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KNOWLEDGE ON FLUID INTAKE AMONG YOUNG ADULT WOMEN

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ABSTRACT

Proper fluid intake is crucial for overall health, yet often overlooked, especially among young adults. The research aims to assess the level of knowledge of young women regarding fluid intake, exploring potential differences between hostelites and non-hostelites. A structured questionnaire was used to collect data from 105 respondents, addressing demographics and knowledge related to fluid intake. The survey revealed both similarities and differences in knowledge about fluid intake among non-hostel and hostel groups of young women. Non-hostel students were more aware of recommended daily fluid intake (80.36%) than hostel students (55.10%). Both groups had similar knowledge of hydrating beverages (around 60%). Knowledge about water's functions and symptoms of dehydration showed no significant difference. However, there was a contrast in understanding hydration based on urine color, with hostel students better informed (44.90%) than non-hostel students (19.64%). Both groups recognized the importance of water as the primary fluid source, the reliability of thirst as an indicator, and the consequences of inadequate fluid intake. The vulnerability of infants to dehydration was better understood by non-hostel students. The hostel group had a slightly better grasp of not using sugary drinks for rehydration. Targeted education can further enhance their understanding of fluid intake. The findings indicate that both hostelites and non-hostelites share a similar understanding of the importance of proper hydration for overall health, with chi-square analysis supporting this observation, revealing no significant differences in knowledge

between the two groups. This study holds significance in addressing the prevailing lack of awareness about fluid intake among young adults, highlighting the need for educational initiatives to promote healthier practices.

Keywords: Fluid intake, young women, knowledge, educational interventions.

INTRODUCTION

Fluids, primarily water, are essential for human survival, constituting about 60% of the human body. Proper hydration is crucial for regulating body temperature, nutrient transport, joint lubrication, waste removal, and more. Sources of fluids include water, beverages, fruits, vegetables, soups, sports drinks, coconut water, and hydration supplements. Fluid requirements vary with age, sex, activity level, and climate, but around 8 cups (64 ounces) per day is a general guideline.

Fluid imbalances can lead to health issues like dehydration, electrolyte disturbances, edema, and more. Vulnerable populations, such as infants, the elderly, athletes, and those with specific medical conditions, are at greater risk. Preventing fluid imbalances involves maintaining balanced fluid intake and monitoring symptoms.

College-going girls, who lead active lives, must prioritize proper hydration to thrive academically, physically, and emotionally. Raising awareness about fluid intake benefits is essential.

Fluid imbalances, including dehydration and overhydration, can disrupt bodily functions and lead to various health problems. Treatment typically involves addressing the underlying cause and restoring appropriate fluid and electrolyte levels.

Preventive measures include drinking enough water, monitoring urine color, balancing electrolytes, limiting caffeine and alcohol, and eating water-rich foods. Establishing a drinking routine and staying hydrated during physical activity are crucial. Paying attention to medications and environmental factors is also important.

A study on the knowledge of fluid intake among young women explored differences between hostelites and day scholars to assess the impact of living arrangements on hydration behaviors. The study used convenience sampling, considering practicality, and collected survey data from both groups. The findings address potential limitations associated with sample selection.

METHODOLOGY

The study on "Knowledge on Fluid Intake Among Young Adult Women" employed a survey method with a questionnaire as the primary tool for data collection. The questionnaire encompassed various aspects, including general information such as the participant's name, age, education level, height in centimeters, and weight in kilograms, along with the collection of contact details for further communication. Knowledge-related questions were incorporated into the questionnaire, aimed at assessing the participants' understanding of fluids, their functions, proper fluid intake, and the potential consequences of fluid imbalance. These questions were presented in both multiple-choice and true or false formats. Additionally, an educational aid in the form of a brochure was created to raise awareness about fluid-related topics, covering the significance of adequate fluid intake, symptoms of fluid imbalance, recommended daily fluid intake, methods of prevention, and maintaining fluid balance through monitoring fluid input and output. The study utilized a descriptive method, and the sample size consisted of 105 participants.

COLLECTION OF DATA

To collect data for the study, initially a Google Form was created, which served as a versatile online survey tool enabling the design of customized questionnaires with various question types, including multiple-choice and True or false, catering to different data requirements.

Following the creation of the Google Form, it is distributed as survey link to target audience, young women, through messaging platforms such as WhatsApp. This step facilitated easy access for potential respondents to complete the questionnaire.

As respondents filled out the Google Form, their responses were automatically collected and organized in a Google Sheets spreadsheet, streamlining the data collection process and ensuring accuracy.

Once the responses were collected, the next step involved data tabulation, wherein the raw data was structured, organized, and summarized. This was achieved using tools like Google Sheets or Excel, which allowed for the creation of tables, charts, and graphs to visually represent and analyze the data.

Statistical analysis played a critical role in the data analysis process, Following the statistical analysis, the results were tabulated to present the findings clearly. This step entailed creating reports, summaries, or presentations that effectively communicated the key insights and conclusions derived from the data. Proper data tabulation ensured that the research findings were accessible and comprehensible to others, facilitating decision-making or further research endeavors.

RESULTS AND DISCUSSION

The results obtained were put through statistical analysis and are presented in this present chapter in the following order.

A. Socio Demo Graphic Profile

B. Knowledge of fluid intake among young adult women

Table – 1 Socio Demographic Profile

S.NO	Variable	Categories	N (105)	P (%)
1.	Age of respondents	18- 19	24	22.86
		20- 21	34	32.38
		22- 23	40	38.10
		24- 25	7	6.67
2.	Residence	Non- Hostel	56	53.3
		Hostel	49	46.7
3.	BMI	Under weight	16	15
		Normal weight	49	47
		Over weight	29	28
		Obesity	11	10

GENERAL INFORMATION OF THE RESPONDENTS

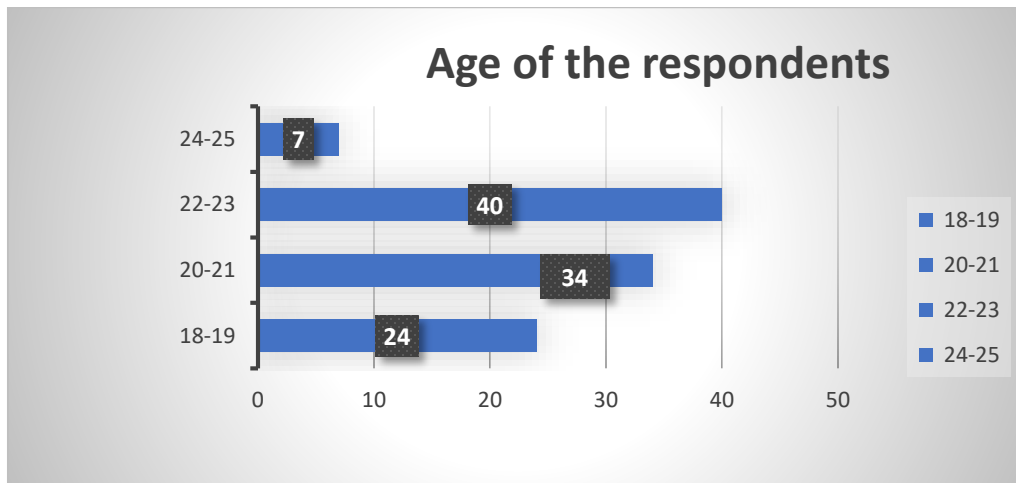


Figure -01- Age of Respondents

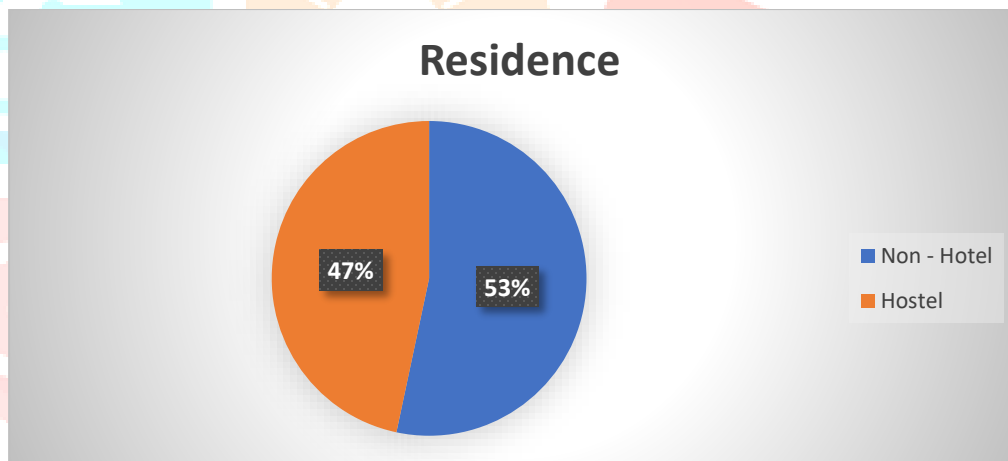


Figure -02- Residence of respondents

Regarding residence of the respondents fifty-three-point three percent of respondents are non-hostelers they come to college from home and forty-six-point seven percent respondents are hostlers. In age of the respondent's 22.86 percent are from 18 to 19 age group and majority of the respondents are from age group 22 to 33 with 38.10 percent and least number of people from age group 24 to 25 years with 6.67 percent.

BMI CLASSIFICATION

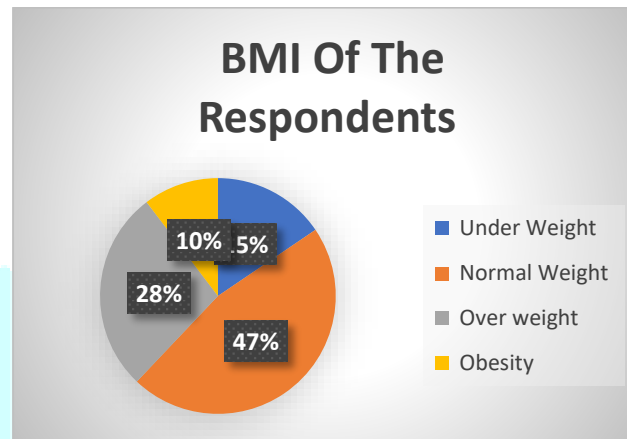


Figure -03- BMI of respondents

The provided data includes information on the BMI (Body Mass Index) of a group of individuals. Out of the sample, 9 individuals are classified as underweight, 27 fall into the normal weight category, 16 are categorized as overweight, and 6 individuals are classified as obese based on their respective BMI values.

TABLE -2A KNOWLEDGE OF FLUID AMONG YOUNG ADULT WOMEN

S.no	Variable	Categories	Frequency	Percentage
			(n-105)	(%)
1.	Recommended daily intake of fluid	1 liter	8	7.6
		2 liters	32	30.5
		3liters	32	30.5
		4 to5 liters	30	28.6
		Other	3	3
2.	Hydrating fluids	Water	85	81
		Rice	6	5.7
		Coffee	8	7.6
		None of the above	6	5.7
3.	Not a function of water in the body	Temperature regulation	19	18.1
		Nutrition absorption	9	8.6
		Waste removal	13	12.4
		Muscle building	64	64
4.	Your hydration status based on urine color	Clear or pale yellow -good hydration	45	42.9
		Dark yellow or amber indicates dehydration	37	35.2
		Urine color is not reliable indicator	13	12.4
		Urine color can only indicate overhydration	10	9.5

TABLE -2B KNOWLEDGE OF FLUID AMONG YOUNG ADULT WOMEN

S.no	Variable	Categories	Frequency	Percentage
			(n-105)	(%)
1.	Not a symptom of dehydration	Headache	25	18.1
		Fatigue	10	9.5
		Increased urine frequency	54	51.4
		Dry mouth and throat	16	15.2
2.	Factors can affect an individual's fluid intake	Physical activity level	14	13.3
		Climate and temperature	7	6.7
		Health conditions	12	11.4
		All the above	72	72
3.	General guideline for fluid intake during exercise	Drink only after finishing the exercise	23	21.9
		Drink as much as possible	51	48.6
		Drink based on thirst and replace fluid	25	23.8
		Drink doubles the amount of regular intake	6	5.7
4.	Consequences of inadequate fluid intake	Dehydration	17	16.2
		Impaired cognitive function	5	4.8
		Increased risk of kidney stones	14	13.3
		All the above	69	65.7

TABLE -2C KNOWLEDGE OF FLUID AMONG YOUNG ADULT WOMEN

S.no	Variable	Categories	Frequency	Percentage
			N=105	(%)
1.	“Water is the only fluid that contributes to daily fluid intake.”	True	67	63.81
		False	38	36.19
2.	“Thirst is a reliable indicator of fluid needs of the body”	True	87	82.86
		False	18	17.14
3.	“Dehydration can affect both physical and cognitive performance.”	True	96	91.13
		False	9	8.57
4.	“Dark yellow urine color is a sign of dehydration”.	True	83	79.05
		False	22	20.95
5.	“Dehydration is a common cause of constipation.”	True	80	76.19
		False	25	23.81
6.	“Infants and young children are more susceptible to dehydration than adults.”	True	76	72.38
		False	29	27.62
7.	“Replacing lost fluids with sugary drinks is an effective way to re-hydrate.”	True	50	47.62
		False	55	52.38
8.	“Drinking excessive amounts of water can be harmful to your health.”	True	55	52.38
		False	50	47.62
9.	“Fluids need vary depending on factors like age, sex, activity level and climate.”	True	82	78.10
		False	23	21.90
10.	Dehydration can impair kidney function and increase the risk of kidney stones	True	83.8	79.81
		False	16.2	15.43
11.	“Severe dehydration can be a medical emergency requiring immediate treatment.”	True	94	89.52
		False	11	10.48
12.	“Drinking caffeinated beverages can contribute to your daily fluid intake.”	True	57	54.29
		False	48	45.71

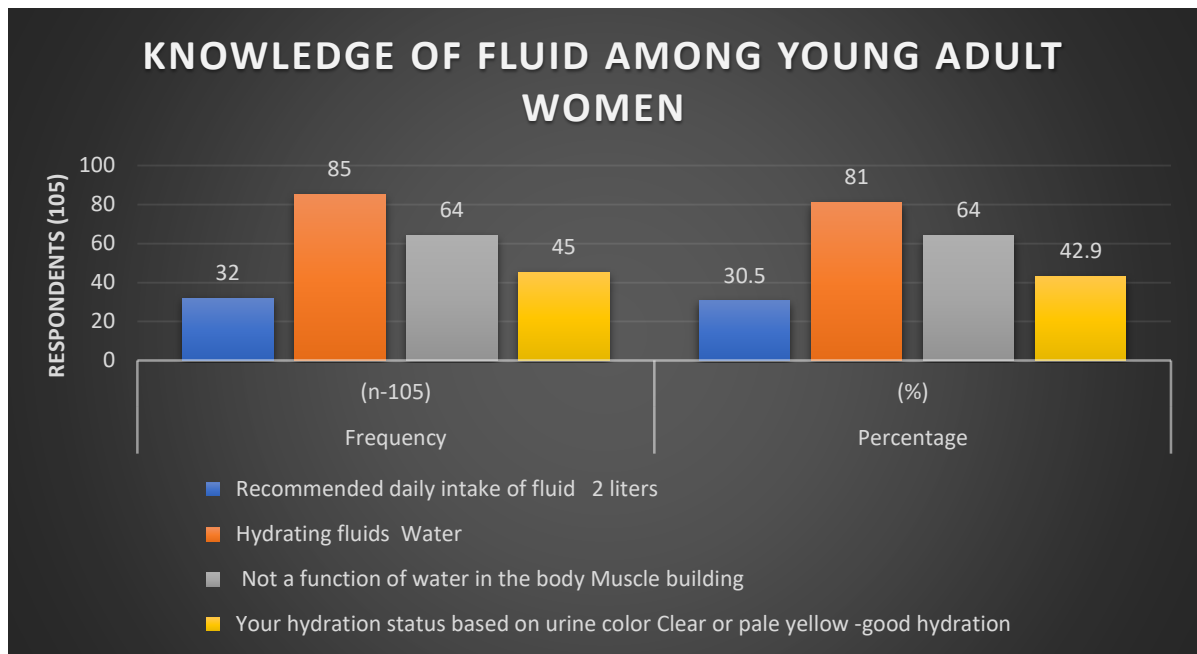


Figure -04- Knowledge of fluid among young adult women

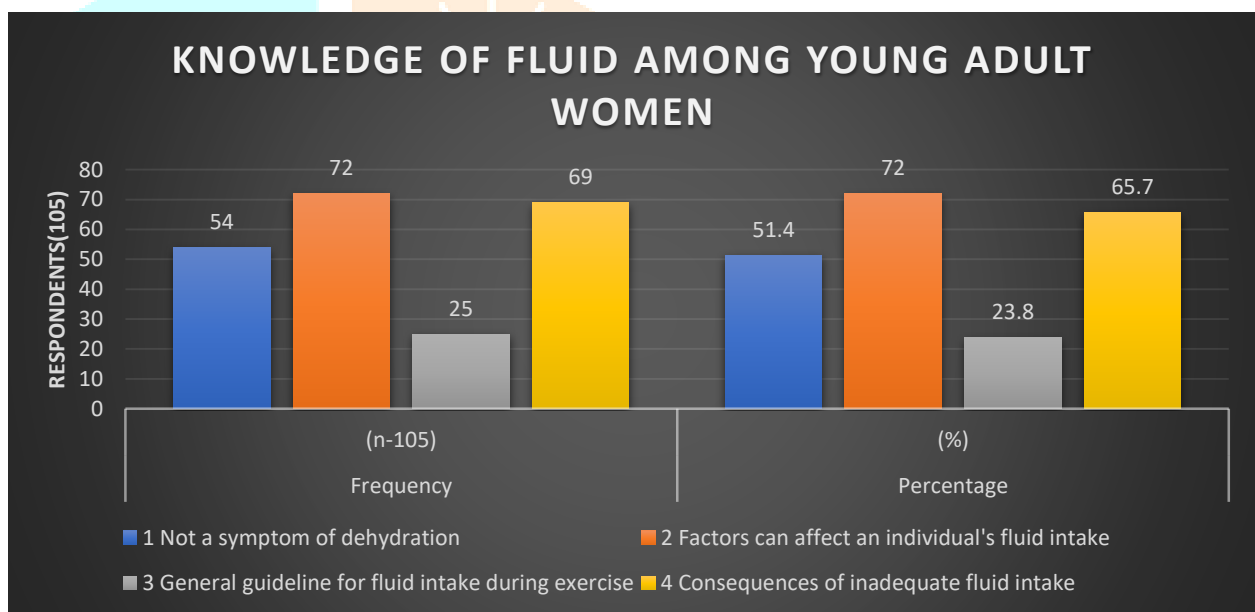


Figure -05- Knowledge of fluid among young adult women

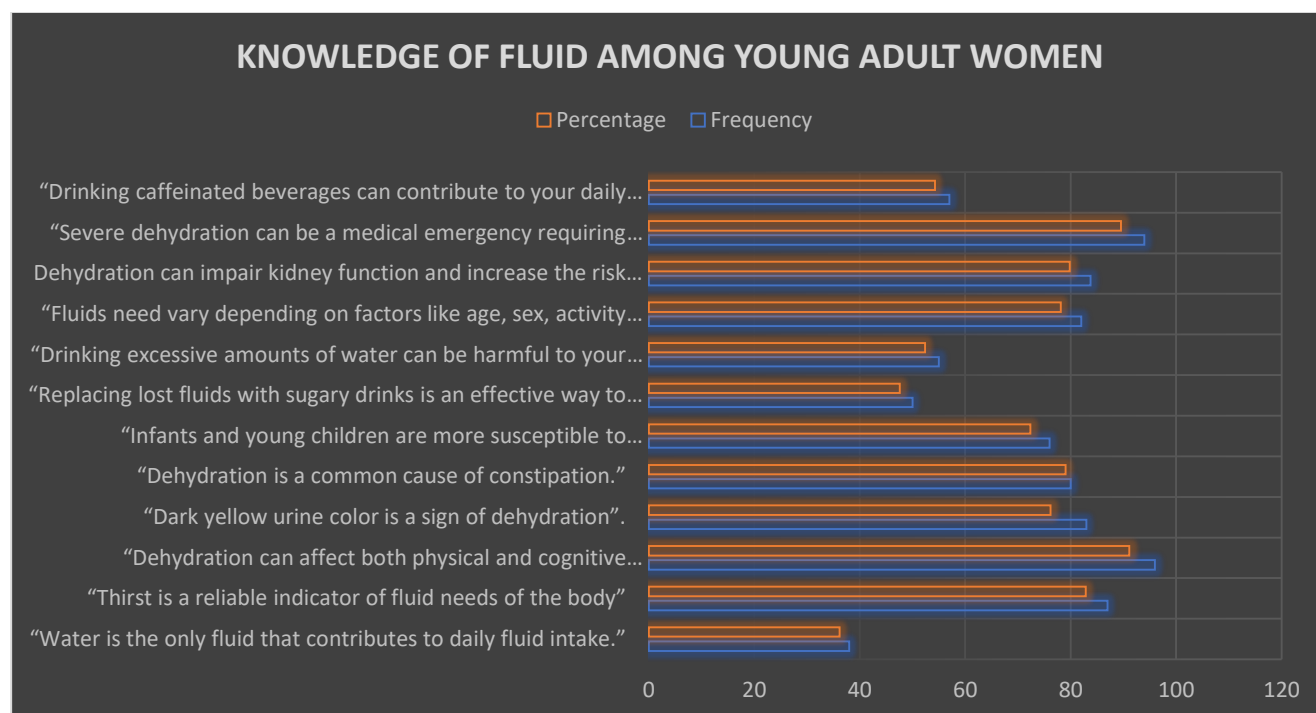


Figure -06- Knowledge of fluid among young adult women

The survey data reveals that there are both commonalities and disparities in knowledge regarding fluid intake and hydration between the non-hostel and hostel groups. Notably, the non-hostel group shows a higher awareness (80.36%) of the recommended daily fluid intake for an average adult, surpassing the hostel group's understanding (55.10%). A study published in the PubMed by Adam D Seal et.al., in 2023 found that the optimal daily fluid intake for adults is 2.7 liters for men and 2.2 liters for women.

However, when it comes to identifying hydrating beverages, both groups exhibit similar knowledge, with roughly 60% accurately recognizing them.

In the context of understanding the functions of water in the body, there is no significant divergence between the non-hostel (60.71%) and hostel (40.82%) groups. A study conducted on E Jéquier and F Constant 2010, found that the main functions of water in the body are to regulate body temperature, remove waste products, and transport nutrients and oxygen to the cells. Knowledge about the symptoms of dehydration remains relatively consistent, with the non-hostel group (17.86%) closely trailing the hostel group's awareness (26.53%). A study by S P Zodpey et. al., (1998) said that symptoms of dehydration include thirst, headache, fatigue, dry mouth and throat, and decreased urine output.

Interestingly, there is a noticeable contrast in understanding hydration status based on urine color. The non-hostel group (19.64%) lags behind the hostel group (44.90%) in this aspect. When considering factors

influencing fluid intake, the non-hostel group (48.21%) exhibits a slightly higher comprehension than the hostel group (55.10%).

Knowledge about the general guideline for fluid intake during exercise is fairly similar, with both groups having a substantial grasp, but there's a more pronounced divergence when it comes to understanding the consequences of inadequate fluid intake, with the non-hostel group (19.64%) less informed than the hostel group (51.02%).

On the topic of the exclusive contribution of water to daily fluid intake, both groups concur, with approximately 80% acknowledging water as the primary source where a study conducted by Sophie Killer et al., 2012 has said that Water is the primary source of fluid that contributes to daily fluid intake. However, other fluids, such as milk, juice, and soup, can also contribute to hydration. Similarly, they share a robust understanding that thirst reliably indicates fluid needs, with a higher level of agreement in the non-hostel group (91.07%) compared to the hostel group (81.63%). Both groups demonstrate a solid comprehension of how dehydration can impair physical and cognitive performance, a study by Kristen E D' Anci et. al., (2006) has proven that Dehydration can affect both physical and cognitive performance. In severe cases, dehydration can lead to confusion, seizures, and even death. Both groups demonstrate a solid comprehension that the correlation between dark yellow urine color and dehydration. They also understand that dehydration can lead to constipation, with similar percentages in both groups.

Regarding the vulnerability of infants and young children to dehydration, the non-hostel group (78.57%) shows a greater awareness compared to the hostel group (65.31%). M Anti et. al., (1998), has proven that Dehydration is a common cause of constipation. However, the hostel group (55.36%) appears to have a slightly better understanding that replacing lost fluids with sugary drinks is not an effective rehydration strategy compared to the non-hostel group (48.98%).

Knowledge about the potential harm of excessive water consumption is consistent between both groups, with roughly half recognizing this concern. A magazine by Adrienne Seitz said that drinking excessive amounts of water can be harmful to your health. They also align in comprehending that fluid needs can vary based on factors like age, sex, activity level, and climate.

Finally, both groups recognize severe dehydration as a medical emergency and acknowledge the contribution of caffeinated beverages to daily fluid intake, with minimal divergence in their understanding. In summary, while both the non-hostel and hostel groups generally possess a solid foundation of knowledge regarding fluid intake and hydration, variations exist across specific areas. These disparities highlight opportunities for targeted education and awareness efforts to further enhance their comprehension of fluid-related topics.

CONCLUSION

This study delved into the realm of fluid intake among young women, with a primary focus on evaluating their knowledge levels. The research revealed that both hostelites and non-hostelites possessed a similar understanding of the significance of proper hydration for overall health, thus aligning with the study's hypothesis. No significant differences in knowledge between the two groups. These findings highlight the need for comprehensive educational interventions aimed at promoting optimal fluid intake behaviors among young women, irrespective of their living arrangements. Enhancing awareness and knowledge about fluid intake can contribute to better overall health outcomes for this demographic. By bridging knowledge gaps, we can empower this demographic to make informed choices, ultimately fostering better health outcomes.

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