

Quality of Life and Glycaemic Control among Older Population with Diabetes in Three Districts of Peninsular Malaysia



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INTRODUCTION

The older population is increasing in numbers worldwide. Most of them have multiple comorbidities including diabetes.¹⁻⁴ Diabetic control in elderly is usually challenging. Their quality of life and socioeconomic condition either in rural or urban area could affect their disease progress.¹⁻⁴ This study aims to measure the diabetic control and its associated factors, including quality of life among the older population with diabetes in three different districts of Malaysia.

METHODS

The patients' health and background details were recorded. A validated Malay version of diabetes quality of life questionnaire was used. 485 elderly diabetic patients were recruited based on two proportion formula comprising all clinics in those districts representing urban vs rural area. Data were analyzed using simple and multiple logistic regression for the association.

RESULTS

Table 1a Sociodemographic data

Variables	Median (Range)	Frequency (n)	Percent (%)
Age (years)	67.0 (43.0)		
Gender			
Female		282	58.1
Male		203	41.9
Ethnicity			
Malay		411	84.7
Chinese		41	8.5
Indian		30	6.2
Others		3	0.6
Religion			
Muslim		410	84.5
Non-Muslim		75	15.5
Job status			
Pensioner		307	63.3
Not working		111	22.9
Still working		67	13.8
Income group			
B40 (household income < RM4850)		450	92.8
M40 (household income RM4850 - RM10959)		35	7.2

Table 1b Sociodemographic data

Variables	Median (Range)	Frequency (n)	Percent (%)
Age (years)	67.0 (43.0)		
Education			
Nil		48	9.9
Primary		216	44.5
Secondary		175	35.1
Tertiary		46	9.5
Family support			
Stay with family		457	94.2
Stay alone		28	5.8
Family accompanies			
Yes		253	52.2
No		232	47.8
Smoking status			
Smoker		39	8.0
Ex-smoker (at least 1 year quit)		91	18.8
Non-smoker		355	73.2
District			
Kuantan		269	55.5
Gombak		127	26.1
Kuala Terengganu		89	18.4
Urbanized area		259	53.4
Rural area		226	46.6
FMS Presence			
Yes		276	56.9
No		209	43.1
Hospital follow up			
Yes		137	28.2
No		348	71.8
ADL status			
Independent		436	89.9
Semidependent		39	8.0
Dependent		10	2.1
Quality of Life	22.0 (34.0)		

Table 2 Clinical Variables and Control

Variables	Frequency (n)	Percent (%)
Diabetes control		
Yes (< 7.5% HbA1c)	148	30.5
No (> 7.5% HbA1c)	337	69.5
Hypertension status		
Yes	397	81.9
No	88	18.1
BP control on visit		
Yes (BP < 140/90 mmHg)	237	48.9
No (BP ≥ 140/90 mmHg)	248	51.1
Lipid control		
Yes (LDL ≤ 2.6 mmol/l)	156	32.2
No (LDL > 2.6 mmol/l)	329	67.8
Abdominal circumference		
Normal	94	19.4
Abnormal	391	80.6
BMI		
Underweight	9	1.9
Normal	102	21.0
Overweight	128	26.4
Obese 1	199	41.1
Obese 2	39	8.0
Morbid obese	8	1.6
CKD status		
Normal / Level I	184	38.1
Level II	126	26.0
Stage IIIa	96	19.8
Stage IIIb	52	10.7
Stage IV	23	4.8
Stage V	3	0.6

Table 3 Multiple logistic Regression

Variables	P value	Crude Odds Ratio (OR)	95.0% C.I. for OR	
			Lower	Upper
Gender (Male)	0.662	1.224	0.496	3.021
Ex-smoker	0.643	1.277	0.454	3.592
Quality of Life	0.002*	1.132	1.047	1.224
Accompany by family members	0.266	1.481	0.741	2.958
Abd Circumference (normal)	0.101	0.493	0.212	1.148
Insulin Usage	0.999	1.488	< 0.001	.
Oral only	0.999	7.942	< 0.001	.
Injection only	0.999	5.537	< 0.001	.
Oral and injection	0.862	1.217	0.133	11.110
Constant	0.999	< 0.001		

a Variable(s) entered on step 1: Gender, Smoking status, QOL, Accompany, Abd Status, Insulin and Oral.

Only 30.5% of the patients have good diabetic control with patients in Kuala Terengganu district achieved better sugar control ($p < 0.001$). However, the only significant diabetic control predictor is the quality of life of the elderly patients (OR = 1.32, CI 1.047 – 1.224).

DISCUSSION

Level of diabetes control in these three districts are poor, concomitant with the poor control of the elderly non-communicable disease profiles. It is essential to embark on holistic approach in dealing with the elderly diabetic management and identify measures to improve quality of life in those with poor glycaemic control in order to have better disease outcome. ¹⁻⁴

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