Diabetes Patients Compliance Towards Routine Care Schedule at Health Care Centers During Covid-19 Pandemic

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ABSTRACT

Background: One of the major health problems of the twenty-first century is chronic disease, which sometimes has the potential to get worse. Chronic diseases of concern include cardiovascular, cancer, chronic respiratory, and diabetes mellitus. The total of Diabetes Mellitus in Hospital in 2022 is 140 patients. During the Covid-19 pandemic, many people with diabetes mellitus did not undergo routine treatment at the hospital, they said they were afraid to go to the hospital because they received information that the hospital was more susceptible to Covid-19, so patients were reluctant to go for routine treatment. Objective: The objective of this study is to describe the compliance of diabetes mellitus patients to undergo routine care at the Health Service Center during the Covid-19 pandemic. Method: This study uses quantitative research methods. The design used in this study is a cross sectional approach. The location of the research was in Ajibarang Hospital and Ajibarang Health Center. Results: This study concluded that the level of patient compliance in routine care during the Covid-19 pandemic was in the moderate category. With an average value of the total "Yes" answer of 71%, and it falls in the 51%-80% interval. Conclusion: There is a description of the compliance of diabetes mellitus patients with routine care during the covid-19 pandemic in the high category, which is 95%.

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1. INTRODUCTION

The world is currently experiencing a corona virus pandemic or also known as Covid-19 which was originally identified in Wuhan City, Hubei Province, China (World Health Organization / WHO, 2020). Data from the Task Force for the Acceleration of Handling Covid-19 in Indonesia shows that there are 80,094 confirmed cases, 39,050, recoveries, 3,797 deaths, and additional cases every day. Makassar City is the epicenter of the Covid-19 outbreak in South Sulawesi which occurred 19 after DKI Jakarta and East Java (Ministry of Health of the Republic of Indonesia/Ministry of Health of the Republic of Indonesia, 2020).

The Covid-19 epidemic has also contributed significantly to the decline in the quality of human life in several ways, including physical, psychological, and environmental dimensions (Banarjee et al., 2020; Epifanio et al., 2021). The health sector has been directly impacted by Covid-19. The number of cases has caused certain resources controlled by the central and regional governments to focus more on handling Covid-19 which has delayed health services (Moynihari Ali, 2021). Since the Covid-19 pandemic hit various countries, health services have also had a fairly serious impact. The impact is felt in the health care sector which occurs in 90% of

countries (WHO, 2021). The decline in the financial capacity of healthcare facilities, the distribution of medical devices and medicines is hampered, and the policy of limiting visits can cause health services to change. These changes affect various health improvement strategies pursued by health facilities in order to achieve building blocks (WHO,2010). Utilization of health services during the Covid-19 pandemic decreased by 40.8% (Zhang et al, 2020). This impact also occurs in various countries, one of which is South Korea(M. Lee and M.You, 2021) and India, and Indonesia is no exception (Pandey et al, 2020). Oneof those who need health services is patients with chronic diseases

Chronic disease is one of the main health problems in the 21st century and there is apossibility that it will continue to increase from time to time, the chronic diseases in questionare cardiovascular, cancer, chronic respiratory and diabetes mellitus (WHO, 2018). Indonesiais in the second highest position in Southeast Asia with 9,116.03 cases of Diabetes Mellitus(International Diabetes Federation/IDF, 2014). According to Central Java Province HealthProfile data, the incidence of DM in 2016 was 16.42% of the total population of Central Java.

Diabetes Mellitus is a metabolic disease characterized by hyperglycemia that occurs due to abnormalities in insulin secretion, insulin action or both (American Diabetes Association, 2010). The hormone that regulates the balance of blood sugar levels in the body is called insulin (Soewondo P, 2011). The Asia Pacific region is the region with the most Diabetes Mellitus, with an incidence of 138 (8.5%) million cases (International Diabetes Federation/IDF, 2014). Indonesia is in the second highest position in Southeast Asia with the incidence of Diabetes Mellitus of 9,116.03 cases (IDF, 2014). It is estimated that 463 million people in the world that in the age group above the age of living can be diagnosed 90% affectedtype 2 diabetes in which an average of 50% of the population has not been diagnosed (International Diabetes Federation, 2019).

Treatment for Diabetes Mellitus is foot care recommended by health professionals, and also controls blood sugar. Foot care is an activity of cleaning and inspecting the area on the feet, drying and applying oil to the feet with the aim of relaxation, hygiene, and skin health (Bulechek et al., 2013). The pillars of effective therapy in overcoming diabetes mellitus are diet education, physical activity, pharmacological therapy and blood control (Agustina, 2013). For the purpose of doing diet and physical activity, namely maintaining and maintaining an ideal body weight and controlling blood sugar. To do a diet in DM in the right way, the patient'scalorie needs are adjusted to the increase in blood sugar levels (Isniati, 2013). Complications in people with Diabetes Mellitus who do not do / are cared for properly will increase the occurrence of various kinds of complications, in patients with Diabetes Mellitus will be more susceptible to complications due to insulin deficiency or insulin action is not strong (Smeltzeret al, 2009). Based on the results of the preliminary study, the total of Diabetes Mellitus in Hospitals in 2022 was 140 patients. From the information I got from some patients that they did not undergo routine treatment at the hospital during the Covid-19 pandemic, they said theywere afraid to go to the hospital which they said that the hospital was easily exposed to Covid-19 so patients were reluctant to go for treatment. routine. Based on the description above, the researchers are interested in conducting research on diabetes mellitus patient compliance to undergo routine care at health service centers during the Covid-19 pandemic.

2. RESEARCH METHOD

This study used a descriptive quantitative cross-sectional method. The research was conducted at Ajibarang Hospital and Ajibarang Healthcare Center. The population and sample in this study were 59 patients suffering from Diabetes Mellitus. Data were collected from January to April 2022 using convenient sampling method. Respondents were asked to fill in the questionnaire to recall their health care history and their compliance in visiting healthcare center. The data then analyzed using descriptive analysis; frequency and percentage.

3. RESULT AND DISCUSSIONS
3.1. Univariat
3.1. Distribution of Respondents Characteristics

Tabel 1. Demographic data and health status of the respondents (n=59)

Characteristics	n	%
Age (Year)		
36-45	2	3,4
46-55	16	27,1
56-65	41	69,5
Gender		
Male	18	30,5
Female	41	69,5
Educational Background		

Characteristics	n	%
No school	1	1,7
Elementary	31	52,5
Junior High	16	27,1
Senior High	10	16,9
College	1	1,7
Occupation		
Farmer	16	27,1
Businessman	17	28,8
Others	26	44,1
Blood Pressure		
Normal	27	45,8
Pre-Hypertension	15	25,4
Stage 1 Hypertension	11	18,6
Stage 2 Hypertension	6	10,2
Period of being diagnosed with DM (Year)		
2-9	50	84,7
10-17	7	11,9
18-26	2	3,4
Level of Blood Glucose (mg/dl)		
High >200	58	98,3
Normal 7-140	1	1,7
History of leg wound		
Yes	13	22,0
No	46	78,0
Presence of Current Leg Wound		
Yes	8	13,6
No	51	86,4

Table 1 shows majority of the respondents in this study were women (n=41, 69.5%) and in early elderly category (n=41, 69.5%). Meanwhile, most of the respondents did not accomplished basic education level (n=48, 81.3%). Moreover, approximately half of them were in pre hypertension and hypertension stages (n=32, 54.2%).

To categorized the level of hypertension suffered by the respondents, the researchers used several categories of Blood Pressure Classification of Hypertension according to JNC - VII 2003. Moreover, based on the category of the shortest diagnosis and the longest diagnosis, which is then divided into three categories to facilitate grouping. So it canbe concluded that patients with a diagnosis of Diabetes Melitus for 2 to 9 years with 50 or 84.7patients, while 10 to 17 years as much as 7 or 11.9% and 18 to 26 years as much as 2 or 3.4% (Table 1). The highest GDS and the lowest GDS are divided into three categories, namely high, normal and low. Thus, it can be concluded that the highest GDS patients have 58 or 98.3% of patients who fall into the high category and 1 or 1.7% of patients fall into the normal category.While at the lowest GDS, it can be concluded that the lowest GDS patients have 5 or 8.5% ofpatients who fall into the high category and 54 or 91.5% of patients fall into the normal category (Table 1).

Based on the category of ever injured legs and wounds, currently using yes and no diagnoses based on characteristics, which can then be concluded that 46 or 78.0% of patients have never experienced leg injuries while suffering from Diabetes Mellitus and 13 or 22.0% ofpatients have suffered a leg wound while suffering from Diabetes Mellitus. Meanwhile, in thecurrent wound category, it can be concluded that 51 or 86.4% of patients do not have leg injuries at this time and 8 or 13.6% of patients have leg injuries at this time.

3.2. Patient Compliance Rate

Table 2. Patient routine care frequency in during Covid-19 pandemic (n=59)

Routine Care	n	%
Complied	36	61.0
Not complied	23	39.0

Table 2 shows patients' compliance towards routine care schedule before and during Covid-19 pandemic. There were about two third of those who kept following their routine care at health care centers (n=36), while 23 patients)39%) did not comply their routine care schedule.

3.3 Overview of the Compliance Level of Diabetes Mellitus Patients with Routine Treatment During the Covid-19 Pandemic

Based on the results of a study related to the level of patients with diabetes mellitus undergoing routine care at health care centers during the COVID-19 pandemic, the average value of the total answer "YES" was 71%. This value is in the 51%-80% interval. Therefore, it can be concluded that the level of patient compliance in routine care during the pandemic is in the moderate category.

Based on the question items, the results of the level of compliance are quite diverse, namely in the question item P4 which is the question that has the highest level of compliance of 95%. While the lowest level of compliance on the item P5 with a percentage of 25%.

While the question item P1 has a percentage level of 92% so it is included in the high category. Question item P2 with a percentage level of 93% in the high category. Question itemP3 has a percentage rate of 81% in the high category. In question item P6 has a percentage levelof 41% in the low category. This study is in line with research conducted by (Wahyuni and Sulistyana, 2021) which states that the level of patient compliance in taking medication with the application of the UDD(Unit Dose Dispensing) system at the Aminah Blitas Hospital Inpatient is in the very high category, which is 87.56%.

This study is supported by research conducted by (Prihantana and Wahyuningsih, 2016) which states that the level of compliance of pulmonary tuberculosis patients in treatment is already high, which means that the better the patient's knowledge regarding pulmonary tuberculosis, the higher the level of patient compliance in treatment. The results of the study (Saibi, Romadhon, and Nasir 2020) are in line with research conducted by which states that there are 71 respondents (40.6%) with moderate level of compliance, 65 respondents (37.1%) high level of compliance and 39 respondents (22, 3%) with a low level of compliance. According to (Ramadhan, Rijai, and Liu 2015) said that the percentage level showed thatthe level of patient compliance was mostly still low, namely 18 subjects or 60% and high adherence, namely 12 or 40%.

4. CONCLUSION

The data from this study showed that there were more patients who complied to their routine care schedule rather than those who did not. However, healthcare professionals still needed to follow-up their compliance behavior post Covid-19 pandemic and kept encouraging those 23 patients who did not comply, to improve their compliance behavior.

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