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PREVALENCE OF SKIPPING BREAKFAST AMONG UNDERGRADUATE MEDICAL STUDENTS

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ABSTRACT

Background: The day starts with breakfast, which is an important meal that contributes to daily nutritional intake and supports concentration, cognitive functions and overall health. However, skipping breakfast is common among which is usually influenced by demanding schedules, early morning classes or clinics. This study assesses the prevalence of skipping breakfast among undergraduate medical students and explores the reasons to contribute to cause.

Methods: An online descriptive cross- sectional study was conducted among undergraduate medical students at Adesh Institute of Dental Sciences and Research. Participants were selected through convenience sampling among undergraduate medical students. A self-administered questionnaire was distributed through institutional setting and via social-media groups using google forms. Informed consent was obtained from participants. The compilation of collected data was done on Microsoft Excel and analyzed using frequencies and percentages. The total calculated sample size was 256.

Results: The study reported 256 participants; however, the breakfast- skipping analysis included 243 responses, comprising 145 females and 98 males. Overall, 44% of students reported that they were sometimes skipping breakfast, 20% always skipped, 28% rarely skipped and around 7% never skipped breakfast. Thus, approximately 64% reported skipping breakfast either sometimes or always. The most common reason was early morning classes or postings(187 responses), followed by unavailability of preferable food in the mess/ cafeteria(25), less appetite in mornings(22) and fear of weight gain(5).

Conclusion: Breakfast skipping is a common interest among medical students , with early morning classes and postings being the most frequent reason. The findings highlighted the need to promote healthy breakfast habits and identify practical measures to facilitate regular breakfast consumption among medical students.

Keywords: Skipping Breakfast; medical Students; Breakfast Habits; Dietary Habits; Early morning Classes; Clinical Postings.

INTRODUCTION

A good breakfast is the best and most convenient meal to start the day.

At different times throughout history there were varying beliefs about the importance of breakfast. By the 16th century, Europeans began to see breakfast as an important meal in terms of overall health. The concept of “cooked breakfast” was widely adopted in the US, under Clean-Living Movement. In India recognized importance of breakfast in 19th century with expedition of East India Company. Recent medical advancement that involves holistic approach in treatment includes breakfast as important part of diet.^[1]

From physiological perspective, breakfast is unique among our meals which is eaten after the longest of our postprandial fasts. People who consume breakfast have a better intake of essential macronutrients and micronutrients having significant contribution to the total daily energy. It fuels the body with essential nutritious needs to function and helps the brain to concentrate during the day. It maintains positive health behavior and improved stress management and cognition. Conversely, the consequences of skipping breakfast activate starvation mode, leading to compensatory feeding later in the day such that overall energy intake is either unaffected or slightly lower. It may cause fatigue and suboptimal concentration levels. Hence students find difficulty in attending their lectures, also their cognitive power is impacted which further leads to weak scholastic and academic performance.^[1,2] A very extensive literature on nutrient intake suggests the extent to which breakfast-based nutrients contribute to overall daily nutrient intake. Vast majority of such studies show clear nutritional benefits in respect of public health importance. Therefore it deserves special attention, an opinion published by various international agencies, national governments and non-governmental organizations.^[2,3]

Even after knowing so many benefits, breakfast is often skipped. Multiple studies and surveys conducted in past reported similar results of skipping breakfast. The major reason for students skipping breakfast is fast-paced lifestyle i.e. lack of availability of time to eat before the first lecture of the day, followed by personal choices such as did not like to eat early, no appetite or oversleeping^[3,4,5]

In this cross sectional study conducted in a period at Adesh Institute of Medical Science and Research, we hope to find out whether there is really a high prevalence of breakfast skipping among this group of undergraduates and also determine the factors contributing to the poor breakfast habits.^[4,5]

AIM AND OBJECTIVES

Aim: To determine the prevalence of skipping breakfast among undergraduate medical students and possible reasons

Objectives:

- To estimate the prevalence of skipping breakfast among medical students
 - To compare prevalence of skipping breakfast among males and females
 - To identify possible reasons for skipping breakfast
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METHODOLOGY

Study design: An online descriptive cross-sectional study design

Setting: Institutional settings, Adesh Institute of Medical Sciences and Research

Participants: Undergraduate medical students were selected by convenience sampling technique. Excluding postgraduates

Study Variable:

Primary Variable- Frequency of skipping breakfast among undergraduate medical students

Independent Variable- Age, Gender/Sex of the student, residency and reported reason for skipping breakfast.

Operational Definition: Breakfast skipping was defined as not consuming breakfast. The participants were asked in the questionnaire to report their frequency of skipping breakfast in 4 categories, i.e. “always (6-7 times per week)”, “frequently (3-5 times per week)”, “occasionally (1-2 times per week)” or “never (eat breakfast daily)”.

Sample size: 256.

Out of 256 Respondents, 243 tend to skip breakfast.

Sampling procedure/technique:

Sample size is calculated by

$$N_0 = \frac{Z^2 pq}{e^2}$$

where Z= critical value (upon which level of confidence depends)
 p= prevalence of habit
 q= 1-p
 e= margin of error

According to previous study on Breakfast consumption patterns among the students at Ahfad University for women.

Prevalence of habit= 80%

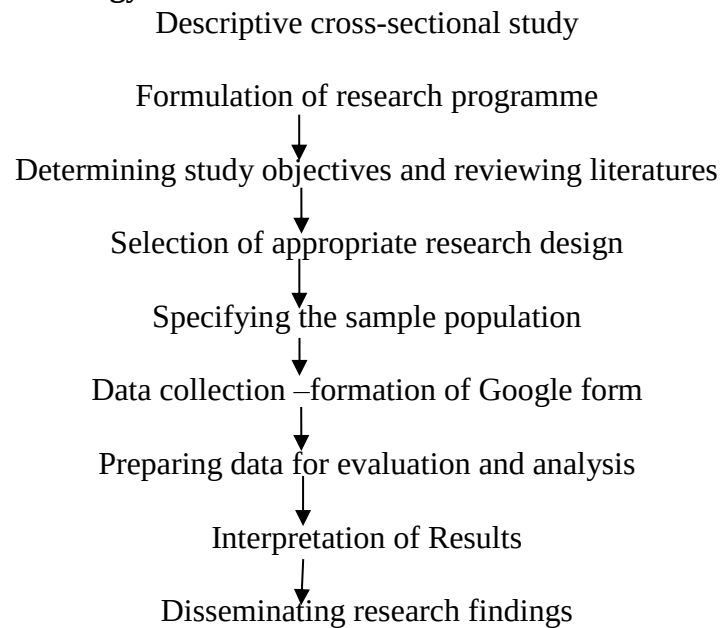
Therefore our sample size:

$$N_0 = \frac{(2)^2(0.8)(0.2)}{(0.05)^2}$$

where Z= 2
 e=0.05
 p=0.8
 q=0.2

$$\underline{N_0 = 256}$$

Description of methodology:



Instruments/Study tool/s/data collection forms:

Data collection form was made on Google which includes self-designed questionnaire. The questionnaire includes 10 questions that were relevant for research purposes. Forms were circulated and data was compiled.

(Annexure: attach Performa/forms)

Data collection process:

- A self-administered online survey was conducted by creating google forms.
- Survey link was shared on social media groups of our institution. And students were requested to participate in survey.
- Informed consent was taken for ensuring willingness to participate.
- Login Emails ids along with names were mandatory for limiting single response.
- Data obtained was prepared for evaluation and analysis.

Data analysis methods used:

- Responses obtained through google form were sorted out.
- Ms excel spreadsheet was prepared
- Results were calculated in percentage and frequency

Ethics: (Annexure: relevant material)

RESULTS & DISCUSSION

In our research we have aimed to find out the prevalence of skipping breakfast among the and what the major reasons affecting the outcome of our research.^[7,8]

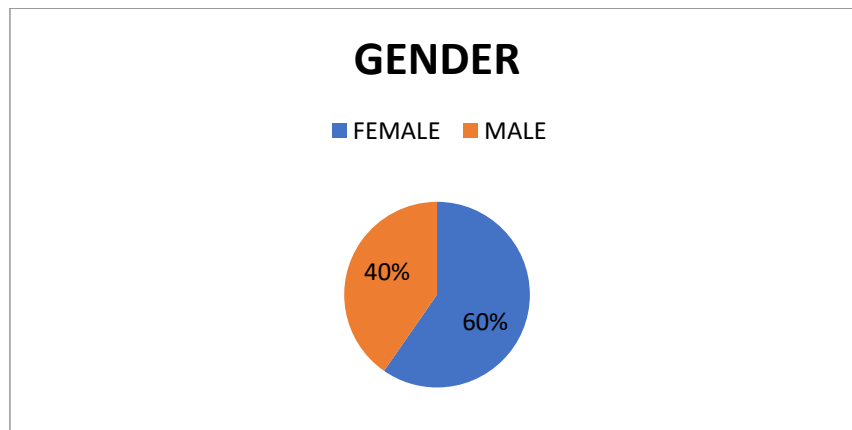
Through this study, we aim to reduce this prevalence and encourage more students to not skip breakfast which plays a crucial role in providing immunity along with other health benefits especially to the medical students.^[7,8]

Out of 256 participants who responded to survey,

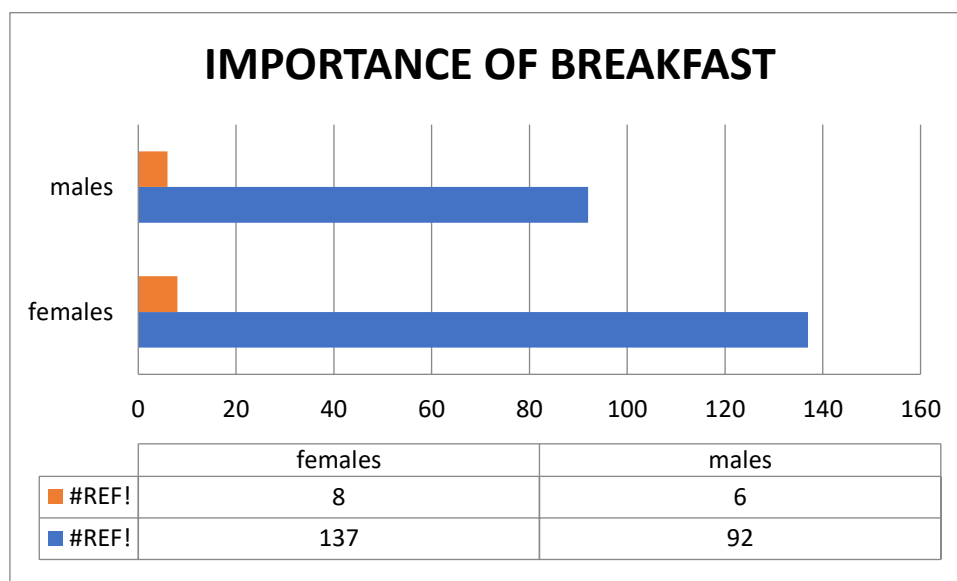
40% are males and 60% are females

Out of 145 (60%) females and 98(40%) males

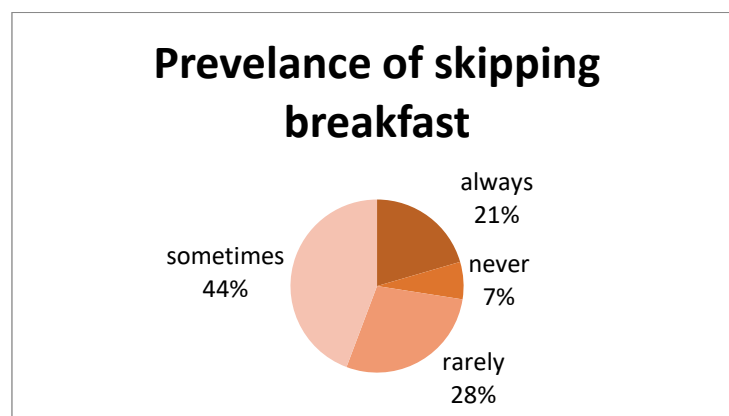
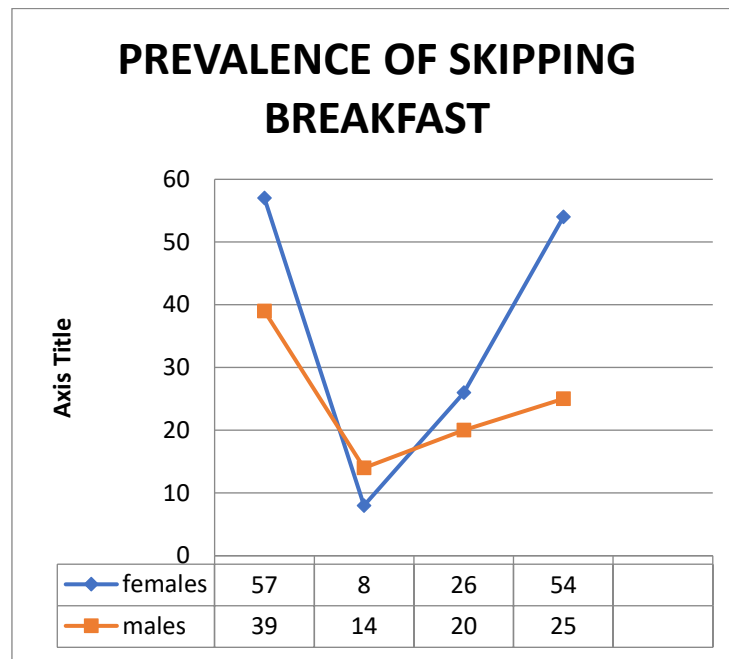
GENDER	NUMBER
FEMALE	145
MALE	98



Importance of breakfast is recognized more by females than males

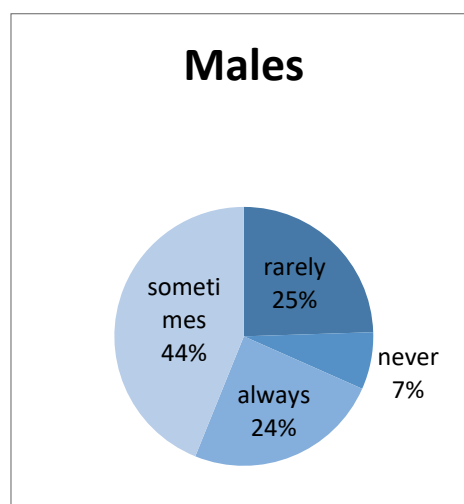


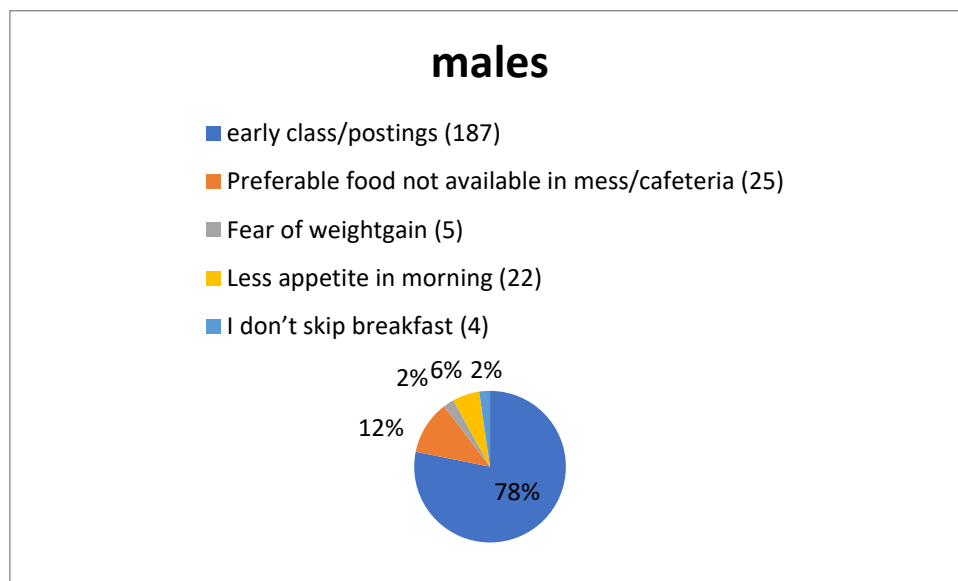
Prevalence of skipping breakfast among medical students, among 243 responses out of 256



Sometimes skipped	44%
Always skipped	21%
Never skipped	7%
Rarely skipped	28%

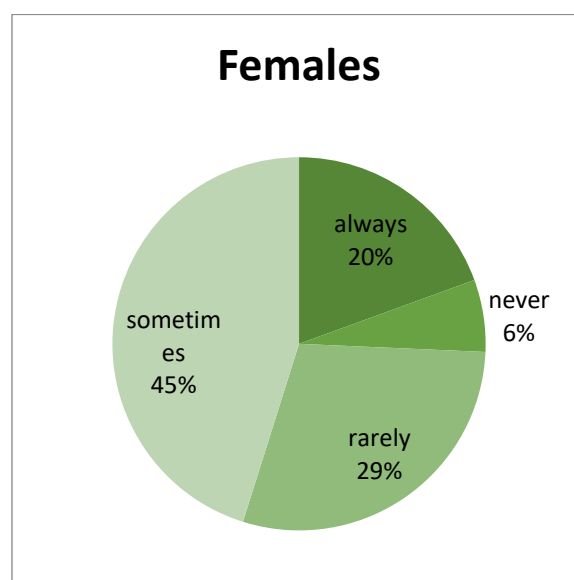
Pattern of skipping breakfast among males and females

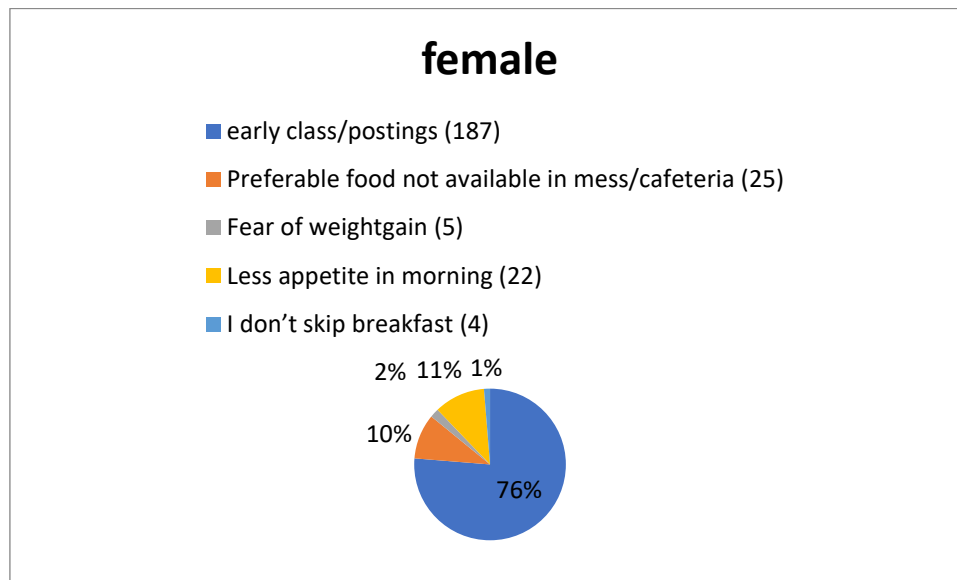




This below is the prevalence of skipping breakfast among male students

Sometimes skipped	44%
Rarely skipped	25%
Never skipped	7%
Always skipped	24%

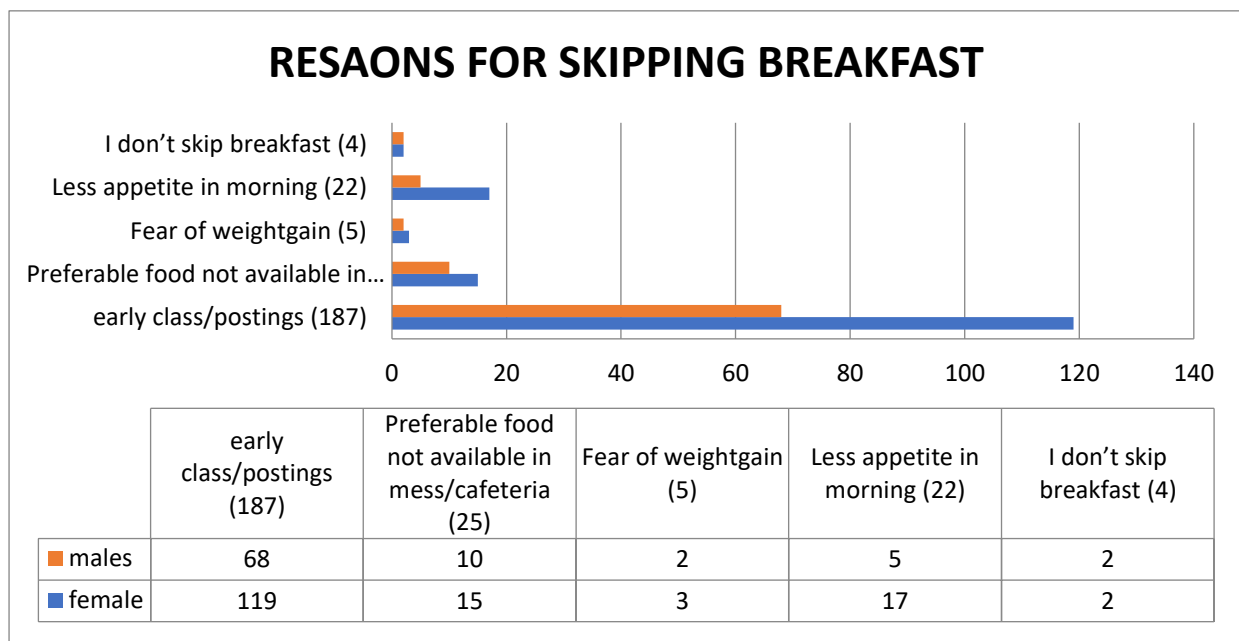


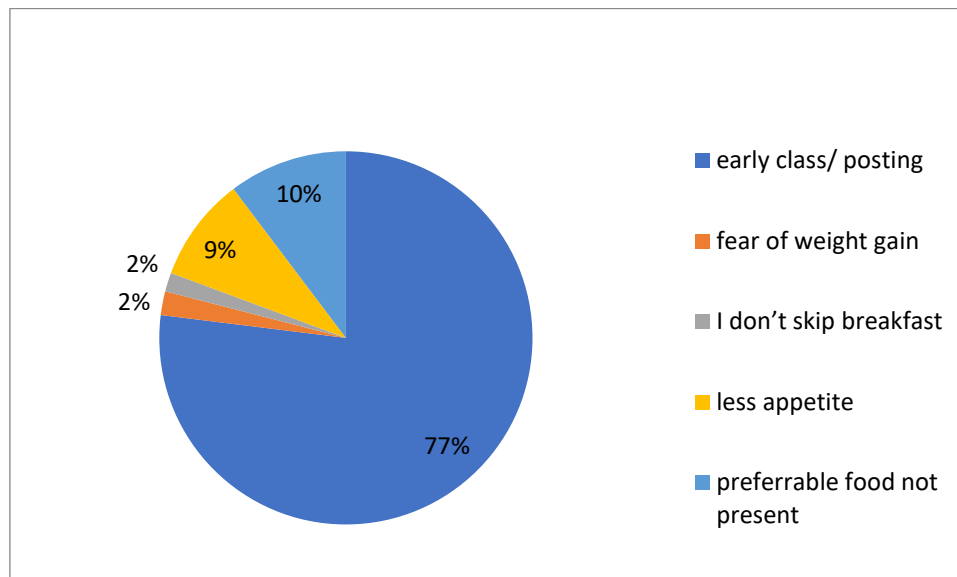


This below is the prevalence of skipping breakfast among female students

Sometimes skipped	45%
Rarely skipped	29%
Never skipped	6%
Always skipped	20%

Common reasons for skipping breakfast





CONCLUSION

In conclusion, our study highlights a significant prevalence of breakfast skipping among medical students, with nearly 65% of them frequently omitting breakfast.[9,10] Our research indicates that the primary factor contributing to this trend is the early morning classes or postings, leading to the majority of students missing their morning meal.[11]

Additionally, when we analyzed breakfast skipping patterns among male and female students, we observed a similar trend:

Among the male students (40% of the total), 69% reported skipping breakfast.

Among the female students (60% of the total), 65% reported skipping breakfast.

In light of these findings, it is evident that there is a comparable prevalence of breakfast skipping among both genders

Plan for future research / action

The findings of our present study hold significance as they will establish a foundational dataset for a more extensive, future, state-funded investigation. It is imperative that relevant authorities proactively initiate and endorse research endeavors aimed at formulating comprehensive policies for medical education.

These policies, in turn, will play a pivotal role in the cultivation of high-caliber medical professionals who can contribute effectively to healthcare systems.

REFERENCES

1. Ghafari M, Doosti-Irani A, Amiri M, Cheraghi Z. Prevalence of the Skipping Breakfast among the Iranian Students: A Review Article. Iran J Public Health. 2017 Jul;46(7):882-889. PMID: 28845398; PMCID: PMC5563869.
2. Bede F, Cumber SN, Nkfusai CN, Venyuy MA, Ijang YP, Wepngong EN, Nguti Kien AT. Dietary habits and nutritional status of medical school students: the case of three state universities in Cameroon. Pan Afr Med J. 2020 Jan 23;35:15. doi: 10.11604/pamj.2020.35.15.18818. PMID: 32341736; PMCID: PMC7174006.
3. Ackuaku-Dogbe EM, Abaidoo B. Breakfast eating habits among medical students. Ghana Med J. 2014 Jun;48(2):66-70. doi: 10.4314/gmj.v48i2.2. PMID: 25667552;

PMCID: PMC4310332.

4. Fujiwara T, Ono M, Iizuka T, Sekizuka-Kagami N, Maida Y, Adachi Y, Fujiwara H, Yoshikawa H. Breakfast Skipping in Female College Students Is a Potential and Preventable Predictor of Gynecologic Disorders at Health Service Centers. *Diagnostics* (Basel). 2020 Jul 13;10(7):476. doi: 10.3390/diagnostics10070476. PMID: 32668795; PMCID: PMC7400274.
5. Xian X, Wang C, Yu R, Ye M. Breakfast Frequency and Sleep Quality in College Students: The Multiple Mediating Effects of Sleep Chronotypes and Depressive Symptoms. *Nutrients*. 2023 Jun 8;15(12):2678. doi: 10.3390/nu15122678. PMID: 37375582; PMCID: PMC10304773.
6. Jennifer A, Srinivasan K, Raj JB. Effect of habitual breakfast skipping on information processing capacity, cortical response, and cognitive flexibility among medical collegiate - a cross-sectional study. *J Basic Clin Physiol Pharmacol*. 2023 Nov 14;34(6):755-759. doi: 10.1515/jbcpp-2023-0178. PMID: 37955249.
7. Abdullah M, Khurram K, Asim A, Naveed E, Abbas M, Raja HZ, Saleem N, Alnaser AF, Aldhafeeri YR, Alnusayri FS. Impact of Breakfast Consumption and Sleep Habits on Morning Attention and Concentration Among Health Professional Students. *Cureus*. 2024 Sep 17;16(9):e69592. doi: 10.7759/cureus.69592. PMID: 39421109; PMCID: PMC11484532.
8. Joseph N, Kumar A, Singh H, Shaheen M, Das K, Shrivastava A. Nutritional Supplement and Functional Food Use Among Medical Students in India. *J Diet Suppl*. 2018 Nov 2;15(6):951-964. doi: 10.1080/19390211.2017.1407384. Epub 2018 Jan 16. PMID: 29336622.
9. Alafif N, Al-Rashed A, Altowairqi K, Muharraq A. Prevalence of energy drink consumption and association with dietary habits among governmental university students in Riyadh. *Saudi J Biol Sci*. 2021 Aug;28(8):4511-4515. doi: 10.1016/j.sjbs.2021.04.050. Epub 2021 Apr 24. PMID: 34354437; PMCID: PMC8324967.
10. Bede F, Cumber SN, Nkfusai CN, Venyuy MA, Ijang YP, Wepngong EN, Nguti Kien AT. Dietary habits and nutritional status of medical school students: the case of three state universities in Cameroon. *Pan Afr Med J*. 2020 Jan 23;35:15. doi: 10.11604/pamj.2020.35.15.18818. PMID: 32341736; PMCID: PMC7174006.
11. Alshdifat E, Alkhawaldeh A, Albashtawy M, Ta'an W, Mohammad K, Al-Rawashdeh S, Malak M, Al-Modallal H, Al-Dwaikat T, Aljezawi M, Hamadne S, Suliman M, Abdalrahim A, Albashtawy S. Breakfast Skipping and Associated Factors Among Jordanian University Students. *Iran J Nurs Midwifery Res*. 2024 Jan 9;29(1):125-132. doi: 10.4103/ijnmr.ijnmr_301_22. PMID: 38333350; PMCID: PMC10849275.
11. Lu Z, Sun Z, Wu R, Du W, Zhang H, Zhang N, Chen G, Yu P, Sun S, Zhang Z, Gao L, Yu B, Duan S, Sun J. Breakfast prevalence of medical students is higher than students from nonmedical faculties in Inner Mongolia Medical University. *Eur J Clin Nutr*. 2020 Oct;74(10):1442-1447. doi: 10.1038/s41430-020-0569-8. Epub 2020 Jan 30. PMID: 32001811.
12. Sliwa SA, Merlo CL, McKinnon II, Self JL, Kissler CJ, Saelee R, Rasberry CN. Skipping Breakfast and Academic Grades, Persistent Feelings of Sadness or Hopelessness, and School Connectedness Among High School Students - Youth Risk Behavior Survey, United States, 2023. *MMWR Suppl*. 2024 Oct 10;73(4):87-93. doi: 10.15585/mmwr.su7304a10. PMID: 39378262; PMCID: PMC11559677.
13. Walker AN, Weeto MM, Priddy CB, Yakubu S, Zaitoun M, Chen Q, Li B, Feng Y, Zhong Y, Zhang Y, Wei T, Bafei SEC, Feng Q. Healthy eating habits and a prudent dietary pattern improve Nanjing international students' health-related quality of life. *Front Public Health*. 2023 Nov 24;11:1211218. doi: 10.3389/fpubh.2023.1211218. PMID: 38098838; PMCID: PMC10720919.