

THE EFFECTIVENESS OF SELF-MANAGEMENT SUPPORT BOOK FOR DIABETES MELLITUS PATIENTS

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THE EFFECTIVENESS OF SELF-MANAGEMENT SUPPORT BOOK FOR DIABETES MELLITUS PATIENTS

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ABSTRAC

Background: Diabetes mellitus (DM) is a non-communicable disease that causes complex problems today, both globally and nationally, because, in addition to high prevalence and mortality rates, it also has a socio-economic impact. So that the effort that can be done is to improve the quality of life of patients with good self-management, one of which is education that aims to improve the quality of self-management of people with diabetes. **Objective:** he purpose of this study is to find out the effectiveness of self-management books for people with diabetes in improving the quality of self-management of people with diabetes. **Methods:** The research is quantitative, with a quasi-experimental design. The sample is people with diabetes mellitus who have never received health education or are not participants in the chronic/prolanis disease service program. The sample is 112 people. Data were collected using guided interviews. The time of data collection before the intervention is June 26, 2022, to July 10, 2022 and the data collection after the intervention is July 28, 2022, until August 22, 2022. The stages of data processing are editing, coding, transferring, and tabulating. Data were analyzed by univariate and bivariate using paired t-test, with a 95% confidence degree ($\alpha=0.05$). The data is presented in the form of narration and tables. **Results:** The average value of self-management before the intervention was 45.2857 and the average value of self-management after the intervention was 48.8837. The paired t-test showed a p-value <0.05 ($0.001 < 0.05$) **Conclusion:** The self-management companion book for people with diabetes is effective in increasing the quality of self-management for people with diabetes.

Kata Kunci: Buku pendamping; kualitas manajemen diri; penderita diabetes

INTRODUCTION

Diabetes mellitus (DM) is one of the non-communicable diseases and metabolic diseases that cannot be cured, so the efforts that can be made are aimed at maintaining the stability of blood sugar. . (Norris et al., 2010; Rahmawati et al., 2016). Experts have produced many models or systems that aim to improve the quality of self-management and increase independence for self-care. This is very important in addition to treatment efforts (Fereydouni et al., 2022). Efforts to improve self-efficacy and self-care are closely related to education. Health education is very important so that the public gets the right information so that it

serves as a guide for healthy behavior (Gever & Ezeah, 2020). For people with DM, health education is very important as an effort to prevent and manage DM holistically. (Soelistijo et al., 2021). Health education is effective in dealing with DM cases, especially towards changes in lifestyle and self-care of DM sufferers.(Ernawati et al., 2021), With this education, it can increase the knowledge and awareness of patients (Gagliardino et al., 2018; Osman et al., 2014).

One of the factors that greatly affect the effectiveness of health education is the media. The media occupies a major role in health education

(Gever & Ezeah, 2020)The role of the media here is as an educator, supporter, promoter of activities, and supplement. One of these media is print media in the form of books or booklets. Many studies have proven the effectiveness of books or booklets as educational media for the elderly (Herwanti et al., 2021; Rahayu et al., 2022).

The advantages of books/booklets as educational media are that they can be studied and their contents are durable. Through books, a lot of important and concise information can be given and pictures can be given so that it can help families and the elderly. (Ewles & Simnett, 1994). For people with DM, books are one of the health education media that are very well suited to the target and are educational media that are highly favored by DM sufferers and health workers. (Bardsley et al., 2020), the choice of books to reduce barriers to lack of knowledge about diabetes self-management practices and inadequate counseling, as well as the lack of guidelines and protocols for counseling people with diabetes (Adhikari et al., 2021).

In connection with this, researchers have conducted a study since 2019 regarding the need for information media for people with diabetes mellitus which is motivated by the low quality of self-management of DM patients, especially those who do not follow the chronic disease service program/Prolanis. (Sidiq & Amos, 2021), From the results of the study, an educational media was identified in the form of a self-management companion book for people with diabetes mellitus (Sidiq et al., 2020, 2021). Until now, the book has been developed 3 times, according to the needs of DM patients, most of whom are elderly (elderly). This book was

developed by involving people with DM and the person in charge of non-communicable diseases (PTM) from the Padang City Health Office and the person in charge of PTM as well as doctors from community health centers at 12 community health centers in Padang City from 2020 to 2021. In this regard, This study aims to determine the effectiveness of the self-management companion book for people with diabetes to improve the quality of self-management of people's diabetes.

1 METHODS

This research is a quantitative study with a quasi-experimental design with a one-group pretest and posttest approach. The sample of this study were patients with DM who had never attended health education or who did not participate in chronic disease service program activities (prolanis) who sought treatment at the community health center as many as 112 people, spread over 8 work areas of the public health center in the city of Padang, namely Lubuk Kilangan, Kuranji, Ambacang, Freshwater, Ulaa Karang, cold water, Rawang Barat and Lapaí. Data were collected using guided interviews using a questionnaire (adapted from the diabetes self-management questionnaire, and the summary of diabetes self-care activities (SDSCA) (Toobert et al., 2000). Interviews were conducted twice, namely to assess the quality of management. before the intervention on June 26, 2022, to July 10, 2022, simultaneously at 8 community health centers. This data collection process is fully carried out by non-communicable disease service officers at community health centers. The provision of companion books is carried out after the respondent has filled out the

questionnaire (pre-test). Then the second self-management quality assessment (post-test) is carried out during the following month's visit, from July 28, 2022, to August 22, 2022. The stages of data processing are editing, coding, transferring, and tabulating. Data were analyzed univariately and bivariate using the paired t-test, with a 95% confidence degree ($\alpha=0.05$). Data is presented in the form of narration and tables.

RESULTS AND DISCUSSION

Characteristics of Respondents

The characteristics of the respondents that were collected in this study are; gender, age, occupation, education, marital status, duration of suffering from diabetes mellitus and comorbidities as well as the name of the health center for treatment. In detail, it can be seen in table 1 below:

Tabel 1. Characteristics of Respondents

Sex	n	%
Male	32	28,6
female	80	71,4
Age (years)		
60-74	38	33,9
75-90	3	2,7
45-59	71	63,4
Profession		
Casual daily laborer	6	5,4
Housewife	74	66,1
Retired	11	11,8
Civil servants	6	5,4
Driver	3	2,7
Self-employed	11	9,8
Farmer	1	0,9
Level of education		

Based on table 1, it is found that from the aspect of gender, most of the respondents are women (71.4%), and most are in the 45-59 year age group or middle age (63.4%), with the profession mostly being mothers. household (IRT) of 66.1%, for the education aspect dominated by secondary education

Primary school	25	22,3
Junior High School	22	19,6
Senior High School	49	43,8
College	16	14,3
Marital status		
Singgle	2	1,8
Widower	3	2,7
Widow	15	13,4
Marry	92	82,1
Long Suffering from Diabetes Mellitus (years)		
10-15 years	20	17,9
5-10 years	31	27,7
Less than 5 years	61	54,5
Co-morbidities		
Stomach acid	3	2,7
Gout	4	3,6
Gout/ TBC	1	1,1
Ca. Mamae	1	1,1
Hypertension	36	32,2
Hypertension & stomach acid	2	1,8
Hypertension & gout	1	0,9
Hypertension & Cholesterol	2	1,8
Heart disease	4	3,6
cholesterol & gout	1	0,9
Tbc	2	1,8
No disease	51	45,5
Origin of Community Health Centers		
Lubuk Kilangan	25	22,3
Kuranji	10	8,9
Ambacang	10	8,9
Rawang Barat	14	12,5
Air Tawar	11	9,8
Air Dingin	9	8,0
Alai	14	12,5
Anak Air	9	8,0
Ulaakarang	10	8,9

(SMA) of 43.8%, with marital status 82.1% married, suffering from DM less than 5 years by 54.5% and most do not suffer from comorbidities (45.5%) but who suffer from comorbidities of hypertension are more than 32.2%, there is even hypertension followed by other diseases such as stomach acid, gout,

and cholesterol. The respondents who participated in this study the most came from

the Lubuk Kilangan Public Health Center, amounting to 22.3%.

1. Differences in the Average Value of Self-Management of DM Patients before and after being given the companion book of Self-Management of DM Patients.

The following is the result of the difference in the average value of self-management of DM patients before and after being given the Self-

Management Assistance book, in detail, it can be seen in table 2 below:

Table 2. The difference in the average value of self-management of DM patients before and after being given the companion book for self-management of DM sufferers.

	Mean	N	Std. Deviation	Std. Error Mean
Pre Tes	45.2857	112	15.25131	1.44111
Pos Tes	48.8839	112	12.68591	1.19871

Based on table 2 above, it is found that there is a difference in the average value of self-management of DM patients, before and after being given a self-management companion book for DM patients with a difference of about 3.5982, and the standard deviation

value also decreased by 1.268, as well as the value of average standard error. This shows that there is an increase in the value of self-management in DM patients before and after the use of self-management companion books for DM sufferers.

Table 3. T-Test of Effectiveness of Self-Management Support Book For Diabetes Mellitus Patients

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Sig. (2-tailed)
				Lower	Upper		
Pre & post	-3.59	11.53	1.09	-5.758	-1.437	-3.300	0.001

Based on table 3 above, it can be seen that there is a difference in the average value of self-management before and after being given a self-management book for people with DM, from the standard deviation value and the standard error value it can be seen that there is a decrease after being given a self-management companion book for people with DM. Then from the statistical test results paired t-test obtained a p-value of 0.002 <0.05, which means that the provision of self-management companion books for DM sufferers is effective in increasing the quality of self-management of DM sufferers. When viewed from the characteristics of the respondents, there are several supports or backgrounds so this self-management companion book for people with DM is effective for respondents. These things such most of the respondents (63.4%) are still 45-59 years old or in middle age, this refers to the

categorization of the elderly according to WHO (2013). Concerning this age, greatly affects a person's ability to receive information and digest the information obtained, this is related to maturity in receiving and digesting information (Notoadmodjo, 2011) then most of the female respondents and housewives have time to study and apply the messages in the book because the family burden is small. Research shows that the smaller the burden on the family, the better the health status of people with diabetes mellitus (Kristaningrum et al., 2021). Likewise, the level of education and duration of suffering from DM. The education level of the majority of high school students can be a supporting factor for the acceptance of the educational material contained in the book. So these things at least support the application of the book for 1 month before the assessment is carried out. The purpose of

implementing this self-management companion book is actually to provide education to DM sufferers to be able to control their lifestyle by understanding and behaving well in dealing with their illness independently (Huang et al., 2014) This education is very important to always be carried out for DM sufferers as a prevention effort and is very important in holistic DM management (Soelistijo et al., 2021). Many studies have found the effectiveness of education in dealing with diabetes cases, especially having a positive effect on lifestyle changes and self-care of people with diabetes (Ernawati et al., 2021)

ased on research, this book has been able to increase knowledge about how to have good self-management, to be applied in daily life, so that it will indirectly improve lifestyle. This is inseparable from the characteristics of the book or booklet media, making it easier for DM sufferers to receive the information contained therein. The advantage of this book or booklet is that it can be equipped with writing and pictures to increase the illustration and imagination power so that it does not directly increase the understanding of the reader (Rahayu et al., 2022). So that books or booklets are appropriate educational media in providing education to people with DM (Sepang et al., 2020).

In connection with this, this self-management assistance book for people with diabetes in the preparation process involves parties who understand the information needs of people with diabetes mellitus, in this case, the person in charge of non-communicable diabetes mellitus. The selection of this media has been through a study by considering the advantages of this media, namely; With this book, DM sufferers can adjust to self-study; content can be studied at leisure; Information can be shared with family and friends; Reduce the need for note-taking; Durable; wider capacity; Can be directed to a specific segment.(Ewles & Simnett, 1994) But one thing that determines the overlap of interest (Wilbur Schramm (1990) in (Ardianto, 2014). And this is what DM sufferers experience as users of this book.

So that this self-management companion book for people with diabetes is designed to

answer the information needed in overcoming the problems of self-management of people with diabetes.

CONCLUSION

This study has tested the effectiveness of self-management companion books for people with diabetes mellitus to improve the quality of self-management of people with diabetes.

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