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Letter to the Editor

Liquid Consumption Conditions of Elderly People Living at Home and Investigation of Effecting Factors

Buse Dönmez [1], ****Gokce Demir*** [2]

1. *Health Sciences Institute, Kırşehir Ahi Evran University, Kırşehir, Turkey*
2. *Department of Community Health Nursing, Faculty of Health Sciences, Kırşehir Ahi Evran University, Kırşehir, Turkey*

***Corresponding Author:** Email: gokce.demir@ahievran.edu.tr

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Dear Editor-in-Chief

Dehydration can cause increased hospitalization rates in old ages, but can also lead to increased mortality rates (1,2). For this reason, monitoring and controlling the fluid intake of the elderly is very important for both the elderly living at home and those living in facilities such as nursing homes and retirement homes.

Therefore, we aimed to examine the fluid intake levels of elderly people living at home and influential factors. Approval (34/05) was obtained from the Ethics Committee of the University.

This study was conducted as a descriptive-relational research. It was conducted in one of Turkey's seven regions Central Anatolia Region. The population of the study consisted of 3247 people aged 65 yr and over who live in their homes in the provincial center of Kırşehir and are registered with a Family Health Center (FHC). In determining the sample size of the study, the template chart of the WHO was used. In studies conducted in our country, the daily amount of fluid intake of individuals over the age of 65 yr is low (72.7%-84.4%) (3). Considering these rates, at the 90% confidence level with d=0.85, and within 0.06 points, the required sample size was determined as 96 (4). Taking into account the possible data losses that may occur during the implementation of the study, a figure was determined as 98 that was higher than what was proposed. Through the random sampling method, the sample of the study was selected from elderly individuals without any neurological disorders and mental disability who came to the FHC between 11.20.2019-02.15.2020, where the study was conducted.

Elderly participants, who met the sample selection criteria of the study, were given fluid intake cards to record the amount of fluid (like water and other fluids) they drank for 24 hours. Participants were asked to record their three-day fluid intake within standard-sized (cup: 200ml, tea glass:100ml) cups provided by the researcher. Their body surface areas were calculated by haycock (0.024265 x height (cm) 0.3964 x weight (kg) 0.5378) calculation method from the height and weight values of the elderly; subsequently, the daily fluid amount needed was determined by Gaspar formula (body surface area x 1200 ml). The amount of fluid deficit of participants was determined by subtracting the average amount of fluid they received over three days from the amount of fluid they needed daily.

Data were collected using a questionnaire consisting of five parts. 1. A form that evaluates the sociodemographic and fluid consumption status of the elderly. 2. Instrumental Activities of Daily

Living (IADL) (5). 3. Katz Activities of Daily Living Assessment Form (ADL) (6). 4. Mini Nutritional Assessment Test (MNT) (7). 5. Geriatric Depression Scale (GDS) (8). The data obtained in the study were analyzed through the SPSS 22.0 package program (IBM Corp., Armonk, NY, USA). Whether the variables of the study demonstrated a normal distribution was checked through the skewness and kurtosis values. In the evaluation of the obtained values, percentage, minimum, median, mean, standard deviation, Pearson correlation test and Spearman correlation test analysis were used. The significance level was accepted as $P<0.05$.

Overall, 75.5% of the elderly were between the ages of 65-74 yr, and 53.1% were women. The mean value of the daily fluid intake of the participant elderly individuals was 1721.4±478.6 ml. Majority of the elderly individuals had fluid deficit (90.8%). Concerning the participant elderly individuals who were 65 years old and over; when the relationship between the ADL mean scores and fluid deficit levels was examined, a negative and significant relationship (rho= -.209 P= 0.039) was determined. When the relationship between the GDS mean scores and fluid deficit levels of the elderly individuals was examined, a positive and significant relationship was determined (r=.211 P= 0.037). When the relationship between the MNT, IADL scores and fluid deficit levels was examined, no significant relationship was determined (Table 1).

Table 1: The relationship between the daily fluid intake, fluid deficiency status, and their mean scores on the scales and fluid deficit levels of the elderly

Variable	*Min- Max*	*Median*	*Mean±standard deviation*	*Number (%)*
Daily fluid consumption (ml)	600-2600	1800	1721.4±478.6	
Fluid Deficit Status				
Yes				89 (90.8)
No				9 (9.2)
Total				98(100.0)
Scale Scores	**r/rho**	***p***		
Mini Nutritional Test	.078 (r)	.444		
Katz Activities of Daily Living	-.209* (rho)	.039		
Instrumental Activities of Daily Living	-.109 (r)	.287		
Geriatric Depression Scale	.211* (r)	.037		

As a result, older individuals did not consume enough fluids per day.

Conflict of interest

The authors declare that there is no conflict of interests.

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