

Hypertension Care Book (HYCAB) Enhancing Motivation and Family Support toward a Healthy Lifestyle

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Abstract: Objectives: This study aimed to investigate Hypertension care book (HYCAB) in improving the family support and the motivation of the hypertensive patients in performing a healthy lifestyle. Methods: This was a quasi-experimental study employing 24 respondents who divided equally into the intervention and control groups. The samples were recruited by simple random sampling technique. The independent variable was the HYCAB, whereas the dependent variables were patients' motivation and family support. The HYCAB was a book developed by the researchers as a learning medium to accompany health education that given thrice a week for two consecutive weeks. The book explains about hypertension and a healthy lifestyle required to prevent future complications. In addition, this book also emphasizes the importance of family support in supporting healthy lifestyles and how families can provide the support needed for patients appropriately. Data were collected using a questionnaire and analysed with Wilcoxon signed rank test and Mann Whitney U Test. Results: The results showed that the HYCAB improved family support and patients' motivation significantly with $p = 0.000$ and $p=0.02$ respectively. Conclusions: HYCAB as a media of health education enhanced family support and hypertensive patients' motivation in performing a healthy lifestyle.

1 INTRODUCTION

Indonesia is one of the developing countries where hypertension is one of primary death cause (Surabaya City Health Office, 2016). Hypertensive patients' poor health status is aggravated by the unhealthy lifestyles include lack of physical activity, poor management of stress, excessive salt consumption, smoking, and consumption of caffeinated beverages (Cosimo Marcello, Maria Domenica, Gabriele, Elisa, & Francesca, 2018; Deaver, Kanika, Ramneek, & Samuel, 2015; Talukder et al., 2010). Unhealthy lifestyles are influenced by lack of motivation and family support (Novian, 2013). Kenjeran Subdistrict is a sub-district in Surabaya which has a higher potential for exposure to sodium intake because geographically the Kenjeran sub-district is bordered by the Madura Strait. Research shows that the cause of high hypertension is caused by a pattern of habits of people who tend to marinate marine processed foods. This causes a tendency for hypertension to occur in coastal areas where sodium intake plays a role in the incidence of hypertension (Cosimo Marcello et al., 2018; Patnaik, Paul, Patnaik, & Sahu, 2017). One of the puskesmas (Community Health

Centers) with the most hypertension patients (1387 people or 21.55%) is the Tambakwedi Health Center (Dinas Kesehatan Kota Surabaya, 2018). Hypertension sufferers in the Tambakwedi Health Center experienced an increase in 2016 to 2177 people (Dinas Kesehatan Kota Surabaya, 2018). As many as 100% of hypertensive patients at the Tambakwedi Health Center lack family support and 80% have low motivation in implementing a healthy lifestyle (Samuel, ., J. Deaver, & ., 2016).

Previous study shows that health education is effective in increasing knowledge, self-management, and controlling lifestyle habits that are detrimental to hypertensive sufferers (Augustovski et al., 2018; Beigi et al., 2014; Jafar et al., 2017). Hypertension care book (HYCAB) is a medium offered as a new innovation in health education media. Hypertension care book (HYCAB) is a modification of booklet media that is equipped with a monitoring table of changes of daily lifestyle with the aim of evaluating and monitoring lifestyle in patients. The purpose of this study was to analyze the effect of Hypertension care book (HYCAB) on family support and motivation of hypertensive patients in implementing a healthy lifestyle.

2 METHODS

This research was conducted in the working area of Tambakwedi Community Health Center Surabaya in July 2018. The design was a quasi experiment with pre-post control group design. Sample of research was 24 respondents selected by simple random sampling technique. Respondents were divided to control group and intervention group equally. The control group received a standard nursing care provided by the nurses of Tambakwedi Community Health Center; whereas the intervention group provided with the HYCAB.

HYCAB was a modification of a booklet that explains about hypertension and its treatment equipped with a table designed to monitor and to evaluate patients' daily lifestyle changes. To ensure the patients understand the book well, the researchers help the patients and family individually, at the patients' homes thrice a week for two consecutive weeks. Both pre test and post test data were collected by fellow researchers that had trained prior to data collection to achieve similar understanding.

The research instruments were questionnaires and a Hypertension Care Book (HYCAB). There were two questionnaires used to collect data: family support and motivation. The family support questionnaire was modified from Engeline (2016) that used to measure the hypertensive geriatric patients' family support in Jakarta, Indonesia. The motivation questionnaire derived from Mas'ulah (2010) that investigated the motivation to control routinely to health care facilities. The questionnaires were tested for its validity and reliability prior the study. The Cronbach alpha for family support questionnaire was 0.854 showing that the questionnaire was highly reliable while the Cronbach alpha for motivation questionnaire was 0.768 indicating that the questionnaire was reliable.

Computer programs were used to process the collected data. The analysis of the variables in this study used the statistical test of Wilcoxon Signed Rank Test and the Mann Whitney U Test. The Wilcoxon Signed Rank Test was used to test results between pre and post test within the same group; whereas, the Mann Whitney U Test was used to analyse the difference between pre or post test results among groups.

3 RESULTS

Table 1 shows the respondents' characteristics: the majority of the control group was 53-59 years old (58%) with 75% of female sex, mostly employed (75%) and 42% had a basic education. Moreover, it can be seen from the table that most respondents suffered from hypertension less than 5 years (75%) and half of them had no family history of hypertension (50%). While in the treatment group most respondents (67%) were 53-59 years old with female in sex (83%), as housewife (67%), mostly suffered from hypertension less than 5 years (83%) and had no family history of hypertension (58%). Mann Whitney statistical analysis shows that all variables had p value of more than 0.05, indicating that respondents at both groups had the same characteristics in terms of age, sex, education, employment, length of hypertension and family history of hypertension.

Table 1: Respondents' Characteristics in control (n=12) and intervention (n=12) groups of HYCAB enhancing motivation and family support toward a healthy lifestyle.

Characteristics	Control Group		Intervention Group		p Value*
	f	%	f	%	
Age					
45-52	5	42	4	33	0.799
53-59	7	58	8	67	
Sex					
Men	3	25	2	17	0.861
Women	9	75	10	83	
Education					
No education	4	33	5	42	1.000
Basic education (elementary)	5	42	3	25	
Basic education (junior high school)	0	0	2	16	
Senior High School	3	25	2	17	
University Education	0	0	0	0	
Employment					
None	0	0	1	8	0.857
House wife	3	25	8	67	
Private	9	75	3	25	

Characteristics	Control Group		Intervention Group		p Value*
	f	%	f	%	
sector					0.081
Interpreneur	0	0	0	0	
Civil servant	0	0	0	0	
Length of hypertension					
< 5 y	9	75	10	83	0.081
5-10 y	3	25	2	17	
> 10 y	0	0	0	0	
Family History of Hypertension					
Yes	6	50	5	42	1.000
No	6	50	7	58	

*Mann Whitney statistical analysis.

Table 2: Family Characteristics of both in control (n=12) and intervention (n=12) groups of HYCAB enhancing motivation and family support toward a healthy lifestyle.

Characteristics	Control Group		Intervention Group		p Value*	
	f	%	f	%		
Age						
25-29	6	50	2	17	0.388	
30-39	1	8	3	25		
40-49	2	17	1	8		
50-59	3	25	6	50		
Sex						
Man	4	33	6	50	1.000	
Woman	8	67	6	50		
Education						
No education	0	0	1	8	1.000	
Basic education (elementary)	4	33	3	25		
Basic education (junior high school)	2	17	5	42		
Senior High School	5	42	2	17		
University Education	1	8	1	1		
Employment						
None	1	8	0	0		0.647
House wife	5	42	3	25		
Private sector	6	50	7	59		

Interpreneur	0	0	1	8	1.000	
Civil servant	0	0	1	8		
Relationship with the respondent						
Spouse	5	42	7	59		
Grandchild	3	25	1	8		
Son/daughter	4	33	3	25		
Son/daughter in law	0	0	1	8		

*Mann Whitney statistical analysis.

Table 2 showed that the majority of families in the control group aged 25-29 years old (50%) and female (67%). This table also informs that nearly half of the respondents had high school education (42%) and working in private sectors (50%). Respondents in intervention group aged of 50-59 year old (50%), female (50%), almost half educated in junior high school (42%) and more than half working in the private sector (59%). Additionally, the largest proportion of family relationships respondents were spouse (42% in treatment group and 59% in control group). A statistical analysis with Mann Whitney showed all variables had $p > 0.05$; thus, it can be concluded that all respondents' characteristics between groups are similar.

Table 3: Family support in control (n=12) and intervention (n=12) groups of HYCAB enhancing motivation and family support toward a healthy lifestyle.

Family Support	Intervention Group				Control Group			
	Pretest		Posttest		Pretest		Posttest	
	f	%	f	%	f	%	f	%
Good	0	0	10	83	1	8	1	8
Average	7	58	2	17	3	25	7	58
Low	5	42	0	0	8	67	4	33
Total	12	100	12	100	12	100	12	100
Wilcoxon	0.002				0.010			

Table 3 shows the level of family support received by the respondents. It can be seen in the treatment group that the family support was perceived as in moderate category by 58% prior to intervention while the rest of them perceived the family support in low category (42%). In the control group, more than half respondents (67%) perceived the support provided by their family as in low category.

Moreover, from Table 3, it can be seen in the treatment group that there was an increase in family

support after posttest where there were 10 people (83%) with good category, while in the control group there was an increase of family support with moderate category of 7 people (58%). The Wilcoxon test rank test in the treatment group was $0.002 < \alpha 0.05$, showing a significant increase in family support during pretest and posttest as a result of the education health education of hypertension care book (HYCAB). Interestingly, both groups show a significant difference of family support in pre and post test, indicating the influence of HYCAB media health education on family support in treatment group.

The effect was also shown by the increase in posttest results about family support in the treatment group after HYCAB health education was provided. As many as 100% of the families understand the importance of family support as well as the importance of practicing a healthy lifestyle to family members who suffer from hypertension after health education. This is in line with previous research which states that there is an influence on the extension of health education to increased knowledge and family support (Purwati, 2014).

These significant changes confirm that the provision of HYCAB media health education is necessary to enable families to understand and provide support to hypertension sufferers. As stressed in the Mann Whitney U Test statistical test, there was a significant different between groups after health education with HYCAB media was given. This is in line with the study Mardhiah, et al. (2014) stating that health education media booklets can enhance knowledge and family support.

Table 4: Motivation of both control (n=12) and intervention (n=12) groups HYCAB enhancing motivation and family support toward a healthy lifestyle.

Motivation	Group							
	Intervention				Control			
	Pretest		Posttest		Pretest		Post-test	
	f	%	f	%	f	%	f	%
Good	0	0	12	100	0	0	0	0
Average	12	100	0	0	8	67	12	100
Low	0	0	0	0	4	33	0	0
Total	12	100	12	100	12	100	12	100
p*	0.002				0.046			
p**	0.201							
p***	0.000							

* Wilcoxon sign rank test

** Mann Whitney at pretest

*** Mann Whitney at posttest

Health education using a booklet or HYCAB medium is more effective and the information delivered visually is more acceptable to patients and families.

Table 4 shows that at pretest, the motivation of hypertension patients in applying healthy lifestyles in the moderate category in the treatment group (67%) and the low category in the control group (33%). Lack of motivation was caused from patients's perception regarding hassles in implementing the healthy lifestyle. At the posttest the motivation increased to 100% in the treatment group; while in the control group there were 12 people with still in moderate category. The results of the statistical test showed that Mann Whitney U Test in both groups significantly different ($p = 0.000$), suggesting that there was influence of HYCAB media health education on motivation in hypertension and family members who received HYCAB media health education.

4 DISCUSSIONS

The results of the study showed that the interventions provided were successful in enhancing family support. Family support is the assistance provided in the form of instrumental support, informal support, assessment support, and emotional support from the family to individuals who need support (Kuntjoro, 2012). Family support is indispensable in the treatment of hypertension patients in improving motivation in hypertension patients in applying lifestyle. The family gives the form of family support one of them is by facilitating people with hypertension in the consumption of low salt food. Family support is an important factor in helping individuals solve problems. Family support can add to self-confidence and motivation to deal with problems and improve life satisfaction.

This study showed that HYCAB improved the family support provided by the family to their family member who suffered hypertension. Initially, the majority of family were not well aware of the importance of a healthy lifestyle hence the support provided by the family was not optimal.

Additionally, the HYCAB also increase patients motivation from poor to good. The Wilcoxon Signed Rank Test test showed a significant different of the patients motivation (average to good). This explains that the provision of HYCAB media health education is essential to hypertension patients to increase motivation in applying healthy lifestyles both internally and externally. This is in line with

research that explains that health education can influence a person in acquiring knowledge and motivation about health, including a healthy lifestyle (Augustovski et al., 2018; Chaparro et al., 2015). Health promotion can improve knowledge and ability to maintain the certain behaviour needed for a disease treatment (Hong, 2010).

The limitation of this study was the small sample size due to the lack in number of patient and patients' family in the Puskesmas of Tambak Wedi Surabaya.

5 CONCLUSIONS

Family support and patients' motivation improved after the intervention of the hypertension care book (HYCAB) because the material contained in HYCAB uses language that is easy to understand by the patients and family. The monitoring table in HYCAB also helps families in providing their supportive forms of hypertension and indirectly motivates hypertension sufferers to adopt a healthy lifestyle.

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