

Evaluation of water/fluid intake of inpatient's relatives and affecting factors

Yatan hasta yakınlarının su/sıvı tüketimi ve etkileyen faktörlerin değerlendirilmesi

İrem DİLAVER¹ (ID), Büşra PARLAK SOMUNCU² (ID), Kübra ŞAHİN¹ (ID), Medine Gözde ÜSTÜNDAĞ¹ (ID), Murat TOPBAŞ¹ (ID), Gamze ÇAN¹ (ID), Nazım Ercüment BEYHUN¹ (ID), Sevil TURHAN¹ (ID)

ABSTRACT

Objective: The aim of this study to evaluation of water/fluid intake of inpatient's relatives and affecting factors.

Methods: In this descriptive study, 608 relatives of inpatient were included, between June-July 2019. The data were collected by using face-to-face interview method with a questionnaire form. In the evaluation of daily fluid intake sufficiency from beverages and water, National Academy of Medicine's (NAM) recommendation of 2.2 L/day fluid intake for females, 3.0 L/day for males was taken as a basis. The values by gender groups equal to these amounts or above were evaluated as sufficient while the values below these amounts were considered as insufficient fluid intake. In data analysis, SPSS 23.0 statistical package program was used.

Results: In this study, the amount of water intake of patient relatives staying full time in the hospital was found as 1361.0±796.9 (0-5000) mL/day and the fluid intake was 1826.8±998.2 (0-6600) mL/day. According to base on the recommendations of NAM, it was determined that 482 (79.3%) of the patient relatives

ÖZET

Amaç: Bu çalışmanın amacı, hastanede yatan hasta yakınlarının su/sıvı alımını ve etkileyen faktörleri değerlendirmektir.

Yöntem: Çalışma tanımlayıcı tipte yapılmıştır. Çalışmaya Haziran-Temmuz 2019 tarihleri arasında yatan hasta yakını olarak bulunan 608 kişi dahil edilmiştir. Veriler anket formu aracılığıyla, yüz yüze görüşme yöntemiyle toplanmıştır. İçecek ve sudan günlük sıvı alımının yeterliliğinin değerlendirilmesinde, Amerikan Ulusal Tıp Akademisi'nin (NAM) kadınlarda 2,2 L/gün, erkeklerde 3,0 L/gün sıvı alımı önerisi esas alınmıştır. Cinsiyet gruplarına göre bu miktarlara eşit ve üzeri değerler yeterli olarak değerlendirilirken, bu miktarların altındaki değerler yetersiz sıvı alımı olarak değerlendirilmiştir. Verilerin analizinde SPSS 23.0 istatistik paket programı kullanılmıştır.

Bulgular: Bu çalışmada hastanede tam gün kalan hasta yakınlarının su tüketim miktarı 1361,0±796,9 (0-5000) mL/gün, sıvı tüketim miktarı 1826,8±998,2 (0-6600) mL/gündür. NAM'a göre değerlendirildiğinde, 482 (%79,3) hasta yakınının sıvı alım miktarı yetersiz,

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¹Karadeniz Technical University Faculty of Medicine, Public Health Department, Trabzon
²Erzincan Community Health Center, Erzincan



İletişim / Corresponding Author : İrem DİLAVER
KTÜ Tıp Fakültesi, Halk Sağlığı AD. 61000 Ortahisar / Trabzon - Türkiye
E-posta / E-mail : dr.iremhekimoglu@gmail.com

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consume insufficient amount of fluid and 126 (20.7%) patient relatives were sufficient. It was found that daily water and fluid intake amounts of males, having jobs and daily fluid intake of participants staying in hospital for more than three days were high ($p<0.05$). According to the statements of patient relatives related to change in their water consumption amount compared to other times, it was seen that the water consumption of 66 (10.9%) relatives increased, 262 (43.1%) relatives did not change, and 280 (46.0%) relatives decreased.

Conclusion: In the study, it was found that daily water intake amount of patient relatives staying full time in the hospital was 1.4 L/day and the amount of fluid intake was 1.8 L/day. Daily fluid intake amount of 79% of patient relatives was lower than the amount recommended by NAM for adult male and female groups. The amount of water and fluid intake of women, those not working in an income generating work, those living in another city/abroad and those who stated that their water intake amount decreased in the hospital was found lower.

Key Words: Hospital, water intake, water consumption

126 (%20,7) hasta yakınının yeterli olduğu saptanmıştır. Erkeklerde, gelir getirici işte çalışanlarda günlük su ve sıvı tüketim miktarı, üç günden uzun süredir hastanede kalan katılımcılarda günlük sıvı tüketim miktarı yüksek saptanmıştır ($p<0,05$). Hastanedeki su tüketim miktarlarının diğer zamanlara göre değişimi sorgulandığında 66'sı (%10,9) su tüketim miktarının arttığını, 262'si (%43,1) değişmediğini, 280'i (%46,0) azaldığını belirtmiştir.

Sonuç: Bu çalışmada, hastanede tam gün kalan hasta yakınlarının su tüketim miktarı 1,4 L/gün, sıvı tüketim miktarı 1,8 L/gündür. Hasta yakınlarının günlük toplam sıvı tüketim miktarı, katılımcıların %79'unda NAM'ın yetişkin erkek ve kadınlar için önerdiği miktardan düşük bulunmuştur. Kadınların, gelir getirici bir işte çalışmayanların, başka bir şehirde / yurtdışında yaşayanların ve hastanede su alım miktarının azaldığını belirtenlerin su ve sıvı alım miktarı daha düşük bulunmuştur.

Anahtar Kelimeler: Hastane, su alımı, su tüketimi

INTRODUCTION

Water is an essential resource for the maintenance of health and life as it is one of the elements for the physiological functioning of human body (1,2). Since the water required in the body cannot be produced by the body itself, it is necessary to provide water intake from outside and replace the fluid lost through some mechanisms (3). There are several recommendations regarding the total amount of daily water and fluid intake that a healthy adult should consume. European Food Safety Authority (EFSA) recommends the total water intake (TWI)

amount from plain water, beverages, and nutrients as 2.0 L/day for adult females and 2.5 L/day for adult males (4). According to the NAM, the amounts should be 2.7 L/day for adult females and 3.7 L/day for adult males. NAM also recommends the amount of total fluid intake from water and beverages as 2.2 L/day for females and 3 L/day for males (5). These recommendations are taken into consideration in the evaluation of daily water and fluid intake amounts of individuals. However, it is also known that the water need of the body is determined mainly by factors such as health condition, water content of the body, physical activity, environmental conditions

(temperature, humidity, altitude, air volume, clothes, etc.) and diet (5, 6).

Water needs of the inpatient's relatives staying in hospitals may be affected due to changing environmental conditions, physical effort, dietary characteristics and other variables (sleep, stress, etc.) affecting metabolism. During their stay in hospital, in addition to drinking water and using water for preparing drinks and food, relatives of the patients consume water in many settings such as body and environmental cleaning that can directly or indirectly affect human health (7). In all these settings, water amount and water resources used by the relatives may be affected by some factors such as availability of water source, being clean, reliable, and economical. Many factors such as not giving priority to their own needs while giving care to the patient, not knowing the environment and facilities around them, and accompanying the patient constantly may cause insufficient water intake and decrease in water intake. Decrease in water intake causes acute dehydration and may end up with negative health consequences depending on the degree of dehydration (8). In conditions such as not being able to reach enough water or accessing water through unhealthy ways may also threaten the patient's health either directly or indirectly, apart from their own health.

Although there are studies in the literature investigating water intake among many specific groups, there is no study evaluating water intake of inpatient's relatives. In a study conducted with the participants over the age of 18 in Trabzon province, the mean daily water intake amount was reported as approximately six glasses. This shows that the mean amount of water intake of citizens in Trabzon is approximately 1.2 L/day (9). This amount is much lower than the recommended water intake amount for adults. Relatives of the patients are considered as a risky group in terms of water intake during their stay in hospital. Patient relatives are both individuals who needs to be protected and an integral part of health services regarding patient care and delivery

of health care. It constitutes a great importance for public health to evaluate water intake in this group accompanying patients and facing many risks caused by insufficient water intake.

In this study, it was aimed to evaluate the water/ fluid intake amounts of the relatives of inpatients in a public university hospital in Trabzon and relevant affecting factors.

MATERIAL and METHOD

The study was conducted as a descriptive study. The permission of the Chief Physician of Karadeniz Technical University (KTU) Farabi Hospital (Date:25.04.2019 and Number: E.5732) and the Ethics Committee of KTU Faculty of Medicine (Date:20.05.2019 and Number:24237859-396) were obtained for the study. In data collection phase, patient relatives were informed about the aim of the study and their verbal and written consent was obtained.

This study was carried out with the participation of the relatives of inpatients between June and July 2019 in selected wards in public hospital of Karadeniz Technical University (KTU) Farabi Hospital in Trabzon. The wards included in the study were selected by the researchers among the wards where patients receive long-term inpatient treatment and more likely to have accompanying persons. In this scope, from the surgery department, General Surgery, Gynecology and Obstetrics, Orthopedics, Brain Surgery and Pediatric Surgery; from the internal wards department, Neurology, Chest Diseases, Pediatrics (Infant, Infection, Hematology) and Internal Medicine (Nephrology, Gastroenterology, Oncology, Hematology) were included in the study. Following the selection of the wards for the study, the number of beds in these wards was determined and it was assumed that there were two different patient relatives for each patient. It was envisaged to include patient relatives two times more than the number of beds in each ward. Accordingly, as the total number

of beds in these wards was 304, it was planned to include 608 patient relatives in the study and this number of participants was ensured.

As the data collection method, a questionnaire was conducted among the patient relatives through face-to-face interview. The questionnaire form consisted of three parts. 1st Part -Questions related to socio-demographic and personal characteristics: In this part, gender, age, working status in an income generating job, monthly household income, place of residence, chronic illnesses and regular drug use of the patient relatives were investigated. 2nd Part -Questions related to hospital-stay: In this part, the ward where inpatient's relatives stay, for how long and days they stay with the patient and when they stay with the patient during the day were investigated. 3rd Part -Questions related to water intake: In this part, the reasons of water consumption and preferred water sources during their stay in hospital, the amount of water and fluid intake during the period of hospital stay, change in the amount of water intake during hospital stay compared to past and the underlying reasons were investigated. In the literature, there is no value for sufficient daily drinking water intake of adults. In the evaluation of daily fluid intake sufficiency from beverages and water, NAM's recommendation of 2.2 L/day fluid intake for females, 3.0 L/day for males was taken as a basis (5). The values by gender groups equal to these amounts or above were evaluated as sufficient while the values below these amounts were considered as insufficient fluid intake. In the evaluation of water and fluid intake of patient relatives, fluids were classified as: water (tap and packaged water); milk and milk derivatives; hot drinks (coffee, tea, and other hot drinks); non-alcoholic beverages (carbonated and non-carbonated non-alcoholic beverages, energy drinks, diet drinks and other beverages).

In data analysis, SPSS 23.0 statistical package program was used. Descriptive statistics presented as number and percentage for categorical variables and mean, standard deviation, minimum and maximum

for numerical variables. Normal distributions of numerical variables were evaluated by Shapiro Wilk test. Mann Whitney U test and Student-T test was used to compare two independent groups. In comparing more than two independent groups, Kruskal Wallis test was used. To determine the source of the significant difference between the groups, Bonferroni test, one of the post-hoc test statistics, was used. Statistical alpha significance level was accepted as $p < 0.05$.

RESULTS

A total of 608 patient relatives participated in the study conducted at KTU Farabi Hospital. Among the participants, 438 (72.0%) of the patient relatives were female. The mean of the patient relatives was 41.9 ± 13.2 (13-81). Total monthly household income was found as 3873.2 ± 2402.5 (500-15000) TL. Socio-demographic and personal characteristics of the patient relatives are presented in Table 1.

Among the patient relatives, 350 (56.6%) of them were in internal wards, and 258 (43.4%) of them were in surgical wards. The mean days the patient relatives stayed in hospital was 13.1 ± 42.8 (1-40) and the mean duration of daily hospital stay was 19.7 ± 6.8 (2-24) hours. While 423 (69.6%) of patient relatives were staying full time in the hospital, 145 (23.8%) of them were staying only in the daytime and 40 (6.6%) of them only in the evening.

Daily mean amount of water and fluid intake (mL/day) of patient relatives was evaluated based on the intake amounts of patient relatives staying full time in hospital (n=423). Accordingly, the amount of water intake of patient relatives staying full time in the hospital was found as 1361.0 ± 796.9 (0-5000) mL/day and the fluid intake was 1826.8 ± 998.2 (0-6600) mL/day. Daily water and fluid intake amount of patient relatives staying full time in the hospital are presented in Table 2. According to the analysis of patient relatives' daily fluid intake based on the recommendation of NAM, the amounts of fluid intake

of 482 (79.3%) patient relatives were insufficient and 126 (20.7%) patient relatives were sufficient.

The amount of water and fluid intake of patient relatives during their stay in the hospital were presented hourly (mL/h) to ensure standardization. As a result, the amount of hourly water and fluid intake of patient relatives staying full time in the

hospital was found as significantly lower than the others (Table 3).

Among patient relatives, 582 (95.7%) of them preferred packaged water as drinking water during their stay in hospital. Descriptive analysis of the water source preferences of patient relatives to meet their nutritional needs is presented in Table 4.

Table 1. Sociodemographic and personal characteristics of patient relatives

	n	%
Gender		
Female	438	72.0
Male	170	28.0
Place of residence		
Trabzon city center	210	34.5
Trabzon village/district	147	24.2
Another province/abroad	251	41.3
Working in an income generating job		
Yes	220	36.2
No	388	63.8
Presence of a chronic disease		
Yes	252	58.6
No	356	41.4
Regular medication intake		
Yes	217	35.7
No	391	64.3

Table 2. Daily water and fluid intake of patient relatives staying full time in the hospital

Fluid intake amount (ml)	Mean±SD	Min.-Max.	Proportion in TFI (%)
Water	1361.0±796.9	0-5000	74.5
Hot beverages			
Tea	281.3±369.7	0-3000	15.4
Coffee	32.2±103.5	0-1000	1.8
Milk and milk derivates	59.0±120.7	0-1000	3.2
Non-alcoholic beverages			
Carbonated beverages	31.0±176.2	0-2500	1.7
Fruit juice	52.9±143.8	0-2000	2.9
Other	9.4±59.3	0-660	0.5
Total fluid intake	1826.8±998.2	0-6600	100.0

Table 3. Comparison of hourly water and fluid intake of patient relatives

	Water intake amount (mL/h)	Fluid intake amount (mL/h)
Relatives staying full day	56.9±33.1	76.4±41.5
Relatives staying only during the day	97.1±67.5	135.3±93.4
Relatives staying only in the evening	91.3±44.4	116.1±55.3
p	<0.001*, +	<0.001*, +

*a:full day vs daytime; +: full day vs evening

Table 4. Water source preference of patient relatives to meet their needs

Water source preference *	Drinking water		Preparing beverages		Washing fruits and vegetables	
	n	%	n	%	n	%
Patient room	11	1.8	4	0.7	95	15.6
Ward kitchen	0	0.0	4	0.7	45	7.4
Packaged water	582	95.7	58	9.5	30	4.9
Other	12	1.9	2	0.3	3	0.5

*: More than one water source preference can be specified for each need.

According to the statements of patient relatives related to change in their water consumption amount compared to other times, it was seen that the water consumption of 66 (10.9%) relatives increased, 262 (43.1%) relatives did not change, and 280 (46.0%) relatives decreased. Regarding the reasons of water consumption, among the patient relatives who stated that their amount of water consumption increased during their stay in the hospital, 37 (56.1%) of them stated that the room was hot, 29 (43.9%) of them felt thirstier, 17 (25.8%) of them felt relaxed psychologically when drinking water, six (9.1%) of them thought their own health and 10 (13.5%) of them for other reasons increased their water intake. Among the patient relatives who stated that their amount of water consumption decreased, 83 (29.6%) of them felt less thirsty, 77 (27.5%) of them did not think of it, 65 (23.2%) of them did not have time, 56 (20.0%) of them thought that the hospital environment was not clean, 47 (16.8%) of them had difficulty to access water, 38 (13.6%) of them thought it increased the need for

toilet, 38 (13.6%) of them neglected, 33 (11.8%) did not want psychologically and nine (3.3%) of them for other reasons consumed less water. Daily water and fluid intake amount of the patient relatives staying full time in the hospital according to some parameters are presented in Table 5.

DISCUSSION

For daily water/ fluid intake, a single amount to meet everyone's need cannot be defined as the individual water need varies according to many factors such as caloric consumption, insensitive water losses, body size, body composition and concentration/dilution capacity of the kidney (5,8). However, to encourage sufficient water intake at the population level, several national and international authorities have developed recommendations for water intake based on national estimations (10). According to the recommendation of NAM for sufficient fluid intake, female adults should consume 2.2 L/day and the males, 3.0 L/day water in a day (5). In the literature, there is no study related to

Table 5. Daily water and fluid intake of patient relatives staying full time in hospital according to some parameters (n=423)

		Daily water intake (L)	Daily fluid intake (L)
Gender	Female	1.3±0.8	1.6±0.9
	Male	1.6±0.8	2.4±1.1
	p	<0.001	<0.001
Age (year)	≤ 35	1.4±0.9	1.9±1.0
	36-55	1.3±0.8	1.8±1.0
	≥56	1.3±0.7	1.7±0.9
	p	0.266	0.203
Working in an income generating job	Yes	1.5±0.8	2.1±1.1
	No	1.3±0.8	1.7±0.9
	p	0.006	<0.001
Total monthly household income (TL)	Less than 3000 TL	1.3±0.7	1.7±0.8
	3000 TL or more	1.4±0.8	1.9±1.0
	p	0.520	0.492
Place of residence	Trabzon city center	1.3±0.8	1.8±1.1
	Trabzon village/district	1.3±0.7	1.7±0.9
	Another province/abroad	1.5±0.8	1.8±1.0
	p	0.017*	0.028
Presence of a chronic disease	Yes	1.3±0.9	1.7±1.0
	No	1.4±0.8	1.9±1.0
	p	0.095	0.153
Regular medication use	Yes	1.3±0.8	1.8±1.0
	No	1.4±0.8	1.9±1.0
	p	0.141	0.328
Ward where the patient is staying	Surgical ward	1.4±0.8	1.8±1.0
	Internal medicine ward	1.3±0.8	1.9±1.0
	p	0.796	0.570
Hospital stays of patient relatives (days)	3 days or less	1.3±0.9	1.7±1.0
	More than 3 days	1.4±0.7	2.0±0.9
	p	0.097	0.001
Total number of people in the hospital room	2 people	1.5±0.9	1.9±1.0
	More than 2 people	1.3±0.8	1.8±1.0
	p	0.145	0.176
Change in water intake during the hospital stay	Increased	1.7±0.8	2.2±0.9
	Not changed	1.5±0.9	2.1±1.1
	Decreased	1.1±0.6	1.5±0.8
	p	<0.001^{*,**}	<0.001^{*,**}

*: Trabzon city center vs other province/abroad; +: Increased vs decreased; **: Same vs decrease.

the water and fluid intake of patient relatives staying in hospital. In the Turkey Nutrition and Health Survey, it was reported that the mean amount of fluid intake in Turkey in 2010 was 1841.9 mL/day among males and 1497.2 mL/day among females, over the age of 19 (11). In the present study, the mean fluid intake of the patient relatives staying full time in the hospital was found as 2368.1 mL/day among males and 1648.0 mL/day among females. According to the analysis of daily fluid intake of patient relatives based on the recommendation of NAM, it was determined that 482 (79.3%) of them consume insufficient amount of fluid. Accordingly, it can be said that the rate of insufficient fluid intake is extremely high among patient relatives. On the other hand, the recommendation of NAM is a standard amount, and it is thought that there are many factors that may increase the daily fluid need of patient relatives. These factors are increased physical activity due to patient care, being in crowded, close, and narrow environment, exposure to temperature and humidity as the study was carried out in the summer season and having to spend a more active and awake time than their normal lives. Therefore, it is considered that the insufficient fluid intake rate was even higher. In this study, hourly water, and fluid intake of patient relatives during their stay in hospital was compared to analyze the effect of their stay time on water and fluid consumption. As a result, hourly water, and fluid intake of those staying full time in the hospital was found to be statistically significantly lower than those staying only in the evening or during the day. This finding suggests that being in the hospital environment for a long time affects people's water and fluid intake negatively. It is important to consider the proportion of different fluid sources in daily total fluid intake. It is reported that consumption of fluids other than water have various effects on health (12-14). In this regard, it is thought that the main determining factor is the differences in energy and nutrient ingredients. It is reported in the study of Guelinckx et al. (14) on water and fluid intake among adults conducted in 13 countries that the proportion of water in TFI was the highest. In six countries including Turkey, this ratio was

% 47-78 and the second highest proportion in TFI was found as hot beverages in all those countries (14). In the same study, TFI in Turkey was found as 2.21 L/day and fluids having the highest proportion in TFI were respectively water (1.04 L/day), hot beverages (0.51 L/day), non-alcoholic beverages (0.20 L/day) and milk derivatives (0.06 L/day) (14). In the present study, TFI of patient relatives was 1.82 L/day. Fluids having the highest proportion in TFI were respectively water (1.36 L/day), hot beverages (0.31 L/day), non-alcoholic beverages (0.08 L/day) and milk derivatives (0,06 L/day). In this study, the was lower than TFI in Turkey the findings in the study of Guelinckx et al. (14), while the proportion of water in TFI was higher. These findings reveal the effect of staying in a hospital environment on people's fluid intake behaviors. In this study, the contribution of water to TFI was high compared to the studies in the literature. This was considered as a positive finding and associated with the easy access to water compared to other fluids in the hospital environment. In this study, approximately half of the patient relatives stated that their water intake decreased during their hospital stay and the reasons were mostly feeling less thirsty, not thinking of it, having no time and believing that the hospital environment is not clear. This negative effect of hospital stay on the amount of water intake may cause many health problems among patient relatives due to insufficient fluid intake. Therefore, this finding of the study should be taken into consideration and underlying causes should be evaluated to determine the possible interventions. According to the evaluation of the findings of the study obtained so far, together with other studies in the literature, there are differences in the amount of water and fluid intake of patient relatives among societies. It is suggested to evaluate water and fluid intake amounts of patient relatives according to some personal parameters or parameters related to the duration of hospital stay to determine intervention points in this group. In the literature, different findings related to the relationship between gender and fluid/water intake have been found in the studies on societies. In addition to many studies not

associating gender with daily fluid and water intake (15-17), there are also studies reporting that daily fluid intake of males is statistically significantly higher than females (18-19). In the present study, it was found that males consumed significantly more water and fluid than females during their hospital stay. It is thought that the most powerful reason of this difference was the effect of gender on daily fluid need due to different physiological and metabolic processes.

Many physiological changes occurring in the body with increasing age cause decrease in water and fluid intake (4). In the studies investigating the relationship between age and daily water/fluid intake, it has been reported that the amount of daily water and fluid intake decreases with increasing age (15-17). In this study, no statistically significant difference was found between age groups in terms of daily water and fluid consumption. It is thought that the reasons for this is that most of the patient relatives participated in the study were in the young and middle age group.

In the literature, according to the studies on the society, it has been reported that high income level affects daily water intake positively (15,19). In this study, as almost all the patient relatives consumed packaged water as drinking water during their stay in hospital, it was implicated that there was a positive relationship between income level and water/fluid intake amounts. However, no statistically significant relationship was found between the monthly income levels of the patient relatives and the amount of daily water/fluid intake. In this study, daily water and fluid intake amounts of patient relatives working in an income generating job were found to be statistically significantly higher.

The daily amount of water and fluid intake of individuals can take a role in the etiology of chronic diseases and can be an affective determinant in their prognosis. In this study, daily water, and fluid intake amount of patient relatives with chronic disease was less than others; however, this difference was not statistically significant. Nevertheless, this finding should be taken into consideration as individuals with chronic diseases are more vulnerable to health problems caused

by low water and fluid intake in hospital environment.

In this study, the daily fluid intake amount of patient relatives staying in hospital for more than three days was found as statistically significantly higher than the patient relatives staying in hospital for three days or less, and there was no statistically significant difference in the amount of water intake. The positive correlation between the length of the duration of hospital stay and the increase in the amount of daily fluid intake may be a result of getting to know the environment, adapting to the process, and realizing their own needs.

The most important limitation of the study is that the data related to the amount of water and fluid intake was collected by recall method and comprised the last 24 hours, since the time of patient relatives to be present in the hospital was not known beforehand. However, it is still believed that the findings of this study provide valuable results about the water/fluid intake patterns of patient relatives.

In conclusion, it is expected that the daily fluid/water intake need will increase during the hospital stay due to environmental conditions, physical load and the active time spent during the day. However, in this study, daily fluid intake of patient relatives was found well below the amount recommended by NAM for adult females and males. In addition, approximately half of the patient relatives stated that their water intake decreased during their hospital stay and among the most remarkable reasons for this decrease, there were negligence and not having time to get water. This situation may confront patient relatives with many health problems caused by insufficient fluid intake. In this regard, it is suggested that the hospital management can create opportunities for patient relatives to access clean and reliable water in a clean environment. When the factors affecting the daily water and fluid intake of patient relatives were evaluated, the amount of water and fluid intake of women, those not working in an income generating work, those living in another city/abroad and those who stated that their water intake amount decreased in the hospital was found to be significantly low. This finding reveals the effect of social and personal determinants on water consumption.

ETHICS COMMITTEE APPROVAL

* The study was approved by the KTU Faculty of Medicine Ethics Committee (Date: 20.05.2019 and Number: 24237859-396).

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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