VALIDATION OF THE INDONESIAN VERSION OF THE PARTNER'S EMOTIONAL DEPENDENCY SCALE (SED): A RASCH MODEL APPROACH

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Abstract

This research aimed to verify the Indonesian version of the Partner's Emotional Dependency Scale (SED), originally developed by Camarillo et al. (2020) in Spanish. The SED is a unidimensional scale with 22 items designed to measure emotional dependence on a partner. This is the first time the instrument has been adapted, particularly for use in Indonesia. The validation process employed the Rasch model to ensure the scale's reliability and accuracy in the Indonesian context. The study involved 229 participants (F = 185, M = 44), aged between 18 and 35 ($M_{Age} = 25.5$, SD = 4.23). The results confirmed the unidimensionality of the SED scale, with 2 – 3 items contributing to the second dimension. The 5-point Likert scale functioned effectively, enabling respondents to distinguish between different response options. The person-item interaction reliability was found to be .85, and the item reliability was .98, indicating excellent reliability of the SED scale items. All items were evenly distributed across the scale from high to low difficulty. However, items number 1, 3, and 7 (SED 1, SED 3, SED 7) were identified as less suitable for measuring emotional dependence and respondents found it difficult to answer these specific questions. Furthermore, three items (SED 5, SED 6, and SED 19) exhibited Differential Item Functioning (DIF) due to gender bias. The study concludes that, with some revisions and improving the translation, the Indonesian version of the SED scale could be a valuable tool for measuring the level of emotional dependence on a partner in the Indonesian population.

Keywords: partner's emotional dependency scale; Rasch model; validity

INTRODUCTION

Individuals who have entered the stage of young adult development begin to carry out tasks. developmental their including establishing romantic relationships (Arnett, 2014). Romantic relationships inevitably involve a strong emotional bond, leading to potential emotional dependence on their partners. Emotional dependence is a rational disorder that manifests addictive behavior in romantic relationships (González-Jiménez & Hernández-Romera, 2014). As quoted in Estévez et al., (2017), Castello described emotional dependence as an extreme affective need by individuals in romantic relationships. The overwhelming fear of separation had an impact on emotional bonds, rendering individuals helpless and leading to pathological behavior.

Individuals with emotional dependence exhibit characteristics, such as emotional

powerlessness and illusions, create expectations, and attributions related to their partners. Consequently, emotionally dependent individuals may be more susceptible to their partners who exploit them. emotional Additionally, dependence represents a persistent behavioral pattern driven by unmet emotional needs, leading individuals to engage in maladaptive behaviors within their relationships with others (González-Jiménez & Hernández-Romera, 2014).

Emotional dependency shares similarities with interpersonal dependency in that both exhibit characteristics of dependence on other individuals. However, interpersonal dependence has the main motivation to maintain the need to be nurtured and supported through every interpersonal relationship (Baumeister & Leary, 1995; Wang et al., 2014). The difference is that individuals with emotional dependence can be independent in other social relationships beside their partners (Camarillo et al., 2020). Individuals with emotional dependence have similarities with addiction disorders in which individuals are helpless, have unconditional love, and control behavior (Alves et al., 2023; Camarillo et al., 2020; Lemos et al., 2019). One risk factor that could lead individuals to develop an emotional dependency on their partners had an insecure attachment in childhood with their parents and generally applied when individuals grow up in romantic relationships (Hoover & Jackson, 2021; Huh et al., 2020; Kerns & Brumariu, 2014; Negrini, 2018). Adult individuals sought comfort and security from their partner, desired to be with them during difficult times, and protested when their partner was not present (Kemer et al., 2016). Caldwell and Shaver (2015), stated that anxiety and avoidant attachment were associated with difficulty managing negative emotions and low levels of resilience. Anxiety attachment was associated with excessive activation of high ruminations and negative emotions, whereas avoidant attachment was associated with high emotional distress and limited understanding of emotional status. In addition, Camarillo et al., (2020) also argued that low self-esteem, accompanied by obsessive personality characteristics, and traumatic experience in past relationships also caused individuals to have an emotional dependency.

Indonesian culture emphasizes collectivism and interdependence. However, this cultural trait can potentially lead to emotional dependency in intimate relationships. Research suggests a potential risk of high emotional dependence is linked to a higher likelihood of intimate partner violence (Arbinaga et al., 2021; Momeñe et al., 2022; Wahyuningrat et al., 2024). This is concerning, especially considering that the Badan Pusat Statistik (BPS) reported 5.526 cases of intimate partner violence in 2022. Furthermore, the Komisi Nasional Anti Kekerasan terhadap Perempuan (Komnas Perempuan) reported 289.111 cases of

gender-based violence in 2023 cases, of which 284.741 cases occurred in intimate relationships. Given this information, it becomes crucial to validate a culturally appropriate tool in Indonesia to identify unhealthy levels of dependence on a partner, which can leave individuals more vulnerable to abuse.

Camarillo et al., (2020) developed a tool known as Escala de measuring Dependencia Emocional de la Pareja or Partner's Emotional Dependency Scale (SED). The development of this measuring instrument was first carried out in Basque Country, Spain. The initial researchers analyzed the data using the Exploratory Factor Analysis (EFA) to ascertain the fundamental structure within a set of measured variables of the Cuestionario de Dependencia Emocional (CDE) or Emotional Dependency Questionnaire. EFA was generally used when researchers wanted to develop measuring tools and identify relationships between construct variables in constructing constructs. SED was first conducted on 166 respondents consisting of 53 men and 113 women from Spain with an age range of 21 - 63 years. According to the findings carried out by Camarillo et al., (2020), SED had high internal consistency ($\alpha = .90$) and construct validity of 45.3% variance of the variables studied. So far, the SED has never been adapted to other language versions and has been carried out in different countries, and no other validity test studies have been conducted.

EFA was utilized as a dependent technique to identify the inherent relationship or structure among the variables in the analysis (Sürücü et al., 2022). Watkins (2018), explained that EFA was a multivariate statistical method fundamental in developing and validating measuring tools and psychological theories. Factor analysis also facilitates the structure of the correlation between variables in large numbers, such as test scores, test items, and questionnaire responses, by defining a several correlated variables referred to as factors (Hair et al., 2009). The weakness of the measurement method using EFA there was no information regarding fit items.

Apart from EFA, there were several other psychological measurement methods which is Classical Test Theory (CTT) to determine reliability and other characteristics of measurement instrument (Bichi, 2016). CTT was developed to measure measurement errors and solve problems, such as correcting dependencies between variables to reduce measurement errors (Steyer, 2015). CTT was used to predict the test results considering students' abilities and the questions' difficulty level. However, CTT had several weaknesses in its measurement of education. When different tests are used to measure the same thing and are administered to different students, the comparison between items and respondents is invalid. According to (Idaka & Idaka, 2014), reliability pertains to the consistency of observed scores when the same instrument is administered multiple times.

Weaknesses in CTT, particularly its inability to account for item difficulty variation were complemented subsequently by Item Response Theory (IRT). IRT is а psychometric approach to examines the relationship between respondents and items. IRT does not depend on a particular item with people's abilities when working on that item. IRT has unique information related to scale psychometric data. such as scale item discrimination and difficulty threshold (Dåderman & Kajonius, 2022). However, IRT has the disadvantage of not directly providing relevant psychometric information from the measuring instrument. Psychometric indices derived from IRT models may not fully inform predictive validity. In the context of IRT, three essential logistic parameters exist: item difficulty, item discrimination, and the guessing parameter. Rasch model simplifies the framework by assuming that the item discrimination is equal across all items. As a result, the Rasch model only includes two parameters of IRT: item difficulty and item discrimination. In essence, the Rasch model

represents a specialized case within the broader IRT framework, emphasizing simplicity and fundamental measurement principles (Thomas, 2019).

The Rasch model is a psychological measurement framework that provides a mathematical framework for comparing test result data (Bond & Fox, 2015). Boone (2016) elucidated that Rasch model analysis is employed to enhance the precision of the tools' underlying concept, ascertain the quality of the instrument, and compute the respondent's ability. Utilizing the Item Response Theory (IRT) approach, the Rasch model employs logits, or the natural logarithm of the likelihood that a respondent will answer an item correctly, and also estimates the associated error rate. The Rasch model's rating scale of the Rasch model is treated as an ordinal scale. (Sumintono, 2016) contended that individuals with higher abilities are more likely to answer correctly than others. A variant within the Rasch framework is the Rasch Rating Scale Model (RSM), which, in dichotomous data, offers an additional feature: besides providing predictions about people and the difficulty threshold of each item, it also establishes a common rating scale boundary for all items (Bond & Fox, 2015).

The strength of the Rasch model, in comparison to the Classical Test Theory method lies in the capability to anticipate missing information by analyzing systematic patterns in responses (Petrillo et al., 2015). There are multiple benefits of the Rasch model: 1) evaluating items that are deemed fit and identifying potential biases within them; 2) item calibration is not affected by sample capability; 3) the calibration standard errors can serve as a means to assess the precision of individual items in terms of their accuracy; 4) it is possible to predict the difficulty of items across different samples; 5) comparing abilities between individuals is feasible, even if they have not responded to identical items; 6) the chi-square statistic for person fit serves as a valuable tool for evaluating the measurement quality; 7) Rasch models facilitate test construction and design (Chan et al., 2014; Zamora-Araya et al., 2018)

Based on the information provided, it is essential to adapt and validate the Indonesian version of the SED using the Rasch model to ensure its cultural relevance and accurately measure emotional dependence within Indonesian population. Additionally, the model method Rasch also examines reliability, validity, item-fit. and unidimensionality of the scale. also Differential Item Functioning (DIF) to identify items with bias and allows for the refinement to improve its accuracy. The validated SED in the Indonesian context, can be for researchers valuable seeking psychometric data to examine the association dependence between emotional and relationship satisfaction. It can be used in therapy settings to assess emotional dependence and guide intervention. Furthermore, this study will offer insights into the application of the Rasch model for testing the validity of a measuring instrument. The results of the study can also serve as a reference to prevent the misuse and abuse of psychological tests.

METHOD

Participants

Participants were non-randomly selected from 229 respondents, consisting of 185 female (80.8%) and 44 male (19.2%). The number of respondents follows the sample size rule in the Rasch Model, which is approximately 150-250, with a logit of 99% or a high stake (Sumintono & Widhiarso, 2015).

The average age of the respondents was 25.5 years (SD = 4.23) ranging from 18-35 years old in the general population. The majority of the population were active workers (52.8%) and bachelor students (28.9%) with most of the ethnicity being Javanese with 79.5%. Whereas the civil status, 42.4% of the sample was dating and 24.5% was married or engaged.

Inclusion criteria for participants in this study

are adults aged 18 to 35 years old, male and female, currently or have been in a romantic relationship (dating, engaged, or married) for more than 6 months. The exclusion criteria for participants were adults aged 36 years and over, male and female who had never been in a romantic relationship (dating, engaged, or married), and had a romantic relationship for less than six months.

Instruments

In this study, researchers employed *Escala de* Dependencia Emocional de la Pareja (SED) or Partner's Emotional Dependency Scale developed by Camarillo et al. (2020) to assess emotional dependence on a partner. This instrument contains 22 items and was a unidimensional measuring emotional dependence on a partner using various questions, considering the diversity of this construct. The SED used a 5-point Likert scale consisting of five answers, namely "very wrong," "partially wrong," "somewhere in between," "partly true," and "very true." As the score increases, emotional dependency also increases, except for item 1 (SED 1) which is inverted.

Procedure

Initially, researchers sought approval to adapt and validate the SED measuring instrument via email from the copyright owner of the SED. They granted permission for us to adapt their instrument into an Indonesian version, with the condition that we appropriately cite it. The original English version was translated into Indonesian by an expert proficient in both languages. The Indonesian version of the SED was then back-translated to English to assess whether its meaning had changed (Klotz et al., 2023).

Data collection

The researcher used a survey method via Google Form as a platform to collect data. We use social media platforms to reach out to more subjects. A survey is a research tool that prioritizes external validity or attempts to generalize from a population sample. The survey method is an important data collection tool and is used to collect information from an individual perspective from a large group (Jones et al., 2013).

Analytical technique

Data analysis used the Rasch Model, a psychological measurement method that compared response data from measuring instruments. The Rasch model used logit to answer items and assess errors related to items. Data analysis using Winstep version 5.1.0, it provides several data analysis features for the Rasch model, including Wright item reliability, map, person reliability, person and item interaction, construct validity by looking at the percentage of variance explained, outfit and infit, rating scale validity, and Differential Item Functioning (DIF).

A person-item map, also referred to as a Wright map, provides an overview of the respondent's location to be compared with the item's location using graphic visualization, such as scale (Briggs, 2019). Reliability in the Rasch Model is obtained through 2 things, namely item reliability and people reliability. The item reliability index determines that the same item given to different people will still behave similarly (Bond & Fox, 2015). While the reliability index of the person who determines the respondent given a parallel set of items will still measure the same construct (Wright & Masters, as quoted in Bond & Fox, 2015).

The item's accuracy is known as the infit and outfit mean square. If it does not align with the pattern of responses to items targeted by respondents or vice versa, it is considered inconsistent. On the other hand, clothing measures the pattern of responses to items with a certain level of difficulty in respondents or in reverse (Sumintono & Widhiarso, as quoted in Sumintono, 2016). This study also described the information function of each item (ICC). Furthermore, this study also provides DIF analysis. DIF refers

to statistical characteristic of a test question that suggests that individual from different groups may answer the question differently. Items with a p-value below .05 indicate that the item is infected with DIF (Sumintono, 2016).

ETHICAL CLEARANCE

The research received ethical approval from the ethics committee at the University of Surabaya (UBAYA) under the reference number 58/KE/IV/2022.

RESULT AND DISCUSSION

Unidimensionality

The Rasch model method can be carried out on a unidimensional or multidimensional scale. The SED scale is a unidimensional scale with only one psychological construct to be measured: emotional dependence on a partner. Unidimensional analysis was determined through the value of raw variance explained by measures. Unidimensional dimensions must be below 40% to obtain accurate measurements and indicate that the scale is unidimensional (Holster & Lake, 2016). Data analysis found the value of raw variance explained by measures on the SED scale was 37.5%. However, it showed that the unexplained variance in the 1st contrast was above 2.0 with Eigenvalue above 5%. Based on Winstep Manual, there about 2 - 3 items worked on the second dimensions.

Rating scale diagnostic

The SED scale used a 5-point Likert scale consisting of five answers, namely "very wrong", "partially wrong", "in between", "partially correct", and "very true". The diagnostic rating scale was used to evaluate whether respondents could interpret the differences between the answers. Based on the results of data analysis in Table 1, the threshold showed that the higher the scale, the higher the threshold value. It showed that respondents could distinguish one answer from another.

Rating Searce Diagnostic							
Rating	Score	f	%	Average	Infit	Outfit	Threshold
Scale				Measure	MNSQ	MNSQ	
0	0	1441	29	98	.89	.94	NONE
1	1	1023	20	49	1.12	1.16	41
2	2	1023	20	22	.93	.91	42
3	3	1039	21	.09	.94	.98	10
4	4	503	10	.23	1.20	1.30	.94

Table 1.Rating Scale Diagnostic

Reliability

Based on the data analysis, the Cronbach's alpha coefficient is .85. Sumintono, (2016) emphasized that the Cronbach's alpha coefficient represents reliability. If the Cronbach's alpha coefficient is above .80 then the reliability of the SED scale is very good. Furthermore, item reliability showed a value of .98 (p > .80), so it can be concluded that the SED scale had very good item quality. Then, the analysis showed that the separation index is > 7.00 (7.16; 7.59), so the SED scale was concluded to have good quality because it successfully distinguished different groups of respondents and items. Additionally, the result also showed person reliability which is comparable to the reliability of traditional tests. Low values suggested limited person measure variability or a scarcity of items. Based on the data analysis, person reliability was .82 and .85 (p > .80). A high level of person reliability implies that individuals who are estimated to have higher measures are more likely to possess higher measures compared to those who are estimated to have lower measures.

Item fit

The Rasch model analyzed items through item fit, outfit, and point measure correlation analysis. Infit refers to a fit statistic that considers the information-weighted deviation of an item's response pattern from the expected pattern predicted by the Rasch model. It considers the precision of a person's ability estimates at a particular point on the trait continuum. An infit value close to 1 indicates a good fit, meaning that the item aligns with the overall pattern of responses and provides useful information for measurement. On the other hand, outfit is a fit statistic that is less influenced by extreme responses and is more sensitive to unexpected patterns in an item's response pattern. An outfit value close to 1 indicates a good fit, whereas Linacre (n.d.), argued that the meansquare value for the ideal infit and outfit is between 0.5 to 1.5. Items showing significant misfit may require revision, removal, or further investigation to ensure the validity and reliability of the test.

Considering the findings obtained from the data analysis, it is shown that SED 7 "Apakah Anda membenarkan pertentangan, kritik, atau perselingkuhan pasangan sebagai perbuatan atau kejahatan ringan di dalam hubungan?" [Do you often justify your partner's conflicts, criticisms or infidelities as a lesser evil in the relationship?] was not fit to measure emotional dependence on a partner (infit MNSQ = 1.76; outfit MNSQ = 2.17). Thus, SED 7 needs revision to better align with the construct.

The data analysis outcomes also revealed the overall point measure correlation presented in Table 2. Point measure correlation refers to the relationship between respondents' ability and the difficulty of the items. According to Sumintono (2016), a good point measure correlation value is between .4 to .85. In the Indonesian version of SED, most of the items' value had a positive correlation and met the criteria, except for item 1, 3, and 7, with the value of -.09, .38, and .24, respectively. This suggests that respondents found it difficult to answer these specific questions. As a result, it is necessary to revise these three items and improving the translation.

Table 2.					
Item Fit	Infi4	Tufit	04fi4	Q.,46;4	Dt Maaguma
Item Number	Infit MNSQ	Infit ZSTD	Outfit MNSQ	Outfit ZSTD	Pt-Measure Correlation
SED 10	1.38	3.0	1.25	1.7	.50
SED 7	1.76	6.2	2.17	7.3	.24
SED 18	1.13	1.4	1.04	.4	.56
SED 16	.86	-1.6	.82	-1.7	.57
SED 17	1.08	.9	1.08	.7	.43
SED 20	.92	9	.93	7	.60
SED 22	1.12	1.4	1.08	.9	.50
SED 19	.94	8	.93	7	.54
SED 6	.81	-2.5	.78	-2.7	.65
SED 11	.95	6	.93	8	.61
SED 15	1.09	1.1	1.09	1.1	.49
SED 9	.86	-1.9	.85	-1.9	.68
SED 8	.78	-3.1	.78	-2.8	.49
SED 3	1.35	4.1	1.37	4.0	.38
SED 14	.66	-4.9	.68	-4.3	.52
SED 21	.73	-3.8	.74	-3.4	.55
SED 12	1.02	.2	1.06	.8	.44
SED 4	.91	-1.1	.91	-1.1	.59
SED 2	.88	-1.6	.94	7	.41
SED 13	.96	5	.94	7	.50
SED 5	1.12	1.4	1.19	2.0	.44
SED 1	1.17	1.9	1.49	4.6	09

Wright map

Construct validity can be observed through the Wright Map in the analysis using the Rasch model as pictured in Figure 1. The Wright Map can explain the difficulty level in each item and the respondent's ability to answer each item. The difficulty level of items on the Wright map is presented linearly from the easiest (bottom) and the most difficult (top) (Boone, 2016). The SED scale tended to have an even distribution of item difficulty levels, meaning that there were items that were the most difficult, the easiest, and existed between the two. Parallel items indicated that they measured aspects of the same emotional dependence. Items on the SED scale indicated that they were less able to cover respondents with a low ability level. However, the items on the SED scale were sufficient to cover respondents with average and above average ability levels.



Figure 1. Wright Map

In the Rasch model, the Test Information Function (TIF) graph is expected to peak at a specific trait level. A higher value at this level suggests that the test is more reliable in assessing the trait at that particular level. In Figure 2, it showed that the scale is reliable to measure emotional dependency on partner.



Figure 2. Test Information Function (TIF)

Differential Item Functioning (DIF)



Figure 3. DIF Plot

Differential Item Functioning (DIF) refers to a statistical phenomenon in psychometrics

and educational measurement where different groups of individuals, such as different

genders, pre-ethnicities, language or backgrounds, exhibit different probabilities of success on specific test items, even when they possess the same level of the underlying trait being measured. DIF analysis is commonly used in test development and assessment to ensure fairness and validity of the test. There different are methods and statistical techniques employed to assess DIF, such as Mantel-Haenszel the method, logistic regression, IRT models, and many others (Cameron et al., 2014; Hagquist & Andrich, 2017). These techniques assist quantify the degree and nature of how test items behave differently based on various groups, which then helps assess the impartiality of those items across different populations.

In accordance with the findings from the DIF analysis conducted to examine gender bias, utilizing the Chi-Squared DIF summary method, the probability was below .05. If seen from Table A1 and Figure 3, it was known that SED 5, 6, and 19 had a greater distance difference than the other items. On SED 5 (p .048), "Apakah Anda membutuhkan pasangan untuk menunjukkan kasih sayang secara terus menerus?" [Do you need your partner to continually show you affection?], it appeared that men had difficulty giving a response. Indonesia, with its patriarchal culture, provided the underlying context implying a specific gender role, wherein women were expected to show continuous affection towards their partners rather than men. Women tend to be socialized to express emotions more freely, while men may face suppress societal pressures to certain resulting differences emotions. in in emotional expression patterns (Hyde, 2014).

Other than that, SED 6 (p = .021), "Apakah Anda melakukan aktivitas yang tidak disukai hanya untuk membuat pasangan senang atau menghindari berakhirnya hubungan?" [Do you normally do things or activities that you don't like just to please your partner or avoid ending the relationship?], exhibited lower pvalue among SED 5 and SED 19. This item is more difficult for women to respond compared to men. This is because the phrase "do things or activities that you don't like" contains several meanings. It may refer to unwanted sexual activities or activities related to their partner's hobbies that women may not enjoy. Women may engage in activities they dislike to maintain and strengthen their relationships. They may believe that compromising and making sacrifices will contribute to relationship satisfaction and longevity. Women may fear that expressing their dislike for certain activities or refusing their partner's requests could lead to conflict or rejection (Inman & London, 2022). They may feel pressure to please their partner to maintain the relationship and avoid potential negative consequences. Some women may have a tendency towards self-sacrifice and prioritize their partner's happiness over their own (Johnson et al., 2019). They may believe that engaging in activities they dislike is a demonstration of love and commitment. According to (Monk et al., 2014) the willingness of individuals to prioritize their partner's interests or make sacrifices in the relationship is greatly influenced by the level of commitment. Commitment not only predicts the frequency of sacrifices made for affects partners but also individuals' satisfaction with making sacrifices for their partner's well-being (Cao et al., 2017; Lin et al., 2022)

SED 19 (p = .0421) "Apakah Anda merasa tidak berdaya dan kesepian saat Anda tidak memiliki pasangan?" [Do you feel helpless and lonely when you have no partner?] was also indicated gender biased, in which men had difficulty to respond this item. Based on (McKenzie et al., 2018) research had found that men are less able and less interested than women to build social relationship with others. Whereas women tend to need to build connectedness with other people, because they are prone to feel lonely when they are not in relationship. Some research had found that both men and women can experience feeling lonely when they do not have romantic partner (Dahlberg et al., 2018; Hawkley et al., 2010; Victor et al., 2012). However, Indonesian cultural norms often promote emotional restraint, particularly for men. Men may feel societal expectations to be stoic and maintain a sense of emotional control, which can limit their willingness to openly express vulnerability (Linceviciute et al., 2022). Men Indonesia may face specific role in expectations, such as being the protectors of their families. These expectations can influence their behaviors and attitudes, as displaying vulnerability might be perceived as a departure from these roles and weakness (Yeung et al., 2015).

DISCUSSION

Based on the research findings, it is demonstrated that the adapted version of the Partner's Emotional Dependency Scale (SED) in the Indonesian version is valid for use in the Indonesian population. The outcomes of the unidimensional analysis demonstrated that the SED scale that measures emotional dependence on partner is a unidimensional scale, yet several items had second dimensions. The four responses following the order indicated that the threshold value increased from negative to positive. The reliability of the SED scale was included in the very good category (Cronbach Alpha = .85) with item reliability which was also very good (p = .98). Based on item fit analysis, it was shown that SED 7 is an unfit item compared to other items.

One limitation encountered during the data collection phase of this study was that the number of respondents did not adequately represent the entire population in Indonesia. In addition, translating some items from English to Indonesian was difficult for the respondents to understand. Further research should improve SED 1, SED 3, and SED 7, which were not designed to measure emotional dependence on a partner and should improve the translation. In addition, further researchers can explore the reliability and validity in more specific populations, such as populations of certain age-specific developmental stages.

CONCLUSION

These findings will contribute to providing Indonesian researchers, who are examining emotional dependence on partners, with a validated and culturally adapted tool. Furthermore, researchers investigating this construct will have the ability to compare their studies, thereby reinforcing the collective research on emotional dependence among partners in Indonesia.

REFERENCES

- Alves, D. F., Camacho, T. P. P., & Reis, E. E. S. (2023). Emotional dependency and the impacts on the lives of people: An integrative literature review. *International Journal of Scientific Research*, 12(8), 5–9. https://doi.org/10.36106/ijsr/9026692
- Arbinaga, F., Mendoza-Sierra, M. I., Caraballo-Aguilar, B. M., Buiza-Calzadilla, I., Torres-Rosado, L., Bernal-López, M., García-Martínez, J., & Fernández-Ozcorta, E. J. (2021). Jealousy, violence, and sexual ambivalence in adolescent students according to emotional dependency in the couple relationship. *Children 2021*, 8(993), 1–14. https://doi.org/10.3390/children 8110993
- Arnett, J. J. (2014). Emerging adulthood: The winding road from the late teens through the twenties. Oxford University Press. https://doi.org/10.1093/acprof:oso/97801999 29382.001.0001
- 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. https://doi.org/10.1037/0033-2909.117.3.497
- Bichi, A. A. (2016). Classical test theory: An introduction to linear modeling approach to test and item analysis. *International Journal for Social Studies*, 2(9), 27–33. https://www.researchgate.net/publication/317 012320
- Bond, T.G., & Fox, C.M. (2015) Applying the Rasch model: Fundamental measurement in the human sciences. Routledge

- Boone, W. J. (2016). Rasch analysis for instrument development: Why, when, and how? *CBE Life Sciences Education*, *15*(4). https://doi.org/10.1187/cbe.16-04-0148
- Briggs, D. C. (2019). Interpreting and visualizing the unit of measurement in the Rasch model. *Measurement: Journal of the International Measurement Confederation*, 146, 961–971. https://doi.org/10.1016/j.measurement.2019.0 7.035
- Caldwell, J. G., & Shaver, P. R. (2015). Promoting attachment-related mindfulness and compassion: A wait-list-controlled study of women who were mistreated during childhood. *Mindfulness*, 6(3), 624–636. https://doi.org/10.1007/s12671-014-0298-y
- Camarillo, L., Ferre, F., Echeburúa, E., & Amor,
 P. J. (2020). Partner's emotional dependency scale: Psychometrics. Actas Espanolas de Psiquiatria, 48(4), 145–153. https://actaspsiquiatria.es/index.php/actas/arti cle/view/308
- Cameron, I. M., Scott, N. W., Adler, M., & Reid, I. C. (2014). A comparison of three methods of assessing differential item functioning (DIF) in the hospital anxiety depression scale: Ordinal logistic regression, Rasch analysis and the Mantel chi-square procedure. *Quality* of Life Research, 23(10), 2883–2888. https://doi.org/10.1007/s11136-014-0719-3
- Cao, H., Fang, X., Fine, M. A., Ju, X., Lan, J., & Zhou, N. (2017). Sacrifice, commitment, and marital quality in the early years of Chinese marriage: An actor–partner interdependence moderation model. *Journal of Social and Personal Relationships*, 34(7), 1122–1144. https://doi.org/10.1177/0265407516670041
- Chan, S. W., Ismail, Z., & Sumintono, B. (2014). A Rasch model analysis on secondary students' statistical reasoning ability in descriptive statistics. *Procedia - Social and Behavioral Sciences*, 129, 133–139. https://doi.org/10.1016/j.sbspro.2014.03.658
- Dåderman, A. M., & Kajonius, P. J. (2022). An item response theory analysis of the Trait Emotional Intelligence Questionnaire Short-Form (TEIQue-SF) in the workplace. *Heliyon*, 8(2),1-7.

https://doi.org/10.1016/j.heliyon.2022.e0888 4

- Dahlberg, L., Agahi, N., & Lennartsson, C. (2018). Lonelier than ever? Loneliness of older people over two decades. Archives of Gerontology and Geriatrics, 75, 96–103. https://doi.org/10.1016/j.archger.2017.11.004
- Estévez, A., Urbiola, I., Iruarrizaga, I., Onaindia, J., & Jauregui, P. (2017). Emotional dependency in dating relationships and psychological consequences of internet and mobile abuse [Dependencia emocional y consecuencias psicológicas del abuso de internet y móvil en jóvenes]. *Anales de Psicología*, 33(2), 260–268. https://dx.doi.org/10.6018/analesps.33.2.255 111
- González-Jiménez, A. J., & Hernández-Romera, M. del M. (2014). Emotional dependency based on the gender of young adolescents in Almeria, Spain. *Procedia - Social and Behavioral Sciences*, 132, 527–532. https://doi.org/10.1016/j.sbspro.2014.04.348
- Hagquist, C., & Andrich, D. (2017). Recent advances in analysis of differential item functioning in health research using the Rasch model. *Health and Quality of Life Outcomes*, *15*(1), 181. https://doi.org/10.1186/s12955-017-0755-0
- Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis: A global perspective (7th edition)*. Prentice Hall
- Hawkley, L. C., Thisted, R. A., Masi, C. M., & Cacioppo, J. T. (2010). Loneliness predicts increased blood pressure: 5-year cross-lagged analyses in middle-aged and older adults. *Psychology and Aging*, 25(1), 132–141. https://doi.org/10.1037/a0017805
- Holster, T. A., & Lake, J. (2016). Guessing and the Rasch Model. *Language Assessment Quarterly*, *13*(2), 124–141. https://doi.org/10.1080/15434303.2016.1160 096
- Hoover, C. R., & Jackson, J. B. (2021). Insecure attachment, emotion dysregulation, and psychological aggression in couples. *Journal* of *Interpersonal Violence*, 36(19–20),

NP10908–NP10936. https://doi.org/10.1177/0886260519877939

- Huh, H. J., Jeong, B. R., Hwang, J. H., & Chae, J.-H. (2020). High Behavioral inhibition system/behavioral activation system sensitivity, childhood emotional neglect and their interaction as possible related factors for adult attachment style in depression. *Psychiatry Investig*, 17(2), 122–129. https://doi.org/10.30773/pi.2019.0165
- Hyde, J. S. (2014). Gender similarities and differences. *Annual Review of Psychology*, 65(1), 373–398. https://doi.org/10.1146/annurev-psych-010213-115057
- Idaka, I., & Idaka, E. (2014). From Classical Test Theory (CTT) to Item Response Theory (IRT) in research instrument validation: An introduction to a desirable transition. LWATI: *A Journal of Contemporary Research*, 11(3), 36–44. https://www.ajol.info/index.php/lwati/article/

view/119740/109198

- Inman, E. M., & London, B. (2022). Self-silencing mediates the relationship between rejection sensitivity and intimate partner violence. *Journal of Interpersonal Violence*, 37(13–14), NP12475–NP12494. https://doi.org/10.1177/0886260521997948
- Johnson, M. D., Horne, R. M., & Neyer, F. J. (2019). The development of willingness to sacrifice and unmitigated communion in intimate partnerships. *Journal of Marriage and Family*, 81(1), 264–279. https://doi.org/10.1111/jomf.12544
- Jones, T. L., Baxter, M., & Khanduja, V. (2013). A quick guide to survey research. *Review Ann R* Coll Surg Engl, 95, 5–7. https://doi.org/10.1308/003588413X1351160 9956372
- Kemer, G., Çetinkaya, E.Y., & Bulgan, G. (2016). Emotional dependency and dysfunctional relationship beliefs as predictors of married Turkish individuals' relationship satisfaction. *Spanish Journal of Psychology*, 19, 1–8. https://doi.org/10.1017/sjp.2016.78
- Kerns, K. A., & Brumariu, L. E. (2014). Is

insecure parent-child attachment a risk factor for the development of anxiety in childhood or adolescence? *Child Development Perspectives*, 8(1), 12–17. https://doi.org/10.1111/cdep.12054

- Klotz, A. C., Swider, B. W., & Kwon, S. H. (2023). Back-translation practices in organizational research: Avoiding loss in translation. *Journal of Applied Psychology*, *108*(5), 699–727. https://doi.org/10.1037/ap10001050
- Lemos, M., Vásquez, A. M., & Román-Calderón, J. P. (2019). Potential therapeutic targets in people with emotional dependency. *International Journal of Psychological Research*, 12(1), 18–27. https://doi.org/10.21500/20112084.3627
- Lin, L., Guo, H., Duan, L., He, L., Wu, C., Lin, Z., & Sun, J. (2022). Research on the relationship between marital commitment, sacrifice behavior and marital quality of military couples. *Frontiers in Psychology*, 13, 964167. https://doi.org/10.3389/fpsyg.2022.964167
- Linacre, J.M. (n.d.). *Fit diagnosis: Infit outfit mean-square standardized.* https://www.winsteps.com/winman/misfitdia gnosis.htm
- Linceviciute, S., Ridge, D., Gautier, C., Broom, A., Oliffe, J., & Dando, C. (2022). 'We're welcomed into people's homes every day' versus 'we're the people that come and arrest you': The relational production of masculinities and vulnerabilities among male first responders. *Sociology of Health & Illness*, 44(7), 1094–1113. https://doi.org/10.1111/1467-9566.13481
- McKenzie, S. K., Collings, S., Jenkin, G., & River, J. (2018). Masculinity, social connectedness, and mental health: Men's diverse patterns of practice. *American Journal* of Men's Health, 12(5), 1247–1261. https://doi.org/10.1177/1557988318772732
- Momeñe, J., Estévez, A., Etxaburu, N., Pérez-García, A. M., & Maguregi, A. (2022). Emotional dependence on the aggressor partner and its relationship to social anxiety, fear of negative evaluation and dysfunctional perfectionism. *Behavioral*

Psychology/Psicología Conductual, 30(1), 51–68. https://doi.org/10.51668/bp.8322103n

- Monk, J. K., Vennum, A. V., Ogolsky, B. G., & Fincham, F. D. (2014). Commitment and sacrifice in emerging adult romantic relationships. *Marriage & Family Review*, 50(5), 416–434. https://doi.org/10.1080/01494929.2014.8963 04
- Negrini, L. S. (2018). Handbook of attachment, third edition: Theory, research, and clinical applications. In J. Cassidy & P. R. Shaver (Eds.). Guilford Press. https://doi.org/10.1002/imhj.21730
- Petrillo, J., Cano, S. J., McLeod, L. D., & Coon, C. D. (2015). Using classical test theory, item response theory, and rasch measurement theory to evaluate patient-reported outcome Measures: A comparison of worked examples. *Value in Health*, 18(1), 25–34. https://doi.org/10.1016/j.jval.2014.10.005
- Steyer, R. (2015). Classical (psychometric) test theory. *International Encyclopedia of the Social & Behavioral Sciences* (pp.785–791). Elsevier. doi:10.1016/b978-0-08-097086-8.44006-7
- Sumintono, B. (2016, March 17). Aplikasi pemodelan rasch pada asesmen pendidikan: Implementasi penilaian formatif (assessment for learning)[Paper presentation]. Kuliah Umum Pada Jurusan Statistika, Institut Teknologi Sepuluh November, Surabaya
- Sumintono, B., Widhiarso, W. (2015). *Aplikasi* pemodelan rasch pada assessment pendidikan. Trim Komunikata
- Sürücü, L., Yikilmaz, İ., & Maslakçi, A. (2022). *Exploratory Factor Analysis (EFA) in quantitative researches and practical considerations* [Unpublished manuscript] https://doi.org/10.31219/osf.io/fgd4e

- Thomas, M. L. (2019). Advances in applications of item response theory to clinical assessment. *Psychological Assessment*, 31(12), 1442– 1455. https://doi.org/10.1037/pas0000597
- Victor, C. R., Burholt, V., & Martin, W. (2012). Loneliness and Ethnic minority elders in great Britain: An exploratory study. *Journal of Cross-Cultural Gerontology*, 27(1), 65–78. https://doi.org/10.1007/s10823-012-9161-6
- Wahyuningrat, F. D., Meiyuntariningsih, T., & Ramadhani, H. S. (2024). Kecenderungan stockholm syndrome ditinjau dari secure attachment pada wanita korban kekerasan dalam pacaran. Seurune: Jurnal Psikologi Unsyiah, 7(1), 40–59. https://doi.org/10.24815/s-jpu.v7i1.37025
- Wang, S., Roche, M. J., Pincus, A. L., Conroy, D. E., Rebar, A. L., & Ram, N. (2014). Interpersonal dependency and emotion in every day life. *Journal of Research in Personality*, 53, 5–12. https://doi.org/10.1016/j.jrp.2014.07.007
- Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *Journal of Black Psychology*, 44(3), 219-246. https://doi.org/10.1177/0095798418771807
- Yeung, N. C. Y., Mak, W. W. S., & Cheung, L. K.
 L. (2015). Conformity to the emotionalcontrol masculine norm and psychological well-being among Chinese men in Hong Kong: The mediating role of stress appraisal for expressing tender emotions. *Psychology of Men & Masculinity*, 16(3), 304–311. https://doi.org/10.1037/a0038578
- Zamora-Araya, J. A., Smith-Castro, V., Montero-Rojas, E., & Moreira-Mora, T. E. (2018). Advantages of the Rasch model for analysis and interpretation of attitudes: The case of the benevolent sexism subscale. *Revista Evaluar*, *18*(3). https://doi.org/10.35670/1667-4545.v18.n3.22201

APPENDIX

Table A1.

Partner's Emotional Dependency Scale (SED)

Items	Item	Translation	Chi-Square Prob.
SED 1	In general, are you satisfied with yourself?	Secara umum, apakah Anda puas dengan dirimu?	.8510
SED 2		Apakah Anda sering merasa bahwa kesejahteraan pasangan lebih penting dibandingkan diri Anda?	.0551
SED 3	relationship with your partner	Apakah ada kemungkinan hubungan Anda dengan pasangan berakhir karena Anda merasa menderita atau sedih?	
SED 4	partner when they are angry,	Apakah Anda sering meminta maaf pada pasangan saat pasangan marah, meskipun Anda tahu bahwa Anda tidak bertanggungjawab atas kemarahan pasangan?	
SED 5	Do you need your partner to continually show you affection?	Apakah Anda membutuhkan pasangan untuk menunjukkan kasih sayang secara terus menerus?	.0476*
SED 6		Apakah Anda melakukan aktivitas yang tidak disukai hanya untuk membuat pasangan senang atau menghindari berakhirnya hubungan?	
SED 7	Do you often justify your partner's conflicts, criticisms or infidelities as a lesser evil in the relationship?	pertentangan, kritik, atau	
SED 8	Do you usually feel guilty about arguments with your partner?	Apakah Anda kerap merasa bersalah saat berargumen dengan pasangan?	.8710
SED 9	your partner despite the upset	Apakah Anda merasa tidak mampu meninggalkan pasangan walaupun pasangan kerap membuat Anda marah dan terluka?	.0582
SED 10	limit and done things that you may even recognise as inappropriate (sexual behaviour, reckless	Apakah Anda pernah memaksa diri Anda untuk melakukan perilaku yang tidak pantas (perilaku seksual, perilaku ceroboh/sembrono yang membahayakan diri sendiri, penggunaan narkoba,	.8919

Items	Item	Translation	Chi-Square Prob.
	allowing financial abuse) just to avoid abandonment?	penyalahgunaan keuangan) agar tidak ditinggalkan pasangan?	
SED 11	to your current partner's	Apakah Anda merasa diri Anda tidak memenuhi kriteria pasangan saat ini Anda sehingga Anda merasa bisa kehilangan pasangan Anda sewaktu- waktu?	.4013
SED 12	up on your partner (mobile,	Apakah Anda merasa perlu selalu mengecek kabar pasangan melalui pesan singkat, Whatsapp, dan lain sebagainya agar Anda tahu keberadaan pasangan dan siapa saja yang bersama dengan pasangan?	.1419
SED 13		Apakah Anda merasa diri Anda dan sikap Anda berubah sejak bersama dengan pasangan saat ini?	.7130
SED 14	Do you make all your joint plans according to your partner's tastes and desires?	•	1.0000
SED 15	Do you constantly suffer from exaggerated jealousy?	Apakah Anda selalu merasa menderita dengan perasaan cemburu yang berlebihan?	.1826
SED 16	or stopped caring for family or	Apakah Anda mengabaikan tugas atau berhenti memedulikan keluarga atau teman karena Anda bersama dengan pasangan?	.2279
SED 17	1	Apakah Anda sering merasa hubungan pasangan sebelum bersama Anda lebih memuaskan dibandingkan dengan saat pasangan bersama Anda?	.2791
SED 18	Has your partner expressed how overwhelmed they feel because of your need to constantly be with them or continually know their movements?	Apakah pasangan Anda pernah mengungkapkan bahwa mereka lelah/muak dengan keinginan Anda yang terus menerus ingin bersama mereka atau selalu ingin tahu keberadaan mereka?	.1133
SED 19	Do you feel helpless and lonely when you have no partner?	Apakah Anda merasa tidak berdaya dan kesepian saat Anda tidak memiliki pasangan?	.0421*

Table A1.

Partner's Emotional Dependency Scale (SED)

Table A1.

Partner's Emotional Dependency Scale (SED)

Items	Item	Translation	Chi-Square Prob.
SED 20	constantly suspect that your	Apakah Anda yakin atau secara terus menerus merasa bahwa pasangan mempertimbangkan untuk mengakhiri hubungan?	
SED 21	Do you continually feel the need to please your partner?	Apakah Anda merasa ada butuh untuk selalu menyenangkan pasangan Anda?	
SED 22	willing to do whatever it took to	Apakah Anda berpikir bahwa Anda akan bersedia melakukan apapun demi mendapatkan pasangan kembali jika mereka meninggalkan Anda?	

Note.

 $^{*}p < .05.$