Validity of Marital Conflict Resolution Scale

Using Reflective Measurement Model of PLS-SEM

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Abstract

This research describes the validity of marital conflict resolution scale that formulated from Gottman theory about marital conflict resolution. Marital conflict resolution scale presented to 255 married women in Makassar city. Consisting of 26 items, marital conflict resolution scale there are two dimensions consisting of constructive resolution and destructive resolution. Constructive resolution consist 11 items and destructive resolution consist 15 items has had five choices of the answer. The answer ranging from strongly agree (1 score) to strongly disagree (5 score) for favorable item, and unfavorable items get the opposite score. Validity of marital conflict resolution scale is tested using the reflective measurement model of PLS-SEM. The results of the outer model and the structure or inner model have shown the original sample estimate $\geq$ 0.50, this means that each indicators can represent both dimensions.

Keywords: marital conflict resolution; constructive resolution; destructive resolution; reflective measurement model

Abstrak

Penelitian ini menguraikan mengenai validitas skala penyelesaian konflik perkawinan yang dirumuskan dari teori Gottman tentang penyelesaian konflik perkawinan. Skala penyelesaian konflik perkawinan diberikan kepada 255 responden wanita menikah di kota Makassar. Terdiri dari 26 item, skala penyelesaian konflik perkawinan memiliki dua dimensi yang terdiri dari penyelesaian konstruktif dan penyelesaian destruktif. Penyelesaian konstruktif terdiri dari 11 item dan penyelesaian destruktif terdiri dari 15 item memiliki lima pilihan jawaban. Jawaban mulai dari sangat setuju (1 skor) hingga sangat tidak setuju (5 skor) untuk item yang menguntungkan, dan item yang tidak menguntungkan mendapatkan skor yang berlawanan. Validitas skala penyelesaian konflik pernikahan diuji menggunakan model pengukuran reflektif PLS-SEM. Hasil outer model dan struktur atau inner model menunjukkan original sample estimate ≥ 0,50, ini berarti bahwa masing-masing indikator dapat mewakili kedua dimensi.

Kata kunci : *penyelesaian konflik pernikahan; penyelesaian konstruktif; penyelesaian destruktif; model pengukuran reflektif*

Introduction

According to Schlenker in Neff and Karney (2002) marriage involves a negotiation process, where couples must be able to determine the roles and characteristics of each who will be accepted in their relationship, if not, conflict will easily occur and become very complex. Research on marital conflict resolution is very important because marital problems can complicate the relationship of husband and wife. Many couples who report disharmony with their partners can last a long time. Resolving marital conflicts or allowing conflicts to continue is a choice that determines the survival of marital life. Allowing conflict to continue to occur is not a wise choice, because ongoing conflict will damage relations between partners. The right strategy is needed to be able to overcome the conflict.

Forste and Flake in Umubyeyi & Mtapuri (2019) observe that there are many factors influencing the use of marital conflict and violence; family size, alcohol use, decision-making power, and education. Conflict and tension do not always indicate instability in marriage, because many couples only face it as a problematic (James & Wilson, 2002).

Research conducted by Gottman over the years, has discussed various strategies and approaches to assess the behavior of married couples during conflict. Gottman (1994) concluded that the resolution of marital conflict can have both positive and negative impacts on marriage. Gottman & Silver (2015) added that marital conflict resolution cannot guarantee continuity of marriage, if conflict resolution is not carried out. Conflict resolution styles or the patterns and sequences used to solve problems generally do not affect overall marital satisfaction. It does appear that one conflict resolution style, assertive/directing, will have more difficulty with higher marital distress than other styles (Chapin, Chapin, & Sattler.2001).

According to Gottman in Miller and Perlman (2009), couples who maintain their marriage tend to resolve conflicts constructively, whereas destructive patterns of conflict resolution show a dangerous attitude towards their marriage. Research conducted by Muin (2014) shows that failure to maintain marriage is caused by destructive conflict resolution. Couples with destructive patterns of conflict resolution often act to attack couples in a rude way. When discussions occur between them, they are usually accompanied by a lot of criticism, rude, defensive and withdraw from their partners.

Hocker & Wilmott in Lim (2000) defines the resolution of marital conflict as a collection of responses or a number of behaviors used by individuals when dealing with conflicts with their partners. Referring to the opinions of experts regarding the definition of marital conflict resolution, the researcher formulated a scale for measuring marital conflict resolution. This scale aims to measure the pattern of marital conflict resolution in married couples. Behavior settlement marriages that are done by married couples, are very diverse and form patterns of behavior that tends to recur when differences or conflicts occur.

A study has been conducted on 56 divorced women and married women in Makassar City through open-ended questions. the study showed different patterns in divorced women and married women. The destructive pattern of marital conflict resolution is found in divorced women, whereas married women show a more constructive attitude and lead to effective problem solving for both parties. A similar study conducted by Bermundes (2008) of 138 married women shows that the style of resolution of marital conflict is dominated by a more constructive style.

Patterns of marital conflict resolution for divorced women usually exhibit destructive attitudes characterized by attacking one another, being rude, or avoiding discussing conflicts openly. This condition is also stated by Halford and Petch, Creedy, & Gamble (2011) regarding the relationship that is accompanied by increasing violence and this violent behavior can predict separation. While women who decide to stay together in marriage show a more constructive attitude, where attitudes displayed include more tolerance towards their partners, trying to talk openly about conflict, and respecting their partners.

Comparing the two preliminary studies, as well as comparing the research that has been done before, then formulated two patterns of marital conflict resolution which are usually displayed on married couples. The first pattern is a constructive pattern and the second is a destructive pattern. This pattern is consistent with Deutsch's opinion in Deutsch, Coleman, & Marcus (2006), regarding constructive conflict resolution processes which tend to be cooperative, whereas destructive conflict resolution processes involve competitive processes. Gottman (1994) revealed that constructive conflict resolution is considered abler to solve the problems it faces effectively. Destructive conflict resolution tends to behave in a destructive manner of relationship with their partner. Both opinions above support the constructive and destructive resolution of conflicts in solving marital problems.

Two dimensions of marital conflict resolution have the following indicators: the constructive dimension has indicators of calming down before discussing conflict, trying to talk about problems even though still sad and angry, giving in and trying to forgive, compromising with their partner, and silencing problems and letting the problem solve itself . The destructive dimension has indicators of expressing harsh words, blaming the partner with sharp allusions, attacking them constantly, avoiding talking about problems, and not being able to remember the goodness of their partners.

Method

Subject

Samples were taken from three regions in the city of Makassar, in the eastern, southern, and northern parts. Furthermore, sampling is done by the data taker, by visiting the place or location that is expected to find participants. Targeted places for data collection include visiting schools where mothers are expected to drop off or pick up their children, visit a number of homes expected to be inhabited by research subjects (information can be obtained through friends or neighbors), collect data at work such as hospital, office, etc. Sampling using non-random sampling type accedental technique (Grasiano, 2000). This method is expected to be in accordance with the characteristics of the research sample. The sample obtained was 255 married women who were the subjects in this study.

Instrument

The scale of marital conflict resolution is formulated through 7 stages; 1) formulating the definition of experts, 2) conducting a survey to find out the condition of the subject, 3) classifying the subject's answers, 4) setting dimensions and indicators based on the survey results, 5) making items, 6) conducting content validity by the validator team, and 7) testing statistics.

The scale of marital conflict resolution consists of 26 items from the constructive dimension, and the destructive dimension (blue print see Table 1). The constructive dimension consists of 11 items and 15 items represent the destructive dimension. Couples who have constructive marital conflict resolution patterns will show high scores on items that indicate constructive actions, and low for items that indicate destructive actions in marital conflict resolution. This measurement tool contains items that have a choice of answers: 1) strongly disagree, 2) disagree, 3) doubtful, 4) agree, and 5) strongly agree.

Table 1. Blue Print of Marital Conflict Resolution Scale

Variable	Dimension	Indicator	Items	Total
Marital Conflict Resolution	Constructive	Calm down before discussing conflict	1,	1
		Trying to talk about problems though still sad and angry.	2 & 3	2
		Defeatism and forgiveness	4 & 5	2
		Compromise with her partner,	6 &7	2
		Silence the problem and let the problem solve itself.	8, 9,10, & 11	4
	Destructive	Expressing harsh words.	12, 13, & 14	3
		Blaming it with sharp allusions.	15 & 16	2
		Attacking continuously.	17 & 18	2
		Avoiding to talk about problems.	19,20, 21, & 22	4
		Can not remember the partner's goodness.	23,24, 25, & 26	4
Sum total item				26

Data Processing Technique

Test the construct validity using reflective constructs from PLS-SEM. Like Confirmatory Factor Analysis, reflective construction in SEM PLS has placed indicators as reflections or manifestations of dimensions. Items that are indicators of marital conflict resolution are processed using the Partial Least (PLS) SEM method. This method is expected to reflect the dimensions of constructive and destructive resolution through indicators. According to Hair, Black, Babin, & Anderson, (2019). Reflective measurement model assessment, in PLS-SEM involves four aspects of each model construct: size and significance of indicator loadings, construct reliability, convergent validity and discriminant validity.

PLS is an alternative analysis method of Structural Equation Modeling (SEM) based on variance. PLS-SEM consists of two models, the measurement model (representing how measured variables represent the constructs) and the structural model (showing how constructs are associated with each other). In PLS-SEM the measurement model is often referred to as the outer model and the structural model is termed the inner model (Hair, Hult, Ringle, Sarstedt, 2017). PLS-SEM can be estimated with consistency in small sample sizes. In addition, a large sample size (> 250) can improve the accuracy and consistency of SEM-PLS estimation results. SEM-PLS also does not require the assumption of data distribution (SEM-PLS is a non-parametric approach; it can work even for extreme data).

The confirmation of theoretical measurement models in PLS-SEM tests the hypothesis that theoretical relationships actually exist between the observed indicator variables and their underlying latent constructs. To do so, variate of the indicators is derived to represent the constructs, similar to the variate that is the building block in all other multivariate methods. With PLS-SEM, to confirm reflective measurement model hypotheses the metrics applied are the size and significance of the loadings and/or coefficients, reliability, convergent validity, and discriminant validity. Note that when confirming measurement models with PLS-SEM the process is referred to as confirmatory composite analysis (CCA), while with CB-SEM it is called confirmatory factor analysis (CFA) (Hair, Black, Babin, Anderson, 2019).

Evaluation of the measurement models of PLS-SEM using reflective measurements models. When assessing reflective outer models, researchers should verify both the reliability and validity. The first step is using composite reliability to evaluate the construct measures' internal consistency reliability. The second step in evaluating reflective indicators is the assessment of validity. Validity is examined by noting a construct's

convergent validity and discriminant validity (Hair, Sarstedt, Marko, & Kuppelwieser, 2014); 1) Internal consistency reliability; composite reliability and Cronbach's alpha greater than 0.70; 2)Convergence validity: loading indicator more than 0.70. (a) the square root average variance extracted (AVE) is greater than the correlation between constructs, (b) the loading indicator to the construct measured is greater than the loading to other constructs (low cross loading). 3) Discriminant validity.

Results and Discussion

Measurement Outer Model Evaluation

The description of construct validity testing for marital conflict resolution consisting of 2 dimensions; constructive resolutions and destructive resolutions. The constructive dimension has five indicators and destructive dimensions also have five indicators that reflect these dimensions. The items in the constructive dimension are 11 items, while the destructive dimensions are 15 items, so the total items in this measurement are 26 items.

These items follow the validity test stage using reflective model measurement PLS-SEM, which is a measurement technique used to find out whether each indicator has reflected the construct. The indicator is declared valid if it has a loading factor above 0.5 for the intended construct. The output of the measurement results includes the following factors:

Table 2. Measurement Outer Model

	Original Sample Estimate	Mean of Subsamples	Standard Deviation	T-Statistic
Constructive				
Conp1	0.652	0.509	0.394	1.654
Conp10	0.564	0.445	0.314	1.797
Conp11	0.954	0.781	0.542	1.759
Conp2	0.707	0.582	0.432	1.639
Conp3	0.958	0.783	0.544	1.762
Conp4	0.678	0.580	0.388	1.745
Conp5	0.650	0.566	0.375	1.731
Conp6	0.708	0.568	0.419	1.689
Conp7	0.681	0.533	0.382	1.783
Conp8	0.662	0.537	0.395	1.674
Conp9	0.938	0.768	0.533	1.759
Destructive				
desp12	0.701	0.680	0.160	4.368
desp13	0.709	0.671	0.173	4.109
desp14	0.708	0.665	0.160	4.419
desp15	0.758	0.704	0.162	4.667
desp16	0.714	0.683	0.169	4.227
desp17	0.620	0.608	0.133	4.657
desp18	0.689	0.658	0.149	4.623
desp19	0.683	0.638	0.163	4.187
desp20	0.625	0.597	0.149	4.201
desp21	0.953	0.932	0.189	5.034
desp22	0.956	0.932	0.190	5.038
desp23	0.654	0.632	0.166	3.947
desp24	0.736	0.706	0.156	4.734
desp25	0.685	0.668	0.183	3.745
desp26	0.662	0.636	0.168	3.936

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Validity testing for reflective indicators uses the correlation between indicators and construct. Measurement of reflective indicators on marital conflict resolution, both in constructive and destructive dimensions shows that the indicators of both dimensions have the same characteristics. Thus it is more appropriate to use reflective indicators to measure the construction of marital conflict resolution.

The results of this test indicate that each item represents an indicator of both types of marriage conflict resolution. Constructive and destructive of marital conflict resolution which are dimensions of the construct are declared valid in measuring marital conflict resolution. This is shown through the original sample estimate ≥ 0.50, that all items are declared valid, and all indicators of marital conflict resolution from both dimensions, are significant to describe of marital conflict resolution.

Measurement of the outside of PLS SEM is the measurement of the reflective model. Outer Model or Outer Measurement is also called the outer loading. Images of the results of constructive and destructive marital conflict resolution dimensions are as follows:
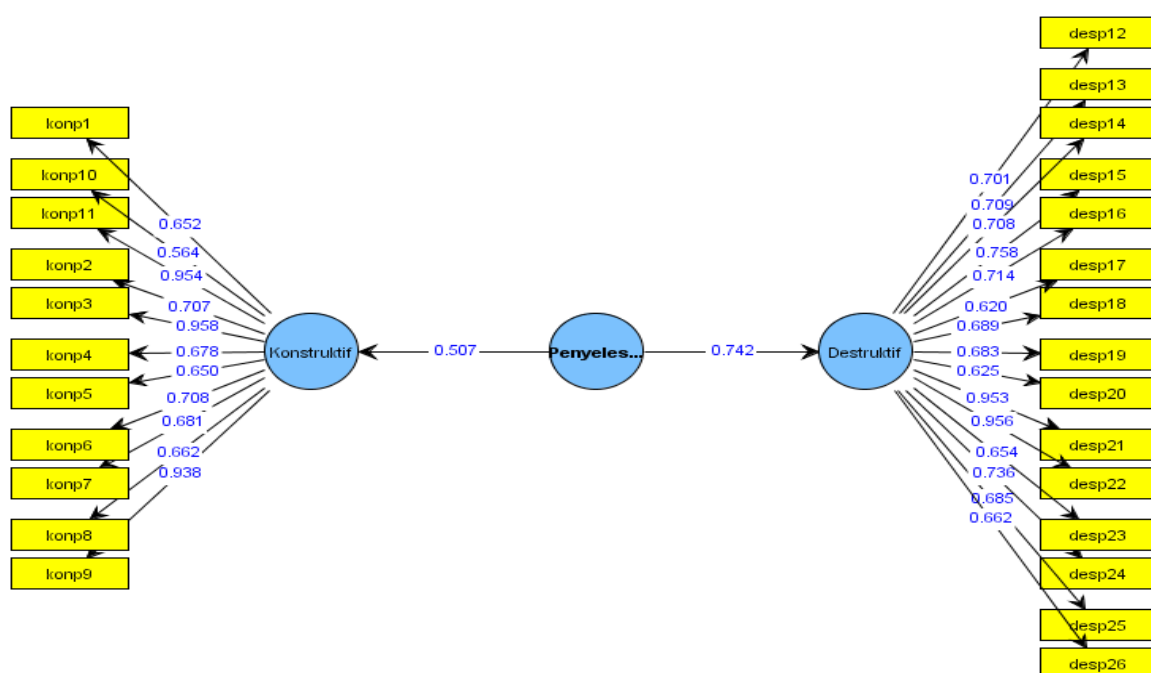

Figure 1. Results of Constructive and Destructive Marital Conflict Resolution Dimensions

The constructive dimension represented by 11 indicators has been tested and declared significant to measure constructive marital conflict resolution. The indicator of constructive conflict resolution has an outer model > 0.5, meaning that the indicators of this dimension can explain the construct. While the destructive dimension represented by 15 indicators also shows an outer model > 0.5 so that the indicator can reflect the construct that is measured.

Structural Model or Inner Model

After the estimated model meets the Outer Model criteria, then the structural model (inner mode) is tested. Following are the R-Square values in the construct in table 3.

Table 3. R Square

	R-square
Constructive	0.257
Destructive	0.551
Marital conflict resolution	

The table above shows that the constructive dimension can explain marital conflict resolution by 0.257 or 25.7%, while the destructive dimension can explain the variance of marital conflict resolution by 0.551 or 55.1%.

Table 4. Results for Inner Model

	Original Sample Estimate	Mean of Subsamples	Standard Deviation	T-Statistic
Conflict Resolution -> Constructive	0.507	0.592	0.113	4.477
Conflict Resolution -> Destructive	0.742	0.751	0.089	8.310

The table above shows that the effect of conflict resolution on constructive resolution is significant with a T-statistic of 4,477 (> 1.96). The original sample estimate value is positive that is 0.507, which shows that the relationship between marital conflict resolution and constructive resolution is positive.

The table above shows that the effect of constructive conflict resolution is significant with T-statistics of 4.477 (> 1.96). The estimated value of the original sample is positive, 0.507, which shows that the relationship between marital conflict resolution and constructive resolution is positive. Likewise, the effect of conflict resolution on destructive resolution is significant with a T-statistic of 8.310 (> 1.96). The estimated value of the original sample is positive, which is 0.742, which shows that the relationship between marital conflict resolution and destructive resolution is positive.

Table 5. Composite Reliability

	Composite Reliability
Constructive	0.933
Destructive	0.944
Marital conflict resolution	0.879

Table 6. Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
Constructive	0.567
Destructive	0.533
Marital conflict resolution	0.229

The measurement results of marital conflict resolution, show that the contribution of each indicator to two types of marital conflict resolution, has shown a strong contribution to marital conflict resolution. Composite reliability also shows the very high level of category measurement reliability for each indicator, which is 70 0.70. Thus the convergent validity reflected through AVE for each indicator is ≥ 0.50, original sample estimate > 0.50, and composite reliability> 0.70, stating both dimensions of marital conflict resolution can describe the construct of marriage conflict resolution well.

Conclusion

Based on the results of testing validity of the marital conflict resolution scale consisting of two dimensions, that; constructive dimensions which have 5 indicators. The results of the validity test showed that 26 items from the scale of marital conflict resolution were declared valid. The constructive dimension represented by 11 indicators has been tested and declared significant to measure constructive marital conflict resolution. The

indicator of constructive conflict resolution has an outer model > 0.5, meaning that the indicators of this dimension can explain the construct. While the destructive dimension represented by 15 indicators also showed an outer model > 0.5 so that the indicator can reflect the construct that is measured.

The results model measuring test of marital conflict resolution, show that the contribution of each indicator to the two types of marital conflict resolution, showed a strong contribution to marital conflict resolution. Composite reliability also showed the level of measurement reliability is very high category for each indicator, which is ≥ 0.70. Thus convergent validity reflected through AVE for each indicator is ≥ 0.50, the original sample estimate is > 0.50, and composite reliability is > 0.70, stating both types of marital conflict resolution can describe marriage conflict resolution well.

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