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HARMONI Profile: Examining Levels and Predictors of Student Well-Being in Indonesia

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Abstract
The HARMONI provides a multicomponent approach to measure Indonesia student well-being adapted from the PROSPER framework. We used the measure to describe the overall well-being and the seven components of HARMONI: *Hasil yang berproses* (outcomes), *Andal berdaya lenting* (resilience), *Relasi positif* (relationships), *Makna dalam tujuan* (purpose), *Orientasi sikap positif* (positivity), *Nilai suatu kekuatan* (strengths), and *Inisiatif yang melibatkan* (engagement). A cross-sectional study was conducted with socio-demographic and school characteristics as predictors of student well-being. A total of 1579 students from 511 senior high schools completed an online survey. We found that overall well-being based on the HARMONI profile was positive (M=3.92; SD=0.53), with all components showing a trend of optimal well-being. Student well-being is significantly predicted by gender, school area, and school type but not associated with parent income, parent education, grade level, and student major ($R^2_{model\ 1}$ = .0299). The effect of gender and school type varies by grade level ($R^2_{model\ 2}$ =

.0342;$R^2_{model\ 3}$ = .0347). The HARMONI can be used not only for measuring well-being but also as a structure for character education. The findings suggest that designing HARMONI-based character education needs to accommodate gender differences, grade levels, school areas, and school types.

Keywords: Positive Education; PROSPER Framework; Student Well-Being

INTRODUCTION

Student well-being has become an interesting topic due to the application of a positive psychology approach in education, which is known as positive education (Proctor, 2017). In this light, the focus of the assessment and development of students will be on what students can do in terms of their resilience, character strengths, and so on (Noble & McGrath, 2008). This paradigm shift also influences the implementation of education in Indonesia, one of which is reflected in the initiatives of the West Java government to develop the HARMONI measure for high school student well-being. With HARMONI, they can capture the student well-being conditions as one of the factors considered in making policies related to education management at a high school level. At the practical level, positive education practitioners can also use HARMONI to measure student well-being.

In describing student well-being, we can use the philosophical tradition of hedonism and eudaimonism that divide well-being as a way to pursue pleasure and strive to be better (Lambert et al., 2015). Further, well-being in positive education is the integration of hedonism and eudaimonism philosophies in its construct and components. Under this integrative framework, we define student well-being as "a relatively consistent mental and emotional condition characterized by positive feelings and attitudes, positive relationships with others in the school environment, resilience, optimal self-potential development, and a higher level of satisfaction with the learning experience." (Dalimunthe et al., 2021).

A recent study by Schwartz et al. (2021) reported that 25% of 2310 students' stress levels were above critical thresholds, while female and older students (15-18 years old) reported higher stress indicators. In this light,

student well-being should become a priority concern of teachers and other stakeholders.

The HARMONI reflects this integrative framework. One component reflects the fulfillment of pleasure, such as positive feelings, and the other reflects the efforts to be better in school performance, such as meaning-making, applying character strengths, and engaging in school activities. HARMONI measures the students' well-being both in general and specific of its seven components which are ***H****asil yang berproses* (outcomes), ***A****ndal berdaya lenting* (resilience), ***R****elasi yang positif* (relationships), ***M****akna dalam tujuan* (purpose), O*rientasi sikap positif* (positivity), ***N****ilai suatu kekuatan* (strengths), ***I****nisiatif yang melibatkan* (engagement). The HARMONI measure has been developed based on The PROSPER framework of student well-being. The PROSPER stands for Positivity, Relationships, Outcomes, Strengths, Purpose, Engagement, and Resilience (Noble & McGrath, 2015).

Several models and frameworks of student well-being in the fields of positive education have been developed as a measure of student well-being. Generally, we can measure student well-being using objective measures (e.g. measurement of students' subject-specific skills and competencies, school infrastructure, socio-economic background) and subjective measures (e.g. students' self-report, school principal's self-report, perceive school satisfaction) (Borgonovi & Pal, 2015; OECD, 2017). The HARMONI measure can capture the student well-being not only as a total score but also can be counted as independent component scores. Due to these psychometric properties, measurement, analysis, and intervention based on HARMONI can be done on the well-being condition as a total sum of its components. However, it can also be applied separately to its seven components. For example, measurement, analysis, and intervention to only engagement or resilience as components of student well-being are possible to be delivered (Dalimunthe, 2021).

Even though we adopt HARMONI from established framework (i.e., PROSPER framework), we still need to prove whether this framework applicable in Indonesian high school students population. Zuhdi and Syarief (2023) suggested that we need research that explores conceptualization of well-being from students' perspectives, teachers' perspectives, and also culturally contextualized. Previous study also found that many educational institution in Indonesia did not have formal policies

to enhance well-being and we need structured framework for that situation (Putri et al., 2023).

Socio-demographic characteristics such as age, ethnicity, gender, health, social relations, employment status, household income and neighbourhood can be a predictor of subjective well-being (Chanfreau et al., 2014). For students, social economic status is attached to their parents' status. Regarding parental circumstances, low household income was not significantly associated with young people's wellbeing while the family relationship significantly predicted adolescent well-being (Chanfreau et al., 2014).

Gender also plays a significant predictor of well-being. Some research shows that female students tend to have lower scores of well-being and life satisfaction than male students (Chanfreau et al., 2014; McKay et al., 2020; OECD, 2017). However, research by Yoon et al. (2023) shows different results: girls have lower well-being than boys and they tend to experience more mental health problem acroos the years. Furthermore, with ageing, there is a significant decline in well-being in young people; even middle adolescent has lower well-being than adult (Chanfreau et al., 2014).

Since students spend a lot of time in school, the role of school characteristics towards student well-being is important to investigate. Earlier studies suggest that various aspects of school backgrounds can influence student well-being and academic outcomes, such as geographic location, school type, academic majors, and grade levels. For example, students from urban area have significantly higher level of psychological well-being and its dimensions (i.e., autonomy, environemntal mastery, psoitive relation, personal growth, and purppose in life) (Arya & Sangwan, 2018). Compared to students from general high schools, those from vocational schools exhibited a higher occurrence of symptoms related to mental and physical health while displaying less frequent aggression and sedentary behaviour throughout the week (Coledam et al., 2022). Students who pursued majors in natural science achieved better academic performance than those who pursued social science majors (Mirizon & Rosmalina, 2021). The subjective well-being of students declines as they progress through each grade level, indicating a noticeable downward trend (Herke et al., 2019).

Previous studies on student well-being in Indonesia suggest to conduct the study that conceptulatize well-being while accomodate cultural

context and also the study that identify structured framework for well-being and mental health (Putri et al., 2023; Zuhdi & Syarief, 2023). To our knowledge, there is a study that address those suggestion, which related to school well-being in Indonesia (Priambadi & Nastiti, 2024). In this study, school well-being is refers to the positive environment within a school that contribute to the emotional, social, and academic satisfaction of students. Our study is align with this study in term of approach we used, which is positive psychology & education. However, HARMONI framework in our study not only include positive environmental conditions, but also positive characteristics of students.

This study had two aims which were to describe the level of student well-being and to investigate socio-demographic and school characteristics as predictors of student well-being. The first aim can give an insight into the condition of West Java high school student well-being using HARMONI framework and evaluate the optimal score that can be reached in its components. The student well-being profile, as one of the results of this research, can be used as a base or foundation to develop specific well-being programs (Morgan & Simmons, 2021), and for education policy at the school or regional level.

For the second aim, we would find significant predictors of student well-being, specifically in Indonesia. We want to find whether the results were the same or had a different variation from established findings. This study also highlighted the predictors of student well-being from the integrative framework (i.e., the combination between hedonism and eudaimonism of well-being). We hope to add richness to existing student well-being research that mainly uses well-being from hedonism philosophy (e.g., subjective well-being).

RESEARCH METHODS

Participants and Procedures

Participants were general and vocational senior high school students aged 15-17 years old, representing twenty-six West Java regions. The students had to understand Bahasa, able to fill out an online questionnaire, and give their consent to participate. We exclude exceptional students and students from private schools from this study. A stratified-cluster random sampling was used to determine the number of representative samples and

the allocation of students required for each school in every region. This survey's total number of respondents was 1579 students from 511 senior high schools in West Java. The research team conducted the online survey in January-March 2021 in collaboration with the West Java Provincial Education Office using the REDCap. The participants completed the survey for 20-30 minutes. Our study protocol has been approved by The Universitas Padjadjaran Research Ethics Committee (No.879/UN6.KEP/EC.2020).

Measures

The measure used in this study was divided into three parts. The first part was informed consent. In this part, participants have explained the survey procedures, risks, benefits, and confidentiality of data provided by participants. The participants could proceed to the next part if they consent to participate in the study. The second part was demographic form. We collected the information on participants' age, gender, school area, grade level students' majors, type of schools, parents' education, and parents' income.

The third part was the HARMONI instrument to measure student well-being. We developed this measure based on the PROSPER Student Well-being Framework. The measure uses a Likert-type scale so that participants can choose between 5 alternative answers ranging from 1 (very dissatisfied with me) to 5 (very suitable for me). The HARMONI instrument has seven components with a total of 35 items: H-outcomes (5 items), A-resilience (5 items), R-positive relationships (5 items), M-purpose (5 items), O-positivity (5 items), N-strengths (5 items), and I-engagement (5 items). All the items have a sufficient loading factor (range from .53 to .82). The components explain 40-50% of the variation in student well-being. This instrument also has a fit model (RMSEA = .063 [90% confidence interval = .059, .067], SRMR = .057, CFI = .865, TLI = .855;).

Data Analysis

We identified careless responses before proceeding to the main analyses. We conducted descriptive analyses for demographic data (percentage) and investigated variables (mean and standard deviation). We investigated the difference between demographic groups using a t-test or ANOVA (i.e. gender, school type, school area, students' class, student majors, and parent education). We also conducted multiple linear

regression analysis to identify whether several demographic variables and school characteristics may influence student well-being. Further analysis of the interaction effect was implemented to find the best model explaining student well-being.

RESULTS AND DISCUSSION

Demographic data

Table 1 shows that the majority of the study participants were female, studied in schools located in urban areas, studied in general schools, took science majors, and were in 11th grade. Meanwhile, most participants had parents who attended senior high school (38% and 33% for father and mother, respectively) and came from families with average income. The characteristics of our sample are representative of the West Java high school student population, notably with respect to school area and school type.

Table 1. Demographic information of senior high school students in West Java (*n*=1579)

Demographic variable	**Percentage** (%)
Gender	
Boys	41
Girls	59
School Area	
Rural	14
Urban	86
School Type	
General School (SMA)	64
Vocational School (SMK)	36
Students' Major	
Science	50
Social	13
Others	37
Grade level	
10th grade	15
11th grade	55
12th grade	30
Father's education/Mother's education	
No school	3.4/4.3
Elementary school graduate	21/24
Junior high school graduate	12/17
Senior high school graduate	38/33
Diploma degree	5/6

Bachelor degree	16/13
Master degree	3/2
Doctoral degree	<1
Parents' income	
Below average	29
Average	42
Above average	29

Descriptive analysis

The main goal of the present study was to describe the levels of well-being of high school students in West Java. Based on the results of HARMONI, it appears that the overall well-being of student participants reported positive well-being, as presented in Table 2, with the average total of HARMONI being 3.92 on a scale from 1 to 5. Across the seven domains of well-being, participants scored highest on M-purpose (M=4.24, SD=.64) and lowest on R-positive relationships (M=3.65, SD=.67). All domains of HARMONI were above the middle point of the scale (3) on all domains, showing a trend of positive well-being.

Table 2. Descriptive statistics of Student Wellbeing

Variables	**Mean**	**SD**
HARMONI (Student Well-being)	3.92	.53
H-outcomes	3.78	.67
A-resilience	3.95	.76
R-positive relationships	3.65	.67
M-purpose	4.24	.64
O-positivity	4.05	.68
N-strengths	3.87	.82
I-engagement	3.88	.75

Figure 1 presents the student well-being scores based on the West Java regions, including nine cities and 18 regencies. Most of the regions showed a score of overall well-being above average (4 cities and 12 regencies, presented in black bars), while the rest were below average (5 cities and 6 regencies, presented in white bars). The results show that the students' well-being scores varied across regions, between 3.59 (Banjar city) and 4.11 (Pangandaran regency).

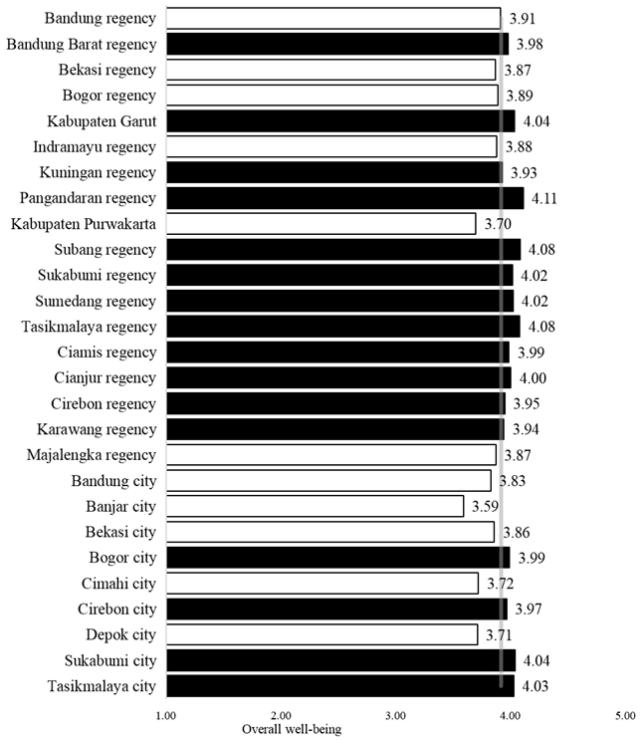

Figure 1. Overall well-being scores based on West Java regions (on a scale from 1 to 5; black=above average, white=below average)

Differences in Demographic Variables

Based on the demographics in our study, we found several significant differences in the overall well-being of the student participants, as shown in Table 3. Boys (M=3.96, SD=0.50) showed significantly higher scores than girls (M=3.88, SD=0.55), t=2.842, p<.01. Students from rural schools (M=4.01, SD=0.55) scored significantly higher than students from urban schools (M=3.90, SD=0.53), *t*=2.780, *p*<.01. Students from general schools (M=3.94, SD=0.53) show significantly higher scores than students from vocational schools (M=3.88, SD=0.54), *t*=2.780, *p*<.01. Effect size (*d*) ranged from .12 to .20 indicated minor differences. No significant differences were found across student majors, grade levels, parents' education, and parents' income.

Table 3. Descriptive statistics for HARMONI by demographic variables and difference

Demographic Variable	HARMONI (Student Well-being)			
	M	***SD***	***t / F***	***d***
Gender				
Boys	3.96	.50	2.842**	.14
Girls	3.88	.55		
School area				
Rural	4.01	.55	2.780**	.12
Urban	3.90	.53		
School Type				
SMA (public)	3.94	.53	-2.267**	.20
SMK (vocational)	3.88	.54		
Students Major				
Science	3.96	.51		
Social	3.87	.56	3.575	-
Others	3.88	.54		
Grade Level				
10th grade	3.89	.52		
11th grade	3.90	.53	2.326	-
12th grade	3.96	.54		
Parents Education				
No school	3.95	.53		
Elementary school graduate	3.86	.56		
Junior high school graduate	3.89	.55		
Senior high school graduate	3.95	.51	1.819	-
Diploma degree	3.91	.53		
Bachelor degree	3.92	.54		
Master degree	3.85	.49		
Doctoral degree	4.63	.09		
Parent's Income				
Below Average	3.89	.55		
Average	3.92	.53	.423	-
Above Average	3.93	.52		

Note. ***p-value* < 0.01

Multiple Linear Regression Analysis

Following the results of the bivariate-difference tests, we conducted a multiple regression to evaluate how socio-demographics (i.e., gender, parent incomes, parent education) and school characteristics (i.e., school

area, type, student majors, grade level) predict student well-being. Significant marginal associations were founded between student well-being and gender, school area, school type, student majors, and grade level. Meanwhile, there was no association found between parents' education and incomes.

The results of the multiple linear regression analysis examining the effects of socio-demographic and school characteristics on student well-being are presented in Table 4. Based on the R square, the model (refer to Model 1 in Table 4) explained 2.99% of the variance in student well-being. The final model was obtained after correcting homoscedasticity using robust error and testing for multicollinearity (vif < 7, no multicollinearity found). In socio-demographic characteristics, parent income and parent education were both not associated with student well-being which was in line with correlation analysis results. However, a higher level of student well-being was founded in students whose fathers have doctoral degrees compared to no education (β = 619; *p*-value < .05; 95% CI = .424 -.814). Meanwhile, in school characteristics, grade level and student majors were not significantly associated with student well-being level.

Table 4. Multiple linear regression analysis summary for socio demographic and school characteristics predicting student well-being

Variables	Model 1	Model 2	Model 3
Gender (ref: Boys)			
Girls	-.076*	.101	-.074*
Father Education (ref: no education)			
Elementary school graduate	-.061	-.065	-.065
Junior high school graduate	-.054	-.058	-.062
Senior high school graduate	-.007	-.013	-.014
Diploma degree	-.072	-.077	-.082
Bachelor degree	-.089	-.098	-.092
Master degree	-.156	-.162	-.160
Doctoral degree	.619*	.590*	.629*

Variables	Model 1	Model 2	Model 3
Mother Education (ref: no education)			
Elementary school graduate	-.011	-/005	-.013
Junior high school graduate	-.030	-/023	-.032
Senior high school graduate	-.012	-.009	-.012
Diploma degree	-.054	.068	.047
Bachelor degree	-.072	.077	.077
Master degree	-.041	-038	-,043
Doctoral degree	.128	.191	.145
Income (ref: below average)			
Average	.017	.015	.021
Above Average	.017	.020	.024
School Area (ref: urban)			
Rural	.103*	.106*	.100*
School Types (ref: general school)	-.138*	-.128*	.022
Vocational school			
Students Major (ref: natural science)	-.071	-.076	-.069
Social	-.142	-.136	-.144
Others			
Grade Level (ref: 10th grade)			
11th grade	.006	.137*	.060
12th grade	.068	.202*	.158*
Gender X Grade level (ref: male X 10th grade)			
Female X 11th grade		-.204*	
Female X 12th grade		-.208*	
School Type X Grade level (ref: general X 10th grade)			
Vocational X 11th grade			-.159*

Variables	Model 1	Model 2	Model 3
Vocational X 12th grade			-.245*
Constant	3.996*	3.881*	3.942*
N	1579	1579	1579
R-Squared	0.0299	0.0342	0.0347
AIC	2484.7	2481.8	2480.9

Note: * *p* -value < 0.05

Controlling for other predictors, girls (female students) have a lower level of well-being by .076 compared to boys (male students) (β = -.076; *p*-value < .05; 95% CI = -.129 - -.023). The level of student well-being was .103 higher in students from rural areas compared to urban areas (β = .103; *p*-value < .05; 95% CI = .027- .179). Finally, general school students have a significantly higher level of well-being than vocational school students (β = -.138; *p*-value < .05; 95% CI = -.129245 - -.031). These results were consistent with bivariate analysis.

Then, we conducted further analysis to find if there were any interactions between significant predictors (i.e., gender, school area, school type) with other predictors. We found two significant interaction models. The first model (refer to Model 2 in Table 4) shows a significant interaction effect between gender and grade level ($\beta_{female/11}$= -.203, *p*-value < .05, 95% CI = -.361 - -.046; $\beta_{female/12}$= -.208, *p*-value < .05, 95% CI = -.381 - -.035). Male students' well-being will increase by 0.1 points as grade level increases. For example, on average, male students in 10th grade have 3.8 points of well-being and 4.0 points when they reach 12th grade. Meanwhile, female students show a different pattern and tend to have a similar level of student well-being across the grade level. This model explains 3.42% of student well-being variance.

The second model (refer to Model 3 in Table 4) shows a significant interaction effect between school type and grade level ($\beta_{SMK/11}$= -.159, *p*-value < .05, 95% CI = -.314 - -.004; $\beta_{SMK/12}$= -.245, *p*-value < .05, 95% CI = -.417 - -.073). Students from general high school (i.e., SMA) have a higher level of well-being by 0.1 points as they are promoted to the next grade. For

example, students in 10th grade have 3.8 points, and students in 11th grade have 3.9 points for well-being. On the contrary, the well-being of students from vocational school (i.e., SMK) decreases by 0.1 point as grade level increases. For example, students in 10th grade have 3.9 points, and students in 11th grade have 3.8 points for well-being. This model explains 3.47% of student well-being variance and has the lowest AIC values (AIC = 2480.9).

Discussion

Level of Student Well-Being

This study aims to describe the levels of well-being of high school students in West Java and investigate its predictors. In this study, it was found that the students showed a tendency toward optimal student well-being. Student well-being becomes optimal when the students have a sustainable emotional state characterized by positive emotion, positive mindset, positive relationships in school, resilience, optimization of oneself, and a high level of satisfaction with their experience in school (Noble & McGrath, 2008). Students with optimal well-being not only feel good and satisfied with their life but also function well (e.g. adaptive coping strategy, good emotion management) and strive for their future (e.g. optimizing strengths, pursuing goals) (Soutter et al., 2014; Waters & Loton, 2019).

HARMONI is an acronym that represents the characteristics of student well-being. We can identify which characteristics need to be optimized by using the scores of each component. From the HARMONI profile, the highest score was found on the *Makna dalam tujuan* (purpose) component. This suggests that the students perceive that everything they do in school is worthwhile and meaningful for themselves. Their meaning of life is derived from their family, who support them after school, their social relationships with peers whom they play and learn with, and through educational activities provided by their teachers (Ahmadi et al., 2016). Previous study shows that the meaning of life correlated negatively with students' risk behaviour (e.g. substance abuse, suicide attempt) (Aviad-Wilchek & Ne'eman-Haviv, 2018; Wilchek-Aviad & Ne'eman-Haviv, 2016). The sense of meaning related to their school life will also help students to develop a sense of purpose (Noble & McGrath, 2015). The more often students find personal meanings in every school experience, the more apparent their sense of purpose becomes (Abdillah, 2024). Additionally, the

more students look for activities relevant to their personal meanings, the more impactful the purpose will be (Moran, 2011; Noble & Mcgrath, 2016).

The lowest score on the HARMONI profile was found on the *Relasi yang positif* (relationships) component. It means that average students in this study perceived that they had positive relationships with their peers, teachers, and other school stakeholders unfavourably. A positive relationship is indicated by respectful, supportive, caring, compassionate, kind, and inclusive relations (Noble & Mcgrath, 2016). The HARMONI profile shows that the quality of relationships between student-peers, student-teachers, and student stakeholders needs to be optimized further. Since the survey was conducted during the COVID-19 pandemic, there are several factors that we presume influence the quality of the students' relationships. The plausible factor that may influence relationship quality is a change in the form of social interaction. Before COVID-19, students interact not only when studying but also during transitions between courses, breaks, and after school. The content of social interaction is not only related to academic contexts but also related to more varied contexts. After COVID-19, online situation appears to change all these habits so that adjustments are needed in order to fulfill the student's relationship needs. This finding is in line with a previous study which shows that during the COVID-19 pandemic, adolescents in Indonesia were at risk of peer-relationship problems and prosocial behaviour problems (Wiguna et al., 2020).

We also found several components which were below the overall student-wellbeing score, implying that further developments on these components should be prioritized. The components are *Hasil yang berproses* (outcomes), *Nilai dari suatu kekuatan* (strength), and *Inisiatif yang melibatkan* (engagement). The outcomes component becomes optimum when the students gain a sense of accomplishment through achieving good learning outcomes, not only related to academic learning but also related to non-academic learning (e.g. socio-emotional learning). Teaching academic tenacity skills and informing success criteria will help students to optimize this component (Brigman & Webb, 2007; Noble & Mcgrath, 2016).

The strength component becomes optimum when students can identify their strengths (i.e. character strengths and ability strengths), accept them, and apply them effectively in school life (Noble & Mcgrath, 2016). The students may need help from the school in identifying their characters

and abilities (Alhamuddin & Murniati, 2024). Some students may need others to help them accept their strengths, while others need guidance to apply them in many situations. The student's engagement level may be influenced by the changes caused by major disasters (e.g., the pandemic), which are changes in their learning environments. A previous study found that learning environments during the COVID-19 pandemic lack support, equipment, and resources; an ineffective learning experience and incompetent digital skills could suppress cognitive and emotional engagement (Chiu, 2021).

Predictors of Student Well-Being

This study shows that the student well-being level varied across West Java regions. A previous study of student well-being by PISA argues that these variations could be happened because of the socio-economic background of each region (OECD, 2017). Our findings were in line with PISA's study. Differences in student well-being were found based on gender (as a socio-demographic characteristic), school type (SMA/SMK), and school area (rural/urban). These three factors also significantly predicted student well-being. These results indicate that efforts to improve student well-being can be carried out by considering three environmental systems in a socio-ecological approach (i.e. microsystem, mesosystem, and macrosystem) (Reupert, 2017). The characteristics of students, such as gender, represent a microsystem; the school type represents a mesosystem; and the school area represents a wider environment (macrosystem).

Our findings suggest that improving the well-being of male students needs to be distinguished from female students (Liu et al., 2016; Visani et al., 2011). This study found that female students tend to have slightly lower well-being than male students. It could have happened because they are more sensitive emotionally, which is influenced by hormonal fluctuation and by social expectations (e.g., female students expect to behave more maturely and diligently than male students) (González-Carrasco et al., 2017). In this light, promoting positivity, relationships, and resilience can be prioritized over other components. Contrary to our study, Liu et al., (2016) found that male students had lower well-being, indicated by higher drop-out rates, more serious behavioural problems, and lower grades. Using the HARMONI framework, the components that need to promote first in male students are outcomes, purpose, and engagement. The effect of gender

towards student well-being showed different pattern accross grade level. As grade level increase, male students' well being increased while female students remained the same. A possible eplanation why male's well-being increases was because socioemotional difficulties decreased with age for males (Booker et al., 2018).

Promoting well-being for students in SMA (general high school) and SMK (vocational high school) are also different. This study found that students from vocational high schools have slightly lower well-being. The vocational high school is oriented towards national development by making education a means of preparing human resources for state-owned industries (Riksa Abdillah, 2024). Therefore, apprenticeships and internships are required for their education (Muhammad et al., 2023). We hypothesized that this different type of education contributes to higher stress levels for vocational students. Compared to regular students, vocational students feel insecure about their careers (because in Indonesia, vocational graduates tend to be underestimated) and also experience work-related stress in actual office/industry in the middle of their life as high school students (Habsy et al., 2019). Thinking about a career and starting an internship begins in 11th grade. This situation becomes a possible explanation about why the effect of school type on student well-being varies by grade level, significantly decreasing trend in vocational students as grade level increases. Thus, for vocational students, we recommend prioritizing promoting strengths (i.e., understanding and being proud of their strengths as vocational students), finding purpose (i.e., choosing a career) and resilience (i.e., persisting in the internship program and class) components.

In contrast to vocational high school students, general high school students' well-being increases as grade level increases. A similar trend was found by Ohannesian et al., (2017), in which the mental health problems that negatively correlated with well-being are higher at 16 years old comapred to 17-18 years old students. We hypothesized that school connectedness might explain how such a trend happened. School connectedness is "students' perceptions of being accepted by the school and identifying themselves as being part of the school" (Frydenberg et al., 2009, p. 264). As students move to the next grade level, they become more familiar with school environments, teachers, staff and know more friends, leading to higher school connectedness.

Another interesting finding in this study is that student well-being in rural areas shows higher well-being than students in urban areas. This finding is consistent with the preliminary qualitative study we conducted, which showed that the climates in rural schools are perceived as more safe and supportive of students' self-development compared to urban schools, which are more demanding to the students to achieve a certain level of achievements (Dalimunthe et al., 2022). Kaur et al., (2017) also found that students in the urban catchment have higher needs for consultation regarding peer problem, hyperactivity, conduct behavior, and pro-social behavior compared to the rural catchment. In sum, schools in rural areas are more focused on developing positivity, building positive relationships, and improving students' engagement in an academic and non-academic context. Meanwhile, schools in urban areas mainly focus on outcomes and purpose, especially related to academic achievement.

Our findings show that parents' education and income did not predict student well-being. This implies that socio-economic background related to family is insufficient to explain variation in the well-being of the students. These findings are also consistent with a previous study by Chanfreau et al., (2014). Students spend an amount of time at school, so the quality of their school environment is more important than the socio-economic background to consider for understanding their well-being (Borgonovi & Pal, 2015; OECD, 2017). For sustaining student well-being in school, it is important to build a positive school climate, including the school system and community, school buildings and facilities, educational resources and technology, school organization, and school safety (Noble & Mcgrath, 2016; OECD, 2020). Thus, further study is needed to investigate factors related to school resources that may influence differences across regions in West Java. School resources include human resources at school, material resources at school, and extracurricular activities in school (Borgonovi & Pal, 2015).

Although the study shows that some socio-demographics (i.e., gender, parent education, parent income) and school characteristics (school type, school area, grade level, and student majors) predict student well-being, this model only explains a small variation in the level of student well-being. In other words, the model is not sufficient to explain why some differences occur in student well-being. Further study is needed to determine factors

that contribute to the level of student well-being in West Java at the individual level (e.g., psychological factors, biological factors) and ecology level (e.g., school climate, the interaction between students and school stakeholders). We also suggest to consider practical value for the development of student well-being, such as the pedagogical aspect that supports student well-being. To follow up on this study's findings, the school stakeholders can collaborate with the local education office (i.e., *Kantor Cabang Dinas*, KCD) to identify factors that affect the level of well-being in West Java high school students. We recommend that educational policy be based on the evidence (i.e. data on student well-being) and targeted for all schools in different regions so that student well-being can be developed more effectively.

We also suggest the implementation of HARMONI as a structure for character education (Noble & McGrath, 2016) as well as the measurement for measuring the effectivity of character education. According to the HARMONI, elements of character that can be developed are self-awareness, self-regulation, positive mindset, resilience, building positive relationships, and finding meaningful life. However, strategies for character education that based on one framework usually not iclusive and effective across diverse population (Yan, 2018). Therefore, as the findings suggest, if we want to design a HARMONI-based character education, we need to take into accound gender differences, grade levels, school areas, and school types.

CONCLUSION

In general, high school students in West Java have a positive level of student well-being. This data becomes the baseline (initial benchmark) that can be used as comparison scores against the measurement of student well-being in the future. Socio-demographic characteristics (which is gender) and school characteristics (which are school type and area) founded predicting student well-being. It also turned out that the effect of gender and school type varied by grade level. However, all models only explain minor variations of student well-being in high school students. Therefore, we need further investigation to explain predictors of student well-being in a comprehensive way. In order to use the student well-being data for developing educational policies, it is necessary to measure the student well-being on a sustainable

basis with a broader scope (e.g. census) and to determine factors that contribute to student well-being in each West Java region. Not only as a tool for measuring student well-being, HARMONI can also be used as a structure for developing character education.

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