



Questionnaire Instrument to Measure Elementary Education Teachers' Bullying Awareness

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Abstract: The increasing prevalence of bullying in elementary schools has raised serious concerns regarding the safety and well-being of students. This study aims to develop and validate a theoretically grounded instrument to assess elementary school teachers' awareness of bullying behavior. A total of 121 teachers from Central Java participated as respondents. The instrument was developed based on the Olweus Bullying Questionnaire (OBQ) and the Bullying and Cyberbullying Scale (BCS), covering four key dimensions: bullying detection, behavioral changes, causes of bullying, and preventive actions. Content validity was assessed using Aiken's V analysis, while construct validity was examined through Confirmatory Factor Analysis (CFA), demonstrating a satisfactory model fit (CFI > 0.90, RMSEA < 0.08). Reliability analysis indicated excellent internal consistency, with Cronbach's α and McDonald's ω values exceeding 0.90. The findings confirm that the developed instrument is both valid and reliable in measuring teachers' awareness of bullying. This research contributes to the development of assessment tools in education, providing a practical framework for improving teachers' roles in bullying prevention and intervention in elementary schools.

Keywords: bullying awareness; confirmatory factor analysis (cfa); elementary education; teacher perception

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INTRODUCTION

Education plays a significant role in shaping individual behavior (Ninda & Marhamah, 2023). Education is a conscious effort carried out through guidance, teaching, and training, both within and outside the school environment, throughout one's life, to prepare students to participate effectively in various aspects of their future lives. The learning process, which involves interaction among students, not only focuses on the transmission of knowledge but also emphasizes the development of affective and character aspects. This aims to guide students in cultivating an awareness of good and bad values in daily life. In this context, education holds responsibility for shaping the character of students.

One of the concerning issues regarding character and attitudes is bullying. It is no surprise that the Minister of Education included bullying as one of the major sins in education. According to the PISA study, 41% of Indonesian students have experienced bullying several times a month (UNICEF, 2020). This figure is significantly higher than the average bullying rate in OECD (Organization for Economic Cooperation and Development) member countries, which stands at only around 22.7%. This fact places Indonesia fifth out of 78 countries with the highest number of bullying cases (Rizky & Yuningsih, 2024). Meanwhile, Sistem Informasi Online Perlindungan Perempuan dan Anak (SIMFONI-PPA) recorded 22,059 cases of violence against women and children in 2024, with 4,862 victims being male and 19,145 victims being female (SIMFONI-PPA, 2024).

Ironically, most bullying cases occur within educational institutions. Places that are supposed to teach noble character and provide a safe and comfortable environment for learning have instead become fertile grounds for bullying. The National Commission for Child Protection (KPAI) reported 16,720 bullying cases in Indonesian schools throughout 2023 (Simbolon & Harahap, 2024). KPAI also noted that cases of school violence, including bullying, increased from 7.6% to 8.7% between January and August 2023. In school settings, particularly primary schools (SD/MI), bullying has become a growing concern in Indonesia. Data from the Indonesian Teachers' Federation (FSGI) revealed that 23 bullying cases occurred in schools between January and September 2023. The majority of these cases occurred in primary schools (23%) and junior high schools (50%). Additionally, the Indonesian Child Protection Commission (KPAI) reported receiving 64 complaints about child violence in educational institutions as of March 2023 (Kurnianingrum, 2023).

Bullying has significant short-term and long-term impacts. It not only has adverse effects on the physical and mental health of victims (Lin et al., 2020; Lu et al., 2020; Pebriana & Supriyadi, 2024) but also impacts their academic performance and social development. If this phenomenon is not properly addressed, its long-

term consequences can be severe (Cuevas et al., 2020), including psychological disorders, low self-esteem, and an increased risk of negative behaviors in adolescence and adulthood. Bullying not only affects the victims; it also impacts the perpetrators. Bullies often struggle to develop healthy relationships and cannot view situations from different perspectives. They are also at risk of engaging in verbal and non-verbal violence against others in the future (Retnowuni & Yani, 2022). Furthermore, bystanders who witness bullying but do not intervene may also experience psychological distress, guilt, or a sense of helplessness, which can affect their emotional well-being. This highlights the broader ripple effect of bullying, where the entire school community is impacted by its presence. Left unchecked, bullying can perpetuate a culture of fear and mistrust within the educational environment, hindering the development of a positive learning atmosphere. Consequently, addressing bullying requires a comprehensive and collaborative approach that involves students, teachers, parents, and policymakers.

Based on the aforementioned data, bullying cases must be taken seriously by all parties. In response, the government, through the Ministry of Education, Culture, Research, and Technology (Mendikbudristek), has issued guidelines on the Prevention and Handling of Violence in Educational Institutions through Regulation No. 46 of 2023 (Mendikbudristek RI, 2023). Both the government and community initiatives have launched various programs; however, many cases still go unnoticed or are not handled effectively. Ironically, schools, which are supposed to be places for instilling moral values and good character, often become fertile grounds for bullying, betraying the essence of education as an effort to shape a generation with strong character (Hamdani & Apriani, 2024). A school environment that fails to foster a sense of safety for students can weaken their trust in educational institutions. Additionally, persistent bullying without adequate intervention can create a cycle of violence that is difficult to break. Therefore, concrete actions and commitments from all parties are needed to establish schools as safe and inclusive zones for every student (Dewi et al., 2024; Ningtias, 2024).

Despite numerous studies on bullying in schools, previous research has primarily focused on qualitative self-reports regarding teachers' responses to bullying incidents (Acquadro et al., 2017; Chow et al., 2023; Jabeen et al., 2022). Many existing instruments, such as the Olweus Bullying Questionnaire (OBQ) and the Bullying and Cyberbullying Scale (BCS), have been widely applied but are often developed in Western contexts, making them less adaptable to the socio-cultural conditions of Indonesian schools. Moreover, several studies have measured teachers' perceptions of bullying; however, they lack a validated instrument tailored to the elementary school level in Indonesia. This gap highlights the need for a culturally relevant, theory-based instrument that comprehensively measures teachers' awareness of bullying. The novelty of this study lies in the development and validation of a bullying awareness instrument specifically designed for elementary school teachers in Indonesia, incorporating both content and construct validation approaches. Unlike previous research, which predominantly relies on qualitative assessments or Western-developed scales, this study introduces a measurement tool that integrates the OBQ and BCS frameworks with local contextual adaptations. This instrument not only measures awareness of bullying but also identifies key dimensions, including detection, behavioral changes, causes of bullying, and preventive actions. By providing a validated tool, this research offers a significant contribution to bullying prevention strategies in elementary education.

One of the main causes of this condition is the low level of awareness and understanding among teachers regarding the various forms of bullying behavior. Many teachers are unaware of bullying behaviors exhibited by their students because they perceive such actions as common or normal in daily interactions. Most teachers and parents fail to recognize bullying because they believe that children sometimes engage in these behaviors as mere games or jokes among friends (Mahriza et al., 2020). Furthermore, a lack of knowledge about bullying in children also contributes to the problem (Besnili & Tanrikulu, 2021). Teachers, as the closest individuals to students in the school environment, play a crucial role in detecting and addressing bullying through guidance, counseling, direction, coaching, and setting positive examples (Junindra et al., 2022). Preventive efforts by teachers also serve as a means to emphasize the importance of mutual respect and the avoidance of bullying among peers (Mahriza et al., 2020). However, teachers' awareness of the various forms of bullying—whether physical, verbal, social, or cyberbullying—remains relatively low (Jabeen et al., 2022). Previous research has shown that the absence of valid and reliable instruments to measure bullying behavior at the primary school level (SD/MI) is one of the main obstacles in enhancing teachers' awareness and ability. Several studies have investigated teachers' responses to bullying incidents based on self-reports presented qualitatively (Acquadro et al., 2017; Chow et al., 2023; Jabeen et al., 2022; Lin et al., 2020; Ten Bokkel et al., 2021). The available instruments often do not align with Indonesia's cultural and social contexts, thus failing to provide an entirely accurate picture of the bullying situation in schools. The lack of relevant instruments also makes it challenging to map bullying behavior patterns in primary schools holistically. This affects teachers' ability to design effective intervention strategies for preventing and handling bullying. Furthermore, differing perspectives among teachers, students, and parents often create a gap in understanding the definitions and types of bullying occurring. Therefore, the development of instruments tailored to local contexts has become an urgent need to support bullying prevention and intervention efforts at the primary school level.

METHODS

This study employs a quantitative research design, utilizing a survey method and a theory-based instrument development approach (Sutikno et al., 2023). Questionnaire items were constructed based on a comprehensive literature review on bullying behavior and teachers' awareness in primary schools (SD/MI). The instrument dimensions were identified through conceptual understandings derived from relevant bullying theories. This research follows a cross-sectional study design, where data were collected at a single point in time to assess elementary school teachers' awareness of bullying behavior. Additionally, psychometric testing was integrated to establish the validity and reliability of the developed instrument.

The objective of this study is to develop and validate a theory-based instrument to measure elementary school teachers' awareness of bullying behavior. This research aims to construct a reliable and valid questionnaire based on established bullying theories, identifying key dimensions such as bullying detection, behavioral changes, causes of bullying, and preventive actions. Furthermore, it seeks to evaluate the instrument's psychometric properties, including content validity using Aiken's V analysis, construct validity through Confirmatory Factor Analysis (CFA), and reliability assessment with Cronbach's α and McDonald's ω . By providing a standardized assessment tool, this study contributes to enhancing teachers' roles in detecting, preventing, and addressing bullying incidents in elementary schools, ultimately fostering a safer and more conducive learning environment. The research process for developing this instrument is outlined in Figure 1.

The dimensions of the instrument were identified based on conceptual understandings derived from relevant bullying theories. This study integrates two key theories widely used to assess bullying behavior in schools: the Olweus Bullying Questionnaire (OBQ) and the Bullying and Cyberbullying Scale for Adolescents (BCS). Both theories share a common objective of measuring awareness and involvement in bullying behavior. From these theoretical foundations, four main dimensions were adopted: (1) identification of bullying forms; (2) recognition of bullying victim signs, such as behavioral changes; (3) understanding of bullying causes, including social dynamics and digital pressure, and (4) implementation of prevention and intervention strategies. The researchers initially targeted 250 respondents, but the number of valid and fully completed questionnaires was 121. Data collection was conducted online through the Google Forms platform over a period of one month, with voluntary participation from respondents. A convenience sampling technique was employed to select the sample, focusing on respondents who were readily accessible or willing to participate. Challenges during data collection were identified as a limitation of the study, potentially affecting the generalizability of the findings.

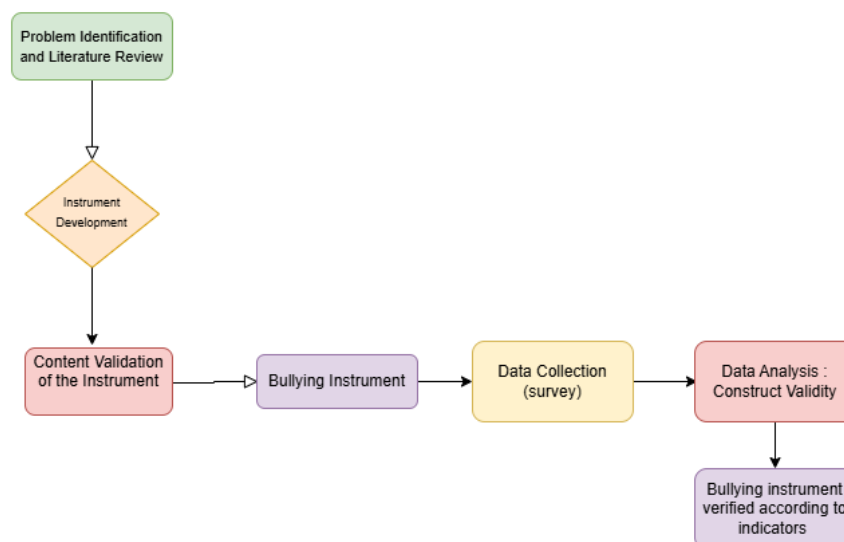


Figure 1. Research Flowchart

The research instrument was validated by four experts with expertise in education and psychology. Content validity was assessed using Aiken's V analysis to evaluate the relevance of each item to the defined theoretical dimensions. Each expert rated item relevance on a five-point scale, ranging from 1 (very irrelevant) to 5 (very relevant). Following content validation, the instrument, developed based on bullying theories, underwent construct validity testing using Confirmatory Factor Analysis (CFA). The primary objective of CFA was to confirm the hypothesized factor structure of bullying behavior dimensions, including physical, verbal, and social intimidation. The analysis was conducted using R statistical software, considering multiple model fit indices, including the Chi-square, Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). The results demonstrated a good model fit, with CFI values exceeding 0.90 and RMSEA values below 0.08, meeting acceptable statistical thresholds.

RESULT AND DISCUSSION

This study aims to develop and validate a bullying behavior instrument to enhance teachers' awareness at the primary school/Madrasah Ibtidaiyah (SD/MI) level regarding bullying incidents in the school environment. The instrument is designed based on existing theories of bullying behavior. It aims to measure various dimensions of teachers' awareness of bullying, including detection of bullying, behavioral changes, causes of bullying, as well as prevention and intervention efforts that can be implemented. From the survey distributed to SD/MI teachers, we obtained responses from 121 teachers. While our initial target was approximately 250 teachers, several challenges arose as we employed a convenience sampling technique, relying solely on those who voluntarily participated in the survey.

The first stage, after drafting the instrument based on the theories, was conducting content validation by involving four expert judges: a psychologist, a lecturer in educational policy, a lecturer in industrial and organizational psychology, and a doctoral student specializing in research and educational evaluation. The expert evaluations of the instrument's content were then analyzed using Aiken's V analysis. The aspects assessed for each item included: content relevance, language clarity, suitability of the rating scale, readability, item construction technique, instrument completeness, and level of difficulty.

Table 1. Content Validity of Each Item

	Item	Aiken's V	Interpretation
item_1	Are the questionnaire items relevant to the research objectives?	0.875	Very Good
item_2	Do the questionnaire items align with the concepts being measured?	0.6875	Good
item_3	Is the language used in the questionnaire easy to understand?	0.6875	Good
item_4	Are the terminologies used appropriate and consistent?	0.6875	Good
item_5	Do the questionnaire items reflect the dimensions or variables being measured?	0.875	Very Good
item_6	Is the rating scale used appropriate and sufficiently representative of the data?	0.875	Very Good
item_7	Are the questionnaire items clear and unambiguous?	0.625	Very Good
item_8	Does the item construction follow the principles of good instrument design?	0.8125	Very Good
item_9	Do the questionnaire items cover all aspects relevant to the research objectives?	0.875	Very Good
item_10	Is the difficulty level of the items appropriate for the respondents completing the questionnaire?	0.8125	Very Good

Table 1 shows the results of Aiken's V analysis, where most items scored above 0.70, indicating adequate content validity. Items 1, 5, 6, and 9 received the highest scores (0.875), which suggests that the experts agreed these items are relevant and representative in measuring teachers' awareness of bullying. However, items 3, 4, and 7 had lower Aiken's V values (0.6875 and 0.625), indicating that some experts considered these items to require further revision regarding terminology and potential ambiguity. During the validation process, the researchers received critical feedback on items measuring teachers' awareness of bullying, both in terms of language and sentence construction. The next step was to analyze the data and determine whether the construct of the instrument measuring teachers' awareness of bullying aligns with the OBQ (Olweus Bullying Questionnaire) and BCS (Bullying and Cyberbullying Scale for Adolescents) theories. The analysis began with instrument reliability. In the initial stage, reliability analysis was conducted to assess the internal consistency of the developed bullying behavior instrument. Two reliability indicators were used in this study: Cronbach's α and McDonald's ω . The results of the reliability analysis are presented in Table 2.

Table 2. Results of Instrument Reliability Analysis

Scale Reliability Statistics		
Scale	Cronbach's α	McDonald's ω
	0.954	0.955

The Cronbach's α value of 0.954 indicates that the instrument has excellent internal consistency. Additionally, McDonald's ω of 0.955 further supports the results of Cronbach's α , demonstrating high reliability for this instrument. McDonald's ω is a newer reliability measure and is often considered a more accurate

alternative to Cronbach's α in certain situations. McDonald's ω (omega) is a reliability coefficient that provides an alternative to Cronbach's α (alpha) and is particularly useful when the assumption of tau-equivalence (i.e., the assumption that all items have the same actual score variance) required by alpha is not met (Zinbarg et al., 2005). Omega is based on factor analysis and is generally regarded as a more accurate measure of internal consistency, especially when the items in a scale contribute differently to the construct being measured. Unlike Cronbach's α , McDonald's ω does not assume that all items contribute equally to the latent variable, making it more flexible and often more precise, particularly for multidimensional scales. Omega total often provides an upper limit for alpha because omega accounts for the possibility that different items have different factor loadings, which is more realistic in psychological and educational measurements (Orçan, 2023).

The next step is Confirmatory Factor Analysis (CFA) to examine the construct validity of the instrument developed to measure teachers' awareness of bullying behavior in primary schools (SD/MI). CFA is a statistical analysis method used to test the extent to which a hypothesized theoretical model fits the empirical data collected from respondents (Retnawati, 2016). Through CFA, researchers can verify whether the items constructed based on the theory align with the predefined dimensions. The results in Table 3 show the factor loading values, which measure the correlation between each indicator and the factor being measured. The higher the factor loading value, the stronger the relationship between the indicator and the corresponding factor.

Table 3. Factor Loading of the Bullying Behavior Instrument (CFA)

Factor	Indicator	Estimate	SE	Z	p	Std. all
Bullying Detection	item_1	1.000			< .001	0.866
	item_2	0.870	0.078	11.199	< .001	0.819
	item_3	1.062	0.085	12.479	< .001	0.872
	item_4	0.699	0.119	5.850	< .001	0.513
	item_5	0.916	0.089	10.250	< .001	0.776
Behavioral Changes	item_6	1.000			< .001	0.852
	item_7	1.021	0.098	10.417	< .001	0.801
	item_8	0.956	0.096	9.973	< .001	0.729
	item_9	1.047	0.117	8.921	< .001	0.771
Causes of Bullying	item_10	1.000			< .001	0.805
	item_11	1.199	0.109	11.013	< .001	0.912
	item_12	0.993	0.110	9.019	< .001	0.765
Prevention & Intervention	item_13	1.000			< .001	0.792
	item_14	0.905	0.101	8.917	< .001	0.758
	item_15	0.896	0.095	9.392	< .001	0.789
	item_16	0.890	0.102	8.705	< .001	0.744
	item_17	0.896	0.102	9.919	< .001	0.721
	item_18	0.963	0.116	8.374	< .001	0.716
	item_19	0.908	0.105	8.304	< .001	0.740
	item_20	0.855	0.119	7.200	< .001	0.636
	item_21	0.970	0.111	8.766	< .001	0.748
	item_22	0.900	0.112	8.005	< .001	0.695

Table 3 shows that loading values (std.all) above 0.5 are considered sufficiently strong. In the table, the average loading values for each item measuring bullying-related dimensions in the instrument for fostering teachers' awareness of bullying among primary school students (SD/MI) indicate that these items consistently measure the hypothesized factors. Only one item has the lowest loading factor value, which is 0.513 for the fourth item in the bullying detection factor. In the Causes of Bullying factor, item_11 has a higher loading factor of 0.912, indicating that this item has a very strong relationship with the factor. This item is highly representative of measuring the causes of bullying. The Standard Error (SE) measures the level of uncertainty or variability in the factor loading estimates. Lower SE values indicate more precise estimates. In this table, all SE values are relatively low (ranging from 0.078 to 0.119), indicating that the factor loading estimates are quite accurate.

Additionally, the Z-values are all very high, showing that the relationships between indicators and factors are statistically significant. The table demonstrates that the instrument used has a strong and reliable factor structure. Each indicator has significant factor loading, confirming that each item measures a relevant factor. The next step involves analyzing covariance or the relationships between factors within the Confirmatory Factor Analysis (CFA) model, as shown in Table 3. Covariance indicates the linear relationship between two factors, where higher covariance values suggest stronger relationships between the factors. The estimated values indicate the magnitude of covariance between two factors.

Table 3. Factor Covariances

		Estimate	SE	Z	p	Std.all
Bullying Detection	Bullying Detection	1.000				
	Behavioral Changes	0.238	0.039	6.057	< .001	0.873
	Causes of Bullying	0.211	0.040	5.340	< .001	0.731
	Prevention & Intervention	0.149	0.030	4.914	< .001	0.629
Behavioral Changes	Behavioral Changes	1.000				
	Causes of Bullying	0.229	0.041	5.621	< .001	0.820
	Prevention & Intervention	0.152	0.030	5.013	< .001	0.662
Causes of Bullying	Causes of Bullying	1.000				
	Prevention & Intervention	0.153	0.032	4.761	< .001	0.629
Prevention & Intervention	Prevention & Intervention	1.000				

^a fixed parameter

From Table 3, the covariance value between the Bullying Detection and Behavioral Changes factors is 0.873, indicating a reasonably strong relationship between these two factors. The estimated values between factors shown in the table are notably high. The covariance between Causes of Bullying and Prevention & Intervention is lower than that of other relationships, at 0.629, but it remains statistically significant. Additionally, the SE values in the table range from 0.030 to 0.041, indicating that the covariance estimates between factors are relatively stable. Small SE values demonstrate that the covariance estimates are more reliable. All factors in the model are significantly interrelated. The strong relationships between factors suggest that various aspects of bullying—detection, behavioral changes, causes, and interventions—are closely interconnected in shaping teachers' awareness of bullying among primary school students (SD/MI). The next step involves evaluating the model fit, as shown in Table 4. The Chi-squared/df ratio is one of the model fit indices that indicate whether the hypothesized model aligns well with the data.

Table 4. Overall goodness-of-fit

	Chi-squared/df	P value	CFI	TLI	RMSEA	SRMR	p-value
Cutt off		≤0.05.	>0.87	>0.90	<0.08	<0.08	
Results	552.886/203	< .001	0.861	0.841	0.999	0.073	0,00
Modification	428.636/198	< .001	0.918	0.904	0.540	0.064	0,00

Table 4 shows a p-value < 0.001 for the Chi-squared test. In this case, a p-value below 0.05 may not be a major concern, as larger sample sizes tend to yield significant Chi-squared values. The CFI value of 0.861 and TLI value of 0.841 indicate that the model approaches a good fit with the data, although they are slightly below the ideal standard. The RMSEA value of 0.999, however, indicates that the model does not meet the desired cut-off. This suggests some deviation between the hypothesized model and the observed data. Meanwhile, the SRMR value of 0.073 falls within an excellent range, indicating that the model fits the data well in terms of the average differences between observed and predicted values. To improve the model fit, modifications were made as suggested: (item_15 ~~ item_19; item_13 ~~ item_14; Detec =~ item_6; item_2 ~~ item_3; item_8 ~~ item_12). Modification Indices (MI) identified areas in the model that could be adjusted to enhance fit. In CFA, MI often highlights potential relationships between error terms or correlations between variables that were not initially considered. These modifications enhance the model without necessitating the addition of new variables or altering the underlying theoretical structure. In this case, MI allowed the model to achieve a better fit with the data, as reflected by improvements in CFI and reductions in RMSEA and SRMR. After the modifications, the CFI and TLI values increased to 0.918 and 0.904, respectively. The RMSEA and SRMR values decreased to 0.540 and 0.064, demonstrating a significant improvement in model fit.

This study presents a novel contribution by developing and validating a questionnaire specifically designed to measure elementary school teachers' awareness of bullying in the Indonesian educational context. While previous studies have primarily used qualitative approaches to explore teachers' perceptions of bullying, this research provides a structured and quantitative measurement tool tailored to the local socio-cultural environment. The integration of the Olweus Bullying Questionnaire (OBQ) and the Bullying and Cyberbullying Scale (BCS) for Adolescents as theoretical foundations ensures that the instrument comprehensively captures bullying detection, behavioral changes, causes of bullying, and preventive actions. Additionally, this instrument is uniquely designed for elementary school teachers, recognizing their crucial role in early intervention and prevention of bullying.

Figure 1 illustrates the relationships between latent factors (circles) and indicators (items) (rectangles). Factor loadings above 0.5 are considered strong in indicating a robust relationship between the factor and the item. From the Detection factor, item_3 has a factor loading of 0.844, indicating that this item is highly correlated

with the Detection factor related to bullying. The correlations between factors are represented by lines connecting the latent factors. For example, there is a significant correlation between Causes and Behavioral Changes (Bhv) with a correlation value of 0.794, indicating a strong relationship between these two dimensions. The diagram indicates that all factors have strong relationships with their respective indicators. However, some factors are more strongly correlated with one another, such as Causes and Detection, with a correlation of 0.749. Overall, this CFA path diagram illustrates the structural model of bullying behavior as measured by the instrument. From the figure, the following can be concluded: (1) Most items have sufficiently high factor loadings, indicating good validity. (2) The correlations between factors demonstrate that the measured dimensions (bullying detection, behavioral changes, causes, prevention, and intervention) are significantly interrelated.

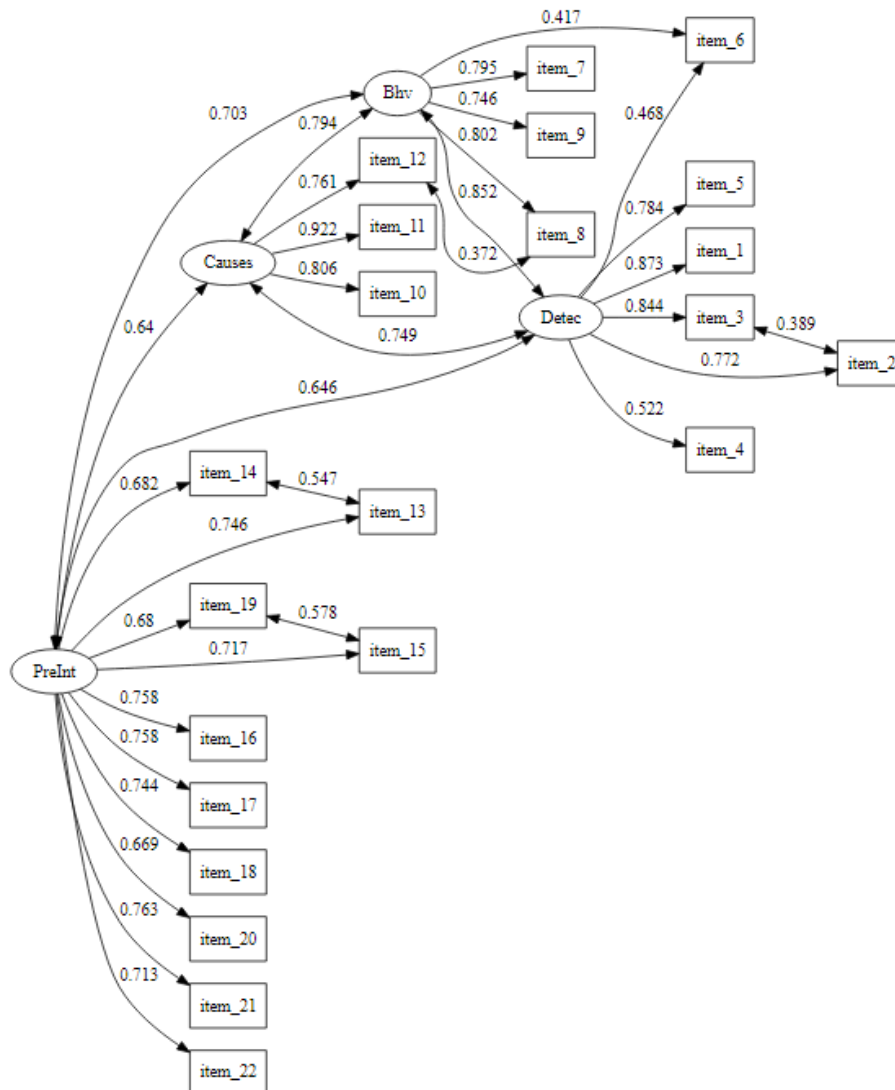


Figure 1. Path Diagram of Confirmatory Factor Analysis (CFA) for the Bullying Instrument

This study successfully developed an instrument to measure primary school teachers' awareness of bullying, validated through Confirmatory Factor Analysis (CFA). During the instrument development process, we conducted focus group discussions with team members and colleagues. The team first conducted a theoretical review, focusing on the OBQ (Olweus Bullying Questionnaire) and BCS (Bullying and Cyberbullying Scale for Adolescents) concepts. The findings showed that all hypothesized factors—Bullying Detection, Behavioral Changes, Causes of Bullying, and Prevention & Intervention—had significant factor loadings, indicating strong relationships between the measured items and their respective latent constructs. Furthermore, the relationships between factors demonstrated supportive correlations, reflecting the complexity of bullying behavior in primary school environments. Reliability analysis confirmed the instrument's internal consistency, with Cronbach's α and McDonald's ω values exceeding 0.90. This aligns with [Orçan \(2023\)](#), who emphasized that McDonald's ω serves as a stronger alternative for multidimensional scales. Notably, item_11 ("Peer pressure and social media as causes of bullying") emerged as the most representative, with a factor loading value of 0.912. This finding is

consistent with [Sripongplerd \(2023\)](#), who highlights the significant role of external pressures, such as peer influence and social media, in bullying behaviors. These findings underscore the importance of understanding the causes of bullying to help teachers design more effective interventions. In the context of education, this instrument has the potential to serve as a critical diagnostic tool for identifying the root causes of bullying in schools.

Construct validity was tested using CFA, where the factor loadings showed that most items had values above 0.5. This indicates that the items consistently support the hypothesized construct. Item 11, with a factor loading of 0.906, is one of the strongest items in measuring Causes of Bullying, highlighting the significant influence of peer pressure and social media on bullying behavior. This item provides direct guidance for teachers to understand the external factors contributing to students' bullying behavior. These findings align with previous literature that emphasizes the role of social environmental influences as key factors in bullying behavior ([Sripongplerd, 2023](#)). Teachers can use this understanding to develop community-based approaches that target the effects of peer pressure and social media. Furthermore, the high factor loading values suggest that the bullying construct in this instrument reflects theoretically relevant dimensions of bullying behavior.

The strong covariance between "Behavioral Changes" and "Bullying Detection" ($r = 0.909$) indicates that teachers who are more adept at detecting bullying also tend to recognize behavioral changes in students related to bullying incidents. This relationship reinforces the model proposed by [Olweus \(2013\)](#), which emphasizes early detection as a core component of effective bullying prevention efforts. Additionally, the correlation between "Causes of Bullying" and "Prevention & Intervention" ($r = 0.716$) suggests that a thorough understanding of the root causes of bullying can inform the design of more effective prevention strategies. For instance, teachers who recognize the influence of peer pressure can implement mediation approaches to reduce conflicts among students ([Olweus, n.d.](#); [Smith & López-Castro, 2017](#); [Solberg & Olweus, 2003](#)). The strong correlations between these factors affirm that the dimensions of bullying measured in the instrument are interconnected and collectively form a comprehensive framework for understanding teachers' awareness of bullying behavior. Significant correlations also suggest that teachers who understand the causes of bullying are more likely to engage in prevention and intervention efforts. This finding is consistent with findings from studies on school-based bullying interventions ([Smith, 2016](#)), which emphasize the importance of addressing root causes to achieve meaningful outcomes in reducing bullying.

However, the CFA model fit indices, such as CFI (0.898) and RMSEA (0.0987), indicate that there is still room for improvement. Nevertheless, modifications based on Modification Indices (MI) showed significant enhancements, with the CFI increasing to 0.918 and the RMSEA decreasing to 0.054. These adjustments involved correlations between several items that were initially unconsidered, such as relationships between error terms. While these modifications improved the model fit, it is essential to ensure that the adjustments remain aligned with the underlying theoretical framework. Future research could integrate additional variables, such as cyberbullying, which is increasingly relevant in the digital era. Refining the model further could make the instrument more representative and relevant for measuring various aspects of bullying in schools.

This study makes a significant contribution to educational psychology and teacher training by introducing a validated, theory-driven instrument for assessing teachers' awareness of bullying. The results offer empirical evidence that a structured awareness instrument can enhance teachers' ability to recognize and address bullying behaviors more effectively. The instrument's high reliability (Cronbach's $\alpha = 0.954$, McDonald's $\omega = 0.955$) and strong construct validity (CFI > 0.90, RMSEA < 0.08) confirm its applicability for future large-scale studies and policy implementation. Additionally, the findings from this study support the need for teacher professional development programs that focus on bullying prevention strategies. Educational policymakers can integrate this instrument into teacher training frameworks, ensuring that bullying awareness is assessed and strengthened systematically across schools.

In the educational context, particularly in measuring teachers' awareness of bullying, these findings align with prior literature emphasizing the importance of robust construct validity for measurement instruments ([Gonçalves et al., 2016](#)). Despite some limitations in the model fit, the results suggest that this instrument is sufficiently robust for further research on bullying awareness in primary school environments. Practically, this instrument serves as a valuable tool for teacher training programs, enabling educators to assess and enhance their understanding of bullying dynamics. Policymakers could incorporate this instrument into national initiatives, such as the Ministry of Education's guidelines on violence prevention in schools. By integrating this instrument into professional development curricula, schools can encourage proactive interventions to reduce the prevalence and impact of bullying. While the instrument has strengths, the study also has limitations. The use of convenience sampling may restrict the generalizability of the findings, and the exclusion of other forms of bullying, such as online harassment, highlights potential areas for future research. Nonetheless, this instrument provides a solid foundation for enhancing teachers' awareness and actions against bullying in primary schools.

CONCLUSION

This study successfully developed and validated a culturally relevant instrument to measure elementary school teachers' awareness of bullying in the Indonesian educational context. The instrument, grounded in the OBQ and BCS theoretical frameworks, integrates four key dimensions—bullying detection, behavioral changes, causes, and prevention/intervention efforts—thus fulfilling the research objectives. The results of Confirmatory Factor Analysis (CFA) and reliability testing (Cronbach's $\alpha = 0.954$, McDonald's $\omega = 0.955$) confirmed that the instrument possesses strong psychometric properties, making it a robust diagnostic tool. This research contributes a novel, theory-based measurement model tailored to local socio-cultural settings, addressing the absence of validated tools for elementary school contexts. The practical implications are significant: the instrument can be integrated into teacher training programs to improve early detection and intervention strategies. Policymakers can adopt this tool to support school-based bullying prevention initiatives as mandated by national education guidelines. Despite its strengths, the use of convenience sampling and the limited inclusion of cyberbullying aspects suggest the need for further refinement. Future studies should test the instrument across diverse regions and cultures, explore longitudinal applications, and integrate qualitative perspectives to enhance its contextual adaptability and predictive capacity. By doing so, this instrument can serve as a foundation for national efforts in fostering safer and more inclusive educational environments.

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