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Research Article

The quality of life assessment of chronic schizophrenia and diabetic patients with WHOQOL in Indian population: a comparative study

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ABSTRACT

Background: Schizophrenia is a chronic, severe and disabling psychiatric disorder and diabetes mellitus is one of the most prevalent non psychiatric chronic illnesses. Both the diseases have common features of their chronicity, economic burden and dysfunction of occupation. QOL becomes more important health outcome tool in disorders that are chronic or where treatment continues over a long period. **Methodology**: In this study, descriptive survey was used to collect the data. Demographics details, laboratory results, given drugs, medical and medication history were documented in to the data entry form and were asked to fill the BREF WHOQOL questionnaires (Malayalam version). **Results**: The BREF WHOQOL score was high in Diabetic group in all the four domains as compared with the Schizophrenia group. Since P value is less than .05 in all cases, the difference is statistically significant. **Discussion:** The schizophrenia patients may have problems in maintaining relationships, frustration in working place, social isolation and stigma which again make their QoL scores lower especially when compared to a chronic physical illness like diabetes. The low score in schizophrenia indicates that mental illness influence above components of this domain. **Conclusion:** Mental health care is an integral part of healthcare. psychiatric illnesses is associated with lower QoL.

Keywords: Schizophrenia, quality of life, Diabetes mellitus, WHOQOL-Bref scale, domains.

INTRODUCTION

Schizophrenia is a chronic mental disease that affects 1 percentage of the population in all cultures changing both physical and psychological wellbeing [1]. In clinical psychiatry the quality of life (QOL) assessment has been considered as important outcome deriving tool. The concept is, this outcome is highly influenced by the presence of clinical symptoms, especially negative and depressive, medication nonadherence, service disengagement and comorbid disorders [2,3]. The definition given by World Health Organization for quality of life is "Individuals' perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns"[4]. It has been no longer that treatment of schizophrenia has deinstitutionalised from silent asylum to community providing them more care ,support from family ,health care professionals ,society .This has forced health care professionals to focus different aspects of treatment planning mainly considering patients quality of life [5]. The studies have revealed that approximately half of patients with schizophrenia in any kind of therapy achieve symptomatic remission and only a minority of 15% to 25% reach a combined QoL, functional, and symptomatic remission [6]. Schizophrenia is a chronic, severe and disabling psychiatric disorder and diabetes mellitus is one of the most prevalent non psychiatric

chronic illnesses. Both the diseases have common features of their chronicity, economic burden and dysfunction of occupation. QOL becomes more important health outcome tool in disorders that are chronic or where treatment continues over a long period. Most commonly used scale which can compare the both diseases was found as WHOQoL. Nowadays management of psychiatric disorders has been more community based providing rehabilitation and involving all the people around the patient. Interestingly, this study aims to compare different aspects of both the diseases to determine how a psychiatric illness and a non psychiatric illness affect respective patients quality of life. By comparing with a non psychiatric illness, we can explore what all aspects both diseases differ and attitude towards both the diseases.

METHODOLOGY

This study is a prospective, observational study conducted in tertiary care teaching hospital, KMCT Medical college hospital, Kerala, India. The study was designed in two departments, psychiatry and general medicine. The main focus of the study was schizophrenia, for which patients were recruited from KMCT Institution of psychiatric and behavioural sciences (KIBS). A detailed literature review was conducted before starting the study. A pilot study was conducted for validation of tools used. In this study descriptive survey was used to collect the data.

Demographics details, laboratory results, given drugs, medical and medication history were documented in to the data entry form and were asked to fill the BREF WHOQOL questionnaires (Malayalam version). It takes about 10-15 minutes to fill the questionnaire.

RESULTS

The diagnosis of schizophrenia was based on DSM-5 criteria, American psychiatric association. The sample characteristics are summarised in the table 1. The socio demographic factors (age, sex, education, marital status, occupation), sociocultural factors (religion, domicile, lifestyle) were assessed from the sample population [Table 1].

The table 2 shows mean scores on the different domains of the two patient populations. We can see that the psychiatric patients had lower scores for all the QoL domains than the diabetic group. The score of the four domains of WHOQOL-Bref scale in schizophrenia were physical health domain (mean ±SD 32.84±8.94), psychological well-being (mean ±SD 31.64±8.05), social domain (mean ±SD 20.24±17.84) and environmental domain (mean ±SD 41.64±12.78) [Table 2].

In DM population, scores of the four domains of WHOQOL- Bref scale were physical health domain (mean ±SD 45.84±9.67), psychological well-being (mean ±SD 43.94±12.48), social domain (mean ±SD 48.56±20.46) and environmental domain (mean ±SD 55.18±12.77). In environmental domain the mean difference of scores were the highest (13.54). The mean difference between the transformed scores of physical domain of the two illnesses was found to be 13. The mean difference of the social domain were 8.3 whereas in the case of psychological domain the mean score was 12.3 [Table 2]. The BREF WHOQOL score was high in Diabetic group in all the four domains as compared with the Schizophrenia group. Since P value is less than .05 in all cases, the difference is statistically significant.

EFFECT OF AGE AND GENDER ON QoL

Schizophrenia: In schizophrenic patients, female gender have significant positive correlation with physical domain of QoL (significant at 0.01 level;r=0.440; p=0.001). Social domain of QoL is negatively correlated significantly with gender (significant at 0.05 level; r= -0.302; p=0.033). Age and social domain have a positive correlation (significant at 0.01 level; r=0.452; p=0.001) [Table 3].

Diabetes: In diabetic patient population, physical domain of QoL and age are negatively correlated (significant at 0.01 level; r= -0.377; p=0.007).Psychological domain and age are negatively correlated (significant at 0.5 level;r= -0.357; p=0.011).Age and social domain have a negative

correlation (significant at 0.01 level; r= -0.444; p=0.001) [Table 3].

EFFECT OF DEMOGRAPHIC VARIABLES ON QoL

Schizophrenia: In schizophrenic patients, physical domain is associated positively to domicile. Urban population have high score for physical domain (significant at 0.05 level; r=0.297; p=0.036).Social domain and marital status are negatively correlated (significant at0.05 level; r= -0.311 ;p=0.028).That is married patients have high score of social domain. Social domain has positive correlation with occupation (significant at0.01 level); r= 0.424; p= 0.002). Environmental is positively associated domicile (significant at 0.05level; R=0.279; p=0.049).It means urban population have greater environmental QoL [Table 3].

Diabetes: Physical domain and marital status correlated negatively in diabetic patients. Married patients have high score for physical domain (significant at0.5 level; r= -.359; p=.010). Physical domain has Positive correlation with occupation (r=0.339 ; p=0.016 ;at 0.5 level).Psychological domain positively correlated with education (significant at0.01 level; r=0.373; p=0.008) and with occupation (significant at0.01 level; r=0.421;p=0.002). social domain is negatively correlated with marital status. Married patients have increased score of social domain (significant at0.01 level;r= -0.362;p=0.010).Social domain has a positive correlation with occupation(significant at 0.05 level; r= 0.337; p=0.017).Occupation is positively correlated to environmental domain too(significant at 0.01 level; r=0.454; p=0.001).The table below shows the association of QoL domains with sociodemographics [Table 3].

CORRELATIONS BETWEEN THE DOMAINS

Schizophrenia: In schizophrenia patient population, there is a positive correlation between psychological domain and environmental domain (significant at 0.05 level; r=0.343; p=0.015).

Diabetes: In diabetic population, physical domain is positively correlated to psychological domain (significant at 0.001 level; r=0.539; p=0.000) and social domain (significant at0.01 level; r=0.553; p=0.00).There is positive correlation between psychological and social domains (significant at0.01 level; r=0.656; p=0.00).Psychological domain and environmental domain are correlated positively (significant at 0.01 level; r=0.377; p=0.007). Environmental domain and social domain are positively correlated (significant at 0.01 level; r=0.368 ;p=0.009).

EFFECT OF FAMILY BURDEN AND ADHERENCE ON QoL IN PSYCHIATRIC PATIENTS

Family burden (SCARF score) and psychological domain are negatively correlated (significant at 0.05 level; r= -0.280; p=0.049) in schizophrenics. Similarly, environmental domain and family burden found to be correlated negatively (significant at 0.05level; r= -0.342; p=0.015)**.** Adherence and physical domain are positively correlated (significant at 0.05level; r=0.303; p=0.33).

DISCUSSION

The study explored a comprehensive analysis of an Indian Schizophrenic population and how a chronic psychiatric illness (Schizophrenia) differs from a chronic non-psychiatric illness (Diabetes mellitus) in terms of quality of life. Schizophrenia is a chronic mental illness which has an effect on person's ability to lead a meaningful life, while diabetes is a chronic non-psychiatric illness which mainly affects the physical health. This study aims to compare different aspects of healthcare issues come across in the management of both illnesses.

The concept of quality of life assessment includes different aspects of an individual's wellbeing and role function extends to which the person have access to resources and opportunities [7]. The WHOQOL-BREF incorporates the individual's perception of health status, psychosocial status and other aspects of life through four domains mainly physical health, psychological wellbeing and environmental domain [8]. The main objective of the study was to compare the four domains and determinants of WHOQOL in patients with schizophrenia.

In this study BREF-WHOQOL score was high in diabetic group in all domains as compare with schizophrenia. Research carried out in a group of Turkish psychiatric patients as demonstrated similar result [9]. The score of physical domain were significantly lower than diabetic population. This implies that physical well being of mentally ill patients is also lower. This domain incorporates the questions related to activities of daily living, dependence on medical substance and medical aids, energy and fatigue, mobility, pain and sleep and these factors are affected by mental illness [8]. Many QoL studies of schizophrenia proved similar results [9,10,11]. There are studies which compared QoL of the two diseases and proved that schizophrenia has lower scores in all the domains except physical domain [12]. In the case of psychological domain the two populations were significantly different. Obviously schizophrenia had the lower score and this domain explains the problems in positive and negative feeling, self-esteem, spirituality/religion and attention. There are many supporting studies for the above fact [13,14,15]. Social domain score indicates how well the patient have social support, sexual activity and maintains personal relationships. The schizophrenia patients may have problems in maintaining relationships, frustration in working place, social isolation and stigma which again make their QoL scores lower especially when compared to a chronic physical illness like diabetes. The decreased scores of physical domain is also supported by similar studies [16,17]. The greater social disability of schizophrenic group is the reason for staying unemployed and single when compared to diabetes [18,19]. Environmental domain which implies the QoL associated with freedom, physical safety and security, health and social care; accessibility and quality, home environment and physical environment. In this domain too our study revealed that diabetic population has higher score than schizophrenia. The low score in schizophrenia indicates that mental illness influence above components of this domain. This similar results are reported in many previous QoL studies [20,21].

CONCLUSION

Mental health care is an integral part of healthcare. Medical and psychiatric illnesses are associated with comparably lower QoL and huge economic loss. In this Study BREF WHOQOL score was high in Diabetic group in all the four domains as compared with the Schizophrenia group. Our healthcare system has to be more aware about the extra beneficial treatment outcomes of combining the conventional pharmacotherapy with more psychosocial interventions like rehearsal of independent living skills, training in social skills, vocational training, social support networks, family interventions etc. We need to adopt interventions which improve the conventional management of psychiatric illness considering all the above mentioned parameters.

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VARIABLES	SCHIZOPHRENIA (n%)	DIABETES MELLITUS (n%)	TEST STATISTIC
Age	40.42±11.30	56.86±9.90	t= 7.738 (p=0.001)
Sex **Male** **Female**	25(50%) 25(50%)	20(40%) 30(60%)	Chisquare =1.01 P=0.315
Marital status **Single** **Married**	19(38%) 31(62%)	6(12%) 44(88%)	Chisquare =9.013 P=0.003
Domicile **Urban** **Rural**	27(54%) 23(46%)	30(60%) 20(40%)	Chisquare =0.367 P=0.545
Education **0-4** **4-8** **8-12** **12-16** **16-20**	3(6%) 11(22%) 24(48%) 11(22%) 1(2%)	6(12%) 9(18%) 18(36%) 13(26%) 4(8%)	Chisquare =4.024 P=0.403
Occupation **Employed** **Unemployed**	30(60%) 20(40%)	28(56%) 22(44%)	Chisquare =0.164 P=0.685

Table 1: Sociodemographic Characteristics

WHOQOL-DOMAIN	DIAGNOSIS	MEAN	SD	T-value	P-value
Physical domain	Schizophrenia	32.84	8.94	6.98	0.0001
	Diabetes	45.84	9.67		
Psychological domain	Schizophrenia	31.64	8.05	5.858	0.0001
	Diabetes	43.94	12.48		
Social domain	Schizophrenia	20.24	17.84	7.377	0.0001
	Diabetes	48.56	20.46		
Environment domain	Schizophrenia	41.64	12.78	5.299	0.0001
	Diabetes	55.18	12.77		

Table 2: Comparison of scores of WHOQOL-BREF domains of schizophrenia and diabetes.

Table 3: Association of QoL domains with socio demographics of schizophrenia and diabetes					
	Group	Physical domain	Psychological domain	Social domain	Environmental domain
Sex	Schizophrenia	.440**	.040	-.302*	.114
	Diabetes	-.175	-.089	-.186	-.207
Age	Schizophrenia		.110	.452**	.194
	Diabetes	-.377**	-.357*	-.444**	-.165
Marital status	Schizophrenia	-.163	-.032	-.311*	-.155
	Diabetes	-.359*	-.152	-.362**	-.243
Domicile	Schizophrenia	.297*	.067	.305*	.279*
	Diabetes	.053	.078	.037	-.069
Education	Schizophrenia	-.003	-.080	-.122	-.042
	Diabetes	.277	.373**	.216	.196
Occupation	Schizophrenia	-.188	-.059	.424**	-.016
	Diabetes	.339*	.421**	.337*	.454**
Adherence	Schizophrenia	.303*	.147	-.032	.065
	Diabetes	-.042	-.096	.158	.247