WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 5, 63-74. Research Article ISSN 2277– 7105

QUALITY OF LIFE OF HYPERTENSIVE PATIENTS VISITING THE FAMILY HEALTH CLINIC, IIUM KUANTAN

Nurul Syahirah Abdul Razak[1], Azwanis Abdul Hadi[2]* and Norafiza Zainuddin[1]

[1]International Islamic University Malaysia, Kulliyyah of Allied Health Sciences, Department of Biomedical Sciences.

[2]International Islamic University Malaysia, Kulliyyah of Medicine, Department of Family Medicine.

Article Received on
28 Feb. 2020,

Revised on 19 March 2020,
Accepted on 07 April 2020,

DOI: 10.20959/wjpr20205-17281

***Corresponding Author**
Dr. Azwanis Abdul Hadi
International Islamic University Malaysia, Kulliyyah of Medicine, Department of Family Medicine.

ABSTRACT

Hypertension is a chronic disease which significantly contributes to cardiovascular complications that could potentially affect a patient's quality of life. The objective of this study is to measure the quality of life of hypertensive patients attending the Family Health Clinic at the International Islamic University Malaysia (FHC IIUM) and its associated factors. This cross sectional study adopted convenience sampling and was conducted through face to face interview of 106 hypertensive patients aged 18 and above using the WHOQOL-Bref questionnaire. Descriptive analysis, Mann Whitney U and Kruskal Walis test were used to measure the quality of life score and its association with sociodemographic factors. Our results showed that hypertensive patients have good quality of life with each domain's median score ranged from 64.00 to 75.00. Age had significant association with quality of life in the environment domain with p=0.009 (p<0.05). Marital status also was significantly associated with quality of life in the social relationship domain with p=0.001 (p<0.05). Older age patient experienced better quality of life in the environment domain as compared with young and middle age patients. Married patients have better social relationship compared to single or widowed patients. This study concluded that there is significant association between quality of life of hypertensive patients and sociodemographic factors in environment and social relationship domains. Good quality of life among hypertensive patient is observed in this study.

KEYWORD: Quality of life, hypertension, Kuantan.

INTRODUCTION

Hypertension is a disease that contributes towards cardiovascular diseases such as myocardial infarction and stroke. It can cause significant concern and burden to a patient affected. Based on the National Health and Morbidity Survey (NHMS) 2015, one in three persons or about 6.1 million people suffers from hypertension in Malaysia.[1]

With therapeutic improvement, patient survival has increased, while fatal events have decreased. However, the aim to a thorough medical management is not only to lower the mortality rate but also to minimize the morbidity caused by this disease and promoting better health status. The concept of health was redefined by the World Health Organization (WHO) as good condition of health in physical, psychological and social relationship aspect rather than the absence of disease only.[2,3]

Quality of life can be understood as a society or an individual standard of health, comfort and happiness. In addition, the evaluation of the quality of life is influenced by cultural norm and experiences which is solely based on the individuals' perception.

The quality of life of hypertensive patients are influenced by symptoms of the disease and reaction of drugs used in the treatment. Presence of other disease together with hypertension also plays an important role in determining quality of life. Most studies conclude that there is an inverse association between the number of present comorbidities and the quality of life of the assessed patients. This fact reinforces that the severity characteristics of the diseases, the presence of pain, as well as the capacity of adaptability, are important factors in the assessment of quality of life.[3]

METHODOLOGY

This study was conducted at the Family Health Clinic International Islamic University of Malaysia (IIUM), Kuantan by using cross-sectional study design with convenient sampling. Total participants involved in this study are 106 hypertensive patients, age 18 years old and above. The participation is voluntary and the patient need to sign the consent form prior to participation. Patients with abnormal mental status or pregnant was excluded from this study. A questionnaire developed by the World Health Organization (WHO) is used.[4] WHO QOL-BREF is a short-form health survey covering all aspect of quality of life which are physical, psychological, social relationship and environment health.

Ethical consideration

Ethical approval to conduct this study has been obtained from the International Islamic University of Malaysia Research and Ethics Committee (IREC) [ID Number: 2019/095].

RESULT

Table 1 shows there were 106 hypertensive patients who participated in this study voluntarily by answering the questionnaire. It shows that majority of respondents were male with 63.2% (n=67) compared to female with 36.8% (n=39). Half of the patients were in the middle age category with 52.8% (n=56) while the other half were in the younger age category with 12.3% (n=13) and elderly with 37% (n=34.9). The mean age in this study was 55.27(11.98). In term of educational background, 2.8% (n=3) had no formal education, 41.5% (n=44) had primary education, 39.6% (n=42) had secondary education and 16% (n=17) had tertiary education. Based on employment status, 45.3% (n=48) of patients were both employed and retired patients while the remaining 9.4% (n=10) of patients were unemployed. For economic status, 17.9% (n=19) had no income monthly, 28.3% (n=30) had income below RM2500, 29.2% (n=31) had income between RM 2500 - RM 5000, 11.3 % (n=12) had income between RM 5001 - RM 7500, 9.4% (n=10) had income between RM 7501-RM 10 000 and lastly, 3.8% (n=4) had income RM 10 000 and above. All participants in this study (n=106) were Muslims. Majority 98.1% (n=104) of the participants were Malay patients while 11.9% (n=2) were from other races. In term of marital status, majority 92.5% (n=98) were married while others were single and widowed with 2.8 (n=3) and 4.7% (n=5) respectively. For co-morbidity or disease status, 65.1% (n=9) had diseases other than hypertension as compared to 34.9% (n=37) who suffered from hypertension only.

Table 1: Table shows frequency and percentage for each socio-demographic data. (N=106)

Variables	Freq. (N)	Percentage (%)	Mean (SD)
Age			
Young Age (18-35)	13	12.3	
Middle Age (36-60)	56	52.8	55.27 (11.98)
Elderly (>60)	37	34.9	
Gender			
Male	67	63.2	
Female	39	36.8	
Education Status			
None	3	2.8	
Primary	44	41.5	

Secondary	42	39.6	
Tertiary	17	16.0	
Employment Status			
Employed	48	45.3	
Unemployed	10	9.4	
Retired	48	45.3	
Income (RM)			
No income	19	17.9	
< 2500	30	28.3	
2501- 5000	31	29.2	
5001-7500	12	11.3	
7501 – 10 000	10	9.4	
> 10 000	4	3.8	
Religion			
Islam	106	100	
Race			
Malay	104	98.1	
Others	2	1.9	
Marital Status			
Single	3	2.8	
Married	98	92.5	
Widowed	5	4.7	
Disease Status			
Yes	69	65.1	
No	37	34.9	

Table 2 shows score summary for quality of life. The score was calculated according to the domain. Since the data was not normally distributed, the data presented using median (IQR). The highest median score can be observed in social relationship and environment domains with the same median score which is 75.00 (12) while the lowest median score was found in physical domain which the median score was 63.00 (13). Psychological domain's median score was 69.00 (13) which it is higher compared to physical domain but lower than social relationship and environment domains.

Table 2: The median scores for quality of life according to domain.

QOL Domain	Min	Max	Median (IQR)
Physical (domain 1)	31	88	63 (13)
Psychological (domain 2)	19	81	69 (13)
Social relationship (domain 3)	19	100	75 (12)
Environment (domain 4)	31	100	75 (12)

Table 3 are the result for relationship between sociodemographic characteristic and QoL of physical domain. It shows there are no significant association between sociodemographic characteristic and QoL in physical domain.

Table 3: Result of association between socio-demographic characteristic and QoL in physical health.

Variables	n	Median (IQR)	*p*-value
Gender			
Male	67	63.00 (13.00)	0.457
Female	39	63.00 (13.00)	
Race			
Malay	104	63.00 (13.00)	0.425
Others	2	59.50 (NA)	
Disease status			
Yes	69	63.00 (13.00)	0.426
No	37	63.00 (9.50)	
Age			
Young age	13	63.00 (13.00)	0.827
Middle age	56	63.00 (13.00)	
Elderly	37	63.00 (13.00)	
Education level			
No formal education	3	63.00 (NA)	0.866
Primary education	44	63.00 (13.00)	
Secondary education	42	63.00 (13.00)	
Tertiary education	17	63.00 (13.00)	
Employment status			
Employed	48	63.00 (13.00)	0.322
Not employed	10	59.50 (20.50)	
Retired	48	63.00 (13.00)	
Income (RM)			
No income	19	63.00 (13.00)	0.196
<2500	30	63.00 (13.00)	
2500 -5000	31	63.00 (13.00)	
5001- 7500	12	63.00(7.00)	
7501-10 000	10	66.00 (13.75)	
>10 000	4	69.00 (12.00)	
Marital status			
Married	98	63.00 (13.00)	0.124
Single	3	63.00 (NA)	

Table 4 are the result for relationship between sociodemographic characteristic and QoL of psychological domain. It shows there are no significant association between sociodemographic characteristic and QoL in psychological domain.

Table 4: Result of association between socio-demographic characteristic and QoL in psychological health.

Variables	n	Median (IQR)	*p*-value
Gender			
Male	67	69.00 (13.00)	0.178
Female	39	69.00 (13.00)	
Race			
Malay	104	69.00 (13.00)	0.943
Others	2	66.00 (NA)	
Disease stataus			
Yes	69	63.00 (13.00)	0.085
No	37	69.00 (6.00)	
Age			
Young age	13	69.00 (22.00)	0.814
Middle age	56	69.00 (13.00)	
Elderly	37	63.00 (13.00)	
Education level			
No formal education	3	63.00 (NA)	0.404
Primary education	44	63.00 (13.00)	
Secondary education	42	69.00 (7.75)	
Tertiary education	17	69.00 (9.50)	
Employment status			
Employed	48	69.00 (17.50)	0.550
Not employed	10	66.00 (13.00)	
Retired	48	63.00 (13.00)	
Income (RM)			
No income	19	63.00 (13.00)	0.150
<2500	30	63.00 (14.50)	
2500 - 5000	31	69.00 (19.00)	
5001 - 7500	12	69.00 (11.25)	
7501 - 10 000	10	69.00 (13.50)	
>10 000	4	69.00 (9.00)	
Marital status			
Married	98	69.00 (13.00)	0.311
Single	3	69.00 (NA)	
Widowed	5	56.00 (13.00)	

Table 5 are the result for relationship between sociodemographic characteristic and QoL of social relationship domain. It shows there are significant association between marital status and QoL in social relationship domain with *p*-value=0.001. For married patients, the median score was 75.00(6), for single patients was 44.00(NA) and for widowed was 44.00(15.5).

Table 5: Result of Mann Whitney U test on association between QoL of social relationship health and socio-demographic characteristic.

Variables	n	Median (IQR)	*p*-value
Gender			
Male	67	75.00 (6.00)	0.388
Female	39	75.00 (12.00)	
Race			
Malay	104	75.00 (12.00)	0.588
Others	2	78.00 (NA)	
Disease status			
Yes	69	75.00 (12.00)	0.187
No	37	75.00 (19.00)	
Age			
Young age	13	75.00 (31.00)	0.757
Middle age	56	75.00 (12.00)	
Elderly	37	75.00 (18.50)	
Education level			
No formal education	3	75.00 (NA)	0.724
Primary education	44	75.00 (12.00)	
Secondary education	42	75.00 (6.00)	
Tertiary education	17	75.00 (15.50)	
Employment status			
Employed	48	75.00 (12.00)	0.761
Not employed	10	75.00 (29.75)	
Retired	48	75.00 (10.50)	
Income (RM)			
No income	19	75.00 (12.00)	0.189
<2500	30	75.00 (22.00)	
2500- 5000	31	75.00 (6.00)	
5001- 7500	12	75.00 (15.75)	
7501- 10 000	10	75.00 (20.50)	
>10 000	4	87.50 (36.25)	
Marital status			
Married	98	75.00 (6.00)	0.001*
Single	3	44.00 (NA)	
Widowed	5	44.00 (15.50)	

**p-value < 0.05 (significant)*

Table 6 are the result for relationship between sociodemographic characteristic and QoL of environment domain. It shows that there are significant association between age and QoL in environment domain with *p*-value = 0.009. For age variable, the median score for young age was 69.00(15.5), middle age was 69.00(10.5) and elderly was 75.00(19).

Table 6: Result of Mann Whitney U test on association between QoL of environment health and socio-demographic characteristic.

Variables	n	Median (IQR)	*p*-value
Gender			
Male	67	75.00 (12.00)	0.841
Female	39	69.00 (12.00)	
Race			
Malay	104	75.00 (12.00)	0.669
Others	2	75.00 (NA)	
Disease status			
Yes	69	75.00 (12.00)	0.626
No	37	75.00 (12.00)	
Age			
Young age	13	69.00 (15.50)	0.009*
Middle age	56	69.00 (10.50)	
Elderly	37	75.00 (19.00)	
Education level			
No formal education	3	69.00 (NA)	0.660
Primary education	44	72.00 (10.50)	
Secondary education	42	75.00 (13.75)	
Tertiary education	17	75.00 (12.00)	
Employment status			
Employed	48	69.00 (10.50)	0.055
Not employed	10	72.00 (18.00)	
Retired	48	75.00 (17.25)	
Income (RM)			
No income	19	69.00 (12.00)	0.900
<2500	30	69.00 (7.50)	
2500 - 5000	31	75.00 (12.00)	
5001 - 7500	12	75.00 (21.75)	
7501 - 10 000	10	75.00 (15.25)	
> 10 001	4	78.00 (48.00)	
Marital status			
Married	98	75.00 (12.00)	0.241
Single	3	69.00 (NA)	
Widowed	5	69.00 (6.00)	

**p-value < 0.05 (significant)*

DISCUSSION

The quality of life score in Table 2 shows that the score for hypertensive patients ranged from 19.00-100.00. In this study, it shows that social relationship and environment domain had the highest score which was 75.00 (12) compared to other domains. It is similar to a previous study that showed social relationship had the highest score.[5] This result shows that in general hypertensive patients under follow up ta FHC IIUM experienced good personal

relationship, received full support from family and friends as well as were satisfied with their sexual activity.

Highest score for environment domain showed that the hypertensive patients were satisfied with their transportation, home, working and physical environment. They also felt secured with their lives, had stable financial resources, had good accessibility to health services and also was able to gain new knowledge or skill. Hence, hypertension does not give a major effect towards their environment health.

However, physical health domain had the lowest median score with 63.00 (13). This result was expected because prevalence of hypertension increases due to unhealthy diet, excess weight, over-stressed and lack of physical activity.[2] This is equivalent with a cross-sectional study that showed that there are positive correlation and strong relationship between physical activity and quality of life of hypertensive patients.[6]

The median score for all domains ranged 63.00 to 75.00 which considered as better quality of life compared to the study done by Thi Ha *et al* which the range was from 49.40 to 64.10 only.[5]

Association between sociodemographic and physical health

The study showed there was no statistically significant association between all sociodemographic factors and quality of life in the physical aspect. This showed that quality of sleep, dependency on medical aids, working ability and daily activities do not have any relationship with sociodemographic factors.

This contradicts with previous studies conducted that showed men, higher education, employed and married patients contribute in good quality of physical health.[5, 7] Patients with higher education have a better health literacy and knowledge regarding good health practice.[8] However, this study showed there is no association between that.

Association between sociodemographic and psychological health

The study observed there was no statistically significant association between the sociodemographic variables and quality of life in psychological aspect such as self-esteem, satisfaction on bodily image and positive or negative feelings.

This study's findings differ with a research that stated gender has significant association with psychological domain.[5] A study by Bhandari *et al* (2016) was consistent with our study that showed gender do not influence the quality of life in mental aspect.[7] However, it showed significant association with age as increasing age will lead to health impairment due to the physiological and psychological changes.[7]

Association between sociodemographic and social relationship health

This study showed a significant association between marital status and quality of life. This result was similar to previous study done in Vietnam which married patient had excellence satisfaction on life compared to single and widowed.[2] It shows that hypertensive patients who are married had better social support, good personal relationship and had more positive perspective on intimacy.

Marriage might help in improving quality of life due to strong emotional connection with their partner and strong believed that they had someone who support them unconditionally. Marriage can create feeling of completeness and contentedness.[9] The married patients might had better quality of life due to the emotional attachment with their spouses.

Association between sociodemographic and environment health

This study showed significant association between age and quality of life in the environment health domain. Elderly is defined as those who are 60 years old and above based on Malaysia's department of Social welfare (Jabatan Kebajikan Masyarakat).[10] Ageing is usually associated with declining financial supply and stability, poor cognitive ability and weakening social attachment.[11] In contrast, this study found significantly higher QoL among elderly compared to young age in environment domain.

Elder patients had high score for environment domain because at aged 60 years old, patients usually settled their financial commitment such as education, car and house loan. According to Tho Ng *et al*, good facilities, and higher pension allowance were the answers on higher quality of life in elderly for environment domain.[12]

CONCLUSION

As a conclusion, this study shown good quality of life among hypertensive patients in Family Health Clinic IIUM in all domains. Age and marital status are important factors contributing to the quality of life. Older patients have better quality of life compared to the young patients

in environment domain. Lastly, marriage is important to ensure better quality of life among patients in term of social relationship.

CONFLICT OF INTEREST

The author declare that they have no conflicts of interest.

AUTHORS' CONTRIBUTION

All authors have made contribution to this work.

ACKNOWLEDGEMENT

The authors would like to acknowledge International Islamic University Malaysia Family Health Clinic for allowing this study.

This study receives no funding.

REFERENCES

1. Institute for Public Health. National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseases, Risk Factors & Other Health Problems. Ministry of Health, 2015; 1-291.
2. World Health Organization. A global brief on hypertension, 2013; 11.
3. Castro D, Côrtes DS, Arantes AA, Paula A, Mendonça P, Silva S. Quality of Life and Hypertension, 2016; 29(6): 512–516.
4. WHO (1998). WHOQoL User Manual: WHO/MNH/MHP/98.4Rev: WHO Programme on Mental Health. Geneva: WHO.
5. Thi Ha,N., Hoang Le, Khanal, Moorin. Quality of life among people living with hypertension in rural Vietnam community. BMC Public Health, 2014; 14: 833.
6. Rodríguez-Fernández A, Zuazagoitia-Rey-Baltar A, Ramos-Díaz E. Quality of Life and Physical Activity: Their Relationship with Physical and Psychological Well-Being. Quality of Life and Quality of Working Life, 2017. https://doi.org/10.5772/intechopen.69151
7. Bhandari N, Ram B, Takma KC, Lawot I. International Journal of Nursing Sciences Quality of life of patient with hypertension in Kathmandu. International Journal of Nursing Sciences, 2016; *3*(4): 379–384. https://doi.org/10.1016/j.ijnss.2016.10.002

8. Xu X, Rao Y, Shi Z, Liu L, Chen C, Zhao Y. Hypertension Impact on Health-Related Quality of Life: A Cross-Sectional Survey among Middle-Aged Adults in Chongqing, China. International Journal of Hypertension, 2016; Article ID 7404957.
9. Huong NT, Hai Ha Le T, Quynh Chi NT, Hill PS, Walton Exploring quality of life among elderly in Hai Duong province, Vietnam : A rural urban dialogue. Global Health Action, 2012; 5-12.
10. Jabatan Kebajikan Masyarakat, 2019. Retrieved from http://www.jkm.gov.my
11. Ian JD, Corley J, Gow AJ, Harris SE, Houlihan LM, Marioni RE. Age associated cognitive decline. Br Med Bull, 2009; 92: 135-152. doi:10.1093/bmb/idp033
12. Tho Ng, Peng Tey and Niaz. What matters for life satisfaction among oldest-old? Evidence from China, PLOS ONE, 2017 Doi: 10.1371/journal.pone.0171799.