A Study of Motivation and Burnout among Law, Engineering and Medical Students Undergraduates

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Abstract
Motivation is the main driving factor for students to actively participate in teaching and learning activities. Highly motivated students have an intense desire to learn during their studies. However, students who are exposed to prolonged stress, anxiety, and pressure due to their excessive workload may experience burnout. Burnout causes a detrimental effect and may adversely affect students' academic performance and overall well-being. Therefore, this study is carried out to explore students' perceptions of their use of learning strategies and to investigate the relationship between motivation and burnout among undergraduates from different disciplines, i.e. social science and science technology. The method used in this study was quantitative, using a questionnaire as the main instrument. A set of questionnaires is designed to gain primary data and is divided into three sections: Section A: Demographic Profile; Section B: Value, Expectancy, and Affective Components; and Section C: Exhaustion and Disengagement. A total of 81 respondents, including law, engineering and medical law students, participated in the survey. The data were then collected and analysed using the software Statistical Package for Social Science (SPSS). The findings of the study reveal that there is a weak relationship between burnout and value components as well as expectancy components, and there is no relationship with regards to affective components. It shows that students are less likely to experience burnout when they are motivated. Higher levels of motivation are associated with lower levels of burnout. Students' motivation can be seen as

the driving force in preventing burnout, thus ensuring learning and improving academic performance.

Keywords: Motivation, Burnout, Undergraduates, Teaching and Learning

Introduction
Background of Study

Motivation is crucial in all aspects of life, including the lives of university students. To accomplish students' goals, achieve higher levels of academic success, and perform better in their studies, motivation is required. According to Nazrul (1999), motivation is a drive that directs people to execute a purposeful job. It is a result of processes, internal or external to the individual, that arouse passion and persistence to do a particular action. Motivation is also defined as an internal state or condition that serves to activate or energize behaviour and direct conduct (Huitt, 2011). In the context of students, it refers to the motivation to study, participate, and engage in learning activities. A 2020 study carried out by Jacob Filgona, John Sakiyo, D. M. Gwany, and A. U. Okoronka, who found that motivation is vital for successful and effective learning. Motivation drives learners to achieve their learning objectives and is a necessary component for delivering a great education. Hence, motivation is considered to be one of the strongest indicators of student success.

Life as a university student, however, is fraught with challenges and impediments. Students are expected to manage academic assignments, curriculum activities, personal matters, and other things that require outstanding skills to cope with. Failure to manage it properly exposed the students to prolonged stress, anxiety, and pressure. These pressures can be detrimental to students' emotional and physical health and may lead to burnout (Asikainen et al., 2022). A study mentioned that there was evidence indicating that academic burnout can lead to a lack of interest in class activities, an inability to attend classes, and a sense of meaninglessness. In addition, the research has also revealed an increasing trend of academic burnout among college students (Lin & Yang, 2021). A 2021 study conducted by Joy O. Thuruthel and Joy R. Tungol stated that it has become a major problem for educational and mental health researchers around the world. Malaysian university students, at the same time, are also experiencing burnout. It is increasingly evident that undergraduate university students encounter significant levels of burnout (Stoeber et al., 2011). Therefore, there is a need to explore the relationship between motivation and burnout and the difference in burnout levels among different academic courses in higher education institutions in Malaysia.

Statement of Problem

Often there are reported cases of anxiety, depression and burnout amongst Law, Engineering and Medical students from their respective faculties. These are professional courses which expect nothing less than standards as required by their respective professional bodies governing them (Otey, 2014). There are theoretical and practical aspects which need to be mastered by the students before they can be admitted into the professions of their choice. The drive to excel may lead to burnt out as ongoing assessment may deprive them from sufficient rest (Allen et al., 2021). In turn, this may subsequently take on negative impacts on their wellbeing and academic performance (Abouras, 2021).

El Barusi et al (2024) in their Systematic Literature Review also observed that from the relevant 20 articles reviewed, academic burnout can have significant negative effects on the students' wellbeing, academic performance and mental health. Wilson et al (2022) concluded that identified viable coping mechanisms encompass quality relationships with family,

friends, and classmates, as well as engaging in health-promoting activities like physical exercise, mindfulness, and nurturing spiritual well-being. Potential strategies to counter this issue involve interventions from the educational institutions in identifying the underlying cause of the possible stressors and offering coping mechanisms. These could include providing free of charge counselling, integrating stress management courses into the curriculum and focusing on the intrinsic motivations unique to each student (Alotiby, 2022). Faculties should prioritise the occurrence of burnout among their students and strive to alleviate avoidable stressors by adjusting and enhancing both educational and experiential learning settings (Yahya et al., 2021). Based on all the studies above, it is apt to conduct a similar study amongst law, engineering and medical undergraduates in Malaysia so as to address this issue effectively.

Objective of the Study and Research Questions

This study is done to explore perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions;

1. How do learners perceive motivation in learning?
2. How do learners perceive their cause of burnout in learning?
3. Is there a relationship between motivation and burnout?
4. Is there a significant difference for burnout across courses?

Literature Review
Motivation in Learning

Motivation in learning refers to the internal and external factors that drive individuals to engage in and persist with learning activities. Motivation is of the utmost importance in education, particularly for effective learning. It is viewed as the primary factor influencing a student's achievement (Salasiah et al., 2010). A study conducted by Mayuri Borah in 2021 indicates that the achievement of learning objectives is dependent on the presence of students 'motivation, which propels students toward their academic goals. Academic success is inextricably tied to the level of motivation students possess. In addition, motivation is vital for student learning as it serves as a driving force that propels students to engage with educational materials, persist through challenges, and strive for academic success (Pintrich et. al., 1990). According to Yu et al., 2022, learners who are highly motivated often encounter positive emotions, such as enjoyment, instead of experiencing emotional exhaustion. They demonstrate increased persistence in engaging with learning activities, leading to a greater sense of accomplishment.

Causes of Burnout

Burnout syndrome poses a risk to university students. A study done by Ana-Maria (2015), indicated that perfectionism, previous academic achievement and social support could predict burnout. The researcher observed that burnout was initially believed to affect primarily those who worked with others owing to excessive work or stress, resulting in physical and mental breakdowns. However, it is now recognized that burnout can also affect students in educational institutions. Academic burnout is frequent among students due to long-term academic pressure and stress, exhaustion, losing interest in their studies and activities, and adopting a negative attitude towards learning (Lin & Yang, 2021). Moreover, poor social support, dissatisfaction with lecturers and poor satisfaction with education were

among the factors associated with burnout (Daud et al., 2020). It is stated that academic burnout is a significant problem associated with poor academic performance, low self-efficacy, negative perceptions of the learning environment and available support, high levels of perceived workload, concern over mistakes and doubts about action and low coping effectiveness (Stoeber et al., 2011).

Past Studies on Motivation

Motivation is an important factor in engaging students to participate in academic activities. Many studies have been conducted on motivation to explore the factors that drive learners to get involved in learning activities. A 2022 study carried out by Norsuhaily Abu Bakar et al. to investigate the impact of student motivation on academic accomplishment among undergraduate students revealed that students' motivation boosted their academic success. This shows that motivation is a strong predictor of greater academic accomplishment and achievement.

Additionally, the development of Keller's ARCS model in relation to human motivation is helpful to increase and maintain students' learning motivation. Children with high levels of learning motivation, according to researchers and teachers, outperform those with low levels of learning motivation in terms of engagement and effort (Chengjun & Mustakim, 2022).

Besides that, Khairulzaim & Wah (2023), for instance, examined the relationship between students' motivation and academic achievement. It shows that students exhibited their ability to pursue their studies under pressure, as long as they were motivated. It is noteworthy to say that motivation can boost a student's interest and involvement in a subject.

Past Studies on Burnout

The concept of burnout has been explored in various literature. According to Felaza et al., 2020, several studies have shown that mental and physical exhaustion among medical students during their education is often referred to as burnout. This study highlights the need to nurture students' motivation since intrinsically motivated students are less likely to have a low perception of their performance, which means they have stronger self-efficacy and can attain better performance.

Furthermore, a previous study done by Amna A. Alotiby in 2022 investigated the relationship between students' motivations to study medicine and their stress levels. The stress levels observed among undergraduate medical students were discovered to correlate with their motivation to pursue medicine as a field of study. It is imperative to enhance intrinsic motivation, as it would enable students to perceive their achievements more positively and serve as a preventative measure against burnout. Students who were motivated would be more resilient and less likely to experience burnout during their studies. It is also agreed that college students' learning motivation and burnout are inversely connected; that is, the higher the learning motivation, the weaker the learning burnout; on the other hand, the weaker the learning motivation, the more severe the learning burnout (Xu et al., 2021).

Conceptual Framework

Figure 1 shows the conceptual framework of the study. This study investigates the relationship between motivation and burnout among undergraduates. According to Rahmat et al (2021), motivation in learning comes from confidence, and lack of either can cause stress and burnout. This study is rooted from motivation from Pintrich & DeGroot (1990) such as

value, expectancy and affective components. The causes of burnout stem from Campos, et al (2011) categories of exhaustion and burnout.
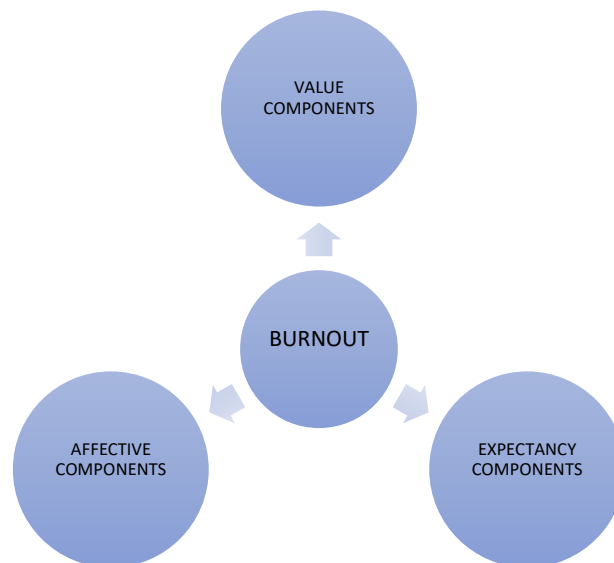

Figure 1- Conceptual Framework of the Study-Motivation and Burnout Among Undergraduates

Methodology

This quantitative study is done to explore perception of learners on their use of learning strategies and to investigate the relationship between motivation and burnout among undergraduates. A set of questionnaires was distributed to undergraduate students from Universiti Teknologi MARA (UiTM) Shah Alam, Universiti Pertahanan Malaysia (UPNM), Widad University Malaysia, and Universiti Kebangsaan Malaysia (UKM). A purposive sample of 81 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Pintrich & DeGroot (1990); Campos et al (2011) to reveal the variables in table 1 below. The survey has 3 sections. Section A has items on demographic profile. Section B has 12 items on Value components, 7 items on Expectancy components and 5 items on affective components. Section C has 8 items on exhaustion and 8 items on disengagement.

Table 1
Distribution of Items in the Survey

SECT	CONSTRUCT	MAIN CATEGORY		VSUB-CATEGORY		Total Items	Cronbach Alpha
B	MOTIVATION Pintrich & De Groot (1990)	VALUE COMPONENT	(i)	Intrinsic Goal Orientation	4	12	
			(ii)	Extrinsic Goal Orientation	3		
			(iii)	Task Value Beliefs	5		
		EXPECTANCY COMPONENT	(i)	Students' Perception of Self-Efficacy	5	7	
			(ii)	Control Beliefs for Learning	2		
		AFFECTIVE COMPONENTS				5	
							0.889
C	BURNOUT Campos,et.al (2011)	BURNOUT-EXHAUSTION				8	
		BURNOUT-DISENGAGEMENT				8	0.674
		TOTAL NO OF ITEMS				40	0.872

Table 1 also shows the reliability of the survey. The analysis shows a Cronbach alpha of 0.889 for section B and Cronbach Alpha of 0.872 for section B and C. This thus reveals a good reliability of the instrument used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Findings
Findings for Demographic Profile
Table 2
Percentage for Demographic Profile

Q1	Gender	Male	Female
		27.2	72.8
Q2	Discipline	Science & Technology	Social Science
		22.2	77.8

Table 2 shows that male students (27.2%) and female students (72.8%) completed the questionnaires. Female students make up the majority of the university's students who participated in the questionnaires. In terms of discipline, the above table indicates that only 22.2% of students from Science and Technology responded to a survey. The remaining 77.8% come from Social Science students.

Findings for Motivation

This section presents data to answer research question 1- How do learners perceive motivation in learning?

Motivational Scale (12 items)
Value Component
Table 3
Mean for INTRINSIC GOAL ORIENTATION (4 items)

ITEM	MEAN
MSVC Q1 In this program, I prefer class work that is challenging so I can learn new things.	3.2
MSVCQ2In the courses of a program like this, I prefer course materials that arouse my curiosity, even if they are difficult to learn.	3.6
MSVCQ 3 The most satisfying thing for me in this program is trying to understand the content of the courses	4.0
MSVCQ 4 When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.	3.0

Table 3 above shows the mean for the intrinsic goal, which was carried out on four items. Undergraduate students are most satisfied with understanding the content of the courses (mean = 4.0). This is followed by a mean of 3.6, where they prefer course materials that arouse their curiosity, even if they are difficult to learn. They also prefer class work that is challenging so they can learn new things (mean = 3.2). The lowest mean of 3.0 reveals undergraduate students choose course assignments that they can learn from, even if they don't guarantee a good grade.

Table 4
Mean for EXTRINSIC GOAL ORIENTATION (3 items)

ITEM	MEAN
MSGGQ1 Getting a good grade in the classes is the most satisfying thing for me right now.	4.4
MSEGQ 2 The most important thing for me right now is improving my overall grade point average, so my main concern in this program is getting a good grade.	4.4
MSEGQ 3 I want to do well in the classes because it is important to show my ability to my family, friends, or others.	4.3

Table 4, on the other hand, shows the mean for the extrinsic goal, which was conducted on three items. The first two items shared the highest mean of 4.4. Degree students find getting a good grade in the classes to be the most satisfying thing for them. The most important thing for them is to improve their overall grade point average so they can get a good grade. Undergraduate students want to do well in the classes because it is important to show their ability to their family, friends, or others (mean = 4.3).

Table 5
Mean for TASK VALUE BELIEFS (5 items)

ITEM	MEAN
MSTVQ1 I think I will be able to transfer what I learn from one course to other courses in this program.	3.6
MYTVQ2 It is important for me to learn the course materials in the courses.	4.1
MSTVQ3 I think the course material in the courses of this program is useful for me to learn	4.0
MTV Q4 I like the subject matter of the courses.	4.0
MTVQ5 Understanding the subject matter of the courses is very important to me.	4.2

Table 5 indicates the mean for the task value beliefs, which were carried out on five items. Understanding the subject matter of the courses is very important for undergraduates (mean = 4.2). It is also important for them to learn the course materials in the courses (mean = 4.1). Two items shared the third highest mean of 4.0, where the students find the course material in the courses of this program is useful for them to learn and they like the subject matter of the courses.

Expectancy Component- 7 items
Table 6
Mean for STUDENTS'PERCEPTION OF SELF-EFFICACY (5 items)

ITEM	MEAN
ECSEQ1I believe I will receive excellent grades in the classes.	3.1
ECSEQ2 I'm confident I can understand the most complex materials presented by the instructors in the courses.	3.0
ECSEQ3 I'm confident I can do an excellent job on the assignments and tests in this program.	3.1
ECSEQ4 I'm certain I can master the skills being taught in the classes.	3.1
ECSEQ5 Considering the difficulty of the courses, the teachers, and my skills, I think I will do well in the classes.	3.0

Table 6 illustrates the mean representing students' perceptions of self-efficacy, as assessed across five items. It shows that three items shared the highest mean of 3.1. Undergraduate students believe they will receive excellent grades in the classes. They are confident that they can do an excellent job on the assignments and tests, and they are certain they can master the skills being taught in the classes. The items "I'm confident I can understand the most complex materials presented by the instructors in the courses" and "I will do well in the classes considering the difficulty of the courses, the teachers, and my skills" received the second highest mean of 3.0. The undergraduate students' perceptions of self-efficacy indicate that they believe they will receive excellent grades in their classes.

Table 7
Mean for CONTROL BELIEFS FOR LEARNING (2 items)

ITEM	MEAN
ECCBQ1 If I study in appropriate ways, then I will be able to learn the material in the courses of this program	4.2
ECCBQ 2If I try hard enough, then I will understand the course materials.	4.3

Above, **Table 7** presents the average score for the control belief regarding learning, derived from two items. It reveals that the undergraduate students will understand the course materials if they try hard enough (mean = 4.3), and they will be able to learn the material in the courses of this programme if they study in appropriate ways (mean = 4.2). This demonstrates students' beliefs about learning: they will comprehend the course materials if they study.

Table 8
Mean for AFFECTIVE COMPONENT

ITEM	MEAN
ACQ1 When I take a test I think about how poorly I am doing compared with other students.	2.5
ACQ2 When I take a test, I think about items on other parts of the test I can't answer	2.4
ACQ3 When I take tests I think of the consequences of failing.	2.0
ACQ4 I have an uneasy, upset feeling when I take an exam.	2.0
ACQ5 I feel my heart beating fast when I take an exam.	2.1

Above, **Table 8** displays the average for affective components, assessed across five items. The first item scored the highest mean of 2.5, where undergraduate students always think about how poorly they are doing when taking a test compared with other students. They also think about items in other parts of the test they can't answer (mean = 2.4). This is followed by the last item, which scored third highest mean, where student hearts beat fast when they take an exam (mean = 2.1). Students' thoughts of the consequences of failing a test and their uneasy, upset feelings when they take an exam received the lowest mean of 2.0. The result demonstrates students' emotions and feelings when they take a test, thinking about their ability to answer the question and the consequences of failure.

Findings for Burnout

This section presents data to answer research question 2- How do learners perceive their cause of burnout in learning?

Table 9

Mean for BURNOUT (EXHAUSTION)

ITEM	MEAN
EQ1 There are days when I feel tired before the day begins	4.3
EQ2 After classes, I tend to need more time than in the past in order to relax and feel better	4.2
EQ3 I can tolerate the pressure of my studies very well	3.1
EQ4 During classes, I often feel emotionally drained	3.6
EQ5 After classes, I have enough energy for my leisure activities	2.5
EQ6 after classes, I usually feel energized	2.2
EQ7 after my classes, I usually feel worn out and weary	3.8
EQ8 Usually, I can manage the amount of my work well	3.2

Table 9 above shows the mean for burnout (exhaustion), which were conducted on eight items. The first item scored the highest mean of 4.3, where there are days when the undergraduate students feel tired before the day begins. This is followed by the need for more time than in the past in order to relax and feel better (mean=4.2). Furthermore, they usually feel worn out and weary after their classes. This data presents exhaustion, which could lead to burnout among undergraduates.

Table 10

Mean for DISENGAGEMENT

ITEM	MEAN
DQ1 I always find new and interesting aspects in my study	3.4
DQ2 It happens more and more often that I talk about my studies in a negative way	3.3
DQ3 Lately, I tend to think less during classes and attend classes almost mechanically	3.4
DQ4 I find my studies to be positive challenging	3.5
DQ5 Over time, students can become disconnected from this type of routine	4.0
DQ6 This is only thing (studying) that I can imagine myself doing now	3.8
DQ7 I feel more and more engaged in my studies	3.0
DQ8 Sometimes I feel sickened by my study tasks	3.9

Table 10 indicates the mean for disengagement, which was assessed on eight items. Undergraduate students who become disconnected from their type of routine over time scored the highest mean of 4.0. It follows that they sometimes feel sickened by their study tasks (mean = 3.9). The third highest mean is 3.8, where studying is the only thing they can imagine themselves doing now. Based on the above findings, disengagement appears to be one of the factors contributing to undergraduate burnout.

Findings for Relationship between Motivation and Burnout
This section presents data to answer research question 3- Is there a relationship between motivation and burnout?

To determine if there is a significant association in the mean scores between motivation and burnout, data is analysed using SPSS for correlations. Results are presented separately in table 11, 12 and 13 below.

Table 11
Correlation between Burnout and Value Component

Correlations

		BURNOUT	VALUECOMPONENTS
BURNOUT	Pearson Correlation	1	.389**
	Sig. (2-tailed)		<.001
	N	81	81
VALUECOMPONENTS	Pearson Correlation	.389**	1
	Sig. (2-tailed)	<.001	
	N	81	81

**. Correlation is significant at the 0.01 level (2-tailed).

Table 11 shows there is an association between burnout and value components. Correlation analysis shows that there is a moderate significant association between burnout and value components (r=.389**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. Therefore, there is a moderate positive relation between burnout and value components.

Table 12
Correlation between Burnout and Expectancy Component

Correlations

		BURNOUT	EXPECTANCY COMPONENTS
BURNOUT	Pearson Correlation	1	.358**
	Sig. (2-tailed)		.001
	N	81	81
EXPECTANCYCOMPONENTS	Pearson Correlation	.358**	1
	Sig. (2-tailed)	.001	
	N	81	81

**. Correlation is significant at the 0.01 level (2-tailed).

Table 12 shows there is an association between burnout and expectancy components. Correlation analysis shows that there is a moderate significant association between burnout and expectancy components (r=.358**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. Therefore, there is a moderate positive relation between burnout and expectancy components.

Table 13
Correlation between Burnout and Affective Component

Correlations

		BURNOUT	AFFECTIVECOMPONENTS
BURNOUT	Pearson Correlation	1	.009
	Sig. (2-tailed)		.935
	N	81	81
AFFECTIVECOMPONENTS	Pearson Correlation	.009	1
	Sig. (2-tailed)	.935	
	N	81	81

Table 13 shows there is no connection between burnout and affective components. Correlation analysis shows that there is no significant association between burnout and affective components (r=.935**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is no relation at all between burnout and affective components.

Significant Difference between Burnout across Course

This section presents data to answer research question 2-Is there a significant difference for burnout across courses?

Table 14
T-test for Burnout across Courses

T-Test

Group Statistics

	Q2Course	N	Mean	Std. Deviation	Std. Error Mean
BURNOUT	Law Degree	63	3.4901	.38219	.04815
	Engineering Degree	11	3.1818	.60108	.18123

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
BURNOUT	Equal variances assumed	3.895	.052	2.249	72	.014	.028	.30826	.13707	.03501	.58152
	Equal variances not assumed			1.644	11.452	.064	.127	.30826	.18752	-.10248	.71901

A t-test was performed to compare burnout across courses. There was a significant difference in burnout for law degree students (M=3.4901, SD= .38219) and students doing engineering degree (M=3.1818, SD = .60108); t (74) =2.249, p=.028.

Conclusion
Summary of Findings and Discussions

The main objective of this study was to explore students' perceptions of their use of learning strategies and to investigate the relationship between motivation and burnout among undergraduates. In relation to motivation, undergraduate students are most satisfied with understanding the content of the courses and achieving a good mark in classes. This shows that students express the highest satisfaction when they comprehend the course content as well as achieve a good mark. This is supported by a study done by Ana-Maria (2015), students who are successful in achieving their goals feel more motivated and engaged in learning activities.

Regarding the relationship between burnout and motivation, it can be concluded that there is a weak relationship between burnout and value components as well as expectancy components, and there is no relationship with regards to affective components. The findings demonstrate that motivated students are less likely to experience burnout, whereas reduced burnout is correlated with higher motivation levels. This is in accordance with a study by Balazs Jagodics and Eva Szabo in 2022, which stated that burnout is connected with lower academic motivation, which leads to decreased engagement, study efforts, and performance. In other words, higher levels of motivation are associated with lower levels of burnout. Hence, students with high motivation can reduce burnout, enhance their learning and improve their academic achievement (Mayuri, 2021). One could argue that student motivation is what keeps them from burning out and ensures that learning occurs. In essence, motivation is fundamental to student life as it drives academic achievement, promotes positive attitudes and engagement, and contributes to overall well-being and satisfaction.

(Pedagogical) Implications and Suggestions for Future Research

This study on undergraduates' motivation and burnout contributes for improving student learning and performance, as well as preventing academic burnout. Understanding motivation and burnout is essential for creating learning environment that promote active participation and effective engagement. Academic achievement is inevitably associated with students' motivation levels which indicates that students are less likely to experience burnout when they are motivated. Hence, higher levels of motivation correlate with lower levels of burnout. Thus, insights from this research can enhance students' motivation and mitigate burnout risk, ultimately improving their performance.

The study's implications for future research aimed at developing guidelines and metrics for motivation and burnout among law, engineering and medical students. Additionally, the results could serve as a guide for enhancing the current educational modules. Future research with students from programs other than law, engineering and medical degrees may benefit from this study. Future studies on particular strategies to foster motivation in students enrolled in a given program may find this research to be useful as a resource. To put it another way, dealing with students' motivation and burnout from the social science and science technology programs may need the use of alternative strategies.

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