

Well-being in Focus: Role of demographic factors on university students

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Abstract

This study aims to investigate the level of well-being of university students' by focusing on demographic factors that influence students' well-being. Researchers are directed to age, gender and household income as demographic variables in measuring the student's well-being. Survey methodology was used to collect data by distributing a set of questionnaires among 234 participants. Data analysis and hypothesis testing were conducted using SPSS Statistics. The research model was analyzed through descriptive statistics as well as ANOVA analysis. Results indicate that students experienced moderate to high levels of well-being, with no significant difference across age, gender, and household income.

Keywords: University students, demographic factors, well-being

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1.0 Introduction

The well-being of university students is a complex and multifaceted construct influenced by various factors, including demographic characteristics, socioeconomic status, and institutional support systems. The influence of teacher-related, instructional, and environmental factors on students' subjective well-being, underscores the idea that well-being is a multidimensional construct encompassing various levels of functioning (Wentzel, 2024). Agyapong-Opoku et al. (2023) identified several factors associated with anxiety and depression, including sociodemographic variables such as age, sex, gender, relationships, ethnicity, and family history, as well as personal health conditions, academic challenges, and socioeconomic difficulties.

Among these, socioeconomic background often emerges as a critical determinant, with financial instability disproportionately affecting students from low-income households. For example, students from underprivileged groups frequently face challenges in meeting basic needs, which can lead to heightened stress, lower academic performance, and adverse mental health outcomes (Shamsuddin et al., 2024). Specifically, environmental mastery and autonomy tend to improve with age, while purpose in life and personal growth exhibit a decline. However, aspects such as self-acceptance and positive relationships with others show no significant variation between adults and older individuals.

Gender demonstrated a significant interaction with resilience in predicting positive reappraisal, with the conditional indirect relationships among resilience, positive reappraisal, and mental well-being found to be stronger for women than for men (Ali & Abbas,

2023). Xie et al. (2024) further corroborate these findings, emphasizing the impact of upward mobility on adolescent subjective well-being differs based on age, sex, and initial household economic status. These observations underscore the importance of examining psychological well-being by comparing children and adolescents within specific communities. Among these groups and university students who are not directly involved in economic activities, the relationship between household income dynamics and well-being is more intricate and has been relatively underexplored.

When looking changes in income over time, studies suggest that age, gender, and a family's starting income can play important roles in how income changes affect adults' well-being. For example, young professionals, women, and people with lower incomes are more likely to experience negative effects from unstable income (Foremny et al., 2024). However, there has been little research on how these factors influence the mental health or well-being of university students. University students' well-being is a critical determinant of their academic performance and overall life satisfaction. However, a range of factors—including financial stress, academic pressures, and social challenges—can negatively impact their mental and physical health. Despite the growing recognition of these issues, the specific role of demographic and socioeconomic factors, such as age, gender, and household income, in shaping student well-being remains underexplored. Moreover, while interventions aimed at improving student mental health have been proposed, there is insufficient understanding of how institutional support, social networks, and economic conditions influence students' resilience and coping mechanisms. This gap in knowledge hinders the development of targeted strategies to enhance student well-being, particularly in the context of increasing economic instability and mental health concerns among young adults. Further research is needed to better understand the complex interplay of these factors and to create effective support systems that foster a healthier and more productive university experience for all students.

The objectives of this paper are: to identify the level of well-being of university students and to explore the intersection of demographic factors and student well-being. By examining key determinants such as age, gender and household income, the study aims to provide a nuanced understanding of how demographic characteristics contribute to variations in student well-being and identify strategies for more inclusive institutional support.

2.0 Literature Review

2.1 Well-being

A study of the literature on wellbeing illustrates the concept's multiple nature, emphasizing its evolution from beginnings based in medical and psychological theories to more comprehensive, multidimensional understandings. Traditionally, wellbeing was defined in terms of physical health and lack of illness. However, recent research has broadened this perspective to incorporate psychological, emotional, and social elements, emphasizing the significance of subjective well-being (Jarden & Roache, 2023).

2.2 Demographic factors and student well-being

The well-being of students in higher education has become a critical area of focus for educational institutions globally. This concern arises from the increasing recognition that student well-being significantly impacts academic performance, mental health, and overall life satisfaction. As students transition to university life, they encounter various stressors, including academic pressures, financial challenges, and social adjustments. In general, well-being can be defined as a comprehensive state in which students feel pleasant emotions, resilience, a sense of meaning and purpose, and a balanced life. While definitions vary, common themes include the balance between academic demands and personal life, as well as the integration of various support systems available to students. Research indicates that students perceive well-being as an interplay between their academic efforts and life outside studies, highlighting the importance of a holistic approach to student welfare (Douwes et al., 2023). Demographic factors significantly influence the well-being of students, as evidenced by various studies that explore the interplay between personal characteristics and mental health outcomes in educational settings. Research indicates that factors such as gender, socioeconomic status, age, and family background play critical roles in shaping students' subjective well-being.

2.2.1 Age

Research from a variety of fields has focused on the connection between age and well-being, identifying intricate patterns that change dramatically throughout the course of a person's life. The U-shaped association between age and subjective well-being—life satisfaction tends to be lower in middle age and higher in older adulthood—is a common finding. Many studies, including extensive polls like the Gallup World Poll, have confirmed this trend: people usually feel their lowest levels of well-being between the ages of 45 and 54, then their levels of satisfaction climb as they approach their later years (Biermann et al., 2019). Age has a huge impact on the well-being of higher education students, especially when they transition from youth to early adulthood, which typically lasts from 17 to 24 years. This phase is characterized by a heightened susceptibility to psychological difficulties such as anxiety and depression, which are compounded by scholastic and social expectations. According to research, students frequently report poorer levels of well-being throughout their transition to university life, with many suffering increased emotional distress as a result of the difficulties of independence and adjusting to a new environment (Douwes et al., 2023). Studies have indicated that while younger students may exhibit higher levels of anxiety connected to academic expectations, older students tend to display stronger coping mechanisms and emotional control, leading to enhanced well-being as they proceed through their studies (Hernandez-Torrano et al., 2020). However, this trajectory has been upset by the start of the COVID-19 pandemic, which has led to significant decreases in mental health among students of all ages. Therefore, it is essential to comprehend the age-related dynamics of student well-being by synthesizing:

H1 There is a significant difference on university students' well-being based on age.

2.2.2 Gender

Research on college students' well-being finds considerable gender differences in academic achievement and mental health results. According to research, female students report higher levels of scholastic stress, anxiety, and depression symptoms than male students, especially during important moments such as the COVID-19 pandemic (Rubach et al., 2022). Academic pressures have a greater negative impact on the mental health of female students, with academic stress being a larger predictor of mental health difficulties in women than in males. Although both sexes encounter issues in terms of academic satisfaction and instructional quality, female students tend to prioritize these factors when it comes to their overall well-being. Furthermore, these gendered responses are heavily influenced by social expectations and coping techniques, with women often internalizing their stress. Male students, on the other hand, are more likely to engage in external behaviors, such as excessive alcohol drinking, to cope with stress (Van de Velde et al., 2023). These gender-specific coping methods underscore the importance of specialized interventions that meet the unique well-being requirements of male and female students in higher education settings. Recognizing and addressing these inequalities allows institutions to encourage a more equitable approach to mental health support, ensuring that both male and female students receive the attention and resources they need to successfully manage academic hurdles (Ilker et al., 2023). Thus, it is hypothesized that:

H2 There is a significant difference on university students' well-being based on gender.

2.2.3 Household Income

The research on the wellbeing of college students emphasizes how household income has an enormous influence on both academic achievement and mental health outcomes. Research has consistently shown that students from lower-income families are more likely to experience financial stress (Donohue & Bornman, 2021), which can have a detrimental effect on their general wellbeing. Furthermore, financial difficulties might aggravate educational demands, since students may be forced to pursue part-time jobs to support themselves, reducing study time and consequently impacting academic achievement. Students from higher-income households, on the other hand, tend to have fewer financial concerns, which leads to better academic achievement and overall mental health. Financial stability enables these students to concentrate more on their studies since they are less stressed by tuition costs, living expenses, and the necessity for part-time employment. With less financial constraints, people can devote more time to academic pursuits, resulting in higher scores and greater interest in their study. These children frequently have greater access to academic resources including tutors, study materials, and technology, which improves their academic performance. They are also more likely to participate in extracurricular activities, internships, and study-abroad programs that provide possibilities for personal growth, career exploration, and social engagement. According to research, students from higher-income households are more likely to utilize positive coping methods and feel more in control of their academic and personal lives (Islam et al., 2022). This sense of control allows people to manage stress more successfully, lowering feelings of powerlessness and exhaustion. Furthermore, these students often have higher social support networks, including family members who can provide emotional and academic help, which contributes to their overall well-being and resilience. Therefore, it is proposed that:

H3 There is a significant difference on university students' well-being based on household income.

3.0 Methodology

The study population consisted of 7,191 students from UiTM Machang Campus, chosen for its diverse student body and relevance to the research objectives. Using the sample size determination method by Krejcie & Morgan (1970), a sample of 364 UiTM students was selected, which was deemed adequate. The Krejcie & Morgan method ensures that the sample size is representative of the population, providing a high level of confidence in the results. The students were randomly selected using a simple random sampling technique to eliminate bias and ensure equal opportunities for participation. However, due to a 64.3% response rate, only 234 students participated in the study, which still falls within the sufficient range of 30 to 500 as suggested by Sekaran (2016). Although the sample size of 234 was within the acceptable range, it was smaller than the initially determined sample size of 364. This reduction in sample size might have affected the generalizability of the findings.

Data were collected through a survey methodology using a carefully crafted questionnaire as the primary instrument for gathering information from participants. The use of self-reported data through questionnaires could have led to response biases such as social desirability bias, where participants might have responded in a manner they perceived as favorable rather than truthful. The clarity and interpretation of the questionnaire items might have varied among participants, potentially affecting the consistency of responses. In addition, the questionnaire was designed in both English and Malay to enable participants to answer in their preferred language, addressing potential language barriers and ensuring inclusivity. Each item in the questionnaire was meticulously developed following an in-depth review of current literature to ensure relevance and comprehensiveness in addressing the research objectives. The questionnaire included a mix of multiple-choice and open-ended questions to capture a wide range of responses.

To measure students' well-being, seven items adapted from Ling et al. (2022) were used, employing a 5-point Likert scale. These items were chosen for their proven reliability and validity in similar studies. Data analysis and hypothesis testing were conducted using IBM SPSS Statistics version 22.0. Descriptive statistics were used to summarize the data, and ANOVA analysis was employed to test the research hypotheses. Ethical considerations, such as obtaining informed consent, ensuring confidentiality, and addressing potential

ethical issues, were carefully adhered to throughout the study. Ensuring confidentiality and obtaining informed consent were crucial, but there might still have been concerns about participants' willingness to provide honest responses due to fear of identification or repercussions.

4.0 Findings and Discussion

4.1 Descriptive Analysis

The descriptive analysis was conducted to analyze the demographic characteristic of the respondents of the study. A total of 234 university students were selected to participate in this study. Based on the analysis result, the respondents consist of 14.5 % male students (n=34) and 85.5% female students (n=200). In addition, most of the respondents fell within 20 to 23 years age group, attributed to 68.8% of the sample (n=161). Students aged less than 20 years old were comprised of 29.1% (n=68) while students that aged 24 years old and above made up the smallest proportion at 2.1% (n=5). The majority of university students were in their early twenties, which is reflected in this analysis result. In terms of household income, 67.1 % (n=157) of respondents reported that their family income as below RM4850 per month which corresponds to the B40 income category in Malaysia. Meanwhile, 26.5% (n=62) respondents with household income between RM4851 to RM10970 per month and remaining of 6.4% (n=15) respondents with household income of more than RM10971 per month. In order to determine the level of university students' well-being, the mean and standard deviation were analyze using 5-Likert scale. The likert scale was categorized based on the following interval level:

Mean Interval	Opinion
1-1.80	Strongly Disagree
1.81-2.60	Disagree
2.61-3.40	Neutral
3.41-4.20	Agree
4.21-5.00	Strongly Agree

(Source: Bukhari, (2023))

The analysis of well-being that measured using 5-point Likert scale resulting a mean score of 3.6285 (SD=0.48946). According to the predetermined mean intervals, this score falls within range of 3.41-4.20 which corresponds to the level of 'Agree' (Bukhari, 2023). This result indicates that on average, most students perceive their well-being to be satisfactory, leaning towards a moderate to high level of well-being.

4.2 Assumption Check

The research study aims to identify the significant differences between well-being of university students that measured by age, gender and household income. In order to do an assumption test of the data, Levene's Test was conducted in order to verify the assumption of homogeneity of variances. The assumptions must be met to ensure the result of the test are valid and reliable. Table 1 represents the results of Levene's test assumptions.

Demographic Factors	F	df1	df2	p
Age	.360	2	231	0.397
Gender	1.002	1	232	0.885
Household income	2.714	2	231	0.493

In order to verify the validity of the findings, several assumptions were tested. The Levene's Test for aged showed a p-value of 0.397, indicating that the variances were identical across the age groups. Besides, Levene's Test for gender produced a p-value of 0.885 meaning that there was no significant difference in the variances of well-being scores between male and female university students. Finally, Levene's Test for household income resulted in a p-values of 0.493 suggesting that the three household income categories were also not significantly different. Since all p-values for the Levene's Test were greater than 0.05, the assumption of homogeneity of variances was met for all three factors.

4.3 Hypotheses Analysis

Hypothesis 1: There is a significant difference on university students' well-being based on age

Table 3. ANOVA Test based on Age

Source	Sum of squares	df	Mean Square	F	p-value
Between Groups	.173	2	.087	.360	.698
Within Groups	55.646	231	.241		

Based on the above result, there is no significant difference in well-being scores across the different age groups, with F-statistic of 0.360 and indicates the null hypothesis is not rejected as the p-value of 0.698 exceeds the typical threshold of 0.05. This result implies that regardless of age, the students' assessments of their well-being remain consistent. A potential rationale for this finding is that students of different ages have similar experiences. University students of various ages may face similar problems, such as academic stress, financial demands, and social dynamics, which could contribute to similar levels of well-being. A study by Barbayannis et al. (2022) found that regardless of age, gender, race or year of study, students who reported higher levels of academic stress had lower mental well-being. Research on age-related changes in well-being reveals mixed and sometimes inconsistent findings, reflecting the complexity of the factors involved (Kassis et al., 2022).

Hypothesis 2: There is a significant difference on university students' well-being based on gender.

Table 4. ANOVA Test based on gender

Source	Sum of squares	df	Mean Square	F	p-value
Between Groups	.240	1	.240	1.002	.318
Within Groups	55.579	232	.240		

Based on the above result, the null hypothesis is not rejected as indicated by F-statistic of 1.002 and a p-value of 0.318 that greater than 0.05. The findings imply that gender does not play a significant role in shaping students' perceptions of their well-being. This finding aligns with Savoye et.al. (2015), which showed that while female students reported slightly higher well-being than male students, the difference was not statistically significant. This suggests that well-being is not sensitive to the gender of students (Savoye,et.al., 2015). In contrast, a study by Akhtar & Kroener-Herwig (2019) indicates that gender as the only significant predictor of psychological well-being among students, with males having a higher level of well-being. The reason for this difference is unknown, but a lower level of psychological well-being among women may be related to higher prevalence of depression in women. Therefore, the gender difference in the well-being pathway, similar to other correlations explored in this study, has not been sufficiently studied, and further research is needed to gain a deeper understanding of this finding (Stronge et al., 2019).

Hypothesis 3: There is a significant difference on university students' well-being based on household income.

Table 5. ANOVA Test based on Household Income

Source	Sum of squares	df	Mean Square	F	p-value
Between Groups	1.281	2	.641	2.714	.068
Within Groups	54.538	231	.236		

Based on the above result, the null hypothesis is not rejected. Since the p-value of 0.068 is greater than 0.05, suggested that household income does not have a significant impact on university students' well-being. Students who come from families with lower incomes may develop the ability to persevere or coping skills that enable them to maintain their well-being despite the difficulties they face financially (Nasr et al., 2024). However, this finding is contrary to a study conducted by Chin et al. (2020) whereby household income is a crucial factor influencing the well-being of the students. The conflicting outcome could be due to a variety of factors, such as how institutional financial aid support can lessen financial inequalities and promote equality of well-being among students from various socioeconomic backgrounds. The findings of this study have several ramifications for related fields, practices, and policies. The study highlights the importance of inclusive programs in education to address stressors like academic pressure and social isolation. It recommends universities implement peer mentoring, stress management courses, and financial aid systems. It also calls for institutional oversight and collaboration.

5.0 Conclusion and Recommendations

This study aimed to examine the well-being of university students and assess significant differences in their well-being based on gender, age, and family household income. The results indicated that the students experienced moderate to high levels of well-being, with no significant variations observed across the demographic factors of age, gender, and household income. Hence, in order to sustain and enhance the well-being of university students, higher education institutions should implement comprehensive support programs tailored to their specific needs. These programs could include mental health services and academic support initiatives, emphasizing the active involvement of all stakeholders in students' learning journeys. Although no significant differences were observed across demographic factors such as age, gender, and family income, institutions should adopt a proactive approach by fostering an inclusive campus culture, promoting social and academic engagement, and offering targeted resources to address emotional and academic challenges.

Future research should investigate additional factors, such as mindfulness, personal resilience, social networks, and campus amenities, to better understand their influence on student well-being and to enable the development of more tailored and impactful interventions.

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Paper Contribution to Related Field of Study

This study contributes to existing literature by examining well-being among Malaysian university students based on demographic factors. Results show moderate to high levels of well-being among students, with no significant difference across age, gender, and household income, as tested in the research model.

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