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Effects of office hours on the academic performance of students in Mogadishu universities, Somalia

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ABSTRACT

This study aims to examine the Effects of Office Hours on Academic Performance in Mogadishu, Somalia The study investigated the relationship between students' engagement in office hours, time spent studying, utilization of academic support services, and their influence on academic performance. The study utilized cross-sectional design to collect data from 348 first year students from four universities in Mogadishu. The data was collected through an online survey using a non-random purposive sampling technique. The data acquired were examined utilizing R-programming, Structural Equation Modeling (SEM), and SPSS 22.0. The study's findings showed noteworthy correlations between students' engagement in office hours, amount of time spent studying, utilization of academic assistance resources, and their academic performance. The null hypotheses (H1, H2, and H3) were rejected since their corresponding p-values of were all below the threshold value of 0.05. According to these findings, the researchers suggest improving academic Performance by increasing participation in office hours, dedicating more time to studying, and making better use of academic assistance resources. These findings and the recommendations of this study are expected to influence the future direction of Office Hours and offer useful insights for educators and policymakers in enhancing university environments, facilities, and teaching capacities to further improve student involvement in Office Hours.

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KEYWORDS
Student engagement; academic support services; office hours and academic performance; Student Success; Educational Enhancement.

SUBJECTS
Study Skills; Sustainability Education, Training & Leadership; Adult Education and Lifelong Learning; Classroom Practice; Higher Education

Introduction

Office hours are widely acknowledged as a significant chance for students to communicate with their instructors, obtain clarification, and receive individualized instruction outside of regular classroom interactions. (Hoxha et al., 2022). However, the university under study does not currently have the practice of office hours. The aim of this research is to examine the impact of attending office hours on academic Performance, emphasizing the possible advantages it provides in terms of academic success, skill enhancement, and overall learning outcomes. The purpose of this inquiry is to offer suggestions for the integration of office hours in the institution, acknowledging its capacity to improve student achievement. Office hours have been a prevalent practice at colleges worldwide, recognizing the significance of cultivating student-faculty interactions outside of conventional classroom environments.(Calamia et al., 2022).

Global research has consistently shown that participating in office hours has a favorable effect on student involvement, motivation, and academic performance. Research has shown that students who actively engage in office hours demonstrate improved levels of academic performance and enhanced satisfaction with the course (Killingsworth & Xue, 2015). These results highlight the significance of office hours in fostering student achievement on a worldwide level.

Office hours have been recognized and utilized in several African countries, such as Nigeria, South Africa, and Kenya, within the context of higher education. The implementation and advantages of office

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hours have been acknowledged in these countries (Vidić et al., 2023) conducted a research that focused on Africa and found that consistent participation in office hours can result in enhanced academic achievement, heightened comprehension of course material, and the establishment of more robust student-instructor connections. These data highlight the beneficial effect of office hours on student outcomes in African higher education.

The lack of office hours in the universities being examined raises worries over its possible influence on academic Performance. However, both global and African research consistently indicate the beneficial consequences of participating in office hours (Arjomandi et al., 2023).

The universities being examined lack a formal practice of office hours, which prompts inquiries regarding its possible influence on academic Performance. In Mogadishu, the capital city of Somalia, there are various universities that do not yet have designated office hours. Although there is a lack of research specifically focused on colleges in Somalia. It is crucial to acknowledge the possible advantages of introducing office hours for students in Mogadishu. By actively engaging in office hours, students can avail themselves of the chance to obtain clarification, enhance their comprehension of course material, and cultivate significant relationships with their teachers, ultimately leading to enhanced academic success.

The academic landscape in Mogadishu universities, Somalia, presents a unique challenge regarding the absence of structured office hours. Office hours traditionally offer students a valuable opportunity to engage with instructors, seek clarifications, discuss course materials, and receive personalized guidance outside the confines of regular classroom settings. However, in certain academic institutions in Mogadishu, this crucial avenue for academic interaction is notably lacking.

The deficiency of established office hours in these universities raises profound concerns about the potential ramifications on students' academic performance and learning outcomes. Without dedicated time for one-on-one or small group discussions with instructors, students may encounter obstacles in grasping complex course content, clarifying doubts, and accessing tailored academic support. This absence of direct engagement with educators could impede students' academic progress, leading to suboptimal grades and a limited comprehension of key subject matter. Moreover, the absence of structured office hours in Mogadishu universities not only affects individual students but also reflects broader institutional challenges in fostering a conducive learning environment. The lack of a formalized system for academic interaction may hinder students' ability to receive timely feedback, engage in meaningful discussions, and cultivate a deeper understanding of course material.

Aligned with the study's objectives, which aim to investigate the relationships between office hour participation, study time, academic support utilization, and academic performance, this research seeks to fill a critical gap in the existing literature. By exploring the impact of the absence of structured office hours on students' academic performance in Mogadishu universities, the researchers strive to shed light on the significance of academic support mechanisms and their influence on student learning outcomes in settings where traditional support systems may be lacking.

The study was guided by the three objectives below:

1. To examine the relationship between office hour participation and academic Performance.
2. To assess the relationship between study time and academic Performance.
3. To explore the relationship between academic support utilization and academic Performance.

The authors constructed the research model shown in Figure 1, which illustrates the relationship between the independent variable (office hour participation, study time, and academic support utilization) and the dependent variable (students' academic Performance).

Literature review

Office hour participations and academic performance

Office hours serve as a valuable opportunity for students to interact with their instructors outside of the classroom setting. The literature on office hour and student academic performance explores the potential impact of student engagement in office hours on their overall academic achievement. This literature

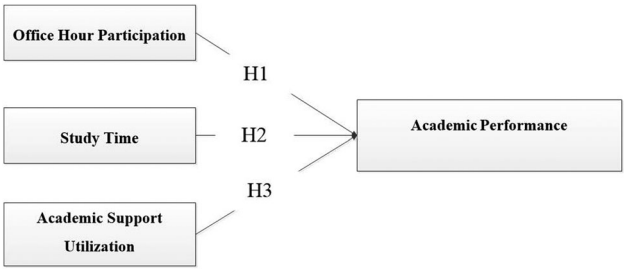

Figure 1. Proposed research model.

review aims to examine the existing research on the relationship between office hour attendance and student academic performance.

Research has shown a positive association between participating in office hours and academic achievement. Students who make use of office hours tend to demonstrate better performance in exams and possess a deeper comprehension of the course content (Arjomandi et al., 2023). However, various factors hinder students from attending office hours, including a solid grasp of the material, procrastination, and limited time to seek assistance before deadlines. Furthermore, instructors may hold unfavorable attitudes towards office hours, leading to insufficient effort in reaching out to students (Abdul-Wahab et al., 2019). Despite these obstacles, office hours are recognized as an underutilized teaching tool that can facilitate student-faculty interactions and enhance student outcomes. Additional investigation is necessary to identify behaviors that promote student success and optimize the effective utilization of time outside the classroom (Wang et al., 2023).

A number of studies have repeatedly demonstrated a link between attending office hours and succeeding academically. Building on this body of work, the current study looked particularly into why Sultan Qaboos University students are reluctant to attend office hours with faculty members. Low attendance rates were found, and some students thought office hours were a waste of time. A number of factors, such as hectic schedules, scheduling difficulties, easy access to information, and negative attitudes from professors, contributed to the disinterest shown by students (Abdul-Wahab et al., 2019). The researchers advise putting policies in place to motivate teachers to have office hours, stressing to students the value of showing up, and including office hour attendance into course grades (Abdul-Wahab et al., 2019).

Engaging in office hours has been demonstrated to positively impact academic performance. Based on the data, students who regularly attended office hours received a mean course grade of B, while those who did not attend had an average grade of C. This juxtaposition implies that actively participating in office hours can enhance academic achievements (Mariano et al., 2022).

A study conducted by Fowler (2021), revealed that students who saw their teachers as accessible and encouraging shown a higher propensity to attend office hours and claimed superior academic performance. Conversely, students who viewed their instructors as aloof or inaccessible were less inclined to participate in office hour sessions and achieved lower levels of academic achievement. This highlights the importance of cultivating favorable instructor-student connections to encourage engagement during office hours and, consequently, improve academic performance. The study highlights the pivotal significance of instructor approachability and support in fostering student engagement and achievement during office hours (Hoxha et al., 2022).

In a study conducted by Warsame (2023), a longitudinal methodology was utilized to gather attendance data from students and analyze its relationship with their ultimate course grades. The results demonstrated a significant correlation between attending office hours and academic achievement. More precisely, students who often visited office hours achieved superior grades compared to those who attended less frequently. This study presents empirical evidence demonstrating the positive influence that enhanced engagement in office hours can have on students' overall academic performance (Fowler, 2021).

Study time and academic performance

The amount of time dedicated to studying has a pivotal role in determining a student's academic performance. The scholarly literature on study time and academic Performance investigates the correlation

between the quantity of time that students allocate to studying and their academic accomplishments (Hoxha et al., 2022).

Effectively organizing and allocating study time is crucial for attaining academic excellence and cultivating self-confidence in one's capabilities. It allows students to consolidate their comprehension of course material, strengthen fundamental principles, and proficiently implement their acquired knowledge (Bueno et al., 2022). Individuals can enhance their learning experience by setting aside specific time for studying and employing active learning techniques, such as reviewing notes, practicing problem-solving, and engaging in critical thinking. Efficiently managing study time enables students to optimize their learning experience, resulting in enhanced understanding, memory, and the capacity to utilize knowledge in many situations (Vortherms & Neal, n.d.).

Multiple studies have repeatedly shown a direct relationship between the amount of time spent studying and one's academic success. Nevertheless, there exists a threshold beyond which augmenting study duration may not result in a substantial enhancement in academic performance. This implies that there could be a point of diminishing returns in terms of academic achievements once a certain amount of study time is exceeded. Moreover, research has demonstrated a substantial correlation between variables such as social media usage and the drive to achieve positive outcomes with the amount of time dedicated to studying (Liu et al., 2023). Adequate allocation of time for studying is crucial for the acquisition of knowledge, the development of critical thinking abilities, and the mastery of course content. It enables students to efficiently arrange their activities, optimize their productivity, and prioritize their tasks. Efficiently managing study time can generally improve academic achievement and maximize the use of resources (Gao et al., 2022).

Similarly, multiple studies have investigated the relationship between the amount of time spent studying and the academic achievement of students across various academic disciplines. These investigations constantly demonstrate a direct correlation between the amount of time devoted to studying and academic performance. An interesting finding is that there is a curvilinear relationship, namely an inverted U-shaped pattern, which indicates that there is an ideal period for studying courses such as mathematics, science, and reading (Bueno et al., 2022). Miao's The research findings revealed a clear and positive association between the amount of time spent studying and academic scores (Bueno et al., 2022). This highlights the substantial impact that study time has on attaining excellent final marks. In addition, the chapter discussing theoretical concepts of time management in academic learning and performance highlighted the significant importance of self-monitoring, goal-setting, and efficient planning of study time in achieving academic success. Furthermore, it was noted that there exists a direct correlation between the amount of time dedicated to studying and one's academic achievement. Grades exhibit enhancement until a specific point at which study time reaches a threshold. Nevertheless, once that threshold is reached, additional increments in study duration do not significantly influence academic performance (Nordito, 2023). This discovery implies that there is an ideal amount of time dedicated to studying that produces the most favorable academic results.

Students who allocate a greater amount of time to studying exhibit elevated grades, enhanced performance on examinations, and a more profound understanding of the course material. These findings indicate that dedicating an adequate amount of time to studying can lead to improved academic performance and a deeper understanding of the material (Arnedt et al., 2020). It is crucial to acknowledge that the correlation between the amount of time spent studying and academic achievement may demonstrate diminishing marginal gains. Although dedicating a sufficient amount of time to studying is advantageous, there is a threshold beyond which increased study time does not yield substantial enhancements in academic performance. This suggests that there is an ideal equilibrium in the amount of time dedicated to studying that maximizes academic achievement, and surpassing this limit may not result in significant additional advantages. It emphasizes the idea that efficient study habits and tactics are just as crucial as the amount of time spent studying (Tomaszewski et al., 2022). Furthermore, while granting additional time for tests may have a minor beneficial effect on overall examination results, it does not necessarily tackle discrepancies in student achievements linked to variables like as gender, race/ethnicity, or college generation status. Hence, although dedicating time to studying is vital for students to achieve success, it is imperative to acknowledge that achieving fair outcomes in education necessitates addressing other elements and implementing systemic modifications in evaluation methodologies.

To rectify inequalities, a thorough strategy is necessary that extends beyond the allocation of study hours, in order to guarantee equitable and all-encompassing educational prospects for every student (Opperman, 2020).

Academic support utilization and academic performance

Studies suggest that academic support services have a significant impact on improving academic Performance, especially in community college environments. Research has demonstrated that actively participating in educational resources such as tutoring and study groups has a beneficial effect on students' academic achievements. These support services offer students supplementary assistance, explanation, and chances for cooperative learning, which can enhance their comprehension and proficiency in course material (Voisin et al., 2023).

Students that extensively employ library services, including as research databases and librarian assistance, generally attain higher GPAs and have more robust research and writing abilities in comparison to those who underutilize these tools (Ontong et al., 2020). Multiple studies have investigated the impact of library resources and services on student achievement in various settings. A study conducted at (Bueno et al., 2022) found a notable association between the library environment and students' study habits and academic success. This study highlighted the significance of the library in influencing students' learning behaviors and subsequently affecting their educational achievements (Sánchez-Almeida et al., 2021). A research conducted at Kent State University revealed a pervasive lack of understanding among international students regarding library resources and services. This discovery underscores the significance of intensifying marketing endeavors and outreach to guarantee that all pupils are cognizant of and may reap the advantages of the accessible resources. Sánchez-Almeida et al., (2021) a research conducted in southwest Federal Universities, Nigeria, showcased the beneficial influence of library resources, including textbooks, e-books, and reference services, as well as library amenities such as Wi-Fi access and user education, on the research endeavors of postgraduate students. These resources and services were discovered to augment the students' capacity to carry out research with efficiency. Nevertheless, a study carried out in the Ilala district of Tanzania revealed that library resources did not have a substantial impact on the academic achievement of pupils in certain secondary schools. The study indicates that additional variables may exert a more significant influence on academic achievement within that specific setting. Conversely, children who actively utilized academic support facilities, such as math laboratories and writing centers, demonstrated substantial enhancements in their subject-specific knowledge and overall academic performance. These facilities offer specialized aid and support, resulting in improved educational achievements (Voisin et al., 2023).

Students who utilized academic counseling services exhibited a greater probability of graduating within the expected timeframe and attaining superior academic performance in comparison to those who did not avail themselves of such assistance. Furthermore, group therapy services have demonstrated efficacy in diminishing levels of academic stress among high school students (Asmi Abdillah & Nurhayani, 2023). Moreover, a study conducted by Kostadinov (2022). Investigated the impact of guidance and counseling on academic requirements and identified a positive relationship between the provision of these services and the achievement of academic goals.

To summarize, the literature evaluation demonstrates a positive correlation between academic Performance and factors such as active involvement in office hours, dedicated study time, and utilization of academic assistance resources. Through active engagement in office hours, allocating ample study time, and making use of academic support services, students can optimize their academic performance, deepen their comprehension of course material, and attain their educational objectives.

Materials and methods

The primary aim of this study was to explore the effects of office hour participation, study time, and academic support utilization on the academic performance of teachers in the Banadir region. A cross-sectional research design was implemented to examine the relationships between variables at a specific time point, following common practices in educational research (Setiamurti et al., 2023).

A survey containing 25 Likert-scale questions (ranging from 1 – strongly disagree to 5 – strongly agree) was administered via Google Forms to 348 respondents from four universities in the Banadir region. Ethical approval was obtained, and all participants provided informed consent, with no conflicts of interest identified.

A probability sampling method was employed to ensure the selection of a representative sample from a population of 3,605 first-year students across the four universities in Mogadishu, Somalia. The research focused on first-year undergraduate students from these universities who had not utilized office hours, reflecting a higher level of need among this group. The total population of first-year undergraduates in 2023 across these universities was confirmed to be 3,605.

The selected population of first-year students shared a high degree of homogeneity, all being first-year undergraduates who had not accessed office hours. This homogeneity provided a level playing field for the study's investigations. The sample size of 348 respondents was determined following established methodologies outlined by Setiamurti et al. (2023) and calculated using method of Uakarn (2021) to ensure statistical rigor and representation of the homogeneous study population.

Sampling technique

Simple random sampling (SRS) was utilized to select participants. This technique ensured that each student in the subset had an equal chance of being chosen, minimizing bias and logistical challenges (Solis et al., 2022).

Data analysis

A quantitative analysis was performed on the gathered data using R-Programming for Structural Equation Modeling (SEMinR). With its user-friendly syntax, SEMinR makes the process of building and estimating structural equation models (SEM) easier. Instead of expressing underlying matrices and covariances explicitly, applied practitioners can use terminology that closely matches their typical modeling notions (such as reflection, composite, and interactions) thanks to SEM syntax. One method for calculating SEM models is Partial Least Squares Path Modeling (PLS-PM). The research model's validation and verification served as the basis for the estimation of the study's measurement and structural models. Convergent and discriminant validity were the constructs the measuring model's evaluation looked at. Three recognized measures of validity were evaluated by the study using convergent validity: convergent validity (AVE), indicator reliability (indicator factor loadings), and internal consistency (composite reliability, CR) (Bagozzi & Yi, 2012). According to recommendations, each construct's average variance extracted (AVE) should explain more than 50% of the variance, the indicator loadings should be greater than 0.5, and the composite reliability (CR) should be greater than the minimal threshold of 0.7 (Fornell & Larcker, 1981). Because of their low scale values, certain items were not included in the validation process. This was because their factor loadings were weak, measuring less than 0.5, or their Composite Reliability values were not validated.

According to Hair et al., (2011), the reliability analysis is deemed complete anytime the CR exceeds the minimum criterion of 0.70. The instrument's validity was checked using construct validity. The Partial Least Squares (PLS) method of data analysis was used to evaluate the study model as shown in Figure 1. The R–Programming software package was specifically utilized for this purpose. According to Hair et al. (2017), this program can handle non-normal data and offer models a comprehensive answer.

Results

The respondents' characteristics are listed in Table 1. Males (71.3%) were marginally higher than females (28.7%), reflecting the gender ratio of students in Somali higher education institutions. The majority of respondents (96.0%) were aged 18 to 22. This is because, over the past few years, many secondary school students have enrolled in colleges and universities. Approximately 86.5% of students major in science. The responders were predominantly from SIMAD University, accounting for 36.8% of the total. Zamzam University of Science & Technology (ZUST) had the second-largest proportion, making up 33.6%

Table 1. Demographics of respondents.

Variable	Response category	Frequency	Per cent (%)
Gender	Female	100	28.7
	Male	248	71.3
Age	18–22 years	334	96.0
	23 + years	14	4.0
Specialization	Arts Science	47	13.5
		301	86.5
Institution	SIMAD University	**128**	36.8
	SIU	**49**	14.1
	JUST	**54**	15.5
	ZUST	**117**	33.6

SIU: Somali International University, JUST: Jamhuriya University of Science & Technology and ZUST: Zamzam University of Science & Technology.

Table 2. Results for the measurement model.

Construct	Items	Loadings	Alpha	AVE	CR
OHP	OHP1	0.747	0.796	0.549	0.858772403
	OHP2	0.808			
	OHP3	0.718			
	OHP4	0.730			
	OHP5	0.698			
ST	ST2	0.797	0.822	0.651	0.881910426
	ST3	0.836			
	ST4	0.770			
	ST5	0.823			
ASU	ASU1	0.804	0.758	0.578	0.844990781
	ASU2	0.775			
	ASU3	0.732			
	ASU4	0.822			
SP	SP1	0.747	0.857	0.638	0.897703504
	SP2	0.834			
	SP3	0.867			
	SP4	0.808			
	SP5	0.730			

of the overall total. Somali International University (SIU) and Jamhuriya University of Science & Technology (JUST) had a comparatively lesser representation, accounting for 14.1% and 15.5% respectively (Solis et al., 2022; Tozkoparan & Odabaşı, 2023).

Measurement model

Both convergent and discriminant validity were used to analyze the measurement model.

Convergent validity

Convergent validity refers to an internal consistency metric that analyzes the adequacy of a scale's correlation of items to assess the same factor (Hair et al., 2017). Average Variance Extraction (AVE), factor loading, Cronbach's Alpha, Composite Reliability (CR), Dijkstra-rho Henseler's (A), as well as Jöreskog's rho (c) measurements, are used to determine them. According to this research, the item loading was higher than 0.7 (Hair et al., 2017). As seen in Table 2 and Figure 2, the AVE was greater than 0.5, and Dijkstra-(A) Henseler's and Jöreskog's (c) rho values were greater than 0.7. Because all three criteria met the necessary threshold values, these results confirm that all criteria were satisfied. Simultaneously, due to low factor loading, two items were dropped (Reise, 2012).

Discriminant validity

After verifying the convergency validity, examining the discriminant validity comes next. This study uses the Fornell–Larcker criterion, which is very common among the research community. As presented in Table 3, all constructs demonstrate appropriate discriminant validity (Fornell & Larcker, 2014) when AVE's square root is greater than the correlation of all reflective constructs.

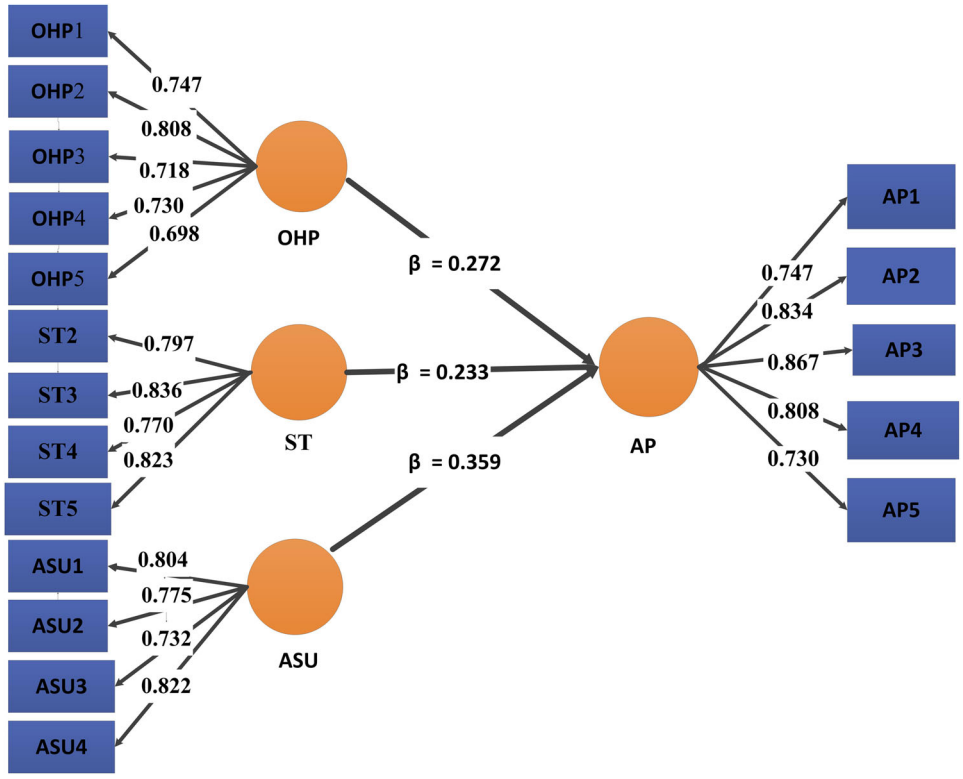

Figure 2. Measurement model.

Table 3. Fornell-Larcker criterion.

	Office Hour Participation	Study Time	Academic Support Utilization	Academic Performance
Office Hour Participation	0.741			
Study Time	0.630	0.807		
Academic Support Utilization	0.668	0.697	0.760	
Academic Performance	0.658	0.654	0.702	0.799

Table 4. Structural model.

Hs	Path relationship	Original Est	T Stat	PV	Decision	R2
1	OP → SP	0.272	3.871	0.0021	Supported	0.583
2	ST → SP	0.233	3.499	0.0023	Supported	
3	ASU → SP	0.359	5.416	0.0006	Supported	

Structural model

In this research, a variant of the multiple linear regression model known as Partial Least Squares (PLS) regression was used. Hair et al. (2017) recommend evaluating the structural model using the standard beta, R-squared, and t-values via bootstrapping approach having a resample of 10,000 to examine the structural model. The outcomes of this study's evaluation of each of these matrices and parameters are displayed in Table 4 and Figure 3. Using structural equation modeling (SEM), the study examined the connections between students' academic performance (AP) and Office Hour Participation (OHP), Study Time (ST), and Academic Support Utilization (ASU). The statistical results are compiled in Table 4, which shows that all three hypotheses were validated by the significant correlations between the independent and dependent variables. Office Hour Participation (OHP): Coefficient $\beta = 0.272$, $t = 3.871$t, $p = 0.0021$. Academic performance is positively impacted by OHP, suggesting that students who actively interact with their teachers outside of the classroom do better academically. This emphasizes how crucial the one-on-one advice and clarification possibilities offered during office hours are.

Study Time (ST): coefficient $\beta = 0.233$, $t = 3.499$, $p = 0.0023$. Academic achievement and study time were found to be significantly positively correlated. Students who set aside time for studying improve

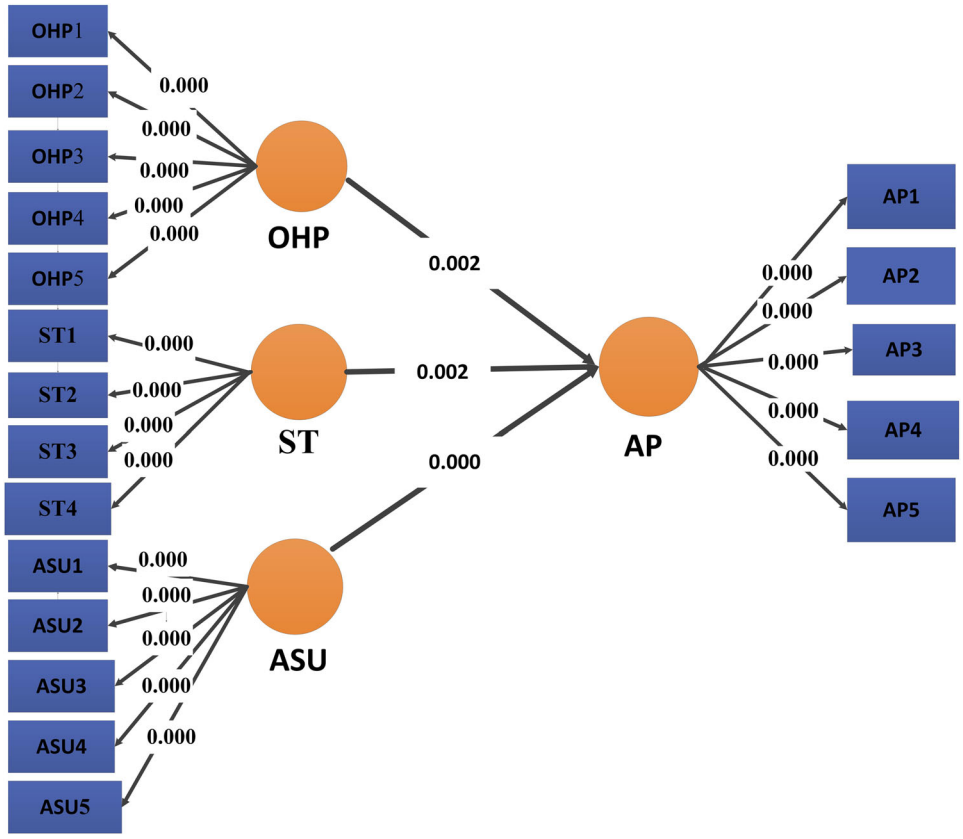

Figure 3. Structural model.

their understanding and memory of the subject matter, which boosts their performance. Academic Support Utilization (ASU): Coefficient $\beta = 0.359$, $t = 5.416$, $p = 0.0006$. ASU showed the strongest effect among the predictors, illustrating the critical role of academic resources such as tutoring and study groups in boosting students' academic outcomes. Variance Explained (R^2): The structural model accounted for 58.3% of the variance in academic performance (R2 = 0.583), indicating that OHP, ST, and ASU collectively provide a strong explanatory power for the dependent variable.

Discussions

The aim of this study was to determine the primary elements that influence the effectiveness of office hours for students in higher education, Mogadishu, Somalia. As mentioned, the presented hypotheses were examined using Structural Equation Modeling (SEM) analysis. As depicted in Figure 2, the results of this study confirmed and demonstrated the significance of three hypotheses: Office Hour Participation (OHP) (H1), Study Time (ST) (H2), and Academic Support Utilization (ASU) (H3). The findings confirmed all hypotheses.

According to the statistical calculation summarized in Table 4, employing Office Hour Participation in higher education significantly positively affects academic Performance. The T-statistics value of 3.871and the P-values value of 0.002 indicate that the significance level is less than 0.05. This indicates that the first objective is accepted aligning with findings from reputable studies such as (Abdul-Wahab et al., 2019; Calamia et al., 2022; Fowler, 2021; Hoxha et al., 2022),so the office hour participation and academic Performance suggests that actively engaging with instructors outside of formal class time can have a beneficial impact on academic outcomes. Office hours provide an opportunity for students to seek clarification, ask questions, and receive individualized guidance from their instructors. These interactions can foster a deeper understanding of course material, address any areas of confusion, and provide additional context that may not have been covered in lectures (Smith & Griffin, 2017).

One possible explanation for the positive relationship between office hour participation and academic Performance is the personalized attention that students receive during these sessions. In a classroom

setting, it can be challenging for instructors to address the individual needs of each student (Delfino, 2019). However, during office hours, students have the opportunity to have one-on-one discussions with their instructors, allowing for a more tailored learning experience. This personalized attention can help students overcome difficulties, gain clarity on complex topics, and build a stronger foundation of knowledge.

Furthermore, office hour participation can contribute to a sense of academic support and connection between students and their instructors. By actively engaging with faculty members outside of class, students may feel more comfortable approaching their instructors with questions or concerns. This can enhance the overall learning experience and create a supportive environment where students feel valued and encouraged to excel academically.

Study time

Based on the statistical calculation summarized in Table 4, it is possible to conclude that Study Time is significant predictors of academic Performance. The T-Statistics value of 3.499 and the P-Values value of 0.002, which is less than 0.05, demonstrate this. The second objective is therefore adopted. The positive relationship between study time and academic Performance reinforces the notion that investing more time in studying leads to improved academic achievements. The study's finding of the positive impact of study time on academic performance is supported by the following studies (Farooq et al., 2023; Schlusche et al., 2024). Allocating sufficient time for studying allows students to review and consolidate their understanding of course material, practice problem-solving, and develop critical thinking skills.

When students dedicate ample time to studying, they are more likely to engage in deep learning strategies, such as elaboration, organization, and reflection. These strategies promote better retention of information and a deeper understanding of concepts. Additionally, consistent study time allows for effective time management, which is crucial for balancing academic responsibilities and other commitments (Ridwan et al., 2019).

Moreover, the positive relationship between study time and academic Performance may also be attributed to the development of effective study habits and routines. Regular study sessions create a structured approach to learning, improving focus and concentration. By consistently dedicating time to study, students can develop discipline, self-regulation, and perseverance, which are essential qualities for academic success (Tomaszewski et al., 2022).

Academic support utilization

Based on the statistical calculation summarized in Table 4, it can be concluded that Academic Support Utilization are strong predictors of academic Performance. The T-Statistics value of 5.416 and the *P*-Values value of 0.000, which is less than 0.05, demonstrate this.

Consequently, the third objective is adopted. The significant positive association between academic support utilization and academic Performance underscores the importance of providing comprehensive academic support services. Academic support services, such as tutoring, writing centers, and study groups, offer additional resources and guidance to students, enhancing their learning experience and performance.

This result is confirmed by the following researchers (Abdi & Idris, 2024; Ananna et al., 2023; Saeed et al., 2023)

When students actively utilize academic support services, they gain access to expertise beyond the classroom. Tutors and writing centers provide targeted assistance, helping students overcome challenges, improve their skills, and gain confidence in their abilities. Study groups facilitate collaborative learning, allowing students to exchange ideas, share study strategies, and receive peer feedback, enhancing their understanding of course material (Baterna et al., 2020).

Students who utilize academic support services are more likely to receive individualized attention and tailored assistance. These services can address specific areas of weakness, provide guidance on study techniques, and offer feedback on assignments. By tapping into these resources, students can enhance their learning, reinforce their understanding of course material, and improve their academic performance (Heindl, 2019).

Conclusions

Office hour participation

The findings suggest that actively participating in office hours is associated with improved academic Performance. This highlights the importance of creating a supportive environment where students feel comfortable seeking help and guidance from their instructors outside of regular class time. Encouraging students to engage in one-on-one discussions with instructors can foster a deeper understanding of course material and address individual learning needs.

Study time

The positive relationship between study time and academic Performance underscores the significance of allocating sufficient time for studying. Students who dedicate ample time to studying have the opportunity to review and consolidate their understanding of course material, develop critical thinking skills, and engage in deep learning strategies. Promoting effective time management and cultivating study habits can enhance students' ability to balance academic responsibilities and improve their overall academic performance.

Academic support utilization

The findings highlight the importance of utilizing academic support services such as tutoring, writing centers, and study groups. These resources provide additional guidance, targeted assistance, and collaborative learning opportunities. Students who actively utilize academic support services benefit from personalized attention, tailored assistance, and the opportunity to reinforce their understanding of course material. Encouraging students to access these resources can enhance their learning experience and contribute to improved academic outcomes.

Recommendations

The universities in Mogadishu should consider implementing a structured system of office hours to provide students with dedicated time for academic interaction with instructors. This can be achieved by allocating specific time slots during which instructors are available to meet with students, either in person or virtually. Clear communication about office hours, including schedules and locations, should be provided to students to ensure their awareness and participation.

The universities in Mogadishu should actively promote the importance and benefits of office hour participation to both students and instructors. This can be done through orientation programs, course syllabi, and campus-wide announcements. Emphasize the value of one-on-one discussions, clarification of course concepts, and personalized guidance that can enhance students' understanding and performance.

Alongside the establishment of office hours, the universities should emphasize the significance of study time for students. Promote the importance of allocating sufficient time outside of class to review and consolidate course material, engage in critical thinking, and practice effective learning strategies. Provide resources and workshops on time management and study techniques to support students in optimizing their study habits.

In the absence of office hours, it is crucial for these universities to provide alternative avenues for academic support. Expand and improve existing academic support services such as tutoring centers, writing centers, and study groups. Ensure these services are easily accessible and adequately staffed with trained tutors or mentors who can provide personalized assistance to students seeking help outside of formal class hours.

These universities should encourage open lines of communication between students and instructors beyond office hours. Promote regular and effective channels of communication, such as email, online discussion boards, or virtual office hours, where students can ask questions, seek clarification, and receive timely feedback. Instructors should be encouraged to be responsive and approachable, facilitating ongoing communication with their students.

These universities should continuously monitor and evaluate the effectiveness of the implemented recommendations. Collect feedback from students and instructors to assess the impact of the

establishment of office hours, emphasis on study time, and enhancement of academic support services. Use this feedback to make necessary adjustments and improvements to further optimize student learning and performance.

The institution can address the lack of office hours and establish a helpful learning environment that improves academic Performance by putting these suggestions into practice. Students will be more empowered to actively participate in their education and achieve better academic results if the value of study time, office hour engagement, and access to academic support services is emphasized (Eryilmaz et al., 2023).

Areas for further research

While the current study has shed light on the positive relationships between office hour participation, study time, academic support utilization, and academic Performance, there are several areas for further research that can deepen our understanding of these variables.

Long-term effects

It would be valuable to investigate the long-term effects of office hour participation, study time, and academic support utilization on academic Performance beyond a single academic term or course. Understanding how these variables impact students' overall academic trajectory, persistence, and achievement throughout their educational journey could provide insights into their sustained influence.

Comparative analysis

Conducting comparative analyses across different educational institutions or instructional approaches could provide valuable insights into the effectiveness of office hour participation, study time, and academic support utilization in varying educational contexts. Comparing institutions with different support structures, instructional methods, or student demographics can help identify best practices and inform policy decisions regarding the allocation of resources for academic support and student success initiatives.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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