ORIGINAL ARTICLE

College Perception and Well-being Assessment of Medical Students in a Public Medical School in the Philippines: A Cross-sectional Study

Armando E. Chiong III, MD,[1] Jemima F. Cabanlong,[2] Chelsea Patricia Immanuelle L. Lopez, MD,[1]
Karl Gerard R. Crisostomo, MD,[1] Jian Kenzo O. Leal, MD,[1]
Jeune Keith G. Mabanag[3] and Charlotte M. Chiong, MD, PhD[1]

[1]College of Medicine, University of the Philippines Manila
[2]Department of Psychology, University of the Philippines Diliman
[3]Philippine General Hospital, University of the Philippines Manila

ABSTRACT

Background and Objective. Given the rigors of medical training with its high documented prevalence of mental issues as well as the global need to safeguard the well-being of medical students, there is an urgency to assess the well-being of medical students and their perception of support from their respective medical schools during their education. This also applies in the context of public medical school students in the Philippines, where there is still a relative lack of literature. This cross-sectional study investigates the well-being and such perceptions of medical students at the University of the Philippines College of Medicine (UPCM).

Methods. The study uses a quantitative approach using a subset of secondary data from a college-wide survey online that was disseminated, through convenience sampling, to medical students from October 3, 2018 to December 3, 2018. A total of 432 responses were included in the analysis, out of the total student population of the included learning unit levels of 809. Participants were grouped based on their entry into medical school, either through the Integrated Liberal Arts and Medicine (INTARMED) program or lateral entry. Exclusion criteria comprised responses from Learning Unit I-II (pre-medical proper) students and incomplete survey sets. Responses were interpreted using established scales such as the World Health Organization Well-Being Index (WHO-5), Perceived Stress Scale-4 (PSS-4), and Oldenburg Burnout Inventory-Medical Student (OLBI-MS). Data analysis involved statistical techniques including one-way ANOVA and independent samples t-test using Statistical Package for the Social Sciences (SPSS).

Results. The findings suggest that medical students at UPCM generally find the administrative and academic systems satisfactory, but express concerns about inadequate educational resources and infrastructure, especially as they progress through their studies and engage more with clinical settings like the Philippine General Hospital (PGH). As students advance through the program, there are different patterns for well-being outcomes, including decreasing perceived stress and increasing burnout. In particular, LU IV and LU VII students reported lower well-being and higher burnout levels, respectively. This is potentially due to heavier workloads and clinical responsibilities. Lateral entrants, who are older and typically enter with prior degrees, tend to have higher well-being and lower burnout compared to INTARMED students, suggesting age and previous educational experience may play a role in adjustment and coping mechanisms.

Conclusion. Overall, the study highlights the medical students' generally satisfactory perception of medical

Corresponding author: Armando E. Chiong III, MD
College of Medicine
University of the Philippines Manila
547 Pedro Gil St., Ermita, Manila 1000, Philippines
Email: ramchiong@gmail.com

educational aspects, as well as the patterns of well-being throughout their medical college experience. Furthermore, it identifies different areas for improvement to ensure effective education and student mental health. By analyzing trends across different year levels, the study provides insights for interventions and program refinements, while also suggesting avenues for further research to assess student experiences over time.

Keywords: well-being, mental health, medical students, college support, college perception, cross-sectional study, Philippines, public medical school, quantitative study

INTRODUCTION

Well-being is an encompassing term referring to individuals having "the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge."[1] It has also been described as one feeling good while being able to function well.[2] There have been numerous methods developed over the years to measure well-being in different contexts, with the 5-item World Health Organization Well-Being Index (WHO-5), the Perceived Stress Scale-4 (PSS-4), and the Oldenburg Burnout Inventory-Medical Student (OLBI-MS) being commonly used.[3-5]

Due to the rigors of medical training and the urgent need for healthcare professionals around the world, safeguarding medical student well-being is among the priorities of medical education institutions. The nuance of the challenges brought by medical education vis-à-vis the internal and external resources available to medical students has been of recent international interest as institutions continually strive toward innovations in training. A qualitative study conducted in the United Kingdom identified key factors that affect medical students' well-being: where medical students are situated inside existing structures and systems; nature of the work and availability of support; interpersonal concerns within teams or among peers; the working environment, including spaces for work and rest; and organizational culture.[6] Another study noted that concerns such as "intense academic rigor, financial debt, sleep deprivation, lack of control, continual exposure to sickness and death, and training mistreatment" may explain higher prevalence of depression, anxiety, and mental stress for medical students.[7] In particular, depression and anxiety affect approximately 27% and 34% of medical students, respectively. A meta-analysis performed on the prevalence of anxiety among medical students found that anxiety was most prevalent among students from Asia and the Middle East.[8]

Studies conducted in different countries commonly report high levels of disengagement and exhaustion which are two factors associated with burnout, a state of mental and physical exhaustion related to work. The proportion of disengaged and exhausted medical students globally, based on studies in Canada,[9] Wales,[10] England,[11] Jordan,[12] Hong Kong,[13] Indonesia,[14] Portugal,[15] India,[16] Italy,[17] Paraguay,[18] Brazil,[19] Morocco,[20] and New Zealand,[21] have been found to range from 64-93% and 70-99%, respectively. Burnout can lead to mental and physical health concerns, and is one of the important measures of well-being. In the Philippines, a recent study by Ly-Uson and de la Llana on the well-being of medical school students looked at a number of factors or "domains of risk." It was found that the factors most concern-ing for students were work-life balance, finances, the ability to cope with the demands of medical school, and the perceived support for their personal and health concerns. The domains which were rated higher than average, indicating less concern, were culture, safety, travel, and perceived academic support.[22]

In the Philippines, the University of the Philippines College of Medicine (UPCM) is considered a pioneer among medical schools, with a mission of commitment to "excellence and leadership in community-oriented medical education, research and service."[23] The well-being of the institution's students and future physicians must be seen as a prerequisite to the ideals of excellence and leadership. As such, awareness on how UPCM students perceive the college and their well-being throughout their medical studies is crucial in ensuring an effective system and compassionate environment.

The UPCM students have two points of entry: via the Integrated Liberal Arts and Medicine (INTARMED) program or the lateral entry program. The INTARMED program is "a seven-year program of UPCM that shortens the whole medical education by two years" and accepts 40 high school graduates every year as direct entrants who take general education and preparatory classes in Learning Units (LUs) I and II.[24] Lateral entrants have completed a bachelor's degree and begin their medical education in LU III where they join INTARMED students for five years of medicine proper until LU VII. Students in LUs V to VII gain clinical experience through the Philippine General Hospital (PGH) which "was established not only to treat patients but also to provide clinical instruction for students of the college."[25] Clerks and interns from LUs VI and VII, respectively, do their hospital duties at the PGH. The UPCM has a mentoring program which connects a small group of students with two faculty or alumni members. The students meet with their mentors "informally on a regular basis three to five times a year to discuss student issues and career plans."[26]

Medical students in UPCM undergo five to seven years of grueling medical education that places them under a lot of stress. This predisposes them to burnout, highlighting the importance of assessing their well-being throughout different stages of their education. Different programs are available to students to assess their well-being, particularly their mental health. Some of these, to name a few, are: free counseling, annual physical examination and mental health evaluation, periodic evaluation using Patient Health Questionnaire for Mental Health (PHQ-9), and a tele-

health and wellness program.[27] These are mostly qualitative and informal methods used to assess a person's well-being. In this study, the researchers utilized a quantitative method by using three tools - the 5-item World Health Organization Well-Being Index (WHO-5), the Perceived Stress Scale-4 (PSS-4), and the Oldenburg Burnout Inventory-Medical Student (OLBI-MS).

This study is interested in students' perception of medical school and its different facets, and in their well-being based on different measures. In particular, the research seeks to establish the reliability of a college assessment questionnaire measuring medical students' satisfaction with factors such as administration and faculty, learning environment, student selection, educational resources and infrastructure, curriculum, and college support. The study wants to look into whether there are patterns in the perception of the aforementioned medical education factors among UPCM students. Another objective of the study is to determine baseline trends in terms of medical student well-being across year levels and between student groups based on entry into the UPCM. Such knowledge would help the college plan support and interventions to help its students maximize their learning and protect their mental health.

MATERIALS AND METHODS

Study Design and Participants

The study is a quantitative cross-sectional study that used secondary selected data subsets from a previously gathered survey. This survey, which includes an assessment of the UPCM, well-being scales, and a section on study habits and career preferences, was administered online to the UPCM medical student population from October 3, 2018 to December 3, 2018. Given the research objectives, only the responses to the college assessment and well-being scales were analyzed in this study.

Participants and Sampling

The responses included in the study and analysis met the following criteria: (1) a medical student currently enrolled in the Doctor of Medicine program at UP Manila, and (2) in their first year of medical school proper (LU III) to fifth or internship year (LU VII) at the time they answered the survey. Participants are also grouped according to the nature of their entry into medical school: via the INTARMED program or lateral entry. With the help of class representatives, convenience sampling was employed for the dissemination of the online survey to UPCM students from October 3, 2018 to December 3, 2018. This kind of sampling was used to gather the greatest number of student responses which was the objective of college administration at that time. Responses from 424 participants out of 632 were analyzed. The rest were excluded for not meeting the inclusion criteria. The total number of respondents meets the criteria for the minimum sample size required. According to G*Power computation[28], a sample size of N=424 is sufficient for a medium effect size and power of 0.95 for the statistical tests for comparison of means.

Data Collection

With the permission of the college, the raw anonymized survey data files were accessed and processed based on the needed data sets. In the original survey, the only potentially identifying information gathered were student numbers of the respondents. However, before endorsement of the desired datasets in this study to the researchers, the survey responses were anonymized and excluded the aforementioned student numbers along with other unnecessary data fields. No other identifying information were made available or accessible to the researchers. No access to the original raw survey responses was given, thus analysis was only performed on the anonymized datasets that were officially endorsed by the college.

Among these was the demographic information of the students such as LU, type of student based on entry, and sex. These also included the two specific sections from the original survey.

The first is the UPCM college assessment composed of items based on the Liaison Committee on Medical Education (LCME) standards and divided into six sections: (1) Administration and Faculty, (2) Learning Environment, (3) Student Selection, (4) Educational Resources and Infrastructure, (5) Curriculum, and (6) College Support. For each section, participants were asked to rate statements indicating their assessment of the particular aspect of UPCM on a 5-point Likert scale, with 1 being the lowest rating and 5 being the highest.

The second part of the survey used three established scales to assess the well-being of UPCM students: the World Health Organization Well-Being Index (WHO-5) which is "a short and generic global rating scale measuring subjective well-being"[3]; the Perceived Stress Scale-4 (PSS-4) which is a brief version of the PSS which measures "the degree to which individuals appraise situations in their lives as stressful"[29]; and the Oldenburg Burnout Inventory-Medical Student (OLBI-MS) which is an adapted version of the OLBI and used "to measure the severity of medical student burnout"[30]. The WHO-5 and PSS-4 are widely used as valid and brief outcome measures across different studies assessing mental health of various populations, including in the medical field.[3,29,31,32] The version of the OLBI for medical students has also been used to measure burnout in the specific population,[33-35] although the adapted scale may need further validation[36]. The well-being response scales were adapted such that the WHO-5 and PSS-4 used a 5-point Likert scale and the OLBI-MS a 4-point Likert scale to maintain consistency with the first part of the survey.

Furthermore, the data was cleaned as necessary based on the inclusion criteria for participants. Thus, responses from UPCM alumni, those on leave from medical school, and

students in LUs I and II were excluded. Participants who did not complete the survey were also excluded from the analysis.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyze the college assessment survey's reliability. SPSS was likewise used to conduct a one-way ANOVA to compare college assessment, WHO-5, PSS-4, and OLBI-MS scores among medical school year levels/LUs, and an independent samples t-test to compare college assessment, WHO-5, PSS-4, and OLBI-MS scores between student groups based on type of entry into medical school.

Ethical Considerations

As detailed previously, the study used secondary data from a college-wide UP College of Medicine survey conducted in 2018 that gathered input from medical students on a range of topics (well-being, preferences, college feedback, etc.). Upon encouragement and oversight of the Office of the Dean of UPCM, it was planned to transform and utilize selected subsets of the data into a paper. Thus, a study proposal was prepared and underwent a technical review under the Department of Psychiatry and Behavioral Sciences of UPCM-PGH. This was done in collaboration with the Research Development and Implementation Office (RIDO) of the UPCM. This was then successfully granted ethical approval by the UPM Review Ethics Board with the reference no. 2024-0512-EX.

After ethical approval, the researchers then secured the necessary permission to acquire and analyze the selected anonymized data subsets of survey data from the Office of the Dean of the UPCM. From here, the analysis of the data subsets was then started and formulated into the aforementioned research paper. Along with other related files, the data files in SPSS and Excel format were kept in a Google Drive that was only accessible by researchers who were granted permission.

Table 1. Internal Consistency of Survey Sections

Section	Cronbach's alpha
Administration and Faculty	0.739
Learning Environment	0.798
Student Selection	0.703
Educational Resources and Infrastructure	0.867
Curriculum	0.857
College Support	0.924
Full Survey	0.945

RESULTS

Data was collected from a total of 424 participants from the five different year levels of UPCM. There were 424 respondents in total, with a mean age of 22.17 years old. The ratio of female and male participants was almost equal, with 215 females and 209 males. There were 128 respondents from LU III, 120 from LU IV, 106 from LU V, 38 from LU VI, and 32 from LU VII. Predictably, there were fewer participants from LU VI and LU VII which are the clerkship and internship years, respectively. Lower turnout may be explained by student availability based on hospital duty schedules. In terms of the type of student based on entry into the UPCM, a total of 101 INTARMED students or direct entrants and 323 lateral entrants responded to the survey.

UPCM Assessment

The college assessment survey had a high level of internal consistency, as determined by Cronbach's alpha of 0.945. The survey was divided into sections, each one containing statements referring to different aspects of UPCM education. These sections were also individually tested for internal consistency and the results are summarized in Table 1.

Given the established reliability of the UPCM assessment survey and its sections, mean scores taken from the full survey and individual sections measuring different factors were compared as follows: (1) across LUs (from LU III or first year medical school proper to LU VII or internship), and (2) between INTARMED and lateral entry students.

Table 2 shows the mean assessment scores and standard deviation for each factor across LUs. Figure 1 shows the mean assessment scores for the same. The scores indicate the average rating on a 5-point Likert scale with 1 being the lowest rating and 5 being the highest. Generally, it can be said that a lower rating reflects lower satisfaction or more issues

Table 2. Mean and Standard Deviation of Assessment Scores per Factor across LUs

Learning Unit	Assessment Factor						
	Overall	Administration and Faculty	Learning Environment	Student Selection	Educational Resources and Infrastructure	Curriculum	College Support
	Mean ± SD						
LU III	3.74 ± 0.57	3.96 ± 0.69	3.88 ± 0.68	4.08 ± 0.88	2.91 ± 0.74	4.07 ± 0.64	3.88 ± 0.79
LU IV	3.51 ± 0.59	3.96 ± 0.72	3.53 ± 0.81	4.05 ± 0.72	2.51 ± 0.77	3.96 ± 0.61	3.59 ± 0.89
LU V	3.21 ± 0.56	3.79 ± 0.62	3.05 ± 0.80	3.56 ± 0.90	2.15 ± 0.68	3.63 ± 0.68	3.44 ± 0.87
LU VI	3.14 ± 0.56	3.70 ± 0.67	3.12 ± 0.82	3.50 ± 0.87	2.10 ± 0.70	3.62 ± 0.65	3.23 ± 0.80
LU VII	2.98 ± 0.59	3.55 ± 0.75	3.21 ± 0.79	3.14 ± 0.86	2.11 ± 0.63	3.22 ± 0.74	3.06 ± 0.97

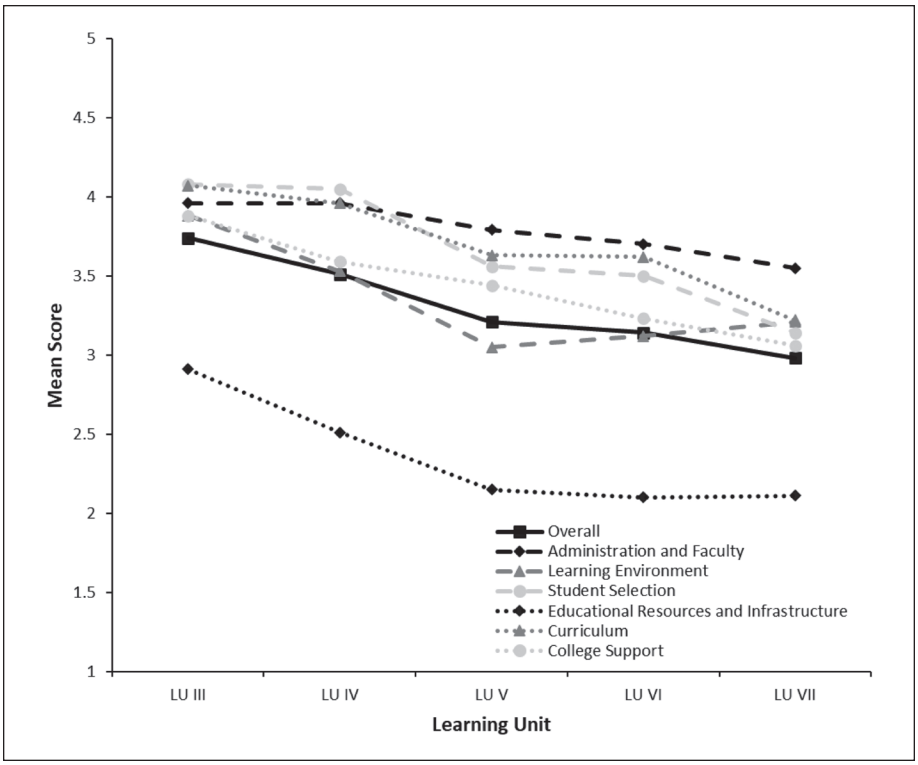

Figure 1. Mean assessment scores per factor across LUs.

Note: Scores are means of responses on a 5-point Likert scale.

with the aspect being measured, and a higher rating reflects higher satisfaction or less issues.

In terms of overall assessment of UPCM, the scores were statistically significantly different across LUs ($F(4, 419) = 21.248$, $p < 0.0005$) and the higher the year level, the lower the mean score given by the student sample. Mean differences between the following LUs, based on average responses on a 5-point Likert scale, and reflecting differences in overall satisfaction with UPCM, were significant, as shown in Table 3.

The Administration and Faculty scores were statistically significantly different across LUs ($F(4, 419) = 3.652$, $p = 0.006$). Scores from LUs III and IV were higher compared to the latter three LUs. Significant mean differences between LUs are shown in Table 4.

For the Learning Environment items, the scores were statistically significantly different across LUs, ($F(4, 419) = 19.686$, $p < 0.0005$). From the highest rating from LU III students, the score went down at LU IV, and LUs III and IV were higher compared to the latter three LUs. LU V gave the lowest score for Learning Environment. Significant mean differences between LUs are shown in Table 5.

In terms of Student Selection, the scores were statistically significantly different across LUs, ($F(4, 419) = 14.485$, $p < 0.0005$). LU III and IV scores were higher than the latter three LUs, and lowest at LU VII. Significant mean differences between LUs are shown in Table 6.

Table 3. Significant Overall Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	***LU IV***	0.24
	LU V	0.53
	LU VI	0.61
	LU VII	0.76
LU IV	***LU V***	0.30
	LU VI	0.37
	LU VII	0.52

Table 4. Significant Administration and Faculty Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	***LU VII***	0.40
LU IV	***LU VII***	0.40

The Educational Resources and Infrastructure scores were statistically significantly different across LUs, ($F(4, 419) = 21.337$, $p < 0.0005$). They were highest at LU III, went down at LU IV, and further dipped at LU V. There was not much difference among LUs V-VII. Significant mean differences between LUs are shown in Table 7.

There was likewise a downward trend for Curriculum scores which was highest at LU III and lowest at LU VII, seen in Table 8. The scores were statistically significantly different

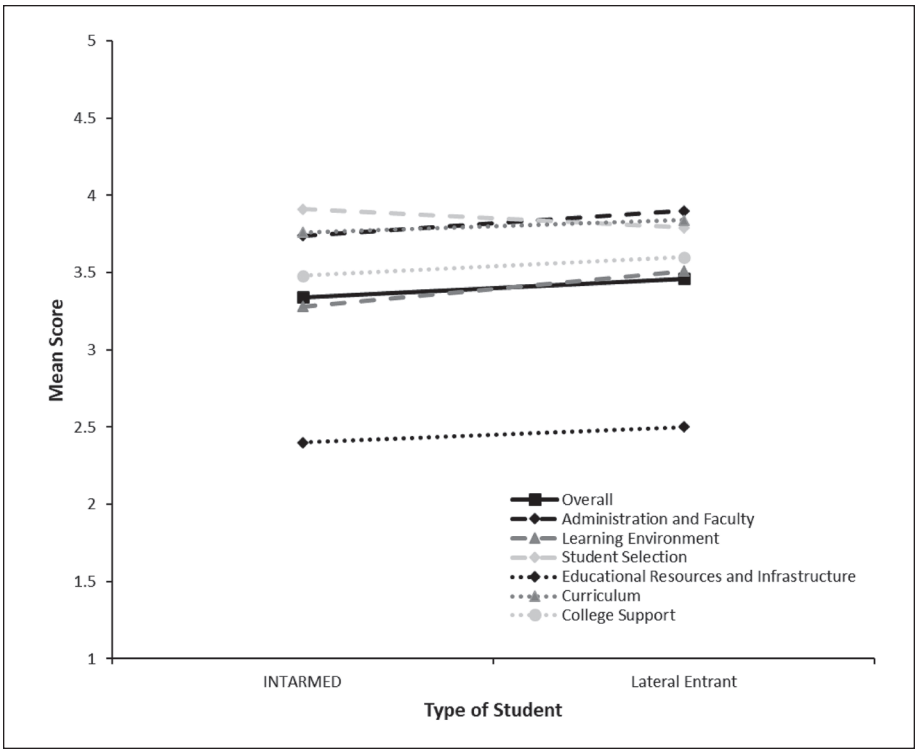

Figure 2. Mean assessment scores per factor between types of student.

Note: Scores are means of responses on a 5-point Likert scale.

Table 5. Significant Learning Environment Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	*LU IV*	0.34
	LU V	0.83
	LU VI	0.75
	LU VII	0.66
LU IV	*LU V*	0.48
	LU VI	0.41

Table 6. Significant Student Selection Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	*LU V*	0.52
	LU VI	0.58
	LU VII	0.94
LU IV	*LU V*	0.49
	LU VI	0.55
	LU VII	0.91

across LUs, ($F(4, 419) = 15.869$, $p < 0.0005$). Significant mean differences between LUs are shown in Table 8.

The College Support scores were statistically significantly different across LUs ($F(4, 419) = 9.231$, $p < 0.0005$), and also consistently went down, from highest at LU III to lowest at LU VII, shown in Table 9. Significant mean differences between LUs are shown in Table 9.

For the comparison between the students based on type of entry into UPCM, Table 10 shows the mean assessment scores and standard deviation for each factor for INTARMED students and lateral entrants. Figure 2 shows the mean assessment scores for the same.

Lateral entrants rated UPCM higher compared to INTARMED students in the overall assessment and in all the sections except for Student Selection where INTARMED students scored higher than Lateral Entry students. Among these mean scores, there was a statistically significant difference in Administration and Faculty ($t(422) = -2.096$, $p = 0.037$); and Learning Environment, ($t(422) = -2.477$, $p = 0.014$).

Well-being, Perceived Stress, and Burnout

Means for the WHO-5, PSS-4, and OLBI-MS scales were compared as follows: (1) across LUs, and (2) between INTARMED and lateral entry students.

Table 11 shows the mean assessment scores and standard deviation for the well-being scores across LUs. Figures 3

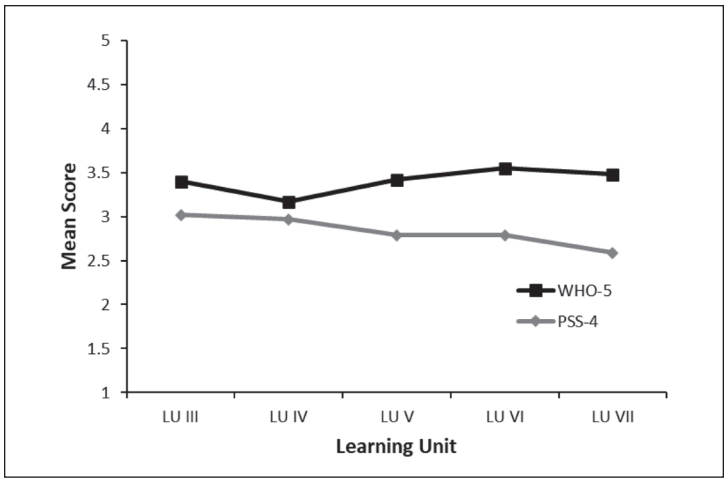

Figure 3. Mean WHO-5 and PSS-4 scores across LUs.

Note: Scores are means of responses on a 5-point Likert scale.

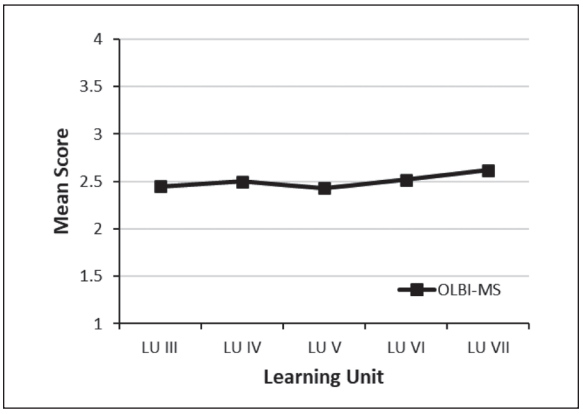

Figure 4. Mean OLBI-MS scores across LUs.

Note: Scores are means of responses on a 4-point Likert scale.

Table 7. Significant Educational Resources and Infrastructure Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	***LU IV***	0.40
	LU V	0.76
	LU VI	0.81
	LU VII	0.80
LU IV	***LU V***	0.36
	LU VI	0.41
	LU VII	0.40

Table 8. Significant Curriculum Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	***LU V***	0.43
	LU VI	0.45
	LU VII	0.85
LU IV	***LU V***	0.32
	LU VI	0.34
	LU VII	0.74
LU V	***LU VII***	0.42

Table 9. Significant College Support Mean Differences between LUs

Learning Unit (A)	Learning Unit (B)	Mean Difference (A-B)
LU III	***LU V***	0.44
	LU VI	0.65
	LU VII	0.82
LU IV	***LU VII***	0.53

and 4 show the mean assessment scores for the same. The WHO-5 and PSS-4 scores indicate the average rating on a 5-point Likert scale with 1 being the lowest rating and 5 being the highest, while the OLBI-MS uses a 4-point Likert scale.

Among LUs, LU IV had the lowest WHO-5 mean score and showed decreased average well-being from LU III. After LU IV, well-being increased again for the rest of the LUs, with LU VI having the highest WHO-5 mean score. For the PSS-4, there was a general downward trend in perceived stress, with LU III having the highest average score and LU VII having the lowest. The results show that the OLBI-MS mean score increased at LU IV compared to LU III, and was highest during LU VII or internship year and lowest during LU V. The scores were statistically significantly different across LUs for the WHO-5 ($F(4, 419) = 2.773$, $p = 0.027$) and the PSS-4 ($F(4, 419) = 2.561$, $p = 0.038$) but not the OLBI-MS.

Table 12 shows the mean assessment scores and standard deviation for the well-being scores for INTARMED students and lateral entrants. Figures 5 and 6 show the mean assessment scores for the same.

Lateral entrants had a higher WHO-5 mean score, lower PSS-4 mean score, and lower OLBI-MS mean score compared to INTARMED students. The scores were statistically significantly different between the student groups for the WHO-5, ($t(422) = -2.332$, $p = 0.020$) and the OLBI-MS ($t(422) = 3.264$, $p = 0.001$) but not for the PSS-4.

DISCUSSION

The study aims to compare the perception of UPCM and well-being scores across LUs and between student groups based on entry into UPCM, looking at well-being, perceived stress, and burnout scores.

Results based on the analysis of means from the college assessment survey show that students' ratings for UPCM

Table 10. Mean and Standard Deviation of Assessment Scores per Factor between Types of Student

Type of Student	Assessment Factor						
	Overall	Administration and Faculty	Learning Environment	Student Selection	Educational Resources and Infrastructure	Curriculum	College Support
	Mean ± SD						
INTARMED	3.34 ± 0.60	3.74 ± 0.70	3.28 ± 0.79	3.91 ± 0.80	2.40 ± 0.75	3.76 ± 0.71	3.48 ± 0.86
Lateral Entrant	3.46 ± 0.63	3.90 ± 0.69	3.51 ± 0.85	3.79 ± 0.92	2.50 ± 0.80	3.84 ± 0.69	3.60 ± 0.90

Table 11. Mean and Standard Deviation of Well-being Scores across LUs

Learning Unit	Well-being Scales		
	WHO-5	PSS-4	OLBI-MS
	Mean ± SD		
LU III	3.40 ± 0.75	3.02 ± 0.79	2.45 ± 0.50
LU IV	3.17 ± 0.85	2.97 ± 0.81	2.50 ± 0.49
LU V	3.42 ± 0.73	2.79 ± 0.85	2.43 ± 0.50
LU VI	3.55 ± 0.83	2.79 ± 0.89	2.52 ± 0.44
LU VII	3.48 ± 0.80	2.59 ± 0.82	2.62 ± 0.62

Table 12. Mean and Standard Deviation of Well-being Scores between Types of Student

Type of Student	Well-being Scales		
	WHO-5	PSS-4	OLBI-MS
	Mean ± SD		
INTARMED	3.20 ± 0.75	3.01 ± 0.80	2.62 ± 0.47
Lateral Entrant	3.41 ± 0.80	2.86 ± 0.83	2.44 ± 0.50

generally and for each aspect are average to above average except for Educational Resources and Infrastructure. This indicates that overall, medical students find the administrative and academic systems of the college satisfactory. They do find buildings, equipment, facilities, security, and financial and other resources to be lacking, and increasingly so as they spend more time at school and later on PGH. One study found environmental factors such as lack of spaces for work and rest to be a reason for burnout among medical students in the UK.[6] Among the most cited needs by the UPCM survey respondents are study spaces such as a library, better and more accessible classrooms, student centers, research facilities, and even provisions for basic needs such as a cafeteria and better comfort rooms. The results may also be affected by the fact that at the time of survey administration, a building of the College of Medicine, which was used to hold classes and served as a venue for student activities, had been demolished and there were delays in the construction of a new one. At this time, there was also a recent change in the college administration. As such, the survey was an opportunity for UPCM students to report such concerns to the new administration. It would be interesting to see if current perceptions and trends would be different given the developments since the data was first gathered.

The data also show that those who are just starting medical school (LU III and IV students) tend to find UPCM more satisfactory but later year levels (LU V-VII) may have more concerns. This may be due to the idea that the longer they stay in college, and especially as they start their training at PGH, the more they are exposed to issues that may negatively affect their perception. At the same time, it is

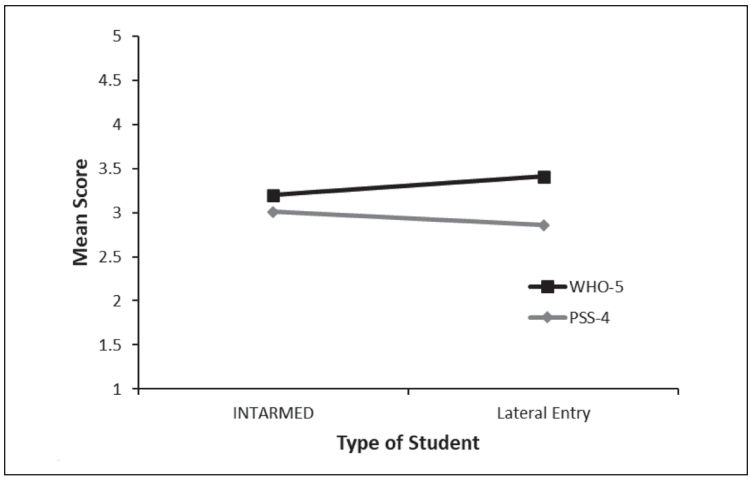

Figure 5. Mean WHO-5 and PSS-4 scores between types of student.

Note: Scores are means of responses on a 5-point Likert scale.

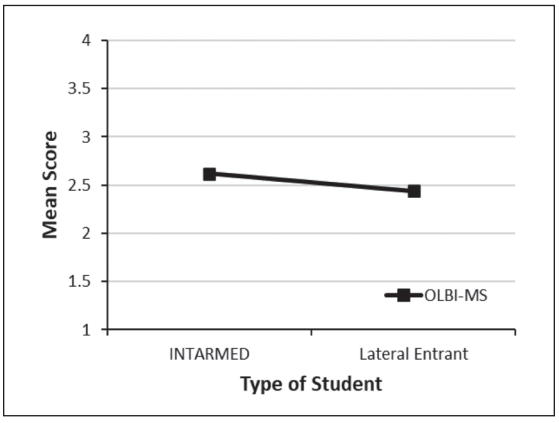

Figure 6. Mean OLBI-MS scores between types of student.

Note. Scores are means of responses on a 4-point Likert scale.

worth examining if the attention and resources extended to medical students are disproportionate and tend to favor earlier year levels. The transition from a mostly classroom-setup to a more clinical orientation seems to be an important point, and the college should assess and address the particular needs that arise during this time. For example, in the recent study on UPCM student well-being, they discuss that students in the later LUs "found mentoring useful but lack opportunity in their clinical rotations; they recommend protected time for this purpose during clerkship and internship, consistent with the low score of perceived personal support."[22] The goal for the UPCM administration is to maintain consistent support throughout the levels of learning, nuanced to each year's needs.

Analysis and comparison of means from the college assessment questionnaire show that while on average, UPCM students rate their overall well-being to be above average, those in LU IV have the lowest perceived well-being in comparison to other LUs. This may be explained by LU IV being considered the year with the heaviest academic load. After LU IV, the academic workload decreases which coincides with increase in well-being scores for the latter LUs. The results of Ly-Uson and de la Llana's study[22] pointing to LU IV students as having the lowest perceived personal support may likewise explain the dip in subjective well-being. Furthermore, based on this present study's survey, among those who have experienced being in LU IV and above, 77% disagree when asked if the academic workload is well-distributed among the LUs. Among those who disagree, a frequent sentiment is how LU IV is "overloaded," especially in comparison to the succeeding LU V wherein students find themselves with more free time. The WHO-5 results indicate that more support from the college administration may be needed as UPCM students transition to their second year of medical school. A reassessment of the academic load distribution may also be considered.

Generally, perceived stress goes down as students move to higher LUs. Perceived stress is highest during LU III which may be explained by a higher need for adjustment given that this is the first year of medical school proper. The downward trend which finds LU VII to have the lowest perceived stress may point to UPCM students increasingly being able to adapt to the experience of medical school. As the PSS-4 items assess insight into students' self-efficacy and helplessness, it may be that more experience translates to a familiarity, or "eventual acclimatization",[22] that lends a greater sense of control. This is similar to the discussion of a study on US-based medical students which stated that their overall health may be influenced by their perceived ability to manage their responsibilities, and as they become more adept at this through training, "specific perceived stress variables improve."[37]

Meanwhile, burnout is highest during LU VII which is when students spend the most time in PGH and with more responsibilities as medical interns. In the 2023 study by Ly-Uson and de la Llana,[22] students in the latter LUs had more concerns regarding the ability to cope with the demands of medical school, work-life balance, and perceived academic and personal support. Thus, even though their experience allows them to be more at ease in terms of learning skills and adjusting to the environment, they still experience higher disengagement and exhaustion as they handle greater workloads at the hospital. In a study on medical students in South Korea, it was found that rising seniority was associated with higher levels of burnout which may affect medical students' empathy, and suggested that this was influenced by "academic efficacy" or how confident they are in managing their studies. As such, their recommendations included "counseling, mentoring, and role modeling" for the students.[38] As previously noted, UPCM students doing heavy clinical work may not be able to take advantage of mentoring opportunities. Exhaustion, or feeling "emotionally overextended by one's work" which affects functioning, and depersonalization involving "unfeeling unempathetic impersonal response" are the challenges at this stage of medical training.[39] In contrast, burnout is lowest during LU V which is commonly considered to have the lightest academic load. LU V is also when students transition from exclusively being in the classroom to actually being exposed to clinical work which may help their level of engagement with their studies. The increase in well-being and concurrent increase in burnout during the latter part of medical training is a shared finding with a 2020 study which noted that while there was overall improvement across health domains, there were worse outcomes on the emotional health variable which measures how much students are bothered by problems like anxiety, depression, or irritability.[37] Additionally, it found that a more flexible schedule after a "daunting phase" of training–similar to LU V after LU IV–may contribute to improved general health outcomes for the medical students in their study.

Finally, comparing students based on entry into UPCM, lateral entrants, or those who entered medical school after completing a bachelor's degree, report higher well-being, lower stress, and lower burnout scores compared to INTARMED students, with the most significant differences found for well-being and burnout. Lateral entrants are, on average, older than INTARMED students upon starting medical school proper. In this study, lateral entrants are, on average, 2.32 years older than INTARMED students. As such, age may explain the difference in these scores. Additionally, certain related differences between older and younger entry medical students have been observed in other studies. Research into differences between graduate entry and undergraduate medical students found significant differences in approaches to learning and ways of coping with the demands of medical school, both of which are thought to have age-related influences.[40] One study also noted that the marginal advantage which graduate entry students have over undergraduate entry students may be related to age and previous learning experience in that

"having a complete (rather than partial) tertiary experience is the critical factor."[41] In a local study, some respondents expressed worries about the preparedness of those who haven't completed a four-year bachelor's degree.[22] In line with the aforementioned literature, the observed trends in this study point to the finding that medical students who enter medical school at a later age, potentially after earning at least an undergraduate degree, seem to be able to adjust better while having a high well-being and being less prone to burnout compared to their younger peers, i.e., those under the INTARMED program. Furthermore, the study results show that lateral entrants generally gave higher assessment scores of the UPCM, with the most significant aspects being Administration and Faculty, and Learning Environment. Working towards increasing satisfaction with these factors may contribute to comparable well-being and less likelihood of burnout for INTARMED students, starting with understanding if there are unique forms of support needed for this student population.

Limitations of the Study

The present study was limited to UPCM students and as such, may not represent the experiences of students in other medical schools in the Philippines. The sample was also limited to students who are currently enrolled and excludes (1) students on leave or who discontinued their studies who may have different experiences of the college and well-being; and (2) alumni who may have additional insight into how their experience of medical school affect their present practice and adjustment.

Another limitation is the well-being scales used. While the OLBI-MS has been modified for the experience of medical school, the other scales, WHO-5 and PSS-4, are brief scales that provide more general information about the state of medical students' well-being. More comprehensive scales which look into specific well-being factors aside from burnout, as well as qualitative approaches, may provide further explanations for the patterns in well-being and help develop recommendations for the UPCM administration. Furthermore, some studies have found that the adapted version of the OLBI specifically for a medical student sample may still be in need of further validation.[36]

CONCLUSIONS AND RECOMMENDATIONS

In assessing medical students' perception of UPCM and their well-being, the current study found that while there are generally satisfactory views of the college, and average to elevated ratings of well-being, there are gaps to be addressed to ensure that the UPCM nurtures its students into effective, healthy, and excellent physicians. A key finding of the study is that students rate UPCM as acceptable overall and particularly in terms of administration and faculty, learning environment, student selection, curriculum, and college support. They are less satisfied with the educational resources and infrastructure, given the need for better study spaces and basic needs facilities. Newer medical students, i.e., those in earlier LUs, rated the aforementioned aspects more highly than did their older counterparts in later LUs. In terms of well-being, this was found to be above average overall across LUs. Notably, LU IV, when academic workload is reportedly most intense, is when perceived well-being is lowest. Perceived stress ratings go down the higher the LU, which may have implications about the students' ability to adjust throughout medical school. Burnout was found to be highest when the students have more responsibilities as medical interns at PGH. Lateral entrants to the program also experience higher perceived well-being, lower perceived stress, and lower burnout, compared to INTARMED students.

These findings point to a clear necessity for an in-depth look into the more nuanced needs of UPCM students, based on shifting realities throughout the different phases of their medical school journey. Some of these needs may include reassessing the distribution of academic workload across LUs, support during major transitions (e.g., from classroom to hospital), and maximizing mentorship opportunities. The consistency and appropriateness of support are crucial, and while students would have different experiences of medical school from one another, there are patterns to be understood from their collective feedback.

In terms of utility, the trends observed in the study can be invaluable in assessing the overall effectiveness of college activities and programs, such as the mentorship, through related outcomes such as student perception of the effectiveness of their college as well as their general well-being across the core LU levels. Therefore, this can provide feedback which can be the basis for further interventions and refinements of existing programs of the college that seek to provide quality education while safeguarding the welfare of its medical students. Given that the data were compared across year levels, the findings of the study identified stress points or gaps in the medical school journey of a UPCM student. These can guide the college administration in planning more cost-effective and appropriate interventions that take into account the different setups and environments among the year levels. The study provides useful initial insight into the nuances necessary to be considered as the UPCM works towards continuous improvement. Furthermore, the college assessment questionnaire was found to be reliable for the UPCM student population and can be of further use in the future.

Further studies can build upon the findings of this research. For example, future studies can gather additional data at one or more points of time in the future so that the trends can be observed longitudinally. Similar studies can also expand the scope of the study to cover a more complete spectrum of the long-term experience of a UPCM student. For instance, the resident trainee population of UPCM-PGH or the premedical years of INTARMED students (LUs I to II) may be included in the target population. Further studies

can also analyze and compare trends between other student groups of the UPCM population such as the MD-PHD and Regionalization Program students. Another possible direction would be to expand and test the items with other medical student populations in the Philippines to have a better understanding of overall national trends. Additionally, the college assessment questionnaire can be tested further for both validity and reliability to confirm its applicability to the UPCM population and other populations. Finally, future studies can also more closely examine the experiences of medical students by focusing on other specific constructs related to well-being, and conducting idiographic studies which look into more individual experiences.

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