Social Status and Oral Hygiene with Quality of Life in Patients with Primary Hypertension

Masriadi[1], Muhammad Fajrin Wijaya[2], Maqh irah Amiruddin[3], Tuti Alawiyah[4], Nur Rahmayani[5]

[1]Professor, Department of Epidemiology, Faculty of Public Health, [2]Lecturer, Departement of Oral Surgery & Maxillofacial, Faculty of Dentistry, [3]Lecturer, Departement of Prosthhodontics, Faculty of Dentistry, Universitas Muslim Indonesia, [4]Lecturer, Departement of Dental Material, Faculty of Dentistry, Moestopo Beragama, University, Jakarta, [5]Student, Departement of Public Health, Faculty of Dentistry, Universitas Muslim Indonesia

Abstract

Background:The main problem in primary hypertension is that most people who have been diagnosed with primary hypertension do not know the etiology clearly.To find out the the relation between social status and oral hygiene with quality of life in primary hypertension. **Methods**:The type of research used was an observational in a cross-sectional study design.The study was conducted in February-May 2021. The number of sampling was 61 people. The sampling method uses purposive sampling technique. The results of data collection were tested by using the Path Analysis test.**Results:** Research conducted at Padongko Public Health Center in Barru Regency. Based on the results of the analysis of the path analysis of social status tests on primary hypertension, the results obtained p_{value} 0.188> α 0.05, oral hygiene against primary hypertension results obtained p v_{alue}0.914> α 0.05, this Ha obtained means that there is a the relation but not significant, while social status on quality of life results are obtained p_{value} 0.837> α 0.05, oral hygiene against quality of life results obtained p_{value}0.227> α 0.05, this Ha obtained means there is the relation but not significant, while the the relation of primary hypertension to quality of life has a significant the relation where the results of p_{value} 0.012 <α 0.05.**Conclusion**: There is the relation between social status and oral hygiene with quality of life in patients with primary hypertension but does not appear significantly.

Keywords: *Knowledge, Social Status, Oral Hygiene, Quality of Life and Primary Hypertension*

Introduction

Hypertension or famously known as the silent killer is a condition where the increase of blood pressure above normal. Increased age is one factor causing the occurrence of hypertension, thisis due to the increasing age of organ function decreased marked by decreased elasticity of the arteries and stiffness occurs blood vessels so vulnerable to an increase in blood pressure. Hypertension is defined as persistent blood pressure where the systolic pressure is above 140 mmHg and diastolic over 90 mmHg. [1],[2],[3]One of the major risk factors of hypertension is stroke, heart failure, chronic kidney disease, visual impairment, and hypertension is often called the silent killer. Hypertension is a condition when a person experiences a rise in blood pressure either slowly. [4],[5],[6],[7]

Corresponding author:
Masriadi
E-mail: arimasriadi@gmail.com
Adress: Jl. Abd. Dg. Sirua No. 155B Makassar, Indonesia

Hypertension or famously known as the silent killer is a condition where the increase of blood pressure above normal. Increased age isone factor causing the occurrence of hypertension, thisis due to the increasing age of organ function decreased marked by decreased elasticity of the arteries and stiffness occurs blood vessels so vulnerable to an increase in blood pressure. Hypertension is defined as persistent blood pressure where the systolic pressure is above 140 mmHg and diastolic over 90 mmHg.[8],[9],[10]

One of the major risk factors of hypertension is stroke, heart failure, chronic kidney disease, visual impairment, and hypertension is often called the silent killer. Hypertension is a condition when a person experiences a rise in blood pressure either slowly. Hypertension or high blood pressure is a disease characterized by an increase in blood pressure that exceeds normal. Blood pressure is measured in millimeters of mercury (mmHg (millimeter Hydrargyrum)) and recorded as two different values namely systolic blood pressure and diastolic blood pressure.[11],[12],[13]

Health-related quality of life (HRQOL) includes physical, psychological and social aspects of the health field that are influenced by one's personal experience of trust, hope and perception. The issue of quality of life in adults is receiving enough attention, because the management of the disease is expected to not only eliminate symptoms but also improve quality of life. This treatment is expected not only to focus on the lives and health of sufferers, but also care must be able to conduct supervision and learning in the form of education about the importance of maintaining oral hygiene that can affect social factors and quality of life.[14],[15]

Material

The type of research used was an observational method in a cross-sectional study design.The study was conducted in February-May 2021. The number of sampling was 61 people. The sampling method uses purposive sampling technique. Inclusion criteria were adult patients aged 18-40 years who had been diagnosed with hypertension clinically, adult patients who had systolic blood pressure measurements> 140 mmHg and diastolic> 90 mmHg, adult patients who were willing to fill out informed consent and questionnaires. Exclusion criteria are patients diagnosed with hypertension in pregnancy or using dentures, patients who are deaf, blind and illiterate, adult patients who are diagnosed with hypertension with systemic disease or complications.The results of data collection were tested by using the Path Analysis test.

Result

The subjects of the study conducted at Padongko Public Health Center in Barru District were 61 people who went to Padongko Public Health Center with a diagnosis from a primary hypertension doctor and the sampling was adjusted according to inclusion criteria. Data collection for quantitative approaches uses questionnaires and direct observation while data collection for qualitative approaches uses interview techniques from both the direct respondent and the respondent's family.

Table 1. Coefficient Value of Social Status and Oral Hygiene with respect to Primary hypertension

Variable	Analysis	Significant
Social Status (X1)	,173	,188
Oral Hygiene (X2)	-,014	,914

a. Predictors: (Constant), Oral Hygiene (X2), Social Status (X1) Primary Hypertension (Z)

Table 2. The value of Regression Model I Social Status, Oral Hygiene is Primary Hypertension

Model	R Square
Model I Regression	,031

a.

Dependent Variable: Z

Table 3. Coefficient Value of Social Status and Oral Hygiene on Quality of Life

Variabel	Analysis	Significant
Social Status (X1)	-,026	,837
Oral Hygiene (X2)	-,153	,227
Primary hypertension	,300	,021

b. Dependent Variable: Quality of Life (Y)

Table 4. Value of the results of Regression Model I Social Status, Oral Hygiene there is Quality of Life

Model	R Square
Regression Model 2	,113

Discussion

In essence, education is one way for someone to gain knowledge and knowledge in school. Education is one of the important aspects in people's lives which has a role in improving the quality of life. This is in line with research by Rebecca, et al (2015) found that the higher the level of formal education, the better the knowledge and behavior of healthy living, otherwise low education will hinder the development of one's attitude towards new values that are known.[16],[17],[18]

Extensive knowledge is easy to understand, digest and understand information that can be obtained either from social media or from information obtained from the closest people. Respondents with primary hypertension who are not handled properly according to doctor's recommendations will continue to become resistant hypertension or secondary hypertension and new disease problems can arise, therefore sufficient education and knowledge is very necessary to support the individual's understanding of the seriousness of a particular disease of hypertensionprimary. Her study also said that when someone is at a higher level of knowledge, attention to oral health will be higher, and vice versa when someone has less knowledge, dental attention and care is also low.[19]

People with moderate incomes are able to provide better health services for themselves and their families. People with inadequate income capacity will find it difficult to meet their basic needs, so it will be difficult to provide health services for their families. This is in line with Jumriani's research which says some people with medium and low incomes tend to

think about visiting and treating dental and oral health conditions, even though he knows that examining and treating dental care is very important to maintain health teeth and mouth.[20]

In contrast to people who have high incomes, they tend to be very concerned about the condition of their teeth and mouth because for them oral health is very important. This is also supported by research from Monica et al in 2017 which says that in low-income groups, the situation is far from satisfying and is a problem that is often overlooked because not everyone sees a tooth disorder as a disease that needs treatment. People who have adequate income will make it possible to provide better health services. People with economic ability will have difficulty meeting their basic needs so it will be difficult to provide health services for their children.[21]

In addition to the variable level of education and income, the level of work in this study there is also a relationship that is social status as seen from work has a relationship to the occurrence of hypertension. The results of this study are in line with the research of M. Hasan Azhari (2017) which says that more work is seen from the possibility of special exposure and the level or degree of exposure as well as the magnitude of risk according to the nature of work, environment and socioeconomic nature of certain jobs. Work also has a close relationship with socioeconomic status, while various types of diseases that arise in the family are often related to the type of work that affects family income.[22]

Work is also a factor affecting oral hygiene and quality of life. A person's work will affect the life of his personal life, the work occupied by each person is different, the difference will cause differences in the level of low income to a high level of income, depending on the work occupied by it. This is supported which cites research from Cristiono and Rama who said that oral hygiene with work status is because people from the upper middle class consider it important to maintain dental health and expect teeth to function optimally in the mouth.[23]

It can be concluded that the data in research conducted at Padongko Public Health Center in Barru Regency which explains the social status of primary hypertension has 0.188 greater than alpha 0.05 or it can be said that social status is 0.188>0.05 so that it can be concluded that social status has a direct influence on primary hypertension but not significant. The analysis of social status variables studied explains the social status of quality of life 0.837 greater than alpha 0.05 or it can be said that social status is 0.837>0.05 so that it can be concluded that social status has a direct effect on social status variables on quality of life but is not significant. While the analysis of the influence of social status on quality of life through primary hypertension is known to be the direct effect of social status on quality of life of -0.026. While the indirect effect of social status on quality of life through primary hypertension is the result of the multiplication of social status beta scores on quality of life with beta values of hypertension on life quality: 0.173 x 0.300 = 0.05. Then the total influence given to social status on quality of life is a direct effect added (+) with an indirect effect, namely: -, 026 + (0.05) = 0.02. Based on the results of the previous analysis, it can be explained that the direct effect is -0.026 and the indirect effect is 0.05, which means that the direct effect is smaller than the indirect effect. This shows that the indirect effect of social status variables on quality of life through hypertension appears to be significantly.

In this study, to measure the level of cleanliness of respondents' oral cavity using the Oral Hygiene Index Symplified (OHI-S) score by screening using a sonde and mouth glass, after which a score calculation is based on the OHI-S level distribution. Human oral cavity is never free of plaque. Plaque plays an

important role in the formation of debris and calculus. The attachment of calculus begins with forming dental plaque and the surface of calculus itself is always covered by plaque. Oral hygiene that is not maintained properly will cause disease in the oral cavity. Periodontal diseases (such as gingivitis and periodontitis) and dental caries are the result of poor oral hygiene. Oral hygiene also has the most important role for the problem of one important component of healthy life.

This study gets results related to the results of the educational characteristics of respondents in Padongko Public Health Center where the results of this study indicate the level of education has a relationship to the oral hygiene index in primary hypertension sufferers, because in this study it is known that the oral hygiene index is the best. at the last senior high school level and the worst oral hygiene index was at the last non-school education level.

The previous study said that education and knowledge are two inseparable things, but in this study these two things did not guarantee that respondents who had a higher education and extensive knowledge were able to maintain their oral cavity to stay clean and healthy or vice versa. Knowledge of respondents must be reviewed in terms of adequate electronic media and health services that have entered the world of television so that it can facilitate the public to understand and understand about health issues, especially dental and oral health. Respondents also said that dental and oral health knowledge was still lacking because some health services promoted through counseling conducted either from health centers or dental health students.

Knowledge obtained from respondents is also still considered trivial for respondents who tend not to apply in daily life to maintain oral and dental hygiene, so that the relationship of knowledge to oral hygiene does not have a very large relationship. Research conducted at Padongko Public Health Center shows that the relationship there is a relationship between primary hypertension patients with oral hygiene,based on this study there is a relationship that can occur if primary hypertension patients do not maintain oral hygiene or oral hygiene.

It can be concluded that the data in a study conducted at Padongko Public Health Center in Barru Regency where oral hygiene variables under study explained oral hygiene against primary hypertension has 0.914 greater than alpha 0.05 or it can be said oral hygiene is 0.914>0.05 so it can be concluded oral cavity hygiene, which is oral cavity hygiene, there is a direct effect on oral hygiene variables on primary hypertension, but not significantly. Analysis of oral cavity hygiene variables studied explains oral cavity hygiene to quality of life has a value 0.227 greater than alpha 0.05 or it can be said that X1 is 0.227>0.05 so that it can be concluded that oral cavity hygiene has a direct effect on oral cavity cleanliness but not significant. While the analysis of the effect of oral hygiene on quality of life through primary hypertension is known to be the direct effect of oral hygiene given on quality of life by -0.153. While the indirect effect of oral hygiene on quality of life through primary hypertension is the result of the multiplication of the oral hygiene beta value of primary hypertension with beta value of primary hypertension on quality of life: -0.014 x 0.300 = -0.04. Then the total effect given by oral hygiene on quality of life is a direct influence plus (+)

The indirect effect is: -0,153 + (-0,004) = 0,157. Based on the results of the previous analysis it can be explained that the direct effect of -0.004 and the indirect effect of 0.05 which means that the indirect effect is smaller than the direct effect. This shows that the indirect effect of oral hygiene variables on quality of life through primary hypertension does not appear significantly.

In this research, it can see that the quality of life of a person can only be described by that person personally. Even this opinion is supported by the existence of a previous study by Sri Santiya which said the picture of quality of life, a person can only be described by the person himself subjectively and cannot be defined exactly. Hypertension is a chronic disease caused by multifactorial and has implications for many things in the lives of sufferers. Hypertension has a relationship with quality of life. Besides the implications for organs, hypertension can have effect on socio-economic life and quality of life of someone. This is because hypertension has a bad influence on vitality, social function, mental health, and psychological function. Therefore, it is important to measure the quality of life with hypertension. It is very important to measure hypertension so that optimal management can be performed.[24]

Research supported by previous research, Kaliyaperumal, et al 2016 in India, found that there was a relationship between hypertension and quality of life because hypertension significantly disrupted quality of life both in terms of physical and mental health. The problem of quality of life of patients today receives more attention because the management of the disease is expected to not only eliminate symptoms but also improve quality of life, this is due to hypertension giving a bad influence on vitality, social function, mental health, and psychological function.[25],[26]

Based on the analysis of research conducted at Padongko Public Health Center in Barru Regency, it was shown that primary hypertension on Quality of Life obtained a significance value of primary hypertension of 0.021 <0.05, so it can be concluded that there is a direct influence of primary hypertension variables on quality of life significantly. This proves that in the research conducted there is a relationship of primary hypertension to the quality of life of respondents. Research that sees a very close relationship of quality of life to hypertension, one of which is the results of research conducted by Yung, French and Leung who say that relaxation training in the form of muscle relaxation and cognitive imagery can reduce blood pressure in people with hypertension. When there is a decrease in blood pressure in people with hypertension will have an impact on improving their quality of life both physically, psychologically, socially and comfortably to feeling therapy in general. [27]

Conclusion

There is the relation between social status and oral hygiene with quality of life in patients with primary hypertension but does not appear significantly.

Finacial support and sponsorship: Own cost

Ethical Considerations: Ethical clearance was obtained from Universitas Muslim Indonesia, Makassar; with number” 519/A/ KEPK-UMI/II/2021. Just before the interview, written (or thumb impression) consent was obtained from each participant in Universitas Muslim Indonesia, Makassar guidelines.

Conflicts of Interest: The authors alone are responsible for the views expressed in this article and they do not necessarily represent the views, decisions, or policies of the institutions with which they are affiliated.

References

1. Masriadi, Febrianto Arif. Effectiveness of ergonomic gymnastics on decreasing blood pressure in patients with stage one hypertension, Indonesia. Indian Journal of Forensic Medicine & Toxicology, 2018; 12[3]: 280-284
2. Masriadi. Epidemiology of non-communicable diseases. Jakarta: CV. Trans Info Media, 2016
3. Masriadi, Rahmawati Azis, eha Sumantri, Anwar Mallongi. Effectiveness of non pharmacologi

therapy through surveillance approach to blood pressure degradation in primary hypertension patients, Indonesia. Indian Journal of Public Health Research & Development, 2018; 9(2): 249-255

4. Masriadi, Muhammad Samsul Arifin, Rahmawati Azis. Effect of supervisory drink drugs (SDG) on decreasing blood pressure reduction in hypertension patients, Indonesia. Indian Journal of Forensic Medicine & Toxicology, 2019; 13(3): 385-390
5. Masriadi, Sumantri Eha. Effectiveness of foot soak therapy with warm water on decreasing blood pressure in patients with stage one hypertension, Indonesia. Indian Journal of Forensic Medicine & Toxicology, 2019; 13(3): 291-296.
6. Musfirah, Masriadi. Risk factor analysis with the incidence of hypertension in the working area of the Takalala Community Health Center in Marioriwawo Subdistrict, Soppeng District. Journal of Global Health, 2019; 2(2): 94-102.
7. Masriadi, Sarafin Aslan, Kurniaty Pamewa, Chusnul Chotimah, Sri Devi. The relationship between dental care perception towardoral Health ofpatients with primary hypertension in Padongko Health Center, Barru Regency. Medico-legal Update, 2021; 21(2):286-91
8. Karim, Nurafni. Franly Oniba., Et al. The Relationship between Physical Activity and the Degree of Hypertension in Outpatients in the Working Area of the Tagulandang Health Center, Sitaro.e-journal Nursing (e-Kp). 2918; 6 (1) 1-6
9. Zaenurohmah, Destiara Hesriantica; Iris Iris Rachmayanti.2017. Relationship of Knowledge and History of Hypertension with Blood Pressure Control Measures in the Elderly. Journal of Periodical Epidemiology.2017; 5 (2); 175-181
10. Alfian, Riza. Yugo Susanto., Et al. Quality of Life of Hypertensive Patients with Concomitant Diseases in Cardiology at Ratu Zhalecha Martapura Regional Hospital. Journal of Pharmacience.2017; 4 (1); 39-47
11. Sherwoodm, Lauralle yd. Human Physiology from Cells to Systems. Jakarta: EGC
12. Suanda, I Wayan. Community Movement for Healthy Living in Preventing Dental and Oral Diseases. Journal of Dental Health.20018; 6 (1); 29-34
13. Nurhamidah.Ety Sofyan Ramadhan., Et al. Relationship of Dental and Mouth Health Status with Student Achievement in Sangga Beru 2 Sangga Beru District, Gunung Meriah District, Aceh Singkil District. Journal of Health.2016; 03 (2); 35-40
14. Sulistyarini, Indahria. Relaxation Therapy for Lowering Blood Pressure and Improving the Quality of Life of People with Hypertension. Faculty of Psychology and Social and Cultural Sciences. Psychology Journal, 2018; 40 (1); 28-38
15. Fithria. Quality of Life of Hypertension Patients in Lamceu Village, Kuta Baro District, Aceh Besar District. Idea Nursing Journal, 3 (1); 62-68
16. Basuni, Cholil., Et al. Figure of Oral Hygiene Index Based on the Level of Community Education in Guntung Ujung Village, Banjar Regency. J2014. Journal of Dentistry, 2 (1);46-55
17. Kusuma, Dr. drg. Indigo. Saliva Physiology and Pathology. Padang Association 2015. Publisher of Indonesian Higher Education (APPTI); 41-45
18. Rebecca, A. Damajanti H., et al. The influence of parents' socioeconomic level on children's caries in Hang Tuah Bitung kindergarten. Journal of e-Dentistry (eG), 3 (2); 542-548
19. Afiati, Risti. Rosihan Adhani., Et al. Relationship of Mother Behavior About Maintaining Dental and Oral Health to the Status of Dental Caries in Children.2017. Dentino Journal of Dentistry, 2 (1); 56-62
20. Jumriani. Overview of Dental Caries Occurrence with Socio-Economic Status of Grade VIII

Students in Darul Hikmah Middle School Makassar City.2017. Dental Health Media; 16 (2); 72-80

21. Sherlyta, Monica.Riana Wardani., Et al. Levels of Dental and Mouth Hygiene of State Elementary School 1 Students in Disadvantaged Villages of Bandung Regency.2017. Dental Journal, 29 (1); 69-76

22. Azhari, N. Hasan., Factors Related to the Occurrence of Hypertension in Makrayu Health Center, Ilir Barat II District Palembang.2017. Journal of Health Sciences, 2 (1); 23-30

23. Purwati, Dwi Eni., Almujadi. Effect of Education and Employment Levels of Parents on the Number of Dental Caries of Elementary School Student Children, Dental Health of the Health Ministry of Health, Semarang 2017. Journal of Dental Health; 4 (2); 33-39

24. Anbarasan, Sri Santiya. Depiction of the Quality of Life of the Elderly with Hypertension in the Rendang Community Health Center Work Area in the Period of 27 February 14 March 2015 Medical Education Program of the Faculty of Medicine, Udayana University; 4 (1); 113-123

25. Poluan, Marco A.D. Angela F.c Kalendah., Et al. Relationship Between Hypertherm and Quality of Life of Population in Kelurahan Kinilow, North Tomohon District, 2017.l; 1-8

26. Laoh, Joice. Debora Tampongangoe. The depiction of the quality of life of patients who were bitten by militus in the Endocrine Clinic of RSUP Prof. Dr. R.D.Kandow Manado. 2015. JUIPERDO, 4 (1); 32-37

27. Yung, O., French., & Leung, B. Relation training as complementary theraphy for mild Hypertension control and the implications of evidence-based medicine. Journal of Dental Health.20017; 8 (4); 34-42