

The Role of Mental Health Literacy and Resilience in Fostering Mental Well-Being among High School Students

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Abstract

Recently, studies related to mental health have switched focus toward mental well-being promotion among all age groups, including students in high school level. Taking into account several factors that influence mental well-being, this study investigated mental health literacy (MHL), mental health promoting knowledge (MHPK), and resilience. This research aims to examine the predicting effect of MHL and MHPK on mental well-being, mediated by resilience. A total of 792 participants, who were recruited conveniently from a private school in Semarang, Indonesia, completed several instruments named MHLQ-SV, MHPKS, BRS, and WEMWBS. Results presented that both MHPK and MHL predict the level of high school students' mental well-being mediated by resilience. Furthermore, MHPK was observed to contribute more to mental well-being compared to MHL. Hence, mental health intervention programs should incorporate a positive psychology approach to ensure the effectivity of the programs on resilience, leading to mental well-being enhancement.

Keywords: Mental Well-Being; Mental Health Literacy; Mental Health Promoting Knowledge; Resilience; High School Students

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INTRODUCTION

In recent years, the United Nations has recognized the great impact of mental health on the well-being of individuals and societies globally, placing it as a critical component of Sustainable Development Goal 3, which aims to ensure healthy lives and promote well-being for all ages (United Nations, n.d.). Reports from UN agencies, such as UNICEF and the World Health Organization (WHO), consistently underscore the escalating mental health crisis affecting young people worldwide. The WHO, for instance, highlights that

mental health conditions account for 15% of the global burden of disease and injury in people aged 10-19 years, emphasizing the urgent need for comprehensive acts and intervention programs to address the mental health needs of adolescents on a global scale (WHO, 2024).

The UN's focus on mental health within its Sustainable Development Goals, therefore, aligns with the critical need to address the challenges faced by adolescents globally, including those in Indonesia who presented a similar situation of a wider international trend. The prevalence of mental health challenges among adolescents is a significant public health concern. While the Indonesian Mental Health Survey 2022 highlights the alarming prevalence of mental health issues among adolescents in that nation, with 34.9% experiencing mental health challenges, this is reflective of a broader global trend. Recent data from the Indonesian Mental Health Survey 2022 reveals that a staggering 15.5 million (34.9%) adolescents in Indonesia are experiencing mental health issues, with 3.5% diagnosed with mental disorders (Center for Reproductive Health, 2022). This alarming data derived from Indonesia elicited the urgent need for a comprehensive investigation regarding what factors contribute to fostering the mental health status among Indonesian adolescents.

Mental health encompasses a broad spectrum of states, ranging from optimal well-being and effective functioning to diagnosable mental disorders. The World Health Organization (WHO) defines mental health as "a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn effectively, work productively, and contribute to their community." Hence, over the years, the focus has shifted to placing well-being as a core component of mental health itself (WHO, n.d.). Based on the survey by Weich et al. (2011), it was found that mental well-being status was relatively independent of the level of mental issues symptoms. Gautam et al. (2024), in their extensive review, propose mental health and mental well-being as separate yet intersecting constructs. Moreover, a thorough review has revealed that mental well-being plays a critical role in predicting general health and quality of life. Consequently, and to better understand this important construct, this study will emphasize the investigation of mental well-being, rather than concentrating solely on mental health or disorder symptoms.

There are several interpretations of mental well-being based on the previous study conducted worldwide. The concept of mental well-being resonates strongly with both the World Health Organization's holistic view of health and Seligman's emphasis on positive psychological states (Crinson & Martino, 2017). Despite the varied definitions, recent studies and measure development defined mental well-being as a multidimensional construct encompassing positive emotions, psychological functioning, and social connectedness, extending beyond the absence of mental illness (Weich et al., 2011; Tennant et al., 2007). Concerning the assessment of mental well-being as an independent construct, Tennant et al. (2007) developed a survey scale named the Warwick-Edinburg Mental Well-Being Scale (WEMWBS), which encompasses several key domains such as positive affect and psychological functioning (autonomy, competence, self-acceptance, personal growth) and interpersonal relationships. Those key domains incorporate the traditional perspectives from both hedonic and eudaimonic well-being into a holistic construct (Diener, 1984; Ryff & Keyes, 1995; Marmara et al., 2022).

Specifically in adolescents, mental well-being is increasingly understood through modifiable factors like resilience and mental health literacy (MHL). Resilience theoretically defined as the ability to bounce back or recover from adversity (Smith et al., 2008). In previous studies, resilience often demonstrates a strong and consistent correlation with

mental well-being, acting as a significant protective factor against psychological distress (Vinayak & Judge, 2018; Sagone & De Caroli, 2014; Konaszewski et al., 2021). Regarding the practical implementation of those findings, Gabrielli et al. (2022) developed a program that promotes resilience as a means of enhancing mental well-being among youth.

Furthermore, resilience is frequently investigated alongside Mental Health Literacy (MHL) as a combined predictor of well-being across diverse populations (Rahimi et al., 2022; Zhang et al., 2023; Black et al., 2023). Numerous studies have established a positive association between MHL and adolescent mental well-being, suggesting that increased knowledge and understanding of mental health concepts contribute to improved psychological states (Beasley et al., 2021; Bjørnsen et al., 2019). In the current study, MHL will be assessed using two different perspectives. The first one is based on the definition proposed by Campos et al. (2022), measuring MHL as the capacity to obtain, process, and understand basic mental health information and services needed to make appropriate health decisions. This definition, however, looks at MHL through the lens of a pathological framework to address mental disorders and their treatment. The other approach uses the positive lens of mental health, namely Mental Health Promoting Knowledge (MHPK). MHPK, as a relatively new construct, is defined as knowledge of factors that promote and protect mental well-being, as well as strategies for enhancing psychological resources (Bjørnsen et al., 2017).

While the models linking MHL/MHPK and resilience to well-being differ across studies, the combined influence of these variables needs further research to clarify the relationships and relative contributions of each factor. Regarding the direct effects of MHL on mental well-being, studies have reported only moderate to weak associations (Nobre et al., 2022; Özparlak et al., 2023; Boonpichachan et al., 2022). Those findings indicate the possibility of resilience playing a mediating role in the relationship between MHL and mental well-being, as demonstrated by several research studies examining other related mental health outcomes (Song et al., 2023; Zhang et al., 2023). Thus, this study aims to investigate the relationship between mental health literacy and resilience toward mental well-being among high school students, using translated measurements for the Indonesian population. Furthermore, two distinct mediation models are proposed to investigate the differential predictive capabilities of MHPK and MHL, with resilience serving as a mediating variable in the relationship with mental well-being.

Figure 1. Research Framework using Mental Health Promoting Knowledge

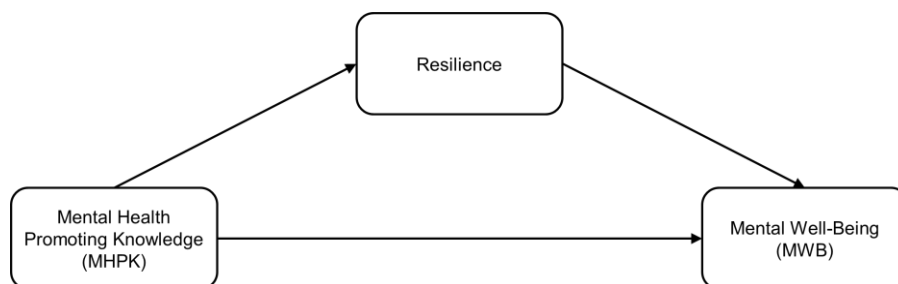
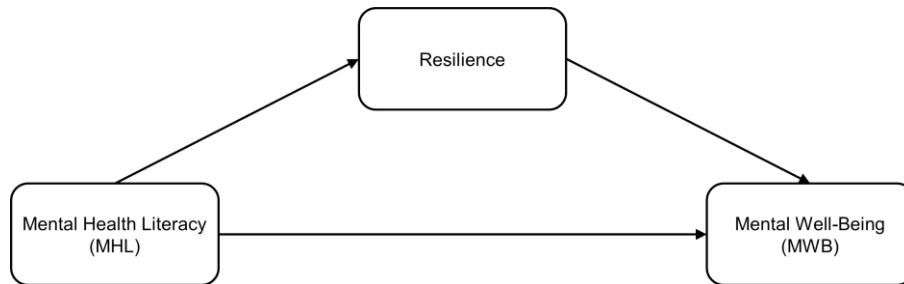


Figure 2. Research Framework using Mental Health Literacy



METHOD

Design

This cross-sectional study employed a quantitative design to investigate the relationships among mental health literacy, resilience, and mental well-being. Specifically, the study aimed to determine the extent to which mental health literacy and resilience predict mental well-being within the studied population. The data for this study originated from Junior and Senior Private High Schools in Semarang, collected as part of the Mental Health Promotion Project for the school environment. Prior to data collection, an ethical review process was undertaken to ensure participant safety and confidentiality. This review, conducted by the Psychology Faculty Research Ethical Committee at Soegijapranata Catholic University, resulted in formal approval. Consequently, the study followed ethical guidelines throughout the data acquisition and analysis phases.

Participants

This study involved 792 high school students recruited through a convenience sampling method. Participants were drawn from various grade levels within the selected high schools to ensure a diverse representation.

Instrument

The current study utilized standardized instruments to assess key variables. MHL was evaluated using two measurements to capture comprehensive evidence on which kind of literacy contributes more to the mental well-being. The first instrument used is the Mental Health Literacy Questionnaire – Short Version (MHLQ-SV; Campos et al., 2022), a tool designed to measure knowledge, beliefs, and help-seeking intention related to mental health conditions. This tool consists of 16 five-point items and is widely used globally. Additionally, the Mental Health Promoting Knowledge Scale (MHPKS) developed by Bjørnsen et al. (2017) was used to assess participants' understanding of factors that contribute to positive mental health. The MHPK tool consisted of 10 six-point scale items. Both instruments were initially in English, which was translated into Bahasa Indonesia for the current project using back-to-back translation.

Besides, resilience was measured using the Brief Resilience Scale (BRS; Smith et al., 2008), a 6-item instrument that assesses an individual's ability to bounce back from

stress. Mental Well-Being was evaluated using the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS; Stewart-Brown et al., 2011), a 14-item scale that captures positive mental health, including aspects of positive affect and psychological functioning. Each instrument was selected for its demonstrated psychometric properties and relevance to the study's objectives.

Data Analysis

In order to verify that the respective data meet the necessary conditions for the chosen statistical methods, both normality and linearity tests were conducted. PROCESS Macro by Hayes was utilized to test the hypothesized models. There are two models of mental health literacy proposed in this study. The first model investigated the predicting effect of MHPK toward mental well-being among students, mediated by resilience. The second one examined the predicting effect of holistic MHL on mental well-being, mediated by resilience as well. Furthermore, correlation tests and t-tests were also performed to assess any interesting findings comprehensively.

RESULT AND DISCUSSION

The gender distribution of the participants was about equal, with 51.5% of responses being female and 48.4% being male. Ages ranged from 12 to 18 years old, with 14-year-olds having the most representation (18.1%), followed closely by 13-year-olds (17.3%) and 16-year-olds (17.2%). Besides, there was a very low number of participants who were 18 years of age or older (2.3%). Concerning education level, a fairly even distribution of participants from junior and senior high school: 15.5% were from first-year junior high, 17.2% were from second-year junior high, 17.4% were from third-year junior high, 14.8% were from first-year senior high, 18.4% were from second-year senior high, and 16.7% were from third-year senior high.

Following data collection, an assumption test demonstrated both the normal distribution of the data and a statistically significant linear association between the variables. Therefore, parametric statistical analysis was utilized to examine the data obtained. The analysis revealed significant differences between male and female students in several areas. Specifically, male participants scored higher in MHPK ($t = 3.176, p = .002$), as did Resilience ($t = 7.077, p = .000$) and Mental Well-Being ($t = 7.077, p = .000$). For age groups, significant variance across groups was found only in MHPK ($F = 3.714; p = .001$). Similarly, MHPK between class groups was the only variable that showed significant results ($F = 3.921; p = .002$) in which higher education level presented higher score of MHPK.

Results from correlational analysis, as presented in Table 1, demonstrated significant positive relationships between all variables. Resilience demonstrated a strong positive correlation with Mental Well-Being ($r = .526, p < .01$). Other interesting findings based on the correlation matrix, presented that MHPK was shown stronger positive correlation with Resilience ($r = .368, p < .01$) compared to MHL with Resilience ($r = .144, p < .01$). Regarding the correlation with Mental Well-Being, MHPK also revealed stronger correlation with Mental Well-Being (MWB) ($r = .579, p < .01$) compared to MHL ($r = .258, p < .01$).

Table 1. Descriptive and correlation among variables

Variable	Mean	SD	2	3	4
1. MHPK	35.88	6.598	.283**	.368**	.579**
2. MHL	57.90	5.680	1	.144**	.258**
3. Resilience	18.23	3.536		1	.526**

4. Mental Well-Being	49.32	8.658	1
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** . Correlation is significant at the level 0.01

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Table 2. Path Analysis of Model 1 (Mental Health Promoting Knowledge/MHPK)

	β	SE	t	p	R ²	F(df)	LLCI	ULCI
a	.367	.017	11.108	.000	.1351	F(1)=123.3 88	.1622	.2318
b	.362	.069	12.737	.000	.4490	F(2)=321.4 32	.7497	1.0229
c'	.446	.037	15.706	.000			.5125	.6588
Total Effect	.579	.038	19.978	.000			.6855	.8349
Indirect Effect	.133	.024					.1283	.2246

Note: a=MHPK→Resilience; b=Resilience→MWB; c'=MHPK→MWB

Table 3. Path Analysis of Model 2 (Mental Health Literacy/MHL)

	β	SE	t	p	R ²	F(df)	LLCI	ULCI
a	.1445	.0219	4.1038	.000	.0209	F(1)=16.84 1	10.516 4	15.521 6
b	.4991	.0731	16.707	.000	.3107	F(2)=177.8 11	1.0785	1.3656
c'	.1864	.0455	6.2393	.000			.1947	.3735
Total Effect	.2585	.0524	7.5206	.000			.2911	.4968
Indirect Effect	.0721	.0282					.0580	.1689

Note: a=MHL→Resilience; b=Resilience→MWB; c'=MHL→MWB

The path analysis revealed significant mediation effects of resilience on the relationship in both models proposed. In Model 1, MHPK significantly predicted resilience ($\beta_a = .3675, p < .001$), which in turn significantly predicted MWB ($\beta_b = .3620, p < .001$), resulting in a significant indirect effect ($\beta = .1330, p < .001$). This indicates that higher levels of MHPK are associated with higher resilience, which in turn leads to greater mental well-being. Likewise, in Model 2, MHL significantly predicted resilience ($\beta_a = .1445, p < .001$), which also significantly predicted MWB ($\beta_b = .4991, p < .001$), with a significant indirect effect ($\beta = .1864, p < .001$). Data presented in Table 2 and Table 3 revealed that the Total Effect of MHPK and MHL towards MWB was critically higher than their Direct Effect, which ensures the partially mediating role of Resilience in both models. While both models demonstrate significant mediation, Model 1 (MHPK) presented a stronger overall effect, as evidenced by a higher R² value (.4490) compared to Model 2 (.3107) and a larger indirect effect. This suggests that MHPK has a more substantial contribution to MWB through resilience compared to MHL.

The present study's analysis revealed significant gender-based disparities across key mental health indicators investigated in this study. Male students exhibited significantly higher levels of Mental Health Promoting Knowledge (MHPK), Resilience, and Mental Well-Being compared to the female group. These findings confirm that due to males and females' different mental health risk profiles, gender should be considered to be a key biological factor in addressing mental health intervention or prevention (Suanrueang et al., 2022; Otten et al., 2021). Similar to the current results, a study in Qatar conducted by Bener & Ghuloum (2011) found that males perceived mental health-related issues more positively, resulting in seeking more reliable knowledge. While female participants demonstrated more negative evaluation toward mental health conditions and had stronger belief in the supernatural approach. Therefore, concerning current results, a similar pattern might underlie the fact that male students presented higher scores in MHPK since this variable was more related to a positive approach to mental health.

For resilience and mental well-being status among high school students, several studies suggest that male students exhibit higher resilience than female students, while others disagree with this argument, finding no significant gender differences or even suggesting that women are more resilient (Amoadu et al., 2024; Marta et al., 2023). Elvira-Zorzo et al. (2025) study results support the idea that female students' lower resilience and well-being appear linked to internalized gender attributes, triggering a higher risk of mental health-related problems. Besides, multiple studies suggest that males demonstrate a greater ability to handle the emotional and psychosocial demands of academic or daily life, leading to increased resilience (Graves et al., 2021; Chaplin & Aldao, 2013).

The findings also identified significant variations in MHPK across age and class groups. Specifically, older age groups and those in higher class levels demonstrated significantly higher MHPK. This suggests that cognitive maturation and socioeconomic factors likely play a role in the acquisition and understanding of mental health promotion knowledge. The observed differences in MHPK across age groups are consistent with the notion that rapid cognitive development during late adolescence facilitates the attainment of more complex knowledge (Nobre et al., 2022). Consequently, interventions should be tailored to consider the varying cognitive capacities and socioeconomic backgrounds of students, ensuring they are developmentally appropriate to receive the necessary information.

As mentioned, the relationship between MHL and MHPK and resilience has been explored, focusing on the predictive power toward resilience. In the current study, both MHL and MHPK were found to demonstrate a significant correlation with resilience. These findings align with prior Indonesian research (Ramadhani et al., 2025), which proposed the idea that mental health knowledge and skills enhance adolescent resilience, equipping them to navigate challenges using coping strategies, seeking for help and leading to overcome adversity (Astipa et al., 2025). Additionally, previous research also found that by developing resilience, young individuals tend to seek help and are able to maintain greater well-being (Song et al., 2023).

Another key finding of the present study is the observed stronger contribution of MHPK to mental well-being, mediated by resilience, when compared to Mental Health Literacy (MHL). This is better explained by the different frameworks underpinning these constructs (Campos et al., 2022; Bjørnsen et al., 2017). MHPK, which originated from positive psychology, prioritizes building strengths, which naturally fosters resilience and well-being. While Mental Health Literacy (MHL) still demonstrated statistical significance,

its emphasis on disorder recognition and treatment appears to limit its capacity to foster proactive resilience.

CONCLUSION

Returning to the initial question, it can be concluded that MHL and MHPK both predict the level of mental well-being among high school students, mediated by resilience. In addition, statistical analysis also presented a stronger contribution of MHPK to mental well-being compared to MHL. Thus, mental health practitioners and school stakeholders should consider promoting mental health knowledge from a positive psychology approach, which appears to be a more effective pathway to enhance resilience and improve mental well-being than focusing only on pathology-related mental health literacy. Besides, the mental well-being promoting program should also be tailored considering several factors such as gender, age groups, and educational backgrounds. Despite supporting growing evidence that highlights the interconnectedness of MHL, MHPK, and resilience in fostering adolescent mental well-being, this study appeared to have several limitations. Firstly, the school selected for this study was a private school that has a great concern in fostering mental well-being among its students. Therefore, this condition limits the variety of the mental well-being level of the population. To enhance the generalizability of findings, future studies should recruit a wider range of demographic and sociocultural backgrounds.

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