The Influence of Achievement Motivation and Time Management Skills on Academic Achievement of Medical Faculty Students

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Abstract

Medical students generally have academic abilities and high discipline compared to students in other faculties. In terms of discipline, medical students must have good time management to deal with a busy schedule of lectures, practicums, and assignments. Perseverance and mental endurance are also key to completing long and challenging studies. The purpose of this study was to investigate the influence of achievement motivation (AM) and time management (TM) on academic achievement (AA). This study was a cross-sectional study. The subjects of the study were students of the Medical Faculty at Universitas Negeri Surabaya. The instruments used in this study were the Academic Motivation Scale (AMS-C) and Assessment of Time Management Skills. The analysis technique used is multiple linear regression analysis by conducting t-tests and f-tests. In the classical assumption test, the data is declared normal, there is no heteroscedasticity and no multicollinearity. The results of the f test obtained a t-value of 1.059 < from t table 1.688 and a sig value of .297 > 0.05 so it is stated that there is no significant influence of AM partially on AA. Furthermore, TM with a t-value of -.408 < from t table 1.688 and a sig value of .686 > 0.05 stated that there is no significant influence of TM partially on AA. R Square shows a figure of 0.035 stating that the magnitude of the influence of the AM and TM variables simultaneously on AA is 3.5%. Although there is no significant influence, it does not mean that there is no influence between AM and TM on AA, there is an influence but, it is small only 3.5%.

Keywords: achievement motivation, time management skills, academic achievement

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Introduction

Academic achievement is one of the most important criteria in assessing students' ability to complete university studies and graduate. The achievement of medical students is very important because it reflects their understanding of medical science and their ability to apply this knowledge in clinical settings. In addition, medical students often face unique challenges, such as high study load, demands for practical skills, and pressures in clinical practice. Medical students are considered the primary recipients of educational services and are the best source for identifying problems in medical or clinical education, because they are directly and indirectly involved in this interaction process (Abdolalipour et al., 2024).

Medical students generally have academic abilities and high discipline compared to students in other faculties. Academically, medical students face a heavy study load, starting from understanding basic sciences such as anatomy, physiology, and pharmacology to the clinical stage, which requires in-depth understanding and analytical skills in diagnosing and treating patients.

AA is the result of a student's accumulated grades as indicated by GPA (Alammar et al., 2022). Achievement is the result of students' accumulated academic scores that reflect their achievements in the learning process, which are usually indicated by the Cumulative Achievement Index (GPA). GPA is one of the main indicators in assessing a person's academic success because it reflects their understanding, skills, and consistency in learning during their studies. In addition to GPA, AA can also be measured through other achievements, such as academic awards, participation in research, and academic or non-academic competitions. Factors that influence AA include study habits, time management, motivation, social support, and a conducive learning environment. By implementing effective and disciplined study strategies, students can improve their GPA and increase their chances of success in the academic and professional world.

AA is very important for all students who want to achieve a successful career. Study habits and routines are essential to achieve this goal (Aljaffer et al., 2024). AA is an important factor for students who want to achieve success in their careers. Good study habits and routines play a major role in achieving this goal. Effective time management, active learning, and creating a conducive learning environment can help students understand the material better.

Medical students are required to continue learning throughout their lives because of the dynamic nature of medical science. In terms of discipline, medical students must have good TM to deal with a busy schedule of lectures, practicums, and assignments. Perseverance and mental endurance are also key to completing long and challenging studies. Medical students must uphold ethics and professional responsibility from an early age, especially in interacting with patients and other medical personnel. This combination of strong academic abilities and high discipline is what shapes medical students into competent and responsible prospective doctors.

AM is defined as the processes within a person in which behaviors that lead him to achieve standards of excellence (better than others/better than his own previous achievements/perfection of tasks) are aroused and maintainedb (Purwanto, 2022). Motivation is important in the academic performance of medical students due to the highly intensive nature of medical programs (Wu et al., 2020). Motivation is recognized as an important factor

because it helps students achieve good academic performance, well-being and satisfaction, and also helps them become good professionals (Kavousipour et al., 2015).

Effective TM can support AA and reduce stress, tension and anxiety, but students often face difficulties in maintaining a balance between academic life and personal-social life (Abdur Rashid et al., 2020; Alyami et al., 2021). The concept of TM skills is often used in conjunction with cognitive and mental functions and the TM aspects of activity and participation (Janeslätt et al., 2018).

There are many previous studies on TM and AM towards AA, but there is something new in this study where the researcher examined samples that have special characteristics. It is said to have special characteristics because the samples used are students of the Faculty of Medicine, which generally consists of students with high commitment, discipline and have good AA.

Method

This research uses a qualitative descriptive survey research design. Respondents in this study were students of the Faculty of Medicine, Surabaya State University. The sampling technique used in this study was quota sampling. Quota sampling was chosen for reasons of research effectiveness. The number of samples determined by the researcher was 36, and it exceeded the Slovin Formula with a minimum number of samples with an error rate of 10%.

Questionnaires are one of the data collection techniques to analyze knowledge, attitudes, beliefs and human characteristics. Questionnaires are in the form of a list of structured questions or statements submitted to respondents. Each statement item must be valid in order to measure what is to be measured. In addition, the questionnaire must also be reliable, meaning it will produce consistent results over time so that the questionnaire is permanent (Bolarinwa, 2015; Heale & Twycross, 2015; Ningsih et al., 2021; Sürücü & Maslakçi, 2020; Taherdoost, 2018).

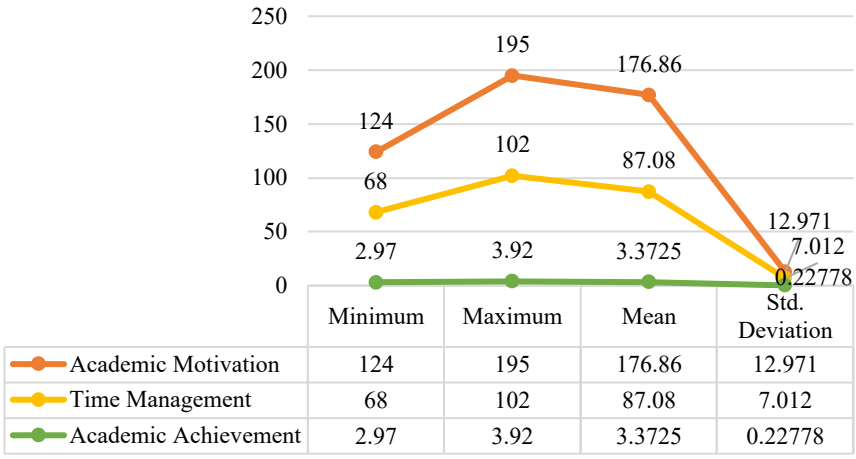
The instrument on variable TM used Assessment of Time Management Skills (Janeslätt et al., 2018; Kapp et al., 2020). The instrument on variable academic motivation use Academic Motivation Scale (AMS-C 28) (Algharaibeh, 2021; Miulescu, 2019; Zeng & Yao, 2023). The Academic Motivation Scale (AMS) is a valuable instrument whose measurement distinguishes motivation derived from interests and actual identification from motivation derived from external control (Utvær & Haugan, 2016). Dimensionality analysis for AMS consisted of intrinsic motivation, extrinsic motivation, and demotivation, with strong evidence of appropriate adjustment and discrimination (Souza et al., 2021). The data collection procedure includes the process of preparing a Google form, then sharing the link to students of the Faculty of Medicine and limiting the filling time to no more than one week from the time the link is provided. The researcher explained the importance of honesty and responsibility for filling out the statements in the contents of each statement in the instrument.

Researchers conducted classical assumption tests including normality tests, heteroscedasticity tests, and multicollinearity tests. After the regression analysis was conducted, hypothesis testing will be conducted with the f test, t test, and coefficient of determination.

Result and Discussion

The research results show the data displayed in descriptive statistics as follows:

Figure 1
Descriptive Statistics



The results of the normality test with the One-Sample Kolmogorov-Smirnov Test are as follows:

Table 1
One-Sample Kolmogorov-Smirnov Test

		AM	TM	AA
N		36	36	36
Normal Parameters[a,b]	Mean	176.86	87.08	3.3725
	Std. Deviation	12.971	7.012	.22778
Most Extreme Differences	Absolute	.125	.095	.112
	Positive	.081	.061	.112
	Negative	-.125	-.095	-.063
Test Statistic		.125	.095	.112
Asymp. Sig. (2-tailed)		.172[c]	.200[c,d]	.200[c,d]

In the One-Sample Kolmogorov-Smirnov Test normality test, the sig. value is > 0.05 with AM of .172, the sig. value of TM is .200 and the sig. value of AA is .200 so that the data is stated as normal.

The results of the heteroscedasticity test are as follows:

Table 2
Heteroscedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.099	.360		.275	.785
	AM	.001	.002	.072	.333	.741
	TM	-.001	.004	-.037	-.174	.863

In the heteroscedasticity test with the Glejser test on the AM and TM variables with sig values of .741 and .863. both > 0.05, it is stated that there is no heteroscedasticity.

The results of the multicollinearity test are as follows:

Table 3
Multicollinearity Test VIF Value

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	TM	.652	1.534
	AM	.652	1.534

Furthermore, the results of the multicollinearity test with tolerance and VIF values of TM .655 > 0.100 and 1,534 < 10.00 it is stated that there is no multicollinearity.

The results of the T test are as follows:

Table 4
t-Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.187[a]	.035	-.024	.23044

The results of the F test are as follows:

Table 5
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.063	2	.032	.597	.556[b]
	Residual	1.752	33	.053		
	Total	1.816	35			

The significance value obtained was 0.556 > 0.05, which means that the TM and AM variables simultaneously have no effect on AA.

Table 6
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.920	.573		5.098	.000
	AM	.004	.004	.224	1.059	.297
	TM	-.003	.007	-.086	-.408	.686

T value 1.059 < from t table 1.688 and sig value .297 > 0.05 then it is stated that there is no significant influence of AM partially on AA. Furthermore, TM with t value -.408 < from t

table 1.688 and sig value .686 > 0.05 it is stated that there is no significant influence of TM partially on AA.

In order for students to successfully plan big things in themselves to be effective in TM, they need to have an awareness of the factors that occupy time. Students need to have a good understanding of how long it takes to complete individual tasks and direct themselves, and be able to make short-term plans (Adams & Blair, 2019). Students' attitude towards TM, short-term and long-term planning plays an important role in improving their GPA (Mulugeta & Pandian, 2022).

Time is a resource that must be managed in a forward-thinking manner. It cannot be regenerated and we must be ready to use it when the time comes. Planning is essential in managing and learning to manage time to complete work with the desired quality. This is an important skill to learn to be productive and fulfilled while making time for other important activities with family, friends, or simply to pursue one's own interests. TM is not about doing the wrong thing faster, t is about doing the right thing, at the right time.

The skills that a person has in managing time, completing tasks, planning schedules, and using time effectively and efficiently so that it provides benefits for him. TM can be trained by anyone. Even individuals who have the ability to manage TM can achieve several goals simultaneously. Good TM and study motivation affect GPA (Andari & Nugraheni, 2016). Previous studies have shown a significant and positive relationship between TM and AM of nursing students. This shows that students' AM increases through successful control and planning of activities within time limits (Ghiasvand et al., 2017; Vu et al., 2022). Good TM skills are necessary for students to learn. Students must take the necessary approaches and implement the strategies to be effective and more productive. TM skills give students the ability to plan ahead and prioritize upcoming tasks and events. This is an important factor in keeping students organized and avoiding procrastination, and ultimately leads to academic success (Cyril, 2015). In addition, the learning environment significantly influences students' professionalism and AA (Almansour et al., 2024).

Structured study habits greatly influence students' AA. Some positive study habits, such as good time management, effective note-taking techniques, active learning, and maintaining consistency and discipline can improve understanding and memory of the contents of the lesson material (Jafari et al., 2019). A conducive learning environment, the use of learning strategies that suit each person's learning style, and the ability to cope with stress and stay motivated also play an important role in academic success. Students who have structured study habits tend to achieve better results than those who study irregularly or rely solely on overnight study systems. Therefore, building good study habits early on can be a long-term investment in education.

It is important for students to identify their strengths and weaknesses to help adjust their study techniques to achieve desired learning outcomes. Students are also encouraged to create individualized learning plans with their academic advisors (O’ Sullivan et al., 2024).

Conclusion

AA is essential for all students who want to achieve a successful career. Factors that influence AA include study habits, TM, AM, social support, and a conducive learning environment. By

implementing effective study strategies and discipline, students can improve their GPA and increase their chances of success in the academic and professional world.

Time is a resource that must be managed in a forward-looking manner. The skills that a person has in managing time, completing tasks, making schedules, and utilizing time effectively and efficiently so that it provides benefits for him. The results of the f test obtained no significant effect of TM partially on AA. R Square shows a number stating the magnitude of the influence of the AM and TM variables simultaneously on AA. Although there is no significant effect, it does not mean that there is no effect between AM and TM on AA, there is an effect, but it is small.

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