

The Journal of Behavioral Science (TJBS)

Quantitative Research Article

A Mental Health Model of Students in State Universities and Colleges and Local Universities and Colleges in Negros Occidental, Philippines

Cye Sartiga^{1*}, JJ Tauban¹, Reignier Ortega¹, Jayme Mariel Villanueva¹, Precious Beatingo¹, Arjay Alvarado¹, and Alfredo Alave¹

Abstract

Background: The Philippine mental health act of 2018 reshaped the nation’s mental health care. Despite its global relevance, few studies examine factors affecting college mental health outcomes.

Objective: Based on Bronfenbrenner’s ecological systems theory, this study aims to develop a structural model illustrating the direct and indirect relationships between variables and mental health.

Design and Methodology: The study surveyed 510 randomly selected students from state and local universities in Philippines, employing a path model to examine relationships among the variables.

Results: The study found that mental health was significantly influenced by social support ($\beta = .22, p < .001$), academic stress ($\beta = .21, p < .001$), service accessibility ($\beta = .18, p < .001$), and campus policies ($\beta = .16, p < .001$). Mental health literacy directly influences help-seeking ($\beta = .42, p < .001$). Campus policies were influenced by mental health literacy ($\beta = .16, p < .001$) and service accessibility ($\beta = .66, p < .001$). Campus culture ($\beta = .23, p < .001$), service accessibility ($\beta = .14, p < .001$), academic stress ($\beta = .15, p < .001$), and mental health literacy ($\beta = .13, p < .001$) also influenced social support. Mental health literacy was negatively correlated with stigma ($\beta = -.34, p < .001$), while campus culture was positively linked to service accessibility ($\beta = .39, p < .001$). Mediator effect of campus policies and social support was confirmed.

Conclusion and Implications: These findings underscore the need for a systemic approach to mental health promotion in state universities, offering a framework to guide the development of supportive, well-being-oriented academic environments. Educational institutions are encouraged to promote mental health literacy programs aimed at reducing mental health stigma and actively promoting students’ willingness to seek help.

Author Affiliation

¹ College of Arts and Sciences, Carlos Hilado Memorial State University – Talisay, Philippines.

*Corresponding author e-mail: cpsartiga.chmsu@gmail.com
https://orcid.org/0009-0007-6146-8626

Article Information

Received: 27.09.25
Revised: 05.12.25
Accepted for Review: 08.12.25

Keywords

Local universities and colleges, mental health model, path analysis, state universities and colleges, structural equation modeling

Since passage of the Philippine mental health act of 2018, Philippine universities and colleges have struggled to promote mental health and well-being among the students (Torres, 2023), and policy implementation of institutions to achieve the mandated provisions of the act are either ambiguous or inadequate (Samaniego, 2022). The development of comprehensive policies under the act may face significant challenges, largely attributable to the act’s recent enactment (Torneo, 2020) and the absence of well-established legislation, plans, and policies (World Health Organization, 2018). Furthermore, recent research focuses only on analyzing factors that affect mental health in a regression model (Byrd & McKinney, 2012), however there is a lack of relevant literature that studies the interplay of factors of mental health on a path model. This results in a lack of identification of relevant variables that affect the mental health of students, leading to lack of interventions and policies to promote a better mental health outcome.

The mental health and wellbeing of university students have become an important public concern (Mortier et al., 2017). The university years are among the most emotionally and intellectually demanding stages of education for students (Saleem et al., 2013). During this stage, individuals are prone to great deal of pressures and challenges, leading to various physical, social, and emotional difficulties (Rodgers & Tennison, 2009). As a result of ever changing social and emotional landscape of university students, they become more vulnerable to developing mental health problems (Eisenberg et al., 2007). Furthermore, student mental health is increasing not only in number but as well as severity (Hunt & Eisenberg, 2010). Given the significant costs to both students and universities, addressing student mental health is an urgent research priority (Sheldon et al., 2021).

Despite the growing magnitude and prevalence of mental health problems among college students' population around the world, it is unexpected that so little empirical research has been conducted to show the interplay of several factors and how they affect the students' mental health outcomes specific to the context of state universities and colleges (SUCs) and local universities and colleges (LUCs) in the Philippines. There is a rising demand for institutions to improve the psychological support services they provide to students. However, the lack of solid knowledge on modifiable risk factors inhibits services from accessing resources and dealing with expanding demand (Broglia et al., 2017). Furthermore, surveys involving thousands of diverse student samples which document the prevalence and identify factors that affect the mental health among college students, these are predominantly drawn upon data from Western culture and population and may not fully capture the sociocultural, economic, and institutional nuances influencing student mental health in the locale of this study. Anchored in Bronfenbrenner's ecological systems theory (EST), this study develops and empirically tests a mental health path model that examines the direct and indirect relationships among ecological level factors influencing student mental health in Philippine public higher education institutions.

This study advances student mental health research by operationalizing Bronfenbrenner's ecological systems theory within a path model, therefore demonstrating how factors across ecological levels interact to influence student mental health. While EST is frequently cited in mental health studies, it is rarely tested using structural pathways, particularly in the Philippine contexts. By focusing on state universities and colleges (SUCs) and local universities and colleges (LUCs) in Negros Occidental, a province that hosts a diverse range of public higher education institutions and represents non-metropolitan settings often underexamined in mental health research, this study enables the identification of underlying mechanisms and mediating processes that may not be captured by traditional regression models. Therefore, this study addresses the lack of empirical evidence on student mental health in Philippine public higher education institutions by offering context-specific insights from the SUCs and LUCs in Negros Occidental that are relevant to the policy making and implementation under the Philippine mental health act of 2018.

Literature Review

This section outlines mental health as a multifaceted concept that refers more clearly to a field of research and clinical activity than to a unitary entity (Lebowitz & Niederehe, 1992). The discussion also explores the ecological systems theory by Bronfenbrenner (1979) role in influencing university students' mental health. Furthermore, this section provides definitions to the relevant variables of this study as well as the understanding of how these variables are integrated to influence the overall mental health of university students.

Mental Health

The definition of mental health today can have its origins traced back to the developments of public health, in clinical psychiatry, and in other branches of knowledge. Its concept can be defined and conceptualized differently based on cultures, communities, and societies (Saleem et al., 2013).

Mental health can be defined as the absence of mental disease (Keyes, 2005) or it can be defined as a state of being that also includes the biological, psychological, or social factors which contribute to an individual's mental state and ability to function within the environment (Carter, 1959). For example, in the

World Health Organization (2018) definition of the term, it includes realizing one's potential, the ability to cope with normal life stresses, and community contributions as core components of mental health. Lebowitz and Niederehe (1992) preferred an operational approach in defining mental health and emphasizing simply that most attempts to define the concept combine in a complex way the several elements of statistical normality, relationship of individual functioning to group or species norms, controllability or treatability of disordered states, and ideals of positive functioning. Manwell et al. (2015) concluded that based on these definitions, "prevention strategies may aim to decrease the rates of mental illness, but promotion strategies aim at improving mental health", adding that the scope of promotion initiatives for mental health depends on how researchers and scholars define mental health. Nevertheless, it can be concluded that mental health underscores a multifaceted construct, encompassing emotional, psychological, and social well-being. Rather than being defined solely by the absence of mental health illness, mental health exists on a continuum, influenced by a range of biological, psychological, and social factors (Keyes, 2002).

Research on mental health encompasses a diversified scientific investigation aimed at understanding the complexities of mental health, mental illness, and psychological well-being. It involves a systematic study of various factors influencing mental health outcomes, including biological, psychological, social, and environmental determinants (Engel, 1977). The world is different from how it was during the 20th century; however, the underlying problem of mental health continues to pose a significant concern in different societies. On this note, research on mental health involved associations with factors that might have influence college students' mental health, this includes but not limited to factors such as, school culture and climate (Kohoulat et al., 2015), access to mental health services (Bommersbach et al., 2022), academic stress (Barbayannis et al., 2022), mental health stigma (Chan & Tsui, 2023), mental health literacy (Jorm, 2012), policies and support programs (Campbell et al., 2022), help-seeking (Bartolome et al., 2016), and social support (Li et al., 2020). College students are an important cornerstone of a country's future development, and the higher rates of existence of mental health problems among them have a serious negative impact on the family and society. Previous studies suggested that mental health research should not end on the identification of factors or variables that might have influence a students' mental health, but on promoting and proposing policies and intervention to lessen the prevalence of mental health problems among students worldwide.

The growing demand for psychological support services in higher education institutions highlights the urgent need to enhance the quality and accessibility of mental health care for students. Currently, the local government and institutions are pushing for mental health awareness policies and initiatives, however the nonexistence of evidence-based research that might identify the specific mental health needs of students as well as the measurement of the effectiveness of these initiatives poses significant risks, as it may fail to address the actual needs of students. Moreover, while large-scale studies involving diverse student populations have documented the prevalence of mental health issues, many of these studies are based on data from Western contexts. While prior studies (Barbayannis et al., 2022; Bommersbach et al., 2022; Byrd & McKinney, 2012; Chan & Tsui, 2023; Jorm, 2012) examined specific predictors of student mental health, these studies are largely variable-centered and regression-based, focusing on isolated associations rather than systemic, interrelated pathways. To the knowledge of researchers, there is limited empirical research in Philippine higher education using path analysis to examine direct and indirect influences on student mental health. Thus, this study develops a context-specific mental health path model for students in state and local universities and colleges in Negros Occidental, Philippines.

As mental health continues to be a critical component of an individual's health, research and policy efforts are essential to enhance the understanding and improve mental health outcomes not only in the Philippines, but also globally.

The Ecological Systems Theory

The ecological systems theory by Bronfenbrenner (1979) examines the complex interactions and relationships between an individual and his/her multiple social and physical surroundings during adolescent development. These interactions between an individual with other people and their various environments

are often seen as key to human development (Hosek et al., 2008). Bronfenbrenner (1979) identifies four ecological systems: the microsystem, the mesosystem, the exosystem, and the macrosystem.

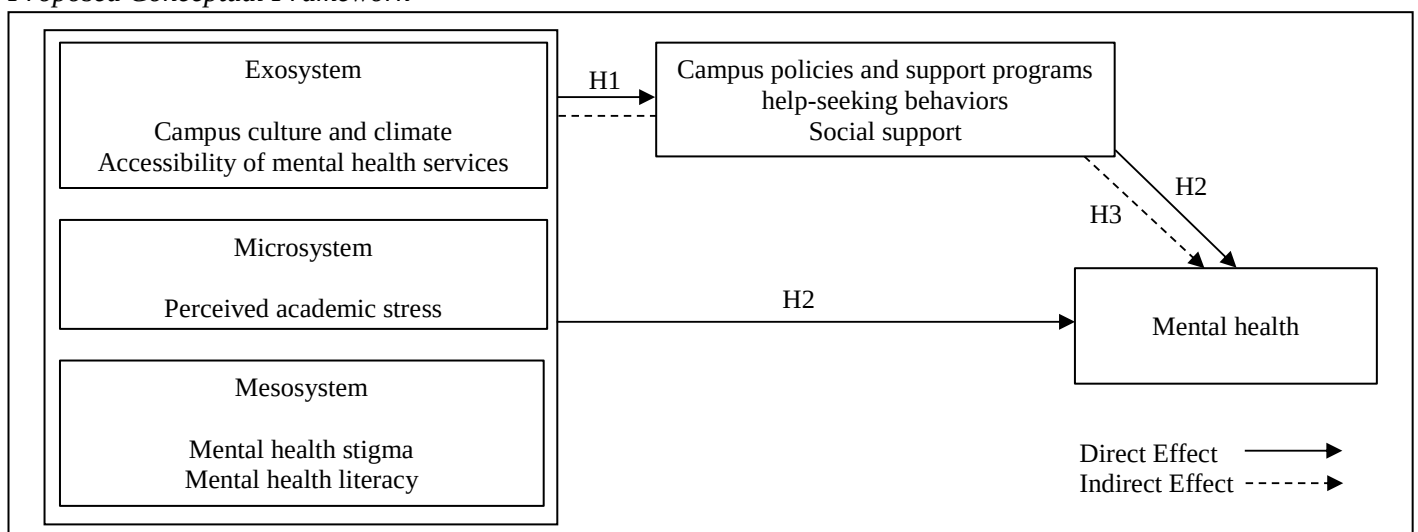
The microsystem refers to the interactions between the developing person and his or her immediate environment, such as the interaction within one's immediate family or circle of friends, this might also include school, health services, religious organizations, and workplace. In this study, microsystem factors include academic stress, help-seeking behaviors, and social support. When microsystems interact, a mesosystem is formed and encompasses the relationship between two or more settings (i.e., relationship between school and peers). In this study mesosystem factors include mental health literacy and mental health stigma. The exosystem is an environment in which the individual is not directly involved, but that impacts him/her anyway, (i.e., relationship between parents, caregiver's place of employment, local media, community agencies) (Hosek et al., 2008). In this study, exosystem factors include campus culture and climate, access to mental health services, and campus policies and support programs. The final ecological system identified by Bronfenbrenner (1979) is that of the macrosystem. The macrosystem consists of larger societal structures and values (i.e., social, cultural, political, religious) that do not directly impact the life of an individual adolescent, but rather society (Hosek et al., 2008). In this study, macrosystem level variables were not included as this study focuses on individual level experiences and institutional contexts. Broader sociocultural influences, such as societal norms, cultural beliefs, and national mental health policies, were assumed to exert indirect effects and were therefore reflected implicitly through constructs such as mental health stigma and mental health literacy. This approach ensured model parsimony and alignment with the study's path analytic design while maintaining theoretical coherence. In 1986, Bronfenbrenner proposed an additional system, the chronosystem, which includes the transitions and shifts in an individual's lifespan. These transitions can be divided into two, which is the normative transitions such as entering school, puberty, or marriage, and the non-normative transitions such as death of a loved one, divorce, or chronic illness (Hosek et al., 2008). These transitions might occur across the lifespan of an individual and may indirectly influence development by affecting family processes and dynamics.

By anchoring this study on Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1979), this theoretical framework provided a structured approach to understanding the complex interplay between individual, interpersonal, and institutional factors affecting student mental health.

Research Hypotheses

Figure 1

Proposed Conceptual Framework



This research investigates the influence of several variables on mental health using a path model among university students of SUCs and LUCs in Negros Occidental, Philippines. The study proposes three hypotheses (see Figure 1).

H1: Campus culture and climate and accessibility of mental health services (exosystem), perceived academic stress (microsystem), mental health stigma and mental health literacy (mesosystem) significantly predict campus policies and support programs (exosystem), help-seeking behaviors, and perceived social support (microsystem) among university students.

H2: Microsystem, mesosystem, exosystem, and variables—including campus culture and climate, accessibility of mental health services, perceived academic stress, perceived mental health stigma, mental health literacy, campus policies and support programs, help-seeking behaviors, and perceived social support—significantly influence mental health among university students.

H3: The effects of campus culture and climate and accessibility of mental health services (exosystem), perceived academic stress (microsystem), mental health stigma and mental health literacy (mesosystem), variables on mental health are significantly mediated by campus policies and support programs, help-seeking behaviors, and perceived social support.

Method

Research Design

This study used a quantitative research design. It examined the role of campus policies and support programs, help-seeking behaviors, and perceived social support as a mediating variable. The exogenous variables are campus culture and climate, accessibility of mental health services, perceived academic stress, perceived mental health stigma, and mental health literacy, and the endogenous variable is mental health.

Research Setting

This study was conducted with 510 students from three ($n = 3$) state universities and colleges and two (2) local universities and colleges in Negros Occidental, Philippines, with data collected from October to December 2024.

Research Participants

This study targeted students from five state-funded institutions aged at least 18 years. Eligible participants were those students who met several criteria: both males and females, enrolled in one of the five institutions in any programs offered for the first semester of the academic year 2024-2025, able to understand both Filipino and English language.

In this study, data was gathered from survey questionnaires distributed to SUCs and LUCs consisting of 510 individuals. Majority of the respondents were female, accounting for 358 respondents (70.2%). Many respondents (66.9%) were between 18 and 20, implying a young student demographic. On the contrary, 33.1% of the samples were above the age of 20. Furthermore, majority of respondents were second-year students, comprising 218 students or 42.7% of the sample.

Sample and Procedure

This research sample consists of university students of at least 18 years and older from five state and local universities in Negros Occidental, Philippines totaling 26,001 people. The sample size was calculated using the Raosoft sample size calculator while observing the minimum sample size required for structural equation modeling and related studies of 10 times (or ideally 20 times) as many cases as parameters, and at least 200 (Kline, 1998). This research has nine observed variables, resulting in the sample size of 510 students. This was conducted on students of three state universities and two local colleges in Negros Occidental from October to December of 2024.

The sampling of this research was done randomly using two sampling methods. (1) proportionate stratified random sampling, to ensure that each university or college is well represented in the sample according to its proportion in the population. (2) multi-stage cluster sampling, four stages of randomization were used for this study. At the first stage, colleges or departments in each institution were assigned numerical codes and were selected through simple randomization. The second stage involves randomly selecting one of the programs offered under the college or department determined during the first stage.

The third stage of randomization was employed for the selection of students based on their year level. The final stage of randomization, one section within the selected year level were identified. This four-stage randomization process was repeated 31 times to identify 31 clusters of student respondents who participated in the study.

Instruments

This research utilized questionnaires to collect data, comprising of nine different questionnaires related to each variable in a rating scale format, which are further described.

Exogenous variables instruments. Perception of campus culture and climate was assessed using the 14-item from the university environment scale (UES) developed by Gloria and Kurpius (1996). Sample item is, “I do not feel valued as a student on campus.” Awareness of the accessibility of mental health services was assessed using the 10-item researcher-made questionnaire aiming to understand their awareness of access of mental health services. Example item is, “I can easily find information about different mental health services on campus.” Perception of academic stress was assessed using the 18-item questionnaire the perception of academic stress scale by Bedewy and Gabriel (2015). Sample item is, “Competition with my peers for grades is quite intense.” Mental health stigma was assessed using the 5-item scale stigma scale for receiving psychological help (SSRPH) developed by Komiya et al. (2000). Sample item is, “Seeing a psychologist for emotional or interpersonal problems carries social stigma.” Mental health literacy was assessed using the 35-item questionnaire the mental health literacy scale (MHLS) developed by O’Connor and Casey (2015). Example item for this scale includes, “It is best to avoid people with a mental illness so that you don’t develop this problem.”

Endogenous variables instruments. Awareness of campus policies was measured using the 11-item questionnaire specifically made by the researchers. Sample item is, “I am aware of the places where I can get information about my school’s mental health services and policies.” Help-seeking behaviors were measured using the 10-item questionnaire the attitude toward seeking professional psychological help scale-short (ATSPPHS) adopted from Fischer and Farina (1995). Example item from this scale is, “I would want to get psychological help if I were worried or upset for a long period of time.” Perceived social support was assessed using the 12-item scale the multidimensional scale of perceived social support adopted from Zimet et al. (1988). Example item is, “I have a special person who is a real source of comfort to me.” Mental health was assessed using the unidimensional 9-item positive mental health scale (PMHS) adopted from Lutz (1992, as cited in Lukat, 2016). Example item includes, “I feel that I am actually well equipped to deal with life and its difficulties.”

The instruments used in this study showed an acceptable to high reliability with Cronbach’s alpha ranging from .72 to .93 as shown in Table 1.

Data Collection

Prior to data collection, the research instruments underwent pilot testing to establish their reliability and validity and were selected to ensure they were normed within the Asian context, preferably in South-East Asian or Filipino settings. Data collection commenced upon securing approval from the presidents of each participating institution and was conducted using pen-and-paper surveys consisting of a ten-page questionnaire that included informed consent and the survey instruments. Participants were provided with sufficient information about their rights, instructions for properly answering each instrument, and contact details in case of concerns following the procedure. After data collection, the researchers conducted data cleaning by checking and removing duplicate responses, identifying incomplete questionnaires and applying a protocol for handling partially completed responses, and tabulating the finalized data in a secured electronic database.

Data Analysis

Descriptive statistics summarized participants data. Variance inflation factor (VIF) assessed the multicollinearity between the exogenous variables. Stepwise multiple regression analysis was utilized to determine the influence of exogenous variables on endogenous variables. Mediation analysis evaluated the

mediational influence of mediator variables between the exogenous variables and the outcome variable. Assumptions, including multivariate normality, linearity, homogeneity of variances, equality of variance-covariance matrices, compound symmetry, and homoscedasticity, were thoroughly tested. For all analysis, the level of significance was set at $p < .05$.

Ethical Considerations

The study adhered to established ethical principles for research. The researchers implemented comprehensive protection measures described in 6 steps. (1) provided detailed and up to date information to all participants prior to obtaining informed consent or signature authorization. (2) ensured voluntary participation and informed the participants that they have the option should they wish to discontinue their participation without having to provide any reason. (3) confidentiality was strictly maintained by anonymizing participants' personal information by using numerical codes, electronic copy of data was secured by a strong password, and pen-and-paper questionnaires were shredded ensuring no risks of re-identification. (4) implemented measures to minimize any potential harm during the survey administration. (5) cultural sensitivities were assessed, stigmatizing labels as well as culturally and socially sensitive terminologies were revised with the permission and approval of author or publisher of instruments. (6) complete debriefing was conducted after the data gather procedure to ensure transparency about the full nature of the study including those aspects that were not initially disclosed to prevent any forms of biases, and to honor their contributions to the research.

Results

Descriptive Analysis

Using mean and standard deviation, the individual variables of the study were assessed. Students from SUCs and LUCs demonstrated an average perception of campus culture and climate ($M = 70.15$, $SD = 10.8$), average awareness of accessibility of mental health services ($M = 20.22$, $SD = 5.01$), high levels of perceived academic stress ($M = 56.58$, $SD = 9.77$), average level of mental health stigma ($M = 6.40$, $SD = 3.57$), below average mental health literacy ($M = 115.92$, $SD = 12.01$), average awareness of campus policies and support programs ($M = 23.61$, $SD = 5.82$), average level of help-seeking behaviors ($M = 16.60$, $SD = 3.65$), high levels of perceived social support ($M = 63.18$, $SD = 14.54$), and an average level of positive mental health ($M = 19.15$, $SD = 4.04$) as shown in Table 1.

Table 1

Mean, Standard Deviations, and Verbal Interpretation of the Mental Health-Related Variables

Variable	<i>M</i>	<i>SD</i>	Interpretation
Awareness of campus culture and climate ($\alpha = .81$)	70.15	10.80	Average
Accessibility of mental health services ($\alpha = .89$)	20.22	5.01	Average
Perception of academic stress ($\alpha = .72$)	56.58	9.77	High
Mental health stigma ($\alpha = .82$)	6.40	3.57	Average
Mental health literacy ($\alpha = .83$)	115.92	12.01	Below Average
Campus policies and support programs ($\alpha = .92$)	23.61	5.82	Average
Help-seeking behaviors ($\alpha = .72$)	16.60	3.65	Average
Social support ($\alpha = .93$)	63.18	14.54	High
Mental health ($\alpha = .86$)	19.15	4.04	Average

Note. Interpretations are based on the equivalent stanine scores of the mean.

Hypotheses Testing Results

As is seen from path coefficients in Figure 2 and Table 2, social support had the most direct positive effect ($\beta = .22$, $p < .001$) on mental health. Similarly, perceived academic stress ($\beta = .21$, $p < .001$),

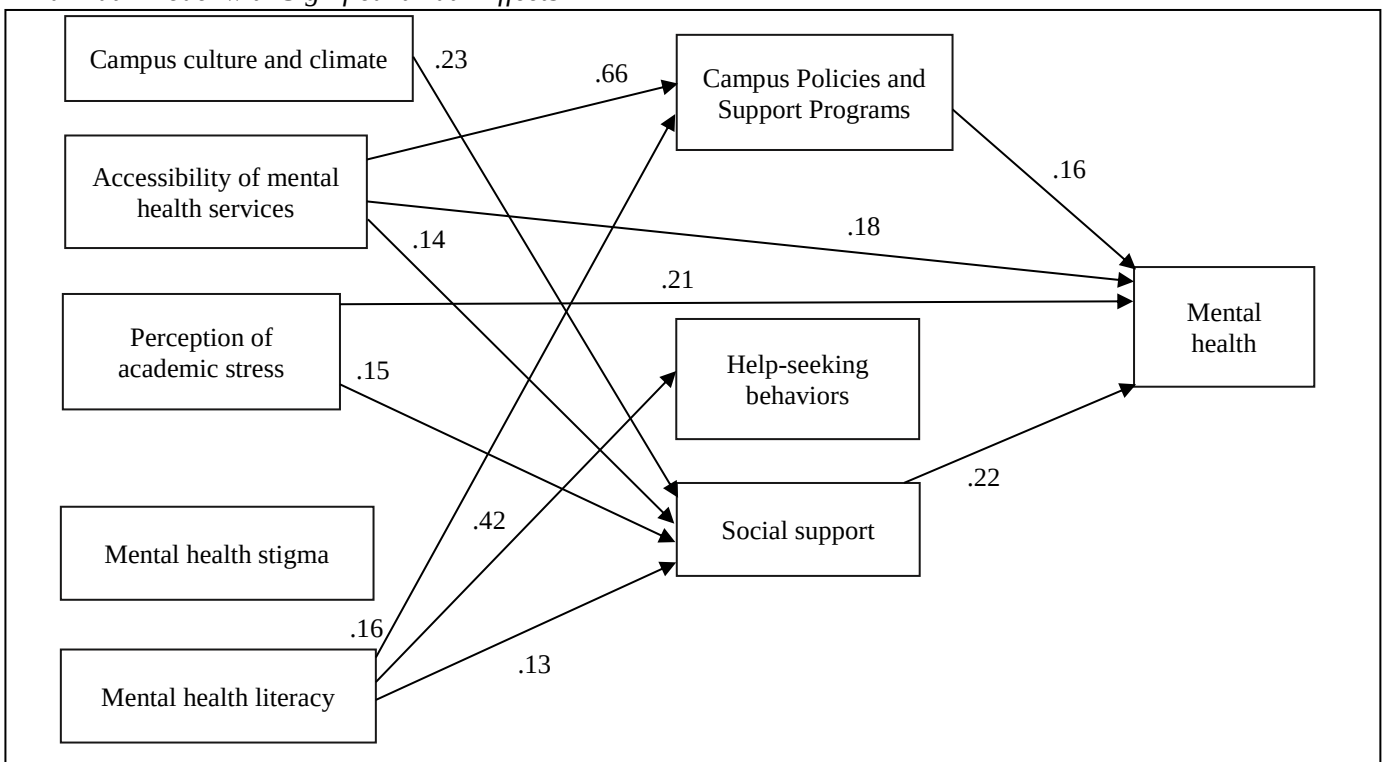
accessibility of mental health services ($\beta = .18, p < .001$), and campus policies and support programs ($\beta = .16, p < .001$) also had direct positive effects on mental health. Furthermore, path analysis coefficients showed that mental health literacy and perceived campus culture and climate do not have any direct effect on mental health. Accessibility of mental health services demonstrated the most indirect effect ($\beta = .14, p < .001$) and total effects ($\beta = .31, p < .001$) on mental health.

The mediating effects of campus policies and support programs, help-seeking behaviors, and social support were also examined. Out of the analyzed exogenous variables, accessibility of mental health services ($\beta = .66, p < .001$) and mental health literacy ($\beta = .16, p < .001$) had positive effects on campus policies and support programs, which subsequently influenced mental health condition ($\beta = .16, p < .001$). On the other hand, mental health literacy is the only variable that has positive effect ($\beta = .42, p < .001$) on help-seeking behaviors. Direct positive effects were also showed by perceived campus culture and climate ($\beta = .23, p < .001$), accessibility of mental health services ($\beta = .14, p < .001$), perceived academic stress ($\beta = .15, p < .001$), and mental health literacy ($\beta = .13, p < .001$) on social support. Campus policies and support programs positively mediated the positive effects of accessibility of mental health services and mental health literacy on mental health. However, help-seeking behavior proved to be an insignificant mediator as it did not mediate the positive effects of mental health literacy on mental health. Social support also mediated several key relationships. Mental health literacy predicted social support ($\beta = 0.13, p < .001$), which then impacted mental health condition directly ($\beta = .22, p < .001$). Similarly, accessibility of mental health services ($\beta = .14, p < .001$) and academic stress ($\beta = .15, p < .001$) were positively associated with social support, underscoring that both institutional and personal stressors indirectly contribute to mental health by shaping students' social networks.

Two significant reciprocal causal paths also emerged. Awareness of campus culture and climate has demonstrated a positive correlation ($\beta = .39, p < .001$) on accessibility of mental health services, and vice versa. On the other hand, a negative correlation ($\beta = -.34, p < .001$) between mental health stigma and mental health literacy emerged.

Figure 2

Final Path Model with Significant Path Effects



Note. $p < .001$

Table 2
Path Analysis of Study Variables

	Hypothesis	Path Coefficient	<i>p</i> -value	Conclusion
H1	Campus culture and climate → Campus policies and support programs	.23	< .001	Supported
H1	Accessibility of mental health services → Campus policies and support programs	.66	< .001	Supported
H1	Accessibility of mental health services → Social support	.14	< .001	Supported
H1	Perceived academic stress → Social support	.15	< .001	Supported
H1	Mental health literacy → Campus policies and support programs	.16	< .001	Supported
H1	Mental health literacy → Help-seeking behaviors	.42	< .001	Supported
H1	Mental health literacy → Social support	.13	< .001	Supported
H2	Accessibility of mental health services → Mental health	.18	< .001	Supported
H2	Perceived academic stress → Mental health	.21	< .001	Supported
H2	Campus policies and support programs → Mental health	.16	< .001	Supported
H2	Social support → Mental health	.22	< .001	Supported
H3	Campus culture and climate → Mental health (via social support)	.05	< .001	Supported
H3	Accessibility of mental health services → Mental health (via campus policies and support programs)	.14	< .001	Supported
H3	Perceived academic stress → Mental health (via campus policies and support programs)	.03	< .001	Supported
H3	Mental health literacy → Mental health (via campus policies and support programs)	.05	< .001	Supported

Discussion and Conclusion

This study found that accessibility of mental health services and mental health literacy significantly influenced campus policies and support programs. Accessibility of mental health services and mental health literacy have a direct effect on campus policies and support programs. Only two exogenous variables have been found to have a direct effect, the other three variables (campus culture and climate, academic stress, and mental health stigma) do not have a direct effect on campus policies and support programs. These findings support the notion that access to mental health services, and the design of campus policies and support programs are critical in addressing the emerging mental health crisis in higher education. This idea compels institutions to implement inclusive policies that prioritize availability and cultural appropriateness of mental health services which in turn may foster better mental health outcomes and a supportive and equitable educational environment (Wang & Liu, 2023). For instance, Monaghan et al. (2020) stresses the importance of having streamlined policies or guiding frameworks from an institutional level to a national level and emphasizing the need for a comprehensive approach to support the development of national policy on how to enhance mental health support across learning institutions.

Moreover, mental health literacy has a direct influence on campus policies and support programs. This means that when an entire student body of an institution has been subject of low mental health literacy rating from several measures, this prompts the institution to find appropriate policies and intervention to alleviate the mental health literacy crisis. Several studies support these results through pre-test and post-test surveys once a policy, program, or intervention has been implemented. A study of Reis et al. (2023) evaluated the impact of innovative curriculum design which relates to mental health literacy and proved that an experiential learning opportunity that contains mental health literacy content in addition to traditional courses can be valuable in advancing the mental health literacy of students. However, although

universal education and awareness play a pivotal role in increasing the mental health literacy of students, Yani et al. (2024) showed that it had limited effects on individual mental health literacy, suggesting that interventions and programs needed to be more personalized to achieve desired outcomes.

Mental health literacy also has a direct influence on help-seeking behaviors. This indicates that higher levels of mental health literacy of students could prompt them to seek formal or informal help when suffering distress. This hypothesis was supported by numerous studies stating that mental health literacy is a significant predictor of formal help-seeking intentions (Awan et al., 2025). A systematic review and meta-analysis study showed that there is a positive correlation between mental health literacy and help-seeking, suggesting that individuals with high levels of mental health literacy engage in help-seeking more compared to those with low mental health literacy, therefore mental health literacy is an important indicator to ensure that young people are able to identify signs of distress for them to seek appropriate support channels when necessary (Özparlak et al., 2023).

The study also found that campus culture and climate, accessibility of mental health services, academic stress, and mental health literacy influenced social support. A positive student's perception and awareness of campus culture and climate are synonymous with higher levels of perceived social support. It has been reported that school climate predicts perceived social support, therefore implying that a supportive and inclusive educational environment enhances students' interpersonal connectedness and can increase students' perceptions of support around them (Luo et al., 2023). Conversely, a negative campus culture and climate which is characterized by exclusion, discrimination, and competitiveness might erode a students' confidence in seeking support from peers, family, or professionals. This supports the "scenario-process-result" model of Roeser et al. (1996), which demonstrated that situational factors in schools can influence students' psychological processes. Therefore, institutions should put importance on maintaining or improving the campus culture and climate through regular inquiries about students' perceptions and awareness of institutional climate, as this also predicts students' perceptions of social support.

Furthermore, accessibility of mental health services has a positive influence on social support. Results from this study was supported by studies which highlights that social support is one of the protective factors for students' mental well-being (Yuhuan et al., 2022), therefore increasing access to mental health services may foster higher perception of social support. Furthermore, Espetvedt et al. (2017), suggested that it is important to focus on local factors that encourage participation in activities, including accessibility to local facilities to strengthen the social support experienced by people.

A positive influence was also demonstrated by academic stress and social support. Which indicates that students who have higher academic stress also have high perceived social support. Although literature often links the opposite in which social support tends to predict academic stress (e.g. higher levels of social support results in low levels of stress) (Aziz et al., 2023), this study provides a new way to look at it. This hypothesis is supported by Suwajo et al. (2024), in which a positive correlation between academic stress and social support was found among high school students. This implies that an adequate social support systems and how student perceive those support systems matters in reducing academic stress and promote well-being. Therefore, the researchers concluded that more comprehensive study of this relationship, particularly in tertiary education will allow one to gain significant insight on how to improve students' overall quality of living and academic experience.

Mental health literacy has been found to have a positive influence on social support. This suggests that high levels of mental health literacy are more likely to seek support, which increases their tendency to get care (Jorm, 2012). Additionally, this hypothesis is further supported by Çebi and Demir (2019) highlighted that high degrees of mental health literacy improve perceived social support and increase people's belief that, with better information and access to support services, psychological problems may be solved and understood. The study highlights the significant role of mental health literacy in enhancing perceived social support and underscores the importance of school-based campaigns to improve mental health literacy and promote student well-being.

Several significant paths influencing mental health have been identified in this study. The findings indicated that academic stress directly mental health. Academic stress has been considered the most dominant stress factor that affects students' mental well-being in which higher levels of academic stress is associated to worse mental well-being in college students (Barbayannis et al., 2022). Furthermore, a negative correlation between the two variables has been found between academic stress and positive mental health (Khan et al., 2023). Therefore, addressing academic stress by adopting an academic-friendly environment without sacrificing the quality of education students receive is tantamount to better mental and psychological health.

Accessibility of mental health services is revealed to have direct effect on mental health. Several studies supported these findings which consistently show that improved access to mental health services correlates with better mental health outcomes (Bommersbach et al., 2022). In a similar study, it has also been found out that despite the increasing number of people who experience mental health problems, service utilization remains static or even decreasing. This suggests that promotion of mental health services is necessary while respecting the nuances of the institution and student population.

Another direct significant path has been identified between social support and mental health. Social support has long been associated with mental health, and the positive effect of it on the latter has been well documented. Social support has been found to be significantly associated with grief, depressive symptoms, and suicidality, as well as increased personal growth (Li et al., 2020). Similarly, higher levels of social support predicted greater mental health levels, including fewer mental health problems (Acoba, 2024). The significant positive path between social support and mental health underscores the need for educational institutions to strengthen support systems and to provide accessible counseling services to enhance students' overall well-being.

A direct path between campus policies and support programs and mental health was also observed. Reconsidering traditional practices and introducing innovative programs and services to address unmet mental health needs could significantly benefit college students and society. Research highlights the importance of developing mental health programs in higher education, emphasizing that interventions must effectively reach a wide range of student demographics to alleviate the growing burden of mental health concerns (Taylor et al., 2024). Additionally, a much more recent study found that a well-designed induction program conferred benefits on student mental well-being and could be a factor enabling students to integrate into a positive social network reinforcement cycle (Campbell et al., 2022). The study highlights the need for effective mental health programs that promote awareness, reduce stigma, foster supportive campus environments, and increase service utilization in SUCs and LUCs in Negros Occidental, Philippines.

Limitations

A key limitation of this study is its restricted generalizability. The findings are specific to tertiary public educational institutions in Negros Occidental and may not be directly applicable to higher education contexts in other provinces of the Philippines. For future research, it would be beneficial to replicate this study in different provinces or types of higher education institutions to examine whether the observed relationships hold in broader contexts, thereby enhancing the generalizability of the findings.

Implications for Behavioral Science

This study contributes to the empirical literature regarding the significance of mental health promotion in higher education landscape of the Philippines. These empirical findings provide a theoretical framework through which institutions may implement culture-specific curriculum, programs, or interventions to enhance the well-being of students. The study supported by empirical evidence and statistical validation demonstrates how different elements related to mental health were able to interact and compound its influences not only influencing mental health but the general environment in which the students are in. This framework necessitates the integration of multiple elements: enhancement of mental health literacy, reducing the stigmatization of mental health in the Philippines, increasing mental health services utilization, creation of mental health friendly campus environments, and the development of

curriculum with consideration to mental health principles. the recent developments in Philippine legislation with the passage of Republic Act No. 12080, or the basic education mental health and well-being promotion act, a law strengthening the promotion and delivery of mental health services in basic education by establishing school-based mental health programs, mental health and well-being offices, and dedicated counseling positions in all public and private basic education institutions (Supreme Court E-Library, 2024), future researchers might also replicate this study not only in other higher education institutions of different provinces in the Philippines, but also in the basic education landscape. Educational institutions across academic levels, in conjunction with different mental health organizations, can implement strategic interventions through policy formulation and initiatives that enhance the well-being of students, while catering to the unique nuances of subjected institutions.

Conclusion

This study highlights the pivotal role of accessibility of mental health services and mental health literacy in shaping campus policies and support programs. These variables also significantly influence students' mental health, both directly and indirectly through perceived social support. While campus culture, climate, and academic stress predict perceived social support, their direct impact on mental health is minimal without the mediation of systemic support. Help-seeking behaviors, on the other hand, show limited predictive power, suggesting a disconnect between awareness and action. Grounded in ecological systems theory, the model provides actionable insights for policymakers, administrators, and mental health practitioners in fostering supportive and resilient academic environments. In light of the findings, a targeted policy response from the commission on higher education (CHED) is warranted, particularly through the establishment of a dedicated mental health fund to support licensed professionals, campus counseling centers, and evidence-based programs, alongside strengthened compliance with the Philippine mental health act of 2018 via mandatory annual mental health plans and utilization reports, thereby ensuring equitable access to mental health services and embedding student well-being into the core mandate of public higher education institutions.

Declarations

Conflicts of Interest: The authors declare no conflicts of interest.

Ethical Approval Statement: The faculty of College of Arts and Sciences, Carlos Hilado Memorial State University – Talisay, Negros Occidental, Philippines, has reviewed the ethical approval for this study in accordance with the ethical principles outlined in the Declaration of Helsinki, dated September 2024.

Declaration of Generative AI: The authors declare that artificial intelligence tools were utilized only to assist in correcting grammar and improving language clarity. All ideas, analyses, and conclusions presented in this article were developed by the authors.

References

- Acoba, E. F. (2024). Social support and mental health: The mediating role of perceived stress. *Frontiers in Psychology*, 15, 1330720. <https://doi.org/10.3389/fpsyg.2024.1330720>
- Awan, M., Boyce, M. A., & Lindsay, B. L. (2025). Mental health literacy and help-seeking: the mediating role of self-stigma and emotional intelligence. *Frontiers in Psychology*, 16, 1589093. <https://doi.org/10.3389/fpsyg.2025.1589093>
- Aziz, N. A. A., Baharudin, N. S., & Alias, N. A. (2023). Association between stress and social support perceived among undergraduate health sciences student. *Malaysian Journal of Medical Sciences*, 30(3), 176–183. <https://doi.org/10.21315/mjms2023.30.3.16>
- Barbayannis, G., Bandari, M., Zheng, X., Baquerizo, H., Pecor, K. W., & Ming, X. (2022). Academic stress and mental well-being in college students: Correlations, affected groups, and COVID-19. *Frontiers in Psychology*, 13, 886344. <https://doi.org/10.3389/fpsyg.2022.886344>
- Bartolome, K. F., Lim, A. G., & Marinay, K. K. (2016). *The help effect: Testing the moderating effects of compassion fatigue and help-seeking behavior among Filipino mental health responders* [Bachelor's thesis, De La Salle University]. Amino Repository. https://animorepository.dlsu.edu.ph/etd_bachelors/7905/

- Bedewy, D., & Gabriel, A. (2015). Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale. *Health Psychology Open*, 2(2), 2055102915596714. <https://doi.org/10.1177/2055102915596714>
- Bommersbach, T. J., Rosenheck, R. A., & Rhee, T. G. (2022). National trends of mental health care among US adults who attempted suicide in the past 12 months. *JAMA Psychiatry*, 79(3), 219–231. <https://doi.org/10.1001/jamapsychiatry.2021.3958>
- Broglia, E., Millings, A., & Barkham, M. (2017). Challenges to addressing student mental health in embedded counselling services: A survey of UK higher and further education institutions. *British Journal of Guidance and Counselling*, 46(4), 441–455. <https://doi.org/10.1080/03069885.2017.1370695>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Byrd, D. R., & McKinney, K. J. (2012). Individual, interpersonal, and institutional level factors associated with the mental health of college students. *Journal of American College Health*, 60(3), 185–193. <https://doi.org/10.1080/07448481.2011.584334>
- Campbell, F., Blank, L., Cantrell, A. J., Baxter, S., Blackmore, C., Dixon, J., & Goyder, E. (2022). Factors that influence mental health of university and college students in the UK: A systematic review. *BMC Public Health*, 22, 1778. <https://doi.org/10.1186/s12889-022-13943-x>
- Carter, L. F. (1959). Proceedings of the sixty-seventh annual business meeting of the American Psychological Association, Inc.: Report of the recording secretary. *American Psychologist*, 14(12), 741–763. <https://doi.org/10.1037/h0043919>
- Çebi, E., & Demir, A. (2019). Help-seeking attitudes of university students in Turkey. *International Journal for the Advancement of Counselling*, 42(1), 37–47. <https://doi.org/10.1007/s10447-019-09385-7>
- Chan, K. K. S., & Tsui, J. K. C. (2023). Perceived stigma from mental health service providers and its adverse impact on service engagement and recovery among people with mental illness. *American Journal of Orthopsychiatry*, 93(5), 365–374. <https://doi.org/10.1037/ort0000680>
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*, 77(4), 534–542. <https://doi.org/10.1037/0002-9432.77.4.534>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136. <https://doi.org/10.1126/science.847460>
- Espetvedt, M., Lyshol, H., & Johansen, R. (2017). Social support and the accessibility to and regular participation in various types of activities. *European Journal of Public Health*, 27(suppl_3). <https://doi.org/10.1093/eurpub/ckx189.190>
- Gloria, A. M., & Kurpius, S. E. R. (1996). The validation of the cultural congruity scale and the university environment scale with Chicano/a students. *Hispanic Journal of Behavioral Sciences*, 18(4), 533–549. <https://doi.org/10.1177/07399863960184007>
- Hosek, S. G., Harper, G. W., Lemos, D., Martinez, J., & Adolescent Medicine Trials Network for HIV/AIDS Interventions. (2008). An ecological model of stressors experienced by youth newly diagnosed with HIV. *Journal of HIV/AIDS Prevention in Children & Youth*, 9(2), 192–218. <https://doi.org/10.1080/15538340902824118>
- Hunt, J., & Eisenberg, D. (2009). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health*, 46(1), 3–10. <https://doi.org/10.1016/j.jadohealth.2009.08.008>
- Jorm, A. F. (2012). Mental health literacy: Empowering the community to take action for better mental health. *American Psychologist*, 67(3), 231–243. <https://doi.org/10.1037/a0025957>
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43(2), 207. <https://doi.org/10.2307/3090197>

- Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539–548. <https://doi.org/10.1037/0022-006x.73.3.539>
- Khan, A., Sriyanto, S., Baranovich, D. L., Tahir, L. M., Panatik, S. A., Sasmoko, S., Indrianti, Y., Hamid, M. A., Lukman, F., Van, N. T., & Jabor, M. K. (2023). The relationship between positive mental health, academic stress and suicide ideation among Malaysian adolescents residing in Johor Bahru. *Current Psychology, 42*, 15718–15726. <https://doi.org/10.1007/s12144-022-02885-7>
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. Guilford Press.
- Khoulat, N., Dehghani, M. R., & Khoulat, N. (2015). Perceived school climate and students' mental health. *International Journal of School Health, 2*(4), e27939. <https://doi.org/10.17795/intjsh27939>
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*(1), 138–143. <https://doi.org/10.1037/0022-0167.47.1.138>
- Lebowitz, B. D., & Niederehe, G. (1992). Concepts and issues in mental health and aging. In *Handbook of mental health and aging* (2nd ed., pp. 3–26). <https://doi.org/10.1016/b978-0-12-101277-9.50005-x>
- Li, D., Ko, N., Chen, Y., Wang, P., Chang, Y., Yen, C., & Lu, W. (2020). COVID-19-related factors associated with sleep disturbance and suicidal thoughts among the Taiwanese public: A Facebook survey. *International Journal of Environmental Research and Public Health, 17*(12), 4479. <https://doi.org/10.3390/ijerph17124479>
- Lukat, J., Margraf, J., Lutz, R., van der Veld, W. M., & Becker, E. S. (2016). *Positive mental health scale* [Database record]. APA PsycTests. <https://doi.org/10.1037/t74178-000>
- Luo, Y., Ma, T., & Deng, Y. (2023). School climate and adolescents' prosocial behavior: the mediating role of perceived social support and resilience. *Frontiers in Psychology, 14*, 1095566. <https://doi.org/10.3389/fpsyg.2023.1095566>
- Manwell, L. A., Barbic, S. P., Roberts, K., Durisko, Z., Lee, C., Ware, E., & McKenzie, K. (2015). What is mental health? Evidence towards a new definition from a mixed methods multidisciplinary international survey. *BMJ Open, 5*(6), e007079. <https://doi.org/10.1136/bmjopen-2014-007079>
- Monaghan, C., Linden, B., & Stuart, H. (2020). Postsecondary mental health policy in Canada: A scoping review of the grey literature. *The Canadian Journal of Psychiatry, 66*(7), 603–615. <https://doi.org/10.1177/0706743720961733>
- Mortier, P., Cuijpers, P., Kiekens, G., Auerbach, R. P., Demyttenaere, K., Green, J. G., Kessler, R. C., Nock, M. K., & Bruffaerts, R. (2017). The prevalence of suicidal thoughts and behaviours among college students: A meta-analysis. *Psychological Medicine, 48*(4), 554–565. <https://doi.org/10.1017/s0033291717002215>
- O'Connor, M., & Casey, L. (2015). The mental health literacy scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research, 229*(1–2), 511–516. <https://doi.org/10.1016/j.psychres.2015.05.064>
- Özparlak, A., Karakaya, D., & Özer, Z. (2023). The association of mental health literacy with mental well-being and help-seeking in young people: A systematic review and meta-analysis. *Journal of Pediatric Nursing, 73*, e243–e250. <https://doi.org/10.1016/j.pedn.2023.09.017>
- Reis, A. C., Saheb, R., Moyo, T., Smith, C., & Sperandei, S. (2021). The impact of mental health literacy training programs on the mental health literacy of university students: A systematic review. *Prevention Science, 23*(4), 648–662. <https://doi.org/10.1007/s11121-021-01283-y>
- Rodgers, L. S., & Tennison, L. R. (2009). A preliminary assessment of adjustment disorder among First-Year College students. *Archives of Psychiatric Nursing, 23*(3), 220–230. <https://doi.org/10.1016/j.apnu.2008.05.007>
- Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology, 88*(3), 408–422. <https://doi.org/10.1037/0022-0663.88.3.408>

- Saleem, S., Mahmood, Z., & Naz, M. (2013). Mental health problems in university students: A prevalence study. *FWU Journal of Social Sciences*.
https://researchmgt.monash.edu/ws/portalfiles/portal/660632963/3.Mental_Health_Problems_in_University.pdf
- Samaniego, R. M. (2022). Mental health legislation in the Philippines. *Taiwanese Journal of Psychiatry*, 36(2), 51–58. https://doi.org/10.4103/tpsy.tpsy_13_22
- Sheldon, E., Simmonds-Buckley, M., Bone, C., Mascarenhas, T., Chan, N., Wincott, M., Gleeson, H., Sow, K., Hind, D., & Barkham, M. (2021). Prevalence and risk factors for mental health problems in university undergraduate students: A systematic review with meta-analysis. *Journal of Affective Disorders*, 287, 282–292. <https://doi.org/10.1016/j.jad.2021.03.054>
- Supreme Court E-Library. (2024). *Republic act no. 12080, December 06, 2024*.
<https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/2/98130>
- Suwajo, T., Mungkornpanich, P., Patanapipat, P., Luksiri, P., Boontanaakrapat, P., Nititham, T., & Wainipitapong, S. (2024). Correlation of learning engagement and social support affecting the academic stress of Thai high school students. *International Journal of Public Health Science (IJPHS)*, 13(3), 1095. <https://doi.org/10.11591/ijphs.v13i3.23680>
- Taylor, M. E., Liu, M., Abelson, S., Eisenberg, D., Lipson, S. K., & Schueller, S. M. (2024). The reach, effectiveness, adoption, implementation, and maintenance of digital mental health interventions for college Students: A systematic review. *Current Psychiatry Reports*. <https://doi.org/10.1007/s11920-024-01545-w>
- Torneo, A., & Roque, I. M. (2020). Exploring the impact of the Philippine mental health law. *The Lasallian*. <https://thelasallian.com/2020/01/24/exploring-the-impact-of-the-philippine-mental-health-law/>
- Torres, S. A. (2023). Number of students suffering from mental health issues growing. *ABS-CBN News*.
<https://www.abs-cbn.com/spotlight/01/31/23/number-of-students-suffering-from-mental-health-issues-growing>
- Wang, H., & Liu, Y. (2023). Influencing factors of Six sigma management in the construction of students mental health service system in the post-COVID-19 era. *International Journal of Lean Six Sigma*, 15(3), 691–718. <https://doi.org/10.1108/ijlss-02-2023-0034>
- Yani, D. I., Chua, J. Y. X., Wong, J. C. M., Pikkarainen, M., & Shorey, S. (2024). The effects of universal educational interventions in improving mental health literacy, depression, and anxiety among adolescents: A systematic review and meta-analysis. *International Journal of Mental Health Nursing*, 34(1). <https://doi.org/10.1111/inm.13494>
- Yuhuan, Z., Pengyue, Z., Dong, C., Qichao, N., Dong, P., Anqi, S., Hongbo, J., & Zhixin, D. (2022). The association between academic stress, social support, and self-regulatory fatigue among nursing students: a cross-sectional study based on a structural equation modelling approach. *BMC Medical Education*, 22, 789. <https://doi.org/10.1186/s12909-022-03829-2>
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41.
https://doi.org/10.1207/s15327752jpa5201_2