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The Relationship Between Health Locus Of Control And Quality Of Life In Patients With Type 2 Diabetes Mellitus At RSUD Balaraja

Marlin Brigita[1], Purbianto [2], Yesi Rahmawati Syahrudin[3]

[1]Nursing Department, Banten Health Polytechnic, Tangerang, Banten, Indonesia.
[2]Nursing Department, Tanjung Pinang Health Polytechnic, Tanjung Pinang, Kepuluan Riau, Indonesia.
[3]Nursing Department, Banten Health Polytechnic, Tangerang, Banten, Indonesia.
Corresponding Author: * brigitamarlin@gmail.com

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ABSTRACT

Type 2 Diabetes Mellitus (DM) is the most prevalent form of diabetes. This condition is characterized by elevated blood glucose levels, which can trigger various serious health problems and diminish an individual's quality of life. Health Locus of Control (HLC) is a psychosocial factor that refers to an individual's beliefs about their control over their health outcomes and can influence disease management and quality of life. **Objective**: This study aimed to determine the relationship between Health Locus of Control and the quality of life in patients with Type 2 Diabetes Mellitus at RSUD Balaraja. **Methods**: This research employed a quantitative method with a descriptive correlational and cross-sectional design. The study population consisted of patients with Type 2 Diabetes Mellitus at RSUD Balaraja. Sampling was conducted using a non-probability sampling technique with predetermined inclusion and exclusion criteria. The research instruments used were the Multidimensional Health Locus of Control (MHLC) questionnaire and the Diabetes Quality of Life (DQOL) questionnaire. **Results**: The results of this study, using the chi-square test, indicated that there was a significant relationship between the Internal Health Locus of Control (IHLC) dimension (P value = 0.000 [<0.05]) and the Chance Health Locus of Control (CHLC) dimension (P value = 0.015 [<0.05]) with the quality of life of patients with Type 2 Diabetes Mellitus. The Powerful Other Health Locus of Control (POHLC) dimension did not show a significant relationship with the quality of life of patients with Type 2 Diabetes Mellitus (P value = 0.288 [>0.05]). **Conclusion**: The findings of this study suggest that patients' beliefs regarding internal control and chance factors have an influence on the quality of life of individuals with Type 2 Diabetes Mellitus.

1. INTRODUCTION

Type 2 diabetes mellitus (DM) is the most prevalent form of DM and is a global and national public health problem. The International Diabetes Federation (IDF) reports a high burden of type 2 DM, and in Indonesia, the number of people with DM is reported to be significant, with projections of an increase in the coming decade (IDF, 2020; Indonesian Ministry of Health, 2024). The Indonesian Health Survey (2023) indicates differences in prevalence when measured based on doctor's diagnosis compared to blood glucose testing—suggesting potential underdiagnosis or variability in monitoring. In Banten

Province, there are 249,564 patients (prevalence of 2.03%), while in Tangerang Regency there are 43,633 patients (prevalence of 1.32%), which emphasises the importance of local research on DM in this region.

Type 2 DM carries the risk of microvascular and macrovascular complications (nephropathy, retinopathy, neuropathy, heart disease, stroke) that reduce patients' quality of life; therefore, understanding the psychosocial factors that influence disease management and quality of life is crucial for effective intervention (WHO, 2024). One relevant psychosocial factor is Health Locus of Control (HLC)—a dimension of patients' beliefs about the source of control over their health (internal, chance, powerful others) that has the potential to influence therapy adherence, healthy living behaviours, and quality of life outcomes (Wallston, Wallston, & DeVellis, 1978). The study at Balaraja General Hospital aimed to address the need for local evidence that healthcare professionals could use to design specific psychosocial education and support.

This study presents novelty in three main aspects: (1) local context—focusing on type 2 DM patients under control at Balaraja Regional General Hospital (Tangerang, Banten), thus providing contextual data that is directly relevant to local policies/services; (2) specific findings on HLC dimensions — empirical results show a significant relationship between the Internal HLC (IHLC) ($p = 0.000$) and Chance HLC (CHLC) ($p = 0.015$) dimensions and patients' quality of life, while the Powerful Others HLC (POHLC) dimension is not significantly related ($p = 0.288$). These findings confirm that strengthening patients' internal beliefs and reducing excessive beliefs in luck can be targets for intervention; (3) practical recommendations — the study suggests that healthcare workers focus their education on strengthening IHLC to improve the quality of life of type 2 DM patients in regional hospital settings. These results and recommendations add local evidence that can complement previous HLC literature, which is more general or non-region-specific.

2. METHODS

This is a quantitative study with a descriptive correlational design and a cross-sectional approach (one-time measurement to examine the relationship between HLC and quality of life). The population in this study were type 2 diabetes mellitus patients who were being treated at the Internal Medicine Clinic of Balaraja Regional General Hospital. The sample size was determined using the Lameshow formula and increased by 10% to account for dropouts, resulting in a total sample size of n = 61. Sampling technique: non-probability purposive sampling with inclusion/exclusion criteria. The Multidimensional Health Locus of Control (MHLC) — Form C (18 items; 3 subscales: IHLC, CHLC, POHLC; 6 items per dimension; Likert scale 1–6) instrument was used. The MHLC was adopted from Wallston et al. (1978) and local adaptation/validation referred to previous studies (Hidayati, 2017) and Diabetes Quality of Life (DQOL) — modified version (12 items; 2 indicators: satisfaction & impact), which was translated and tested for validity/reliability previously (Chusmeywati, 2016). Bivariate data analysis with the chi-square test was used to examine the relationship between each HLC dimension (IHLC, CHLC, POHLC) and quality of life categories (good vs. poor). Significance was set at $p < 0.05$. Data processing was performed using SPSS statistical software.

3. RESULTS AND DISCUSSIONS

Tabel 1.1 The Relationship Between Health Locus of Control and Quality of Life in Type 2 Diabetes Mellitus Patients at the Internal Medicine Clinic of RSUD Balaraja

Health Locus of Control		Quality of Life				Total		*P value*
		Good		Worse				
		N	%	N	%	N	%	
Internal	High	25	92,6	2	7,4	27	100%	0.000

	Medium	11	57,9	8	42,1	19	100%	
	Low	1	6,7	14	93,3	15	100%	
	Total	37	60,7	24	39,3	61	100%	
Chance	High	4	30,8	9	69,2	13	100%	0.015
	Medium	25	75,8	8	24,2	33	100%	
	Low	8	53,3	7	46,7	25	100%	
	Total	37	60,7	24	39,3	61	100%	
Powerful Other	High	11	68,8	5	31,3	16	100%	0.288
	Medium	20	64,5	11	35,5	31	100%	
	Low	6	42,9	8	57,1	14	100%	
	Total	37	60,7	24	39,9	61	100%	

The relationship between HLC and quality of life (Table 1.1 Chi-square test) where IHLC has a significant relationship: p = 0.000. Direction of relationship: high IHLC indicates a majority of good quality of life (25/27; 92.6%); low IHLC means a majority of poor quality of life (14/15; 93.3%). CHLC has a significant relationship: p = 0.015. Direction of relationship: high CHLC indicates more frequent poor quality of life (9/13; 69.2%); moderate/low CHLC indicates a greater proportion of good quality of life in several categories. POHLC was not significant: p = 0.288. This means that the perception of 'influence of powerful others' did not show a meaningful relationship with Quality of Life categories in this sample. Patients' internal beliefs (IHLC) were strongly related to better quality of life: patients who believed they had control over their health tended to report good quality of life. Conversely, strong belief in luck factors (CHLC) is associated with poorer quality of life. POHLC is not significantly related in this sample. These quantitative findings are clearly seen in the distribution and Chi-square test (IHLC p = 0.000; CHLC p = 0.015; POHLC p = 0.288).

These results are consistent with HLC theory (Wallston et al., 1978), which states that individuals with an internal orientation are more proactive in health management (e.g., medication adherence, diet, exercise), thereby potentially achieving better clinical and subjective (QOL) outcomes. The negative correlation between CHLC and QOL indicates that if patients leave the outcome to luck/fate, they are less motivated to engage in adaptive management behaviours, which implies a decline in quality of life; this has also been reported in previous literature cited in the thesis (e.g., Fausi, 2022; Lianawati, 2021).

Lianawati's (2021) study on TB patients showed a positive correlation between IHLC and quality of life, supporting the role of IHLC as a protective factor; Fausi's (2022) study on post-stroke patients also reported that IHLC was strongly associated with QOL. Yesi Rahmawati's findings add similar evidence in the type 2 DM population in regional public hospitals. The authors discuss that although some patients consider the role of healthcare workers/family to be important (POHLC), actual quality of life appears to be more influenced by the patient's self-management capacity and habits (IHLC) or by an attitude of resignation to fate (CHLC). They also mention limitations in the sample size, local context, and the possibility of variability in social support that was not measured quantitatively.

4. CONCLUSION

There is a significant relationship between Internal Health Locus of Control (IHLC) and the quality of life of patients with type 2 diabetes mellitus; patients with high IHLC tend to report a better quality of life (p = 0.000). Chance Health Locus of Control (CHLC) is significantly related to quality of life; a strong belief in luck/chance (high CHLC) is associated with a poorer quality of life (p = 0.015). Powerful Others Health Locus of Control (POHLC) did not show a significant relationship with quality of life in this sample (p = 0.288), so the role of the perception of other people's influence on quality of life was not proven to be significant in the context of Balaraja Regional General Hospital.

The majority of respondents (60.7%) reported good quality of life; demographic composition (majority aged 45–59 years, low education level, and many unemployed) needs to be considered when interpreting results and generalisations. The findings indicate that patient empowerment efforts that strengthen internal control (e.g., self-management education, increased self-efficacy) have the potential to improve the quality of life of type 2 DM patients, while approaches that rely solely on external support without increasing self-control may be less effective.

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