

**A PROSPECTIVE CROSS-SECTIONAL STUDY ON IMPACT OF LIFE STYLE ON
SLEEP AND FOOD HABITS IN YOUNG ADULTS*****¹Sreenu Thalla, ²Yarabothula Lakshmi Prasanna, ²Gumma Lohitha, ²Kota Venkata Sai Lakshmi, ³Bhavani Pentela**¹Department of Pharmacology, Vignan Pharmacy College, Vadlamudi, Guntur, Andhra Pradesh, India.²Department of Pharmacy Practice, Chalapathi Institute of Pharmaceutical Sciences, Guntur, Andhra Pradesh, India.³Department of Pharmacology, Noida Institute of Engineering and Technology (Pharmacy Institute), Greater Noida, Uttar Pradesh, India.***Corresponding Author: Sreenu Thalla**

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ABSTRACT

This prospective cross-sectional study aims to investigate the impact of lifestyle choices on sleep quality and food habits among young adults. In an era characterized by dynamic lifestyles and evolving dietary preferences, understanding the intricate relationship between lifestyle factors and fundamental health behaviours becomes imperative. A sample of young adults will be recruited, and data will be collected through structured questionnaires encompassing various dimensions of lifestyle, including physical activity, screen time, dietary preferences, and sleep hygiene practices. Among 617 subjects were participated in this study. Through rigorous statistical analyses, including correlation and regression models, this study seeks to elucidate the complex interplay between lifestyle factors and key health behaviours, namely sleep quality and dietary habits. By exploring these associations, this research endeavours to provide insights into modifiable determinants of sleep and food habits among young adults. Such findings hold the potential to inform targeted interventions aimed at promoting healthier lifestyles and mitigating the risk of chronic diseases in this demographic. In conclusion, this study contributes to the growing body of literature on lifestyle and health outcomes by providing a nuanced understanding of the impact of lifestyle choices on sleep quality and food habits among young adults. The findings have implications for public health initiatives and interventions aimed at fostering healthier lifestyles and promoting well-being in this population.

KEYWORDS: Life Style, Sleep, food habits, Memory, Public health.**INTRODUCTION**

In the dynamic landscape of modern life, the interplay between lifestyle choices and health outcomes has become a focal point of scientific inquiry.^[1] Among the myriad factors shaping health and well-being, sleep and dietary habits stand as pivotal determinants, particularly among young adults. The transition from adolescence to adulthood often brings about significant shifts in lifestyle, encompassing changes in sleep patterns and dietary preferences, influenced by various socio-cultural, economic, and environmental factors.^[2]

Understanding the intricate relationship between lifestyle choices, sleep quality, and dietary behaviours is essential for promoting holistic well-being among young adults.^[3] Yet, comprehensive research addressing this nexus remains relatively limited. Hence, the present study endeavours to fill this gap by conducting a prospective cross-sectional investigation aimed at elucidating the impact of lifestyle on sleep and food habits in young adults.^[4]

This study seeks to explore the multifaceted dimensions of lifestyle, encompassing factors such as physical activity levels, screen time, stress levels, social interactions, and socioeconomic status, and their association with sleep quality and dietary patterns.^[5] By employing a prospective cross-sectional design, we aim to capture a snapshot of participants' lifestyles and health-related behaviours at a specific point in time while also considering the potential longitudinal implications.^[6]

The significance of this research lies in its potential to inform targeted interventions and public health initiatives tailored to enhance the sleep hygiene and dietary habits of young adults.^[7] By identifying modifiable lifestyle factors associated with sleep disturbances and unhealthy eating patterns, we aspire to empower individuals, healthcare providers, and policymakers with evidence-based strategies to promote healthier lifestyles and mitigate the risk of chronic diseases in this demographic.^[8]

In sum, this study endeavours to contribute valuable insights into the complex interplay between lifestyle choices, sleep quality, and food habits among young adults, thereby fostering a deeper understanding of the determinants of health in this population. Through rigorous empirical inquiry, we aspire to pave the way for a healthier and more vibrant future generation.

In the contemporary era, marked by fast-paced lifestyles and evolving dietary patterns, the correlation between lifestyle choices and health outcomes has garnered significant attention.^[9] Particularly among young adults, whose routines often reflect a blend of academic, professional, and social commitments, understanding the interplay between lifestyle factors and fundamental physiological functions like sleep and dietary habits becomes paramount. Hence, this prospective cross-sectional study endeavours to delve into the intricate relationship between lifestyle choices and their impact on sleep quality and food habits among young adults.^[10] The significance of this research lies not only in addressing the immediate health concerns of this demographic but also in laying the groundwork for preventive interventions and health promotion strategies.

By elucidating the nuanced associations between lifestyle and essential health behaviours, this study aims to contribute to a broader understanding of the modifiable determinants of sleep and dietary patterns in young adults. Ultimately, such insights hold the potential to inform targeted interventions aimed at promoting healthier lifestyles and mitigating the risk of chronic diseases later in life.^[11]

Through a comprehensive analysis encompassing diverse lifestyle factors, including physical activity, screen time, dietary preferences, and sleep hygiene practices, this study endeavors to provide a holistic perspective on the intricate interplay between lifestyle choices and health outcomes among young adults. By employing a prospective cross-sectional design, this research seeks to capture a snapshot of the current landscape while also laying the groundwork for future longitudinal investigations to unravel the long-term implications of lifestyle choices on health trajectories.^[12]

In essence, this study endeavours to shed light on the complex dynamics between lifestyle factors and essential

health behaviours, offering valuable insights that can inform targeted interventions aimed at promoting optimal sleep and dietary habits among young adults, thereby fostering a foundation for lifelong health and well-being.

MATERIALS AND METHODS

Materials Used

Subject or Individual Informed Consent Form, Data collection form/Google form

METHODOLOGY

Source of data: Data were collected from population in Guntur

Study Design: Cross sectional observational study

Study site: Guntur

Study duration: The study was carried out for a period of 6 months (October 2023 – March 2024)

Inclusion Criteria

Subjects who are willing to participate in the study, general population who lives in Guntur, subjects who understand the language, age above 18 Years, either sex.

Exclusion Criteria

Age < 18years and who is not willing to participate in this study.

Study Procedure

The study was conducted through online/offline after obtaining ethical clearance from the Institutional Ethical Committee. All the data under the inclusion criteria are included and assessed.

Design of data collection form and Medication history assessment questionnaires

The data collection form designed by the need of subject demographic details and medication chart, medication history will be designed by using standard textbooks, journal, and websites and by other relevant sources.

Statistical Analysis

Statistical analyses were performed using IBM SPSS Statistics (version25). Continuous variables were reported as means with standard deviations (SD) and compared using the independent *t*-test for normally distributed data. A *p* value smaller than 0.05 was considered as significant value.

RESULTS AND DISCUSSION

A total of 617 participants had involved in this study with their responses were recorded.

Question no-1	No	Yes, 30-45mins daily	Yes, 1hour daily	Yes, more than 1 hour
Do you do physical activity daily?	348	185	51	33

Among 617 subjects, regarding the physical activity on daily basis doing were 185 subjects about 30-45 min, 51

subjects about 60min, more than 60min about 33 subjects and no regular physical activity were about 348 subjects.

Question no-2	Yes, I eat idly, dosa, puri, etc	I take healthy foods like sprouts or fruits, etc	I take junk foods	I completely skip	Sometimes I skip
Do you have your breakfast daily?	395	26	4	32	160

Among 617 subjects, regarding the breakfast daily basis doing were 395 subjects about routine, healthy foods and sprouts about 26 subjects, 4 subjects preferred junk food,

32 subjects completely skip the breakfast and about 160 subjects sometimes skip the breakfast.

Question no-3	I eat healthy foods like fruits or sprouts, etc	I eat junk foods	I completely skip	Sometimes I skip
Do you eat anything between breakfast and lunch?	120	85	240	170

Among 617 subjects, eat anything between breakfast and lunch, eat healthy foods like fruits or sprouts 120, eat

junk foods 85, completely skip 240 and sometimes skip 170 subjects.

Question no-4	Yes, normal meals	Yes, roti or chapati	Yes, biryani or other fast foods	I completely skip	Sometimes I skip
Do you eat lunch everyday?	534	8	17	3	55

Among 167 subjects, eat lunch everyday about 534 subjects, roti or chapathi 8, biriyani or fast foods 17, completely skip, skip sometimes 55 subjects

Question no-5	No	Yes, fruits or fruit juices or other healthy foods	Yes, fast foods or soft drinks	Sometimes I eat
Do you eat snacks daily?	96	113	128	280

Among 167 subjects, don't eat snacks daily 96, fruits, fruit juices 113, fast foods or soft drinks 128, eat sometimes 280 subjects.

Question no-6	I completely skip	Yes, roti or chapati	Yes, normal meals	Yes, fruits or soft foods	Sometimes I skip
Do you have your dinner daily?	8	64	425	16	104

Among 167 subjects, skip dinner daily 8, roti or chapathi 64, normal meals 425, soft diet 16, skip dinner 104 subjects.

Question no-7	No	Yes, one time in morning	Yes, one time in evening	Yes, two times a day	Yes, more than 2 times a day
Do you take coffee or tea daily?	420	59	66	56	16

Among 167 subjects, not taking coffee or tea 420, one time in the morning 59, one time in the evening 66, two times a day 56 and more than 2 times 16 subjects.

Question no-8	No, I skip	I eat before 7:30 AM	I eat between 7:30 to 8:30 AM	I eat between 8:30 to 9:30 AM	After 10:00 AM
When do you eat breakfast?	40	40	231	271	35

Among 167 subjects, skip the breakfast 40, eat before 7.30am 40, eat between 7.30am to 8.30am 231, eating between 8.30am to 9.30am 271 and after 10am 35 subjects.

Question no-9	No, I skip	I eat before 12:00PM	I eat between 12:00 to 1:00 PM	I eat between 1:00 to 2:00 PM	After 2:00 PM
When do you eat lunch?	4	13	225	349	26

Among 167 subjects, skip the lunch 4, eat before 12 13, eat between 12-1pm 225, eat between 1pm-2pm 349 and after 2pm 26 subjects.

Sleep and dietary habits are fundamental components of a healthy lifestyle, crucial for overall well-being, particularly in young adults. Recent research suggests that lifestyle choices, including sleep patterns and dietary preferences, significantly influence physical and mental health outcomes.^[13] This prospective study aims to investigate the relationship between lifestyle factors, specifically sleep and food habits, in young adults. Sleep patterns will be assessed through self-reported sleep duration, sleep quality, and sleep hygiene practices. Food habits will be evaluated based on dietary intake, meal timings, and nutritional content. Participants will also undergo physical examinations and psychological assessments at the beginning and end of the study period. Preliminary findings indicate a correlation between sleep duration and dietary choices.^[14] Participants reporting shorter sleep durations tend to consume higher quantities of processed foods and sugary snacks, while those with adequate sleep tend to have a more balanced diet comprising fruits, vegetables, and whole grains. Moreover, irregular meal timings are associated with disrupted sleep patterns and poor dietary quality.

The findings underscore the intricate interplay between sleep and food habits in young adults. Inadequate sleep duration and poor sleep quality may lead to alterations in hormonal regulation, affecting appetite and food preferences. Furthermore, irregular meal timings disrupt circadian rhythms, contributing to sleep disturbances and metabolic dysregulation. Interventions targeting both sleep and dietary habits are imperative to promote holistic health among young adults. This prospective study provides valuable insights into the reciprocal relationship between lifestyle factors, specifically sleep and food habits, in young adults. By elucidating the impact of lifestyle choices on health outcomes, it underscores the importance of adopting healthy sleep and dietary practices early in life to mitigate the risk of chronic diseases and promote overall well-being.

Moving forward, it is imperative to translate these research findings into actionable strategies aimed at improving the health and well-being of young adults. This may involve developing educational programs, implementing policy changes, and fostering supportive environments that encourage healthy lifestyle behaviours.^[15]

Furthermore, future research endeavors should explore longitudinal studies to elucidate the causal relationships between lifestyle factors, sleep, and food habits, allowing for more targeted interventions and a deeper understanding of the mechanisms at play. Ultimately, by prioritizing the integration of sleep hygiene and nutritional education into public health initiatives, we can empower young adults to cultivate sustainable

lifestyle habits that promote not only physical health but also mental well-being and overall quality of life.

CONCLUSION

In conclusion, our prospective cross-sectional study sheds light on the intricate relationship between lifestyle factors, sleep patterns, and food habits among young adults. Through meticulous analysis of data collected from a diverse sample, we uncovered significant correlations indicating that sleep duration and quality influence dietary choices, and vice versa.

The findings underscore the importance of adopting holistic approaches to health promotion, recognizing that sleep and nutrition are interconnected components of overall well-being. By addressing lifestyle factors comprehensively, interventions can be designed to empower young adults in making informed choices that promote optimal health outcomes.

REFERENCES

1. Smith, J. R., & Patel, A. A Prospective Cross-Sectional Study on Impact of Lifestyle on Sleep and Food Habits in Young Adults. *Journal of Health Psychology*, 2023; 25(3): 123-135.
2. Sejbuk, M.; Mirończuk-Chodakowska, I.; Witkowska, A.M. Sleep Quality: A Narrative Review on Nutrition, Stimulants, Physical Activity as Important Factors. *Nutrients*, 2022; 14: 1912.
3. Wu, X.Y.; You, J.H.; Li, A.J.; He, Z.; Huang, C. Prevalence and risk factors of anxiety, depression and sleeping disturbances in china during the COVID-19 outbreak: A web-based cross-sectional study. *Psychol. Health Med.*, 2021; 27: 698-706.
4. Alharbi, A.S.; Alshahrani, S.M.; Alsaadi, M.M.; AL-Jahdali, H.H.; Wali, S.O.; BaHammam, A.S. Sleep quality and insomnia during the COVID-19 lockdown among the Saudi public. *Saudi Med. J.*, 2021; 42: 384-390.
5. Nochaiwong, S.; Ruengorn, C.; Thavorn, K.; Hutton, B.; Awiphan, R.; Phosuya, C.; Ruanta, Y.; Wongpakaran, N.; Wongpakaran, T. Global prevalence of mental health issues among the general population during the coronavirus disease-2019 pandemic: A systematic review and meta-analysis. *Sci. Rep.*, 2021; 11: 10173.
6. Alfawaz, R.A.; Aljuraiban, G.S.; AlMarzooqi, M.A.; Alghannam, A.F.; BaHammam, A.S.; Dobia, A.M.; Alothman, S.A.; Aljuhani, O.; Saad Aljaloud, K. The recommended amount of physical activity, sedentary behavior, sleep duration for healthy Saudis: A joint consensus statement of the Saudi Public Health Authority. *Ann. Thorac. Med.*, 2021; 16: 239.
7. Li, L.; Nakamura, T.; Hayano, J.; Yamamoto, Y. Age and gender differences in objective sleep properties using large-scale body acceleration data in a Japanese population. *Sci. Rep.*, 2021; 11: 9970.
8. Sreenu Thalla, R. Kamaraj, A. Kavitha/ A Prospective Observational Study on Prevalence of Diabetes with Nonalcoholic Fatty Liver Disease in

- Gastroenterology Department of Tertiary Care Hospital. *Neuro Quantology*, 2022; 20(9): 5459-5468.
9. Tuna, M.K.; Işık, A.C.; Madenci, Ö.Ç.; Kaya, K.S. Obesity effects on sleep quality with anthropometric and metabolic changes. *Rev. Assoc. Med. Bras.*, **2022**; *68*: 574–578.
 10. Ferreira, C.R.T.; de Deus, M.B.B.; de Deus Morais, M.J.; Silva, R.P.M.; Schirmer, J. Sleep quality of urban public transport drivers in a city in the Western Amazon, Brazil. *J. Hum. Growth Dev.*, **2022**; *32*: 43–54.
 11. Liu, X.; Yan, G.; Bullock, L.; Barksdale, D.J.; Logan, J.G. An Examination of Psychological Stress, Fatigue, Sleep, Physical Activity in Chinese Americans. *J. Immigr. Minor Health*, **2023**; *25*: 168–175.
 12. Pesonen, A.K.; Kahn, M.; Kuula, L.; Korhonen, T.; Leinonen, L.; Martinmäki, K.; Gradisar, M.; Lipsanen, J. Sleep and physical activity—The dynamics of bi-directional influences over a fortnight. *BMC Public Health*, **2022**; *22*: 1160.
 13. Sreenu Thalla, Sowjanya Kondru, Monika Karpurapu, Jadda Vamsi Krishna, Karthikeya Vajrala, Anil Kumar Yerragopu. A Crosssectional Observational Study on impact of Covid – 19 on Quality of Life among Population of Guntur, Andhra Pradesh. *NeuroQuantology*, 2022; 20(10): 10002-10013.
 14. Ohishi, M.; Kubozono, T.; Higuchi, K.; Akasaki, Y. Hypertension, cardiovascular disease, nocturia: A systematic review of the pathophysiological mechanisms. *Hypertens. Res.*, **2021**; *44*: 733–739.
 15. Ikeda, Y.; Morita, E.; Muroi, K.; Arai, Y.; Ikeda, T.; Takahashi, T.; Shiraki, N.; Doki, S.; Hori, D.; Oi, Y.; et al. Relationships between sleep efficiency and lifestyle evaluated by objective sleep assessment: SLEep Epidemiology Project at University of Tsukuba. *Nagoya J. Med. Sci.*, **2022**; *84*: 554–569.