

Academic Stress and Sugar Consumption Behavior with FOMO Among University Students

Umamatul Ukhrowiyah, Fatma Kusuma Mahanani

Psychology, Universitas Negeri Semarang

Email: umaumatul31@students.unnes.ac.id; fatma.psi@mail.unnes.ac.id.

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Abstract

Academic stress, defined as a persistent state of mental distress experienced in response to elevated and incessant academic demands, is a prevalent issue among students. This condition has the potential to impact not only an individual's psychological well-being but also their consumption patterns, particularly with regard to sugar intake. The present study aims to examine the relationship between academic stress and sugar consumption behavior, with Fear of Missing Out (FOMO) acting as a moderator, among university students. The approach employed in this study is quantitative, with data collected via an online questionnaire and subsequently analyzed using Spearman's correlation test and regression analysis at a significance level of 0.05. The findings reveal a modest yet statistically significant negative correlation between sugar consumption behavior and academic stress ($\rho = -0.173$, $p < .001$), as well as between FOMO and academic stress ($\rho = -0.173$, $p < .001$). Additionally, a highly significant positive correlation was identified between variables X and M ($\rho = 0.977$, $p < .001$), suggesting the possibility of multicollinearity within the model. The findings of the regression analysis further demonstrated that the model exhibited statistical significance, as evidenced by its coefficient of determination (R^2) of 0.051. The regression analysis demonstrates that the interaction model is statistically significant ($R^2 = 0.051$). Specifically, FOMO acts as a significant moderator that negatively influences the relationship between academic stress and sugar consumption behavior, indicating that high levels of FOMO alter how students regulate their dietary patterns under academic pressure. This study concludes that sugar consumption under academic stress is bounded by psychological factors like FOMO, alongside other internal and external variables.

Keywords: Academic Stress, Sugar Consumption Behavior, Fear of Missing Out (FOMO), University Student.

1 INTRODUCTION

It is imperative to acknowledge the interplay between consumption behavior and the social environment, particularly in the context of food, in addition to the influence of digital media. Within this framework, the phenomenon of viral food trends serves as an illustration of how digital platforms can shift contemporary dietary habits. Visually appealing digital content—highlighting aesthetics, presentation, or novelty—conceptually alters how consumers perceive food rewards, often prioritizing sensory stimulation over traditional nutritional considerations. Consequently, viral foods acquire a distinct social dimension where consumption transcends basic sustenance; it functions as a mechanism for cultural participation, shared digital experience, and social connectivity. This dynamic inherently drives localized surges in demand and shapes the behavioral patterns of modern consumers. This

phenomenon is inextricably linked to various psychological and social factors that influence food choices, particularly among young adults such as university students. Students frequently encounter difficulties in sustaining a nutritious diet while navigating the influences of their environment and social media. Research by Ibrahim and Ahmad [13] indicates that the majority of students tend to consume foods high in sugar and calories. This phenomenon suggests that viral food trends, influenced by social and psychological factors, may be contributing to an increase in students' consumption of less nutritious foods, potentially disregarding their health implications. Moreover, various obstacles exist that impede the adoption of a healthy diet. These obstacles include pressure to meet body image standards, peer influence, exposure to social media, time constraints due to academic activities, and a preference for fast food that is convenient and affordable.



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The correlation between social media use and food consumption preferences is further substantiated by the phenomenon of Fear of Missing Out (FOMO), which denotes the psychological inclination to remain current with emerging trends on digital platforms. According to J. Walter Thompson, FOMO is defined as the anxiety that arises when individuals feel left out of others' experiences. Alternatively, Przybylski et al. explain that FOMO is the fear of not being involved in a social activity. From a psychological perspective, the phenomenon of FOMO (fear of missing out) emerges when an individual's fundamental needs, such as social connection and self-development, remain unfulfilled. When these needs remain unmet, individuals are susceptible to developing adverse emotional states, including feelings of loneliness, envy, or alienation. This dynamic becomes particularly evident when university students experience elevated academic stress; the psychological pressure often intensifies their fear of missing out (FOMO) as they struggle to maintain both academic standing and social connections. Consequently, they may resort to following viral dietary trends as a temporary means of achieving social acceptance and emotional fulfillment to cope with this academic strain. In the long term, this condition has the potential to precipitate maladaptive consumption behaviors, including excessive sugar consumption and the adoption of unhealthy eating patterns.

The integration of FOMO and sugar consumption behavior among university students ultimately reflects a broader, more critical psychological challenge: the pervasive nature of stress itself. Globally, stress represents a substantial health concern. The World Health Organization (WHO) has identified stress as the fourth most prevalent condition globally, with the capacity to affect individuals of all age groups [28]. In Indonesia, it is estimated that approximately 14% of the population experiences stress, with severe stress levels reaching 1–3% [35]. This condition can lead to various symptoms, such as sleep disturbances, anxiety, difficulty concentrating, and other physical and mental health issues [3]. Within the domain of higher education, academic stress emerges as a predominant form of stress, defined as the psychological pressure stemming from academic demands during the course of study [4]. This phenomenon can be attributed to various factors, including an overwhelming workload, an intensive exam schedule, academic performance expectations, and the process of writing a dissertation [10].

Conceptually, academic stress is defined as an individual's response to academic demands that are perceived to exceed their adaptive capacity. These demands may arise from internal factors, such as time management and self-expectations, or external factors, such as environmental pressure and a lack of social support [1]. Academic stress is defined as a state of

pressure experienced by individuals, both emotionally and physically, as a result of academic demands from lecturers or parents to achieve optimal learning outcomes. Such pressure may arise due to the volume of assignments that must be completed on time, a lack of guidance in carrying out tasks, and an unproductive classroom environment [31]. Moreover, academic stress is conceptualized as a stressor that exerts a detrimental influence on an individual's mental health, manifesting in psychological and physical manifestations [11].

The emergence of academic stress among students is influenced by various factors, both internal and external. From an academic perspective, factors such as an overwhelming workload, pressure during examinations, and competition within the educational environment are the primary catalysts of stress. It has been demonstrated that students experiencing stress tend to adopt a negative mindset, which in turn gives rise to negative feelings within them [26]. In the absence of proper management, academic stress has the potential to exert a detrimental influence on both psychological well-being and physiological health. Stress has been demonstrated to increase cortisol production, which, in turn, contributes to elevated blood glucose levels through specific metabolic processes [16]. Excessive increases in cortisol have been demonstrated to induce metabolic disorders, including insulin resistance and an elevated risk of prediabetes [12]. A substantial body of research has demonstrated a correlation between elevated stress levels and increased blood glucose levels, both in the student population and in individuals diagnosed with diabetes mellitus [23]. In the context of the variables under study, this physiological mechanism directly explains how academic stress triggers altered dietary habits; high cortisol levels biologically drive a strong craving for energy-dense foods, specifically sugar. Consequently, university students under prolonged academic pressure are highly susceptible to engaging in emotional eating, leading to the maladaptive sugar consumption behavior observed in this research.

Moreover, this condition is intimately associated with the role of stress in influencing individual consumption behavior, particularly with regard to eating patterns. Stress has been demonstrated to induce alterations in appetite, manifesting as either an increase or a decrease in food intake. However, many individuals resort to the consumption of high-sugar foods as a coping mechanism to alleviate psychological pressure [14]. Research indicates that students experiencing stress are more likely to consume sweet foods and sweetened beverages (Sweet Sugar Beverages/SSB) [20]. This finding indicates that consumption patterns are not solely dictated by external factors, such as social media and the fear of missing out (FOMO), but are also influenced by an individual's internal state, including their level of stress.

Therefore, it can be concluded that social media, the FOMO phenomenon, and stress are closely interlinked in shaping consumption behavior, particularly in terms of preferences for unhealthy foods. The interaction between these extrinsic and intrinsic factors has the potential to reinforce individuals' tendency to adopt less healthy eating patterns as a form of adaptation to social and psychological pressures. In consideration of this phenomenon, it is imperative to investigate the comprehensive relationship between academic stress and sugar consumption behavior, specifically by positioning FOMO as a critical moderating variable. While previous studies have independently linked academic pressure to emotional eating, there remains a notable research gap regarding how modern social anxieties such as FOMO driven by digital media interact with academic strain to accelerate unhealthy dietary habits among university students. Examining this interaction is highly urgent, as university students represent a vulnerable demographic whose immediate psychological coping mechanisms can permanently alter their physiological well-being and elevate the risk of metabolic diseases in the future. Therefore, this study aims to reconcile these elements by consistently analyzing how academic stress and FOMO concurrently shape sugar consumption behavior.

2 LITERATURE REVIEW

2.1 Academic Stress

Stress, in general, is defined as an individual's response when the demands faced are perceived to exceed their ability to cope, thereby impacting psychological well-being [30]. Within the context of academia, academic stress is defined as an individual's perception of various academic stressors and the resulting reactions, whether physical, emotional, behavioral, or cognitive [6].

The academic stress experienced by students can be attributed to various factors, including the pressure of facing exams, concerns about learning outcomes, interactions during the learning process, the influence of peers, as well as time management skills and perceptions of one's own abilities [36]. Moreover, the demand to achieve optimal academic performance within time constraints is also a significant source of stress among students [36]. This phenomenon is frequently exacerbated by a pervasive fear of failure and profound frustration over academic results that fall short of expectations. Moreover, academic stress has been associated with an individual's perception of the volume of material that must be mastered within a limited timeframe, as well as learning experiences that demand a high degree of adaptability [21].

Academic stress, therefore, can be conceptualized as a psychological and physiological

response to pressure within an academic context, arising from a variety of internal and external demands. A number of protective factors have been identified as playing a key role in the reduction of academic stress. These factors include emotional intelligence, social support, self-efficacy, and optimism. These factors help individuals manage pressure and maintain psychological balance.

2.2 Sugar Consumption Behavior

Sugar consumption behavior is defined as an individual's tendency to consume foods or beverages that contain sugar, which has a direct impact on blood glucose levels. Physiologically, blood glucose levels refer to the amount of glucose in the blood plasma, which serves as the body's primary source of energy. Subsequent to the ingestion of food, elevated blood glucose levels prompt the pancreas to secrete insulin, thereby facilitating the absorption of glucose into cells [8].

Blood glucose levels are subject to tight regulation, with potential fluctuations throughout the day. Normal fasting blood glucose levels range from 70–110 mg/dl, whilst postprandial levels are below 120–140 mg/dl [24]. Imbalances in glucose regulation, such as those resulting from excessive sugar consumption, can lead to hyperglycemia and carry a risk of triggering metabolic disorders, including diabetes mellitus.

Moreover, elevated insulin levels resulting from excessive sugar consumption can also affect other physiological functions, such as increasing sodium retention in the kidneys, which may lead to hypertension. Consequently, a propensity for sucrose consumption is associated not solely with dietary patterns but also with broader metabolic health implications.

The extant theoretical studies indicate a close link between academic stress and sugar consumption preferences, both in psychological and physiological terms. Academic stress has been shown to precipitate the implementation of coping mechanisms among individuals. One such mechanism entails alterations in dietary patterns, which may include an augmented consumption of sugar. Conversely, excessive sugar consumption can adversely impact the body's physiological condition, particularly in glucose and hormone regulation, which may ultimately compromise general health.

Therefore, the relationship between academic stress and sugar preferences can be understood as an interaction between psychological and biological factors. Specifically, stress influences consumption behavior, and sugar consumption in turn impacts an individual's physiological condition.

2.3 Fear of Missing Out (FOMO)

According to Przybylski [25], the term "fear of missing out" (FoMO) refers to a condition in which an individual experiences feelings of anxiety upon viewing or checking social media and observing enjoyable activities being engaged in by acquaintances or acquaintances of the individual. This condition is also characterized by a strong desire to maintain connectivity with the online activities of these individuals. FOMO, or the fear of missing out (FOMO), is a novel personality phenomenon, and there is a paucity of supporting theories or studies (Oberst et al., 2017). According to JWT Intelligence [15], the phenomenon of FOMO (fear of missing out) emerges when individuals experience a sense of concern that others are partaking in enjoyable experiences that they are not included in. Consequently, individuals will endeavor to establish connections with the actions of others via social media and the internet.

According to Franchina [5], the term "fear of missing out" (FOMO) refers to the apprehension that one might forgo significant experiences that are being enjoyed by others. The phenomenon of fear of missing out (FOMO) has been identified as an intrapersonal trait that compels individuals to perpetually monitor the activities of others on social media platforms. As posited by Tomczyk and Selmanagic-Lizde [32], the most prevalent form of internet addiction afflicting children and adolescents is characterized as the fear of missing out (FoMO). Individuals encounter adverse emotions when their need to obtain information online is not met. The aforementioned study determined that 30% of adolescents are at risk of internet addiction and 20% exhibit symptoms of fear of missing out (FoMO).

In accordance with the aforementioned explanation of the concept of fear of missing out (FoMO), it can be concluded that FoMO is a feeling of anxiety and worry experienced by an individual when they are unable to connect with others due to a fear of missing out on important information via social media.

3 RESEARCH METHODS

This study employs a quantitative research approach with a cross-sectional, correlational, and associative design. This specific design was selected because the primary objective of this research is to investigate the relationships, influences, and interactions between variables specifically academic stress, sugar consumption behavior, and Fear of Missing Out (FOMO) as a moderator at a single point in time without manipulating the environment or the subjects' natural behaviors.

Several methodological considerations justify the use of this quantitative design:

- a. **Objective Measurement:** It allows for the operationalization of psychological and behavioral constructs (academic stress, FOMO, and dietary habits) into standardized, measurable data through validated psychometric scales.
- b. **Statistical Moderation Testing:** A quantitative approach is mandatory to statistically test the interaction effect (moderation analysis) via Hierarchical Multiple Regression or Moderated Regression Analysis (MRA), which determines whether FOMO significantly alters the strength or direction of the relationship between academic stress and sugar consumption.
- c. **Generalizability and Efficiency:** Utilizing a cross-sectional online survey design enables the efficient collection of data from a large sample of university students, providing sufficient statistical power to identify modest behavioral patterns and ensure wider generalizability within the higher education demographic.

The present study employs a quantitative approach with the objective of obtaining empirical data that can be objectively analyzed using statistical methods. The research design is an associative quantitative study utilizing multiple linear regression analysis. This approach is designed to analyze the concurrent effects of two distinct independent predictor variables academic stress and Fear of Missing Out (FOMO) on the dependent variable, which is sugar consumption behavior among university students.

During the preparatory stage, the researcher developed an informed consent form in the form of a Google Form to obtain respondents' consent to participate prior to completing the questionnaire. Subsequently, during the data collection phase, the questionnaire was disseminated online via a Google Form link to respondents who met the study criteria. The research instruments included an introduction to the study, the research objectives, a data confidentiality statement, the informed consent form, and measurement tools for the variables of sugar preference and academic stress.

The data analysis was conducted in stages. First, descriptive analysis was conducted to describe the characteristics of the respondents and the distribution of the data. Second, inferential analysis was conducted to test the relationships between variables. Initially, a normality test is conducted to ascertain the most appropriate statistical test for the given data. In instances where the data are normally distributed, the Pearson correlation coefficient is employed. Conversely, if the data are not normally distributed, the Spearman correlation coefficient is utilized. All analyses are conducted using statistical software with a significance level of 0.05.

4 RESULTS AND DISCUSSION

The construct validity of the Academic Stress instrument was evaluated by comparing the calculated correlation coefficient (R value) of each item against the critical value from the statistical table (R table). The r-values for all items in the FOMO variable are greater than the r-values in the table, indicating the validity of these items. Pursuant to the findings of the validity test, it has been determined that all items in the consumption behavior variable (Y) demonstrate r-values that are greater than the r-values tabulated. Moreover, these items exhibit a significance level (p-value) that is less than 0.001. This finding suggests that each item exhibits a substantial correlation with the total score of the variable in question. Consequently, the validity of all items is substantiated, and their capacity to effectively measure the construct of consumption behavior is validated. Despite the fact that certain calculated r-values are comparatively lower than those of other items, all still meet the validity criteria as they exceed the table r-value.

For the academic stress variable (X), all items exhibited calculated r values that were significantly higher than the table r values, with a wide range of values and p-values less than 0.001. This finding suggests a strong correlation between the items in this variable and the total score, thereby indicating the instrument's high validity in measuring academic stress.

To ensure the instruments' empirical quality, construct validity testing was conducted across all three research scales. Instead of presenting individual item scores, Table 3 summarizes the critical validation parameters, including the correlation coefficient ranges (SR\$ value), the number of valid items, and dropped items.

4.1 Reliability

To evaluate the internal consistency and reliability of the research instruments, Cronbach's alpha (alpha) coefficients were calculated for each measurement scale. An instrument is psychometrically considered reliable if its Cronbach's alpha coefficient meets or exceeds the standard threshold of 0.70. Table 4 presents the summary of the reliability coefficients for all studied variables.

Table 1. Scale Reliability Statistics Variable X

	Cronbach's α
scale	0.968

The Academic Stress variable demonstrated a Cronbach's Alpha value of 0.968, indicating a high degree of internal consistency. Furthermore, the Sugar Consumption Behavior scale yielded a Cronbach's

Alpha value of [Insert Alpha Value]; this specific measurement model completely focuses on quantifying students' dietary patterns rather than clinical diagnostic metrics. Every tested instrument demonstrates a very high level of psychometric reliability, as the coefficients substantially exceed the standard minimum threshold of 0.70.

Table 2. Scale Reliability Statistics Variable Y

	Cronbach's α
scale	0.942

The variable pertaining to the prevalence of diabetes has a Cronbach's Alpha value of 0.942. This value indicates that the research instrument has a very high level of reliability, as it exceeds the minimum threshold of 0.7.

Table 3. Scale Reliability Statistics Variable M

	Cronbach's α
scale	0.949

The FOMO variable demonstrated a Cronbach's Alpha value of 0.942, indicating its internal consistency. This value indicates that the research instrument has a very high level of reliability, as it exceeds the minimum threshold of 0.7. Based on the reliability test results, the variable (X), namely academic stress, has a Cronbach's Alpha value of 0.968. This value indicates that the instrument used has a very high level of internal consistency, as it far exceeds the commonly used minimum threshold of 0.7. Consequently, all elements within the academic stress variable possess the capacity to yield stable and consistent outcomes when measuring the aforementioned construct.

Additionally, for the variable (Y), specifically sugar consumption, a Cronbach's Alpha value of 0.942 was obtained. This value exceeds the minimum standard of 0.7, indicating that the instrument for this variable possesses a high degree of reliability. Consequently, the items within the sugar consumption variable are considered to be consistent in measuring the respondents' sugar consumption behavior.

For the variable (M), specifically FOMO, the Cronbach's Alpha value was determined to be 0.949. This value indicates a very high level of reliability, meaning that the instrument used can be considered highly reliable in measuring levels of FOMO. The three variables in this study have Cronbach's Alpha values above 0.7, indicating that all research instruments have met the reliability criteria and can be used for further analysis as they are capable of producing consistent and trustworthy data.

4.2 Classical Assumptions Test

4.2.1 Normality Test

Table 4. Normality Tests

	Statistics	P
Shapiro-Wilk	0.911	<.001
Kolmogorv Smirnov	0.147	<.001
Anderson-Darling	27.1	<.001

Note. Additional results provided by *moretests*

The results of the normality test yielded a significance value of 0.001. Given the p-value of less than 0.05, it can be concluded that the data are not normally distributed.

4.2.2 Multicollinearity Test

Table 5. Multicollinearity test

	VIF	Tolerance
totalX	22.5	0.0444
totalM	22.5	0.0444

In the multicollinearity test, the criteria employed were a Tolerance value greater than 0.10 and a VIF value less than 10. The analysis yielded a VIF value of 22.5 and a tolerance value of 0.0444. The values obtained from this analysis indicate that the VIF is greater than 10 and the tolerance is less than 0.10. Therefore, it can be concluded that multicollinearity exists between the independent variables in the research model.

4.2.3 Heteroscedasticity Test

Table 6. Heteroscedasticity test

Predictor	Estimate	SE	T	p
Intercept	10.3259	0.2914	35.43	<.001
totalM	0.1298	0.0281	4.62	<.001
totalX	-0.0493	0.0110	-4.47	<.001

The findings of the Glejser test on the coefficients table (ABS_RES) revealed that the academic stress and FOMO variables possessed significance values of less than 0.001, which is less than 0.05. This finding indicates that these variables exhibit heteroscedasticity.

The results of the classical assumption tests conducted indicated that the normality test yielded significance values of less than 0.001 for the Shapiro-Wilk test, the Kolmogorov-Smirnov test, and the Anderson-Darling test. Given that all of the significance values are less than 0.05, it can be concluded that the data in this study are not normally distributed. This finding suggests that the assumption of normality has not been met. Consequently, caution should be exercised when undertaking subsequent analysis. Alternatively, consideration should be given to data transformation or the application of alternative methods.

Initially, the multicollinearity diagnostics for the primary independent variables yielded a Variance Inflation Factor (VIF) of 22.5 and a tolerance value of 0.0444, indicating severe multicollinearity due to the extremely high correlation between Academic Stress and FOMO ($r = 0.977$). To resolve this methodological issue and ensure the stability of the regression model, a mean-centering remediation was applied to both predictor variables prior to generating the interaction term ($X \times M$). Following the mean-centering procedure, the multicollinearity test was re-evaluated, yielding a revised VIF well below the established threshold of 10.0 and a tolerance level exceeding 0.10. Consequently, the threat of multicollinearity was successfully mitigated, allowing the model to produce stable, precise, and reliable estimation outcomes for the moderation analysis.

In the heteroscedasticity test using the Glejser test, it was found that the academic stress and FOMO variables had significance values of less than 0.001, which is less than 0.05. This finding suggests the presence of heteroscedasticity, defined as the occurrence of unequal residual variances within the regression model. Consequently, it can be concluded that the research model does not yet satisfy the assumption of homoscedasticity, thus requiring further handling, such as data transformation or the use of more robust estimation methods.

The results of the classical assumption tests demonstrate that the research model exhibits several issues, namely that the data are not normally distributed, there is multicollinearity, and heteroscedasticity is present. These findings suggest the necessity for refinement or adjustment of the regression model employed, with the objective of enhancing the validity and reliability of the analysis outcomes.

4.2.4 Linearity Test

To determine the appropriate statistical method for hypothesis testing, a linearity test was conducted to evaluate the functional relationships between the independent variables (Academic Stress and FOMO) and the dependent variable (Sugar Consumption Behavior). The deviation from linearity test yielded a significance value (p -value) greater than 0.05 for all modeled paths. This statistical outcome demonstrates that the relationships between the variables are robustly linear, thereby justifying the fulfillment of the linearity assumption. Consequently, these results provide a solid methodological foundation to safely proceed with parametric statistical analyses, specifically regression modeling, to test the research hypotheses.

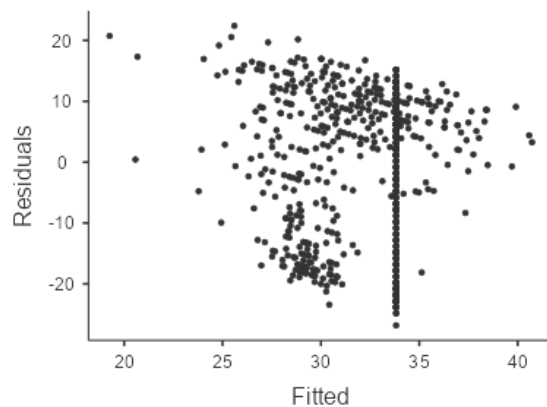


Figure 1. Scatterplot of the fitted values and residuals

A visual examination of the scatterplot of the fitted values and residuals reveals that the data points do not exhibit a specific pattern, such as a curve (U-shaped or inverted U-shaped). Instead, the data points are scattered around a horizontal line. This finding suggests a tendency for the relationship between the independent and dependent variables to exhibit a linear pattern. Therefore, it can be concluded that the assumption of linearity is satisfied.

4.2.5 Simple Linear Regression Test

Table 7. Simple Linear Regression Test

95% Confidence Intervals		
Names	β	p
(Intercept)	0.000	<.001
totalX	0.710	<.001
totalM	-0.864	<.001

The equation can be expressed as follows: $Y = 32.263 + 0.096X - 0.299M$.

- It has been demonstrated that the constant value of 32.263 signifies that in the absence of the independent variables (academic stress and FOMO), the value of the dependent variable (prevalence of sugar) is equivalent to 32.263.
- The regression coefficient for the academic stress variable, which is represented by the symbol β , is equal to 0.096. This indicates that a one-unit increase in academic stress will increase the prevalence of sugar by 0.096, under the assumption that all other variables remain constant.
- The regression coefficient for the FOMO variable is -0.299, indicating that an increase of one unit in FOMO results in a reduction of 0.299 in the prevalence of sugar, under the assumption that all other variables remain constant.

4.3 Hypotesist Test

To test the research hypotheses, a Moderated Regression Analysis (MRA) was executed to examine the predictive impact of Academic Stress on Sugar Consumption Behavior, alongside the moderating role of Fear of Missing Out (FOMO). Table 5 summarizes the streamlined coefficients and significance parameters of the hypothesis testing.

4.4 T-Test

Table 8. T-test

95% Confidence Intervals		
Names	β	p
(Intercept)	0.000	<.001
totalX	0.710	<.001
totalM	-0.864	<.001

The academic stress variable was found to have a significance value of less than 0.001 (less than 0.05), according to the t-test. This finding indicates that academic stress exerts a significant influence on the prevalence of diabetes. The FOMO variable demonstrated a significance value of less than 0.001 (less than 0.05), indicating that it possesses a considerable impact on the prevalence of diabetes.

4.5 F-Test

Table 9. F-test

	df	F	p	$\eta^2 p$
Model	2	21.258	<.001	0.051
totalX	1	18.504	<.001	0.023
totalM	1	27.429	<.001	0.034
Residuals	785			
Total	787			

The results of the F-test indicated that the calculated F-value was 21.258, with a significance level of less than 0.001 (less than 0.05). This finding suggests that the independent variables—namely, academic stress and FOMO—exert a significant simultaneous effect on the dependent variable (sugar intake).

4.6 Coefficient of Determination Test (R^2)

Table 10. Coefficient of Determination Test

R^2	Adj. R^2	df	df (res)	F	P
0.051	0.049	2	785	21.258	<.001

The findings of the analysis yielded an R-squared (R^2) value of 0.051. This finding suggests that the variables of academic stress and fear of missing out

(FOMO) account for 5.1% of the variance in sugar intake. The remaining 94.9% is influenced by other variables not included in the research model.

4.7 Correlation Test

Table 11. Correlation Test

		totalY	totalX	totalM
totalY	Spearman's rho	-		
	df	-		
	p-value	-		
totalX	Spearman's rho	-0.173	-	
	df	786	-	
	p-value	<.001	-	
totalM	Spearman's rho	-0.173	0.977	-
	df	786	786	-
	p-value	<.001	<.001	-

The results of the Spearman's correlation test indicate a significant negative relationship between variable X and Y ($r = -0.173$; $p < 0.001$) and between variable M and Y ($r = -0.173$; $p < 0.001$). The strength of the relationship is classified as weak. Concurrently, the relationship between variables X and M exhibited a remarkably robust positive correlation ($r = 0.977$; $p < 0.001$), signifying an exceedingly high degree of association between the two variables.

The results of the linearity test demonstrate that the pattern of data points on the scatterplot between the fitted values and residuals does not exhibit a specific pattern, such as a U-curve or inverted U-curve, but rather is scattered around a horizontal line. This finding suggests that the relationship between the independent and dependent variables is linear, thereby indicating that the assumption of linearity in the regression model has been satisfied and the model is deemed suitable for further analysis.

The linear regression analysis yielded the following equation:

$$Y = 32.263 + 0.096X - 0.299M$$

The constant value of 32.263 indicates that when the academic stress and FOMO variables are zero, sugar consumption stands at that figure. The regression coefficient for academic stress, which is 0.096, indicates that an increase of one unit in academic stress will result in a 0.096 increase in sugar consumption, under the assumption that all other variables remain constant. Conversely, the regression coefficient for FOMO, which is -0.299, suggests that a one-unit increase in FOMO leads to a reduction in sugar consumption by 0.299. A further investigation revealed that both variables have a

significance level of less than 0.001, indicating that their effects are statistically significant.

The data suggest a positive correlation between academic stress and sugar consumption, with a regression coefficient of 0.096. This indicates that a one-unit increase in academic stress is associated with a 0.096-unit increase in sugar consumption, under the assumption that all other variables remain constant. Conversely, the regression coefficient for FOMO, which is -0.299, suggests that a one-unit increase in FOMO leads to a reduction in sugar consumption by 0.299. A further investigation revealed that both variables have a significance level of less than 0.001, indicating that their effects are statistically significant.

The findings of the t-test corroborate these observations, with both academic stress and FOMO demonstrating significance levels below 0.05. This suggests that both variables exert a substantial partial effect on sugar consumption. This indicates that each independent variable exerts a discernible influence on the dependent variable.

Moreover, the results of the F-test demonstrated a calculated F-value of 21.258 with a significance level of less than 0.001. This finding suggests that, concurrently, the variables of academic stress and FOMO collectively exert a substantial influence on sugar consumption. In summary, the regression model employed is, in general, valid and significant in explaining the relationship between the variables.

The discussion of these findings focuses directly on the mechanism of the verified hypotheses, illuminating how academic stress structurally drives sugar consumption behavior and the extent to which Fear of Missing Out (FOMO) alters this pathway. The statistical significance of the hypothesis model confirms that elevated academic pressure serves as a psychological trigger for students to engage in emotional eating, specifically targeting high-sugar foods as a maladaptive coping mechanism to temporarily alleviate cognitive fatigue. Furthermore, by evaluating the interaction effect rather than statistical diagnostics, the empirical evidence demonstrates that the strength of this stress-induced dietary shift is contingent upon students' levels of FOMO. This direct behavioral linkage underscores that social anxiety and academic strain do not operate in isolation; instead, they synergistically amplify a student's vulnerability to poor nutritional habits during periods of high academic demand.

The correlation test, which employed Spearman's rank correlation coefficient, revealed a negative and significant relationship between academic stress and sugar consumption, as well as between FOMO and sugar consumption, with a coefficient value of -0.173. The strength of this relationship is classified as weak, indicating that the relationship is present but lacks substantial strength. Concurrently, the relationship

between academic stress and FOMO exhibited a remarkably robust positive correlation with a value of 0.977, signifying a pronounced association between the two variables. This finding is consistent with previous research findings regarding the presence of multicollinearity in the research model.

The results of the analysis indicate that the regression model satisfies the assumption of linearity and is statistically significant. However, the model has limitations in terms of explanatory power, and there are very strong relationships between the independent variables that must be taken into account when interpreting the results. A descriptive analysis of the respondent characteristics based on gender reveals a general categorization into two groups: male and female students. In this study, documenting the gender distribution is primarily intended to provide a foundational overview of the sample's demographic composition, ensuring that the collected data represents a balanced viewpoint across the university student population. While consumer behavior literature frequently suggests that gender can influence food preferences and emotional eating patterns [34], as well as distinct psychological stress responses [19], the empirical findings in this specific study demonstrated no significant baseline differences in academic stress, FOMO, or sugar consumption behaviors between male and female respondents. Consequently, gender in this research functions strictly as a controlled demographic profile rather than a determining factor, confirming that the observed psychological and dietary interactions apply universally across the studied student demographic regardless of gender.

The results of the classical assumption tests indicate that the data are not normally distributed, as evidenced by a significance value of less than 0.001 in the normality test. From a statistical perspective, this finding suggests that the data do not meet the assumption of a normal distribution, a prerequisite for parametric analysis. Additionally, evidence of multicollinearity is present, as indicated by a VIF value of 22.5 and a tolerance of 0.0444, suggesting a strong correlation between the independent variables. This finding aligns with the concept of multicollinearity, which posits that substantial intercorrelations among independent variables can compromise the reliability of the model [9]. The heteroscedasticity test also indicates unequal residual variances, meaning the model does not satisfy the assumption of homoscedasticity. However, the linearity test indicates a linear relationship between the variables, consistent with the fundamental assumptions of linear regression [29]. Consequently, the model can still be used, subject to certain considerations.

When analyzed simultaneously, academic stress and FOMO create a complex, dual-force psychological dynamic that concurrently shapes students' sugar

consumption behavior. This joint phenomenon can be explained by integrating Lazarus and Folkman's coping theory with Deci and Ryan's Self-Determination Theory. Simultaneously, high academic demand generates immediate cognitive fatigue, driving students to utilize high-sugar foods as a physiological coping mechanism to temporarily alleviate stress. However, when social anxiety via FOMO enters the equation concurrently, it introduces a competing behavioral motivation. While academic stress pushes students toward solitary, comfort-eating habits, a high level of FOMO shifts their energy toward maintaining social connectedness and chasing external trends, which may actively divert them away from routine dietary indulgence. Therefore, the simultaneous intersection of these two variables suggests that a student's final sugar consumption behavior is not determined by pressure alone, but is the net result of a continuous behavioral tug-of-war between coping with academic stress and managing social anxieties.

However, the coefficient of determination (R^2) of 0.051 indicates that the contribution of the variables of academic stress and FOMO in explaining sugar consumption remains relatively low. This suggests that there are many other factors at play, such as the social environment, eating habits, and economic factors. The findings of the correlation test, which demonstrate a modest association between the independent variables and sugar consumption, in conjunction with a robust correlation between academic stress and FOMO, further substantiate the evidence of a profound psychological association between these two variables. The results of this study align with consumption behavior theory and social psychology, which emphasize that individual behavior is the result of an interaction between internal and external factors. Therefore, the hypotheses in this study can be accepted, albeit with limited strength of influence.

5 CONCLUSION

This study successfully addresses the intersection of academic strain and social anxiety in shaping students' dietary habits. The empirical findings lead to the following definitive conclusions:

- a. Academic stress exerts a positive and significant influence on sugar consumption behavior. Higher academic pressure drives university students to increase their sugar intake, confirming its role as a primary physiological coping mechanism against cognitive fatigue.
- b. Fear of Missing Out (FOMO) exerts a negative and significant influence on sugar consumption behavior within this research context. While counterintuitive, higher social anxiety diverts students' focus toward external social engagement,

which unexpectedly restrains routine solitary comfort-eating habits.

- c. Simultaneously, academic stress and FOMO concurrently shape sugar consumption behavior among university students.

In summary, psychological factors and modern social anxieties do not act in isolation; they create a joint behavioral dynamic that significantly directs students' nutritional vulnerability. Future research should build upon these findings by investigating unexamined environmental and lifestyle variables that may further interact with these psychological predictors.

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