ASSOCIATION BETWEEN NUTRITIOUS STATUS AND LIFE QUALITY OF ELDER PEOPLE VISITING GERIATRIC CLINIC AT DR. SARDJITO HOSPITAL

Muhipah[1], I Dewa Putu Pramantara[2], Deddy Nur Wachid A[3]
[1]Specialty Training Program, Department of Internal Medicine, Faculty of Medicine, Universitas Gadjah Mada, Dr. Sardjito General
[2]Geriatric Division, Department of Internal Medicine, Faculty of Medicine, Universitas Gadjah Mada, Dr. Sardjito General
[3]Rheumatology Division, Department of Internal Medicine, Faculty of Medicine, Universitas Gadjah Mada, Dr. Sardjito General

ABSTRACT

Background. *Successful development in health sector cause shift in world population to older age. Yogyakarta Special Territory reveals highest percentage in amount of elderly people in Indonesia (13.7%). Prevalence of decrease in nutritional status rise along with age. Individual with low nutritional status is vulnerable to some diseases such as depression, cognitive disturbance and dementia progressivity. Nutritional status on elderly people is subject ignored in clinical practice. Prevention and early intervention is the best approach to obtain optimal nutrition.*

Objective. *To identify association between nutritional statuses measured using MNA score and life quality measured with WHOQOL-BREF at elderly patient visiting geriatric clinic in Dr. Sardjito Hospital.*

Method. *This research used cross-sectional design on elderly population in Dr. Sardjito Hospital. The research was conducted in October 2014. It includes elderly persons meeting inclusion and exclusion criteria, nutritional status assessed with MNA score and measurement of life quality with QHOQOL-BREF including four domains: physical aspect, psychological aspect, social relationship and environment.*

Result: *There is significant correlation with $p<0.001$ between MNA and domain 1 (physical aspect) where Pearson correlation of 0.546 indicates positive correlation with weak correlation. Association of MNA and domain 2 (physical aspect) indicates significant correlation with $p=0.006$ with Pearson correlation of 0.435 indicating positive correlation with moderate correlation. There is significant correlation between MNA and domain 3 (social aspect) with $p=0.005$ and Pearson correlation of 0.437 indicating weak correlation. Association of MNA and domain four (environment aspect) indicate significant correlation with $p=0.007$ and Pearson correlations core of 0.426 indicating positive correlation with moderate correlation.*

Conclusion. *The results indicate significant association between nutritional status (MNA) and life quality based on WHOQOL viewed from physical aspect (domain 1), psychological aspect (domain 2), social aspect (domain 30 and environmental aspect (domain 4) on elderly person.*

Keywords: *Geriatrics, MNA, quality of life*

HUBUNGAN STATUS NUTRISI DAN KUALITAS HIDUP USIA LANJUT YANG BEROBAT JALAN DI KLINIK GERIATRI RUMAH SAKIT UMUM PUSAT DR. SARDJITO YOGYAKARTA

Latar belakang. *Keberhasilan pembangunan di bidang kesehatan, menyebabkan terjadi pergeseran populasi dunia ke usia yang lebih tua. Daerah Istimewa Yogyakarta (DIY) ternyata menunjukkan presentasi tertinggi dalam jumlah lansianya di indonesia yaitu sebesar 13,7%. Penurunan status nutrisi meningkat pravalensinya seiring dengan pertambahan usia. Pada individu dengan status nutrisi yang rendah rentan terhadap beberapa penyakit antara lain depresi, gangguan kognitif dan progresifitas demensia. Status nutrisi usia lanjut sering kali merupakan subyek yang di abaikan dalam praktek klinik. Pencegahan dan intervensi dini merupakan pendekatan yang terbaik untuk mendapatkan gizi yang optimal.*

Tujuan. *mengetahui adanya hubungan antara status nutrisi di ukur menggunakan skor MNA, dengan kualitas hidup yang diukur dengan WHOQOL-BREF pada usia lanjut rawat jalan di poli klinik Geriatri Rumah Sakit Umum Pusat DR. Sardjito Yogyakarta.*

Metode. Penelitian ini menggunakan rancangan penelitian potong lintang (Cross-sectional) pada populasi usia lanjut di RSUP DR.Sardjito Yogyakarta. Waktu penelitian pada Oktober 2014. Usia lanjut yang memenuhi kriteria inklusi dan eksklusi, status Nutrisi yang dinilai dengan skor MNA, dan pengukuran kualitashidup dengan WHOQOL-BREFmencakup 4 domain yaitu domain fisik,psikologik, hubungan sosial dan lingkungan.

Hasil. *Terdapat korelasi bermakna diperoleh nilai p = <0.001 antara MNA dengan domain 1 (aspek fisik) dimana nilai korelasi pearson sebesar 0,546 menunjukan korelasi positif dengan kekuatan korelasi lemah, MNA dengan domain 2 (aspek psikologi) korelasi bermakna diperoleh nilai p = 0.006 dimana nilai korelasi pearson sebesar 0.435 menunjukan korelasi positif dengan kekuatan korelasi sedang, MNA dengan domain 3 (aspeksosial) korelasi bermakna di peroleh nilai p = 0.005 di mana nilai korelasi pearson sebesar 0,437 menunjukan korelasi positif dengan kekuatan korelasi lemah dan MNA dengan domain 4 (aspek lingkungan) menunjukan korelasi bermakna diperoleh nilai p = 0.007 antara MNA dengan domain 4 (aspek lingkungan) di mana nilai korelasi pearson sebesar 0.426 menunjukan korelasi positif dengan kekuatan korelasi sedang.*

Kesimpulan. *Hasil penelitian ini menunjukan adanya hubungan yang bermakna antara status nutrisi (MNA) dengan kualitas hidup berdasarkan WHOQOL yang di lihat dari beberapa segi aspek yaitua spekfisik (domain 1), aspek psikologi (domain 2), aspeksosial (domain 3) dan aspek lingkungan (domain 4) pada usia lanjut.*

Kata Kunci: *Geriatri, MNA dan Kualitas Hidup*

INTRODUCTION

Category elderly is someone who has more than 60 years of age. In this age group, there will be changes in anatomy, physiology and biochemistry in the body tissues that will affect th e functionality and capability of the body as a whole. In old age, there is a decrease and a change from the aspects of biology, social and economy.[15] According to the data from the World Health Organization, Indonesia is estimated to increase the number of the highest older people in the world, which is 414% from 1990 until 2025. Yogyakarta Special Region is a region with the highest percentage of elderly population in Indonesia, amounting to 13.7%. In 2020, the elderly population in Indonesia will be the fourth largest in the world after China, India, and United State.[12] Mini nutritional assessment is an easy and inexpensive screening in elderly patients and detect tendencies in the development of complications that caused by malnutrition. [34]

METHOD

The study was conducted using cross-sectional study in the elderly population-based outpatient geriatric clinic General Hospital DR.Sardjito Yogyakarta.

STATISTICAL ANALYSIS

Statistical analysis of the correlation between the value of MNA scores and WHO-QOL BREF scores assessed by using the Pearson correlation test if normally distributed data and or the Spearman when the data are not normally distributed. Testing the reliability of this research through the calculation of the coefficient of reliability using Cronbach Alpha Coefficient with SPSS 17.0. The results of the reliability test WHOQOL-BREF instrument for R = 0.75.

RESULTS

The data base characteristics of the respondents in the mean and standard deviation as follows mean age 66.87 ± 5.20, mean of BMI 23.24 ± 3.58, mean of GDS 4.64 ± 0.80, mean of MNA 25.97 ± 3.34, mean of LLA 25.41 ± 3.22, mean of LB 30.90 ± 2.92, mean of TDS 132.05 ± 15.76, mean of TDD 80.21 ± 8.31, mean of domain 1 22.82 ± 3.99, mean of domain 2 21.33 ± 5.73, mean of domain 3 9.31 ± 0.83, mean of domain 4 27.10 ± 4.62. The gender of SD-SMP 18 (42.6%), level of high school education 20 (51.3%), D1 1 (2.6%), PT 16 (41.0), Retired civil servant 27 (69.2%), IRT 4 (10.3%), private (20.5%).

Table. 1. Characteristics of the study subject's basic data

Variable	N	Min	Max	Mean	±	SD
Age	39	60.00	80.00	66.87	±	5.20
TB	39	140.00	167.00	154.31	±	7.97
BB	39	32.00	90.00	55.56	±	10.84
IMT	39	16.00	32.00	23.24	±	3.58
LLA	39	20.00	30.00	25.41	±	3.22
LB	39	24.00	38.00	30.90	±	2.92
TDS	39	110.00	160.00	132.05	±	15.76
TDD	39	60.00	98.00	80.21	±	8.31
MNA	39	17.00	30.00	25.97	±	3.34
domain1	39	14.00	31.00	22.82	±	3.99
domain2	39	14.00	48.00	21.33	±	5.73
domain3	39	8.00	12.00	9.31	±	0.83
domain4	39	19.00	33.00	27.10	±	4.62

Description: SD = Primary, junior = Junior High School, Middle School Upper, PT= College, DI = Diploma 1, PNS = Civil Servants, IRT = Housewife, BMI = body mass index, MMSE = Mini Mental Examination State, Geriatric Depression Scale GDS =, MNA = Mini Nutritional Assessment. LLA = Upper Arm, LB = Circumference Betis.

Table. 2. Characteristics of the study subject's basic data

Variable	N	%
Gender		
Male	18	46.2
Female	21	53.8
Education		
SD-SMP		
SMA	20	51.3
D1	1	2.6
PT	16	41.0
Jobs		
Retired civil servants	27	69.2
IRT	4	10.3

The Private Group of IMT	8	20.5
<17	3	7.7
18-25	25	64.1
>25	11	28.2
Total	39	100.0
Group of MNA 17-23.5	7	17.9
>23.5	32	82.1
Group of LB <30	14	35.9
>30	25	64.1

Table 3. Correlation MNA with Domain 1

MNA	n	r	P
Domain 1	39	0.546	<0.001*

*. Spearman's Correlation Test

Table 3 shows significant correlations obtained value p = <0.001 between MNA with domain1 (physical aspects) where the correlation value of 0.546 shows a positive correlation with the strength of a weak correlation.

Table 4. Shows significant correlation was obtained between the value of p = 0.006 MNA with domain 2 (psychology) in which the correlation value of 0435 showed a positive correlation with the strength of the correlation being.

Table 5. Shows significant correlation was obtained between the value of p = 0.005 MNA with 3 domains (social aspect) in which the correlation value of 0.437 indicates a positive correlation with the strength of the correlation is weak.

Table 4. Correlation MNA with Domain 2

MNA	n	r	P
Domain 2	39	0.435	0.006

*. Spearman's Correlation Test

Tabel 5. Correlation MNA with Domain 3

MNA	n	r	P
Domain 3	39	0.437	0.005

*. Spearman's Correlation Test

Table 6. Correlation MNA with Domain 4

MNA	n	r	P
Domain 4	49	0.426	0.007

*. Spearman's Correlation Test

Table 6. Shows significant correlation was obtained between the value of p = 0.007 MNA with domain 4 (environmental aspects) where the correlation value of 0426 showed a positive correlation with the strength of the correlation being.

DISCUSSION

This study was done to know the relation of the quality of life with nutritional status in elderly patients who outpatient geriatric clinic Hospital Dr. Sardjito Yogyakarta. A qualified life of elderly is a functional condition of elderly in optimal conditions, so that they can enjoy their old age meaningful, happy and useful.

Table 2 shows the characteristics of the respondents are the result of data showing

that more elderly respondents in this study were 39 respondents. The results of this study, the subjects with female sex more 30 (60.0%) of people in comparison with males 20 (40.0%) of people, that the elderly women tend to have a poorer quality of life in comparison to men.

National Commission of exposure BPS 2009, female life expectancy is longer than men, the number of the elderly women more than men (11:29 million versus 9:26 million). Therefore, the problem of the elderly in general in Indonesia, in fact it is a problem that was more dominated by woman.[7]

Elderly people who do not have jobs and income have different quality of life to the quality of life of elderly who have jobs and income. Research conducted by Nawi et al. (2010) in Purworejo, Central Java in 2010, to get the result that women, older age, not married / widow / widower, low education and low income-related quality of life and lower health status in the elderly.

Table 4 shows significant correlations obtained value p = <0.001 between MNA with domain 1 (physical aspects) where the correlation value of 0.546 indicates a positive correlation with the strength of the correlation is weak. Research in Iran indicate that the nutritional status of the elderly affect the quality of life. Reported that the elderly who suffer from malnutrition increased morbidity, mortality and reduce the quality of life.[1]

Table 5 shows significant correlation was obtained between the value of p = 0.006 MNA with domain 2 (psychology), where the correlation value of 0435 showed a positive correlation with the strength of the correlation being. A person 60 years old or more, needs to be factors psycho-socio-economic and cultural importance to maintain an adequate diet.

Table 6 shows significant correlation was obtained value of p = 0.005 between MNA with 3 domains (social aspects) where the correlation value of 0.437 indicates a positive correlation with the strength of the correlation is weak.

Table 7 shows significant correlation was obtained between the value of p = 0.007 MNA with domain 4 (environmental aspects) where the correlation value of 0,426 showed a positive correlation with the strength of the correlation being.

CONCLUSION

The results of this study shows a significant association between nutritional status (MNA) with quality of life based WHOQOL that viewed from the several aspects: physical terms (domain 1), psychology (domain 2), social aspects (domain 3) and environmental aspects (domain 4) in the elderly.

DAFTAR PUSTAKA

1. Aliabadi, Maliheh *et al.* (2008). *Prevalence of Malnutrition in Free Living Elderly People in Iran: a cross-sectional study*. Asia Pac JClin Nutr 2008;17(2):285-289.
2. BPS-susenas.(2007).Jumlah penduduk usia lanjut di Indonesia, diakses pada tanggal 5 September

2011

3. Boedhi-Darmojo dan Martono, H., 2010. Buku Ajar Boedhi DarmojoGeriatri, Edisi ke-4. Jakarta: Balai Penerbit FKUI; 1: 3-53
4. Departemen Kesehatan RI (2003) Pedoman Tatalaksana Gizi Usia Lanjut Untuk Tenaga Kesehatan. Jakarta Bina Gizi Masyarakat Ditzen Binkesmas Depkes RI.
5. 5.Miller, Carol A (2004), Nursing for wellness in older adult Theory and Practice. Philadelphia: Lippincott Williams Wilkin
6. Owen S, 1999. Nutrition in The Art and Science of Delivering Service (4 rd ed). The Mc Graw. New York: Hill Companies.
7. Perrson M.D.,Brismar K.E.,Katzarski K.S., Nordenstrom J,Cederholm T.E., 2002. Nutritional status using Mini Nutritional Assessment and subjective Global Assessment predict mortality in geriatric patiens. JAGS,2002;50(12):1996-2002.
8. Southwick S. M., et al. 2005. The Psychobiology of Depression and Resilience to Stress: Implications for Prevention and Treatment. Annu. Rev. Clin. Psychol. 1: 255–291
9. Supariasa,I Dewa Nyoman (2001).Penilaian Status Gizi. Jakarta EGC.
10. Vellas B.J, et al., 1996. The Rales Of Nutrition and Body Composition In Falls. Gait and Balance Dissorder in The Erderly. Geriatric Nutrition A Comprehensive Review. Second Edition.Edited By J Morley.
11. Watanabe H,et al., (2010). Quality of life, knee function, and physical activity in Japanese elderly women with early stage knee osteoarthritis. Journal of Orthopedic Surgery 2010;18: 31-4.