PROCEEDING
1st Banten International Conference on Health Advancement & Research
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COMPLIANCE WITH TREATMENT OF NON-COMMUNICABLE DISEASE PATIENTS (NCDs) WITH A COLLABORATIVE INTERPROFESSIONAL APPROACH IN THE AREA OF THE LEBAK DISTRICT HEALTH CENTER

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ABSTRACT
Non-communicable diseases require long treatment and medication, thus impacting patient compliance in taking medication. Patient medication compliance is an important factor in the management of Non-communicable diseases. The study aims to determine the effect of the Collaborative Interprofessional Approach model on medication compliance of Non-communicable Disease patients in Community Health Centers. The research method is a mix method cross-sectional survey design on patients and quasi-experimental on health workers with the form of collaborative interprofessional training interventions and the provision of monitoring books for Non-communicable Disease patients, with a sample size of 159 patients and 64 health workers. The results of the study showed a relationship between age and medication compliance of non-communicable disease patients with a p value = 0.03. There was a relationship between patients with family members suffering from non-communicable diseases and medication adherence in those with non-communicable diseases (p=0.003). There was a relationship between the use of a non-communicable disease monitoring book and medication adherence in those with non-communicable diseases (p=0.000 and OR=4.737). There was an increase in staff knowledge before and after training on the use of interprofessional education books. It can be concluded that the use of medication adherence books and the IPE-C approach are effective in the care and control of non-communicable diseases.

Keywords: Non-communicable Diseases, Interprofessional Collaboration

INTRODUCTION
Non-communicable diseases (NCDs) are long-term illnesses that generally progress slowly. Therefore, patients with these diseases are expected to receive regular care and treatment at healthcare facilities so their illnesses can be controlled. However, many patients still do not receive regular care and treatment, resulting in their condition often going uncontrolled, and patients even stop visiting healthcare facilities for check-ups.

Currently, the most common NCDs found in the community, including at community health centers in Lebak Regency, include hypertension and diabetes mellitus. Data from the Kalanganyar Community Health Center in 2020 showed that 363 people visited with hypertension and 137 with diabetes mellitus. Meanwhile, the results of the Healthy Indonesia Program with a Family Approach (PIS-PK) in the Kalanganyar Community Health Center area in 2020 measured 3,532 people, and found that 1,123 (32%) of the population had hypertension.

Given the numerous factors that cause non-communicable diseases, their management requires contributions from multiple healthcare professionals within healthcare units. Through interprofessional collaboration in patient care, it is hoped that the quality of healthcare services can be improved, enabling patient issues to be resolved collaboratively.

Various studies have shown that many positive aspects can arise from well-established collaborative relationships between healthcare professionals. Interprofessional collaborative practice has become a strategy

to enhance collaboration between two or more healthcare professionals, fostering collaboration and mutual support between professions, thereby strengthening the relationship between professions and patients in providing care and making shared decisions regarding patient health conditions.

The urgency of research conducted on hypertension and diabetes mellitus is because these diseases are the most common non-communicable diseases found in the Kalanganyar community health center, Lebak Regency. Handling these diseases requires patient patience, sincerity and cooperation from health workers who treat patients with non-communicable diseases. Handling hypertension and diabetes mellitus is also part of the Minimum Service Standards that must be carried out in community health centers as stated in the Minister of Health Regulation number: 4 of 2019 concerning technical standards for fulfilling basic service quality in the minimum service standards in the health sector. Through this research, researchers hope to create a new model in providing health services for patients with infectious diseases, especially patients with hypertension, through an interprofessional collaborative approach using a health monitoring book for patients with non-communicable diseases.

MATERIALS AND METHODS

The quasi-experimental study design with an intervention form by conducting collaborative interprofessional training on health workers and providing monitoring books for non-communicable disease patients to non-communicable disease patients. The population is non-communicable disease patients with a sample of 159 hypertension or Diabetes Mellitus patients. Sampling was carried out using the incidental sampling method, as well as 64 health workers at the Kalanganyar and Cibadak health centers in Lebak Regency. Data collection was carried out using a questionnaire adopted from the Collaborative Practice Assessment Tool (CPAT) CPAT and Morisky Medication Adherence Scale (MMAS-8) questionnaire models. Data collection was carried out for 4 months by the team at the health center, both to patients at the health center, and during services outside the health center building. Data were analyzed univariately and bivariately with the Kai-skuer statistical test, to measure the causal relationship between the independent and dependent variables.

RESULTS AND DISCUSSION

1. Respondent Characteristtics

Respondents in this study were 159 patients suffering from non-communicable diseases (hypertension or diabetes mellitus) and 64 health workers who provide health services at the Kalanganyar and Cibadak health centers. Patients who were respondents in this study were on average 52 years old, with the lowest age being 18 years old and the highest age being 86 years old. The average body weight was 58 kg, with the lowest weight being 30 kg and the highest being 100 kg, and the average height was 153 cm, with the lowest height being 135 and the highest being 168 cm. Meanwhile, the health worker respondents were 64 people with the professions of doctors, nurses, midwives, medical laboratory workers, nutritionists, sanitarians, and administrative staff. The average length of service was 11.5 years, with the lowest length of service being one year and the highest length of service being 36 years, with an average IPC practice score based on the CPAT assessment of 218 out of a total score of 265. This means that health workers are able to carry out interprofessional practices well. All health workers at the community health center have collaborated and been part of the work team in carrying out their duties (100%).

Table 1: Distribution of respondents (patients) by Compliance, Family History, Age, and Use of NCD Monitoring Books

Compliance	Non-Compliance	67	42,1
	Compliance	92	57,9
Family History	Yes	71	44,7
	No	88	55,3
Age	≥ 50 years	94	59,1
	< 50 years	65	40,9
Use of NCD Monitoring Books	No	80	50,31
	Yes	79	49,69

Meanwhile, the description of interprofessional collaborative practices of health workers working at the Kalanganyar Community Health Center and the Cibadak Community Health Center shows that interprofessional collaborative practices at both Community Health Centers have been implemented well (100%).

1. Compliance with Non-Comunicable Disease Patients In treatment

Compliance is the patient's active and voluntary involvement in managing their disease, following a mutually agreed-upon treatment plan, and demonstrating mutual accountability between the patient and healthcare provider (World Health Organization, 2003). Compliance in the treatment of non-communicable diseases is part of monitoring and controlling the patient's condition, as the treatment process for patients with non-communicable diseases requires continuity and a long time.

Patient adherence to medication significantly impacts the success of treatment. Non-adherence to medication in hypertensive patients can have significant negative effects, such as the development of complications (Muhlis and Jihan Prameswari, 2020). Medication adherence is the most significant factor influencing blood pressure control. The average range of adherence to antihypertensive medication is estimated to be 50-70%. Carpenito (2000) argues that factors influencing adherence include anything that can influence the patient's ability to maintain adherence, leading to poor adherence and non-adherence.

The results of the study conducted by the author at two community health centers in the Lebak Regency area showed that almost half of respondents with non-communicable diseases were not compliant with treatment, (42.1%). This result illustrates that there are still many patients with non-communicable diseases in the community who are not compliant in taking medication. Some patients said they often forget to take their medication and patients come back for treatment if they feel there are complaints or the medication has run out. This situation causes the condition of the disease experienced by patients with non-communicable diseases to be less controlled and uncontrollable. Patient non-compliance with the therapy carried out is caused by many factors including knowledge/education factors, communication between health workers and patients and family support. Therapy counseling during control is a factor that increases patient understanding of medication adherence (Syamsudin and Handayani, 2019). The existence of a Health Monitoring Book that can be read by patients can help remind patients to regularly take their medication.

The results of this study are relatively similar to the results of research conducted by Riati Karya Utami, (2018) who found that 40.7% of patients with heart failure had low adherence to treatment and research by Melisa I et al (2021) in Banda Aceh who found that 41.4% of hypertensive patients had low adherence to their treatment. The results of this study are slightly higher than those found by Yulianti F, et al (2019) in Kendari who found a low level of adherence in hypertension patients with treatment of 37.2%. However, it is lower when compared to that obtained by Risman Ariana, et al (2019) at the Health Service Unit of Padjadjaran University, who reported that 64.81% of patients with non-communicable diseases were non-compliant in following the Prolanis program. This non-compliance is caused by a poor perception of Prolanis activities towards healing their disease (Purnamasari, 2016). Perception is an experience of an object, event or relationship obtained by concluding information and interpreting it (Notoatmodjo, 2014).

The overview of several research results that show the still low patient compliance in taking medication, has encouraged us all to look for various efforts so that patients with Non-Communicable Diseases, especially hypertension and diabetes mellitus, have good compliance in following the treatment program determined by health workers. One of these efforts was carried out by researchers by compiling a Non-Communicable Disease Monitoring Book, which was given to patients, to be kept and brought every time they received treatment at health services, so that the development of the disease experienced by patients could be recorded and monitored by both patients and health workers. Based on the results of this study, it shows that the use of a Non-Communicable Disease Monitoring Book given to patients and brought every time patients visit health services encourages patients to be more compliant and regular in their treatment, as seen from the results of the statistical analysis of the use of a Non-Communicable Disease Monitoring Book on compliance in treatment obtained a p value = 0.000 which means that statistically there is a relationship between the use of a Non-Communicable Disease Monitoring Book and compliance in treatment.

2. Family history of compliance with treatment of non-communicable disease patients

The results of the study showed that the proportion of patients with non-communicable diseases who were not compliant with their treatment was higher in patients whose family had a non-communicable disease (52.1%) compared to patients whose family did not have a non-communicable disease (34.1%). The results

of the Kai-skuer test obtained a p value = 0.033, so it can be concluded that statistically there is a relationship between the patient's family history and compliance with treatment for patients with non-communicable diseases. Families who have a history of non-communicable diseases can provide experience in carrying out treatment, so that it can strengthen compliance in carrying out treatment for non-communicable diseases for other families.

3. Age and compliance with treatment of non-communicable diseases in patients

Age is the length of a person's life, calculated from birth to the time of measurement/data collection. Age is a factor often associated with the development of various diseases, including non-communicable diseases. The study results showed that nearly half of respondents with non-communicable diseases were under 50 years of age (40.9%). This finding differs from that obtained by Melisa I (2021) in Banda Aceh, which found that more than half of patients with non-communicable diseases were over 50 years of age (62.4%). The study also showed that the proportion of non-communicable disease patients who were non-compliant with their treatment was higher in the age group >50 years compared to the age group <50 years. This finding differs from that described by Yulianti F (2019) in Kendari, who found that the older age group had higher compliance (79%) than the younger age group (21%). The Kai-Squared test yielded a p-value of 0.03, thus concluding that there is a statistically significant relationship between patient age and adherence to treatment for non-communicable disease patients. This finding differs from the study by Ivonsiani N (2014) in Kupang, which showed no significant relationship between age and adherence. Similar results were also obtained by Hilda in 2007, with a sample of 94 individuals, who showed no association between age and adherence status. A study by Yuliarti in 2007, with a sample of 104 individuals, showed no association between age and adherence to hypertension treatment.

4. The use of Non-Communicable Disease Health Monitoring Books and the IPC approach to medication compliance in Non-Communicable Disease patients

The results of the variable analysis of the interprofessional collaboration approach and the use of the Non-Communicable Disease Patient Health Monitoring Book showed that the proportion of Non-Communicable Disease Patients who were non-compliant in their treatment was higher in patients who did not use the Non-Communicable Disease Monitoring Book (60.8%) compared to patients who used the Non-Communicable Disease Monitoring Book (23.8%). The Health Monitoring Book for Patients with Non-Communicable Diseases compiled by the author contains information about interprofessional collaboration and hypertension and Diabetes Mellitus as well as records of visits and patient health developments. The book was given to respondents at the Kalanganyar Community Health Center and brought by patients when visiting the Integrated Health Post (Posyandu) or Health Services. Through this book, patients can independently monitor their health developments and more easily remember the schedule of visits to Health Services. Patients who received the Non-Communicable Disease Health Monitoring Book showed more compliance and regularity in taking medication compared to patients who did not receive the Non-Communicable Disease Health Monitoring Book.

The results of the Kai-skuer test obtained a p value = 0.000, so it can be concluded that statistically there is a relationship between the use of the Non-Communicable Disease Monitoring Book and compliance with treatment for patients with Non-Communicable Diseases. From the results of the analysis, an OR value of 4.737 was also obtained, which means that patients who do not use the Non-Communicable Disease Monitoring Book have a 4.9 times greater chance of having non-compliance in the treatment of Non-Communicable Diseases compared to patients who use the Non-Communicable Disease Monitoring Book with the IPC approach.

CONCLUSION

Based on the research results described by the author, the following conclusions can be drawn:

1. Nearly half of respondents with non-communicable diseases were non-compliant with their treatment (42.1%).
2. Nearly half of respondents with non-communicable diseases were in the age group <50 years (40.9%).
3. Nearly half of respondents with non-communicable diseases had family members with chronic diseases (44.7%).

4. All health workers at the Kalanganyar Community Health Center and Cibadak Community Health Center practiced interprofessional collaboration in caring for patients with chronic diseases (100%).
5. Based on the results of the statistical test, Kaiskuer found that the variables family history, age, and use of a non-communicable disease monitoring book were statistically related to patient compliance with non-communicable disease treatment.

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