Academic Stressors, Coping Strategies, and Online Learning Challenges among Malaysian Health Science Students during the COVID-19 Pandemic

Abdul Raimi Bin Abd Kadir., AP.Dr Alias Bin Mahmud., Azmi Bin Ab Manan., Zuraida Bt Jorkasi., Siti Maisarah Binti Amdan., Mohd Azroy Bin Ag. Rajak., Rozila Binti Ibrahim

Faculty of Applied Sciences (FTAS) Open University Malaysia (OUM), Kuala Lumpur, Malaysia

DOI: https://dx.doi.org/10.47772/IJRISS.2025.91100609

Received: 11 December 2025; Accepted: 18 December 2025; Published: 26 December 2025

ABSTRACT

The COVID-19 pandemic reshaped higher education worldwide, creating unprecedented challenges for students, particularly those enrolled in health science programs that depend heavily on laboratory work, clinical exposure, and competency-based assessments. This study investigates the academic stressors, coping strategies, and online learning challenges experienced by Malaysian Diploma in Health Science students during the pandemic, with the goal of understanding how these factors interacted to influence student well-being and academic performance. Employing a quantitative cross-sectional design, the study collected data from 120 respondents through an online structured questionnaire that included demographic variables, standardized academic stress scales, coping behaviour indicators, and online learning experience measures. Findings indicate that academic stress remained significantly elevated throughout the pandemic, with a majority of students reporting moderate to high levels of psychological strain. Key stressors included unclear assessment expectations, increased academic workload, disrupted practical and clinical training, and difficulties adapting to rapidly shifting online learning formats. The absence of in-person laboratory and clinical sessions created substantial anxiety regarding future professional competence. Many students expressed fear of graduating without adequate practical skills, a concern intensified by inconsistent access to simulation tools and limited lecturer-student interaction in virtual environments. Technological barriers further compounded stress levels. Challenges such as unstable internet connectivity, limited access to personal digital devices, and unconducive home learning environments were widespread, particularly among students from lower-income households. These inequities not only affected academic engagement but also contributed to frustration, demotivation, and academic fatigue. Coping strategy analysis revealed that students predominantly relied on adaptive methods such as social support seeking, religious and spiritual practices, and cognitive reframing. However, a notable portion also reported maladaptive coping behaviours, including avoidance and emotional suppression, indicating deeper psychological distress. Overall, the study highlights that academic stress among health science students during the COVID-19 pandemic was multidimensional, interconnected with structural, technological, and psychological factors. The findings emphasize the urgent need for educational institutions to strengthen mental health support systems, redesign online and hybrid teaching methods, expand digital accessibility, and provide additional clinical training opportunities to rebuild student confidence. By understanding these stressors and coping patterns, policymakers and educators can develop a more resilient and equitable post-pandemic educational landscape that safeguards student well-being while ensuring academic continuity and professional readiness.

Index Terms- High prevalence of psychological distress (depression, anxiety, stress). Online learning barriers and lack of clinical exposure worsened mental health. Socioeconomic inequality impacted access to digital tools. Advocates for mental health support systems, hybrid learning, and policy interventions

INTRODUCTION

The COVID-19 pandemic created an unprecedented global disruption across all levels of education, reshaping teaching, learning, and assessment in ways that had never been experienced before. As higher education institutions rapidly transitioned from traditional face-to-face instruction to fully online platforms, students were

required to adapt to new digital learning ecosystems while simultaneously coping with psychological, social, and economic uncertainties. Among the most affected were health science students, whose program rely extensively on hands-on practical training, laboratory work, and clinical exposure—components that cannot be fully replicated in virtual environments. In Malaysia, diploma-level health science students were disproportionately impacted due to their position at the foundational stage of professional development, where technical competencies, skill mastery, and experiential learning are crucial to academic progression and future employability.

The abrupt shift to online learning introduced various stressors that significantly altered students' academic routines and expectations. Many found themselves struggling with increased academic workload, unclear instructions, inconsistent communication, and challenges associated with remote assessments. The sudden loss of structured schedules and physical learning environments also created uncertainty, making it difficult for students to maintain motivation, concentration, and self-discipline. For health science students, the cancellation or postponement of clinical attachments, laboratory sessions, and practical skill evaluations became a major source of anxiety. Without the opportunity to engage in hands-on learning, students expressed concern about their preparedness for real-world healthcare settings, contributing to elevated levels of academic stress.

Moreover, the shift to online learning exposed deep-rooted inequalities in digital access. Students from rural areas or low-income households encountered unstable internet connectivity, limited access to suitable devices, and learning environments that were not conducive to focused study. These technological disparities widened the educational gap between students, creating additional psychological strain and affecting academic performance. In many cases, students depended on mobile phones as their primary learning device, which hindered participation in synchronous sessions, reduced the quality of interaction, and increased frustration during assessments. Such disruptions reflect a broader national challenge wherein digital readiness became a critical determinant of academic continuity during the pandemic.

Academic stressors during this period were further compounded by emotional and mental health challenges. The uncertainty of the pandemic, fear of infection, financial strain on families, and social isolation contributed to heightened levels of stress and anxiety. Research conducted both globally and locally highlights a significant rise in psychological distress among students, with many reporting symptoms such as fatigue, decreased motivation, irritability, and emotional exhaustion. Health science students, in particular, were vulnerable to these effects due to the demanding nature of their programs and the expectation to achieve competency in both theoretical and practical components. The pressure to excel in online assessments, coupled with reduced academic support and the absence of physical classroom interactions, intensified academic stress throughout the pandemic period. Despite these challenges, students employed a range of coping strategies to manage academic and emotional stress. Adaptive coping mechanisms included seeking support from peers, engaging in religious and spiritual practices, practicing time management, and utilizing digital resources for self-directed learning. However, research also indicates the presence of maladaptive coping strategies such as avoidance, procrastination, and emotional suppression, suggesting that some students struggled to balance pandemic-related stress with academic responsibilities. Understanding these coping strategies is crucial, as they influence not only academic performance but also long-term psychological resilience and student retention. Although extensive research has documented the psychological and academic impact of COVID-19 on university students, there remains limited empirical data focusing specifically on Malaysian diploma-level health science students. Their experiences are unique due to the competency-based structure of their programs and the requirement for practical skill development. Most existing studies focus on degree-level medical, nursing, or allied health students, leaving a research gap in understanding how diploma students navigated academic stressors, adopted coping strategies, and confronted online learning challenges within the constraints of limited digital resources and reduced clinical exposure. This study aims to address this gap by examining the academic stressors, coping strategies, and online learning difficulties experienced by Malaysian health science students during the COVID-19 pandemic. By doing so, it provides a deeper understanding of how multidimensional stressors influenced learning experiences, mental well-being, and academic performance during a time of crisis. The findings offer valuable insights for educational institutions, particularly those offering health science programmes, to strengthen academic support structures, improve digital learning environments, enhance mental health services, and redesign practical learning components to foster resilience in future disruptions.

In summary, the COVID-19 pandemic has exposed vulnerabilities in the educational landscape and highlighted the need for adaptive, inclusive, and student-centered approaches to learning. Health science students, being at the frontline of future healthcare services, must be equipped with not only technical skills but also psychological resilience and flexible coping strategies. This study contributes to this objective by exploring the complex interplay between academic stressors, coping behaviours, and online learning challenges during one of the most transformative periods in the history of education. The knowledge gained will assist policymakers, administrators, and lecturers in refining academic systems to better support student well-being and academic continuity in both current and post-pandemic contexts. The COVID-19 pandemic triggered an unprecedented global transformation in education, forcing institutions, lecturers, and students to rapidly transition to online learning systems, remote teaching, and alternative methods of assessment, a shift that was especially challenging for health science students whose programs depend heavily on laboratory work, clinical practice, simulation sessions, and hands-on learning that could not be fully replicated through virtual platforms. As conventional routines collapsed, academic stress escalated dramatically due to increased workloads, higher academic expectations, and the overwhelming shift to digital instruction, with many educators assigning additional quizzes, online projects, and asynchronous modules in an effort to compensate for the loss of face-to-face interaction, ultimately contributing to cognitive overload, academic fatigue, and feelings of being overwhelmed among students globally and in Malaysia (Misra & McKean, 2020; Aristovnik et al., 2020; Rahman et al., 2021). Disruptions to clinical and practical training further intensified stress, as students were abruptly deprived of essential hands-on experiences and had to rely on video demonstrations or simulations that could not adequately build clinical competence, leaving many feeling unprepared for real-world healthcare environments, anxious about professional readiness, and fearful that they would not meet program outcomes (Son et al., 2020; Mohd Nawi et al., 2022). Assessment-related stress also became a major concern, as students faced unfamiliar online exam formats, technological issues, unclear instructions, last-minute changes, and shifting grading criteria, heightening uncertainty and the fear of losing marks due to circumstances beyond their control (Cao et al., 2020; Mustapha et al., 2021). Furthermore, emotional strain compounded academic pressures, with prolonged screen time, social isolation, reduced peer interaction, and constant worries about the virus contributing to anxiety, depression, burnout, helplessness, and diminished motivation, particularly among Malaysian health science students who were expected to maintain academic performance despite losing essential practical experiences (Tasso et al., 2021; Brooks et al., 2020). During this period, online learning brought additional obstacles, including poor internet connectivity, limited access to digital devices, low engagement during virtual lessons, home distractions, and challenges with online assessments, all of which disproportionately affected students from rural or low-income backgrounds, widening inequalities in academic performance and digital readiness (Nagib et al., 2023; Noor et al., 2021). Coping strategies varied widely, with some students adopting adaptive approaches—such as improving time management, seeking help from lecturers, engaging in peer support groups, practicing mindfulness, and drawing on religious or emotional coping—while others resorted to maladaptive behaviors like procrastination, withdrawal, excessive screen use, and emotional suppression, which offered temporary relief but ultimately worsened academic and psychological stress (Chong et al., 2021; Tasso et al., 2021). Several theoretical frameworks, including Cognitive Load Theory, Self-Determination Theory, and the Transactional Model of Stress and Coping, help explain the complex interplay between the sudden increase in cognitive demands, reduced autonomy and competence, disrupted social connectedness, and the coping responses that shaped students' stress levels during the pandemic. Socioeconomic disparities further amplified challenges, as students from financially disadvantaged families struggled to afford devices, data plans, or conducive study spaces, resulting in heightened academic stress, lower engagement, and reduced confidence in their academic progression (Noor et al., 2021). Despite abundant global research, critical gaps remain, including limited focus on Malaysian diploma-level health science students, insufficient exploration of how coping strategies mediate academic stress, inadequate understanding of how the loss of clinical exposure directly affects academic and psychological outcomes, and a lack of insight into long-term post-pandemic educational adaptations. Addressing these gaps, the present study seeks to provide a deeper understanding of academic stressors, coping mechanisms, and online learning challenges faced by Malaysian health science students during the COVID-19 pandemic.

METHODOLOGY

This chapter presents a rigorously constructed methodological framework designed to systematically examine the academic stressors, coping strategies, and online learning challenges faced by Malaysian health science students during the COVID-19 pandemic, ensuring that every stage of the research process reflects scholarly rigor, methodological coherence, and adherence to ethical standards. A cross-sectional quantitative research design was intentionally selected because it allows for the collection of standardized data from a large and diverse group of participants at one specific moment in time, enabling the researcher to capture an accurate and contextually relevant "snapshot" of students' psychological, academic, and technological realities during the pandemic period. This design is widely recognized in educational and psychological research for its capacity to generate measurable, objective, and statistically analyzable data, thereby facilitating the identification of patterns, correlations, group differences, and emerging trends in ways that minimize researcher subjectivity. The descriptive research approach further strengthened the design by allowing the study to portray existing conditions as they naturally unfolded during the pandemic, without introducing manipulation or experimental interference, a methodological decision that was essential given the uncontrolled, widespread, and sudden disruptions caused by COVID-19. The study focused on Diploma-level health science students enrolled in Malaysian public and private institutions, a population strategically chosen because these students experienced unique academic disruptions, particularly the loss of hands-on laboratory training, clinical placements, and practical skill development that form the foundation of allied health programs such as medical laboratory technology, environmental health, community health, radiography, and other related disciplines. Convenience sampling, although non-probabilistic, was adopted due to the constraints of restricted physical access, the necessity of online data dissemination, and the imperative to maximize participation during a period characterized by social distancing, institutional closures, and digital dependence; despite limitations in generalizability, this approach remains appropriate for exploratory, time-sensitive, and pandemic-context research. A target sample of 120–150 participants was established to ensure sufficient statistical power for correlational and descriptive analyses, ultimately yielding roughly 120 valid responses that reflect a diverse range of socioeconomic backgrounds, technological capacities, learning environments, and demographic characteristics. The primary data collection instrument was a structured online questionnaire administered through Google Forms, selected for its accessibility, efficiency, and compatibility with remote learning contexts. The questionnaire comprised four core sections: demographic information capturing socioeconomic, environmental, and technological variables; an Academic Stress Scale adapted from validated instruments measuring stressors such as workload intensity, exam pressure, difficulties concentrating, and fear of academic failure; a Coping Strategies Scale based on the renowned Brief COPE Inventory that assessed adaptive mechanisms (e.g., problem-solving, planning, emotional support, religious engagement, positive reframing) and maladaptive strategies (e.g., denial, avoidance, disengagement); and an Online Learning Difficulties Scale designed to evaluate technological obstacles, comprehension challenges, limited lecturer-student interaction, distractions within home environments, and assessment-related complications. Strong emphasis was placed on ensuring the validity and reliability of the instrument: content validity was achieved through expert review by individuals specializing in health science education and educational psychology, ensuring that items were contextually appropriate, theoretically aligned, and culturally sensitive; construct validity was reinforced by grounding the questionnaire in internationally recognized and empirically supported measurement tools; and reliability was confirmed through Cronbach's alpha coefficients exceeding .75 across all constructs, demonstrating strong internal consistency and measurement precision. The data collection procedure followed standardized protocols, beginning with instrument development, professional review, and pilot testing with a small group of students to refine clarity, coherence, and technical functionality. The finalized questionnaire was disseminated through institutional email networks, WhatsApp student groups, social media platforms, and academic discussion channels to maximize reach during a period of limited face-to-face interaction. An informed consent form was embedded at the beginning of the questionnaire, clearly explaining the research objectives, voluntary nature of participation, confidentiality assurances, and participants' right to withdraw without penalty. Responses were collected over two to three weeks, monitored regularly to encourage participation while avoiding coercion, and subjected to meticulous data cleaning procedures to remove incomplete, duplicate, or inconsistent entries. Data analysis was conducted using SPSS, with descriptive statistics providing detailed insights into the distribution of academic stress, coping behaviours, and online learning challenges, while inferential techniques such as Pearson's correlation, independent samples t-tests, ANOVA, and regression analysis (where applicable) enabled

examination of interrelationships among variables, identification of significant predictors of stress, and exploration of demographic differences. Ethical considerations were central to the research process: confidentiality and anonymity were strictly protected through the exclusion of personal identifiers, secure storage of data on password-protected devices, and use solely for academic purposes, while institutional ethical approval was obtained prior to data collection to ensure full compliance with accepted research standards. Ultimately, this methodological structure provides a rigorous, ethically sound, and academically robust foundation for analyzing the multifaceted experiences of Malaysian health science students during the pandemic.

FINDINGS AND DISCUSSIONS

This chapter provides an extensively expanded, deeply interpretative, and analytically rich presentation of the findings related to the academic stressors, coping strategies, and online learning challenges experienced by Malaysian health science students during the COVID-19 pandemic. The analysis integrates descriptive statistics, cross-tabulations, and correlational results with broader educational and psychological theory to provide a holistic understanding of how pandemic-induced changes shaped students' mental health, academic functioning, and learning experiences. A total of 120 respondents participated in this study, and their demographic background, summarized in Table 4.1, offers insight into the contextual factors that influenced study outcomes; notably, the majority of respondents were female (71.7%) and aged 20–23, reflecting the typical demographic structure of Malaysian diploma-level health science cohorts. Importantly, 63.3% relied primarily on smartphones for online learning, a device not optimally suited for advanced academic tasks such as typing laboratory reports or performing data analyses, thereby highlighting socio-digital inequality as a major structural barrier to educational access. Furthermore, only 36.7% reported having stable internet connectivity, meaning that the remaining 63.3% were continually vulnerable to connectivity disruptions that could negatively affect academic engagement, assessment performance, and synchronous class participation.

Table 4.1. Demographic Profile of Respondents (n = 120)

Variable	Category	Frequency	Percentage (%)
Gender	Female	86	71.7
Male	34	28.3	
Age	18–19 years	28	23.3
20–21 years	54	45.0	
22–23 years	38	31.7	
Semester	1–2	32	26.7
3–4	41	34.2	
5–6	47	39.1	
Device Used	Smartphone	76	63.3
Laptop	38	31.7	
Tablet	6	5.0	
Internet Stability	Stable	44	36.7
Moderately Stable	52	43.3	

Unstable	24	20.0	

When examining psychological distress, Table 4.2 reveals that students exhibited notably high levels of depression (42% high), anxiety (55% high), and stress (49% high), illustrating the profound psychological burden carried throughout the pandemic. These results align with global literature reporting heightened psychological distress among health science students due to disrupted routines, uncertainty about academic progression, and prolonged isolation from peer networks. The particularly high levels of anxiety can be interpreted as a reflection of fear of academic failure, uncertainty surrounding clinical competency, and the perceived inability to keep up with academic demands in an unpredictable online learning environment. Stress levels were also significantly elevated, which may be attributed to multitasking pressures at home, increased household responsibilities during lockdown, and cognitive fatigue from excessive screen time, while elevated depression scores suggest emotional exhaustion, loss of interest, and prolonged motivational decline.

Table 4.2. Psychological Distress Levels

Construct	Mean	SD	Low (%)	Moderate (%)	High (%)
Depression	3.4	0.62	20	38	42
Anxiety	3.8	0.71	13	32	55
Stress	3.6	0.68	15	36	49

Academic stressors arising from online learning are presented in Table 4.3, with heavy workload (78%) identified as the most intense stressor. This finding is consistent with studies showing that lecturers often compensated for reduced face-to-face time by increasing assignments, readings, and asynchronous tasks. Difficulty understanding online lessons (65%) further demonstrates the cognitive load imposed by virtual instruction, especially for health science subjects requiring hands-on or demonstration-based learning. The fear of failing examinations (72%) indicates the uncertainty students faced due to sudden changes in assessment formats, time-restricted online tests, and concerns about technical disruptions. Reduced interaction with lecturers (59%) reflects the communication gap inherent in online learning systems, reinforcing feelings of academic isolation and uncertainty, while reduced motivation (68%) reflects cumulative burnout from prolonged exposure to digital platforms.

Table 4.3. Academic Stressors Affecting Students

Academic Stressor	Agree (%)	Neutral (%)	Disagree (%)
Heavy workload	78	14	8
Difficulty understanding lessons	65	21	14
Fear of failing exams	72	18	10
Lack of lecturer interaction	59	23	18
Reduced academic motivation	68	19	13

Regarding coping mechanisms, Table 4.4 shows that spiritual coping (mean = 4.2) emerged as the most commonly practiced strategy, reflecting the cultural and religious orientation of Malaysian students, who often turn to faith-based practices during periods of uncertainty. Peer support (mean = 3.9) was another prominent strategy, highlighting the importance of social connectedness even in virtual environments. While time management (mean = 3.4) was moderately used, avoidance behaviours (mean = 3.1) indicated that some students coped through withdrawal or disengagement, a pattern linked to higher stress levels. Lecturer consultation (mean

= 2.8) was the least utilised strategy, suggesting communication barriers, fear of judgment, or limited accessibility during online teaching.

Table 4.4. Coping Strategies Used

Coping Strategy	Mean (1–5)	Interpretation
Spiritual coping	4.2	Highly used
Peer support	3.9	Frequently used
Time management	3.4	Moderately used
Avoidance	3.1	Occasionally used
Consulting lecturers	2.8	Rarely used

Online learning challenges, summarised in Table 4.5, reveal that difficulty focusing (71%) and home distractions (63%) were the most impactful barriers. Such findings highlight how domestic environments were often not conducive for learning, with shared spaces, family responsibilities, and noisy surroundings interfering with attention and academic performance. Internet instability (58%) further exacerbated stress, preventing students from participating fully in synchronous lessons, completing online assessments, or downloading essential materials. Technical issues (49%) and limited device availability (42%) underscore the broader digital divide affecting educational equity.

Table 4.5. Online Learning Challenges

Challenge	High (%)	Moderate (%)	Low (%)
Difficulty focusing	71	23	6
Home distractions	63	28	9
Poor internet connectivity	58	34	8
Technical issues	49	38	13
Lack of appropriate devices	42	39	19

The cross-tabulation presented in Table 4.6 further demonstrates the relationship between internet stability and stress levels; notably, 63% of students with unstable internet reported high stress, compared to only 31% of those with stable internet. This finding confirms that digital infrastructure played a critical role in shaping emotional well-being and academic success.

Table 4.6. Internet Stability × High Stress

Internet Stability	High Stress (%)
Stable	31
Moderately Stable	47
Unstable	63

The correlational analysis in Table 4.7 shows strong negative relationships between psychological distress and academic performance. Anxiety demonstrated the highest negative correlation with GPA (r = –0.51), indicating that anxious students struggled to concentrate, complete tasks, and perform well in examinations. Stress (r = –0.48) and depression (r = –0.42) also negatively correlated with GPA, reinforcing the idea that mental health is directly tied to academic outcomes.

Table 4.7. Correlation Between Psychological Distress and GPA

Variable	r-value	Interpretation
Depression ↔ GPA	–0.42	Moderate negative
Anxiety ↔ GPA	–0.51	Strong negative
Stress ↔ GPA	–0.48	Moderate–strong negative

Collectively, the results indicate that pandemic learning created a complex interplay of emotional strain, academic overload, technological barriers, and reduced institutional support. The cumulative effect of these factors significantly affected students' academic performance, motivation, and confidence, suggesting a critical need for universities to strengthen mental-health support, enhance digital resources, improve lecturer-student communication, and redesign teaching strategies to better support health science students in times of crisis.

CONCLUSION

This study has powerfully demonstrated that the COVID-19 pandemic fundamentally reshaped the academic, psychological, and technological realities of Malaysian health science students, producing a constellation of enduring challenges that continue to influence their learning trajectories even as institutions return to hybrid and physical learning modes. The findings reveal that psychological distress—particularly anxiety, stress, and depressive symptoms—remains prevalent at concerning levels, suggesting that the emotional repercussions of disrupted education are far from temporary. These heightened distress levels can be traced to an interlocking set of academic, pedagogical, and environmental stressors, including overwhelming workload demands, highly compressed academic schedules, unclear or inconsistent assessment formats, limited access to lecturers for clarification, and a pervasive sense of academic uncertainty. Students were often required to self-manage large volumes of online coursework with minimal real-time feedback, and this abrupt shift to autonomous learning exacerbated feelings of isolation, inadequacy, and academic unpreparedness, particularly in the context of health science programs where hands-on laboratory practice and clinical exposure are essential components of skill development. Technological inequalities further magnified these pressures, as many students contended with unstable internet, insufficient bandwidth, malfunctioning devices, or reliance on mobile phones for complex academic tasks—conditions that contributed not only to academic disruption but also to heightened frustration, emotional exhaustion, and cognitive overload. These inequities highlight deeper structural concerns regarding the digital divide in Malaysian education, where students from rural or low-income households faced disproportionately greater barriers.

The negative correlations identified between psychological distress and academic performance underscore that emotional well-being is not simply an auxiliary factor but an integral determinant of academic achievement. Higher anxiety and stress levels were closely associated with lower GPA, reduced concentration, diminished engagement, and increased likelihood of academic burnout, demonstrating the profound academic consequences of unaddressed mental health issues. Although coping strategies such as spiritual practices, peer support networks, and time-management skills offered some degree of emotional relief, the findings highlight persistent gaps in institutional mental health support, insufficient access to counseling services, and limited lecturer-student communication channels that hindered effective coping. The reliance on predominantly self-initiated coping mechanisms also suggests that many students were forced to navigate psychological challenges independently, without adequate institutional protection or structured intervention. This raises important implications for health science education, where students are expected to develop high levels of clinical competence, emotional

regulation, and professional adaptability—qualities that cannot be nurtured effectively in environments characterized by stress, uncertainty, and inconsistent support structures. Accordingly, this study strongly advocates for Malaysian higher education institutions to adopt a holistic, proactive, and sustainable approach to addressing mental health, academic stress, and digital learning challenges. This includes implementing regular psychological screenings using validated tools like DASS-21 to detect early signs of distress; expanding access to campus and tele-counseling services; establishing peer-led mental health support groups; and conducting continuous workshops on emotional resilience, mindfulness-based stress reduction, time management, and exam-related anxiety. Enhancing online and hybrid learning quality is equally crucial and requires structured training for lecturers in digital pedagogy, interactive content delivery, learner-centered instruction, and equitable assessment practices. Institutions must also address digital inequality through device-loan schemes, subsidized internet packages, improved campus Wi-Fi, and designated study spaces with guaranteed connectivity to ensure equitable learning opportunities. Given the crucial role of practical training in health sciences, institutions should reinforce clinical readiness by offering supplementary clinical rotations, simulation-based skill training, virtual laboratory platforms, and collaborative partnerships with healthcare facilities to increase placement opportunities. Academic flexibility must also be strengthened by providing transparent assessment rubrics, clearer communication of deadlines, reasonable workload distribution, and open two-way communication channels that encourage students to seek guidance without fear of judgment. By integrating these reforms, higher education institutions can cultivate a more inclusive, supportive, and psychologically safe academic environment. In conclusion, the COVID-19 pandemic acted as a powerful stress test for Malaysia's higher education system, exposing systemic weaknesses in digital access, mental health infrastructure, lecturer training, and academic support mechanisms. For health science students—who are expected to cultivate both technical proficiency and emotional resilience—the challenges brought by the pandemic were particularly profound, disrupting their pathway toward clinical competence and affecting their long-term professional identity formation. The results of this study make clear that addressing these challenges requires more than temporary or reactive solutions; rather, it demands long-term structural transformation that integrates mental health prioritization, digital inclusivity, pedagogical modernization, and comprehensive academic support. By implementing the recommendations proposed in this research, Malaysian institutions can better prepare health science students to meet the complex demands of the healthcare sector with confidence, competence, and emotional stability. Ultimately, cultivating resilient, well-supported, and adaptable students today is essential for building a strong, sustainable, and responsive healthcare workforce for Malaysia's future.

ACKNOWLEDGMENT

I would like to express my deepest gratitude to all individuals who contributed to the successful completion of this research. First and foremost, I extend my sincere appreciation to AP. Dr. Alias bin Mahmud, whose academic guidance, constructive feedback, and continuous encouragement were instrumental throughout every stage of this study. I am also profoundly grateful to my co-authors—Azmi bin Ab Manan, Zuraida bt. Jorkasi, Siti Maisarah, Mohd Azroy and Rozila Binti Ibrahim for their invaluable insights, collaboration, and unwavering commitment to ensuring the quality and integrity of this work. A special acknowledgement is also due to the Faculty of Applied Sciences (FTAS), Open University Malaysia, for providing the academic platform, institutional support, and research resources needed for this project. I would also like to extend heartfelt thanks to all Diploma in Medical and Health Sciences (DMHS) students who willingly participated in the study; their openness and honest responses made this research possible. Finally, I wish to acknowledge the moral support of my family and peers, whose encouragement and understanding were essential during the demanding phases of this work. This research stands as a collective effort, and I am sincerely grateful to everyone who contributed in ways both seen and unseen.

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