Multidimensional School Climate Confirmation Study For School Management In Indonesia

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Abstract:
School climate needs to be measured completely and accurately for purposes related to school management. This research aims to validate the Indonesian version of the PACE-33 scale, as developed by Mateos et al. in 2020, on private junior high school students in Magelang City, Central Java Province, Indonesia. A sample size of 315 students was taken using a purposive sampling technique. Data collection was carried out by distributing questionnaires which were answered directly by the students themselves. Examination by applying confirmatory factor analysis supports the 9-factor model of the scale with results that meet the suitability of the model. This scale has good psychometric assessments, including reliability as well as convergent, discriminant, and nomological validity. The validation results of the Indonesian version of this scale can facilitate the emergence of various research possibilities in the future, especially in schools in Indonesia according to student perceptions.
Key Word*: School climate; Multidimensional scale; Confirmatory factor analysi.*

I.   Introduction

One major concern of educational researchers and practitioners is school climate. Although it is widely agreed that there is no generally accepted definition or dimensions and indicators of school climate, most experts base it on the concept of quality and character of school life (Olsen et al., 2017). In this case, school climate is understood to not only include the physical aspects of the school, such as building facilities and infrastructure but also the various social interactions and emotional experiences that students encounter at school (Rohatgi & Scherer, 2020). A conducive school climate provides support and encouragement to school principals, teachers, staff, and students to carry out various activities in accordance with their respective duties and functions (Konold et al., 2018; Manla, 2021). In short, a positive school climate is widely believed to be an important factor that determines the success of school institutions and educational activities.

Several studies have examined school climate in Indonesia and linked it to school performance or student behavior. School climate was empirically found to be related to truant behavior among adolescent students in Samarinda (Mawarni, 2019). The relationship between school climate and student engagement was found in Bandung (Laudya & Savitri, 2020). Using a sample of students from a school in Depok, Siskandar et al. (2021) examined the influence of school climate on students' stress levels. Muslimah et al. (2022) showed that school climate influences the aggressiveness of school students in Surakarta during the Covid-19 pandemic. By applying structural equation modeling, Khosiyah (2022) tested the effect of school climate on mathematics academic achievement among students at a school in Pamulang. Recently, Sembiring & Tarigan (2023) showed that school climate is correlated with bullying behavior in private schools in North Sumatra. These empirical studies in Indonesia generally investigated school climate by applying a cross-sectional survey design that distributes questionnaires to school students. All of their research certainly contributes to the importance of a positive and conducive school climate in schools in Indonesia.

Unfortunately, those studies in Indonesia did not carry out a more in-depth analysis of school climate in its dimensions. They usually view the concept of school climate as a single dimension, whose single average score is then correlated or regressed with other research variables. In the history of school climate research, one understanding that has emerged recently is that school climate is multidimensional (Lewno-Dumdie et al., 2020). In this case, school climate is viewed as a broad and multidimensional construct that represents the quality and character of school life so relying only on one single dimension to describe school climate in general will limit responses to the scale and ignore other relevant features of school climate (Wang & Degol, 2016). So by taking a multidimensional approach to school climate measures, researchers will be facilitated to gain a stronger understanding of the relationship between school climate and various student outcomes.

One of the reasons why school climate research in Indonesia is generally not yet multidimensional is because a valid and reliable Indonesian version of a multidimensional school climate measurement scale is not

yet available. Meanwhile, several researchers have conducted studies that validate various multidimensional school climate measurements using questionnaires in the same language as the sample of local students studied. Kearney et al. (2020) evaluated the multidimensional construct of school climate for the School Climate and Academic Mindset Inventory in school adolescents in the United States. The study of Nishimura et al. (2020) confirmed the usefulness of the Japan School Climate Inventory to measure students' perceptions of school climate in elementary and junior high schools in Japan. Research conducted by Bochaver et al. (2022) developed and validated the School Climate Questionnaire using a sample of students in Russia. The study of Yu et al. (2022) validated the Dual School Climate and School Identification Measure–Student on students from middle schools in Taizhou City, China.

School climate research in Indonesia should be further developed with the availability of adequate Indonesian versions of measuring instruments to highlight multidimensional aspects of school climate. For this reason, this study intends to validate the Indonesian version of the PACE-33 multidimensional school climate scale by applying confirmatory factor analysis to junior high school students in Indonesia. Based on the theory of Cohen et al. (2009) and others, the study of Mateos et al. (2020) has developed and validated the Multidimensional School Climate Scale PACE-33 (*escala Percepción del Alumnado sobre el Clima Escolar*) in secondary school students in Spain. This research has benefits as stated that research that applies survey data to assess school climate requires measures that have been tested by research that has been validated and has reliable measures so that they contain strong psychometric properties (Wang & Degol, 2016). It is hoped that this research can provide benefits for the further development of school climate research in Indonesia.

A systematic review study suggests that a diversity of dimensions needs to be measured when evaluating school climate (Bravo-Sanzana et al., 2023). This leads this research to adopt the views of several researchers as a theoretical basis for understanding the dimensions of school climate. Cohen et al. (2009) outlined four important main domains of the school climate construct, namely: safety, relationships, environmental-structural, and teaching and learning. Their review then outlined that a positive school climate is associated with or predicts academic achievement, school success, effective violence prevention, student health development, and teacher retention. These four domains still appear discussed by Thapa et al. (2013) who reviewed a lot of research that has been conducted on school climate, including survey research using questionnaires. Furthermore, Wang & Degol (2016) reiterated the multidimensional nature of school climate and discussed theoretical support for various domains and dimensions of school climate. Likewise, Lewno-Dumdie et al. (2020) elaborated on the dimensions and sub-dimensions of school climate to allow for well-informed decision-making from research data. Finally, Mateos et al. (2020) recently outlined nine factors or dimensions of school climate. Their research provides an updated scale based on the theory that has been popularly proposed by Cohen et al. and other researchers (Cohen et al., 2009; Lewno-Dumdie et al., 2020; Thapa et al., 2013; Wang & Degol, 2016). Based on the description, especially in Mateos et al. (2020), the main research hypothesis of this study is:

H1: School climate can be explained by nine factors, namely: physical safety, rules, student-teacher relationships, peer relationships, group cohesion, environmental-structural aspects, teachers' ability to motivate, teachers' expectations, and methodological resources.

II. Material And Methods

With a type of cross-sectional research, this study took a sample of students at a private junior high school in the city of Magelang, Central Java province, Indonesia. The total population members were 330 students, consisting of three grades 7, 8, and 9. A total of 317 students participated in this study, however, two respondents were excluded from the sample because the questionnaire contained quite several statements that were not filled in so they were considered incomplete. In the end, this study took a sample of 315 students so that it covered around 95 percent of the total population. In one guidance table in a business research methods textbook, the minimum sample size required for a population size of 400 is 196 with a margin of error of 5 percent (Saunders et al., 2019). The general recommendation for absolute sample size for CFA studies is at least 200 or relatively 10 respondents per observed variable (Hahs-Vaughn, 2017). Therefore, the sample size of 315 is likely to be sufficient because it exceeds the minimum sample size recommended for absolute size. Meanwhile, relatively speaking, the sample size of this study also seems to be appropriate considering that 10 respondents per 33 observed variables are 330 respondents, which is already the size of the population.

This research took samples by applying a non-probability sampling technique, namely purposive sampling. Data collection was carried out by distributing questionnaires to students who were asked to volunteer as research samples. The statement in the questionnaire stated that the respondent's identity was guaranteed to be kept confidential and did not ask for the student's name. The researchers asked for help from the homeroom teachers from each class to provide time and opportunities to meet with the students in the class. Next, one of the researchers came and entered the classes to directly distribute questionnaires and receive the results of the

questionnaires that had been filled in by the students. This questionnaire distribution activity was carried out in April 2024.

Furthermore, to measure the perceived school climate, this research applies the Multidimensional School Climate Scale PACE-33 which has been developed by Mateos et al. (2020) based on the work of Cohen et al. (2009) and others. The PACE-33 scale has 9 dimensions consisting of a total of 33 statement items, consisting of 29 items stated directly and 4 items (namely items 9, 13, 19, and 31) in reverse. Initially, the PACE-33 scale was in English and then translated into Indonesian in this study. Appendix shows the Indonesian version of the PACE-33 scale. Respondents are provided with a choice of answers to statements on a five-point Likert scale with codes: 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree). For some later analyses, a summation scale is formed by combining all variable items into a total value which is more often an average score (Hair Jr. et al., 2019). This approach is often found in many studies (Miranda et al., 2020; Yurdabakan & Uz Baş, 2018).

This research uses confirmatory factor analysis (CFA) which is a type of structural equation model (SEM) to test the multidimensional structure of the theoretical construct of school climate. Being hypothesis-driven in nature, CFA is almost always used during the scale development process to examine the latent structure of test instruments (e.g. a questionnaire) (Timothy A. Brown, 2015). Textbooks have suggested that researchers should report three or four goodness-of-fit indices with at least one incremental index and one absolute index, in addition to the χ^2 value and its degrees of freedom (*df*) (Hair Jr. et al., 2019). On the one hand, the absolute goodness-of-fit index directly measures how well the model under study reproduces the observed data; whereas the incremental fit index assesses the fit of the estimated model relative to alternative base models. Because χ^2 is usually significant in small samples, it has been commonly suggested that root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), and comparative fit index (CFI) or Tucker–Lewis index (TLI) are useful for evaluating the goodness-of-fit of a single model (Keith, 2019).

III. Result

All study data were initially entered manually into the Microsoft Excel spreadsheet software program and then exported for statistical analysis using the Stata version 17 computer program. Stata is powerful enough to perform various types of structural equation modeling including confirmatory factor analysis (Ramlall, 2017). SEM, which is included in the Stata statistical package, uses the SEM Builder option or command language to create model path diagrams (Schumacker & Lomax, 2016).

The demographic profile of student respondents is as follows. A total of 160 students (49.21 percent) were female, and 155 students (50.79 percent) were male. Meanwhile, for grade level, as many as 32.06 percent of students were in grade 7, as many as 29.52 percent were in grade 8, and as many as 38.41 percent were in grade 9. Thus, the proportion of respondents was almost equally distributed based on gender and grade level.

Data Examination

This research data contains missing values even though the students have been instructed to answer all questions and accompanied by a visual check after filling in the questionnaire. However, only 21 of the total observations (33 indicators x 315 respondents = 10,395) or 0.20 percent were missing values. By following Hair Jr. et al. (2019), the next treatment is to apply the mean substitution method with the consideration that the missing values that occur are spread across various indicators and that the missing data is very small relative to the number of respondents and the number of observations.

The next check concerns the normality assumption. The normality test was carried out using Mardia's test, where Mardia's test is a multivariate extension of skewness and kurtosis measures (Oppong & Agbedra, 2016). The results show that Mardia mSkewness is 227.63 with χ^2 (6545) = 12071.30 and prob $> \chi^2 = < 0.0001$, while Mardia mKurtosis is 1367.31 with χ^2 (1) = 1536.70 and prob $> \chi^2 = < 0.0001$. Thus, at a 1% level of significance, the null hypothesis of multivariate normality is rejected. The results from this test reveal that the data is not multivariate normal. Consequently, this will impact the CFA procedures in the next section.

Overall Fit

The CFA procedure is generally carried out through Maximum Likelihood (ML) estimation, especially on normal data. Meanwhile, initial checking of the data in the study showed non-normal results. Although research has shown that ML estimation is robust to small deviations in normality (Timothy A. Brown, 2015), one approach to analyzing non-normal data is to apply the Satorra-Bentler approach (Byrne, 2016). Following up, this research data analysis was carried out by applying ML estimation with the standard error being the Satorra-Bentler estimator. Table 1 presents the fit indices of the CFA for the hypothesized measurement model on the 9 correlated factors of the PACE-33 Bahasa version. The goodness-of-fit index shows the following results: χ^2 = 592.07 with *df* = 459, RMSEA = 0.030, SRMR = 0.055, CFI = 0.957, and TLI = 0.951. Following

the cut-off guidelines suggested by Hu and Bentler (Hu & Bentler, 1999), a value < 0.06 for RMSEA; a value of ≤ 0.08 for SRMR; and values > 0.95 for TLI and CFI indicate a good fit. Thus, the estimation results show that the Indonesian version of the PACE-33 measurement model with 9 factors is good in providing model fit.

Apart from that, Table 1 also displays the results of the analysis by applying ML estimation but not using the Satorra-Bentler estimator. The results still show good capital suitability. Next, to determine whether the internal structure of the scale corresponds to the theoretical constructs it was designed to measure, models representing unidimensional conceptualizations of school climate perceptions were compared. For the one-factor model, the CFI and TLI indices did not reach the 0.90 cut-off point, and the RMSEA had a value of over 0.06. The one-factor model, therefore, is considered to have an unacceptable fit. Thus, the model consisting of nine factors received empirical support, and was, therefore, the model used in all subsequent analyses.

Table 1 : Summary of Model Fit Indices

Models	χ^2	SRMR	RMSEA	CFI	TLI
9 factors model, ML estimation, Satorra-Bentler estimator	χ^2 (459) = 592.07 Prob > χ^2 = 0.000	0.055	0.030	0.957	0.951
9 factors model, ML estimation	χ^2 (459) = 703.30 Prob > χ^2 = 0.000	0.055	0.041	0.935	0.925
1 factor model, ML estimation, Satorra-Bentler estimator	χ^2 (459) = 1465.47 Prob > χ^2 = 0.000	0.087	0.079	0.686	0.665

Convergent Validity

The next assessment of the validity of the measurement model is to assess construct validity, namely by testing convergent, discriminant, and nomological validity (Hair Jr. et al., 2019). This section presents an assessment of construct validity by checking convergent validity by examining the estimated factor loading values including their direction and statistical significance. The estimated factor loading results from the measurement model for 9 school climate factors are presented in Table 2. Rather than using a rule of thumb for factor loading values, for example, 0.60 or higher, the significance of factor loadings should be used to determine which observed variables are important (Schumacker & Lomax, 2016). All estimated standardized factor loadings (regression weights) meet the minimum standard, namely statistically significant, with a range from the lowest value of 0.423 to the highest value of 0.790. There are 29 of the 33 loading factors that have a value above 0.5 and the remaining 4 are between 0.423 and 0.5. Nevertheless, several previous studies set a lower limit of 0.4 for acceptable standardized factor loadings (Mubarokah et al., 2022; Nada et al., 2022). Therefore, these results support the convergent validity of the measurement model in this research.

Reliability (Internal Consistency)

Reliability can be seen as an indicator of convergent validity (Hair Jr. et al., 2019). Reliability testing for each of the 9 dimensions of school climate was carried out by paying attention to aspects of internal consistency. Reliability estimation was carried out by calculating two reliability coefficients, namely Cronbach alpha and item-total correlation. As seen in Table 2, almost all of the Cronbach's alpha values are above 0.7 except for SC_F = 0.5859 and SC_I = 0.6107. General guidelines suggest the lower limit for Cronbach's alpha is 0.7 but researchers can still accept 0.6 (Hair Jr. et al., 2019). In addition, the results of calculating the correlation of each of the 33 items with the average score of their dimensions are significant at the 0.01 level with all correlation values above 0.6. Thus, the results of this item-total correlation indicate that the measurement with 9 factors consisting of 33 items in this study is generally reliable. One dimension that was found to be somewhat less reliable was the environmental-structural aspects (SC_F).

Discriminant Validity

The discriminant validity test was carried out by calculating the correlation between 9 dimensions of school climate. The calculation results - not shown in the table here - reveal the values of the Pearson correlation coefficient and an indication of their significance. Correlation values between dimensions or factors ranged from 0.14 to 0.77 and all were significant at the 1 percent level. In addition, all correlations between factors were below the threshold value of 0.85 recommended in similar CFA studies (Cheung et al., 2023; Hair Jr. et al., 2019). These results indicate that the 9 latent factors of school climate have good discriminant validity.

Table 2 : Factor Loadings, Cronbach's Alpha, and Item-Total Correlation

No.	Items	Dimensions	Estimates	$p > \|z\|$	Item-total correlation	Cronbach
1.	SC_9R	SC_A	0.711	0.000	0.7729*	
2.	SC_13R	SC_A	0.721	0.000	0.7979*	0.7512
3.	SC_19R	SC_A	0.532	0.000	0.6999*	
4.	SC_31R	SC_A	0.684	0.000	0.7618*	

5.	SC_2	SC_B	0.659	0.000	0.7620*	
6.	SC_5	SC_B	0.696	0.000	0.7914*	0.7550
7.	SC_17	SC_B	0.779	0.000	0.7968*	
8.	SC_23	SC_B	0.550	0.000	0.7035*	
9.	SC_1	SC_C	0.548	0.000	0.7720*	
10.	SC_11	SC_C	0.624	0.000	0.6620*	0.7215
11.	SC_22	SC_C	0.770	0.000	0.7528*	
12.	SC_28	SC_C	0.546	0.000	0.7699*	
13.	SC_6	SC_D	0.715	0.000	0.8222*	
14.	SC_8	SC_D	0.553	0.000	0.7457*	0.7739
15.	SC_15	SC_D	0.711	0.000	0.7220*	
16.	SC_25	SC_D	0.734	0.000	0.7996*	
17.	SC_10	SC_E	0.687	0.000	0.8044*	
18.	SC_14	SC_E	0.790	0.000	0.7999*	0.7786
19.	SC_20	SC_E	0.646	0.000	0.7702*	
20.	SC_27	SC_E	0.613	0.000	0.7283*	
21.	SC_4	SC_F	0.470	0.000	0.6409*	
22.	SC_12	SC_F	0.641	0.000	0.6497*	0.5859
23.	SC_24	SC_F	0.463	0.000	0.7013*	
24.	SC_30	SC_F	0.423	0.000	0.6802*	
25.	SC_26	SC_G	0.762	0.000	0.8473*	
26.	SC_29	SC_G	0.754	0.000	0.8559*	0.8072
27.	SC_33	SC_G	0.774	0.000	0.8459*	
28.	SC_3	SC_H	0.671	0.000	0.8269*	
29.	SC_7	SC_H	0.726	0.000	0.8311*	0.7544
30.	SC_16	SC_H	0.739	0.000	0.8007*	
31.	SC_18	SC_I	0.432	0.000	0.6522*	
32.	SC_21	SC_I	0.669	0.000	0.7870*	0.6107
33.	SC_32	SC_I	0.712	0.000	0.8055*	
* Correlation is significant at the 0.01 level (2-tailed).						

Nomological Validity

Nomological validity can be supported by showing that constructs have relationships with other constructs that are not contained in the model, which therefore refers to the theoretical framework (Hair Jr. et al., 2019). In other words, it refers to the extent to which the Indonesian version of the PACE-33 scale makes accurate predictions of other concepts in a theory-based model. A previous study in Indonesia has shown that school climate is related to several domains such as academic performance (Saputra et al., 2020). This leads to this research being able to explore the relationship that occurs between the school climate scale in this research proposal and school performance measures.

This research links school climate with perceived academic performance by referring to recent studies (Mateos et al., 2021; Maxwell et al., 2017). The perceived academic performance variable has 3 indicators, each of which is given a choice from strongly disagree (1) to strongly agree (6) (Mateos et al., 2021). The perceived academic performance variable was then created in a summated scale with an average value of 4.23 a standard deviation of 0.95 a minimum value = 1 and a maximum value = 6. Also, the summated scales are calculated for each 9 factors or dimensions and school climate as one factor. The average score values are quite spread out from the lowest value of 1 to the highest value of 5.

Table 3 shows the correlation coefficient between school climate as one factor and each of the 9 factors and perceived academic performance (AP). School climate (SC) is positively and significantly correlated with academic performance. All nine dimensions have a positive correlation with academic performance, almost all of which are significant. Only one dimension was found to be insignificant, namely peer relationships (SC_D). Overall, school climate and its dimensions have a relationship with perceived academic performance. Therefore, these results demonstrate sufficient support for the nomological validity of the model.

Table 3 : Correlation Between Each Dimension of School Climate and Academic Performance (AP)

	SC	SC_A	SC_B	SC_C	SC_D	SC_E	SC_F	SC_G	SC_H	SC_I
AP	0.38**	0.16**	0.26**	0.29**	0.09	0.30**	0.35**	0.39**	0.24**	0.38**
**. Correlation is significant at the 0.01 level (2-tailed)										
*. Correlation is significant at the 0.05 level (2-tailed)										

IV. Discussion

Although there have been many previous studies examining school climate in various schools in Indonesia, attention to the multi-dimensional aspects of school climate is still very lacking in previous research in Indonesia. This research analysis focuses on validating a current measurement scale for assessing the school climate construct, namely the Indonesian version of PACE-33 which has 33 statement items and 9 dimensions. The results of this study demonstrate good psychometric properties of the scale in middle school students.

The findings of this current study support that the school climate construct is complex and multidimensional. The findings of this research agree with several previous studies both in Indonesia and outside Indonesia. The dimensions and indicators in this research agree that school climate, which is the sum of the behaviors that exist in a school, is best interpreted as the character of the school (Taşkın & Canlı, 2021). A literature study in Indonesia described that school climate can be viewed in several aspects including the physical environment, maintenance system, and close relationships between parties within it (Syahril & Hadiyanto, 2018). They concluded that the dimensions of school climate can be broken down into more complex scales. In line with those statement, the school climate scale in this study contains 9 dimensions and has convergent, discriminant and nomological validity that meets standards.

The relationship between the nine factors or dimensions in this study and Mateos et al. (2020) with the four areas or domains of school climate in Cohen et al. (2009) and Thapa et al. (2013) can be described as follows. Dimension 1 (physical safety) and 2 (rules) are an elaboration of domain 1 (safety). Then dimension 3 (student-teacher relationships), 4 (peer relationships), and 5 (group cohesion) break down in more detail than domain 2 (relationships). Meanwhile, dimension 6 (environmental-structural aspects) determines domain 3 (environmental-structural). Next, dimension 7 (teachers' ability to motivate), 8 (teachers' expectations), and 9 (methodological resources) describe domain 4 (teaching and learning).

This research provides a major contribution that validates a multidimensional school climate measure for further use in education and school management research in Indonesia. Future research could link multidimensional school climate as one overall scale or focus on several specific dimensions that are relevant to school performance and student behavior. Previous literature review studies on similar topics can stimulate further ideas. For example, the relationship between school climate and the progress of noncognitive skills (Zynuddin et al., 2023), student mental health (Aldridge & McChesney, 2018), and student literacy performance (Pamularsih, 2022). The possibility of developing research can become wider because school climate is not only important and determining in junior high school but also in senior high school and vocational schools (Izaguirre et al., 2023).

The weakness of this research is that it did not carry out further analysis, namely testing measurement invariance of school climate. This is of course a limitation of this research, but does not reduce the quality of the findings. Although researchers have examined the validity of school climate measurements, there is a dearth of measurement invariance studies that investigate differences in students' perceptions of school climate across race and ethnicity (Whitehouse et al., 2021).

V. Conclusion

This study examined the CFA model to test the multidimensionality of the theoretical construct of school climate. The results of this study confirm that the Indonesian version of the school climate scale is valid and reliable and has a nine-factor or dimensional structure. This study contributes to confirming the usefulness of this scale to measure students' perceptions of school climate in Indonesia.

Future research could examine the influence of dimensions of school climate on academic performance or adolescent behavior among school students in Indonesia. The number of dimensions studied can be all nine dimensions of school climate, but researchers can also choose only certain dimensions that are more relevant to the research topic. Student samples could be taken from students at junior, senior, or vocational high schools.

Acknowledgements

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Appendix : The Indonesian Version of the PACE-33 Scale

Codes	Items	Factors or Dimensions
SC_1	Di sekolah saya ada guru yang dapat saya ajak bicara tentang masalah apa pun yang mungkin saya alami.	Student-teacher relationships (SC_C)
SC_2	Sekolah saya memiliki peraturan yang jelas.	Rules (SC_B)
SC_3	Guru-guru kami mengharapkan siswa tertarik untuk belajar.	Teachers' expectations (SC_H)
SC_4	Gedung dan fasilitas sekolah saya dalam keadaan baik.	Environmental-structural aspects (SC_F)
SC_5	Peraturan sekolah disampaikan jelas kepada siswa.	Rules (SC_B)
SC_6	Saya merasa nyaman berbicara dengan teman-teman sekelas saya tentang masalah saya.	Peer relationships (SC_D)
SC_7	Guru-guru kami berharap agar kami berusaha dengan giat.	Teachers' expectations (SC_H)
SC_8	Di sekolah, saya memiliki teman sekelas yang dapat saya ajak bicara tentang masalah apa pun yang sedang saya alami.	Peer relationships (SC_D)
SC_9R	Di sekolah saya ada sejumlah siswa yang suka berkelahi (mendorong, menendang, dll). [R]	Physical safety (SC_A)
SC_10	Suasana di kelas saya baik, dan semua orang bergaul dengan baik	Group cohesion (SC_E)
SC_11	Guru-guru saya ada pada saat saya perlu berbicara dengan mereka.	Student-teacher relationships (SC_C)
SC_12	Ruang kelas saya bersih dan rapi.	Environmental-structural aspects (SC_F)
SC_13R	Di sekolah saya ada siswa yang mengancam atau menghina orang lain. [R]	Physical safety (SC_A)
SC_14	Setiap orang di kelas saya saling membantu dan menjaga satu sama lain.	Group cohesion (SC_E)
SC_15	Teman-teman sekelas saya ada saat saya perlu berbicara dengan mereka.	Peer relationships (SC_D)
SC_16	Guru-guru kami berharap agar kami berusaha untuk melakukan yang terbaik.	Teachers' expectations (SC_H)
SC_17	Di sekolah saya sudah jelas apa yang boleh dan apa yang tidak boleh.	Rules (SC_B)
SC_18	Guru-guru saya melakukan kegiatan yang asli/orisinil.	Methodological resources (SC_I)
SC_19R	Di sekolah saya ada siswa yang mencuri barang. [R]	Physical safety (SC_A)
SC_20	Pada umumnya, kami para siswa bergaul dengan baik.	Group cohesion (SC_E)
SC_21	Menurut saya, materi pelajaran yang kami gunakan di kelas menarik.	Methodological resources (SC_I)
SC_22	Guru-guru saya mudah diajak bicara.	Student-teacher relationships (SC_C)
SC_23	Semua siswa mengetahui tata tertib sekolah.	Rules (SC_B)
SC_24	Ruang kelas saya cukup terang.	Environmental-structural aspects (SC_F)
SC_25	Saya mempercayai teman-teman sekelas untuk berbicara tentang masalah pribadi.	Peer relationships (SC_D)
SC_26	Guru-guru kami berhasil membuat kami tertarik pada tugas kelas yang diberikan.	Teachers' ability to motivate (SC_G)
SC_27	Semua orang di kelas saya bekerja sebagai tim.	Group cohesion (SC_E)
SC_28	Ada guru di sekolah saya yang saya percayai.	Student-teacher relationships (SC_C)
SC_29	Guru-guru kami membuat kami ingin belajar.	Teachers' ability to motivate (SC_G)

SC_30	Area lain di sekolah saya cukup terang.	Environmental-structural aspects (SC_F)
SC_31R	Ada konflik di sekolah saya (perkelahian, ancaman, dll.). [R]	Physical safety (SC_A)
SC_32	Kegiatan yang diusulkan oleh guru-guru saya kebanyakan menarik.	Methodological resources (SC_I)
SC_33	Guru-guru kami berhasil membuat kami tertarik pada mata pelajaran yang mereka ajarkan.	Teachers' ability to motivate (SC_G)
Source: adapted from Mateos et al. (2020)		