



What Are The Academic Lyceum Of Westminster International University In Tashkent (Alwiut) Students' Opinions About The Impact Of Well-Being On Their Academic Performance?

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ABSTRACT

This study examines how students at the Academic Lyceum of Westminster International University in Tashkent (ALWIUT) perceive the relationship between well-being and academic performance. The study is positioned within a multidimensional view of well-being that integrates physical, psychological and social domains rather than treating wellness as a single emotional state. A cross-sectional quantitative survey was administered through Google Forms to 50 students aged 16–18; the sample was evenly divided by sex, while 90% of respondents were first-year students. The original questionnaire contained 15 multiple-choice and hypothetical items. Because respondent-level data were not available in the supplied dataset, the present analysis uses transparent descriptive reconstruction of the reported percentages and does not claim correlations, regression coefficients or causal effects. The strongest signals were deadline-related anxiety (70%), perceived benefits of balanced nutrition and physical activity for academic performance (68%), perceived benefits of physical activity for daily effectiveness (66%), morning sleepiness (56%) and frequent test anxiety, with 54% reporting anxiety often or very often before tests. The findings are interpreted against recent international evidence on adolescent sleep, physical activity, test anxiety, school belonging, digital-device use and validated well-being measurement. The article proposes an ALWIUT Well-Being and Learning Support Cycle combining brief anonymous screening, exam-readiness support, active learning breaks, peer-belonging mechanisms, digital well-being guidance and privacy-conscious early academic advising. The results should be interpreted as student perceptions rather than evidence of causality, but they provide a practical basis for a more systematic, evidence-informed student-support framework.

Keywords:

Student well-being; academic performance; adolescents; ALWIUT; test anxiety; sleep; physical activity; school belonging; digital well-being.

1. Introduction.

Well-being is increasingly understood as a multidimensional condition that includes positive functioning, the capacity to cope with

stress, supportive relationships and the physical resources needed for everyday life [1]. In educational settings, this broader understanding matters because students do not

learn through cognitive processes alone. Sleep, emotional regulation, perceived pressure, social belonging, physical activity and the organisation of academic demands can shape concentration, motivation, attendance and engagement. A health-promoting school approach therefore treats student well-being and learning as mutually reinforcing objectives rather than competing priorities [2].

Earlier research has linked student health and well-being to self-reported academic outcomes [3], while studies of physical activity, psychological distress and social support indicate that the mechanisms are likely to be multiple rather than singular [4–8]. Importantly, recent longitudinal work in adolescence suggests that the direction of influence may also be reciprocal: well-being can precede later academic outcomes, while academic success or pressure can subsequently influence well-being [9,10]. This means that a student who is anxious, sleep-deprived or socially disconnected may experience difficulty engaging with learning, but high academic demands can also contribute to stress and reduced subjective well-being.

The ALWIUT context is particularly relevant because the source manuscript describes an academically intensive, university-style learning environment in which students adapt to lectures and seminars, substantial independent study, recurring assessment periods and relatively long academic days. Such a context can build autonomy and academic maturity, yet it may also make time management, recovery, social integration and exam readiness especially important. The present study therefore does not ask whether well-being mechanically 'causes' grades to rise or fall. Instead, it examines how ALWIUT students themselves perceive the role of well-being in their academic experience and identifies institutional mechanisms that could respond to the strongest signals in the survey.

The study addresses three research questions: (RQ1) Which physical, psychological and social well-being factors are most salient in ALWIUT students' self-reports? (RQ2) How do the observed patterns compare with international evidence on adolescent learning and well-

being? (RQ3) Which feasible, measurable and non-intrusive mechanisms could strengthen student well-being while supporting academic performance?

1.1. International evidence and conceptual framework.

Physical well-being is relevant to learning through energy, attention and cognitive functioning. A 2025 systematic review and meta-analysis of school-based physical activity found a small positive overall effect on academic achievement, with moderate-intensity programmes showing favourable patterns in several analyses [12]. More recent adolescent-focused synthesis similarly concludes that moderate-to-vigorous activity is generally associated with better academic outcomes, although effects are modest and heterogeneous. These findings support balanced activity rather than the assumption that more exercise is always academically better.

Sleep is another plausible pathway. A 2026 meta-analysis based on 59 studies and 163,357 participants found a modest positive association between sleep quality and academic performance ($r = 0.17$), while a previous adolescent meta-analysis found sleep quality to be more consistently related to academic performance than sleep duration alone [11,17]. Thus, morning sleepiness in an academically intensive setting should be treated as a potential signal of recovery and schedule quality rather than as a simple question of motivation.

Psychological well-being is especially relevant around high-stakes assessment. A 30-year meta-analysis covering 238 studies found test anxiety to be negatively related to multiple educational outcomes, with the relationship particularly visible in middle grades [13]. This supports interventions that target preparation, predictability, coping and self-efficacy rather than relying only on exhortations to 'study harder'.

Social well-being also has an academic pathway. Social support has been associated with lower emotional exhaustion and stronger academic functioning [7], while student connectedness and support from peers and teachers are linked to engagement [8]. A 2024 meta-analysis found

a statistically significant, though small, positive effect of school belonging on academic achievement [14]. Family support can also contribute to the stability of academic performance over time [18].

Finally, digital behaviour should be interpreted by purpose rather than by screen time alone. A 2024 meta-analysis of 48 studies reported a positive relationship between educational

device use and academic performance, but negative relationships for entertainment/socialising and gaming use, with longer overall duration also associated with weaker performance [15]. This distinction is directly relevant to student well-being because a device can function as a learning tool, a social resource or a source of displacement of sleep and study time.

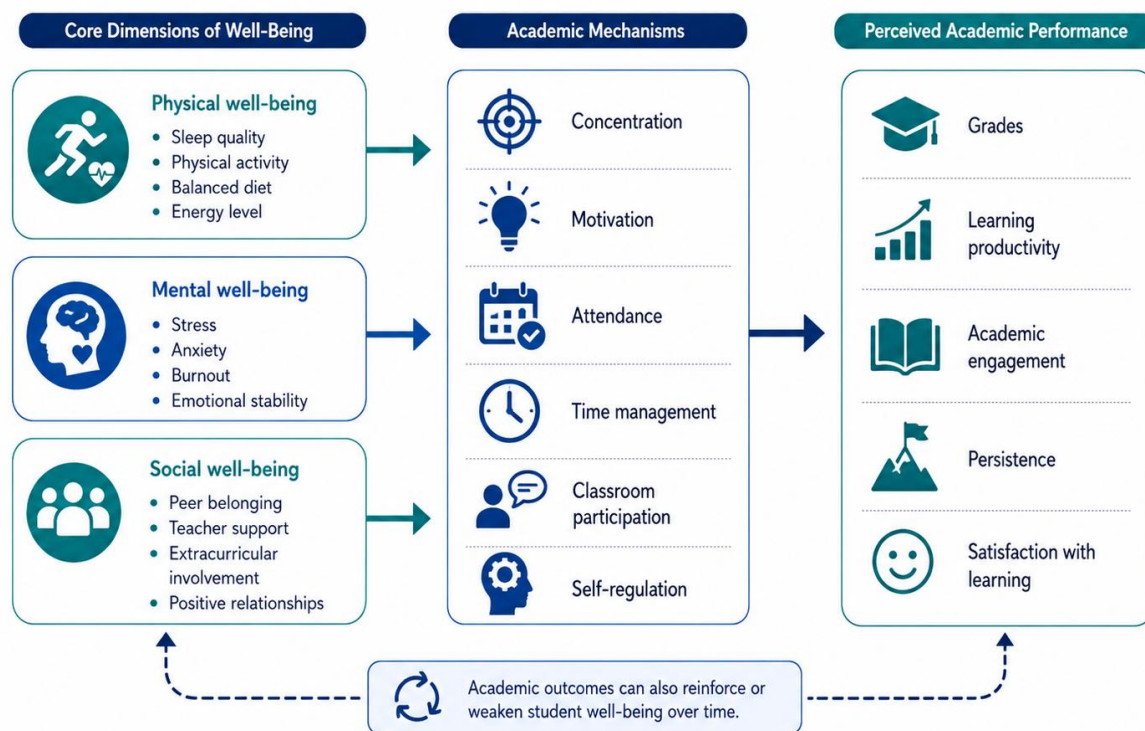


Figure 1. Conceptual framework linking student well-being to perceived academic performance¹

2. Materials and Methods.

Research design. The study used a cross-sectional, exploratory quantitative design focused on student perceptions. The purpose was descriptive and diagnostic: to identify patterns in how ALWIUT students view the connections among physical, psychological and social well-being and their academic experience. The design does not permit causal inference.

Participants. The source manuscript reports 50 participants aged 16–18 years, with an equal distribution of female and male students. Ninety per cent were first-year students and 10% were second-year students. This imbalance is

important because the results predominantly represent first-year experience.

Instrument and data collection. Primary data were collected using a 15-item Google Forms questionnaire containing multiple-choice and hypothetical questions. The survey was distributed through ALWIUT-related Telegram groups and student e-mail channels. The source manuscript states that respondents were informed about confidentiality and anonymity and that sensitive questions were avoided. No formal institutional ethics-approval information is documented in the supplied manuscript; consequently, this article does not claim such approval. Future waves involving minors should follow the applicable

¹Source: Author's conceptualisation based on the ALWIUT survey context and international literature [7–17].

institutional procedures for research ethics and consent.

Analytical strategy. The supplied file contains aggregate percentages rather than a respondent-level spreadsheet. Accordingly, analysis was restricted to descriptive reconstruction of the percentages explicitly reported in the manuscript. Where a set of reported percentages clearly left a mathematically determinate remainder to 100%, the remainder was labelled as derived; where categories were missing or totals did not reach 100%, no category was invented. For headline proportions that were compatible with

$n = 50$, 95% Wilson confidence intervals were calculated to show sampling uncertainty. No correlation matrix, Cronbach's alpha, regression model, factor analysis, p-values or subgroup comparisons were fabricated because these require raw individual-level responses.

International comparison. The discussion triangulates the ALWIUT descriptive findings with systematic reviews, meta-analyses and longitudinal studies on adolescent sleep, physical activity, test anxiety, school belonging, digital-device use and subjective well-being [9–17]. This comparison is interpretive rather than a formal meta-analysis.

Table 1. Sample and study design profile

Characteristic	Reported value
Sample size	50 students
Age range	16–18 years
Sex distribution	50% female; 50% male
Year of study	90% first-year; 10% second-year
Survey mode	Google Forms
Questionnaire length	15 items
Sampling/distribution	Convenience distribution via ALWIUT-related Telegram groups and student e-mail
Analytical level	Aggregate percentages; respondent-level raw data not available

3. Results.

The descriptive results reveal a combination of strong well-being awareness and notable pressure-related signals. Seventy-four per cent of respondents were reported to understand the meaning of well-being. At the same time, 56% reported greater sleepiness during morning classes, 70% reported anxiety when deadlines approached, and 54% reported feeling anxious often or very often before exams or tests.

Positive health beliefs were also prominent: 66% agreed that physical activity helps them manage the day more effectively, and 68% agreed that balanced nutrition and physical activity contribute positively to academic performance. Detailed response distributions reconstructed from the Excel workbook are presented in Tables 3–6 in the same sequence as the results narrative.

Table 2. Headline descriptive indicators

Headline indicator	%	Approx. n	95% Wilson CI
Awareness of well-being	74%	37	60.4%–84.1%
Sleepier during morning classes	56%	28	42.3%–68.8%
Physical activity improves daily effectiveness	66%	33	52.2%–77.6%

Balanced diet + activity support academic performance	68%	34	54.2%–79.2%
Anxious when deadlines approach	70%	35	56.2%–80.9%
Anxious often/very often before tests	54%	27	40.4%–67.0%

Note: Confidence intervals are descriptive uncertainty intervals for proportions compatible with $n = 50$; they do not test causal relationships.

Sedentary behaviour. Reported sitting or screen-related sedentary time was concentrated in the middle-to-high range: 36% selected 3–4 hours per day, 32% selected 5–6 hours, 20% selected 1–2 hours and 12% selected more than seven hours. This distribution totals 100% and therefore

represents one of the cleanest items in the source data. The result should not be interpreted as equivalent to recreational screen time, because the question appears to combine sitting, computer use and television use and does not separate educational from non-educational use.

Table 3. Well-being awareness and daily sedentary-time profile

Measure	Response category	Percent
Meaning of well-being	Correct / aware	74%
Meaning of well-being	Positive emotions only	10%
Meaning of well-being	Mental health only	12%
Meaning of well-being	Health only	4%
Daily sitting / screen-related sedentary time	1–2 hours	20%
Daily sitting / screen-related sedentary time	3–4 hours	36%
Daily sitting / screen-related sedentary time	5–6 hours	32%
Daily sitting / screen-related sedentary time	More than 7 hours	12%

Source: reconstructed from the accompanying Excel workbook (Survey_Summary). Both reported distributions in this table sum to 100%.

Burnout and academic pressure. The manuscript reports that 30% experienced burnout up to two times in roughly two months, 22% reported five to six occurrences, 14% more than six occurrences and 10% never. These categories total 76%, which means at least one response category is missing from the written report. The safest conclusion is therefore not a prevalence estimate for 'burnout' as a clinical

construct, but evidence that repeated experiences of exhaustion or negative emotion were common enough to be salient for many respondents. The reported qualitative reasons centred on adjustment to a new social environment, more demanding expectations, longer seminar/lecture formats and concentrated assessment periods.

Table 4. Burnout, morning sleepiness and perceived physical-health effects

Measure	Response category	Percent
Burnout frequency over roughly two months	Up to 2 times	30%
Burnout frequency over roughly two months	5–6 times	22%
Burnout frequency over roughly two months	More than 6 times	14%
Burnout frequency over roughly two months	Never	10%
Morning classes	Agree that they feel sleepier	56%
Physical activity	Agree that it helps manage the day effectively	66%
Balanced diet + physical activity	Agree that they support academic performance	68%
Balanced diet + physical activity	Disagree	14%
Balanced diet + physical activity	Neutral	18%

Source: accompanying Excel workbook (Survey_Summary). Burnout categories explicitly reported in the source total 76%; omitted category/categories were not inferred. The 18% neutral value for diet + activity is the arithmetic remainder from the complete reported distribution.

Exam and deadline anxiety. Deadline-related anxiety was the single strongest headline concern at 70%. Before exams or tests, 36% selected 'sometimes', 36% 'often', 18% 'very often' and 8% 'rarely'; the remaining 2% is

mathematically consistent with 'never'. Thus 54% fell into the often/very-often categories, indicating that anticipatory anxiety around assessment is not a marginal experience in the sample.

Table 5. Deadline-related and test-related anxiety

Measure	Response category	Percent
Anxious when deadlines approach	Agree / yes	70%
Anxious when deadlines approach	Disagree / no	20%
Anxious when deadlines approach	Neutral	10%
Anxiety before exams/tests	Never	2%
Anxiety before exams/tests	Rarely	8%
Anxiety before exams/tests	Sometimes	36%
Anxiety before exams/tests	Often	36%
Anxiety before exams/tests	Very often	18%

Source: accompanying Excel workbook (Dashboard and Survey_Summary). The 2% "Never" test-anxiety category and the 10% neutral deadline-anxiety category are arithmetic remainders required to complete the reported distributions.

Social participation. Forty per cent were reported to participate in social events or clubs once a month, 16% several times a week, 4% daily and 25% not at all. These written percentages total 85%; therefore, the missing 15% is not assigned to any category in this analysis. The 25% value is also not an exact multiple of 2%, which would be expected if every item had exactly 50 responses, suggesting either rounding, item non-response or a different denominator for that question.

Self-reported marks. The manuscript reports 40% in the 61–70 band, 28% in the 71–80 band and 22% in the 51–60 band. The stated categories total 90%, leaving 10% unreported. Consequently, the present article does not infer the missing grade category and does not claim any statistical association between marks and individual well-being indicators because no cross-tabulated or respondent-level data were supplied.

Table 6. Social participation and self-reported mark distribution

Measure	Response category	Percent
Participation in social events/clubs	Once a month	40%
Participation in social events/clubs	No participation	25%
Participation in social events/clubs	Several times a week	16%
Participation in social events/clubs	Daily	4%
Self-reported mark range	51–60	22%
Self-reported mark range	61–70	40%
Self-reported mark range	71–80	28%
Self-reported mark range	Unreported category/categories	10%

Source: accompanying Excel workbook (Dashboard and Survey_Summary). The reported social-participation categories total 85%, so the missing 15% is not assigned to an invented response category. The mark bands explicitly reported total 90%; the remaining 10% is shown only as unreported.

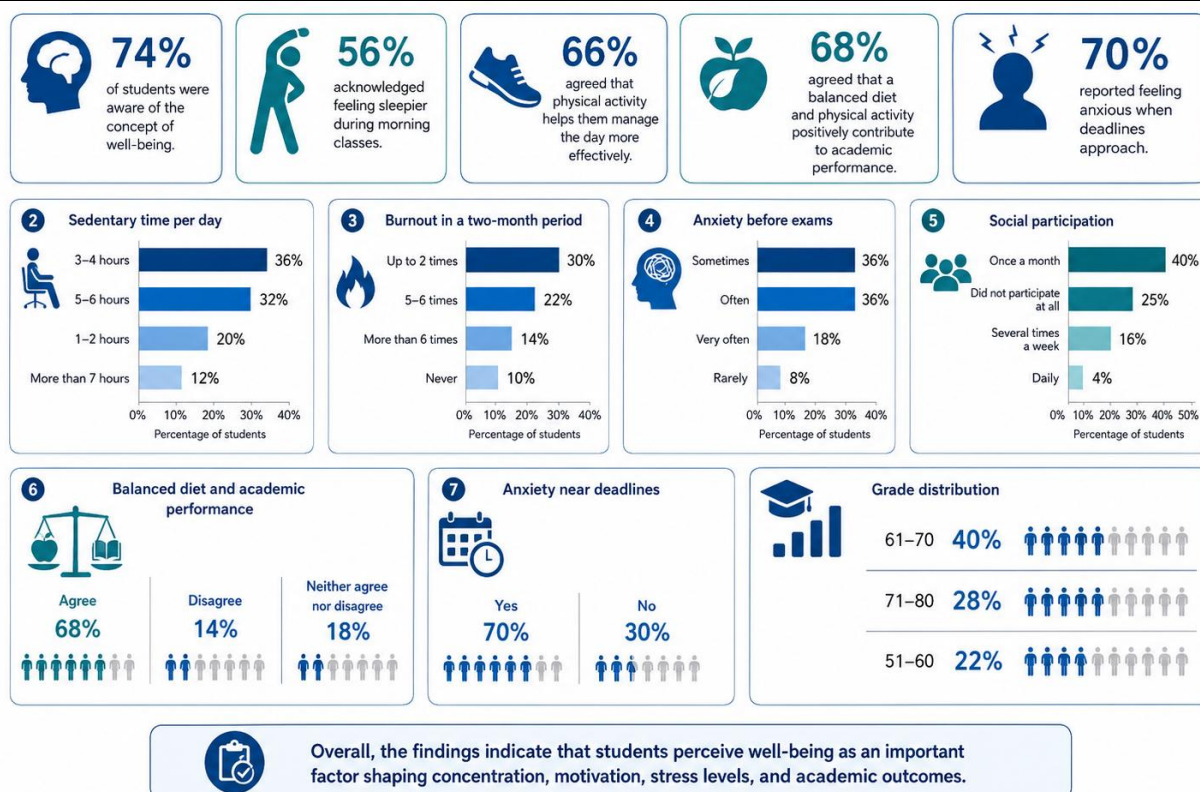


Figure 2. Visual summary of the reported ALWIUT survey findings

4. Discussion.

The results support a nuanced interpretation: ALWIUT students appear to recognise the importance of well-being, yet awareness alone does not remove the pressures associated with an intensive academic environment. The combination of 70% deadline anxiety, 54% frequent pre-test anxiety and repeated burnout-like experiences suggests that the most actionable problem is not ignorance of wellness concepts but the translation of awareness into routines, assessment preparation and support mechanisms. This distinction is important because generic wellness messaging is unlikely to be sufficient when stress is tied to concrete academic processes.

The sleep and energy signal is also meaningful. More than half of respondents reported morning sleepiness. International evidence indicates that sleep quality has a modest but reliable association with academic performance [11], although adolescent meta-analysis also cautions that sleep duration alone is not a simple predictor of grades [17]. For ALWIUT, this supports low-cost interventions focused on sleep hygiene, timetable awareness, workload planning and the timing of demanding tasks

rather than rigid claims that a fixed number of sleep hours will automatically improve marks. Physical activity offers a comparatively positive entry point. Two-thirds of respondents already believe that activity improves daily effectiveness, and 68% link balanced nutrition and activity with academic performance. This alignment between student beliefs and international meta-analytic evidence [12] means interventions can be framed as performance-supportive rather than as an unrelated health obligation. Short active breaks, accessible sport opportunities and exam-period movement routines are likely to face less cultural resistance than interventions that begin with a deficit message.

The anxiety findings are consistent with the broader evidence that test anxiety is associated with weaker educational outcomes [13]. However, the present dataset cannot demonstrate that anxiety caused lower grades among ALWIUT students. It also cannot identify whether high achievers are more anxious, whether anxiety rises only during specific exam weeks or whether some students use anxiety as a motivating signal. The correct institutional response is therefore targeted support and

better measurement, not labelling students as psychologically unwell.

Social well-being should also be treated as an academic resource. International evidence links school belonging and social support to engagement and, to a smaller degree, achievement [7,8,14]. The source manuscript notes that ALWIUT already uses induction/adaptation activities, clubs and events. These existing structures are valuable because they can be organised more deliberately around peer mentoring, first-year transition and inclusion of students who do not naturally join extracurricular activities. The target is not simply 'more events'; it is stronger belonging and easier access to supportive relationships.

Digital well-being requires similar precision. The survey's sedentary-time item does not distinguish educational device use from gaming, entertainment or social networking. International evidence shows that this

distinction matters: educational device use can be positively related to performance, whereas entertainment/gaming and longer duration show negative associations [15]. Future ALWIUT measurement should therefore ask about purpose, timing and displacement effects (for example, whether leisure screen use delays sleep or study) rather than using total screen time as a single risk variable.

A further conceptual implication is that the relationship between well-being and achievement may be bidirectional [9,10]. In a high-performing environment, academic success may coexist with pressure, perfectionism or reduced recovery. An effective support system should therefore not focus only on students with visibly low marks. High-performing students with deteriorating well-being may also need preventive support, especially around concentrated assessment periods.

Table 7. International evidence benchmark and implications for ALWIUT

Domain	Study / design	Effect or signal	How it informs ALWIUT
Sleep	Zhou et al. (2026); meta-analysis, 59 articles, 163,357 participants	Sleep quality positively associated with academic performance; $r = 0.17$ overall	Treat morning sleepiness as a learning-related signal, while avoiding causal claims from the ALWIUT survey.
Physical activity	He et al. (2025); systematic review/meta-analysis, 17 school-based studies	Overall academic achievement improved; SMD = 0.22; moderate-intensity programmes were favourable	Use structured active breaks and moderate activity rather than excessive training loads.
Physical activity	Jee (2026); systematic review of adolescent studies	Moderate-to-vigorous activity generally associated with better outcomes; effects modest and non-uniform	Use balanced, developmentally appropriate activity programmes.
School belonging	Uslu Gülşen (2024); meta-analysis, 22 studies	Statistically significant small positive effect on academic achievement	Support peer mentoring, clubs and belonging-focused interventions.

Domain	Study / design	Effect or signal	How it informs ALWIUT
Test anxiety	von der Embse et al. (2018); 30-year meta-analytic review, 238 studies	Small-to-moderate negative relationship with educational performance	Combine exam-readiness and anxiety-management support.
Digital device use	Wang et al. (2024); meta-analysis, 48 adolescent studies	Educational use $r = 0.12$; entertainment $r = -0.10$; gaming $r = -0.16$	Use purpose-sensitive digital well-being guidance rather than blanket screen-time rules.
Adolescent well-being measure	Sischka et al. (2026); WHO-5 validation across 43 countries	WHO-5 supported as a brief cross-national adolescent well-being measure	Add a validated WHO-5 module to future ALWIUT survey waves.

Source: accompanying Excel workbook (Literature_Benchmark). The benchmark is used for interpretation, not to infer causality in the ALWIUT cross-sectional perception survey.

4.1. Methodological limitations.

First, the sample is small ($n = 50$) and heavily weighted toward first-year students (90%), limiting generalisability to the whole lyceum. Second, recruitment through Telegram groups and e-mail is a convenience-sampling approach and may over-represent more engaged students. Third, the questionnaire is a custom 15-item instrument; the supplied material does not provide psychometric validation, reliability statistics or a clearly defined composite well-being score. Fourth, academic performance is reported in broad self-reported mark bands rather than verified continuous grades. Fifth, the article supplied only aggregate percentages, making correlation, regression, mediation, reliability and subgroup analyses impossible. Sixth, several reported distributions are incomplete or inconsistent with a denominator of exactly 50, indicating probable rounding, item non-response or incomplete transcription. Finally, the cross-sectional design measures perceptions at one point in time and cannot identify causal direction.

Table 8. Analytical notes and reproducibility constraints from the Excel workbook

Issue	Status	Implication	Recommended next step
Respondent-level data	Not available	Correlation, regression, Cronbach's alpha and subgroup tests cannot be calculated validly.	Retain/export one anonymised row per respondent in future waves.
Sampling	Convenience distribution	Findings describe participants and may not generalise to all ALWIUT students.	Use stratified sampling by year and, where feasible, sex/group.
Year composition	90% first-year; 10% second-year	Second-year opinions are underrepresented.	Set minimum quotas for each year.
Outcome measurement	Self-reported mark bands	Broad bands reduce precision and limit outcome modelling.	With consent and governance, use verified term averages or finer bands.

Issue	Status	Implication	Recommended next step
Well-being scale	Custom 15-item questionnaire	Construct validity and reliability are not demonstrated in the supplied dataset.	Add WHO-5 and validated brief stress/test-anxiety instruments.
Causal inference	Cross-sectional perception survey	No causal effect of well-being on grades can be established.	Use repeated measures across term/exam periods and longitudinal/multilevel models.

Source: accompanying Excel workbook (Method_Notes). These constraints define what can and cannot be claimed from the current dataset.

5. Conclusion and Practical Recommendations.

The study provides a useful diagnostic picture of how ALWIUT students perceive well-being in relation to academic life. The most important finding is not simply that students value well-being, but that substantial proportions report pressure-related experiences at predictable academic moments. Deadline anxiety (70%), frequent test anxiety (54%) and morning sleepiness (56%) point to concrete

opportunities for support, while positive attitudes toward physical activity and balanced nutrition suggest strong readiness for preventive health-oriented interventions. Because the available data are descriptive and incomplete, the study should not be used to claim that well-being statistically causes higher or lower grades at ALWIUT. Its value lies instead in identifying where a more systematic student-support model can begin.

Table 9. ALWIUT Well-Being and Learning Support Cycle

Mechanism	Concrete action	Implementation logic	Suggested KPI
1. Two-minute well-being pulse	Run an anonymous 5-item WHO-5-based pulse at the start, midpoint and pre-exam period of each term; report only aggregated results.	Tracks change over time without requiring students to disclose sensitive information publicly. WHO-5 has recent cross-national adolescent validation [16].	Response rate; mean well-being score by wave; share below predefined support threshold (aggregate only).
2. Exam-readiness protocol	Two weeks before exam periods, provide assessment calendar, mock formats, revision map, study-planning template and a short anxiety-management workshop.	Targets the 70% deadline-anxiety and 54% frequent test-anxiety signals at the point where pressure rises.	Workshop participation; pre/post self-rated preparedness; late-submission rate; exam-week absence.
3. Active learning micro-breaks	Pilot 3–5 minute movement breaks in long lecture/seminar blocks and optional 20–30 minute moderate activity	Aligns with students' positive beliefs and international evidence favouring balanced school-based physical activity [12].	Participation; student energy rating; perceived concentration after breaks.

	sessions during exam preparation weeks.		
4. Sleep and recovery module	Provide short evidence-based guidance on sleep regularity, caffeine timing, late-night device use and recovery during assessment periods.	Responds to 56% morning sleepiness without assuming a single cause.	Morning sleepiness pulse; self-reported late-night study frequency; attendance in first sessions.
5. Peer-belonging bridge	Pair new first-year students with trained second-year peer mentors for the first 6–8 weeks; route students who do not join clubs toward low-threshold activities.	Uses belonging as a protective academic and social resource [14].	Mentor contact rate; club participation among initially non-participating students; belonging score.
6. Digital well-being by purpose	Teach students to separate educational device use from entertainment/gaming; introduce focus blocks, notification control and deadline reminders.	Reflects evidence that purpose and duration of device use have different academic associations [15].	Self-reported entertainment screen time after 22:00; use of focus tools; missed-deadline rate.
7. Privacy-conscious early academic advising	Use academic indicators such as attendance change, repeated missed deadlines and sudden grade decline to trigger a supportive advisor conversation; do not create hidden mental-health risk scores.	Provides early support while avoiding intrusive profiling or diagnosis.	Number of support contacts; resolution rate; recovery in attendance/deadline completion.
8. Research upgrade	In the next survey wave, retain row-level anonymised data, stratify sampling by year, use WHO-5 plus brief validated stress/test-anxiety measures, and collect finer academic outcomes.	Enables Cronbach's alpha, factor analysis, correlation, regression and longitudinal modelling in a scientifically defensible way.	Balanced year representation; scale reliability; completeness of raw dataset; pre-registered analysis plan.

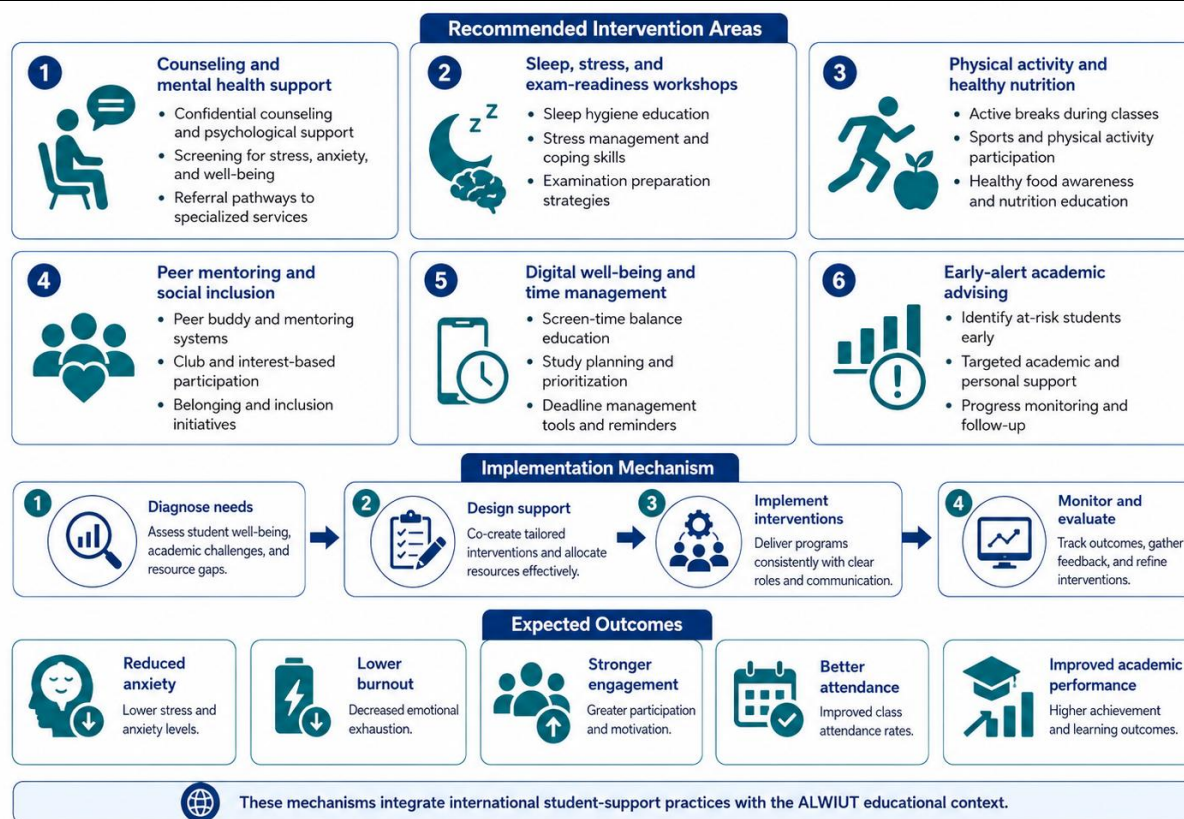


Figure 3. Evidence-based mechanisms for improving student well-being and academic performance²

A practical implementation sequence is: Diagnose needs → Design targeted support → Implement low-burden interventions → Monitor aggregated outcomes → Refine each term. The proposed system is intentionally non-political, educationally focused and compatible with an academic lyceum environment. Its central principle is that well-being support should be measurable, proportionate and integrated with academic processes rather than treated as a separate campaign.

5.1. Proposed analytical model for the next research wave.

If respondent-level data are collected in the next wave, the following analytical sequence is recommended: (1) data cleaning and missing-data audit; (2) reliability analysis (Cronbach's alpha and preferably McDonald's omega) for multi-item scales; (3) exploratory/confirmatory factor analysis where sample size permits; (4) descriptive statistics by year and sex; (5) Spearman/Pearson correlations as appropriate; (6) ordinal or linear regression of academic

outcomes on well-being dimensions with basic controls; and (7) repeated-measures or cross-lagged analysis across the beginning, midpoint and examination period of the academic term. This would move the project from a perception survey to a reproducible explanatory study without overstating causal conclusions.

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²Source: Author's proposed implementation model informed by international evidence [2,6,11–16].

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