

Research Article

Determinants of physiotherapy compliance for low back pain patients in Medan Teaching Hospital 2016Anita Andriany¹, Erna Mutiara¹, Halinda Sari Lubis¹**Abstract**

Purpose: The high rate of non-compliance with physiotherapy was 71.7% in LBP patients in Medan Education Hospital in 2016. The purpose of the study was to determine the variables that are related and most related to compliance with physiotherapy. **Method:** The sample size of the cross-sectional study was 125 people and was chosen by simple random sampling. The type of data used is primary data through direct interviews with LBP patients who do physiotherapy at Medan Teaching Hospital using a questionnaire. **Results:** The results of data processing obtained the value of RP family income of 0.764 (0.337-1.732), $p > 0.005$ not related to compliance with physiotherapy. The role of health workers is Rp. 2.453 (1.084-5.550), $p < 0.005$ and accommodation values are Rp. 3,076 (1.159-8161), $p < 0.005$ related to Compliance with physiotherapy. **Conclusions:** Accommodation is the variable most associated with compliance with physiotherapy so that the estimated number of RP is 1.897 with 95% CI (1.210-2.974) and $p < 0.050$. LBP patients with adequate accommodation are estimated to give an opportunity 1.897 times to obey physiotherapy.

Keywords: obedience; physiotherapy, low back pain

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¹Fakultas Kesehatan Masyarakat, Universitas Sumatera Utara (E-mail: dr.anita.andriany@gmail.com)

INTRODUCTION

Al-Eisa (2009) cites the opinion of Walker et al (2004) and Oleske et al (2006) that the high prevalence of Low Back Pain (LBP) is considered a major problem of health, recurrence, and disability [1]. A research conducted by Hameed found that the LBP prevalence in India (2013) was 51%, then in 2015, another research found that the prevalence had increased to 74.2% [2,3]. In Nigeria year 2012, the LBP prevalence was 78.1% while in Turkey in the same year, the LBP prevalence was 34.3% [4].

LBP treatment funds exceed 16 million dollars and the majority are 55-64 years. Samartzis and Grivas (2016) cited the opinion of Dagenais et al (2008) that in the United States the direct and indirect costs associated with LBP were USD 90 billion per year [5]. Samartzis and Grivas (2016) cited the opinion of GBD et al (2015) and Vos et al (2012) that LBP was the deadliest condition in the world involving all populations and across all boundaries [5]. Samartzis and Grivas (2016) cited the opinion of Fournery et al (2011), Karppinen et al (2006), Shen et al. (2006) and Wong et al. (2016) that LBP was the second condition after the flu that motivated individuals to seek medical consultation and was the most debilitating condition at the age of 45, so that it can lead to reduced quality of life, decreased activity, loss of wages, and psychological distress. Samartzis and Grivas (2016) also cited the opinion of Apkarian et al (2004) which stated that chronic LBP could reap the brain and destroy the brain tissue more quickly compared to asymptomatic individuals [5].

Shah and Dave (2012) cited the opinion of Hoffman et al (2002) that the prevalence of LBP in doctors in Surat, India was 36.82%, proportional to the prevalence of LBP which varied from 32 to 74% [6]. Fernandez et al. (2009) cited by Putri et al. (2014) argue that LBP in adult participants in Spain prevalence is 19.9% [7].

Tania et al (2015) cite the opinion of Hayden et al (2005) that effective interventions for the treatment of LBP were exercise because it had the benefit of reducing pain and improving function better than other types of intervention [8]. Fitria (2015) cited the opinion of Kisner and Colby (2013) that physiotherapy was used to restore and improve musculoskeletal function by using limb movements [9].

Bull and Archard (2007) defined physiotherapy as a normal return to motion function. Sackett (1976) quoted by Niven (2012) defined patient adherence as a habit that was changed to and obey the doctor's rules [10]. Priyanka and Sionnadh (2011) cited the opinion of Van Gool et al (2005) that patient compliance was multifactorial [11]. Shah and Dave (2012) argued that treatment for LBP such as drugs, physiotherapy, and surgery [6]. The number of patients doing physiotherapy at IRM Medan teaching hospitals from January to April 2016 were 273 participants (42.00%) of all patients who did physiotherapy at the IRM Medan

teaching hospital. The number of patients in August 2016 who took 6x physiotherapy were 43 participants (28.29%) and patients who underwent physiotherapy <6x were 109 participants (71.71%).

METHOD

All 125 patients who obeyed and did not comply with physiotherapy were taken by simple random sampling. The inclusion criteria were samples of LBP patients who did physiotherapy at the 4th week at the Medan teaching hospital and were willing to be interviewed while the exclusion criteria were LBP patients with other complications of the disease at week 4 at the Medan Teaching Hospital.

RESULTS

The results in Table 1 showed that there were 90 (72.0%) participants who did not adhere to physiotherapy. LBP patients who came from middle to upper income families were 84 participants (67.2%). Adequate accommodation for LBP patients is adequate when doing physiotherapy is 84 participants (67.2%).

Table 2 showed that from 41 LBP patients who came from middle to lower income families, there were 28 patients (68.3%) who did not adhere to physiotherapy. The results of data processing were obtained from 84 LBP patients who came from middle to upper income families, there were 62 patients (73.8%) who did not comply with physiotherapy with $p > 0.050$. Hence, there was no statistically significant relationship between family income and adherence to physiotherapy in LBP patients at the Medan Education Hospital in 2016.

The results of the role of health workers obtained that of 39 LBP patients whose health workers had a role in the therapy, there were 23 patients (59.0%) who did not adhere to physiotherapy. Meanwhile, from 86 LBP patients whose health workers were less active, there were 67 patients (77.9%) who did not comply with physiotherapy with $p < 0.050$. Hence, there was a relationship between the role

Table 1. Frequency of Physiotherapy

Variable	n	%
Obedience		
Not obedient	90	72.0
Obedient	35	28.0
The role of health workers		
Play a role	39	31.2
Less role	86	68.8
Family Income		
Middle-upper	84	67.2
Middle-lower	41	32.8
Accommodation		
Adequate	84	67.2
Inadequate	41	32.8

Table 2. Bivariate Analysis

Variable	Obedience				Total		RP 95% CI	p
	Not obey		Obedient		n	%		
	n	%	n	%				
Role of Health Officers								
Play a role	23	59.0	16	41.0	39	100	2.453	0.290 (1.084-5.550)
Less role	67	77.9	19	22.1	86	100		
Family Income								
Middle-upper	62	73.8	22	26.2	84	100	0.764	0.519 (0.337-1.732)
Middle-lower	28	68.3	13	31.7	41	100		
Accommodation								
Adequate	55	65.5	29	34.5	84	100	3.076	0.200 (1.159-8.161)
Inadequate	35	85.4	6	14.6	41	100		

Table 3. Multivariate Analysis

Variable	p	RP	95% C.I. for RP	
			Lower	Upper
Role of Health Officers	0.286	0.618	0.256	1.496
Accommodation	0.005	1.897	1.210	2.974

of health workers and the adherence to physiotherapy in LBP patients in Medan teaching hospitals in 2016. The RP value was 1,857 with 95% CI (1,075-3,209), which indicated patients whose health workers were more active, were 1.857 times more likely to comply with their physiotherapy.

The results of the accommodation variable showed that from 41 LBP patients whose accommodations were inadequate, there were 35 patients (85.4%) who did not comply with physiotherapy. Meanwhile, from 84 LBP patients whose accommodations were adequate, there were 55 patients (65.5%) who did not comply with physiotherapy with $p < 0.050$. Therefore, there is a statistically significant relationship between the adequacy of patients' accommodation and the adherence to physiotherapy in LBP patients at the Medan Education Hospital in 2016. The RP value was 2,359 with 95% CI (1,064-5,228), which indicated that LBP patients with adequate accommodation were 2,359 times more likely to comply with the physiotherapy.

The results in Table 3 showed that accommodation is the variable most associated with compliance with physiotherapy so that the estimated number of RP is 1,897 with 95% CI (1,210-2,974) and $p < 0.050$. This can be interpreted that LBP patients with adequate accommodation were estimated to provide an opportunity of 1,897 times to obey physiotherapy compared to LBP patients who are inadequately accommodated.

DISCUSSION

Jannah and Azam (2016) argued that there was no relationship between income and compliance with physiotherapy in patients [12]. Bugni et al (2012) argued that most patients (86.8%) had low income not related to therapy adherence [13].

Choi-Kwon et al (2015) cited by Jannah and Azam (2016) argued that patients from low-income groups were usually not compliant in undergoing treatment [12]. Low family income can cause patients not to adhere to Hellenbrent therapy (1983) in Wahyu (2013) cited by Jannah and Azam (2016) [12].

Pranada (2016) argued that there was no relationship between the adequacy of patients' accommodation and their compliance towards the visits to health facilities, because most health care respondents have the same access, which is less than 75%. Accommodation referred to in this study is the affordability of access to hospitals [14].

Pradana (2016) argues that there was a relationship between the role of health workers and adherence to treatment. This means that the role of health workers was a driving factor for compliance with return visits to health services [14]. Babatunde et al. (2017) cited the opinion of Bekkering et al. (2005) that the role of health workers in health education about LBP could improve compliance with physiotherapy so as to reduce back pain [15]. Babatunde et al. (2017) cited the opinion of Hall et al. (2010) and Picorelli et al. (2014) that the role of health workers in the decision-making paradigm that integrated patient preferences, clinical conditions, personal experience, and scientific evidence for each patient could improve patient's compliance [15].

Notoatmodjo (2010) cited the opinion of Lawrence Green (1980) that the factors associated with medication adherence were the role of health workers [16]. Sarwono (2004) cited Pradana (2016) argued that health workers had an important role in the compliance of patients undergoing therapy [14]. Health workers were considered ordinary people have the knowledge and skills to diagnose and cure diseases. The high number of non-adherent patients but their health workers play a role was 66 participants (68.0%) [17].

CONCLUSION

LBP patients in this study mostly use health insurance such as BPJS which made it easier for patients to undergo treatment and therapy. However, the patients found it

difficult to bear costs during treatment or therapeutic visits, such as transportation costs and the cost of meals during the physiotherapy in medical rehabilitation installations. Health workers were considered ordinary people have the knowledge and skills to diagnose and cure diseases. The results showed that the lack of role of health workers in LBP patients in the form of participation and attention of health workers to LBP patients caused non-compliance of LBP patients in doing physiotherapy.

The role of health workers is very important to improve the compliance of LBP patients in doing physiotherapy in the form of support in the form of providing good service to patients and giving patients an explanation of the importance of conducting regular visits on schedule during physiotherapy so that the pain suffered by patients can be reduced even without pain complaints. The high number of non-adherent patients but their health role is 66 participants (68.0%) due to the classification of health behavior of patients who argue that behavior seeking treatment when suffering from illness or accident [17].

PUSTAKA

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