RELATIONS CONSUMPTION LIQUID, NUTRITIONAL STATUS, PHYSICAL ACTIVITY WITH STATUS HYDRATION IN ELDERLY IN WERDHA WISMA MULIA KOWANI INSTITUTION, WEST JAKARTA

Rona Chelsea[1], Dudung Angkasa[2] dan Mury Kuswari[3]
[1]Nutrition Program, Faculty of Health Sciences, Esa Unggul University of West Jakarta
Email : chechechelsea6@gmail.com

ABSTRACT

The Process of a menu is a process of an artless manner that will be experienced in by every individual so they can. Problems in accessing health services often occurs in of rheumatoid arthritis in addition to nutritional needs, elderly need the detailed regulation of the hydration and a high intake of its secreting a fluidthat essentially and perfactly morally good.Objectives of the studyare to analyze the relation of a high intake of liquid, nutritional status of children under, physical activity, with the status of the hydration on of rheumatoid arthritis from the institution werdha wisma mulia kowani jakarta barat. Know relations consumption liquid, nutritional status, physical activity, with status hydration in elderly in an werdha wisma mulia kowani west jakarta. The kind of research this is the kind of research quantitative with the design research of cross sectional. Percent of the population of this research is that an entire kind of rheumatoid arthritis from the institution werdha wisma mulia kowani west jakarta with on samples from 30 respondents in the persent study. Which is done based on the data in were was used in the study pearson candy businesses correlation test and test it at least a high school spearman to analysis support for new bivariat. This technique used in order to understand the consumption relationship which has seen trade a liquid, nutritional status of children under, physical activity, with the status of the hydration on of rheumatoid arthritis.

Based on the results of the test and been approved bivariat use spearmen correlation test will be within the range that there was a correlation a high intake of a liquid with the status of the hydration, is statistically *p-value* <0,05, there was no connection nutritional status of children under,an physical activity, with the status of the hydration is statistically *p-value*>0,05. Consumtion is a liquid the most relating to status hydration in elderly in an werdha wisma mulia kowani west jakarta.
.

Keywords: physical activity, consumption liquid, nutritional status, hydration status

INTRODUCTION

The older members of the is a phase the decrease in the city the ability of thought and your moral understanding and physical , which begins with the fact that there are a few changes in life , these changes came with the pt pgn promised to supply a rush for the local downward trends in exports and physiological and psychological where middle age until continuing through old age till (of rheumatoid arthritis) can cause issues concerning health services post nutritional supplements and at the age of groups in this category .The problems that happened quite a lot though lack of care for a high intake of a liquid especially water white and in some cases declining physical activity that can cause of rheumatoid arthritis slipped to only their second dehydration (Aprilia & Khomsan, 2014)

This study which was conducted in the hospital united kingdom declared that from 200 the subject are recruited to are only sampled as many as 79 % slipped to only their second dehydration and 7 % the subject of died at the residence hall the hospital told . (Ahmed M, 2015).

Research in indonesia regarding the average intake of water at the capacity in jakarta shelters werda show building 1,000 ml per day (p siregar , 2009) .The results of a study conducted by dipanti werdha kabupaten pacitan shows that 75 % the subject are are categorized white water consumption who could be classified as less and 25 % is considered relatively (Aprilia & Khomsan, 2014)

Dehydration can also resulting in interference in brain function, as the decline in concentration and the ability reflect besides physically can be lowered stamina and labor productivity.Water shortage 1 percent it can cause trouble remember.In addition, the impact of that could happen is easily confused, vigilance see decline, easily tired, difficult to concentrate and headache (hardinsyah, 2009) .

The other factors that can impact on the dehydration in elderly the composition food and drink non white water that may increase or decrease thirst in elderly to consume white water , so that have an impact on enough or lack of the fulfillment of bodily fluids .Aging process that occurs in elderly also can influence its ability to maintaining water balance in the body (Aprilia & Khomsan, 2014).

World health organization (world health organization who until) recommend to send them consuming liquids in the male with the age range of the 19 until ≤ 70 year is about / 3.700 ml of days while on the ladies the age range of the 19 until ≤ 70 year is about 2.700 ml / the day (grandjean , 2004) .Of the european federation of bottled waters (efbw) also suggests the for consumption a liquid at an advanced age that is almost the same as the age of full youth with consumption as many as 2500 ml / the day for men and 2000 ml / the day to women but formerly used (efbw , 2013)

The activity itself to the physical condition of the is the gesture of the which was carried out by muscular body and the system penunjangannya .The activity itself to the physical condition of the also takes energy outside the needs of for the metabolism of basal .According to briawan , italian agent driving the vehicle .(2011) intake of water of a person about to depends on the level of the activity of , food consumption pattern , and the environment .An activity that is low on of rheumatoid arthritis could also happen due to affect intake of of its fluids because of being able to the allocation of an unslaked thirst , desire to while of them consume a drink , especially white water levels of education show decreasing (aprilia &; khomsan notes to be so performed , 2014) .

The status of hydration is a condition described the amount of fluid in the body someone could be known by means of the specific gravity of urine examination (BJU) .A method of the specific gravity of urine (BJU) chosen because they are easy to be implemented , often used , a short analysis , the accuracy of good , more cost , a good portability , and the low risks for the subject .Bju inappropriate when used on a subject of suffering from diabetes mellitus , fever , nefrotik syndrome and because it could affect the value of the specific gravity of (sawka et al , 2010)

METHOD

The study is done at december with people died people 2017 .The kind of research a method of including on the instrument types of cross sectional because all the variables was measured at the same time .30 per cent of the sample of rheumatoid arthritis pt pgn promised to supply of rheumatoid arthritis women 25 sample districts and of rheumatoid arthritis laki-laki sample 5 .Over the withdrawal of funds data using the objective of the interview , observation and documentation of .The research instruments used in uses prescribed forms food recall and food weighing 3 x 24 hours , in the forms anthropometry to the uptake of characteristics data on the other , the questionnaire nutritional status of children under mini mutritional (mna) form of assessment , the questionnaire importance of correctly filling out physical activity physical activity reach the level of less (pal at the) , assay urienometer to check the specific gravity of urein (bju) . Other instruments are notebook, stationery, knee height meter, Indonesian Food Composition Table (TKPI) and Bioelectrical Impedance Analysis (BIA) tool.

Data analysis executed is univariat and bivariat.Analysis univariat used to mendeskirpsikan dependent variable status hydration and independent variable consisting of consumption liquid, status nutrition and physical activity.Analysis bivariat in this research using test korelasi.pada the data berdistribusi abnormal use the correlation the spearman to relate the liquid consumption, status nutrition and physical activity with status hydration in elderly in an werdha wisma mulia kowani west jakarta.

RESULTS

The location for the research was being conducted from the institution werdha wisma noble kowani west jakarta .The daycare centers is located on the the supreme and heavenly prize , no 14-16 , jelambar urban village , grogol , west jakarta .The total number of of rheumatoid arthritis is 60 people .

Univariate Analysis

Subject distribution based on nutritional status of the elderly (MNA) can be seen in Table 1

Table 1.
Distribution of subjects based on nutritional status of Mini
Nutritional Assessment (MNA) in elderly

Characteristics of Nutrition Status	Frequency (n)	Percentage (%)
Under Weight	2	6,6
Normal	8	26,7
Over Weight	8	26,7
Obesitas	12	40
Total	30	100

Table 1 shows that from 30 respondents have 6.6% with underweight nutrition status, 26.7% of respondents with normal nutritional status, 26.7% of respondents with over weight nutrition status and 40% of respondents with obesity nutritional status.

The average value distribution of nutritional status is 10.70 ± 1.93 points. The distribution of the lowest nutritional status of respondents is 5 points and the highest is 13 points.

Table 2
Subject distribution based on Physical Activity Level (PAL)
physical activity in elderly

Physical Activity Characteristics	Frequency (n)	Percentage (%)
Very Light Activities	14	46,7
Light Activities	16	53,3
Medium Activity	-	-
Heavy Activity	-	-
Total	30	100

Based on table 2 shows that of 30 respondents, there is physical activity distribution with PAL value of an average of 1.52 ± 0.13 PAL. Physical activity distribution ranging from 1.36 the lowest value entered in the category of very light while 1.69 the highest value fall into the category of light.

Table 3
Subject distribution by Hydration Status in elderly

Hydration Status Characteristics	Frequency (n)	Percentage (%)
Good Hydration	15	50
Light Dehydration	7	23,3
Dehydration Medium	3	10
Dehydration Weight	5	16,7
Total	30	100

Based on Table 3 shows that of 30 responders, there is a distribution of hydration status with an average urine weight of 1.015 ± 0.05 gr / ml. The distribution of hydration status with the lowest urien weight of respondents was 1.00 gr / ml and the highest respondent was 1.03 gr / ml.

The results of measurement of urine weight showed 50% of respondents had good hydration status. The remaining subjects were found to have pre-dehydration (mild

dehydration 23.3% and moderate dehydration 10%), while those with severe dehydration of 16.7%.

with dependent variable namely status hydration

Analysis bivariat

Analysis bivariat be held to find out variable influence the treatment.Variable subjects that is independent variable consumption liquid, nutritional status, physical activity

Table 4.
Relation of fluid consumption, nutritional status, physical
activity with hydration status in elderly

Variable	Correlation (r)	p-value
Liquid Consumption	1,0000	0,001
Nutritional Status	0,282	0,132
Physical activity	0,233	0,215

Relation of Fluid Consumption with Hydration Status

There is a significant correlation between consumption a liquid and hydration status in elderly at Werdha Panti Wisma Mulia Kowani in West Jakarta with p-value 0,000 (p ≤ 0,05) with strength value 1,000 which means having perfect relationship with positive direction which means more high fluid intake, the lower the urine density value indicates good hydration status.

Relationship of Nutritional Status with Hydration Status

There is no significant correlation between nutritional status and hydration status in elderly at Werdha Panti Wisma Mulia Kowani in West Jakarta with p-value value 0,132 (p> 0,05) with strength value is 0,25 which means having weak relation with positive direction .

Relationship of physical activity with Hydration Status

There is no significant correlation between physical activity and hydration status in elderly at Werdha Panti Wisma Mulia Kowani in West Jakarta with p-value 0,215 (p> 0,05) with strength value is 0,25 which means having weak relation with positive direction .

DISCUSSION

The need for liquid consumption in Indonesia is differentiated by age group, in men aged 50-64 years was as much as 2600 mL / day while in women 50-64 years as much as 2300 mL / day (Kemenkes, 2013). The various references above indicate the existence of variations of recommended water needs for elderly people. This is likely due to various factors such as body size and composition, physical activity, drinking habits, the ambient temperature and the season during the research (summer and winter) (Santoso, 2012).

In this study showed that there is a correlation between fluid or liquid consumption with hydration status in elderly at WerdhaPantiWismaMuliaKowani in West

Jakarta with p-value value 0,001 (p ≤ 0,05) which means variable of fluid consumption and hydration status have strong relationship. A positive correlation (r) value indicates the higher the liquid consume the lower the urine density value which indicating a good hydration status.

This research is in line with the research (Andayani, 2013) with the value of r = -0.319 and p-value 0.006 known p-value <0.05 which indicates that there is a relationship between fluid consumption with hydration status. In addition, the study conducted by Susanti, 2016 also states that there is a relationship between fluid consumption with hydration status, r = 0.752 and p-value of 0.0001 (p <0.05).

Mineral water consumption is more than the consumption of other beverages and liquid from food. The consumption of water contribute 72.71% of the total liquid consumptions, while the consumption of other beverages contributed as much as 4.72% and liquid from food accounted for 22.58%. The highest water consumption was 1,986,46 ml, while the other drink consumption reached only 184,25 ml maximum and liquid from food that is from stapale food 98 ml, 68 ml animal protein, vegetable protein 44 ml, 39 ml vegetable and 95 ml fruit .

Exercise or physical activity is beneficial physiologically, psychologically and socially. Physiologically, exercise can increase aerobic capacity, strength, flexibility, and balance (Made, 2009). In old age there is a decreasing in muscle mass and strength, maximum heart rate, exercise tolerance, aerobic capacity and increased of body fat (Darmojo, 2010).

This research stated that there is no correlation between physical activity with hydration status in elderly at WerdhaPantiWismaMuliaKowani, West

Jakarta with p-value 0,215 (p> 0,05) with strength value is 0,25 which means having a weak relation with positive direction, so it states the greater the phydsical activity of the respondent the more severe the type of urine respondent by showing the status of heavy hydration.

The results of this study are in line with the research conducted (Rizkiyanti, 2015) that there is no significant relationship between physical activity with body mass index, with p-value of 0.481 (p> 0.05). Research conducted by research (Saputra, 2016) with p-value of 0.580 (p> 0.05) which states that there is no relationship between physical activity with fluid intake. This is in contrast to the statement (Briawan et al, 2011) that a person's water intake depends on the level of activity, diet, environment and social activities. This difference in outcomes can occur due to different types of respondents.

Although there is no relationship in this study, but theoretically it can be seen that the lack of physical activity can cause the respondent to consume less mineral water because the body does not feel thirsty, so the respondents tend to have heavy density of heavy urine which indicates the status of heavy hydration, should respondents pay more attention to fluid consumption in the body that corresponds to the Nutrition Adequacy Rate in the elderly.

In addition, physical activity also affects the nutritional status of a person. Nutritional status is a condition that can be measured and assessed with the aim of knowing the condition of a person or group of people having good or bad nutritional status (Riyadi, 2003). Nutritional status is a state of health of a person or group caused by consumption, absorption (absorption), and the use (utilization) of nutrients in the past. In addition, physiological factors and the occurrence of the aging process causes

the intake of nutrients from food consumption is reduced, so it can affect the nutritional status. Deficiencies to vitamins and minerals can also affect the process of metabolizing the nutrients in the body that affect the nutritional status (Fatimah, 2010).

The data of food consumption of the subject can show the contribution of energy and protein to the fulfillment of nutrient needs based on meal time, this is supposedly related to the system of organizing food in the orphanage which gives freedom to the subject to consume food source of energy as desired, which has not been varied.

In addition, the freedom of food consumption, especially carbohydrate sources, such as rice and additional food from outside the orphanage that tends to be sweet foods (sweet bread, biscuits) causes some subjects to experience more nutritional status. Other factors that affect the nutritional status of the subject are changes in physiological function, decreased fluid consumption balance, and dietary errors that affect nutritional status changes (Muckelbaue et al., 2013).

This research stated that there is no correlation between nutritional status with hydration status in elderly at WerdhaPantiWismaMuliaKowani West Jakarta with p-value value 0,132 (p> 0,05) with strength value is 0,25 which means having weak relation with positive direction , so that states the more increasing weight the higher the type of urine with the status of heavy hydration.

The results of this study are in line with the research conducted (Andayani, 2013) that there is no relationship between nutritional status with hydration status, with p-value value of 0.072 (p> 0.05). Research conducted by (Aprilia and Khomsan, 2014) also states no relationship between nutritional status with hydration status, with a p-value of 0.074 (p> 0.05).

The limitations of this study are related to the number of samples taken that is only 30 elderly people in Werdha Panti Wisma Mulia Kowani, West Jakarta. Other factors that may be related to hydration status in the elderly but not addressed in this study, such as environmental factors, and knowledge of water. These factors can be considered for further research.

CONCLUSION AND RECOMMENDATION

The elderly needs to pay attention to the fulfillment of fluid consumption, especially for consuming enough water to maintain hydration and balance the changes due to age factor in the fulfillment of the achievement of water balance for the body. In addition, direct and regular monitoring of the types of food, dietary habit or patterns, and health of the elderly are necessary to maintain nutritional status. Suggestions that can be given are 1). The management of the institution should entered a nutritionist to maintain the quality of the food menu, for the elderly in order to create optimal nutritional status. 2). There should be counseling on the elderly about the importance of water consumption in the body with sufficient amount. 3). Daily management of WerdhaPantiWismaMuliaKowani West Jakarta held a positive activities needed by elderly people, such as relaxing walks in the yard, caring for plants, skills training and hobby opportunities. Implementation of these activities can be guided by the daily board of the orphanage and students who are practicing at WerdhaWismaMuliaKowaniPanti West Jakarta. With these activities, the elderly can fill the days in the orphanage with more quality.

BIBLIOGRAPHY

Ahmed M, P. W. (2015). Hydration and outcome in older patients admitted to hospital. *Age and Ageing Journal* , 943-947.

Andayani, Khairunnisa. (2013). Hubungan Konsumsi Cairan Dengan Status Hidrasi Pada Pekerja Industri Laki-Laki. (Skripsi). Universitas Diponogoro Semarang

Aprilia, D. D., & Khomsan, A. (2014). Konsumsi Air Putih, Status Gizi dan Status Kesehatan Peghuni Panti Werda Kabupaten Pacitan. Jurnal Gizi Pangan .

Briawan, D., Rachma, P., Annisa, K. Kebiasaan Konsumsi Minum dan Asupan Cairan Pada Anak Usia Sekolah Di Perkotaan. Journal of Nutrition and Food, 2011, 6(3) :186-191

Boedhi, Darmojo. 2010. Jurnal Kesehatan Usia Lanjut, Jakarta. Fakultas Kedokteran. Universitas Indonesia.

EFBW. (2013). Guidelines for Adequate Water Intake: A Public Health Rationale. *Journal International Congress of Nutrition* (hal. 1). Granada, Spain: European Federation of Bottled Waters.

Hardinsyah. (2009, Oktober 22). Penduduk Indonesia Mengalami Dehidrasi. Jakarta, Indonesia.

Kementrian Kesehatan RI. (2013). Angka Kecukupan Gizi. Jakarta : Kementrian Kesehatan RI

Kementrian Kesehatan RI. (2014). Studi Diet Total. Jakarta: Badan Penelitian dan Pengembangan Kesehatan.

Made, S, I. 2009. Status Gizi Pada Lanjut Usia Pada Banjar Paang Tebel di Desa Peguyangan Kaja Wilayah Kerja Puskesmas III Denpasar Utara. Jurnal Ilmiah. Vol 2. Hal 45-59.

Muckelbauer R, Giselle S, Anke G, Jacqueline M. 2013. *Association between water consumption and body weight outcomes: a systematic review. Am Journal Clin Nutr 98: 282-299.*

Siregar P, Susalit E, Wirawan R, Setiati S, Sarwono W. 2011. Optimal water intake for the elderly: prevention of hyponatremia. Mer Journal Indonesia 18(1):18-25..

Rizkiyanti, Gandis, A. (2015) Status Hidrasi, Aktivitas Fisik, dan Tingkat Kebugaran Atlet Futsal Remaja Putri

Sawka MN, Cheuvront SN, Carter R. 2005. Human Water Needs. Sport Science Exchange Journal 18(2):1-12.