June 2024; 15(1): 91-103
Jurnal Kesehatan Reproduksi
DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)
https://journaliakmitangsel2.iakmi.or.id/index.php/kespro

Assessing Validity and Reliability of Physical and Psychological Violence Victimization Instrument among Adolescents in Dating Relationships

Suci Musvita Ayu[1], Erni Gustina[1], Liena Sofiana[1], Thoharoh Halimatusa'diyah[1], Soeharto[2,3,4], Moh. Irma Sukarelawan[5], Ratu Matahari[6], Septian Emma Dwi Jatmika[7]

[1] Public Health, Faculty of Public Health, Universitas Ahmad Dahlan, Indonesia
[2] Research Center of Educational Technologies, Azerbaijan State University of Economics, Baku, Azerbaijan
[3]National Research and Innovation Agency (BRIN), Jakarta, Indonesia
[4] Doctoral School of Education, University of Szeged, 32-34, Petofi S. sgt., Szeged, H-6722, Hungary
[5] Physics Education Study Program, Faculty of Teacher Training and Education, Universitas Ahmad Dahlan, Indonesia
[6] Institute for Population and Social Research, Mahidol University, Thailand
[7] International Health program, Institute of Public Health, College of Medicine, National Yang-Ming University, Taipei, Taiwan, ROC

Email: suci.ayu@ikm.uad.ac.id
* Corresponding author

Article Info

Keywords:
Dating adolescents;
Physical and psychological violence;
Validity and reliability;
Victims of violence;

Abstract

Background: Couple victimization among adolescents has an impact on their physical and psychology. The objectives of this study were to evaluate the validity and reliability of a physical and psychological violence scale among dating adolescents. **Methods**: A total of 294 students participated in this study. The participants were chosen using a basic random sampling approach. The validity of the proposed scale was assessed using expert judgment, t-values, and Standardized Loading Factors (SLFs) using Confirmatory Factor Analysis. The reliability of each construct was determined using the Construct Reliability (CR) value. The acquired data satisfied the criterion for goodness-of-fit based on Confirmatory Factor Analysis. The experts deemed a total of 37 items valid. **Results**: The Confirmatory Factor Analysis demonstrates that the 32-item scale measuring victims of physical and psychological violence meets the criteria for validity and reliability. The t-values range from 6.41 to 17.87, the standardized loading factor ranges from 0.38 to 0.85, confirming construct validity achieved, and the construct reliability ranges from 0.89 to 0.93, showing all construct or latent factors achieving acceptable reliability criteria. **Conclusion**: Victims of physical and psychological assault met the criteria for being valid and reliable.

Received 24/06/2024 Revised 06/08/2024 Accepted 31/08/2024

How to Cite:

Ayu SM, Gustina E, Sofiana L, Halimatusa'diyah T, Soeharto, Sukarelawan MI, Matahari R, Jatmika SED. ASSESSING VALIDITY AND RELIABILITY OF PHYSICAL AND PSYCHOLOGICAL VIOLENCE VICTIMIZATION INSTRUMENT AMONG ADOLESCENTS IN DATING RELATIONSHIPS. J. Kesehat. Reproduksi [Internet]. 2024 Jun. 30;15(1):91-104. Available from: https://doi.org/10.58185/jkr.v15i1.184

INTRODUCTION

Intimate partner violence (IPV) is a significant global public health problem that affects a large number of women worldwide. The World Health Organisation (WHO) estimates that the global prevalence of IPV is around 30%.[1] IPV encompasses multiple forms of abuse, including physical, sexual, emotional, and controlling behaviour.[2] The impact of IPV is profound, causing physical, sexual, and psychological harm to women.[3]

Research has shown that IPV is the most common form of violence against women worldwide.[4–6] The prevalence of IPV varies across regions, with developing regions experiencing higher rates, reaching up to 33%.[7] In Africa, the prevalence of IPV in women ranges from 2% to 57%.[8] IPV violence is not limited to physical violence but also includes psychological and sexual violence.[9,10] Psychological violence has been reported as the most common form of IPV, followed by physical and sexual violence.[9,10]

In Indonesia, the prevalence of violence in women aged 15-64 years, both unmarried and those who have/are having a partner, experienced physical violence at 18.1%, and 33.4% experienced physical and/or sexual violence during life, both carried out by spouse and non-spouse.[11] The Annual Note Sheet (CATAHU) in 2023 reported that in private/personal areas, psychological violence had the highest percentage at 39.6% (1,494 cases), while physical violence ranked third at 18.9% (713 cases).[12] The results from the previous study reported that 59.2% of adolescents had committed violence against their partners.[13]

Some studies show that IPV is more difficult to recognize from both the perspective of the victim and from the perspective of the community.[14,15] Physical violence remains a prevalent form of violence in relationships among adolescents.[16–18] Psychological violence has not received significant study attention as a kind of violence due to its inherent difficulty in evaluation and its subjective nature, which sets it apart from physical violence and other forms of violence.[19,20] Adolescent girls are more susceptible to psychological violence than males.[21] Psychological violence is pervasive and constitutes a distinct form of violence within romantic relationships. It is recognized as the primary cause of pain for women who experience partner violence.

Screening instruments that have been developed to identify women as victims of IPV, such as the VITA Scale[15], IVPRAS[22], and CASR-SF[23]. The 15-item CAS version has been developed from 12 items developed from the original CAS and 3 items suggested by experts and a literature review covering 3 domains, namely physical, sexual, and psychological abuse that contain questions about violence experienced for life, current exposure, and the frequency of exposure to violence. The VITA Scale contains items about the specific role of several emotions, such as shame, guilt, and fear. The VITA Scale aims to assess the intensity of the post-traumatic influence of victims of IPV.[15] While

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

there are scales to identify intimate partner violence, there is limited information on scales to recognize dating violence in adolescents.

The purpose of this study was to determine the validity and reliability of an instrument for victims of physical and psychological violence in adolescent dating. The following research questions were posed for consideration: (1) What is the content validity of the scale of victims of physical and psychological violence in adolescent dating? (2) What is the construct validity and reliability of the scale of victims of physical and psychological violence in adolescent couples?

Against the background of the issues outlined, the results of this study contribute to providing in-depth insights into the prevalence and characteristics of intimate relationship violence among adolescents in Indonesia. This study not only reinforces the importance of recognizing physical and psychological violence as the main forms of violence in adolescent relationships but also highlights the challenges in the identification of psychological violence, which has received less attention. As such, this study serves as a basis for developing screening instruments that are more specific and effective in identifying adolescent relationship violence, which in turn can improve prevention and intervention efforts in the community.

METHODS

Participants

The preliminary study involved 15 respondents (11 females and four males) selected using a convenience sampling technique. They were involved in providing feedback on the readability of the developed instrument. The main study involved 397 respondents selected using a purposive sampling technique at a private university in Yogyakarta, Indonesia and used inclusion criteria. The inclusion criteria were all active university students (male and female) who had non-marital relationships, were able to be respondents and provided consent. Based on the inclusion criteria, 294 out of 397 respondents were obtained.

Scale-development procedures.

The scale construct validation was determined based on responses from 294 respondents who met the inclusion criteria. The experts assessed the scale using 10 items in terms of content: (a). Accuracy of examples of violence (b). Correspondence of items, (c). Completeness of types of violence, (d). Language Suitability (e). Use of Communicative Language (f). Appropriate use of language with the level of development of respondents. The scale for physical and psychological violence victims employed a four-point Likert rating scale, namely: 1 (Often), 2 (Sometimes), 3 (Rarely), and 4 (Never).

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

Data Collection Procedures

An online questionnaire completed via Google Forms was used to collect data. Potential respondents received the questionnaire through social media groups. To confirm that they were freely participating in the study, respondents were asked to fill out a consent form on the first page of the questionnaire.[24] Those who refused to participate or did not meet the participation requirements could not proceed to answer the questions. Students will proceed to the next step. All data were collected over 3 weeks.

Data Analysis

The Aiken V technique determines the validity of the content.[25] Experts who were involved in this study were 5 people and 5 rating numbers, namely "very irrelevant," "less relevant," "quite relevant," "relevant," and "very relevant." Based on the Aiken V table (significance level of 5%), the allowable cutoff value of the content validity index was 0.80. In carrying out a factor analysis, or more specifically, a Confirmatory factor analysis (CFA), a number of requirements must be fulfilled. This includes the adequacy of the sample size and the model's suitability. The KMO value test and Bartlett's sphericity were used to ensure the sample size's adequacy or data suitability and whether factor analysis can be performed.[26–29]The adequacy or suitability of the model for factor analysis if it fulfills a KMO-MSA value of more than 0.6, and Bartlett's Test of Sphericity is statistically significant or sig. < 0.05.[30]

The validity of each item was determined based on the t-value and standardized loading factor (SLF) from the Confirmatory Factor Analysis results. Items are declared valid if they meet the t-value > 1.96 and SLF ≥ 0.40.[31] Referring to these two values, items will be removed and re-analyzed if they do not meet the minimum values.[32] The next step is to determine the suitability or suitability of the model through several Goodness-of-Fit indices.[33] Based on the number of observed variables (12-30 observed variables) and number of observations (> 250 number of observations), the suitability index in this study refers to the cut-off value of five indices suggested by Hair *et al.*: $\chi 2/df$, Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square of Approximation (RMSEA) and Standardized Root Mean Residual (SRMR).[34,35] Table 1 shows the Goodness-of-Fit index standard for a scale model of victims of physical and psychological violence in dating adolescents.

Table 1. Standard Model of Goodness-of-Fit Index for PPVV

Fit indices	Recommended Values
χ^2/df	≤ 5.00
CFI	≥ 0.92
TLI	≥ 0.92
SRMR	≤ 0.08 with CFI ≥ 0.92
RMSEA	< 0.07 with CFI ≥ 0.92

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

After the validity of each item is obtained, the reliability of each construct is determined based on the value of Construct Reliability (CR) and Variance Extracted (VE).[36] Model reliability is good if it meets a CR value of ≥ 0.70 and VE ≥ 0.50, but the reliability coefficient of 0.60 to 0.70 can be accepted as long as the indicators of the model construct validity are also good.[32,37]

RESULTS

Eligible Respondents

Based on the established criteria, 294 respondents were identified: 13% were men (37 respondents), and 87% were women (257 respondents). Their ages range from 17 to 25 years, with an average age = 20.1 years and SD = 1.4 years. The distribution of respondents consisted of 30% first-level students, 27% second-level, 23% third-level, 19% fourth-level, and 2% fifth-level.

Content Validity

Table 2 shows the results of the experts' assessment to determine the content validity scale for victims of physical and psychological violence in dating adolescents. The magnitude of the calculated V index ranges from 0.8 - 0.9. This indicates that the developed scale can be used for further analyses.

Table 2. Content Validity Scale of Victims of Physical and Psychological Violence

Aiken V	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
PhyVV	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.9	0.8
PsyVV	0.9	0.8	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8

PhyVV = Physical Violence Victims; PsyVV = Psychological Violence Victims

Validity and Reliability Construct

The analysis showed that the data fulfilled the adequacy and suitability requirements for factor analysis. This was supported by the KMO-MSA value of 0.904, and Bartlett's Test of Sphericity had a significance of < 0.05. Table 3 shows the results of the confirmatory factor analysis. Four measurement models were obtained from the analysis results.

Table 3. Model fit indices on the scale of physical and psychological violence

Models	Description	χ^2	df	χ^2/df	CFI	TLI	SRMR	RMSEA
Model 1	All item	2626.05	628	4.18	0.90	0.89	0.083	0.104
Model 2	Removed item 4 item (Phy9, Phy12, Phy14, and Phy16)	2261.93	494	4.58	0.91	0.90	0.084	0.111
Model 3	Index Modification (33 items)	1315.92	443	2.97	0.95	0.94	0.069	0.082
Model 4	Modification indices (32 items) with removed Phy11	1217.98	416	2.93	0.95	0.94	0.072	0.081

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

Table 3 shows that the first Confirmatory Factor Analysis was used to analyze the 37 items (see appendix). Even though 37 items already had a t_{value} > 1.96, four items were removed (Phy9, Phy12, Phy14, and Phy16) because they had an SLF value lower than the cut-off. The Goodness-of-Fit Index is shown in Table 3 in Model 1. Model 1 shows that the model is less fit because the CFI, TLI, SRMR, and RSMEA values do not meet the recommended values. Therefore, re-analysis was carried out without including Phy9, Phy12, Phy14, and Phy16.

All items (33 items) in the second analysis have fulfilled the cut-off value, which is SLF value ≥ 0.35. The Goodness-of-Fit Index is shown in Table 3 as model 2. Model 2 shows that the overall model does not fit. Therefore, the researchers modified the index as suggested in the third analysis. The results of the modification of the index are shown in Model 3 in Table 3. However, in the third analysis, the SLF PhyVV11 value has decreased and does not reach the cut-off value, so it is re-analyzed by eliminating Phy11 and obtaining 32 valid and fit items. Model 4 in Table 3 shows the fourth Goodness-of-Fit analysis. It appears that after the second modification, the Goodness-of-Fit Index has increased for the CFI and TLI index and decreased in the index $\chi 2/df$ and RMSEA.

The results of the analysis of the CR values were 0.89 and 0.93 for the constructs of physical violence and psychological violence, respectively. The results in Table 4 confirm that all the constructs or latent factors in this study achieved acceptable reliability criteria. Construct validity based on SLF values confirmed that all items had loading values above 0.4, confirming the instrument's validity in this study. The complete validity and reliability values for each construct are shown in Table 4.

Table 4. Validity and Reliability Scale of Victims of Physical and Psychological Violence

Latent Variables	SLF ≥ 0.40	Reliability		Explanation
		CR ≥ 0.70	VE ≥ 0.50	
Physical Violence Victims		0.89	0.50	Reliable
Phy1	0.70			Valid
Phy2	0.64			Valid
Phy3	0.52			Valid
Phy4	0.70			Valid
Phy5	0.78			Valid
Phy6	0.82			Valid
Phy7	0.57			Valid
Phy8	0.89			Valid
Phy10	0.70			Valid
Phy13	0.65			Valid
Phy15	0.73			Valid
Phy17	0.68			Valid
Psychological Violence Victims		0.93	0.50	Reliable
Psy1	0.65			Valid
Psy2	0.64			Valid
Psy3	0.60			Valid
Psy4	0.88			Valid
Psy5	0.68			Valid
Psy6	0.69			Valid
Psy7	0.63			Valid

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

Psy8	0.57	Valid
Psy9	0.64	Valid
Psy10	0.74	Valid
Psy11	0.73	Valid
Psy12	0.85	Valid
Psy13	0.78	Valid
Psy14	0.86	Valid
Psy15	0.55	Valid
Psy16	0.77	Valid
Psy17	0.75	Valid
Psy18	0.60	Valid
Psy19	0.67	Valid
Psy20	0.74	Valid

DISCUSSION

This study aims to produce a scale of victims of physical and psychological violence that is valid and reliable both in terms of content (theory) and construct (empirical). This is supported by the Aiken V index value of 0.8 - 0.9. This value indicates that the instrument has high content validity. This judgment is based on input from experts, who provided confidence that the instrument covers relevant aspects of physical and psychological violence in dating relationships. Good content validity is a crucial first step in ensuring that the instrument can be used to measure the intended variables accurately.

Several expert suggestions have been used to refine the editorial wording of the scale. For example, on physical violence (PHYVV10): "My partner knocked me out of the vehicle" was changed to "My partner forced me out of the vehicle in the middle of the journey" on psychological violence (PSYVV4). For example, "My partner demands me to have sex" became "My partner demands me to have sex whenever he/she wants."

Sample size adequacy and model fit must be met to conduct Confirmatory Factor Analysis (CFA). The results of the initial requirements test show that the KMO MSA value and Bartlett's Test of Sphericity significance value have met the requirements for the adequacy of the sample size for factor analysis. The KMO MSA value shows the ratio of the distance between the correlation coefficients to the partial correlation coefficient, and Bartlett's Test of Sphericity significance value shows that, overall, all correlations in the correlation matrix.[34]

Furthermore, the model's fit is determined by the Goodness-of-Fit index value. Four CFAs were conducted to obtain empirically valid items. The cut-off value we used was in accordance with the suggestion that for a sample size of 250, the minimum factor loading is 0.34.[31] The assessment of model fit is based on the absolute fit index (RMSEA or RMR) and relative fit index (CFI. TLI. IFI). Hair et al. recommend a TLI and CFI cut-off value of 0.92 (observed variables $12 < m < 30$ and number of observations > 250) because a value of 0.90 is too low and may lead to incorrect model

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)

acceptance. Not all fit indices are shown in this study. Three or four fit indices of different types (at least one incremental and one absolute index) can provide evidence of adequate model fit.

Model 1. Preliminary analysis showed that out of 37 items, four items (Phy9, Phy12, Phy14, and Phy16) had to be removed as the SLF (Standardised Loading Factor) value was lower than the set cut-off value. The model showed unsatisfactory Goodness-of-Fit Index results with CFI, TLI, SRMR, and RMSEA values that did not meet the recommended values. This indicates that the initial model did not fully fit the data. *Model 2.* After removing four items, the second analysis using 33 items showed insufficient Goodness-of-Fit Index results. This indicates that although four items were removed, the overall model still needs to be modified to improve the fit. *Model 3.* Model modifications were made based on the suggested index of adding covariance between two errors in one latent variable.[38–40] However, item Phy11 showed a decrease in SLF value and did not meet the cut-off value. This suggests the need for deletion of this item and re-analysis with 32 items.

Model 4. The final analysis with 32 items showed improvements in the Goodness-of-Fit Index values, with increases in CFI and TLI values and decreases in $\chi 2/df$ and RMSEA values. Overall, in Table 3, model 4 shows a good model fit. This is supported by the fit indices that have met the recommended values except RMSEA. Although RMSEA is less fit, the representation of the absolute badness of the fit index can be replaced by the SRMR value.[34] This model shows that the instrument fits the data better and is valid after modification. The results of the validity and reliability test of the scale of victims of physical and psychological violence show that the scale of victims of physical and psychological violence can be declared valid and reliable. This is supported by the SLF value, which is in the range of 0.38 - 0.82 (physical violence victim scale) and 0.44 - 0.85 (psychological violence victim scale). The CR value is 0.89 (scale of victims of physical violence) and 0.93 (scale of victims of psychological violence). Construct Reliability (CR) indicates that the same latent construct has been consistently represented across all measures.

This study has several limitations, including samples limited to certain areas, data collection methods with self-report questionnaires, which could cause bias, the absence of longitudinal measurements to see changes over time, limitations in factor analysis, which may cause overfitting, and a focus that only focuses on physical and psychological violence without considering other forms of violence.

CONCLUSION

The Indonesian version of the scale for victims of physical and psychological violence in adolescent couples has shown good validity and is theoretically and empirically acceptable (construct). The Aiken V index ranges from 0.8 - 0.9, which indicates that the developed scale can be used for further analysis based on expert judgment. The results of the CFA confirmed that the

model in this study has a good index based on the measurement model. The SLF value confirmed that all items had good loading factors above the 0.4 threshold. Reliability shows that all latent factors are consistent in representing participants' answers. Thus, the physical and psychological violence victimization scale supports its role in measuring the incidence of violence experienced by university-level adolescents, both victims of physical and psychological violence.

RECOMMENDATION

For future research, it is recommended to expand the sample geographically and culturally, use longitudinal designs, combine qualitative with quantitative methods, develop instruments that cover various forms of violence, conduct research on interventions to reduce violence and evaluate their effectiveness, conduct cross-cultural studies, utilize technology in collection data, as well as conducting comparative studies to understand patterns or differences in youth experiences of violence in various contexts. To be used as a screening tool for violence, this instrument needs to be tested for sensitivity and specificity by comparing adolescents who experience violence with those who do not. With this approach, it is hoped that future research will provide deeper and more comprehensive insight into physical and psychological violence against adolescents as well as efforts to prevent and handle it.

REFERENCES

1. Epuitai J, Udho S, Auma AG, Nabirye RC. Intimate partner violence among pregnant women in Uganda. Afr J Midwifery Womens Health [Internet]. 2019 Apr 2;13(2):1–5. Available from: http://www.magonlinelibrary.com/doi/10.12968/AJMW.2018.0027. https://doi.org/10.12968/AJMW.2018.0027
2. Tessema ZT, Gebrie WM, Tesema GA, Alemneh TS, Teshale AB, Yeshaw Y, et al. Intimate partner violence and its associated factors among reproductive-age women in East Africa:-A generalized mixed effect robust poisson regression model. Paul P, editor. PLoS One [Internet]. 2023 Aug 18;18(8):e0288917. Available from: https://dx.plos.org/10.1371/journal.pone.0288917. https://doi.org/10.1371/journal.pone.0288917
3. Serpa Pimentel A de, Mshana G, Aloyce D, Peter E, Mchome Z, Malibwa D, et al. Women's understanding of economic abuse in North-Western Tanzania. Women's Heal [Internet]. 2021 Jan 8;17:174550652110421. Available from: http://journals.sagepub.com/doi/10.1177/17455065211042180. https://doi.org/10.1177/17455065211042180
4. Kelly JT, Holmes M, Gibbons N, Matabaro A, Voors M. Conflict, Displacement and Overlapping Vulnerabilities: Understanding Risk Factors for Gender-Based Violence among Displaced Women in Eastern Democratic Republic of Congo [Internet]. The World Bank; 2021. (Policy Research Working Papers). Available from: https://hdl.handle.net/10986/36470. https://doi.org/10.1596/1813-9450-9819
5. Wood SN, Glass N, Decker MR. An Integrative Review of Safety Strategies for Women Experiencing Intimate Partner Violence in Low- and Middle-Income Countries. Trauma, Violence, Abus. 2021 Jan;22(1):68–82. https://doi.org/10.1177/1524838018823270
6. Yonfa EDA, Fasol M, Cueva CM, Zavgorodniaya AC. Intimate Partner Violence: A Literature Review. Open Psychol J. 2021 Feb;14(1):11–6. https://doi.org/10.2174/1874350102114010011
7. Kifle ME, Aychiluhm SB, Anbesu EW. Global prevalence of intimate partner violence during the COVID-19 pandemic among women: systematic review and meta-analysis. BMC Womens

Health [Internet]. 2024 Feb 17;24(1):127. Available from: https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-023-02845-8. https://doi.org/10.1186/s12905-023-02845-8

8. Azene ZN, Yeshita HY, Mekonnen FA. Intimate partner violence and associated factors among pregnant women attending antenatal care service in Debre Markos town health facilities, Northwest Ethiopia. Ameh CA, editor. PLoS One [Internet]. 2019 Jul 1;14(7):e0218722. Available from: https://dx.plos.org/10.1371/journal.pone.0218722. https://doi.org/10.1371/journal.pone.0218722
9. Ashenafi W, Mengistie B, Egata G, Berhane Y. The role of intimate partner violence victimization during pregnancy on maternal postpartum depression in Eastern Ethiopia. SAGE Open Med [Internet]. 2021 Jan 23;9:205031212198949. Available from: http://journals.sagepub.com/doi/10.1177/2050312121989493. https://doi.org/10.1177/2050312121989493
10. Gebrewahd GT, Gebremeskel GG, Tadesse DB. Intimate partner violence against reproductive age women during COVID-19 pandemic in northern Ethiopia 2020: a community-based cross-sectional study. Reprod Health [Internet]. 2020 Dec 7;17(1):152. Available from: https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-020-01002-w. https://doi.org/10.1186/s12978-020-01002-w
11. Kementrian Pemberdayaan Perempuan dan Perlindungan Anak. Statistik Gender Tematik: Mengakhiri Kekerasan Terhadap Perempuan dan Anak di Indonesia. Jakarta: Kementrian Pemberdayaan Perempuan dan Anak; 2017.
12. Komnas Perempuan. CATAHU2023: Kekerasan terhadap Perempuan di Ranah Publik dan Negara: Minimnya Perlindungan dan Pemulihan. Jakarta; 2023.
13. Ayu SM, Sofiana L, Jayanti FU. The correlation of teacher's role, peers, and mass media with the incidence of dating violence in adolescents at SMK Piri 1 Yogyakarta. Int J Community Med Public Heal. 2019 May;6(6):2325–30. https://doi.org/10.18203/2394-6040.ijcmph20192292
14. Herman J. Trauma and Recovery: The Aftermath of Violence from Domestic Abuse to Political Terror. Bible through the Lens of Trauma. New York; 2015. 177–192 p.
15. Troisi G. Measuring Intimate Partner Violence and Traumatic Affect: Development of VITA, an Italian Scale. Front Psychol. 2018 Jul;9(JUL):1–14. https://doi.org/10.3389/fpsyg.2018.01282
16. Mudayana AA, Gustina E, Wardani Y, Ayu SM, Sofiana L, Sukarelawan MI. Physical and Psychological Violence in Dating Adolescents: Who are the Victims? J Aisyah J Ilmu Kesehat [Internet]. 2023 Jan 9;8(1):251–256. Available from: https://aisyah.journalpress.id/index.php/jika/article/view/8136. https://doi.org/10.30604/jika.v8i1.1579
17. Cascardi M, Hassabelnaby R, Schorpp H, Smith Slep AM, Jouriles EN, O'Leary KD. The Relationship Behavior Survey: A Comprehensive Measure of Psychological Intimate Partner Violence for Adolescents. J Interpers Violence. 2023 May;38(9–10):7012–36. https://doi.org/10.1177/08862605221140044
18. Silveira IA da, Silva Neto TA da, Conceição LD, Nascimento GG, Avezedo MS, Lund RG. Physical violence in children and adolescents. Brazilian J Oral Sci. 2023 Nov;22:e231486. https://doi.org/10.20396/bjos.v22i00.8671486
19. Ureña J, Romera EM, Casas JA, Viejo C, Ortega-Ruiz R. Psichometrics properties of Psychological Dating Violence Questionnaire: A study with young couples. Int J Clin Heal Psychol. 2015 Jan;15(1):52–60. https://doi.org/10.1016/j.ijchp.2014.07.002
20. Dokkedahl S, Kok RN, Murphy S, Kristensen TR, Bech-Hansen D, Elklit A. The psychological subtype of intimate partner violence and its effect on mental health: protocol for a systematic review and meta-analysis. Syst Rev. 2019 Dec;8(1):198. https://doi.org/10.1186/s13643-019-1118-1
21. Vagi KJ, O'Malley Olsen E, Basile KC, Vivolo-Kantor AM. Teen Dating Violence (Physical and Sexual) Among US High School Students. JAMA Pediatr. 2015 May;169(5):474–82. https://doi.org/10.1001/jamapediatrics.2014.3577

22. Lila M, Oliver A, Catalá-Miñana A, Galiana L, Gracia E. The Intimate Partner Violence Responsibility Attribution Scale (IPVRAS). Eur J Psychol Appl to Leg Context. 2014 Jan;6(1):29–36. https://doi.org/10.5093/ejpalc2014a4
23. Ford-Gilboe M, Wathen CN, Varcoe C, MacMillan HL, Scott-Storey K, Mantler T, et al. Development of a brief measure of intimate partner violence experiences: the Composite Abuse Scale (Revised)—Short Form (CAS R -SF). BMJ Open. 2016 Dec;6(12):e012824. https://doi.org/10.1136/bmjopen-2016-012824
24. Ayu SM, Gustina E, Sofiana L, Wardani Y, Sukarelawan MI. Physical and psychological violence victimization scale in adolescents dating: Confirmatory factor analysis and Rasch model. Int J Eval Res Educ [Internet]. 2023 Mar 1;12(1):96. Available from: https://ijere.iaescore.com/index.php/IJERE/article/view/22250. https://doi.org/10.11591/ijere.v12i1.22250
25. Aiken LR. Three Coefficients for Analyzing the Reliability and Validity of Ratings. Educ Psychol Meas. 1985 Mar;45(1):131–42. https://doi.org/10.1177/0013164485451012
26. Modarresi G, Javan E. Construction and Validation of Foreign Language Learners' Dropout Questionnaire. Int J Instr. 2018;11(4):425–44. https://doi.org/10.12973/iji.2018.11427a
27. Ad'hiya E, Laksono EW. Development and Validation of an Integrated Assessment Instrument to Assess Students' Analytical Thinking Skills in Chemical Literacy. Int J Instr. 2018;11(4):241–56. https://doi.org/10.12973/iji.2018.11416a
28. Gürkan G, Kahraman S. Development of an Attitude Scale To Measure Attitudes Towards Organ Transplantation and Donation of Preservice Teachers. J Balt Sci Educ. 2018 Dec;17(6):1005–16. https://doi.org/10.33225/jbse/18.17.1005
29. Son YJ, Won MH. Psychometric Validation of the Korean Version of the 9-Item European Heart Failure Self-Care Behaviour Scale. Eval Health Prof. 2018 Dec;1–18. https://doi.org/10.1177/0163278718817946
30. Lee K. Development of a Diagnostic Tool for Self-Esteem for University Students. Korea Assoc Yeolin Educ. 2023 Jan;31(1):141–55. https://doi.org/10.18230/tjye.2023.31.1.141
31. Hair JF, Black WC, Babin BJ, Anderson RE. Multivariate Data Analysis. 5th ed. London: Prentice-Hall; 1998.
32. Hidayati K, Budiyono B, Sugiman S. Development and Validation of Student's Responsibility Scale on Mathematics Learning Using Subject Scaling Model. Int J Instr [Internet]. 2018 Oct 25;11(4):499–512. Available from: http://www.e-iji.net/dosyalar/iji_2018_4_31.pdf. https://doi.org/10.12973/iji.2018.11431a
33. Hanifah M, Mohmadisa, Hashim, Nasir, Nayan, Yazid, et al. A Confirmatory Factor Analysis of Malaysian Primary School Students' Energy Saving Practices. J Turkish Sci Educ. 2018;15(3):51–63.
34. Hair JF, Black WC, Babin BJ, Anderson RE. Multivariate data analysis. 7th ed. British: Pearson Education Limited; 2014.
35. Sundström A, Söderholm A, Nordin M, Nordin S. Construct validation and normative data for different versions of the Shirom-Melamed burnout questionnaire/measure in a Swedish population sample. Stress Heal [Internet]. 2023 Aug;39(3):499–515. Available from: https://onlinelibrary.wiley.com/doi/10.1002/smi.3200. https://doi.org/10.1002/smi.3200
36. Sukarelawan MI, Jumadi J, Kuswanto H, Thohir MA. The Indonesian Version of the Physics Metacognition Inventory: Confirmatory Factor Analysis and Rasch Model. Eur J Educ Res [Internet]. 2021 Oct 15;10(4):2133–44. Available from: https://www.eu-jer.com/the-indonesian-version-of-the-physics-metacognition-inventory-confirmatory-factor-analysis-and-rasch-model. https://doi.org/10.12973/eu-jer.10.4.2133
37. Hair JF, Sarstedt M, Hopkins L, Kuppelwieser VG. Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. Eur Bus Rev. 2014 Mar;26(2):106–21. https://doi.org/10.1108/EBR-10-2013-0128
38. Foldnes N, Olsson UH. The Choice of Normal-Theory Weight Matrix When Computing Robust Standard Errors in Confirmatory Factor Analysis. Struct Equ Model A Multidiscip J. 2019 Nov;26(6):861–75. https://doi.org/10.1080/10705511.2019.1600408

39. Joo SH, Kim ES. Impact of error structure misspecification when testing measurement invariance and latent-factor mean difference using MIMIC and multiple-group confirmatory factor analysis. Behav Res Methods. 2019 Dec;51(6):2688–99. https://doi.org/10.3758/s13428-018-1124-6
40. Schweizer K, Troche S. The EV Scaling Method for Variances of Latent Variables. Methodology. 2019 Oct;15(4):175–84. https://doi.org/10.1027/1614-2241/a000179

Declarations

Author contribution	:	Suci Musvita Ayu was responsible for the entire research process from drafting the instrument to data collection. She drafted the manuscript and helped discuss the findings. Erni Gustina and Liena Sofiana were responsible during the instrument validation process. They also contributed to providing improvements to the manuscript content. Thoharoh Halimatusa'diyah was responsible for collecting data in the field. She also helped in improving the manuscript from the appearance aspect. Soeharto, Ratu Matahari, and Septian Emma Dwi Jatmika assisted in interpreting the findings and making language improvements. Moh. Irma Sukarelawan was responsible for analyzing the data and making interpretations.
Funding statement	:	This research did not receive any funding.
Conflict of interest	:	Both authors declare that they have no competing interests.
Additional information	:	No additional information is available for this paper.

Appendix

Physical Violence Victims (PhyVV) in Dating

No.	Statement
1	My partner hits or punches my body parts
2	My partner hit or slapped my face
3	My partner scratches parts of my body
4	My partner twisted my hand
5	My partner slammed me
6	My partner pushed me roughly
7	My partner bit me
8	My partner choked me
9	My partner pulled me violently*
10	My partner forced me out of the vehicle in the middle of the trip
11	My partner pinched me strongly*
12	My partner kicked a part of my body*
13	My partner hurt me with a hard object
14	My partner threw a hard object at me*
15	My partner tore the clothes I was wearing
16	My partner stepped on my foot*
17	My partner forced me to have sex

Note: * : *invalid*

Psychological Violence Victims (PsyVV) in Dating

No.	Statement
1	My partner looks down on me
2	My partner demands that I comply with his/her wishes.
3	My partner gets angry if I reprimand him/her for his/her mistakes
4	My partner demands that I have sex whenever he or she wants.
5	My partner restricts my socialising.
6	My partner restricts my opposite-sex friends.
7	My partner scolds me in front of other people.
8	My partner seems stingy to me.
9	My partner underestimates my academic ability.
10	My partner shouts or yells at me.
11	My partner does not respect my feelings.
12	My partner traumatises me.
13	My partner treats me like a fool.
14	My partner is rude to me.
15	My partner makes fun of my appearance.
16	My partner threatens me.
17	My partner brings up my past with my old partner.
18	My partner insults me in front of my friends
19	My partner scares me
20	My partner says hurtful things

DOI: 10.58185/jkr.v15i1.184
ISSN: 2354-8762 (Online)