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Factors Affecting First-Year Engineering Student Well-being: A Six-Year Study at a Large, Research-Intensive University

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Abstract

This Complete Research paper examines well-being of six consecutive first-year engineering student cohorts at a large research-intensive university. Academic pressures and personal challenges negatively affect well-being for all students, but first-year students face additional stressors as they transition into an unfamiliar environment with large classes, a new social setting, and increased self-responsibility. Data were collected through weekly surveys including the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS), Perceived Stress Scale (PSS-10), and a stressor selection and ranking activity. Results show a slow, steady decline in well-being over the academic year, strongly correlated to feelings of stress. Stable year-to-year patterns also show academic considerations (getting high grades, passing, workload, and competitive entry to second year programs of choice) are the most prevalent stressors in this program, comprising roughly 55% of all student concerns at the start of each term and increasing roughly linearly to approximately 65% by the end. Stressors show statistically significant dependence on demographic factors (gender, nationality, and level of disability). The data for the current academic year also capture the impact of a recent program change to guarantee some students placement into their second-year program of choice, but paradoxically this is associated with lower well-being, higher stress, and no statistically significant difference in program placement as a key stressor.

Introduction

Student well-being has been a topic of ongoing interest over the past decade and continues to be an important consideration for university educators. In 2015, the International Conference on Health Promoting Universities and Colleges resulted in the creation of the Okanagan Charter [1] that outlines two calls to action: to embed health into all aspects of campus culture and to lead health promotion action and collaboration locally and globally. Canadian engineering students are known to have heavy course loads, in part due to the requirements of the national accreditation system for engineering programs. In addition to workload, many engineering students are motivated to participate in extracurricular activities such as design teams, student government, and internships, just to name a few. In the case of first-year students, additional stressors such as the transition to university learning, the move away from home (for some), a new social environment, and increased autonomy are present [2]. While these stressors may impact all engineering students, it is thought that first-year students have potential to experience greater impacts due to the lack of established social connections that are known to enhance well-being and resilience [3].

At the University of British Columbia (UBC), efforts to study well-being in the first-year engineering cohort have been underway since 2017 [4]–[6]. A weekly survey campaign has been conducted since 2019 to better understand well-being and stressors in this population as part of a program continual improvement process. The surveys have evolved over time and now contain three main sections: the seven-item Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) [8]–[10], the ten-item Perceived Stress Scale (PSS-10) [11]–[13], and a ranking of

the most significant stressors impacting students at the time of each survey invitation [5],[6]. This approach has been used consistently since 2019, with six complete years of data available for analysis for this paper [6],[7]. The data in this study expands on the initial work and spans the full duration of the COVID-19 pandemic and all associated disruptions to in-person instruction. The data presented includes analysis across a variety of diversity dimensions including gender, nationality, Indigeneity, and disability. Ultimately the goal of this work is to more accurately identify the needs of different groups within our cohort to provide appropriate resources to better support our students as well as to provide a reference for examining the impact of new initiatives (e.g., admissions, curricular, and extra-curricular interventions).

Literature Review

The World Health Organization (WHO) definition of well-being "encompasses quality of life, as well as the ability of people and societies to contribute to the world in accordance with a sense of meaning and purpose" [14]. The SWEMWBS questionnaire [8]–[10] was used in this study to collect student data consistent with the WHO definition. Well-being typically requires that individuals find a balance between challenges faced and resources available to address them [15]. Insufficient challenge can lead to feelings of stagnation in an individual, but too many challenges may lead to feeling overwhelmed. To measure feelings of being overwhelmed, including feelings of hopelessness and lack of self-efficacy in addressing challenges, the Perceived Stress Scale (PSS) [11]–[13] was also used in this study.

The pressures on university students are varied, with academic pressures being a significant contributor. In the case of engineering students, highly competitive admissions processes, both to the first-year program and in some cases to discipline placement, result in extended periods of grade pressures, which can negatively impact factors related to well-being and academic performance [16]–[18]. Academics in general are known to be connected to student well-being [19], but other factors are also believed to contribute to well-being. For example, studies have shown that women engineering students, international students, and first-year engineering students are known to have lower mental health scores [17]–[21]. Additionally, international students have been found to be more susceptible to negative well-being outcomes, exhibited as elevated stress, depression, and anxiety disorders [21],[22]. For all the aforementioned groups, these effects may be related, at least in part, to factors such as the transition to a new learning environment, moving away from family and friends, and possibly a transition to instruction in a different language. The data presented in this paper includes the 2020/2021 academic year, during which all classes were held online, and most students were not on campus. For students who struggle with feelings of social isolation, the lack of regular social interaction achieved with in-person instruction would have likely been disproportionately challenging [20].

There are several factors known to enhance student well-being, including participation in extra-curricular activities including design teams, clubs, sports, or volunteering, maintaining a social network, having healthy relationships with family and teachers, and maintaining a healthy lifestyle [24]. Easily accessible institutional support systems are also essential for student well-being [25]–[27].

Significance

This work adds to the understanding of first-year engineering student well-being through detailed, week-by-week tracking of six years of large cohorts in a learning setting. Furthermore, this work enhances our understanding the relationships of well-being with stress and stressors relevant to various demographic groups in a sizeable first-year engineering cohort at a large, research-intensive university.

Project Approach

This study is focussed on the first-year engineering program at UBC, a large Canadian research-intensive university. The four related research questions being studied and reported on in this paper are as follows:

- RQ1: How does first-year engineering student well-being change from week-to-week over the academic year?
- RQ2: How strongly is first-year engineering student well-being related to feelings of stress, hopelessness, and a loss of self-efficacy?
- RQ3: What are the main stressors impacting first-year engineering students, and how do those vary based on gender, nationality, and other diversity dimensions?
- RQ4: Does the new guaranteed placement offer being extended to some first-year students improve well-being and reduce stress and stressors related to second-year engineering program placement?

Methodology

Weekly surveys were used throughout the academic year to track student perspectives on their well-being and key stressors. This work is ongoing, but for this paper six complete sets of data spanning the 2019/20 to 2024/25 academic years are included in the presented analysis. The surveys were anonymous, and participation was voluntary with no incentives offered. Recruitment was done through email and class announcements. Each year the students were divided into four quasi-randomized groups, with invitations to the groups occurring on a rotation pattern. Students in each group received an email invitation every four weeks, for a total of six survey invitations roughly equally spaced throughout the academic year. Additional details regarding the survey construction and content have been reported previously [4],[6],[7].

The survey is designed to take approximately two to three minutes to complete and asks students to engage in three activities: the Short Warwick-Edinburgh Mental Well-Being questionnaire (SWEMWBS), the ten-item Perceived Stress Scale (PSS-10), and a select-and-rank activity from a provided list of stressors based on what was most challenging in the past week. The list of stressors is shown in Table 1 and was developed based on a mapping exercise conducted in the 2018/19 academic year [5] and refined in 2020/21 [4]. Starting in 2020/21, additional questions at the end of the survey collected demographic information. These questions were marked optional, and all included a “Prefer not to say” response.

Table 1. Summary of Stressors by Area

Academic	• Getting high grades[1] • Passing exams / courses[1] • Getting into a particular engineering program • Managing the workload
Related to academics	• Working with teammates in courses • Adjusting to university • Adjusting to working online[2,3] • Spending too much time online • Difficulties or limitations in access to hardware or internet[2,3]
Personal	• Being away from family / friends / community • Maintaining a healthy lifestyle • Making friends • Continuing my hobbies / activities • A personal relationship • Living with family[2] • Living on my own
Financial	• Finding / maintaining a job • Paying for school / living expenses
Equity & inclusion	• Being treated differently based on my race, ethnicity, gender identity, and/or beliefs[2] • Feeling disadvantaged or treated differently due to a physical and/or mental disability[2]

[1] Split from a single "grades" category starting in 2020/21.
[2] Added starting in 2020/21.
[3] Removed in 2023/24.

The SWEMWBS questionnaire consists of seven items and students are asked to indicate the frequency with which each item applies over the past two weeks using a 5-point scale (1 = none of the time, rarely, some of the time, often, 5 = all of the time):

- I've been feeling optimistic about the future
- I've been feeling useful
- I've been feeling relaxed
- I've been dealing with problems well
- I've been thinking clearly
- I've been feeling close to other people
- I've been able to make up my own mind about things

The overall SWEMWBS score reported in this study is the average rating from the seven items. A SWEMWBS score of 1 indicates poor well-being (i.e., never feeling optimistic, useful, relaxed, etc. over the previous two-week period), whereas a score of 5 indicates very healthy well-being (i.e., always feeling optimistic, relaxed, useful, etc.).

The PSS-10 questionnaire was added in the 2023/24 academic year and consists of ten items. Students are asked to indicate the frequency with which each item applies over the past two weeks using a 5-point scale (1 = none of the time, rarely, some of the time, often, 5 = all of the time): In the last month, how often have you…

- been upset because of something that happened unexpectedly?
- felt that you were unable to control the important things in your life?
- felt nervous and "stressed"?
- felt confident about your ability to handle your personal problems?*
- felt that things were going your way?*
- found that you could not cope with all the things that you had to do?
- been able to control irritations in your life?*
- felt that you were on top of things?*
- been angered because of things that were outside of your control?
- felt difficulties were piling up so high that you could not overcome them?

The PSS-10 items noted with a "*" above form the self-efficacy subscale and scores are inverted (i.e., 5 becomes 1, 4 becomes 2, etc.) in determining the PSS-10 average. The items without a "*" form the hopelessness subscale of the PSS-10.

Context

The annual UBC first-year engineering intake is nominally 1,000 students, but it has fluctuated between about 800 and 1,100 over the period of the study. The UBC first-year curriculum is common for all engineering students, and it consists primarily of foundational math and science courses along with several engineering courses with significant team-based components. Classes at UBC are taught in person, although all courses shifted to remote instruction for several periods due to the COVID-19 pandemic (including the last few weeks of the 2019/20 academic year, all of the 2020/21 year, and six weeks in the middle of the 2021/22 year). Importantly, the placement into second-year engineering specializations (e.g., civil, electrical, mechanical, chemical, etc.) is done on a competitive basis after the conclusion of first year. The process is based primarily on first-year average grades, although programs also consider written personal statements for the students who rank that program as their first choice. Starting in 2024/25, UBC began offering guaranteed placement of first-choice program to a subset of highly ranked incoming first-year students. Roughly 23% of the current first-year cohort has guaranteed placement. These students must still achieve a minimum overall first-year average grade of 80% on at least 30 credits (full load is 37 credits); roughly half of the full first-year cohort meets this threshold under normal conditions.

Participants

A summary of the number of responses is shown in Table 2, divided by cohort year, nationality and Indigeneity (non-Indigenous Canadian, International, and Indigenous in Canada), and gender (man, woman, and non-binary). The proportions of responses from international students and women are representative of the first-year cohort (within 5%). Also shown are students who identify as having no disability, a mental disability, a physical disability, or both mental and physical disabilities. Note that demographic information was not part of the survey in the 2019/20 year. By the anonymous and repeated survey design, each student receives an invite to a new survey every four weeks and there could be multiple responses from the same student (up to six maximum) in the totals. Further, the total number of respondents by year or nationality is not the sum of the rows above since some students may have left a demographic question blank

or selected "Prefer not to say" as a response. Each student is invited to complete six different surveys per year and, because the surveys are anonymous, it is not possible to determine how many unique students are represented in the aggregate responses captured nor to track any individual student's responses. A trend with diminishing response rate by year is noted; it is not clear if there is a reason for this beyond the broader societal trend of declining survey participation [28]–[30].

Table 2. Number of Survey Responses by Year Based on Gender (Men, Women, or Non-binary), Nationality (Canadian, International, or Indigenous), and Disability

Nat	Gen	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	All
Can.	M	-	635	481	441	356	297	2210
	W	-	366	376	239	233	173	1387
	N	-	13	16	11	20	2	62
	All	-	1033	888	704	631	481	3737
Int.	M	-	299	247	129	97	91	863
	W	-	121	92	78	46	31	368
	N	-	5	2	2	4	6	20
	All	-	429	345	218	149	131	1272
Ind.	M	-	2	8	1	0	0	11
	W	-	2	8	4	0	0	14
	N	-	0	0	0	1	0	1
	All	-	4	16	6	2	0	28
No disability		-	1340	1125	859	630	477	4431
Mental dis.		-	49	61	37	0	0	147
Physical dis.		-	15	7	8	0	0	30
Both		-	6	9	2	3	4	24
Total		1274	1735	1487	1182	1008	807	7,493

Results and Discussion

Results and discussion are provided in the sections below organized by research question: RQ1 (weekly trends in well-being), RQ2 (relationship between stress and well-being), RQ3 (stressors), and RQ4 (well-being differences due to guaranteed placement).

RQ1: Weekly Trends in Well-being

In Figure 1, the average SWEMWBS scores are shown by item and week of the academic year for data collected from the 2019/20 to 2024/25 academic years. No data is collected during the winter break (weeks 15–18). There are four key observations from the figure:

- There is a small, slow deterioration in well-being over the academic year. A significant linear regression was found for the average SWEMWBS score versus day of term ($F[1,6251] = 145.8$, $p < 0.001$, $r^2 = 0.023$, slope = -0.00180 ± 0.00015 per day, constant 3.235). This slope corresponds to a 0.40 ± 0.03 drop in average SWEMWBS score (i.e., 10% of the full scale) over the academic year.

- "Feeling relaxed" is consistently the lowest-scoring item, except for the first week back from winter break (where "Feeling close to others" is the lowest scoring).
- "Feeling close to others" is notably lower (and below the SWEMWBS average) for the first two weeks in each term but then remains near or above the SWEBMWS average through the rest of term. Noting that students are assigned to new course project teams at the start of each term, it may be that working closely with and getting to know their new teammates at the start of each term helps build some social connections.
- The "I've been able to make up my own mind about things" item is consistently the highest-scoring item across all weeks.

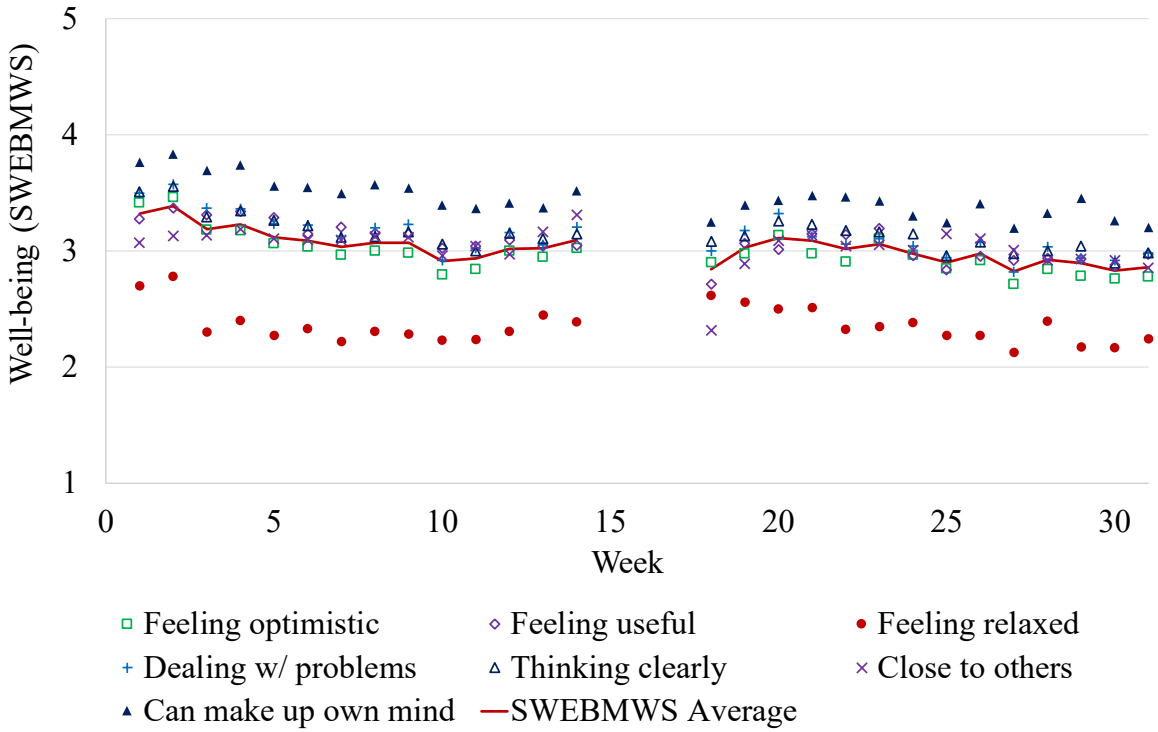

Figure 1. SWEMWBS Score Components by Week of First Year for Six Academic Years, 2019/20 to 2024/25

Using the Canadian Campus Wellbeing Survey (CCWS) [31] as reference, that study found 31% of post-secondary students had low well-being (below a 14-item WEMWBS score of 40, equivalent to 2.86 average on the SWEMWBS), 60% had average well-being (equivalent to 2.99 to 4.14), and 8% had high well-being (equivalent to 4.21 and above). The CCWS data is compared against the six years of this study in Table 3. This study found at the start of first year (i.e., Weeks 1–3), well-being was slightly better than the national post-secondary average from CCWS, while by the end of the academic year (i.e., Weeks 29–31), well-being had dropped well below the national average. (Note that the CCWS data was collected from two institutions in the equivalent to weeks 10–14 in this study, and 18 institutions in the equivalent to weeks 18–31, meaning overall it is biased towards the academic period covering the latter half of this study.) A value feature of the current study is it reveals nuances in well-being and trends over the academic year that are not captured by snapshot studies, such as with CCWS.

Table 3. Comparison of SWEMWBS Distribution from This Study to the Canadian Campus Wellbeing Survey (CCWS) WEMWBS Data

Well-being category	This Study			CCWS
	Weeks 1–3	All Weeks	Weeks 29–31	
Low well-being	26%	40%	55%	31%
Average well-being	67%	55%	43%	60%
High-well being	7%	5%	2%	8%

RQ2: Relationship Between Stress and Well-being

Perhaps not surprisingly, the SWEMWBS and PSS-10 values were strongly correlated (see Figure 2). A sample linear regression was conducted to evaluate the extent to which stress (i.e., PSS-10) could predict well-being (i.e., SWEMWBS). A significant regression was found ($F(1,1422) = 1479.4$, $p < 0.001$, $r^2 = 0.510$), suggesting 51% of the variance in well-being was explained by feelings related to helplessness and loss of self-efficacy (i.e., the subscales of the PSS-10).

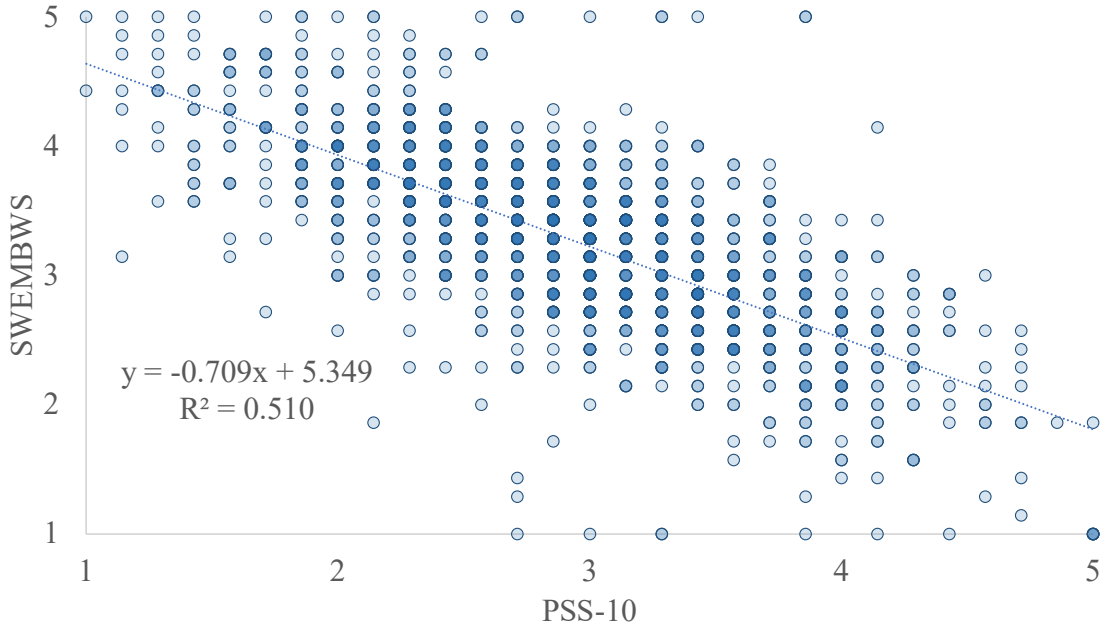

Figure 2. Comparison of SWEMBWS (well-being) and PSS-10 (stress) for 2023/24 and 2024/25 academic years (darker dots indicate more datum points)

Considering the impacts of the COVID-19 pandemic specifically as a stressor, the average SWEMWBS score by year is shown in Figure 3. Only a portion of the SWEMBWS scale is used to reveal detail. SWEMWBS scores each year are compared to the 2020/21 academic year (i.e., the height of pandemic impacts on teaching), with the significance (p-value) and effect size (Cohen's d) from two-tailed t-tests indicated. The findings highlight a small, statistically significant impact from the pandemic on well-being. Encouragingly, well-being appears to have returned to—and in fact surpassed—pre-pandemic levels.

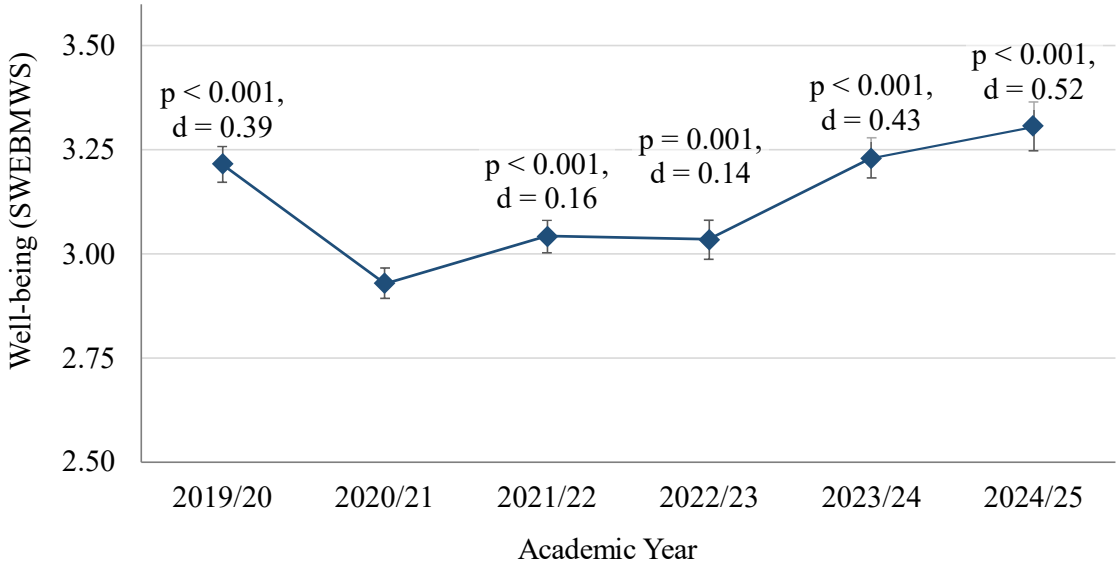

Figure 3. Average SWEMBWS (well-being) versus academic year with comparisons to 2020/21 indicated in terms of t-test p-value and Cohen's d (error bars indicate 95% confidence intervals)

RQ3: Key Stressors Based on Demographics

The relative significance of the different stressors from Table 1 are shown in Figure 4. Data for the five academic years from 2020/21 to 2024/25 have been combined in the figure as previous work showed a high degree of year-to-year consistency in these stressors [7]. Results are presented by gender, with the output of a one-way ANOVA showing stressors with statistically significant gender-based differences indicated in the stressor labels. The academic stressors (getting high grades, getting into a particular engineering program, management the workload, and passing courses and exams) were the most prevalent overall, and all four of these showed statistically significant differences based on gender to better than $p = 0.001$. When the ANOVA was repeated considering only men and women (and excluding non-binary students), the statistical significance was unchanged except for five stressors: getting high grades ($p = 0.773$), getting into a particular engineering program ($p = 0.002$), being away from home ($p = 0.007$), other ($p = 0.012$), and feeling disadvantaged due to a disability ($p = 0.188$).

The analysis was repeated considering student nationality as a factor, shown in Figure 5. For this analysis, non-Indigenous domestic students (i.e., with Canadian citizenship) were one group, international students (without Canadian citizenship) were a second, and Indigenous from within the borders of Canada (i.e., students who self-identified as First Nations, Métis, or Inuit during in survey) were a third. Large differences are observable between Indigenous and the other students for academic factors (grades, program, workload, and passing) and personal factors (maintaining a healthy lifestyle, continuing hobbies, and being away from home). When the ANOVA was repeated with only the Canadian and international students (and not Indigenous students), the following changes in significance were noted: grades ($p = 0.209$), program ($p = 0.091$), friends ($p = 0.007$), other ($p = 0.055$), and disability ($p = 0.781$).

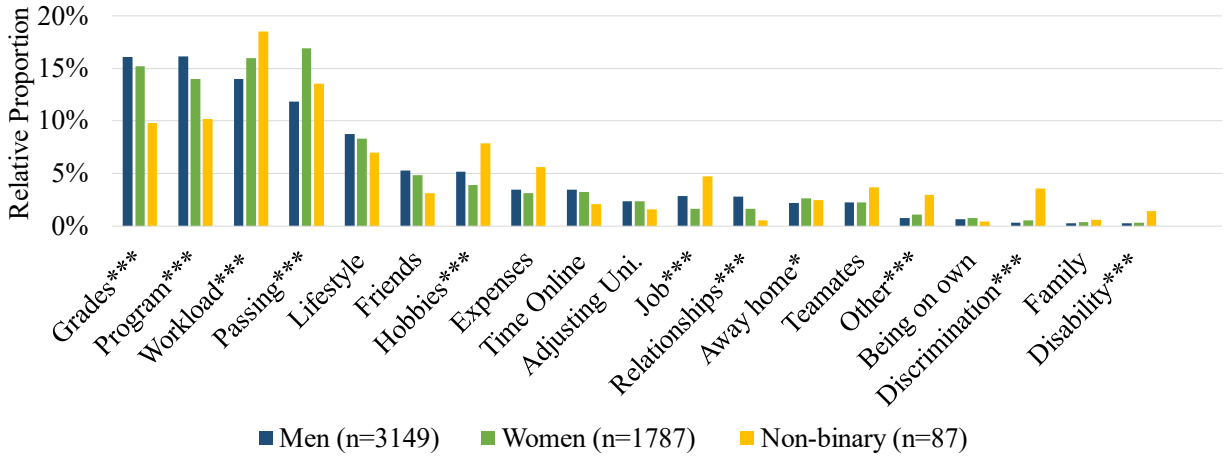

Figure 4. Relative Proportion of Stressors by Gender with Significance from a One-Way ANOVA 2020/21 to 2024/25 (Significance: * for < 0.001, ** for < 0.01, and * for < 0.05)**

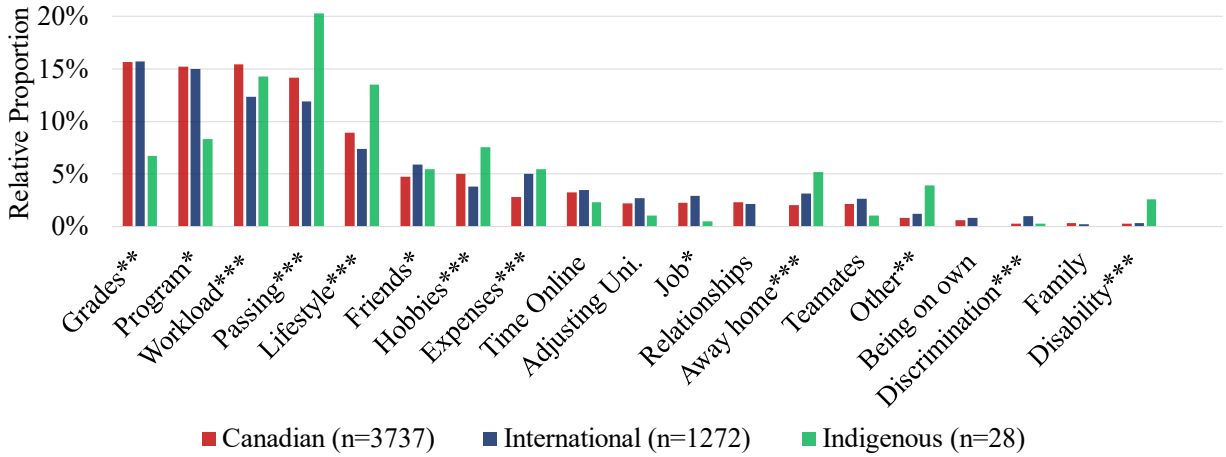

Figure 5. Relative Proportion of Stressors by Nationality with Significance from a One-Way ANOVA 2020/21 to 2024/25 (Significance: * for < 0.001, ** for < 0.01, and * for < 0.05)**

Finally, the stressor analysis based on type of self-reported disability (none, mental, physical, or both mental and physical) is shown in Figure 6. The same general patterns as the previous charts are noted, but differences in all four academic factors (grades, program, workload, and passing) are evident, as are differences in expenses and feeling disadvantaged or treated differently due to a physical and/or mental disability.

Overall, the stressor data in Figures 4 to 6 reveal generally consistent patterns, with academic factors as the most prevalent stressors for first-year engineering students. The data also reveal that stressors significantly depend on demographic factors, including gender, nationality, and level of disability.

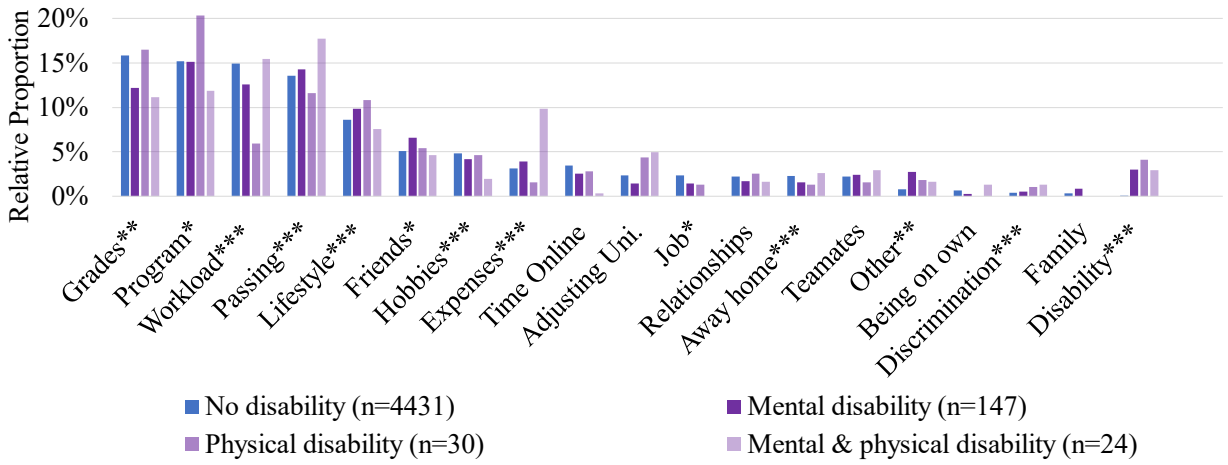

Figure 6. Relative Proportion of Stressors by Disability with Significance from a One-Way ANOVA 2020/21 to 2024/25 (Significance: * for < 0.001, ** for < 0.01, and * for < 0.05)**

RQ4: Well-being Differences with Guaranteed Placement

Table 4 compares the guaranteed placement group to the group without a guarantee in terms of SWEMWBS items and overall average. This includes 79 total responses for the students with guaranteed placement and 433 responses for those without, and it excludes 6 students who responded "Prefer not to say" and 97 who indicated they were unsure of their placement status. Paradoxically, the table shows the group *without* guaranteed placement as generally having better self-reported well-being according to SWEMWBS. The SWEMWBS scores for four of the seven items (feeling optimistic, feeling useful, feeling relaxed, and thinking clearly) as well as for SWEMWBS overall were lower for the guaranteed placement group, with statistical significance of 0.002 or better and effect sizes (Cohen's d) of 0.38 or better.

Table 4. Comparison of SWEMWBS scores for students with guaranteed placement to those without (higher scores more favorable), along with the difference in means (Δ), the two-tailed independent samples t-test significance (p), and the effective size (Cohen's d).

SWEMWBS Criterion	Group		Δ	p	d
	Guaranteed placement	No guarantee			
Feeling optimistic	2.91	3.37	-0.46	**<0.001**	-0.43
Feeling useful	3.03	3.45	-0.42	**0.001**	-0.42
Feeling relaxed	2.14	2.52	-0.38	**0.002**	-0.38
Dealing with problems well	3.29	3.46	-0.17	0.147	-0.18
Thinking clearly	3.06	3.46	-0.39	**<0.001**	-0.44
Feeling close to others	3.38	3.38	0.00	0.979	0.00
Able to make up my own mind	3.70	3.82	-0.12	0.266	-0.14
SWEMWBS Average	3.07	3.35	-0.28	**0.002**	-0.38

A similar analysis was repeated for the PSS-10 and is shown in Table 5. Note that scores for the four items related to perceived self-efficacy and noted with "*" in the table have been inverted such that smaller numbers represent more favourable ratings for all items in Table 5.

Table 5. Comparison of PSS-10 scores for students with guaranteed placement to those without (lower scores more favorable), along with the difference in means (Δ), the two-tailed independent samples t-test significance (p), and the effective size (Cohen's d).

PSS-10 Criterion	Group		Δ	p	d
	Guaranteed placement	No guarantee			
Upset by unexpected	3.00	2.94	0.06	0.746	0.06
Unable to control important things	3.27	2.91	0.35	**0.006**	0.34
Nervous or stressed	4.22	3.78	0.44	**0.006**	0.45
Confident to handle problems*	3.30	3.56	-0.25	**0.037**	-0.24
Felt things going your way*	2.96	3.27	-0.31	**0.006**	-0.34
Could not cope with all to do	3.17	2.85	0.32	0.166	0.29
Able to control irritations in life*	3.18	3.43	-0.25	0.095	-0.28
Felt on top of things*	2.82	3.10	-0.28	0.172	-0.28
Angered by things outside control	3.27	2.67	0.61	**0.003**	0.53
Felt difficulties piling up	3.34	3.00	0.34	**0.021**	0.31
Perceived helplessness subscale	3.38	3.01	0.38	**<0.001**	0.45
Perceived self-efficacy subscale*	3.11	3.36	-0.25	**0.011**	-0.31
PSS-10 Average	3.18	2.85	0.33	**<0.001**	0.44

Large differences were observed between the groups and six of ten items showed statistical significance. Consistent with the less favourable SWEMWBS scores, the guaranteed placement group had less favourable PSS-10 scores (i.e., higher values) on the perceived helplessness subscale ($p < 0.001$, $d = 0.45$), but they also had more favourable scores (i.e., lower values) on the lack of self-efficacy subscale ($p = 0.011$, $d = 0.31$). Overall, the guaranteed placement group had a higher (less favourable) PSS-10 average ($p < 0.001$, $d = 0.44$).

The comparison of stressors based on whether students had guaranteed placement are shown in Figure 7. This data is for the 2024/25 year when guaranteed placement was added, so the number of responses is substantially less than in previous charts. None of the academic factors show statistically significant differences, and only the stressor of working with teammates in courses reached the threshold of statistical significance ($p = 0.050$). Critically, while the guaranteed placement group rates getting into a particular engineering program as a lower stressor (12.5% versus 16.0%), the effect size is small and not statistically significant ($p = 0.105$, $d = -0.20$).

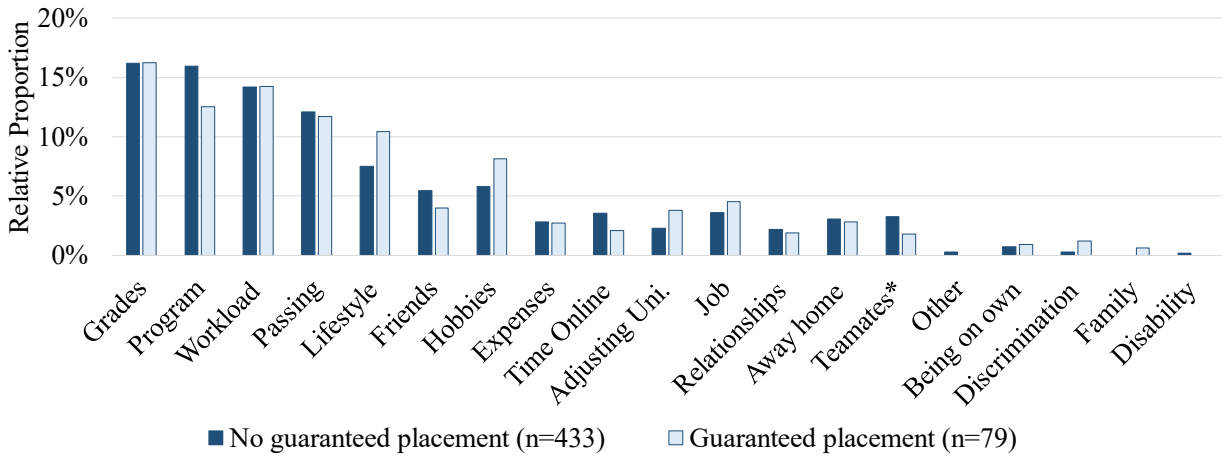

Figure 7. Relative Proportion of Stressors by Placement Guarantee with Significance from a One-Way ANOVA (Significance: * for < 0.001, ** for < 0.01, and * for < 0.05)**

There are several possible explanations for the unexpected observations with the guaranteed placement group. As these are highly ranked students, they may place greater importance on academics and academic success, and they may simply operate at a higher level of stress. The PSS-10 data for the guaranteed placement group had less favourable scores in terms of hopelessness but more favourable scores in terms of self-efficacy; it may be these students are more aware of their feelings of stress but also more confident in their ability to manage that stress.

Conclusions

Considering six consecutive cohorts of first-year engineering at a large Canadian research-intensive university, a number of themes related to well-being have emerged. Well-being (measured by the SWEMWBS) was tracked on a weekly basis. It was found to start slightly higher than the Canadian post-secondary student average but slowly and consistently drop as the academic year progressed, ending the year well below the national average. Roughly 50% of the observed drop in well-being can be explained by an increase in stress (measured through the PSS-10). Academics (getting high grades, passing, workload, and competitive entry to second year programs of choice) dominate as the primary stressors across all demographic groups, although statistically significant differences based on gender, nationality, and level of disability are observed. A new intervention to guarantee some students placement into their second-year program of choice was expected to address one of the most significant stressors (second-year program placement), but data collected to date shows these students have lower well-being scores, higher stress scores, and no statistically significant difference in identify program placement as a key stressor.

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