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Factors Influencing Malaysian University Students' Well-Being: Coping Strategies, Social Media Addiction and Personal Characteristics

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ABSTRACT

University students' well-being has received significant attention following the COVID-19 pandemic. More online learning and a surge in social media use have triggered concern about their well-being, coping styles, and social media addiction. This study assessed undergraduate university students' well-being and its association with personal characteristics, coping styles and social media addiction. An online cross-sectional study was conducted among undergraduate students from July 2022 to September 2022 utilising a self-administered questionnaire that involved the respondents' personal information, the World Health Organization (WHO)-5 Well-Being Index, the abbreviated Coping Orientation to Problems Experienced Inventory (Brief-COPE) for emotion- and problem-focused coping, and the Bergen Social Media Addiction Scale questionnaire. A total of 234 students responded to the survey. Most respondents were female (76.4%) and Malay (60.7%). The well-being mean score was 65.79 (SD = 18.81) and that for social media addiction was 16.50 (SD = 5.42). The mean scores for emotion- and problem-focused coping were 33.38 (SD = 5.42) and 24.90 (SD = 4.04), respectively. Multiple linear regression demonstrated that being Malay [β = –6.50 (95% confidence interval [95% CI] –12.02, –0.97), p = 0.021], being Indian [β = –10.52 (95% CI –18.36, –2.69), p = 0.009], having a medical illness [β = –6.75 (95% CI –13.45, –0.05), p = 0.048], and problem-focused coping [β = 0.92 (95% CI 0.33, 1.510), p = 0.002] were significantly associated with well-being. Our results suggested that students in certain ethnic groups and with a medical illness were at risk of poor well-being, while those using problem-focused coping had better well-being. Further research is needed to explore these issues and develop interventions to improve the students' well-being.

Keywords: *Well-being, Coping, Students, University, Social media*

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INTRODUCTION

University students' well-being has been of concern to all, particularly educators, as they are preparing for future careers and life (1). Students' well-being is crucial for their academic success and quality of life (1, 2) and is an indicator of education system quality (3). The concept of well-being is believed to be synonymous with positive mental health (4), which the World Health Organization (WHO) defined as "a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community" (5). This concept has evolved to include other aspects such as happiness, life satisfaction, calmness and positive functioning (1, 4, 6, 7). Well-being can be measured using various questionnaires, for example, quality of life, mental health, or well-being index scales (1, 2, 4, 6–9). Despite being measurable through questionnaires, the abovementioned aspects remain subjective and can only provide a general overview of an individual's well-being (10).

An excellent education system and approaches are acknowledged as essential for students to cope with their studies and ensure their well-being (6, 11, 12). An unfavourable education system can affect a student's well-being, causing them to lose focus, mental ability, and optimism, hindering performance and increasing the dropout rate (11, 12). The COVID-19 pandemic that emerged in early 2020 drastically altered education systems due to social distancing and limited physical interaction to curb infections (8, 13). Online and distance learning rapidly replaced traditional face-to-face learning, and students struggled with this change (8), as they were unprepared and struggled to adapt. Hence, many students experienced psychological distress that affected their well-being (7, 8, 14).

Nonetheless, students were expected to cope (8), and their ability to cope is essential in determining their well-being (8, 15). Researchers have agreed that an individual should make cognitive and behavioural efforts to handle stress (16), and this is particularly important for students in higher education. Several coping strategies have been suggested for handling stress and include problem-focused, emotion-focused and avoidant coping (16). Among these, students have used problem and emotion-focused coping to manage stress, such as the sudden change in education approaches during the COVID-19 pandemic (17). Locally, pre-pandemic studies have demonstrated that secondary school students used coping strategies parallel to problem-focused coping (18), while pre-university students used emotion-focused coping (19). Meanwhile, some researchers have believed that problem-focused coping has a greater effect on students and should be utilised more (13, 14, 20). However, the evidence on which coping method affects students' well-being remains limited to date, especially since the shift in education style.

Apart from online learning, the pandemic also triggered a surge in social media use for interaction, including among university students (13). Despite the benefit of maintaining social interaction, concern is growing that some users, particularly young adults and university students, are becoming addicted (21) as they spend much more time on social media (22). Recent data from 32 countries has indicated that up to 24% of students are addicted to social media (21). Some users misuse social media to alleviate negative feelings, leading to psychological dependence (23). Excessive social media use can harm students' well-being, leading to dissatisfaction with life, loneliness and poor mental health (24). Students' learning environment and social interaction are anticipated to be physical and virtual using various online platforms.

Previous studies have indicated that students' well-being is affected by their coping skills (25) and addictive behaviour regarding social media (26). However, information on whether this occurs among Malaysian students remains scarce. Malaysia is ethnically diverse and

has various cultural roots and demographic profiles. Therefore, assessing students' personal characteristics as a factor affecting well-being is equally important. This study evaluated the factors contributing to university students' well-being, namely social media addiction, coping strategies and the students' characteristics.

MATERIALS AND METHODS

Study Setting and Population

This cross-sectional study was conducted from July to September 2022 and involved undergraduate students from the Universiti Kebangsaan Malaysia (UKM), Faculty of Medicine. The faculty offers three bachelor's degrees: (a) Doctor of Medicine; (b) Science in Emergency Medicine; and (c) Nursing, and an Advanced Diploma in Midwifery.

Convenience sampling was used, and all undergraduate students were invited to participate in the study through email and group WhatsApp messages. The students' email addresses and group leaders' contact numbers were obtained from the secretariat of undergraduate studies. The inclusion criteria were students from the bachelor programmes, age ≥ 18 years, owned at least one electronic gadget (smartphones, tablets or laptops) and had internet access. The exclusion criterion was non-Malaysian students.

The sample size was calculated using Power and Sample Size calculation software (27) at a 5% significance level, study power of 80% and with reference to a previous study (28) that assessed the well-being of allied health sciences students in a Malaysian public university. The authors reported that the well-being mean scores of male and female students were 24.13 (SD = 5.99) and 22.50 (SD = 4.89), respectively. Thus, the present study required a minimum sample size of 284.

Study Instruments and Variables

The questionnaire was self-administered, prepared in English, and consisted of five sections.

Section A was related to the students' personal characteristics, namely, (a) sociodemographic characteristics: age (years), sex (male or female), ethnicity (Malay, Chinese, Indian, other), and monthly family income [bottom 40 (B40) group: Malaysian Ringgit (MYR) < 4,850; middle 40 (M40) group: MYR4,850–10,959; top 20 (T20) group: >MYR10,959] (29); (b) programme-related information: bachelor's degree (Doctor of Medicine, Science in Emergency Medicine, or Nursing); (c) years of study; (d) whether they received financial aid; and (e) have any medical illness.

Section B assessed their coping strategies, i.e., problem- and emotion-focused coping. These scales were from the abbreviated Coping Orientation to Problems Experienced Inventory (Brief-COPE) (30) and are available for public use. Problem-focused coping contained eight items and involved active coping skills, informational support, positive re-framing and planning. Emotion-focused coping involved 12 items that assessed whether the students regulated their emotions through emotional support, venting, humour, acceptance, self-blame and religion. The responses for each item ranged from not doing at all (1 point) to doing a lot (4 points). The total score of each coping strategy was calculated, where a higher score indicated higher utilisation (30). The overall score for problem-focused coping is 8–32 points, while that for emotion-focused coping is 12–48 points.

Section C measured social media addiction using the Bergen Social Media Addiction Scale (31). Permission to use the scale was obtained from the original author. This scale comprises six items and the options are scored on a five-point Likert scale from very rarely (1 point) to very often (4 points). The overall score is 6–30 points, with a higher score reflecting greater social media addiction.

Section D evaluated the student's well-being with the WHO-5 Well-Being Index questionnaire (32), which measures subjective well-being and was derived from the WHO-10 (33). The questionnaire is free and contains five items related to positive emotions. The responses range from feeling none at all (0 points) to feeling all the time (5 points). The total score of all items was computed and multiplied by four to obtain a standardised percentage (%) score between 0 and 100. A higher score indicated better well-being.

The dependent variable was the well-being score. The independent variables were the student's personal characteristics, problem- and emotion-focused coping scores, and social media addiction score.

Data Collection

A set of questionnaires was prepared using Google Forms and distributed to the students through email. Informed consent was provided in the first section of the online survey form to highlight the intent and purpose of the study. Students who agreed to participate and have their data used for this study clicked the "I agree" button and completed the questionnaire online. Students who refused to participate clicked "I do not agree". The questionnaire clarity and comprehensibility were assessed using a pre-test involving five students.

Statistical Analysis

The data were analysed using the Statistical Package for the Social Sciences (SPSS) 28.0.1. Categorical data are reported as the frequency (n) and percentage (%), while continuous data are reported as the mean and SD. The crude β and its corresponding 95% confidence interval (95% CI) were determined using simple linear regression. The adjusted β of the final factors associated with well-being were identified using multiple linear regression analysis. Statistical significance was set at $p < 0.05$.

RESULTS

Students' Characteristics and Descriptive Analysis

The questionnaire was distributed to 942 undergraduate students, of which 235 responded and completed the survey (response rate: 24.9%). One non-Malaysian student was excluded, making 234 responses available for analysis. Table 1 lists the students' characteristics. The well-being mean score was 65.80 (SD = 18.81). The students' mean age was 22.23 years (SD = 2.43). Most students were female (76.4%) and Malay (60.7%). Almost half were from the B40 group (42.3%). Most students were from the medicine programme (89.3%). Year 1 and Year 4 students comprised 30.8% and 34.2% of the respondents, respectively. More than half of the participants were financial aid recipients (56%). The emotion-focused coping mean score was 33.38 (SD = 5.42) and that for problem-focused coping was 24.90 (SD = 4.04). The social media addiction mean score was 16.50 (SD = 5.42).

Table 1: Characteristics of the students (n = 234)

Sociodemographic	n (%)	Mean (SD)
Age (years)		22.23 (2.43)
Sex		
Female	170 (72.6)	
Male	64 (27.4)	
Ethnicity		
Chinese	44 (18.8)	
Malay	142 (60.7)	
Indian	33 (14.1)	
Others	15 (6.4)	
Monthly family income (MYR)		
T20 (> 10,959)	39 (16.7)	
M40 (4,850–10,959)	96 (41.0)	
B40 (< 4,850)	99 (42.3)	
Programme-related (Bachelor degree)		
Science in Emergency Medicine	12 (5.1)	
Medicine	209 (89.3)	
Nursing	13 (5.6)	
Year of study		
1	72 (30.8)	
2	20 (8.5)	
3	56 (23.9)	
4	80 (34.2)	
5	6 (2.6)	
Financial aid recipient		
Yes	131 (56.0)	
No	103 (44.0)	
Personal medical illness		
No	200 (85.5)	
Yes	34 (14.5)	
Coping strategy score*		
Emotion-focused		33.38 (5.42)
Problem-focused		24.90 (4.04)
Social media addiction score**		16.50 (5.42)
Well-being score***		65.80 (18.89)

Notes: *Brief-COPE, **Bergen Social Media Addiction Scale, ***WHO-5 well-being index

Factors Associated with Students' Well-Being

Table 2 presents the three factors significantly associated with well-being in the simple linear regression analysis: (a) ethnicity; (b) bachelor programme enrolled; and (c) problem-focused coping strategy. Malay and Indian students had well-being mean scores that were significantly lower by 8.35 [(95% CI –14.64, –2.06), $p = 0.009$] and 13.00 points [(95% CI –21.40, –4.60), $p = 0.002$], respectively, than those of Chinese students. Students in the medicine programme had a significantly lower well-being mean score by 11.30 points [(95% CI –22.25, –0.36), $p = 0.043$] than those in the emergency medicine programme. Students with one more score of problem-focused coping strategies had a higher well-being mean score by 0.92 points [(95% CI 0.33, 1.51), $p = 0.002$].

Table 2: Preliminary factors associated with the well-being of the students (n = 234)

Sociodemographic	Well-being score, Mean (SD)	Crude β	95% CI	*P*-value
Age (years)	–	0.80	–0.20, 1.80	0.115
Sex				
Male	67.13 (22.94)	reference		
Female	65.29 (17.05)	–1.83	–7.27, 3.61	0.508
Ethnicity				
Chinese	73.00 (19.58)	reference		
Malay	64.65 (17.00)	–8.35	–14.64, –2.06	**0.009**
Indian	60.00 (21.40)	–13.00	–21.40, –4.60	**0.002**
Others	68.27 (22.14)	–4.73	–15.64, 6.17	0.393
Monthly family income (MYR)				
T20 (> 10,959)	64.72 (21.14)	reference		
M40 (4,850–10,959)	66.29 (16.76)	1.57	–5.49, 8.64	0.661
B40 (< 4,850)	65.74 (19.87)	1.02	–6.01, 8.05	0.775
Programme-related (Bachelor degree)				
Emergency medicine	76.33 (19.18)	reference		
Medicine	65.03 (19.06)	–11.30	–22.25, –0.36	**0.043**
Nursing	68.31 (10.26)	–8.03	–22.79, 6.73	0.285
Year of study				
< 3	65.89 (19.95)	reference		
≥ 3	65.63 (16.77)	–0.26	–5.30, 4.77	0.918
Financial aid recipient				
Yes	66.47 (17.88)	reference		
No	64.93 (19.98)	–1.51	–6.43, 3.35	0.535
Having medical illness				
No	66.68 (18.00)	reference		
Yes	60.59 (22.61)	–6.09	–12.94, 0.75	0.081

(*Continued on next page*)

Table 2: (*Continued*)

Sociodemographic	Well-being score, Mean (SD)	Crude β	95% CI	*P*-value
Coping strategy score*				
Emotion-focused	–	0.22	–0.23, 0.67	0.330
Problem-focused	–	0.92	0.33, 1.51	**0.002**
Social media addiction score**	–	–0.39	–0.87, 0.10	0.120

Notes: Reference (reference group); *Brief-COPE, **Bergen Social Media Addiction Scale

Table 3 lists the final factors associated with the students' well-being. The multiple linear regression analysis indicated that: (a) ethnicity; (b) having medical illness; and (c) problem-focused coping were significantly associated with well-being. Malay and Indian students' well-being mean scores were significantly lower by 6.50 [(95% CI –12.02, –0.97), $p = 0.021$] and 10.52 points [(95% CI –18.36, –2.69), $p = 0.009$], respectively, than those of Chinese students. Students with medical illness had well-being mean scores that were 6.75 points lower [(95% CI –13.45, –0.05), $p = 0.048$] than those of students with no illness. Students with one more score of problem-focused coping strategies had a well-being mean score that was 0.92 points higher [(95% CI 0.33, 1.510), $p = 0.002$]. In the presence of the three significant factors, the model explained a 9% variance in the well-being mean score in the study sample ($R^2 = 0.09$).

Table 3: Final factors associated with the well-being of the students (n = 234)

Sociodemographics	Adjusted β	95% CI	*p*-value
Ethnicity			
Chinese	reference		
Malay	–6.50	–12.02, –0.97	0.021
Indian	–10.52	–18.36, –2.69	0.009
Having medical illness			
No	reference		
Yes	–6.75	–13.45, –0.05	0.048
Coping strategy score*			
Problem-focused	0.92	0.33, 1.51	0.002

Notes: $R^2 = 0.09$; reference (reference group); *Brief-COPE

DISCUSSION

The present study aimed to evaluate university students' well-being and its association with coping strategies (emotion- and problem-focused), social media addiction and their personal characteristics. The concept of well-being has been acknowledged as a significant indicator of good education quality, outlined by the United Nations Sustainable Development Goal 4 (3). Thus, this research is part of an effort to evaluate well-being in the Malaysian setting, and most importantly, when the country is recovering from the COVID-19 pandemic. The results demonstrated that the overall well-being mean score was 65.80 (out of 100), which was moderate and suggested that the students feel positive about life and optimistic during this recovery phase. A total score ≤ 50 indicates the probability of depression and reduced well-being (34). Notably, the score was slightly lower than that reported in previous local

studies conducted during the emergency phase of the pandemic, with a score of 7.67 out of 10 (7). However, this could be attributed to the different study instruments, as the latter two studies used the Personal Wellbeing Index (PWI), while the present study used the WHO-5 Well-Being Index.

Factors Associated with Well-Being

The results revealed that students using problem-focused coping strategies had better well-being, which was consistent with previous studies (25). The result might be due to several reasons. First, students who adopt problem-focused coping start by thoroughly evaluating a problem, which aids them in re-framing their thoughts and correctly assessing the situation (35). This step could assist students in accepting the challenge and being optimistic, leading them to plan and take necessary action (36). Students with this mindset would be motivated to seek resources and advice from their families, friends, or academic institutions. As Malaysia is a collectivist society where people are mutually dependent and value each other (37), students would naturally be comfortable seeking advice and opinions from family and friends. This is also a part of coping efforts that aid them in managing their emotions, re-organising their thoughts, and making decisions wisely (35). The effort also promotes better adaptability and resilience (17, 38), which is important for students when facing challenges (39). The resilience theory states that resilience is a dynamic process and is key in sustaining an individual's well-being (40).

Second, when students readily adopt a problem-focused coping strategy, they have hope and believe that their situation can improve. This thought and attitude are closely linked to local religious beliefs, as Malaysia has a multi-ethnic society that deeply values religious and cultural beliefs (41). Although students are in a younger age category, they tend to follow the older generation's attitudes and beliefs, reflecting the strong family cohesiveness in Malaysian society (37). Thus, local students would turn to religion to cope with challenges (18, 42). Several studies have indicated the importance of religion and spirituality in maintaining a good quality of life and buffering stress among local university students (42, 43).

In the present study, emotion-focused coping did not influence the students' well-being, although a previous report stated that students utilising this form of coping had lower well-being (6). Unlike problem-focused coping, emotion-focused coping focuses on relieving emotion and occasionally avoiding the situation, which results in the problem remaining unsolved (44). Our results suggested that students should be taught to confront difficulties or stressors rather than avoid them. Students should also be aware that their well-being would not improve if they only focused on expressing emotions rather than confronting the stressor and generating possible solutions.

Apart from problem-focused coping, having a medical illness (physical or mental) was another significant factor contributing to well-being, which confirmed previous evidence of a strong link between both aspects among university students (11). Students who perceived their health status as poor had lower well-being (9), and this was more apparent in those with mental or emotional issues (11, 45). Being physically fit is also important for students when resolving challenges and engaging in physical or outdoor activities to cope with stress (46). Regular exercise or physical activities promote the release of positive hormones, which aid in reducing tension and improving psychological well-being (47). The benefits of having good physical and mental health are undeniable for students (48). Therefore, academic institutions should closely monitor students who are ill, particularly those with mental health issues, to ensure that they receive proper medical care.

Our analysis demonstrated that Malay and Indian students had lower well-being than Chinese students. This result was probably related to the different socioeconomic statuses among the Malaysian ethnic groups. A previous report on the Malaysian population reported that the Chinese have an average higher economic status than Malays and Indians (49). Most of our respondents are Malay and Indian, and half receive financial aid for their academic fees. Our result warrants further exploration, as previous studies have indicated that students with low socioeconomic backgrounds and income could have poor well-being (9, 11). Nevertheless, the results were inconclusive, as another local study reported no significant difference in students' well-being among different ethnic groups (7).

Contrary to our initial prediction, social media addiction was not significantly linked to the respondents' well-being, but researchers have differing opinions about this link (26, 50). Some studies have demonstrated that social media addiction could affect mental health and psychological well-being (26, 50), but several reports have indicated the opposite (13, 51). This inconsistent result might be due to the various measurement scales used, and possibly different aspects of social media usage were evaluated. For example, the Bergen Social Media Addiction Scale measures whether an individual has any symptoms of social media dependency or craving, as these represent addictive behaviour (31). In contrast, others have evaluated social network use intensity (frequency and time spent) (26, 51) and the type of social platform used (51). Perhaps information on the nature of online social networking is equally important, as some platforms are useful for students and aid their studies (52). Hence, spending more time on a specific social media network may not entirely harm students. Another means of assessing the degree of social media addiction is by determining the individual's physical interactions on the screen to monitor their behaviour (53) and screen time (54). This refers to the opinion of Phu et al. (24) where the purpose of using social media and with whom the user engages can affect well-being.

Limitations and Recommendations

The limitations of this study include the poor response rate and the fact that it was an online-based survey. The students' coping and social media addiction was assessed by self-reporting, and this might have resulted in bias, such as social desirability bias. Additionally, using non-random convenience sampling limited the external validity of the study. Hence, the results should be interpreted with caution as our study population may not represent all university students. Furthermore, the R^2 value could only explain a small proportion of the variance in the well-being score, and many other factors were unexplored. We recommend that future studies include other factors that could affect students' well-being, such as social support, academic performance, and personality factors, and a more objective assessment of social media usage.

CONCLUSION

The present study confirmed that only certain ethnicities, personal medical illnesses and problem-focused coping are significant determinants of university students' well-being. We may conclude that social media addiction does not primarily affect university students' well-being at present. Simultaneously, students should utilise problem-focused coping strategies to improve their well-being, which should be emphasised to students from the beginning of their academic journey. Furthermore, seeking advice from the correct channels is crucial to ensure their academic success and preserve their well-being. Moreover, students' family

members should be aware that they are key in helping students cope with stress. Lastly, universities and academic institutions should provide adequate resources and means for students who need support and information.

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ETHICAL APPROVAL

The study approval was obtained from the UKM Medical and Research Ethics Committee (research code: FF-2022-169).

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