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Are Compassionate and Self-Image Goals Comparable across Cultures?

Abstract: *This study tested whether compassionate goals to support others and self-image goals to maintain and defend desired self-images: 1) are equivalent constructs across three cultures (U.S., Japan, Poland); 2) overlap with interdependent self-construal; and 3) predict relationships and growth measures similarly in each country. We re-analyzed data from American (n = 130) and Japanese (n = 203) students, reported in Niiya et al. (2013), along with new data from Poland (n = 246). Single and multiple group confirmatory analyses showed that the two-factor structure holds across the three cultures. Interdependence correlated with compassionate and self-image goals only in Japan. In all three samples, compassionate goals correlated with non-zero-sum belief, feeling close, growth-seeking, self-compassion, and learning from failures, whereas self-image goals correlated with defensive responses to conflicts and validation-seeking. Our results suggest that compassionate and self-image goals may serve similar functions in relationships and growth across cultures.*

Key words: *compassionate goals, self-image goals, cultures*

People use different strategies to satisfy their fundamental need to belong (Baumeister & Leary, 1995). Some people focus on how they are perceived by others and wonder if they are socially acceptable (Leary, 2001). In their relationships, they might pursue self-image goals to construct, maintain and defend desirable images of themselves (Crocker & Canevello, 2012). Others seek to develop supportive, mutually caring relationships (Uchino, 2004). In their relationships they may have compassionate goals focused on supporting others in a constructive way and caring for others' well-being (Crocker & Canevello, 2012). Crocker, Canevello, Breines and Flynn (2010) proposed that self-image goals and compassionate goals involve two different perspectives on the relations between the self and others. Self-image goals typically reflect an *egosystem* motivational perspective, in which people seek to satisfy their own needs even at the expense of others. In contrast, compassionate goals typically reflect a broader *ecosystem* perspective, in which people care about others' well-being in addition to their own.

Three longitudinal studies of American first-semester college students showed that compassionate goals enhance relationships, growth and mental health, whereas self-image goals undermine relationships and mental health (see Crocker & Canevello, 2012, for a review). Compassionate goals predict increased closeness, social support, desire to grow and improve relationships, and learning orientation, and decreased anxiety and depression. On the other hand, self-image goals predict loneliness, conflict, decreased social support, performance-focused achievement goals and (marginally) increased anxiety and depression. Furthermore, compassionate goals predict increased responsiveness and relationship quality for students and their roommates, whereas self-image goals predict decreased responsiveness and relationship quality.

The results of the research on American students suggest that compassionate and self-image goals have different consequences for relationships and personal growth. But do compassionate and self-image goals exist in non-American cultures in the same way? This question is important because people brought up in collectivistic cultures such as Japan tend to give priority to communal over personal goals (Bresnaham, Chiu, & Levine, 2004; Yamaguchi, 1994). If it is normative in Japan to have compassionate goals, then Japanese may have these goals as a means for promoting a positive self-image. Consequently, the Japanese might not distinguish compassionate from self-image goals. Moreover, as the overall tendency to pursue communal goals over personal goals relates to interdependent orientation

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(Kitayama, Duffy, & Uchida, 2007), having compassionate goals might be also indistinguishable from having an interdependent self-construal. If compassionate and self-image goals were not distinguishable or they overlapped with cultural orientation, they would predict relationships and growth in Japan in a different way than in the U.S. Thus, Niiya, Crocker, and Mischkowski (2013) tested whether compassionate and self-image goals exist as separate factors in Japan and the extent to which having an interdependent self-construal overlaps with pursuing compassionate and self-image goals. A correlated two-factor structure emerged among Japanese undergraduates and adults. Interdependence correlated moderately with compassionate goals in both Japanese samples and weakly with self-image goals (only in Japanese adults), suggesting some conceptual overlap between interpersonal goals and interdependent self-construal.

Niiya et al. (2013) also tested whether compassionate and self-image goals predict relationships and growth in similar ways across both cultures. People with compassionate goals know that supporting others can be mutually beneficial. Thus, they predicted and found that compassionate goals correlate with non-zero-sum beliefs (i.e. the belief that one person's success need not detract from others' success; Messik, 1967; Swingle, 1970). Because people with compassionate goals give equal priority to the needs of the self and the needs of others, they also hypothesized and found that compassionate goals correlate with compassion toward oneself (in the sense of being kind to oneself in instances of failure, perceiving one's experience as a part of the larger human experience, and holding painful feelings in mindful awareness; Neff, 2003). Caring about something larger than the self gives a reason to persevere through hardships and expand one's capacities even under difficult or challenging circumstances. Therefore, compassionate goals also fostered a desire to grow (Dykman, 1998). On the other hand, focusing on desired images of one's self, for example as a smart or competent person, orients people toward chronically validating their abilities (Dykman, 1998). Thus, self-image goals correlated with validation-seeking. Pursuing one's desirable self-images, such as being a good relationship partner, brings defensive reactions to relationship conflicts (Knee, Lonsbary, Canevello, & Patrick, 2005). Consistently, Niiya et al. (2013) showed that self-image goals predicted defensive responses to relationship conflicts. More importantly, they found similar associations in both individualistic (i.e., U.S.) and collectivistic (i.e., Japan) cultures and found that interdependence did not account for these associations.

Our study sought to replicate these findings in a Central-European country, Poland. The results of the IBM Study (Hofstede, 2001), GLOBE Project (House et al., 2004) and meta-analyses conducted by Oyserman, Coon, and Kemmelmeier (2002) show that collectivism in Poland is higher than in the U.S. but lower than in Japan. In contrast, individualism is higher than in Japan but lower than in the U.S. Are compassionate and self-image goals relevant constructs in cultures with different levels of collectivism and individualism? How much, in comparison with the U.S. and Japan, do compassionate and self-image goals in Poland overlap with interdependent self-construals? Are interpersonal goals in Poland connected with relationships and growth in the same way as in the U.S. and in Japan? To address these questions we re-analyzed the U.S and Japan data from Niiya et al., (2013) and collected additional data in Poland.

So far the factor structures of the Compassionate and Self-image Goals Scale have been examined within the three samples separately (Crocker & Canevello, 2012; Niiya et al., 2013; Kuncewicz, 2013). Tests of constructs invariance across cultures have not been performed. Hence, we first investigated some plausible two-factor structures using single-group confirmatory factor analysis (CFAs). As in the previous studies, we expected a correlated two-factor structure of the Compassionate and Self-image Goals Scale to fit the data across samples. Then, we used multiple groups confirmatory analysis (MGCFA) to test whether the sets of items on both subscales had similar loadings across cultures.

Niiya et al. (2013) reported positive correlations between interpersonal goals and interdependent self-construal only in Japan, suggesting that in a collectivistic culture both compassionate and self-image goals overlap to some extent with interdependence. However, these correlations were moderate or weak, indicating that pursuing interpersonal goals differs from maintaining interdependence with others (c.f. Singelis, 1994). Because the Polish culture presents an intermediate level of collectivism (lower than Japan but higher than the U.S.), we hypothesized that compassionate and self-image goals in Poland would correlate positively but weakly, or even non-significantly, with interdependence.

Compassionate and self-image goals were associated with relationship and growth measures in a similar way in Japan and in the U.S. (Niiya et al., 2013). We examined whether interpersonal goals in Poland would show similar associations with relationship and growth measures. To reinforce the intercultural comparisons, we also examined the associations with two single-item measures, closeness (an additional aspect of relationships) and learning from failures (an additional aspect of growth) used by Niiya et al. (2013) but eventually not included in their study. We assumed that people who are chronically high in compassionate goals are responsive to others' needs, which leads others to become more responsive in return, and results in feeling close to them (Canevello & Crocker, 2010). Moreover, because people with compassionate goals care about something larger than the self, they may not perceive failures as self-threats. Instead, they may want to use failure to learn about their weaknesses and improve helpful skills, benefiting both themselves and others. Consistent with this reasoning, compassionate goals in college freshmen strengthened the belief that difficulties can lead to growth in friendship (Canevello & Crocker, 2011).

Thus, in all three cultures we expected compassionate goals to correlate positively with non-zero-sum belief, self-compassion, growth-seeking, closeness, and learning from

failures. On the other hand, we expected self-image goals to correlate positively with defensive responses to conflict and validation-seeking. Moreover, we expected that these relationships would not statistically differ between cultures.

Method

Participants

The American sample in Niiya et al.'s (2013) study comprised 130 students (66% female) with ages between 18 and 33 (*Mode* = 18; *Mean* = 18.8, *SD* = 1.45). The Japanese sample comprised 203 students (62% female) with ages between 18 and 27 (*Mode* = 19; *Mean* = 19.8, *SD* = 1.37). For more information about the U.S. and Japanese samples, see Niiya et al. (2013).

The new Polish sample comprised 246 full-time and part-time students (50% female) recruited from the University of Social Sciences and Humanities (*n* = 147) and the Main School of Fire Service (*n* = 99). All participants completed the questionnaire on paper inside their classes for partial course credit. All were of Polish ethnicity. Their ages ranged from 17 to 35, with a mode of 21 and a mean of 23.37 (*SD* = 4.68).

Measures

Compassionate and self-image goals were assessed with 12 items adapted from Crocker and Canevello (2012). Participants selected one person who was important to them (e.g., a friend, a girl/boyfriend, a sibling) and rated how much they wanted or tried to be helpful and constructive (e.g., "be supportive of this person") and get this person to see them in desired ways (e.g., "get this person to like you") on a scale from 1 (*always*) to 5 (*not at all*).

Interdependence was assessed with eight items (e.g. "I will sacrifice my self-interest for the benefit of the group I am in") from the modified Singelis Self-Construal Scale (Uchida, Park, & Kitayama, 2008). Participants responded on a scale of 1 (*describes me very much*) to 5 (*doesn't describe me at all*).

Non-zero-sum belief was measured with four items (e.g., "It is usually possible to resolve disagreements in mutually beneficial ways") used in Crocker and Canevello (2012).

Defensive responses to conflict was measured with two items from Knee, Lonsbary, Canevello, and Patrick (2005; e.g., "I avoid discussing problems with this person because I don't want to create a conflict").

Validation and growth seeking was assessed using six items from Dykman's (1998) Goal Orientation Inventory. Three items measured validation-seeking (e.g., "I feel like my worth, competence, and likeability are things I'm constantly struggling to prove to myself and others") and another three measured growth-seeking (e.g., "I look upon potential disappointments in life as opportunities to improve and grow as a person").

Self-compassion was measured with four items adapted from Neff's (2003) Self-Compassion Scale (e.g., "When I'm down, I remind myself that there are lots of other people in the world feeling like I am").

Closeness was measured with a single item: "For the past week I felt close" and *learning from failures* with another single item: "When I fail, I view it as a great opportunity to learn about my weaknesses and where I need improve," both derived from Crocker and Canevello (2012).

The non-zero-sum belief, defensive responses to conflict, and closeness measures used a scale from 1 (*always*) to 5 (*not at all*) whereas validation and growth seeking, self-compassion, and learning from failures was on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*). For a detailed description of these measures, see Niiya et al. (2013).

We reversed all items so that higher values indicate a greater endorsement of these measures. The Japanese and Polish versions of the questionnaire were back-translated from the English questionnaire. We checked the validity of relationship and growth measures in Japan and Poland by examining whether these measures showed similar correlations with each other in the three samples. For example, in the United States, Japan, and Poland, non-zero-sum belief was correlated with defensive responses at -.32, -.21, and -.29, and with closeness at .36, .28, and .17 respectively. On the other hand, growth-seeking was correlated with validation-seeking at -.14, -.12, and -.17; with self-compassion at .58, .38, and .62; and with learning from failures at .60, .63 and .57 respectively. These results suggest that relationship and growth measures have reasonable validity across cultures.

Results

Compassionate and Self-Image Goals Scales across Cultures

First, we conducted CFAs to test whether a two-factor model fits the data in each culture. Following Kline (2005), we selected the following indices to assess the fit: the relative Chi squared (χ^2/df), the comparative fit index (CFI), the root mean square error of approximation (RMSA), and the standardized root mean square residual (SRMR). A model is considered acceptable if χ^2/df is less than three (Kline, 2005), if CFI is greater than .90 (Marsh, Hau, & Wen, 2004); SRMR is equal or less than .08; and RMSA is less than .08 (Hu & Bentler, 1999). RMSA values between .08 and .10 indicate a mediocre fit and values above .10 a poor fit (MacCallum et al., 1996). Table 1 represents the results of CFAs.

The baseline model including all 12 items showed poor fit: CFI ≤ .81 in all three cultures; χ^2/df > 3 for Japan and Poland; RMSA ≤ .11 and SRMR ≤ .10 in the U.S. and Poland. Deleting four problematic items in Niiya et al.'s (2013) study yielded a better fit in all three cultures but the fit was still not acceptable in the U.S. (CFI = .85; RMSA = .11).

Thus, we created a third model based on the standardized regression coefficients (β) and the squared multiple correlations of the items (R^2) in the baseline model. We required all βs to be greater than .40 (Ferguson & Cox, 1993) and R^2s to be .20 or above (Hooper et al.,

Table 1. Fit indices of two-factor models in American (n = 130), Japanese (n = 202) and Polish (n = 246) samples

Models	χ^2	*df*	χ^2/df	CFI	RMSA	SRMR
1. Baseline (all items included)						
United States	131.69	53	2.45	.80	.11	.11
Japan	182.65	53	3.45	.68	.11	.10
Poland	159.82	53	3.02	.81	.09	.07
2. Modified (items 1,6,9,11 deleted)						
United States	46.96	19	2.26	.85	.11	.08
Japan	42.43	19	2.23	.90	.08	.07
Poland	37.08	19	1.95	.95	.06	.05
3. Modified (items 6,9,10,11,12 deleted)						
United States	27.56	13	2.12	.93	.08	.06
Japan	30.34	13	2.33	.93	.08	.07
Poland	18.23	13	1.40	.98	.04	.05

2008) in all three cultures. Three items from the self-image goals scale (i.e., item 10 "convince this person that you are right", item 11 "avoid being wrong," and item 12 "avoid showing your weaknesses") were below the threshold in all cultures: $\beta s \le .37$ and $R^2 \le .12$ in U.S; $\beta s \le .31$ and $R^2 \le .10$ in Japan; and $R^2 \le .19$ in Poland. In the compassionate goals scale, item 9 ("avoid doing things that aren't helpful to you or this person") in Japan ($\beta s = .38$; $R^2 = .15$) and Poland ($R^2 = .19$), and item 6 ("avoid being selfish or self-centered") in Japan ($\beta s = .37$; $R^2 = .13$) did not meet the requirements. We removed these five items, leaving three items on the self-image goals scale: ("avoid being rejected by this person," "get this person to notice your positive qualities," and "get this person to like you") and four items on the compassionate goals scale ("be constructive in your comments to this person," "avoid doing anything that would be harmful to this person," "have compassion for this person's mistakes and weakness," and "be supportive of this person"). Then we ran the CFAs again in each country separately. The results showed that all the items had βs greater than .40 and R^2 greater than .20 in the three cultures. We found a good model fit for each country ($\chi^2/df \le 2.33$; CFI $\ge .93$; RMSA $\le .08$ and SRMR $\le .07$).

To test the equivalence (invariance) of this two-factor structure across cultures, we conducted a MGCFA. We examined three increasingly restrictive models of invariance by sequentially constraining parameters to be equal across groups. A model is considered invariant across groups when it fits the data and its fit does not differ considerably from the fit of a less restrictive model (Milfont & Fischer, 2010). Following Cheung and Rensvold (2002), we assumed that a model is invariant across groups if the difference in χ^2 between two nested models is non-significant ($p > .05$) and the difference in CFI value is .01

or less. The basic configural level of invariance was already established independently for each country by CFAs. However, we ran this step using MGCFA, constraining the factor structure to be the same across cultures, to have a comparison standard for subsequent tests of invariance. As shown in Table 2, the configural model (Model 1) provided quite good fit to the data ($\chi^2/df = 1.95$; CFI = .95; RMSA < .04 and SRMR < .06), indicating that the two-factor structure of interpersonal goals was equal across cultures.

As the configural invariance was supported, we tested the metric invariance, which additionally (apart from the factorial structure) required that factor loadings were equal across samples. The metric invariance model (Model 2) had relatively good fit ($\chi^2/df < 3$; CFI > .90; RMSA < .06 and SRMR < .08) but χ^2 increased significantly [$p(\Delta) < .05$] and CFI decreased unacceptably (ΔCFI = .025). By freeing the (slightly lower) loading of item 8 ("be supportive of this person") in the U.S. sample, we created Model 2a, for which partial metric invariance was obtained: $p(\Delta) < .05$; ΔCFI = .010. We concluded that almost all (except one) factor loadings were invariant across three countries.

Finally, we tested the scalar (or intercept) invariance by constraining the intercepts of items to be the same across cultures. The scalar invariance model (Model 3) also provided adequate fits to the data ($\chi^2/df < 3$; CFI > .90; RMSA < .06 and SRMR < .08). The difference in fit between the scalar and partial metric invariance model remained non-significant ($\Delta\chi^2 = 4.57$; $p > .05$; ΔCFI = .004). Support for the scalar invariance indicates that the (latent) means can also be meaningfully compared across cultures.

We created measures of compassionate and self-image goals by calculating the mean of the three self-image goals items and the mean of four compassionate goals items.

Table 2. Fit indices across invariance models for the modified 7-item model of compassionate and self-image goals

Invariance models	χ^2	df	χ^2/df	CFI	RMSA	SRMR	$\Delta\chi^2$	Δdf	$p(\Delta)$	Δ CFI
1. Configural	76.19	39	1.95	.954	.04	.06				
2. Metric (2 vs. 1)	106.18	49	2.17	.929	.05	.07	29.99	10	< .05	.025
2a. Partial metric (2a vs. 1)	95.70	48	1.99	.944	.04	.07	19.51	9	> .05	.010
3. Scalar (3 vs. 2a)	100.27	50	2.01	.940	.04	.07	4.57	2	> .05	.004

Table 3 shows the means, standard deviations, Cronbach αs, and intercorrelations of these measures obtained in each country.

Interpersonal Goals and Interdependence

To examine whether interdependence predicts compassionate and self-image goals across cultures we conducted hierarchical multiple regression analyses and examined the interactions between interdependence (z-scores) and culture variables. We created two dummy variables for culture: Japan (Japan = 1; United States = 0; Poland = 0) and Poland (Poland = 1; United States = 0; Japan = 0). In the first step, we entered interdependence, Japan, and Poland as predictors. In the second step, we introduced two interaction terms: Japan x Interdependence and Poland x Interdependence. Table 4 shows the results of hierarchical multiple regression analyses with interpersonal goals as dependent variables.

The main effects of both culture variables emerged for compassionate as well as for self-image goals. Thus, even when controlling interdependence, Japanese and Poles both had less compassionate goals ($M = 4.13$, $SD = .61$; $M = 4.27$, $SD = .58$, respectively) than Americans ($M = 4.44$, $SD = .51$). Similarly, Japanese and Poles had less self-image goals ($M = 3.68$, $SD = .84$; $M = 3.79$, $SD = .85$, respectively) than Americans ($M = 4.07$, $SD = .85$). The results also yielded one significant and one marginally significant interaction between Japan and Interdependence. Simple slope tests revealed that interdependence predicted compassionate goals among Japanese ($\beta = .38$, $p < .001$) but not among Americans ($\beta = .08$, ns) and Poles ($\beta = .20$, ns). Similarly, interdependence predicted self-image goals among Japanese ($\beta = .32$, $p < .001$) but not among Americans ($\beta = .08$, ns) or Poles ($\beta = -.01$, ns).

Interpersonal Goals and Relationship and Growth Measures

We tested whether compassionate and self-image goals predict relationship and growth measures similarly across three cultures, by conducting two-step regression analyses for each of the outcome variables. First, we entered the two culture variables (Japan and Poland) and both interpersonal goals (z-scores). Then, in the second step, we entered four interaction terms: Compassionate goals x Japan; Compassionate goals x Poland; Self-image goals x Japan; Self-image goals x Poland.

As shown in Table 5, compared to Americans, Japanese showed lower non-zero-sum belief, greater defensive responses to conflict and greater feelings of closeness. Moreover, compassionate goals predicted greater non-zero sum belief, greater feelings of closeness, and less defensive responses to conflicts. Self-image goals predicted more defensive responses to conflicts. More importantly, these main effects of interpersonal goals did not statistically differ by culture, except for a significant Compassionate goals x Japan interaction for defensive responses, and a marginally significant Self-image goals x Japan interaction for closeness. Separate analyses by culture revealed that compassionate goals predicted reduced defensive responses to conflict among Americans and Poles ($\beta = -.22$, $p < .05$; $\beta = -.23$, $p < .001$, respectively), but not among Japanese ($\beta = -.03$, ns). In contrast, self-image goals marginally predicted feeling close ($\beta = .17$, $p = .06$) among the Japanese but not among Americans and Poles ($\beta = -.03$, ns; $\beta = .01$, ns, respectively).

We next examined whether compassionate and self-image goals predict growth measures similarly across cultures. As shown in Table 6, compared to Americans, both Japanese and Poles reported greater motivation to learn from failures, Japanese were more likely to seek growth, and Poles were less likely to seek self-validation and have self-compassion. As expected, compassionate goals predicted greater growth seeking, greater self-compassion, greater learning from failures, and reduced validation-seeking whereas, self-image goals predicted reduced growth-seeking, reduced learning from failures, and greater validation-seeking. There were no significant interactions between culture and either goal on growth measures.

Discussion

Our first aim was to examine whether compassionate goals to support others and self-image goals to maintain positive views of oneself are equivalent constructs in the U.S., Japan, and Poland. With the exception of five items,

Table 3. Means, standard deviations, reliability coefficients, and intercorrelations for all variables in the United States, Japan and Poland

Measures	n	M	SD	α	1	2	3	4	5	6	7	8	9
1. Compassionate goals													
United States	130	4.44	.51	.68									
Japan	203	4.13	.62	.63									
Poland	246	4.27	.58	.69									
2. Self-image goals													
United States	130	4.07	.51	.77	.29**								
Japan	203	3.68	.84	.65	.31***								
Poland	246	3.75	.85	.69	.20**								
3. Interdependence													
United States	130	2.55	.52	.65	-.08	.08							
Japan	123	3.77	.56	.62	.38***	.32***							
Poland	246	3.32	.61	.69	.11	-.01							
4. Non-zero sum belief													
United States	130	4.23	.59	.79	.37***	.01	-.09						
Japan	203	3.76	.72	.70	.33***	.13†	.18*						
Poland	246	4.10	.74	.80	.20**	-.01	.12†						
5. Defensive responses													
United States	130	2.32	.95	.56	-.22*	.17†	-.16†	-.32***					
Japan	203	2.76	.93	.58	-.03	.16†	.17†	-.21*					
Poland	246	2.31	.89	.49	-.23***	.16*	-.02	-.29***					
6. Closeness													
United States	130	3.86	.80		.17†	-.03	.10	.36***	.01				
Japan	123	4.11	.97		.11	.17†	.22*	.28**	-.20*				
Poland	246	3.77	.95		.11†	.01	-.13†	.17**	-.06				
7. Growth seeking													
United States	130	3.64	.82	.80	.24**	-.13	-.16†	.37***	-.09	.31***			
Japan	123	4.11	.76	.77	.31**	.05	.21*	.09	.03	.11			
Poland	246	3.71	.85	.90	.21***	-.02	-.03	.25***	-.07	.20**			
8. Validation seeking													
United States	130	3.44	.97	.81	-.09	.14	-.41***	-.05	.18*	-.18*	-.14		
Japan	123	3.27	.87	.62	.00	.31**	.06	.16†	.10	.07	-.11		
Poland	246	3.15	1.16	.78	-.0	.23***	.26**	-.02	.18**	-.12†	-.17**		
9. Self-compassion													
United States	130	3.51	.70	.79	.26**	.01	-.25**	.24**	-.01	.19*	.58***	.01	
Japan	123	3.31	.76	.65	.21*	.13	.28**	.03	.02	.06	.38***	-.13	
Poland	246	3.23	.66	.47	.15**	-.03	-.06	.16*	.01	.23***	.62***	-.18**	
10. Learning from failures													
United States	130	3.30	1.10		.21*	-.08	-.07	.19*	-.01	.28**	.60***	-.14	.26***
Japan	123	3.80	.98		.24**	-.07	.03	.10	.00	-.01	.63***	-.10	.34***
Poland	246	3.58	1.06		.13*	-.04	-.08	.21**	-.17**	.06	.57***	-.11†	.36***

Note. We reanalyzed the American and Japanese data reported in Niiya et al. (2013). Self-image goals and defensive responses comprise different numbers of items and some measures (i.e., closeness and learning from failures) were not reported previously.

† *p* < .10, * *p* < .05, ** *p* < .01, *** *p* < .001.

Table 4. Hierarchical regression analyses summary for culture and interdependence predicting compassionate and self-image goals (N = 579)

Step and predictor variables	Compassionate goals		Self-image Goals	
	β	ΔR^2	β	ΔR^2
Step 1		.05***		.05***
Japan	-.21***		-.23***	
Poland	-.15**		-.15**	
Interdependence	.13**		.10*	
Step 2		.03***		.01*
Japan x Interdependence	.22**		.11†	
Poland x Interdependence	.12		-.05	

† *p* < .10, * *p* < .05, ** *p* < .01, *** *p* < .001.

Table 5. Summary of hierarchical regression analyses predicting relationship measures with culture, compassionate and self-image goals (N = 579)

Step and predictor variables	Non-zero sum beliefs		Defensive responses		Feeling close	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.14***		.11***		.04***
Japan	-.25***		.21***		.14*	
Poland	-.05		.00		-.04	
Compassionate goals	.28***		-.22***		12*	
Self-image goals	-.02		.21***		-.02	
Step 2		.01		.01		.01
Compassionate goals x Japan	-.05		.14*		-.05	
Compassionate goals x Poland	-.11		.06		-.06	
Self-image goals x Japan	.07		-.04		.12†	
Self-image goals x Poland	.04		-.04		.05	

† *p* < .10, * *p* < .05, ** *p* < .01, *** *p* < .001.

the two-factor structure was supported across cultures, indicating that the modified scale is suitable for cross-cultural comparisons (see van de Vijver & Leung, 1997).

Two items were excluded from the compassionate goals scale because they had a poor fit in Japan (item 6: "avoid doing things that aren't helpful to you or this person" and item 9: "avoid being selfish or self-centered") and Poland (item 6). These two items may be more ambiguous than others. In the case of item 6, "avoid doing things that aren't helpful to *you*" can reflect orientation to self, associated with self-image goals, whereas the phrase "avoid doing things that aren't helpful to *this person*" can express orientation to others, which is characteristic of compassionate goals. Regarding item 9, one may avoid being selfish out of compassion for others or to project a likeable image of the self. In collectivistic cultures like Japan and Poland, showing compassion may reflect desirable self-image more than in the U.S., resulting in greater overlap between self-image and compassionate goals. Our explanation corresponds with the results of Niiya et al.'s (2013) study which found that in the Japanese sample, item 6 loaded more on the self-image factor than on the compassionate factor, whereas item 9 cross-loaded equally on both factors.

Interestingly, three items from the self-image goals scale (item 10: "convince this person that you are right",

Table 6. Summary of hierarchical regression analyses predicting growth measures with culture, compassionate and self-image goals (N = 499)

Step and predictor variables	Growth seeking		Validation seeking		Self-compassion		Learning from failures	
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.11***		.08***		.06***		.07***
Japan	.27***		-.04		-.08		.23***	
Poland	.07		-.12*		-.17**		.16**	
Compassionate goals	.26***		-.13*		.20***		.20***	
Self-image goals	-.09*		.25***		-.02		-.10*	
Step 2		.01		.01		.01		.00
Compassionate goals x Japan	-.03	.	.05		.06	.	-.02	
Compassionate goals x Poland	-.08		.00		-.12		-.10	
Self-image goals x Japan	.10		.05		-.08		.01	
Self-image goals x Poland	.10		.08		.01		.06	

† *p* < .10, * *p* < .05, ** *p* < .01, *** *p* < .001.

item 11: "avoid being wrong" and item 12: "avoid showing your weaknesses") presented a poor fit in all three cultures. We can speculate that these items reflect the pursuit of self-image as a competent person. In contrast, the other three items which remained on the self-image scale (item 1: "avoid being rejected by this person", item 3: "get this person to notice your positive qualities", and item 5: "get this person to like you") may reflect the image of a likable person. The desire to project an image of competence may be stronger in an individualistic culture than in a collectivistic culture (see meta-analysis on the cultural differences in self-esteem by Osyerman et al., 2002) whereas the desire to be liked may be equally strong in all cultures.

Our second aim was to test associations between interpersonal goals and interdependence across cultures. Neither compassionate nor self-image goals correlated with interdependence in the U.S. or Poland, but they showed moderate positive correlations in Japan. Apparently, Americans, Poles, and Japanese differentiate between interpersonal goals and interdependence, although there is some conceptual overlap between these constructs in Japan. This overlap may simply result from the similar "social" contents of both interpersonal goals and the Japanese beliefs about dependence on others. However, understanding interdependence in relationships, Japanese might try to save face or social images in public (see the concept of *mentsu*; Lin & Yamaguchi, 2007) or they might react empathically with a desire to help (see the concept of *omoiyari*; Hara, 2006). Thus, people in different cultures

may have self-image goals as well as compassionate goals that are "colored" by specific cultural contents.

Finally, we examined whether the two interpersonal goals predicted relationship and growth measures similarly across cultures. As expected, compassionate goals correlated positively with non-zero sum belief, closeness, growth-seeking, self-compassion, and learning from failures, whereas self-image goals correlated with defensive responses to conflicts and validation-seeking across cultures. These results support Niiya et al.'s (2013) conclusion that compassionate and self-image goals have similar implications for relationships and growth regardless of cultural context.

Compassionate goals also predicted reduced defensive responses to conflicts in the U.S. and Poland but not in Japan, and self-image goals marginally predicted closeness in Japan. Again, these differences suggest that cultural context can shape the contents of goals. Avoiding discussing a problem may be the norm in Japan, where people tend to suppress their thoughts and emotions (Kim & Sherman, 2007) and communicate more indirectly (e.g., Clancy, 1986). Surprisingly, self-image goals related weakly to closeness among Japanese. Japanese may pursue self-image goals to maintain interdependence and closeness. Despite some cultural differences in the correlates of interpersonal goals, overall, similar patterns emerged across cultures, suggesting that compassionate and self-image goals have similar implications for relationships and growth.

Our study has some limitations related to psycho-metric requirements: especially the American sample size

was rather small for confirmatory factor analyses and the reliabilities for the interdependence and defensive responses scales were somewhat low across cultures because we only had a few items for these variables (Cortina, 1993). We also relied on single items to measure closeness and learning-from-failure. We also acknowledge that the correlational nature of the research does not allow us to draw causal conclusions about the associations between goals and dependent variables. Research should test whether and how interpersonal goals influence relationships and growth by activating these goals experimentally.

There are also some limitations to intercultural comparisons which results from the organization of our research. The study in Poland was conducted about two years later than those in the U.S. and Japan. Thus, in intercultural comparisons, we could not include some additional important variables, which were not used in Niiya et al.'s (2013) study, such as independent self-construal. Next, the compassionate and self-image goals scales used in this study were developed in research among American students and may not adequately capture how these goals are manifested in non-American cultures and non-student population. Future research should explore differences in the contents of compassionate and self-image goals in different cultures by using indigenous psychology methods (see e.g., Grienfield, 2000) and create scales that are customized for each culture.

On the other hand, the pan-cultural nature of compassionate and self-image goals, which was partly supported in our study, encourages an investigation into their non-cultural roots. Both goals may be regulated by distinct motivational- physiological systems: "fight-or-flight" interconnected with stress hormones such as cortisol (Henry & Wang, 1998) in the case of self-image goals; and "tend-and-befriend", associated with reproductive hormones such as oxytocin or vasopressin in the case of compassionate goals (Henry & Wang, 1998; Taylor et al., 2000).

References

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529. doi: 10.1037/0033-2909.117.3.497

Bresnaham, M.J., Chiu, H.-C., & Levine, T.R. (2004). Self-*construal as a predictor of communal and exchange orientation in Taiwan and the USA. Asian Journal of Social Psychology, 7*, 187–203. doi: 10.1111/j.1467-839x.2004.00144.x

Canevello, A., & Crocker, J. (2010). Creating good relationships: Responsiveness, relationship quality, and interpersonal goals. *Journal of Personality and Social Psychology*, 99, 78–106. doi: 10.1037/a0018186

Cheung, G.W., & Rensvold, R.B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*(2), 233–255. doi**:**10.1207/S15328007SEM0902_5

Clancy, P.M. (1986). The acquisition of communicative style in Japanese. In B. Schieffelin & E. Ochs (Eds.), *Language socialization across cultures* (pp. 373–524). New York: Cambridge University Press. doi: 10.1017/CBO9780511620898.011

Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*, 98–104. doi: 10.1037//0021-9010.78.1.98

Crocker, J., & Canevello, A. (2012). Consequences of self-image and compassionate goals. In P. G. Devine & A. Plant (Eds.), *Advances in Experimental Social Psychology*, *45*, 229–277. New York: Elsevier. doi: 10.1016/B978-0-12-394286-9.00005-6

Crocker, J., Canevello, A., Breines, J.G., & Flynn, H. (2010). Interpersonal goals and change in anxiety and dysphoria: Effects of compassionate and self-image goals. *Journal of Personality and Social Psychology*, *98*, 1009–1024. doi: 10.1037/a0019400

Dykman, B.M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of goal orientation approach. *Journal of Personality and Social Psychology, 74*, 139–158. doi: 10.1037//0022-3514.74.1.139

Ferguson, E., & Cox, T. (1993). Exploratory factor analysis. A users guide. *International Journal of Selection and Assessment, 1*, 84–94. doi: 10.1111/j.1468-2389.1993.tb00092.x

Greenfield, P.M. (2000). Three approaches to the psychology of culture: Where do they come from? Where can they go? *Asian Journal of Social Psychology, 3*, 223–240. doi: 10.1111/1467-839X.00066

Hara, K. (2006). The concept of omoiyari (altruistic sensitivity) in Japanese relational Communication. *Intercultural Communication Studies, 15*(1), p. 24–32.

Henry, J.P., & Wang, S. (1998). Effects of early stress on adult affiliative behavior. *Psychoendocrinology, 23*, 863–875.

Hofsteade, G. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: SAGE Publications.

House, R.J., Hanges, P.J., Javidan, N., Dorfman, P.W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage Publications.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. doi: 10.1080/10705519909540118

Kim, H.S., & Sherman, D.K. (2007). "Express Yourself": Culture and the Effect of Self-Expression on Choice. *Journal of Personality and Social Psychology, 92*(1), 1–11. doi: 10.1037/0022-3514.92.1.1

Kitayama, S., Duffy, S., & Uchida, Y. (2007). Self as cultural mode of being. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 134–174). New York: Guilford Press.

Kline, R.B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Knee, C.R., Lonsbary, C., Canevello, A., & Patrick, H. (2005). Self-determination and conflict in romantic relationships. *Journal of Personality and Social Psychology, 89*, 997–1009. doi: 10.1037/0022-3514.89.6.997

Kuncewicz, D. (2013). *Does thinking about a close well-wishing person work therapeutically? The role of ecosystem and egosystem perspectives*. Manuscript in preparation.

Leary, M.R. (2001). *Toward a conceptualization of interpersonal rejection*. In M.R. Leary (Ed.), Interpersonal rejection (pp. 3–20). New York: Oxford University Press. doi.10.1093/acprof:oso/9780195130157.003.0001

Lin, C., & Yamaguchi, S. (2007). Japanese folk concept of *mentsu*: An indigenous approach from psychological perspectives, In G. Zgeng, K. Leung, & J. Adair (Eds.). *Perspectives and progress in contemporary cross-cultural psychology* (pp. 343–357). Beijing: The International association of Cross-Cultural Psychology Press.

MacCallum, R.C., Browne, M.W., & Sugawara, H.M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130–149. doi: 10.1037/1082-989X.1.2.130

Marsh, H.W., Hau, K.T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) Findings. *Structural Equation Modeling, 11*, 320–341. doi: 10.1207/s15328007sem1103_2

Messick, D.M. (1967). Interdependent decision strategies in zero-sum games: A computer-controlled study. *Behavioral Science, 12*, 33–48. doi: 10.1002/bs.3830120105

Milfont, T.L., & Fischer, R. (2010). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of Psychological Research, 3*, 112–131.

Neff, K. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223–250. doi: 10.1080/15298860309027

Niiya, Y., Crocker, J., & Mischkowski, D. (2013). Compassionate and self-image goals in the US and Japan. *Journal of Cross-Cultural Psychology, 44*, 389–405.

Oyserman, D., Coon, H.M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128*(1), 3–72. doi: 10.1037/0033-2909.128.1.3

Singelis, T.M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin, 20*, 580–591.

Swingle, P.G. (1970). Exploitative behavior in non-zero-sum games. *Journal of Personality and Social Psychology, 16*, 121–132. doi: org/10.1037/h0029844

Taylor, S.E., Klein, L.C., Lewis, B.P., Gruenwald, T.L., Gurung R.A.R., & Updegraff, A. (2000). Biobehavioral responses to stress in females: tend-and-befriend, not fight-or-flight. *Psychological Review, 107*(3), 411–429. doi: 10.1037//0033-295X.107.3.411

Uchida, Y., Park, J., & Kitayama, S. (2008, February). *Explicit and implicit social orientations: Independence and interdependence in Japan and the U.S.* Poster session presented at the annual meeting of the Society for Personality and Social Psychology, Albuquerque, New Mexico.

Uchino, B.N. (2004). *Social support and physical health: Understanding the health consequences of our relationships*. New Haven, CT: Yale University Press.

Van de Vijver, F.J.R., & Leung, K. (1997). *Methods and data analysis for cross-cultural research*. Sage, Newbury Park, CA.

Yamaguchi, S. (1994). Collectivism among the Japanese: A perspective from the self. In U. Kim, H. C. Triandis, C. Kagitcibasi, S.-C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications* (pp. 175–188). Thousand Oaks, C.A: Sage.

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