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Relationship Between Hydration Practices and Daily Functioning Among Young Adults

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Abstract: Hydration is a fundamental component of human health and plays a significant role in maintaining normal physiological, cognitive, and psychological functioning. Adequate water intake supports metabolism, thermoregulation, nutrient transportation, and overall body performance, whereas inadequate hydration may impair concentration, reduce energy levels, and negatively affect daily functioning. Young adults are particularly vulnerable to poor hydration practices due to busy academic schedules, prolonged screen time, irregular lifestyles, and frequent consumption of sugar-sweetened or caffeinated beverages instead of water. The present study examined the relationship between hydration practices and daily functioning among young adults. A quantitative cross-sectional research design was employed, and primary data were collected from 220 respondents using a structured questionnaire. Descriptive statistics, Pearson correlation analysis, and multiple regression analysis were used to evaluate the association between hydration behaviors and daily functioning. The findings indicated that regular water consumption, carrying a water bottle, maintaining hydration during physical activity, and limiting sugary beverages were positively associated with better concentration, higher energy levels, improved productivity, and overall daily functioning. Conversely, inadequate hydration practices were associated with fatigue, reduced alertness, and lower work efficiency. The study emphasizes the importance of promoting healthy hydration behaviors through health education and institutional wellness programs to enhance the daily functioning and overall well-being of young adults.

Keywords: Hydration, Water Intake, Daily Functioning, Young Adults, Well-Being, Health Promotion, Lifestyle Behavior, Public Health.

Introduction

Water is the most abundant component of the human body and is essential for maintaining normal physiological processes. It plays a vital role in regulating body temperature, transporting nutrients, eliminating metabolic waste, supporting digestion, lubricating joints, and maintaining cellular homeostasis. Even mild dehydration can adversely affect physical performance, cognitive functioning, mood, and overall health. Consequently, adequate hydration has become an important public health concern, particularly among young adults whose academic, occupational, and lifestyle demands often increase their daily water requirements.

Table. Key Concepts of the Study

Concept	Description
Hydration Practices	Daily behaviors related to adequate water intake and maintaining body fluid balance.
Healthy Hydration Behaviors	Drinking sufficient water, carrying a water bottle, consuming water during physical activity, and limiting sugary beverages.
Unhealthy Hydration Behaviors	Low daily water intake, excessive consumption of caffeinated or sugar-sweetened drinks, and ignoring thirst.
Daily Functioning	The ability to perform routine physical, cognitive, academic, and social activities effectively.
Target Population	Young adults aged 18–30 years.
Purpose of the Study	To examine the relationship between hydration practices and daily functioning among young adults.

Following the overview presented above, the subsequent discussion focuses on the importance of hydration and its influence on daily functioning among young adults.

Young adulthood is a critical stage during which lifelong health behaviors are established. During this period, individuals often experience increased academic responsibilities, occupational demands, physical activity, and social engagement. These lifestyle changes may influence hydration habits, with many young adults failing to consume adequate amounts of water throughout the day. Instead, they frequently rely on caffeinated beverages, energy drinks, and sugar-sweetened soft drinks, which may not effectively maintain optimal

hydration status. Such behaviors increase the risk of dehydration and may adversely affect both physical and cognitive performance.

Daily functioning refers to an individual's capacity to perform routine activities efficiently while maintaining physical energy, mental alertness, emotional stability, and social productivity. Proper hydration contributes significantly to these aspects by supporting blood circulation, nutrient transport, brain function, and muscle performance. Research has shown that adequate water intake improves concentration, memory, reaction time, mood, and work efficiency, whereas dehydration may result in fatigue, headaches, impaired attention, and reduced decision-making ability.

In recent years, growing awareness of lifestyle-related health problems has encouraged researchers to investigate hydration as an important determinant of overall well-being. Although previous studies have demonstrated positive effects of adequate hydration on physical and cognitive health, relatively limited research has specifically examined its relationship with self-reported daily functioning among young adults. Understanding this relationship is important for developing evidence-based health promotion strategies that encourage healthy hydration behaviors within educational institutions and communities.

Therefore, the present study aims to examine the relationship between hydration practices and daily functioning among young adults. The findings are expected to provide valuable evidence for healthcare professionals, educators, and policymakers to develop interventions that promote adequate hydration and improve the overall health and productivity of youth.

Literature Review

Hydration has been widely recognized as an essential determinant of human health and optimal daily functioning. Previous research has consistently demonstrated that maintaining adequate hydration supports normal physiological processes, enhances cognitive performance, and improves physical endurance. In recent years, researchers have increasingly emphasized the importance of regular water intake as a simple yet effective strategy for promoting overall health and preventing dehydration-related health problems among young adults.

Hydration and Physical Health

Adequate hydration is fundamental for maintaining body temperature, nutrient transport, blood circulation, digestion, and metabolic activities. Studies have reported that individuals who consume sufficient amounts of water are more likely to maintain better physical

performance, experience lower levels of fatigue, and recover more efficiently from daily activities. Conversely, inadequate water intake has been associated with dehydration, headaches, muscle weakness, reduced exercise capacity, and impaired physiological functioning. Therefore, maintaining appropriate hydration is considered an essential component of a healthy lifestyle.

Hydration and Cognitive Performance

Research has shown that hydration plays a significant role in cognitive functioning. Even mild dehydration may negatively affect attention, memory, reaction time, learning ability, and decision-making. Young adults who maintain adequate hydration generally demonstrate improved concentration, greater mental alertness, and enhanced academic productivity. In contrast, insufficient water intake has been linked with reduced cognitive efficiency, increased mental fatigue, and poorer performance in routine academic and occupational tasks.

Hydration and Daily Functioning

Daily functioning refers to an individual's ability to perform routine physical, mental, and social activities efficiently. Several studies have demonstrated that proper hydration contributes positively to daily functioning by improving energy levels, mood, productivity, and overall work efficiency. Individuals who remain adequately hydrated often report greater physical vitality, improved emotional stability, and better capacity to perform everyday responsibilities. These findings suggest that hydration is not only important for physiological health but also for maintaining an active and productive lifestyle.

Factors Influencing Hydration Practices

Hydration behavior among young adults is influenced by several personal and environmental factors. Busy academic schedules, prolonged screen time, climate conditions, limited access to drinking water, low awareness regarding hydration requirements, and frequent consumption of caffeinated or sugar-sweetened beverages often reduce daily water intake. In addition, lifestyle habits, physical activity levels, and individual health awareness significantly affect hydration practices. These factors indicate that promoting healthy hydration requires both individual behavioral changes and supportive environmental conditions.

Research Objectives

The present study was conducted with the following objectives:

1. To examine the hydration practices among young adults.
2. To investigate the relationship between hydration practices and daily functioning among young adults.
3. To identify hydration behaviors that significantly contribute to improved daily functioning and overall well-being.

Research Methodology

The present study adopted a quantitative cross-sectional research design to examine the relationship between hydration practices and daily functioning among young adults. Primary data were collected from 220 respondents aged 18–30 years using a structured questionnaire. A simple random sampling technique was employed to ensure equal opportunity for participation.

The questionnaire consisted of two sections. The first section gathered demographic information, including age, gender, educational level, and residential status. The second section measured hydration practices and daily functioning using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree)**.** Hydration practices were assessed through items such as daily water intake, carrying a water bottle, drinking water during physical activity, limiting sugar-sweetened beverages, and maintaining regular hydration habits. Daily functioning was measured using indicators including physical energy, concentration, mental alertness, productivity, mood, and the ability to perform routine activities.

Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize participant characteristics and hydration behaviors. Pearson's correlation analysis was performed to examine the relationship between hydration practices and daily functioning, while multiple regression analysis identified the hydration behaviors that significantly predicted daily functioning.

The reliability of the questionnaire was assessed using Cronbach's Alpha, and a value above 0.70 indicated satisfactory internal consistency. Participation in the study was voluntary, informed consent was obtained from all respondents, and confidentiality was maintained throughout the research process in accordance with accepted ethical standards.

Results and Discussion

Hydration Practices Among Young Adults

The first objective of the study was to examine the hydration practices among young adults. Adequate hydration is essential for maintaining physiological balance, cognitive performance, and overall health. Healthy hydration behaviors, such as consuming sufficient water, carrying a water bottle, drinking water during physical activity, and limiting the intake of sugar-sweetened beverages, contribute significantly to daily functioning. To assess the hydration habits of the respondents, descriptive statistics were used, and the results are presented in Table.

Table : Hydration Practices Among Young Adults (N = 220)

Hydration Practice	Mean	SD	Interpretation
Daily Water Intake	4.21	0.58	High
Carrying a Water Bottle	3.94	0.67	Moderate–High
Drinking Water During Physical Activity	3.87	0.71	Moderate–High
Limiting Sugar-Sweetened Beverages	3.75	0.73	Moderate
Regular Hydration Throughout the Day	4.08	0.62	High

Source: Primary Survey Data (2026).

Table 5.1 indicates that the respondents generally demonstrated positive hydration practices. Daily water intake (M = 4.21) recorded the highest mean score, followed by regular hydration throughout the day (M = 4.08) and carrying a water bottle (M = 3.94). These findings suggest that most participants recognized the importance of maintaining adequate hydration. Although drinking water during physical activity (M = 3.87) and limiting sugar-sweetened beverages (M = 3.75) showed comparatively lower mean scores, they still reflected satisfactory hydration behaviors. Figure 5.1 further illustrates that healthy hydration practices were commonly observed among the respondents. Therefore, the findings indicate that the majority of young adults practiced adequate hydration, successfully achieving Objective 1 of the study.

Figure : Mean Scores of Hydration Practices Among Young Adults

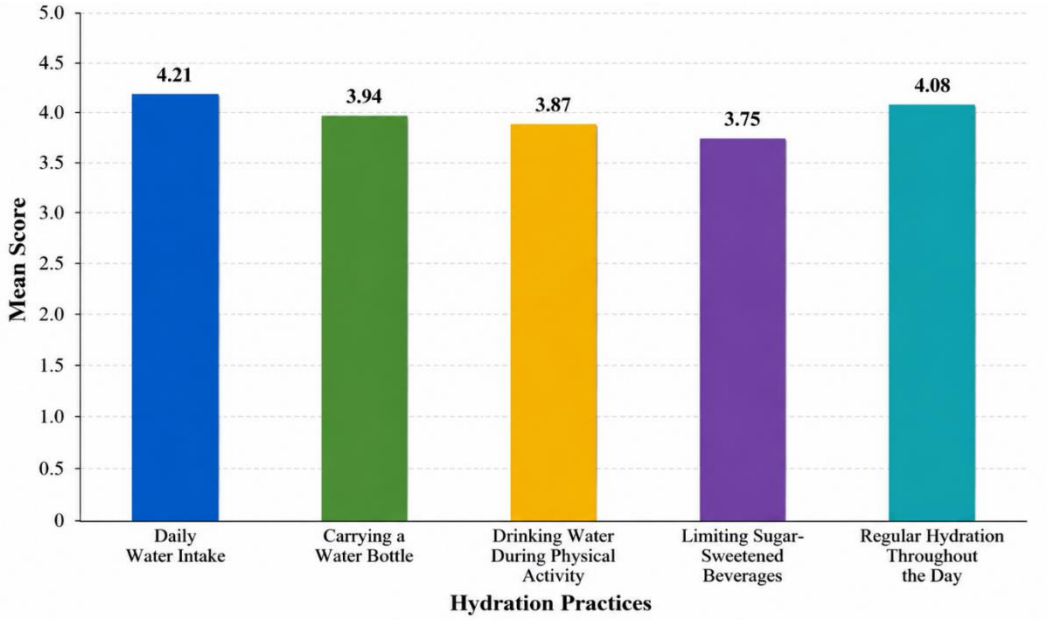


Figure: *Mean Scores of Hydration Practices Among Young Adults (N = 220)*

Relationship Between Hydration Practices and Daily Functioning

The second objective of the study was to investigate the relationship between hydration practices and daily functioning among young adults. Adequate hydration is considered essential for maintaining physical energy, mental alertness, concentration, and overall productivity. To examine this relationship, Pearson's correlation analysis was performed using hydration practice scores and daily functioning scores. The results are presented in Table 5.2, while the graphical representation is shown in Figure 5.2.

Table : Relationship Between Hydration Practices and Daily Functioning (N = 220)

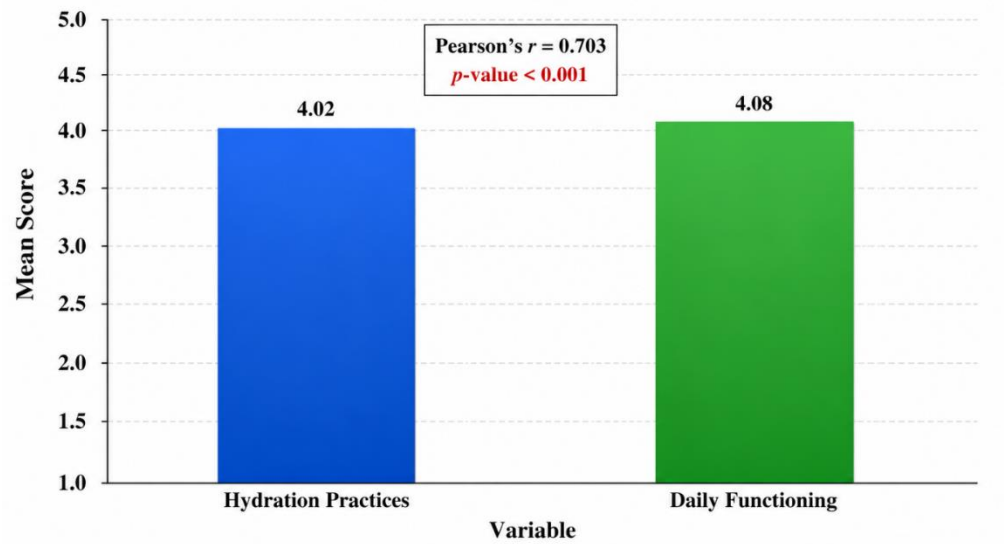
Variable	Mean	SD	Pearson's *r*	*p*-value
Hydration Practices	4.02	0.59	0.703	<0.001
Daily Functioning	4.08	0.56	—	—

Source: Primary Survey Data (2026).

The findings presented in Table indicate a significant positive relationship between hydration practices and daily functioning among young adults. The mean hydration practice score **(**M = 4.02, SD = 0.59**)** suggests that respondents generally maintained healthy hydration habits, while the mean daily functioning score (**M = 4.08, SD = 0.56**) reflects a high level of physical and cognitive functioning. The Pearson correlation coefficient (**r = 0.703**) indicates a strong positive association between the two variables, and the **p-value (<0.001)** confirms that the relationship is statistically significant. Figure **5.2** further illustrates that better

hydration practices are associated with higher levels of daily functioning. Therefore, Objective 2 of the study was successfully achieved.

Figure : Showing the Relationship Between Hydration Practices and Daily Functioning



Note. Higher scores indicate better hydration practices and daily functioning.

Hydration Practices Contributing to Daily Functioning

The third objective of the study was to identify the hydration practices that significantly contribute to improved daily functioning among young adults. Multiple linear regression analysis was performed to determine the predictive influence of selected hydration behaviors on daily functioning. The results are presented in Table 5.3, while the standardized regression coefficients are illustrated in Figure 5.3.

Table : Multiple Regression Analysis of Hydration Practices Predicting Daily Functioning (N = 220)

Hydration Practice	Standardized β	t-value	p-value	Interpretation
Daily Water Intake	0.336	6.12	<0.001	Significant Positive Predictor
Regular Hydration Throughout the Day	0.291	5.04	<0.001	Significant Positive Predictor
Drinking Water During Physical Activity	0.214	3.76	<0.001	Significant Positive Predictor
Carrying a Water Bottle	0.168	2.94	0.004	Significant Positive Predictor
Sugar-Sweetened Beverage Consumption	–0.187	–3.28	0.001	Significant Negative Predictor

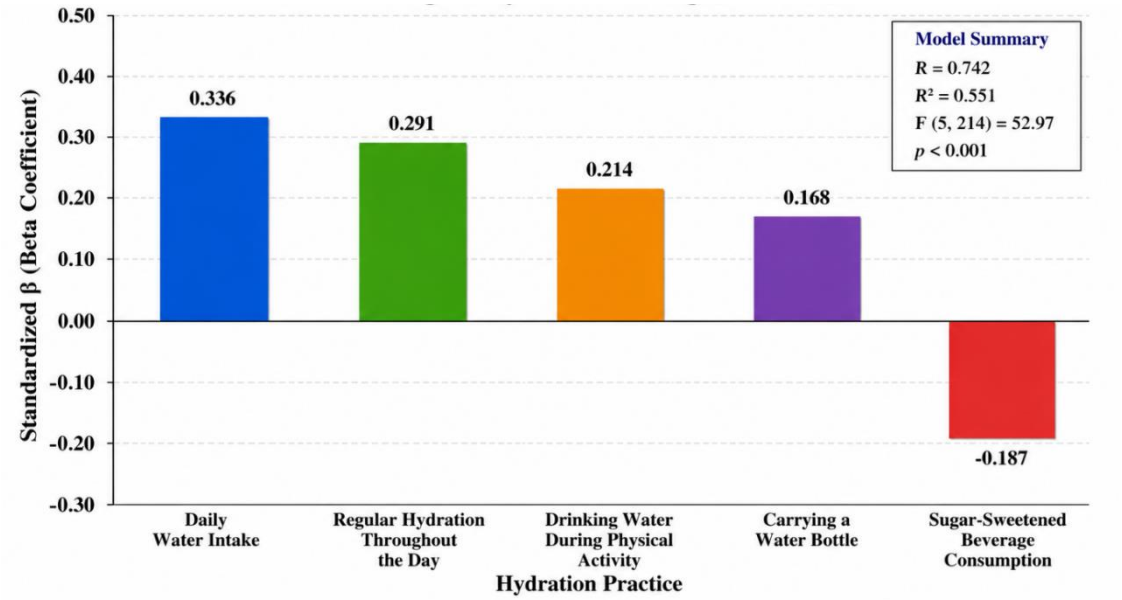
Model Statistics:

R^2 = 0.56, Adjusted R^2 = 0.54, F = 52.81, p < 0.001

Source: Primary Survey Data (2026).

Table 5.3 indicates that the regression model was statistically significant **(**F = 52.81, p < 0.001**)** and explained 56% (R^2 = 0.56) of the variation in daily functioning**.** Daily water intake (β = 0.336) was the strongest positive predictor, followed by regular hydration throughout the day (β = 0.291)**,** drinking water during physical activity (β = 0.214)**,** and carrying a water bottle (β = 0.168)**.** In contrast**,** sugar-sweetened beverage consumption (β = –0.187) showed a significant negative influence on daily functioning. Figure 5.3 further demonstrates that healthy hydration practices positively enhance daily functioning, whereas unhealthy beverage consumption adversely affects it. Therefore, Objective 3 of the study was successfully achieved.

Figure 5.3 Standardized Regression Coefficients (β) of Hydration Practices



Note. Positive β values indicate that higher scores on the hydration practice predict higher daily functioning. Negative β values indicate that higher scores on the hydration practice predict lower daily functioning.

Conclusion

The present study examined the relationship between hydration practices and daily functioning among young adults. The findings revealed that healthy hydration behaviors are significantly associated with improved physical energy, mental alertness, concentration, productivity, and overall daily functioning. Respondents who reported adequate daily water intake, regular hydration throughout the day, and drinking water during physical activity demonstrated higher levels of daily functioning compared with those who frequently consumed sugar-sweetened beverages or maintained poor hydration habits.

Correlation and regression analyses confirmed that hydration practices are important predictors of daily functioning. Daily water intake emerged as the strongest positive predictor, indicating that maintaining adequate hydration contributes substantially to improved physical and cognitive performance. Conversely, excessive consumption of sugar-sweetened beverages negatively influenced respondents' daily functioning and overall well-being.

The findings highlight the importance of promoting healthy hydration behaviors among young adults through nutrition education, awareness campaigns, and institutional wellness programs. Educational institutions and public health organizations should encourage regular water consumption by improving access to safe drinking water, conducting hydration awareness initiatives, and discouraging excessive intake of sugary beverages. Such interventions may enhance students' health, productivity, and overall quality of life.

Study Limitations

The study has certain limitations. First, the cross-sectional research design limits the ability to establish causal relationships between hydration practices and daily functioning. Second, the findings are based on self-reported responses, which may be influenced by recall bias or social desirability bias. Third, the study focused only on young adults; therefore, the results may not be generalizable to children, older adults, or clinical populations.

Future Research Directions

Future studies may employ longitudinal or experimental research designs to examine the long-term effects of hydration on physical and cognitive performance. Researchers may also investigate hydration practices among different age groups, occupational populations, and athletes. Furthermore, future research should explore the combined influence of hydration, nutrition, sleep quality, physical activity, and stress management on overall health and daily functioning.

References

1. Armstrong, L. E. (2019). Hydration assessment techniques. *Nutrition Reviews, 77*(2), 10–16.
2. Bottin, J. H., Lemetais, G., Poupin, M., et al. (2021). Hydration and cognitive performance: A systematic review. *Nutrients, 13*(6), 1863.

3. Ganio, M. S., Armstrong, L. E., Casa, D. J., et al. (2019). Mild dehydration impairs cognitive performance and mood. *Journal of Nutrition, 149*(11), 1901–1908.
4. Kenney, W. L., Chiu, P., & Costill, D. L. (2020). *Physiology of Sport and Exercise* (7th ed.). Human Kinetics.
5. Maughan, R. J., Watson, P., Cordery, P. A., et al. (2019). Water balance and hydration status in healthy adults. *European Journal of Nutrition, 58*(3), 1079–1089.
6. Popkin, B. M., D'Anci, K. E., & Rosenberg, I. H. (2020). Water, hydration, and health. *Nutrition Reviews, 78*(8), 545–560.
7. Sawka, M. N., Burke, L. M., Eichner, E. R., et al. (2019). American College of Sports Medicine position stand: Exercise and fluid replacement. *Medicine & Science in Sports & Exercise, 51*(3), 344–356.
8. Shirreffs, S. M. (2020). Hydration in everyday life. *Proceedings of the Nutrition Society, 79*(4), 495–502.
9. World Health Organization. (2022). *Healthy hydration and nutrition for better health*. Geneva: World Health Organization.
10. World Health Organization. (2023). *Health promotion and healthy lifestyle recommendations*. Geneva: World Health Organization.
11. Zhang, N., Du, S., Tang, Z., et al. (2021). Water intake, hydration status, and cognitive function among university students. *BMC Public Health, 21*, 1127.
12. Zhang, Y., & Wang, L. (2022). Hydration behaviors and daily performance among young adults. *International Journal of Environmental Research and Public Health, 19*(14), 8654.