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ORIGINAL RESEARCH

A COMMUNITY BASED CROSSECTIONAL STUDY FOR EVALUATION OF HEALTH RELATING QOL IN TYPE 2 DIABTES PATIENTS IN RURAL AREA OF HISTORICAL CAPITAL OF MADHYA PRADESH.

Dr Aditi Sengar [1], Dr Rohit Pratap Singh Tomar[1] *

[1]PG Resident, Community Medicine, Gajra Raja Medical College, Gwalior, Madhya Pradesh *SR Medicine, Gajra Raja Medical College, Gwalior, Madhya Pradesh

ABSTRACT:
Diabetes is the undeniably developing metabolic danger of our contemporary time. World Health association (WHO) perceives diabetes as one of the most significant reason for preventable mortality and morbidity among non-transmittable ailments worldwide, impacting Quality of life patient. Diabetes is a significant reason for retinopathy, neuropathy, nephropathy, coronary artery ailments, stroke and lower appendage amputation affecting patient's physical, social, emotional, financial aspects of life.This cross-sectional examination was led in the rural regions of Gwalior area; Door to entryway visit was finished with the Community Health volunteers (CHVs) to identify diabetic patients. During the examination time frame, 460 patients were enrolled with Type II diabetes dependent on the accompanying incorporation and prohibition measures. They chose patients were regulated with the MDQoL-17 poll and recorded the demographics data in the data collection structure subsequent to acquiring their consent. Examination of fluctuation (ANOVA) test was utilized to dissect the connection between independent factors and spaces of personal satisfaction.Among the 460 diabetic patients enlisted, the majority of them were male, and majority had a past filled with diabetes for more than Decade has low Qol score. The majority of the patients had a moderate QOL score somewhere in the range of 50 and70. There is urgent need to focus on preventive strategies like screening programmes, IEC activities by opening NCD clinics at accessible and approachable level. Routine assessment of QOL as part of clinical practice .Supporting Tele-medicine interventions to limit complications and improve QOL of our people. To make better tomorrow.

Keywords: Diabetes, metabolic, Community, functioning, Quality of Life.

Corrseponding Author: Dr Aditi Sengar, PG Resident, Community Medicine, Gajra Raja Medical College, Gwalior, Madhya Pradesh

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INTRODUCTION

Diabetes is the undeniably developing metabolic danger of our contemporary time. World Health Organization (WHO) perceives diabetes as one of the most significant reason for preventable mortality and morbidity among non-transmittable ailments worldwide. As indicated by the International Diabetes federation (IDF), there were an expected 387 million people with diabetes worldwide in 2014, and this number is set to increment to 592 million by the 2035. Adults in India alone record for 86% of this present district's grown-up populace of 883 million. India is encountering an economic development rate second just to china somewhere in the range of 2000 and 2016; there was a 5% expansion in untimely mortality from diabetes. Diabetes predominance has been raising all the more rapidly in low- and center salary nations than in high-pay nations. Diabetes is a significant reason for visual deficiency, kidney disappointment, coronary failures, stroke and lower appendage amputation. Expanded mortality identified with diabetes in India is identified with helpless in general human services, with 59.11% biting the dust inside multi week of hospitalization with contamination and chronic renal disappointment being the significant reasons for death, contrasted and cardio-and cerebro-vascular sickness in the west. The pervasiveness of retinopathy among Indians with diabetes ran from 7.3% to 34.1%, commonness of unmistakable nephropathy was 2.2%, while that of miniaturized scale albuminuria was 26.9%, and proteinuria 19.7% peripheral neuropathy dependent on bio-thesiometry was seen in 26.1%. Coronary supply route diseases(CAD) were seen in 21.4% of patients with diabetes, 14.9% of patients with disabled glucose resistance, and 9.1% of patients with normal glucose tolerance furthermore, fringe vascular disease(pvd) was available in 6.3% of patients with diabetes contrasted and 2.7% in people without diabetes.

The pooled predominance of country diabetes among low- and center pay nations has been assessed at 5.6% over a 25-year period. The diabetes trouble in India results from different factors. Hereditary inclination joined with way of life changes and connected with urbanization and globalization; all together add to the quick ascent of diabetes in India. Ethnicity assumes a job too, and in one model, there are lower edges for the impact of BMI on age-balanced sort 2 diabetes (t2d) commonness rates among Indians. The examinations on QoL help in the assessment of the mental functioning of a patient, recognizable proof of explicit deficiencies, and the necessities of patients at various phases of the illness. They additionally help in looking at the effect of various treatment regimens on a patient's wellbeing and satisfaction. QoL is the inclination of generally life fulfillment, as controlled by the intellectually ready person whose life is being evaluated. They have additionally centered on the effect of ailment wellbeing status and infection on, and estimation of, physical and mental inability and disabled job functioning. The accentuation has been on (dys) utilitarian status. Utilitarian status is how much an individual can perform socially designated jobs liberated from physical or psychological wellness related limitations. Diabetes is a chronic ailment in this way there is a requirement for surveying the qol of patients at standard spans. The confusions of diabetes influence the organ framework and are liable for most of morbidity and mortality related with the disease. Routine appraisal of qol as a piece of clinical practice can possibly improve correspondence between the patient and the social insurance supplier, identify much of the time disregarded issues, survey the issues, and assess the impact of helpful endeavors at the individual patient's level.

METHODOLOGY

This cros-sectional examination was led in the provincial regions of Gwalior area; Door to entryway visit was finished with the Federation of community Health volunteers (FCHVs) to identify diabetic patients. Patients, who were not accessible during first visit, were in this way followed for second and third occasions. Subsequent to getting Ethical Committee endorsement from the Ethics council. The examination was accomplished for a complete duration of 9 months. During the examination time frame, 460 patients were enrolled with Type II diabetes dependent on the accompanying incorporation and prohibition measures. They chose patients were regulated with the MDQoL-17 poll and recorded the demographics data in the data collection structure subsequent to acquiring their consent. It comprises of 17 inquiries that involve seven spaces, which include physical functioning, job limitations because of physical medical issues, job limitations because of individual or passionate issues, enthusiastic prosperity, social functioning, vitality/weariness, and general wellbeing observations. All the substance is scored with the goal that a high score delineates an increasingly good wellbeing state. The potential scores are 0-100, 0 being the base and 100 being the greatest score Scores speak to the level of all out conceivable score accomplished. Data were broke down utilizing IBM SPSS measurements form programming Questionnaire tending to definite history of demographic data, for example, sex, age gathering, family, occupation, number of workers, per capita salary duration of diabetic history, hereditary history the quantity of diabetic medications endorsed, protection advantage taken, the remedy example of diabetic medications food propensities and physical activity, The QoL score of MDQoL-17 was communicated as a level of the complete QoL Score. Those patients with a QoL score of in excess of 70 had a superior QoL, those with a QoL score in the middle of 50-70 had a moderate QoL, and those with score under 50 had a poor QoL. Data are introduced as recurrence, rate, mean and standard deviation. Examination of fluctuation (ANOVA) test was utilized to dissect the connection between independent factors and spaces of personal satisfaction. P esteem is likewise calculated,<0.05 was considered significant.

RESULT

According to the examination rules, the 460 diabetic patients conceded were incorporated and the majority of them were male members as appeared in Table 3. Among the 460 patients, 45(9.78%) patients were in the age group of under 35 years, 153(33.26%) were in the age group of 35-49 years, and (56.95%) were falling under the age group of more than 50years. We saw that out of 460 patients, 105 (22.8%) had the historical backdrop of diabetes under 5year, and 355(77.17%) of over 10 years. We saw that as patient is going through more long periods of time on earth in diabetes prompting low QOL (62.12±9.83)as contrasted with those patients who are having low duration of diabetes with better qol (72.42±9.23).There were 270 (58.7%) on oral hypoglycemic specialists, and 130 (28.3%) were taking a mix of insulin and oral hypoglycemic operators. Among the diabetic patients, many had different comorbidities present, for example, hypertension (HTN), kidney sickness, liver malady, and different ailments as appeared in Table 3 .Out of 460 patients, 312 (67.82%) are under ayushaman bharat conspire ,are Bpl card holder, 148(32.17%) didn't have any . Patients were endorsed with 1 to 4 drugs for diabetes treatment; the majority of the patients were on monotherapy (Table3).On investigation of MDQoL-17 polls, the normal QoL score was 68.47±14.07.The relationship between's the QoL score and the quantity of diabetic complications is portrayed in Table 5. 212 patients had different kinds of complications; retinopathy, nephropathy, neuropathy, diabetic foot, Ischemic Heart Disease (IHD) and ketoacidosis. The patients with diabetic nephropathy had the least QoL score (53.99±16.34) and the patient with diabetic retinopathy had a superior QoL score (63.24±16.87) contrasted with other referenced complications (Table 5). The patients without comorbid condition had a superior qol than the patients with comorbidity. Hospitalization additionally assumes a significant job in affecting quality of life of patient, those who invest more energy in emergency clinic length of stay has low QOL (62.59±11.23),as contrasted with little duration of medical clinic remain with high qol score(72.13±15.90)On assessment of BMI of patient, those who lie in 18.5-22.9 class has better qol. Patient without confusion has better qol when contrasted with persistent with intricacy higher hb1ac >9, prompting lower qol. On assessing protests, of diabetes quiet ,it was discovered that fatigue, polyurea, decrease rest prompting problem in work life, decreased vitality level ,shivering sensation, pain in appendages hold most noteworthy rate and measurably significant effect on QoL, reducing QoL scores. Expanding, weight change doesn't show significant difference in qol score measurably.

TABLE 1: SHOWING AGE WISE DISTRIBUTION OF DIABETES PARTICIPANTS.

S. No.	Age in years	NO OF PARTICIPANTS	PERCENTAGE
1	<35	45	9.78
2	35-49	153	33.26
3	>50	262	56.95
	Total	460	100

TABLE 2 SHOWING RELIGION WISE DISTRIBUTION OF PARTICIPANTS

S. No.	Religion	Total	
		No.	%
1	Hindu	359	78.04
2	Muslim	55	11.9
3	Sikh	28	6.08
4	Christian	18	13.9
TOTAL		460	100

TABLES-3 DEMOGRAPHIC CHRACTERISTICS OF SUBJECTS

S.NO	CATEGORY	NO OF PATIENTS
1 GENDER N=460	MALE FEMALE	308(67%) 152(33%)
2. Fating Blood Sugar (mg/dl) N= 344	< 110 110-126 >126	96(28%) 22(6.3%) 226(65.7%)
3 HBIAC (%) N=296	4-7 7 -8 >8	71(24%) 49(16.6) 176(59.4)
2 4.BMI(KG/M N=267	<18.4 18.5-22.9 23-24.9 >25	19(7.2%) 76(28.4%) 43(16.2%) 129(48.2%)
5.COMORBIDITY N=313	HTN KIDNEY DISEASE LIVER DISEASE	164(52.3%) 128(40.9%) 21(6.8%)
6.DM WITH AND WITHOUT COMPLICATION N=460	A)DM WITHOUT COMPLICATION DM+1 COMPLICATION DM+2COMPLICATION DM+3COMPLICATION DM+4COMPLICATION	286(62.2%) 108(23.5%) 27(5.9%) 22(4.8%) 17(13.7%)
7 TYPES OF DIABETES COMPLICATION	RETINOPATHY NEPHROPATHY NEUROPATHY DIABETIC FOOT IHD KETOACIDOSIS	48(22.7%) 40(18.9%) 15(7.1%) 26(12.2%) 70(33.0%) 13(6.1%)
8.NO OF DIABETIC DRUGS	ONE TWO THREE FOUR	270(58.7%) 130(28.3%) 51(11.0%) 9(12.0%)

FIGURE 1: ASSESSMENT OF QOL PATIENTS WITH DIABETES

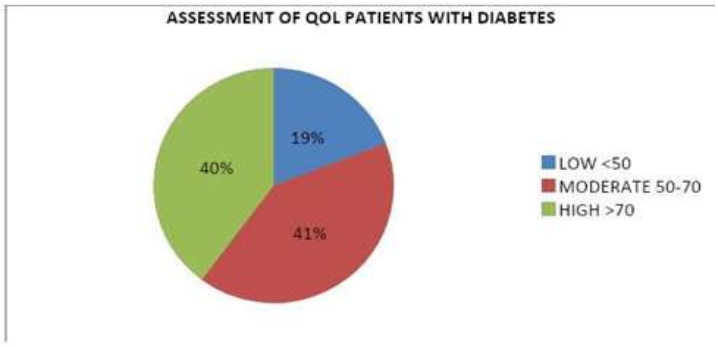

TABLE 4—ASSESSMENT OF QOL PATIENTS WITH DIABETES

QOL SCORE	NO OF PARTICIPANTS N=460
LESS THAN 50	88(19.1%)
50-70	189(41.1%)
MORE THAN 70	183(39.8%)

TABLE 5 - CORRELATION OF QOL WITH VARIOUS DEMOGRAPHICS CHARACTERISTICS OF DIABETIC PATIENTS

S.NO	CO VARAITE FACTORS		QOL scores (Mean ± S.D)	p values
1	Gender	Male	68.12±17.04	>0.05
	FEMALE		67.98±14.12	
2	AGE	<40	69.42±15.17	>0.05
		40-70	64.84±14.92	
		>70	62.48±15.14	
3	COMORBIDITY	PRESENT	62.23±13.95	>0.05
	ABSENT		64.52±14.12	
4	TYPE OF MORBIDITY- HTN		64.39±12.23	>0.05
		KIDNEY DISEASE	63.14±16.12	
		LIVER DISEASE	62.34±15.15	
5	DURATION OF ILLNESS	<1-10	72.42±9.23	<.05
	(YEARS)	> 10	62.12±9.83	
6	LENGTH OF STAY IN HOSPITAL (DAYS)	<10	72.13±15.90	<.05
		>10	62.59±11.23	
7	MEDICATION	INSULIN	62.14±14.08	>0.05
	OHA		66.78±14.79	
	INSULIN+OHA		61.18±15.33	
8	AAYUSHMAN BHARAT INSURANCE	PRESENT	74.49±14.98	<0.05
		ABSENT	63.17±12.10	
9	DM WITHOUT COMPLICATION		69.87±13.18	>0.05
	DM+1 COMPLICATION		64.67±12.66	>0.05
	DM+2COMPLICATION		62.94±16.87	>0.05
	DM+3COMPLICATION		61.34±20.12	>0.05
	DM+4COMPLICATION		50.98±13.78	<0.05
10	TYPES OF COMPLICATION			
	RETINOPATHY		63.24±16.87	>0.05
	NEPHROPATHY		53.99±16.34	<0.05
	NEUROPATHY		54.67±14.78	<.05
	DIABETIC FOOT		62.57±16.13	>0.05
	IHD		58.12±15.97	<.05
	KETOACIDOSIS		57.78±11.23	<.05
11	BMI	<18.4	68.2±13.78	>0.05
	18.5-22.9		70.67±12.11	
	23-24.9		66.89±12.76	
	>25		64.18±14.29	
12	HB1AC	4-7	67.65±14.14	<0.05
	7 -8		65.34±13.28	
	>8		59.34±18.44	

TABLE 6 ASSESSMENT OF QOL BASED ON THE DIABETES RELATED COMPLAINTS

SNO	DIABTES RELATED COMPALIN	QOL scores (Mean ± S.D)	p values
1	FATIGUE PRESENT	61.48±15.14	<.00001
	ABSENT	76.89±13.09	
2	POLYUREA PRESENT	64.98±16.08	.027
	ABSENT	68.14±14.34	
4	SLEEP	59.72±14.08	<.00001
	DISTURBANCES PRESENT	69.40±16.40	
	ABSENT		
5	WEIGHT NO CHANGE	67.08±14.07	>0.05
	CHANGE PRESENT	64.62±16.81	
	ABSENT	68.84±12.81	
6	PROBLEM IN WORKLIFE PRESENT	60.81±14.48	<.00001
	ABSENT	74.95±13.95	
7	DECREASE IN ENERGY LEVEL		<.00001
	PRESENT	60.73±13.98	
	ABSENT	76.98±12.91	
8	HYOGLYCEMIA PRESENT	62.34±16.43	<.00001
	ABSENT	70.95±13.42	
9	TINGLING/NUMBNESS		<.00001
	PRESENT	55.14±15.90	
	ABSENT	72.43±14.54	
10	BLURREDVISION		<.00001
	PRESENT	64.21±15.90	
	ABSENT	74.53±14.28	
11	PROBLEM IN SOCIAL LIFE		<.00001
	PRESENT	58.42±17.64	
	ABSENT	68.98±13.88	
12	DIFFICULT IN WALKING		<.00001
	PRESENT	59.98±13.88	
	ABSENT	76.40±13.42	
13	SWELLING IN LOWER LIMBS PRESENT	62.44±13.78	0.226
	ABSENT	68.74±14.84	
14	PIANFUL LIMBS PRESENT	61.94±13.98	<.00001
	ABSENT	73.43±14.12	
15	DELAYED WOUND PRESENT	58.42±15.88	<.00001
	HEALING ABSENT	69.91±14.78	

DISCUSSION

In the current investigation, we met 460 subjects, planned for surveying the QoL in Diabetic patients in a country zone, they by and large have negative effect on the QoL. This Finding is in help with different examinations Vivek Bhanubhai Prajapati et al,(2017), Gautam et al. (2009) and Anumol et al(2014).The majority of the investigation subjects were males 308(67%) and this was like the perception from the examination did by Vivek Bhanubhai Prajapati et al,(2017 and Eljedi et al. (2006).King et al. (1998) mentioned a comparative objective fact in their investigation. We additionally see as the age expands there is a significant decline in the QoL score (p=<0.05). Ali et al. (2013) and Glasgow et al. (1997) mentioned a comparative objective fact in an investigation, where an expansion in age diminished the QoL in diabetes patients. Shirish, Priya, and Ahsan et al (2011) mentioned a comparable objective fact in their examination. We saw in the examination that as the duration of history expanded there was a significant decline in the QoL (62.12±9.83).Benbow et al. (1998) states patients whining of weariness and torment in appendage had poor QoL. Revealed the comparative perception as our examination Where Diabetic related protests weakness, rest unsettling influences, polyurea, problems in work life, diminished vitality levels, hypoglycemic indications, shivering sensation/deadness, problems in social life, trouble in strolling, growing in appendages, torment in appendages and postponed wound mending significantly lessen the QoL scores The QoL score for the patients on mix treatment with insulin and OHA(61.18±15.33) was worse than patients on monotherapy OHA(66.78±14.79), which not bolstered the finding by Hermanns et al. (2015) and Yki-Järvinen (2001) both detailed that the blend of insulin with OHA would do well to qol.Because tolerant are more consistent towards single oral medicine instead of agonizing injection.It was additionally seen that among the diabetic complications the patients with neuropathy had the least QoL score, which isn't like the examination by Benbow et al. (1998) who detailed that neuropathy impedes the QoL. The patients with nephropathy had a lower QoL (53.99±16.34) and there was a factually significant difference in the QoL scores (P=<0.05) contrasted with the patients without complications, and it is bolstered by an investigation by Lauro et al. (2005) who announced that the patients with diabetic nephropathy demonstrated crumbling in the QoL. The patients with a BMI of 25 kg/m^2 , however there is no measurably significant difference in the QoL scores, already the investigations independently taking a gander at the relationship among heftiness and Qol have plainly shown that the corpulence debilitates the QoL (Kolotkin, Meter, Williams, 2001). Hlatky, et al., 2010).also indicated that among diabetics, the nearness of stoutness significantly hindered QoL. Patients with HbA1c 4-7% had a superior QoL life (67.65±14.14) contrasted with the patients with HbA1c levels between 7-8% and over 8%, factually significant. An examination by Stanetić et al. (2012) announced the comparable outcome as our investigation that poor people QoL was seen in the patients with poor glycemic control and levels of HbA1c >8.1%. It likewise expressed that the better QoL was found in patients with HbA1c level between <8% . In our examination The paients with aayushman bharat wellbeing inclusion had a superior Quality of life(74.49±14.98) than those without benefit. As study Roetzheim et al., 1999, Davidoff et al., 2001) announced same finding that those with medical coverage have the best results and those with no protection have the worst.

CONCLUSION

Diabetes significant epidemic, the investigation was done to assess the qol in type ii diabetic patients with and without complications. Among the 460 diabetic patients enlisted, the majority of them were male, the mean period of diabetic patients was 62.34±15.04 years, and majority had a past filled with diabetes for more than decade. The majority of the patients had a moderate QOL score somewhere in the range of 50 and 70. As duration of sickness, uncontrolled hb1ac leads because of delayed emergency clinic remain affecting QOL unfavorably and confusion of diabetes in which IDH, trailed by retinopathy, nephropathy hypertension found as significant comborbidity with diabetes. Diabetes and its complications influence different spaces, for example, physical functioning, enthusiastic wellbeing, social functioning, economical status, and general wellbeing in a patient's life, in this way affecting the general QOL of patient.

RECOMMENDATION

Consequently it is expected to concentrate on counteraction systems like screening program diabetic instruction in network level , opening NCD facilities, Routine evaluation of QOL as a piece of clinical practice and tele-medication intervention so as to constrain its complications and to increase the quality of life of type 2 diabetic patient. Thus, it is prescribed for patients to have a satisfactory and exacting Glycemic control, regular reflection, appropriate consistence, making self improvement gatherings, physical action of a base 30 min/day, expanding mindfulness, improving social emotionally supportive network empowering them to keep up their quality of life, forestalling ailment movement and diabetic complications.

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