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The Resentment Rating Scale for Couples (RRS-C): Development and Psychometric Properties of a Novel Scale for Measuring Resentment

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ABSTRACT

Three studies involving a total of 844 individuals were conducted to develop and validate the Resentment Rating Scale for Couples (RRS-C), a new measure assessing resentment that may exist in a relationship. The studies examined the dimensionality, internal consistency, and construct validity of the new scale. The final instrument comprised 13 items that had adequate internal consistency. Convergent validity of the new measure was indicated by its significant relationships with the Dorman Resentment Rating Scale (DRRS), relationship variable, namely frequency of conflict, and indicators of psychological well-being, namely overall satisfaction and happiness in a relationship. The scale discriminated resentment from anger (Novaco Anger Scale), anxiety (Beck Anxiety Inventory) and jealousy (Multidimensional Jealousy Scale). Implications for future research of the present study are discussed.

Keywords

Construct validity, Couples, Psychometrics, Resentment, Scale development.

The Philippines stands alone in the world, aside from Vatican City, where divorce is not legal [1]. Under its laws, those who want to end their marriage have minimal options. They can either file for a legal separation, which allows them to divide their properties and live separately but does not legally end the marital union and permit remarriage, or obtain an annulment, which requires high economic cost [2,3]. But aside from the legal and economic barriers to terminating the consummation of marriage in the Philippines, there is also a mark of disgrace attached to having had a union dissolved [4], particularly for women, who, according to Aguilar [5], are expected to keep the marriage together. For these reasons, most Filipinos in an unsatisfactory marriage tend to think they have no choice but to stay in the relationship.

However, staying in a troubled marriage often leads to further issues in the relationship. Once a relationship does begin to break down, a predictable sequence of events tends to occur. John Gottman [6] has labelled this sequence, "The Four Horsemen of the Apocalypse". The first step of the breakdown process involves conflict and criticism, while the second step encompasses

contempt. Couples then respond to criticism by defensiveness, the third stage of breakdown. Over time, when they start to realize that they cannot resolve their differences, they progress to the final stage called "stonewalling". Stonewalling occurs when partners do not trust each other anymore and completely withdraw from the relationship to avoid more assault.

Research on romantic relationships during the past decade has focused on a range of topics, including the factors that increase marital satisfaction, predictors of separation, and interventions for couples having problems in their relationships. Despite this development, there seems to be insufficient empirical evidence on resentment and its effects on intimate relationships.

Drive for Resentment Rating Scale for Couples

Resentment is the persistent feeling that you are being mistreated - not getting due respect, appreciation, affection, help, apology, consideration, praise, or reward [7]. It is a negative emotional state that combines annoyance, anger, dislike or hatred, and other negative feelings that interferes with a person's ability to relate to another person or situation. Miceli and Castelfranchi [8] showed that resentment is different from anger and indignation, stating that each of their cognitive space does not overlap each other. They concluded that although resentment can be considered as a

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kind of anger, the former is more intense than the latter because it experiences twofold suffering- both from the actual harm and the intentional attempt to cause harm, even if it is unsuccessful, by a wrongdoer. They also indicated that if harm is neutralized, anger is more likely to be pacified, whereas "resentment tends to persist until the offence is punished" (p. 11). Another difference between anger and resentment according to Miceli and Castelfranchi [8] is that "more generally, the expression of mere anger is more likely to be inhibited than that of resentment" (p. 11).

An article online has also provided an elaborate characteristic of resentment:

It is not based on a present event but on several past events, which may be ignited by the present event. Resentment usually involves reliving a painful experience again and again. The individual fails to let go of the hurt and forgive the other individual but clings on to the bitterness. Unlike anger that can sometimes be positive, resentment is never definite as it only hurts the individual [9].

This retrospective characteristic of resentment is likely to happen in romantic relationships because conflicts are inevitable [10] and can be damaging, especially if partners respond with destructive behaviours and hostility [11]. It would seem to suggest that in the Philippines, where divorce is not legal, and separation carries a social stigma, couples who are forced to stay in an unhealthy relationship are possibly vulnerable to high levels of resentment.

Based on the above premises, we deemed it necessary to assess the presence of resentment in a romantic relationship. To date, there is no published resentment scale available in academic databases. We believe that developing a resentment scale and evaluating its psychometric properties are essential steps that must be taken to enrich our understanding of the dynamics of resentment in intimate relationships.

Study 1

Study 1 examined the factor structure and reliability of the RRS-C. To reduce the impact of nonnormality, we conducted a data screening technique [12]. All respondents had no missing value; however, one respondent was unengaged as evidenced by giving the same response for every single item. We also examined the outliers on continuous variables (age and length of relationship) and applied Trimming on the extreme values, which consisted of less than 5% of the data points. Since ordinal non-normal data cannot be transformed into normal data, we specifically observed the items that were highly skewed and kurtotic and dropped them when they loaded on two or more components (i.e., crossloadings) during the Principal Component Analysis (PCA). We also conducted a simple test of the scale's construct validity.

Method

Participants and Procedure

The sample consisted of 387 participants, 297 (76.7%) females and 90 (23.3%) males, who were living in the Philippines. They were all in a long-term relationship with an average of 7.99 years (SD = 4.39) in which 243 (62.8%) were married, 46 (11.9%) were

cohabiting, and 98 (25.3%) were in a boyfriend-girlfriend status. The mean age of the respondents was 31.65 years (SD = 5.18).

Snowball sampling was employed to recruit participants via Facebook, i.e., convincing Facebook friends who were in a long-term relationship to take part in the study. Interested and qualified participants were asked to answer the RRS-C through a unique, password-protected Google Forms document.

Measures

The Dorman Resentment Rating Scale (DRRS) [13]. The DRRS consists of 24 items that determine the degree of resentment and the actions that lead to that resentment. In this study, participants were asked to complete the scale on a 6-point Likert-type scale ranging from 0 (No resentment) to 5 (Extreme resentment, almost constant anger or frustration). To our knowledge, the psychometric soundness of DRRS has not been reported previously.

RRS-C. The initial steps taken in this study were based on the prevalidation methods used by Prior et al. [14] when they developed a Patient-Reported Outcome Instrument. The item-generation process involved adapting items from an existing scale and developing new ones that examine the presence of resentment in a long-term relationship. We paid particular attention to the retrospective attribute of resentment to avoid overlapping with related but distinct constructs such as anger, anxiety, and jealousy. The items were carefully reviewed and refined based on a pilot study that tested the comprehensibility, acceptability, relevance, and answerability of each item on a sample of 119 individuals.

From this method, we generated 36 items to assess individuals' resentment level that exists in a relationship. The response key for this scale ranged from 1 (Almost Never True) to 7 (Almost Always True), with higher scores denoting a higher level of resentment. Participants in this study were asked to rate their degree of resentment based on the 36 items.

Results and Discussion

Dimensionality

We performed PCA with oblique rotation to reduce the number of items on the RRS-C. This method was selected because it accounts for the total variance of variables and thus, reflects the common and unique variances of variables [15].

Preliminary test results verified that the dataset was suitable for factor analysis as revealed by the Kaiser-Meyer Olkin (KMO) and Bartlett's Test of Sphericity, with values. 964 and .000, respectively [16]. The number of components extracted was determined through the eigenvalues larger than 1.0, [17] the examination of Scree plot [18], and Monte Carlo PCA for Parallel Analysis [19]. An assessment of the component structure was made in terms of (a) Correlation Matrix, (b) Communalities, and (c) Loading values.

PCA with Oblique rotation (Direct Oblimin) produced five components from 36 items with 12 cross-loadings. Based on the eigenvalues above 1.0, the items can be reduced into five

components. These five components had a cumulative percentage variance of 62.93%, but the first component displayed most of the variance (46.74%) compared to the other four components. This high variance was supported by the Scree plot (Figure 1) despite showing two inflexion points. It suggested that we retain either one or four components. We also employed the Monte Carlo PCA for Parallel Analysis to help us decide the number of components to extract. We systematically compared the initial eigenvalues we obtained from our SPSS data with the corresponding first eigenvalue of the Monte Carlo PCA for Parallel Analysis. We retained the components that were greater than the first randomly generated eigenvalue of the parallel analysis program resulting in three components. Upon careful consideration of these varying results, we decided to rely on the result of the Scree plot and kept one component. It was because of the distinctive line that graphically determined the optimal number of factors to retain. As seen in Figure 1, the place where the smooth decrease of eigenvalues appears to level off is at the second principal component, which means that the remaining principal components account for a tiny proportion of the variability and are probably unimportant. It was also congruent with the significant variance of the first component indicated by the eigenvalues above 1.0. Moreover, the three components generated by the Monte Carlo PCA for Parallel Analysis, the four components indicated by the second inflexion point of the Scree plot, and the five components extracted through the eigenvalues greater than 1.0 are predicted to result in having only two items loading on some components, and as such may be considered weak and unstable components. Thus, we decided to extract the items into one component.

We continued the process and set the Number of Components to be Extracted into one; and under Rotation Method, we chose None. The cumulative percentage was still 46.73%. We observed the Component Matrix and found two items with no loadings. We dropped these items and reran an extraction. This process increased the cumulative variance to 49.07%, and all the items had a loading above .40. At this point, we examined and dropped the items whose value was less than .30 on the Communalities. Note that one of these items was highly skewed and kurtotic. It resulted in a variance of 52.92% with loadings higher than .50 and Communalities that were .30 and above. Finally, a clean solution emerged with 30 items and a KMO of .968.

Reliability and Convergent Validity

Cronbach's alpha showed the items to reach high reliability, α = 0.97 [20]. If deleted, three items did not affect the alpha while the rest would result in a decrease in reliability value. Overall, all items appeared to be worthy of retention.

To offer an initial assessment of RRS-C's construct validity, we examined its correlation with DRRS. We hypothesized that the two related constructs were positively correlated with each other. As predicted, RRS-C was correlated in the expected direction with DRRS, r(385) = 1.000, p < .01.

The results of Study 1 provide promising evidence for the reliability

and validity of RRS-C. First, using PCA with Oblique rotation, we obtained a clean single-component solution explaining 52.92% of the variance and with all items having primary loadings over .50. The Cronbach's alpha value of .97 also indicated a strong internal consistency of the scale while its significant correlation with DRRS suggested a convergent validity.

Despite these reassuring results, a variety of measures and samples are required to provide complementary indication attesting to the measure's validity.

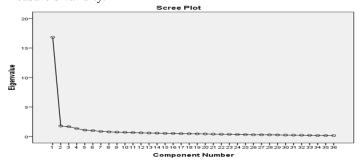


Figure 1: The Scree plot shows two inflexion points: one at eigenvalue 2 and the other at eigenvalue 5. For the purpose of this study, we choose to keep the factor corresponding to the left of eigenvalue 2, i.e. the largest eigenvalue.

Study 2

According to Osborne and Fitzpatrick [21], it is necessary for researchers to conduct a replication analysis in Exploratory Factor Analysis to "examine the stability or volatility of their EFA solutions to gain more insight into the robustness of their solutions and insight into how to improve their instruments while still at the exploratory stage of development" (p. 1). Based on this proposition, we replicated the EFA using internal and external replications to provide complementary evidence attesting to the measure's validity.

In light of the additional evidence provided by the replication analyses, Confirmatory Factor Analysis (CFA) was conducted to determine whether the 27-item single-component model best represents the new scale. Because the chi-square statistic is sensitive to sample size, we relied on alternative fit indexes such as Chi-square Mean/Degree of Freedom (CMIN/DF) [22]; Comparative Fit Index (CFI) [23]; root-mean-square error of approximation (RMSEA) [24]; and standard root mean square residual (SRMR) [25] to gauge goodness of fit. CMIN/DF should not exceed 3.0 to indicate a good fit [26], whereas a CFI value greater than .95 denotes an adequate fit [27]. For RMSEA, a cut-off value [27] close to .06 or a stringent upper limit [28] of .07 is considered a good fit. Lastly, SRMR values as high as .08 are deemed acceptable [27].

Method

Participants and Procedure

There were 271 Filipino participants in this study, 225 (83%) females and 46 (17%) males. All respondents were in a long-term relationship with an average of 5.47 years (SD = 4.07). A total of

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136 (50.2%) were married, 32 (11.8%) were cohabiting, and 103 (38%) were in a boyfriend-girlfriend relationship. The mean age of the sample group was 29.30 years (SD = 6.15). The recruitment process employed in this study was similar to the one described in Study 1.

Measure

RRS-C. A 27-item version that resulted from internal replication analysis was used to evaluate the participants' level of resentment.

Results and Discussion Dimensionality

Internal Replication Analysis: In internal replication, we randomly split the sample of Study 1 (N = 387) into two samples resulting in a sample size of 193 for Sample 1 and 194 for Sample 2. Following the clean solution that emerged from the prior analyses of the scale, we extracted the components into one and chose None under the Rotation Method. KMO indicated that Sample 1 and Sample 2 were both adequate for analysis (0.950 and 0.958, respectively). Examination of factor loadings and communalities led to the removal of three items for having small loadings and communality values. The remaining 27 items on both samples had loadings higher than .50 and the squared differences for such loadings were within a reasonable range (0.00-0.03) (Osborne and Fitzpatrick [21] suggested that once the squared differences achieve a magnitude of .04 indicating a difference of <.20>, the researcher may begin to consider factor loadings as volatile (p.5).). Based on this outcome, we reanalyzed the original sample without the three items. The result was used as the basis for external replication.

External Replication Analysis

In external replication, we used two separately gathered datasets: the original sample of Study 1 (n=387) and a new independent sample of Study 2 (n=271). Similar to internal replication, we analyzed the new sample by extracting the components into one and choosing None under the Rotation Method, then compared it to the original sample. Both the original and new independent samples were adequate for analysis, as shown by their KMO values (0.967 and .958, respectively). They had loadings more than .50 and the squared differences for these loadings were within a reasonable range (0.00-0.03). Also, the communality values were all above .30. Both datasets were roughly equivalent in magnitude, including the cumulative variance. Overall, the 27-item scale passed structural replication.

Confirmatory Factor Analysis

We assessed the 27-item hypothesized model utilizing CFA. Initially, the CFA results showed a poor fit to the data, CMIN/DF = 3.47, CFI = .85, RMSEA = .10, SRMR = .05. All factor loadings were greater than .50.

A closer examination on Covariances showed high values on Modification Indices. We used these values as the basis for the respecification of the model. To make sure that modifications were consistent with our research goals, we considered both samples-dependent results and theoretical implications. A clean solution

was obtained with 13 remaining items. The nested model has a good fit, CMIN/DF = 1.63, CFI = .98, RMSEA = .05, SRMR = .03. All factor loadings were greater than .50.

Additionally, the nested model is statistically superior to the original hypothesized model based on a chi-square difference test. The result was significant, $\chi 2$ (259, N = 271) = 1019.48, p < .05 [29].

Reliability

A reliability test was carried out on the re-specified model. The Cronbach's alpha showed acceptable reliability, α = 0.93. If deleted, all items would result in a decrease in reliability value. Thus, 13 items were retained for further analysis.

Given that many re-specifications were made, a replication of the model was undertaken, as suggested by Kenny [30]. Study 3 was conducted to examine the psychometric properties of RRS-C further.

Study 3

Analyses in Study 2 proceeded in an exploratory fashion as we determined the parameters that substantively affect the goodness of fit of our model. For this reason, it was necessary to examine the nested model using a replicate sample to confirm its fit indexes and chi-square values.

We also examined in detail the construct validity of RRS-C. First, we assessed its convergent validity by measuring the Average Variance Extracted (AVE) and the Composite Reliability (CR). To establish convergent validity, AVE values must be above 0.5, and the CR values must be 0.7 and above [31]. We also analyzed the correlations of RRS-C with DRRS, relationship variable (frequency of conflict), and indicators of psychological well-being (level of satisfaction and happiness in the relationship) for its additional evidence of convergent validity when compared to related constructs.

Second, we tested the discriminant validity by verifying the scale's empirical difference from anger, anxiety, and jealousy using CFA. If RRS-C is distinct from each of these measures, two distinct correlated factors should account for the covariances among the items [32]. To test this hypothesis, we estimated a series of twofactor solutions (Unconstrained Model) specifying that the items on RRS-C and other relevant scales loaded on two distinct but correlated latent variables. We then compared these two-factor solutions with a series of one-factor solutions (Constrained Model) specifying a single latent variable underlying all the items from RRS-C and other relevant scales. Being nested models, the twoand the one-factor solutions were evaluated by interpreting the change in chi-square (per change in df) as a chi-square statistic. If the two-factor solutions were superior to the corresponding one-factor solutions, we conclude that the RRS-C is distinct from scales measuring related constructs.

In addition to that, we also compared the square root of the AVE

with the correlation of latent constructs [33]. A latent construct should explain better the variance of its indicator rather than the variance of other latent constructs. Therefore, to establish discriminant validity, the square root of each construct's AVE should have a greater value than the correlations involving the constructs [33].

Method

Participants and Procedure

Participants in this study were 186 individuals, 157 (84%) females and 29 (16%) males, who reside in the Philippines. All respondents were in a long-term relationship with an average of 5.98 years (SD = 4.87). A total of 85 (45.7%) were married, 19 (10.2%) were cohabiting, and 82 (44.1%) were in a boyfriend-girlfriend relationship. The mean age of the sample group was 27.53 years (SD = 7.60). Questionnaires were administered by following the same procedure used in the previous studies.

Measures

RRS-C: The 13-item version that resulted in Study 2 was used to measure the level of resentment in the relationship.

DRRS [13]: Similar to Study 1, the DRRS was used to determine the degree of resentment and the actions that lead to that resentment.

Novaco Anger Scale-Short Form (NAS-SF) [34]: NAS-SF contains 25 items that measure the degree of anger people would feel if placed in certain situations. Participants were asked to imagine themselves in such situations and rate their reactions on a 5-point Likert-type scale ranging from 0 (if you would feel little or no annoyance) to 4 (if you would feel very angry). Several authors like Huss, Leak, and Davis [35] suggest evidence attesting to the psychometric soundness of NAS-SF.

Beck Anxiety Inventory (BAI) [36]: BAI is a self-report measure of anxiety. Participants were asked to stipulate how much they have been bothered by the 21 symptoms using the scoring system that ranges from 0 (Not at all) to 3 (Severely- it bothered me a lot). The validity and reliability of the scale were established by Beck at al. [36].

Multidimensional Jealousy Scale (MJS) [37]: MJS provides assessments of the three components of jealousy: cognitive, emotional and behavioural. It contains eight items for each component and participants in this study were asked to rate their responses to the questions using a scale that ranges from 1 (All the time) to 7 (Never). Excellent reliability and validity were obtained for the scale as reported by Pfeiffer and Wong [37].

Frequency of Conflict: Participants were asked to indicate the approximate extent of conflict they have with their partners using a 5-point Likert-type scale ranging from 0 (Never) to 4 (Always).

Relations Assessment Scale (RAS) [38]: RAS is a 7-item scale created to measure general relationship satisfaction in a relationship. In this study, respondents answered each item

using a 5-point scale ranging from 1 (low satisfaction) to 5 (high satisfaction). Acceptable psychometric properties of the scale were discussed in detail by Hendrick [38].

Happiness in Relationships: In this study, respondents were asked to indicate the degree of overall happiness they feel in their relationship using a 5-point Likert-type scale that ranges from 1 (Very Low) to 5 (Very High).

Results and Discussion Dimensionality

CFA results was congruous with the nested model, CMIN/DF = 1.89, CFI = .96, RMSEA = .07, SRMR = .04. All factor loadings were greater than .50.

Reliability

The internal consistency reliability also showed a similar value to the nested model, α = 0.93. If deleted, all items would result in a decrease in reliability value. The final version of the RRS-C appears in the Appendix.

Convergent Validity

In addition to the factor loadings above .50, the Average Variance Extracted of the scale was 0.52, and the Composite Reliability was 0.93, indicating convergent validity of RRS-C. We also examined its correlations with related constructs for additional evidence of convergent validity (Table 1).

Related constructs	RRS-C
DRRS Relationship Variable	.29**
Frequency of Conflict Psychological Well-Being	.39**
Overall Satisfaction	56**
Overall Happiness	54**
Social Desirability	15*

Table 1: Correlations of the RRS-C With DRRS, Relationship Variable and Psychological Well-Being and Social Desirability (Study 3).

Note. N = 186. RRS-C = Resentment Rating Scale for Couples; DRRS = Dorman Resentment Rating Scale

- **. Correlation is significant at 0.01 level (2-tailed)
- *. Correlation is significant at 0.05 level (2-tailed)

As predicted, RRS-C was positively correlated in the expected direction with DRRS. Results revealed that individuals who were high in RRS-C were also high in DRRS. RRS-C was also correlated with the frequency of conflict. Individuals with high resentment experience more conflict in a relationship than those with less or no resentment. Moreover, RRS-C was negatively correlated with the level of satisfaction and level of happiness in a relationship. As expected, participants with a high level of resentment found less or no satisfaction and happiness in a relationship.

The RRS-C inversely correlated with social desirability. The said correlation (r = -.15) is consistent with previous results obtained

by Fernandez and colleagues [39] in which anger, an emotional state related to resentment, and Social Desirability Bias (SDB) were negatively correlated. Accordingly, this seems to indicate that resentment is susceptible to social desirability bias.

Discriminant Validity

The fit for the two- and the one-factor solutions, as well as the change in chi-square, are reported in Table 2. The two-factor solutions, distinguishing the RRS-C from other related constructs (i.e., anger, anxiety, and jealousy) were always preferable to the

one-factor solutions. Also, the two-factor solutions demonstrated an acceptable fit except for the model correlating with jealousy.

Moreover, the square root of the AVE for each construct exhibited greater values than the correlations involving the constructs. It indicated that RRS-C assesses a construct that is related to, but not equivalent to, the one assessed by anger, anxiety, and jealousy. A summary of comparisons of the square root of the AVE with the correlation of latent constructs is shown in Table 3.

Two-factor solutions					One-factor solutions							
RRS-C and related scale	χ^2	df	p	CFI	RMSEA	χ^2	df	p	CFI	RMSEA	$\Delta \chi^2 (1)$	p
Anger	1144.48	664	.00	.86	.06	2385.24	665	.00	.47	.12	1240.76	<.05
Anxiety	1.97	526	.00	.86	.07	2224.61	527	.00	.54	.13	2222.64	<.05
Jealousy	2933.74	628	.00	.48	.14	3230.53	629	.00	.40	.15	296.80	<.05

Table 2: Factor Solutions Examining the Discriminant Validity of the RRS-C in Relation to Anger, Anxiety, and Jealousy (Study 3). Note. N = 186. RRS-C = Resentment Rating Scale for Couples; CFI = comparative fit index; RMSEA = root-mean-square error of approximation.

	CR	AVE	MSV	MaxR(H)	Anger	RRSC	Anxiety	Jealousy
Anger	0.924	0.335*	0.071	0.933	0.579			
RRSC	0.934	0.525	0.079	0.939	0.186	0.724		
Anxiety	0.944	0.453*	0.079	0.953	0.267	0.281	0.673	
Jealousy	0.704	0.214*	0.068	0.900	0.261	0.251	0.213	0.462

Table 3: Comparisons of the Square Root of Average Variance Extracted (AVE) with the Correlations of Latent Constructs (Study 3). Note. N = 186. CR = Composite Reliability; MSV = Maximum Shared Variance; MaxR(H) = McDonald Construct Reliability. *. AVE values are less than .50, indicating convergent validity issue of the constructs.

General Discussion

Although research on different facets of romantic relationships has grown significantly in recent years, few efforts have been made to develop psychometrically sound measures of resentment, a negative emotional state that can hurt the relationship. Studies 1-3 address this limitation by developing a scale and examining its psychometric properties. This 13-item measure is called the Resentment Rating Scale for Couples (RRS-C).

Across the three studies, the RRS-C appeared to be psychometrically robust. The items are unidimensional and possess high internal consistency. It also correlated in theoretically expected ways with an existing resentment scale, relationship variable and psychological well-being indicators. Specifically, we found evidence that RRS-C is associated with DRRS as well as with frequency of conflict, satisfaction, and happiness in a relationship.

Some evidence of discriminant validity for the scale was also found. In Study 3, RRS-C exhibited contrast to other related but inherently unique constructs such as anger, anxiety, and jealousy.

The above results seem to hold adequate evidence on the reliability and validity of the RRS-C. Nonetheless, it should be viewed in light of several limitations. Chief among these is the limited variability of the samples, which restricts our ability to generalize the result. The distribution of gender groups was quite imbalanced, having 80% female and 20% male. The sample size of men was too small to test the differences between men and women in this study.

Additionally, respondents in the study were all Filipinos. Future research should determine whether RRS-C performs adequately in different cultures, especially in countries with a high divorce rate. Another limitation lies in the reliance on self-report measures in the present studies. As indicated by the significant inverse relationship between RRS-C and social desirability, individuals may be highly concerned about social convention and responded in such a way as to avoid social disapproval. Future research should examine the veracity of the scale by comparing it with behavioural observations.

Notwithstanding these limitations, the development of the RRS-C demonstrates a significant step in the development of a resentment scale that helps provide a better assessment on the status of a relationship, especially of those individuals having issues in their marriage and long-term romantic relationships. Considering the different types of interventions aimed at fixing broken or struggling relationships, the need for a valid and reliable scale is not only essential but meaningful. Filling this need has been our ultimate motivation for developing the RRS-C.

References

- 1. de Leon SL. The fight to make divorce legal in the Philippines. CNN. Retrieved from https://edition.cnn.com. 2014.
- 2. Lopez J. The law of annulment of marriage rules of disengagement: How to regain your freedom to remarry in the Philippines. Pasig City: Anvil Publishing. 2006.
- 3. Lauser A. Philippine women on the move: Marriage across

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- borders. International Migration. 2008; 46: 85-110.
- 4. Raposas T. Marriage and domestic violence: A fatal combination in the Philippines, where divorce is illegal. Retrieved June 2, 2018, from the Alternet website: http://www.alternet.org/story/74044/marriage_______%26_domestic_violence%3A_a_fatal_____ combination_in_the_philippines,_where divorce is illegal. 2008.
- Aguilar DM. II. Women in the Political Economy of the Philippines. Alternatives. 1987; 12: 511-526. Constable N. A transnational perspective on divorce and marriage: Filipina wives and workers. Identities: Global Studies in Culture and Power. 2003; 10: 163-180.
- Gottman J. Why marriages succeed or fail. New York: Simon and Schuster. 1994.
- Stosny S. Chains of resentment. Retrieved August 14, 2017, from the Psychology Today website: https:// www.psychologytoday.com/blog/anger-in-the-ageentitlement/201109/chains-resentment. 2011.
- Miceli M, Castelfranchi C. Anger and its cousins. Emotion Review. 2017; 11: 13-26.
- 9. Admin (2015, April 2). Difference between anger and resentment. Retrieved from https://www.differencebetween.com/difference-between-anger-and-vs-resentment/.
- Gordon AM, Chen S. Do you get where I'm coming from?. Perceived understanding buffers against the negative impact of conflict on relationship satisfaction. Journal of Personality and Social Psychology. 2015; 110: 239-260.
- 11. Gottman JM, Levenson RW. Timing of divorce-predicting when a couple will divorce over a 14-year period. Journal of Marriage and the Family. 2000; 62: 737-745.
- Tabachnick BG, Fidell LS. Using multivariate statistics (5th ed.). New York: Allyn and Bacon. 2007.
- Dorman D. How much resentment do you have towards your partner?. Retrieved April 6, 2018, from the marriage.com website: https://www.marriage.com/advice/ counseling/howmuch-resentment-do-you-have-towards-your-partner. 2017.
- Prior ME, Hamzah JC, Francis JJ, et al. Pre-validation methods for developing a patient- reported outcome instrument. BMC Medical Research Methodology. 2011; 11: 1-9.
- Garson GD. Factor analysis. Asheboro, NC: Statistical Associates Publishers. 2013.
- 16. Tabachnick BG, Fidell LS. Using multivariate statistics (3rd ed.). New York: HarperCollins. 1996.
- 17. Kaiser HF. The application of electronic computers to factor analysis. Educational and Psychological Measurement. 1960; 20: 141-151.
- 18. Cattell RB. The scree plot test for the number of factors. Multivariate Behavioral Research. 1966; 1: 140-161.
- 19. Watkins MW. Determining parallel analysis criteria. Journal of Modern Applied Statistical Methods. 2005; 5: 344-346.
- 20. Hair J, Hult G, Ringle C, et al. A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.). Los Angeles: SAGE Publications, Inc. 2017.
- 21. Osborne J, Fitzpatrick D. Replication analysis in exploratory factor analysis: What it is and why it makes your analysis better. Practical Assessment, Research Evaluation. 2012; 17:

- 1-8.
- 22. Kline RB. Principles and practice of structural equation modeling (4th ed.). New York: Guildford Publications, Inc. 2015.
- 23. Bentler PM. Comparative fit indexes in structural models. Psychological Bulletin. 1990; 107: 238-246.
- 24. Hu L, Bentler PM. Evaluating model fit. In R. H. Hoyle (Ed.), Structural equation modeling: Concepts, issues, and applications. Thousand Oaks, CA: SAGE Publications, Inc. 1995; 76-99.
- Hancock GR, Mueller RO. Structural equation modeling: A second course (2nd ed.). Charlotte, NC: Information Age Publishing. 2006.
- Byrne BM. Structural equation modeling with EQS: Basic concepts, applications, and programming (2nd ed.). Mahwah, NJ: Erlbaum. 2006.
- 27. Hu L, Bentler PM. Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling. 1999; 6: 1-55.
- 28. Steiger JH. Understanding the limitations of global fit assessment in structural equation modeling. Personality and Individual Differences. 2007; 42: 893-898.
- 29. Yuan KH, Bentler PM. On chi-square difference and z-tests in mean and covariance structure analysis when the base model is misspecified. Educational and Psychological Measurement. 2004; 64: 737-757.
- Kenny D. Respecification of latent variable models. Retrieved August 7, 2018, from the David A. Kenny's homepage: http:// davidakenny.net/cm/respec.htm. 2011.
- 31. Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research. 1981; 18: 39-50.
- 32. Kenny DA, Kashy DA. Analysis of the multitrait-multimethod matrix by confirmatory factor analysis. Psychological Bulletin. 1992; 112: 165-172.
- 33. Hair J, Hult G, Ringle C, et al. A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.). Los Angeles: SAGE Publications, Inc. 2017.
- 34. Novaco RW. Anger control: The development and evaluation of an experimental treatment. Oxford, England: Lexington. 1975.
- 35. Huss MT, Leak GK, Davis SF. A validation study of the Novaco Anger Inventory. Bulletin of the Psychonomic Society. 1993; 31: 279-281.
- 36. Beck AT, Epstein N, Brown G, et al. An inventory for measuring clinical anxiety: Psychometric properties. Journal of Consulting and Clinical Psychology. 1988; 56: 893-897.
- 37. Pfeiffer SM, Paul PT. Multidimensional jealousy. Journal of Social and Personal Relationships. 1989; 6: 181-196.
- 38. Hendrick SS. A generic measure of relationship satisfaction. Journal of Marriage and the Family. 1988; 50, 93-98.
- 39. Fernandez E, Woldgabreal Y, Guharajan D, et al. Social desirability bias against admitting anger: Bias in the test-taker or bias in the test?. Journal of Personality Assessment. 2018; 1-9.

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Appendix

Resentment Rating Scale for Couples

The following statements describe possible feelings, thoughts, and behaviours that you might currently experience in your relationship. Please indicate the number that best represents how likely the statement describes you using the rating scale below.

Table A1

1	2	3	4	5	6	7
Almost Never True	Usually Not True	Rarely True	Occasionally True	Often True	Usually True	Almost Always True

I'm disappointed because my partner does not meet my expectations.	1	2	3	4	5	6	7
I acknowledge that we have unresolved conflicts.	1	2	3	4	5	6	7
I feel upset that my needs are ignored.	1	2	3	4	5	6	7
I am preoccupied with regrets in this relationship.	1	2	3	4	5	6	7
I feel that I will never be good enough in this relationship.	1	2	3	4	5	6	7
I don't trust my partner anymore.	1	2	3	4	5	6	7
I feel frustrated about having to explain myself all the time just to be understood.	1	2	3	4	5	6	7
I only point out my partner's flaws.	1	2	3	4	5	6	7
I feel that I'm giving more than I'm getting in this relationship.	1	2	3	4	5	6	7
It is hard for me to communicate my true feelings.	1	2	3	4	5	6	7
I am angry because my partner does not treat me the way I think he/she should.	1	2	3	4	5	6	7
My partner and I have grown emotionally apart.	1	2	3	4	5	6	7
I am mad at my partner for doing the same mistakes many times over.	1	2	3	4	5	6	7

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