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Assessment of quality of life in diabetes and hypertensive patients attending tertiary care hospitals in (Jammu), (Jammu and Kashmir)

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ABSTRACT

The numbers of individuals with chronic conditions, particularly those with hypertension and diabetes, have a low Quality of Life as a result of their treatment and lifestyle choices. It can also cause a slew of difficulties in the body's systems, as well as unfavourable metabolic circumstances that impair one's quality of life. The goal of this study is to find out how satisfaction with hypertension affects quality of life in people with hypertension and diabetes. A six-month prospective cross-sectional study was carried out in a tertiary care facility in (District) (State). A total of 200 patients were consented to be interviewed in order to gather information on socio demographics, physical, mental, and behavioural characteristics using a standardised questionnaire. The MINICHAL scale, which has 17 questions and is divided into two domains, mental domain and somatic domain, is used to assess quality of life. It has four possible replies, with scores of 0=not at all, 1=yes, somewhat, 2=yes, a lot, and 3=yes, a lot, with a total of points ranging from 0-51. The greatest and worst levels of health are indicated by the International Diabetes Federation, while the last question is a sign of the patient's general agreement to participate in the survey. According to the findings of this study, the average quality of life in hypertension is 61.83 percent, and the average quality of life in hypertension and diabetes is 42.22 percent. Using the chi square test, a significant association was also discovered, with a p value of 0.001. This learning presentation demonstrates that self-care is important to avoid disease, and that, based on historical comments; more counselling is required in patients to improve their Quality of Life.

Keywords: Mental domain, Somatic domain, Chronic diseases, Quality of life, MINICHAL

INTRODUCTION

Hypertension, often known as high blood pressure, is a chronic condition that is defined by a continuous increase in arterial blood pressure caused by forceful blood against walls. One of the noncommunicable diseases is hypertension, (1) With 31.1 percent [1.39 billion] of worldwide prevalence, which may be predicted using the growth in population by 1.56 billion in 2025, it is known as the "silent killer" and causes severe health issues across the world. (2) Hypertension is an inevitable risk factor for heart disease, which has a wide range of severe health consequences, including morbidity and death. (3) According to the majority of research, hypertension causes 9.4 million deaths each year (4), lowering life expectancy by 11.9 percent. According to a research, about 26% of the adult population worldwide has been diagnosed with cancer, and this number is expected to rise as people become older.

According to medical definitions, diabetes is a condition characterised by different functions of insulin produced in the pancreas, wherein the action may be adequate or inadequate, or it may cause resistance, resulting in an increase in blood glucose levels known as hyperglycemia (5) Type I and type II diabetes are the most common, with newer variations such as latent autoimmune diabetes of adulthood/type 1.5 and gestational diabetes. (6) There are also monogenic diabetes forms, such as young-onset diabetes, which is a hereditary form of diabetes, cystic fibrosis, and other hormonal diseases. According to the International Diabetes Federation, type II diabetes mellitus is the fourth leading cause of death6 worldwide, with the global epidemic expected to reach 171 million cases in 2000 (7) and 366 million by 2030, along with morbidities such as microvascular damage, heart disease, stroke, and obesity.

According to the World Health Organization in 2016, 422 million individuals were diagnosed worldwide in 2014 (8), with the majority living in poor and medium income nations. (9) Micro and macro vascular damage, organ dysfunctions such as retinopathy, neuropathy, renal nephropathy, and hyperlipidemia, as well as ulcers on the foot and infection, can all lead to a decrease in quality of life, as well as an increased risk of heart disease and hypertension. Cardiovascular problems are a constant source of worry for diabetics. Quality of life was defined by the World Health Organization in 1948 as "a condition of well-being in terms of physical, mental, and psychosocial well-being in the absence of sickness or infirmity." Quality of life is a subjective term (10) that refers to the physical, mental, and social aspects of one's health. Some treatments and illness conditions are now one of the reasons for a change in lifestyle, which has an impact on health-related quality of life (11) and treatment adherence. It's an important part of illness management. (12) Studies have shown that hypertension has a significant detrimental influence on health-related quality of life during the last 25 years. So, in this work, we chose to look at people's quality of life in hypertension, as well as both hypertension and diabetes, because these are the most frequent and snuffled out diseases in the world. The purpose of this study was to examine the quality of life of participants who had long-term disease and to counsel them on how to better manage their medical state and their therapeutic management, as well as a clinical pharmacist.

MATERIALS AND METHODS

Study process

A prospective cross-sectional survey was performed at a tertiary care hospital in (Jammu) (Jammu and Kashmir) over the course of six months, from January to June 2021, with a sample size of around 200 patients.

Selection of participants

The sampling technique was carried out by addressing the participants to initiate a fruitful conversation and then following up with the inclusion and exclusion criteria throughout the study's duration.

Inclusion criteria

Patients over the age of 16 who suffered primarily from hypertension and diabetes and were diagnosed with either hypertension or diabetes, or both, were considered. All patients admitted to the inpatient unit are eligible, and they were invited and asked to participate in the study if they agreed.

Exclusion criteria

Patients with chronic illnesses other than hypertension and diabetes are omitted from the study. Patients under the age of 16, pregnant or postpartum women, diabetic patients, and emergency room patients were also eliminated.

Source of data

A systematic questionnaire was created to gather data on socio demographics. Characteristics of health and medication, clinical diagnosis, checkups, and daily activities such as exercise, health literacy, medication adherence questionnaire, and mental and

somatic areas of quality of life based Self-reports were gathered to confirm the accuracy of the patient medication records.

Plan of data

Data is collected using a pre-made questionnaire, and demographic information about each patient is acquired through a patient/attendant interview. The data is examined using conventional statistical methods, and the International Diabetes Federation determines which of the variables corresponds with the outcomes.

Method of assessment

MINICHAL scale was useful for measuring quality of life, and it had two domains: mental domain and somatic domain, each with 17 questions. The last question, which was asked by the International Diabetes Federation, indicated the patient's overall agreement to participate in the study.

Statistical analysis

Statistical data was extracted from a structured questionnaire that was completed in Microsoft Excel 2007, and the Chi Square Test in Graph Pad Prism 8 was used to evaluate the significance of the connection.

RESULTS

Demographics and health related characteristics of the study patients

Table 1-3 shows the sociodemographics and health-related characteristics of the research participants. The study found that only 176 people out of 200 were qualified to examine the quality of life in people with hypertension and diabetes (Table 1), with 104 men (59.09 percent) and participants aged 20 to 49 (37.1 percent) and 50 to 89 (62.8 percent) being classified as geriatrics.

Using the data, we discovered that 155 people were married (88.06%), 4 were single (2.2%), and 17 were widowed (9.7 percent). The majority of the patients were illiterate (47.72%), graduated (39.77%), and in school (12.5 percent). As shown in Table 1, the majority of them work in other jobs (34.65 percent), are self-employed (23.86 percent), or are farmers (41.47 percent).

Table 1: Demographic Details of participants with their gender, marital, educational and occupational status.

Demographic Details		Number	Percentage
Gender	Male	104	59.09
	Female	72	46.15
Marital status	Married	155	88.06
	Single	4	2.2
	Widow	17	9.65
Educational status	Uneducated	84	47.72
	Up to school	22	12.5
	Graduated	70	39.77
Occupation	Farmer	73	41.47
	Self Employed	42	23.86
	Others	61	34.65

Participants followed a diabetic diet (16.47 percent), no diet (38.63 percent), low cholesterol (5.11 percent), low salt (21.59 percent), weight loss (9.65 percent), and vegetarian diets, as shown in Table 2. (8.52 percent). Daily activity (17.04%), irregular (9.65%), occasional (7.95%), and no exercise (17.04%) were among the subjects (65.34 percent) Patients who drank alcohol on a regular basis (15.90%), irregularly (20.45%), occasionally (25%) or not at all (38.63%), while smokers were on a regular basis (23.86%), irregularly (17.04%), sometimes (16.47%), or not at all (38.63%). (42.61 percent).

Table 2: Distribution of Data Regarding Diet, Exercise, Alcohol and Smoking Status.

Distribution of Data	Number	Percentage
Diet plan		
Diabetic	29	16.47%
no diet	68	38.63%
low cholesterol	9	5.11%
low salt	38	21.59%
weight reduction	17	9.65%
Vegetarian	15	8.52%
Exercise		
Daily	30	17.04%
Irregularly	17	9.65%
Occasionally	14	7.95%
None	115	65.34%
Alcohol status		
Regular	28	15.90%
Irregular	36	20.45%
Occasional	44	25%
None	68	38.63%
Smoking status		
Regular	42	23.86%
Irregular	30	17.04%
Occasional	29	16.47%
None	75	42.61%

Hypertension (25%) and Diabetes and Hypertension (25%) were common ailments among the participants (75 percent). Patients aged 1-4 years (39.77 percent), 5-9 years (31.25 percent), 10-14 years (21.02 percent), and 15-20 years (21.02 percent) have the illness (7.95 percent). Participants went to the hospital for checkups on a monthly basis (19.31 percent), every 3-4 months (14.20 percent), every 6 months (30.68 percent), and once a year (35.79 percent). Table 3 shows that five medications were prescribed to 25 percent of the individuals.

Table 3: Details of Disease, Duration of Disease, Checkups and Drugs Prescribed

Disease	Number	Percentage
Hypertension	44	25%
both Diabetes and hypertension	132	75%
Duration of disease		
1-4 years	70	39.77%
5-9 years	55	31.25%
10-14 years	37	21.02%
15-20 years	14	7.95%
Checkups		
Monthly	34	19.31%

every 3-4 months	25	14.20%
every 6 months	54	30.68%
once a year	63	35.79%
Total number of drugs		
<2	44	25%
3-<5	76	43.18%
>5	56	31.8%

Determination of Quality of Life

The mental domain has a range of 0-27 points, whereas the somatic domain has a range of 0-21 points, according to the MINICHAL scale. Consider the four potential responses with scores of 0=not at all, 1=somewhat, 2=quite a bit, 3=quite a little, and add the points ranging from 0-51. The greatest and poorest health values are shown by the International Diabetes Federation. The distribution of Hypertension, Hypertension, and Diabetes responses in MINICHAL is clearly seen in the tables below. Tables 4-7 demonstrate that chi square test analysis revealed a strong association in both domains with the effects (P 0.001).

Table 4: Mental domain-Quality of Life in Hypertension

Mental domain	Not at all 0	Yes, somewhat 1	Yes, a lot 2	Yes, very much 3	Mean ± SD
Poor sleep	8	16	10	11	1.47 ± 0.16
Difficulty to maintain social relationships	21	10	8	6	0.96 ± 0.09
Difficulty in interaction	21	10	8	6	1.01 ± 1.12
Not playing useful role	34	7	3	1	0.36 ± 1.02
Unable to make decision	19	9	9	8	1.11 ± 0.21
Felt distressed continuously	8	17	13	7	1.40 ± 0.12
Life is a struggle	8	8	21	8	1.67 ± 1.00
Not enjoying daily activities	19	11	8	7	1.05 ± 1.09
Felt worn out	21	10	6	8	1.03 ± 0.11

Table 5: Somatic domain - Quality Of Life in Hypertension.

Mental domain	Not at all 0	Yes, somewhat 1	Yes, a lot 2	Yes, very much 3	Mean ± SD
Felt sick	6	18	7	14	1.64 ± 0.12
Felt breathless	15	17	6	7	1.12 ± 0.21
Swollen ankles	17	11	9	8	1.04 ± 1.21
Frequent urination	8	12	14	11	1.61 ± 1.11
Dry mouth	8	20	14	3	1.25 ± 0.45
Chest pain without exertion	12	24	4	7	1.05 ± 0.95
Tingling and numbness	8	25	11	1	1.04 ± 0.66
Quality of life affected by hypertension and its treatment	14	18	12	3	1.01 ± 0.89
Felt sick	6	18	7	16	1.56 ± 1.34

Table 6: Mental domain - Quality Of Life in Hypertension and Diabetes.

Mental domain	Not at all 0	Yes, somewhat 1	Yes, a lot 2	Yes, very much 3	Mean ± SD
Poor sleep	39	54	22	16	1.20 ± 0.94
Difficulty to maintain social relationships	120	8	2	0	0.12 ± 0.34
Difficulty in interaction	85	39	1	6	0.41 ± 0.45
Not playing useful role	102	27	3	0	0.23 ± 0.45
Unable to make decision	108	14	7	2	0.27 ± 0.43
Felt distressed continuously	35	56	21	19	1.16 ± 0.87
Life is a struggle	26	67	25	13	1.19 ± 0.75
Not enjoying daily activities	70	55	2	2	0.51 ± 0.51
Felt worn out	57	59	8	7	0.73 ± 0.45

Table 7: Somatic domain - Quality Of Life in Hypertension and Diabetes.

Mental domain	Not at all 0	Yes, somewhat 1	Yes, a lot 2	Yes, very much 3	Mean ± SD
Felt sick	24	48	29	30	1.49 ± 1.01
Felt breathless	45	51	14	21	1.08 ± 1.21
Swollen ankles	62	34	12	23	0.96 ± 1.14
Frequent urination	22	56	30	23	1.38 ± 0.67
Dry mouth	29	61	20	21	1.21 ± 0.45
Chest pain without exertion	39	55	13	24	1.11 ± 1.32
Tingling and numbness	31	68	23	9	1.04 ± 0.32
Quality of life affected by hypertension and its treatment	47	59	20	5	0.87 ± 0.21
Felt sick	24	48	29	30	1.52± 1.11

The International Diabetes Federation has a score range of individual responses to the questions (45) hypertension patients with (8) best, (19) average, and (18) poor quality of life based on the total participant data. Table 8 shows that individuals with hypertension and diabetes had (25) better, (81) average, and (25) worse QUALITY OF LIFE, respectively.

Table 8: Data of Quality Of Life International Diabetes Federationividual Responses in Participants (*n*=176).

Hypertension		
Parameter	N	N%
Better	8	17.77%
Average	19	42.22%
Poor	18	40%
Hypertension And Diabetes		
Better	25	19.08%
Average	81	61.83%
Poor	25	19.08%

DISCUSSION

Chronic conditions such as hypertension and diabetes are included in our study to assess quality of life in hypertension only because there have been numerous studies on health-related quality of life in diabetes, but very few on hypertension, and it is also possible to take a broad view of quality of life in individuals with hypertension, diabetes mellitus, or both. Despite the fact that they didn't come to any conclusive conclusions on bad quality of life, the majority of them agreed that more counselling is necessary. Previous research have revealed that physical domain in Quality of life diminishes with increased incidence of chronic disease and advanced age, according to some studies. Even with increasing age and chronic illnesses, the mental domain of Health Related Quality of Life has been demonstrated to be more constant.

Indeed, in order to examine the influence of illness type and adherence level interaction on Quality of life domains, the Quality of life was assessed not only in hypertension but also in both hypertension and diabetes. Indeed, in order to examine the influence of illness type and adherence level interaction on Quality of life domains, the Quality of life was assessed not only in hypertension but also in both hypertension and diabetes. However, as shown in Table 4, 5 patients with chronic diseases (particularly diabetes and hypertension) have a high somatic parameter due to their worsening disease condition, which could be due to a variety of other factors such as medication use patterns, diet, physical stress, long-term illness, educational, occupational status, and other habits, as in the previous study.

Patients with either hypertension or hypertension plus diabetes (Table 6) had a high average Quality of Life, which had a significant association (P=0.0001) with the specific illness condition. Geriatrics 50-89 (61.7 percent) suffered in the company of long-term disease, seasonal disease [dengue fever] because they had less ability to endure environmental conditions and also recover their health. Other variables such as educational status, nutrition, physical stress, and everything else that impacts quality of life, because many of them had poor knowledge of food, medicine usage, and job plans, as most of them were housewives, retired officers (34.45%), and farmers (41.47%). (Table 1). The majority of the subjects (Table 2) were non-alcoholics (38.63%) and non-smokers (42.61%) who were being monitored to enhance their quality of life.

Because most of the participants had both diabetes and hypertension (75 percent), as shown in Table 3, diabetic patients are at higher risk of hypertension. The number of drugs prescribed in each prescription is 3-5 drugs in (43.18 percent) of subjects due to multiple disease conditions, and the duration of disease is 1-4 years (39.77 percent).

We've seen that certain graduates and farmers who aren't concerned about their quality of life are more likely to develop co-morbidities such as cardiovascular disease and renal disease, in that order. We quoted a small group of individuals in this article, but we obtained a lot of information to analyse the general effect or cause of the sickness or people who have common diseases, and it is also another means of establishing epidemiological status if needed. People, it appears, have little desire to improve their immunity in terms of health, the environment, or social standing. A clinical pharmacist, who plays an important part in delivering effective medication adherence practises in chronic illness patients or patients with any other condition, is required to educate or inform them in advance.

Farmers and other vocations were aware that disease is experimental via their understanding levels linked to medicine, disease consequences, and health fitness in the current study, as shown in Table 1. Finally, we found that 61.83 percent of participants with diabetes and hypertension had an average quality of life of 61.83 percent, and 42.22 percent of those with hypertension had an average quality of life of 42.22 percent (Table 8) as well as a modest variation in patients compared to previous studies reports that followed the low level of health quality.

CONCLUSION

We concluded from this study that self-care is required to avoid hypertension and diabetes-related morbidity and death. Even yet, several individuals had no idea what causes diabetes and hypertension. In reality, there is some scepticism of physicians, health care providers, and other health-care professionals, as well as acceptance of people's opinions. To avoid this, health care providers should closely monitor the patient's health condition and sternly advise them on their disease, medications, and lifestyle changes in a courteous manner in order to preserve their higher quality of life and ensure that they keep to their prescription.

REFERENCES

[1]. Lee GK, Wang HH, Liu KQ, Cheung Y, Morisky DE, Wong MC. Determinants of medication adherence to antihypertensive medications among a Chinese population using Morisky Medication Adherence Scale. Plosone. 2013;8(4):62775.

[2]. Saqlain M, Riaz A, Malik MN, Khan S, Ahmed A, Kamran S, et al. Medication Adherence and its Association with Health Literacy and Performance in Activities of Daily Livings among Elderly Hypertensive Patients in Islamabad, Pakistan. Medicina. 2019;55(5):163.

[3]. Riaz H, Sadeeqa S, Sultana M. Hypertension-related knowledge, medication adherence and health-related quality of life among hypertensive patients in Islamabad, Pakistan. Tropical Journal of Pharmaceutical Research. 2019;18(5):1123-32.

[4]. Khayyat SM, Alhazmi RS, Mohamed MM, Hadi MA. Predictors of medication adherence and blood pressure control among Saudi hypertensive patients attending primary care clinics: A cross-sectional study. PloS One. 2017;12(1):0171255.

[5]. Timar R, Velea I, Timar B, Lungeanu D, Oancea C, Roman D, et al. Factors influencing the quality of life perception in patients with type 2 diabetes mellitus. Patient Preference and Adherence. 2016;10:2471.

[6]. Gupta L, Khandelwal D, Lal PR, Gupta Y, Kalra S, Dutta D. Factors Determining the Success of Therapeutic Lifestyle Interventions in Diabetes–Role of Partner and Family Support. European Endocrinology. 2019;15(1):18.

[7]. Singh C, Crawford K, Willey S, Hall H, Harder K, Plummer V, et al. Medication adherence among people of International Diabetes Federation an ethnicity living with chronic disease following migration to Australia. Collegian. 2020;27(2):179-84.

[8]. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: Estimates for the year 2000 and projections for 2030. Diabetes Care. 2004;27(5):1047-53.

[9]. Poljicanin T, Ajdukovic D, Sekerija M, Pibernik-Okanovic M, Metelko Z, Mavrinac V. Diabetes mellitus and hypertension have comparable adverse effects on health-related quality of life. BMC Public Health. 2010;10(1):12.

[10]. Trevisol DJ, Moreira LB, Fuchs FD, Fuchs SC. Health-related quality of life is worse in International Diabetes Federation individuals with hypertension under drug treatment: Results of population-based study. Journal of Human Hypertension. 2012;26(6):374.

[11]. Erickson SR, Williams BC, Gruppen LD. Relationship between symptoms and health-related quality of life in patients treated for hypertension. Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy. 2004;24(3):344-50.

[12]. Sushma P, Gali NC, Badhela H, Palinga A, Lakshmi KR. Evaluation of medication adherence in type-2 diabetic patients in tertiary care hospital. International Journal of Research and Analytical Reviews. 2018;5(4):921-9.