ORIGINAL RESEARCH

MODEL OF STRENGTHENING HEALTH LITERACY AND PREVENTION OF HYPERTENSION BASED ON FAMILY INDEPENDENCE

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ABSTRACT	Keywords
Hypertension is often referred to as the silent killer because it is a deadly disease accompanied by early symptoms for people with hypertension. The prevalence of hypertension continues to increase sharply and it is predicted by 2025 as many as 29% of adults, but the tendency to do prevention independently is still low. Prevention of hypertension can't be separated from the risk factors that exist in the family, including an unhealthy lifestyle. Family involvement in early detection needs to develop and modified so that every family member can reduce risk factors. The brief background of the topic and significance of the study. This study aims to collect information on the family of ability in health literacy as a solution to increase family independence in preventing hypertension. This study is used for research and development (R&D), which is the first of 3 research stages planned to be completed in 3 years. The research design was cross-sectional. The study was conducted on families in Bangkalan Regency with a sample of 150 people from 4 sub-districts representing mountainous, urban, rural, and coastal areas, namely Bangkalan, Kedundung, Sukolilo, and Kokop sub-districts taken by random cluster sampling. Data was collected using questionnaires and analyzed using Partial Least Square Path Modeling. This study has obtained ethically appropriate information through the Research Ethics Committee of the Health Polytechnic of the Ministry of Health Surabaya with the number EA/940/KEPK-Poltekkes Sby/V/2022. The results show that the demographic characteristics of the family have an effect on health literacy in preventing hypertension. Families with good health literacy can increase independence in preventing hypertension. Families who achieve a high level of independence will be able to prevent hypertension. The use of digital literacy can be a solution to improve people's health literacy skills. Materials from health literacy are made simpler but right on target. Supported by more complex forms of communication such as interactive video. Application usage to advance the knowledge of patients' hypertension can increase the independence of hypertension.	*Strengthening; Health Literacy; Family Independence; Hypertension Prevention.*

INTRODUCTION

Hypertension is a disease that can cause short-term and long-term impacts and is called the silent killer because this disease is classified as a deadly disease without any initial symptoms for people with hypertension (Brunner&Suddarth, 2013). The prevalence of hypertension continues to increase sharply and it is predicted that by 2025 as many as 29% of adults have hypertension, so they need prevention. Prevention of hypertension is inseparable from the risk factors that exist in the family, including unhealthy lifestyles, such as eating habits, lack of sleep and rest, weight control, and ability to manage stress(Alicea-Planas et al., 2016). Efforts to

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prevent hypertension require family involvement in early detection and implementing hypertension care at home. This is because the number of people with hypertension is getting higher but the tendency to do prevention independently is still low.

Family independence is needed to support family care with hypertension at home (Rosidin et al., 2018). Based on the indicators of family independence in a preliminary study taken at the Cardiology Clinic of Anna Medika Hospital, Madura, it is known that 60% of family independence in preventing hypertension is still in the category of less independent. Families who are less independent in the care of hypertension families are related to the level of knowledge. Knowledge in caring for families is related to family health literacy. Health literacy is related to the knowledge, motivation, and competence of the community (family) to access, understand, assess, and apply health information to make judgments and make decisions in everyday life regarding health care, disease prevention, and health promotion to maintain and improve quality of life. (Sørensen et al., 2012) included in the prevention of hypertension in the family. Families need to strengthen in health literacy to be able to care for family members with hypertension independently. Especially in Madurese families who have a culture and pattern of nutritional fulfillment that are accustomed to high salt and fewer vegetable foods. This pattern is very risky to be a trigger for hypertension.

In Indonesia, there is no research on family health literacy to be independent of the family by looking at certain ethnic groups based on the pattern of nutritional fulfillment for the prevention of hypertension. The previous research put more emphasis on the level of patients' health literacy on several diseases. And the results of research (Soemitro, 2014), (Sahroni et al., 2019), and (Rianti Kesumawati, Kusman Ibrahim, 2019), regarding the level of patient literacy in several cases of the disease show that it is still in the low category. While this study will explore a lot of information from families about the ability in health literacy as a solution to increase family independence in preventing hypertension.

Hypertension can have an impact on increasing morbidity and mortality. The pattern of nutritional fulfillment in Madurese families tends to be at risk for increasing the prevalence of hypertension. The strong impact of the social and cultural structure of Madura determines the success of the implementation of the hypertension prevention program as a non-communicable disease. Supported by weak health literacy in caring for family members with hypertension, this has an impact on the high prevalence of hypertension. So research is needed with a study to develop a model of strengthening health literacy to increase family independence in preventing hypertension in the Madurese community.

The aims of this study were (1) Maping the health literacy of families in preventing hypertension in Madura. (2) Describing the trend of strengthening health literacy patterns to increase family independence in preventing hypertension in Madura, (3) Developing an effective model in strengthening health literacy to increase family independence for hypertension prevention in Madura.

METHOD
Methods should be structured as follows:
1.1 Research design
This research is the first phase of multi-year research that will be carried out for three years with a Research and Development (R & D) approach. This study uses analytic observational methods to describe the variables that affect the strength of family health literacy. Furthermore, by analyzing the strengthening of health literacy that has been carried out and drafting the development of a model for strengthening health literacy that can be applied in Madurese families. The research design was done by cross-sectional.

1.2 Setting and samples
The research was carried out in Bangkalan Regency, one of the cultural areas of Madura. The population of this research is families in Bangkalan Regency with 225,559 households spread over 273 villages or sub. The research sample was taken by random cluster sampling

from 4 sub-districts representing urban, rural, coastal, and mountainous areas with a total sample of 150 people.

1.3 Intervention (applies to experimental studies)

There is no intervention in this first phase of research.

1.4 Measurement and data collection;

Data was collected using a questionnaire that was compiled based on variable indicators that had been tested for validity and reliability.

1.5 Data analysis;

The data were analyzed using descriptive data to describe the characteristics of the respondents and the characteristics of each variable in the family health literacy model for preventing hypertension. Furthermore, the data were analyzed using *structural equation modeling* (SEM) based on *variance* or *component-based* SEM, which is called *partial least square* (PLS). PLS, testing is done with the help of *Smart PLS software version 2.0 for windows*. Furthermore, after the model is formed, a focus group discussion is conducted to determine strategic issues and review the research results. The FGD was attended by stakeholders consisting of the health office, the communication and information office, the KB PA and PP offices as well as the Youth, Sports, Culture, and tourism office.

1.6 Ethical considerations.

This research has obtained an ethical certificate from the Research Ethics Committee of the Health Polytechnic of the Ministry of Health Surabaya with the number EA/940/KEPK-Poltekkes_Sby/V/2022 dated April 25, 2022, in accordance with 7 WHO 2011 standards, namely social values, scientific values, equitable distribution of burdens and benefits, risk, inducement/exploitation, confidentiality, and privacy as well as approval after receiving an explanation referring to the 2016 CIOMS guidelines. Before the research was carried out, a research permit was issued from Bakesbangpol Bangkalan Regency number 072/111/433.207/2022 and Bangkalan District Health Office number 072/ 2014/433.102/2022 Prior to the research activity, the researcher gave an explanation to the respondent and asked the respondent to sign the informed consent that had been prepared.

RESULTS

The data used in this study were 150 families in several districts of Bangkalan Regency who met the criteria of the sample collection by *cluster random sampling*. Family demographic factors are sought as antecedent factors in strengthening family health literacy in preventing hypertension.

a. Social and Cultural Structure of the Bangkalan Society

Tabel 1. Frequency Distribution of Characteristics, Social structure and Culture of Bangkalan Society in 2022 (n=150)

Characteristics, Social structure and Culture of Bangkalan Society	F	%
Education		
Elementary School	37	24,7
Junior High School	16	10,7
High School	68	45,3
College/ University	29	19,3
Total	**150**	**100**
Occupation		
Civil Servant/ Soldier/ Police	11	7,3
Private	36	24
Self Employe	79	52,7
Other	24	16
Total	**150**	**100**
Family Income		
< 1.5 jt	85	56,7
1.5 - 2.5 jt	30	20
2.5 – 3.5 jt	20	13,3
>3.5 jt	15	10
Total	150	100
Geder		
Male	110	73,30
Female	40	26,7
Total	**150**	**100**
Information technology		
Good	70	46,67
Enough	70	46,67
less	10	6,66
Total	**150**	**100**
Political		
Good	85	56,67
Enough	63	42
Less	2	1,33
Total	**150**	**100**
Cultural values		
Good	94	62,67
Enough	52	34,67
Less	4	2,66
Total	**150**	**100**
Social Factors		
Good	0	0
Enough	7	4,67
Less	143	95,33
Total	**150**	**100**

Based on table 1, it is known demographically that most of the education levels of the Bangkalan people are already high because the average is already at the high school level and even at the university level. The average occupational demographic is self-employed with an average income of less than 1.5 million per month. Most Bangkalan people are very open to the use of information technology, especially in the use of gadget media and the use of the internet to obtain information (46.67%). From a political perspective, the average family position is close to health care facilities and allows easy access to health information and education (56.67%). Cultural values in the community are higher than the average in the good category (62.67%). Weaknesses in preventing hypertension in the community are social factors where the pattern of family support is no longer strong (95.33%).

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b. The Family Health Literacy

The following is a description of family health literacy in preventing hypertension to create independence and the ability to prevent hypertension.

Table 2. Frequency Distribution of Health Literacy Ability in Hypertension Prevention in Bangkalan Regency in 2022 (n=150)

Health Literacy Ability in Hypertension Prevention in Bangkalan Regency	Frekuensi	Persentase
Ability to access information	28	18,7
Very good	100	66,7
Good	21	14,0
Enough	1	0,6
Poor		
Total	**150**	**100**
Understand information	24	16
Very good	105	70
Good	19	12,67
Enough	2	1,33
Poor		
Total	**150**	**100**
Justify and evaluate information	28	18,7
	100	66,7
Very good	21	14,0
Good	1	0,6
Enough		
Poor		
Total	**150**	**100**
Application of information	4	2,7
Very good	16	10,7
Good	105	70
Enough	25	16,6
Poor		
Total	**150**	**100**

Based on table 2, shows the ability of family health literacy in preventing hypertension in the ability to access information, understand information, and justify and evaluate information, mostly in the good or even very good category (66.7%). But in the application of information, most of them are in the poor category and are not even able to apply it (70%).

c. The Family Independence

The following is an illustration of the level of family independence in preventing hypertension through strengthening family literacy:

Table 3. Frequency Distribution of Family Independence in hypertension prevention in Bangkalan in 2022 (n=150)

Family Independence in hypertension prevention	Frekuensi	Persentase
Readiness to use healthcare		
Well Prepared	52	34,67
Ready	77	51,33
Less Prepared	19	12,67
Not Ready	2	1,33
Total	**150**	**100**
Knowing the Problem of Hypertension		
Very Capable	20	13,33
Can	90	60
Underprivileged	38	25,33
Incapacitated	2	1,33
Total	**150**	**100**
Deciding on Nursing Actions		
Very Capable	21	14
Can	86	57,33
Underprivileged	40	26,67
Incapacitated	3	2,00
Total	**150**	**100**
Carrying out proper care		
Very Capable	19	12,67
Can	94	62,67
Underprivileged	32	21,33
Incapacitated	5	3,33
Total	**150**	**100**
Modifying the environment		
Very Capable	17	11,33
Can	93	62,67
Underprivileged	35	24,00
Incapacitated	3	2,00
Total	**150**	**100**
Leveraging healthcare		
Excellent	44	29,33
Good	88	58,67
Not Good	16	10,67
Enough	2	1,33
Bad		

Total	**150**	**100**
Activeness in Preventing Disease		
Very Active	32	21,33
Active	87	58
Less Active	29	19,33
Inactive	2	1,33
Total	**150**	**100**
Sharing Information		
Very Active	36	24
Active	77	51,33
Less Active	35	23,33
Inactive	2	1,33
Total	**150**	**100**

Based on table 3 it can be seen that the level of family independence is already at an independent level, it can be seen that most families are ready to use health services if a family has hypertension (51, 33%). Furthermore, most families can recognize health problems related to hypertension (60%), decide on treatment actions (57.33%), carry out treatment, and modify the environment (62.67%). In utilizing health service facilities, most of them are in a good category (58.67%). Family independence in terms of being active in preventing hypertension and sharing health information is mostly in the active category.58% and 51.33%).

d. Prevention of Hypertension

The following is a description of the level of family ability in preventing hypertension through strengthening family literacy:

Table 4. Frequency Distribution of Family Ability in Prevention of Hypertension Bangkalan in 2022 (n=150)

Family Ability in Prevention of Hypertension	Frekuensi	Persentase
Health Check		
Excellent	23	15,33
Good	56	37,33
Enough	66	44
Less	5	3,33
Total	**150**	**100**
Nutritional Arrangements		
Excellent	14	9,33
Good	69	46
Enough	66	44
	1	0,67

Less		
Total	**150**	**100**
Managing Weight		
Excellent	23	15,33
Good	67	44,67
Enough	54	36
Less	6	4
Total	**150**	**100**
Activity patterns and sports	10	6,67
Excellent	68	45,33
Good	63	42
Enough	9	6
Less		
Total	**150**	**100**
Managing Stress		
Excellent	0	0
Good	82	54,67
Enough	68	45,33
Less	0	0
Total	**150**	**100**
Avoiding Cigarette Smoke	0	0
Excellent	0	0
Good	122	81,33
Enough	28	18,67
Less		
Total	150	100

Based on table 4, the ability of the family to prevent hypertension, the health check-up action (44%), nutrition regulation (46%), weight management (44.67%), and activity and exercise patterns (45.3%) were in the good or even very good category. But there is prevention in the category of less and even unable to prevent stress management (54.67%) and avoid cigarette smoking (81.33%).

e. Inferential Analysis
**1. Evaluation of Measurement Model (Outer Model)**
Table 5 Values of Loading Factors (Cross Loadings) Convergent Validity Results

Constructs and Indicators		Loading (λ)	Information
Family Demographic Factors	X1.1	0.811	Valid & Sig.
	X1.2	0.864	Valid & Sig.
	X1.3	0.810	Valid & Sig.
	X1.4	-0.777	Invalid & Sig
	X1.5	0.843	Valid & Sig.
Factors of Social and Cultural Structure	X2.1	0.857	Valid & Sig
	X2.2	0.923	Invalid & Sig
	X2.3	0.948	Valid & Sig
	X2.4	0.752	Valid & Sig
Family Health Literacy	Y1.1	0.843	Valid & Sig
	Y1.2	0.751	Valid & Sig
	Y1.3	0.910	Valid & Sig
	Y1.4	0.808	Valid & Sig
Family Independence	Y2.1	0.757	Valid & Sig
	Y2.2	0.756	Valid & Sig
	Y2.3	0.858	Valid & Sig
	Y2.4	0.849	Valid & Sig
	Y2.5	0.871	Valid & Sig
	Y2.6	0.822	Valid & Sig
	Y2.7	0.752	Valid & Sig
	Y2.8	0.707	Valid & Sig
Prevention of Hypertension	Y3.1	0.776	Valid & Sig
	Y3.2	0.840	Valid & Sig
	Y3.3	0.840	Valid & Sig
	Y3.4	0.925	Valid & Sig
	Y3.5	0.846	Valid & Sig
	Y3.6	0.883	Valid & Sig

Based on table 5, it is known that not all variables are significant. The indicators are valid for measuring latent variables and show the criteria for goodness from a measurement model (*outer model*) except for the gender variable, who is responsible for the family and the cultural values of the community, which

must be excluded because they do not support the construction of the social and cultural
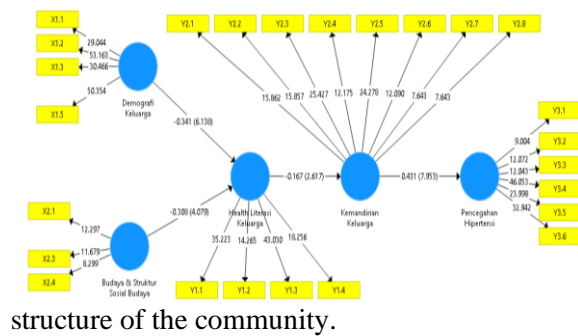
structure of the community.

2. Evaluation of the Structural Model (Inner Model)

Analysis of the structural model was conducted to examine the effect of exogenous factors on endogenous factors. The results of the full effect significance test are described in table 6 as follows:

Table 6 Structural Model Significance Test Results

Causality Relationships	Koefisien	T-statistcs	Influence
(X1) Family Demographics → (Y1) Health Literacy	-0.341	5.553	Significant
(X1) Culture and social structure → (Y1) Health Literacy	-0,308	4.556	Significant
(Y1) Health Literacy → (Y2) Family Independence	-0.167	2.639	Significant
(Y2) Family Independence → (Y3) Prevention of Hypertension	0.431	7.971	Significant

Health Literacy Model To increase family independence in preventing, it is shown in Figure 1 below:

Figure 1. Family Literacy Strengthening Model in Increasing Independence and Hypertension Prevention
Based on Figure 1 it is known that all T values -statistics on the path diagram (relationship of exogenous factors to endogenous factors) have a value greater than the t-table value > 1.96. In conclusion, the model in Figure 1 is structurally feasible.

DISCUSSION

1) Culture and Social of Bangkalan Society towards Health Literacy

Data shows that Bangkalan people are very open to the use of information technology, especially in the use of gadgets and the use of the internet to obtain information. From a political perspective, the average family position is close to health care facilities and allows easy access to health information and education. Cultural values in the community are better than average in the good category. Weaknesses in preventing hypertension in the community are social factors where the pattern of family support is no longer strong. The culture and social structure of the Bangkalan community affect the health literacy ability of the Bangkalan community in preventing hypertension. Based on the results of the Focus Group Discussion that increasing public health literacy in preventing hypertension can be done with digital literacy.

Although some dimensions of literacy are included in the good category, it turns out that the ability to implement health literacy is still lacking. This is inseparable from the cultural aspects of the Bangkalan people. The culture of health care in the family tends to be passed down as a culture. Strong culture often has an impact on decision-making abilities. Although people already know that it is not appropriate for health care in the family, but because it has become a culture in their environment, they tend to follow what has become a habit. A family environment that builds a culture of critical thinking will form critical individuals in various aspects of their lives, including health(Mardiana et al., 2019). The low level of health literacy is obtained from the culture that exists in the community(Duplaga, 2020).

The culture of the Bangkalan people is very influential on health literacy prevention of hypertension. This is in accordance with Kesumawati's research (2019) that low health literacy is influenced by culture and health information access technology(Rianti Kesumawati, Kusman Ibrahim, 2019). One aspect of culture in society is the development of technology to access information. Individuals must have access to health information and have the ability to seek information relevant to their health situation(Sahroni et al., 2019). Technological advances have many impacts on lifestyle changes (Meskó et al., 2017), which make it easier for people to access information. Information technology is a means of disseminating health information, so access to information technology is one of the determinants of health literacy (Manganello et al., 2017).

Politically, the government's policy to promote health promotion can also improve health literacy skills in preventing hypertension in the Bangkalan community. Health care facilities that are close to the community and supported by effective educational programs are supportive factors in improving public health literacy in preventing hypertension(Syahrir & Sabilu, 2021). Anggraini's research, FD P (2020) explains that there is a strong correlation between low health literacy and inefficient use of health services, and adverse health status(Anggraini F, 2020). Health workers are stakeholders who play an important role in providing an optimal understanding of health literacy (Eo & Kim, 2019).

Public trust in health issues is mostly good. People believe in the medical aspects of hypertension. The belief in the threat, the severity of which encourages people to seek information, try to understand the information, and make judgments about the information obtained. This study shows that public trust in disease can affect the ability of health literacy to prevent hypertension. Health literacy is related to belief (Eo & Kim, 2019). Health literacy has a significant moderating effect on the relationship between adherence and anxiety beliefs and perceptions of threatening disease (Shiyanbola et al., 2018).

Based on the development of communication culture, political government policies by increasing education programs in the community and the existence of public trust in health, one alternative to improve health literacy is digital literacy. Digital literacy refers to the skills to access, understand, question, critically analyze, and evaluate online content. The use of the internet in this digital era is able to make a person learn and practice skills in overcoming health problems.

2) Health Literacy of Family Independence in Preventing Hypertension

Data depiction from family respondents in Bangkalan Regency shows that the ability of family health literacy in preventing hypertension in the ability to access information, understand information and justify and evaluate information is mostly in the good or even very good category. But in the application of information, most of them are in the poor category and are not even able to apply it. In inferential analysis, it is known that health literacy has a significant effect on family independence in preventing hypertension.

The inability to apply information has been stated in Kim's research (2017) that respondents feel they have knowledge about using the internet to answer questions about health but do not have the skills to evaluate available health resources. is on the Internet. In addition, respondents lack confidence in their ability to apply information to health-related decision-making. While health literacy is needed to build family independence in preventing hypertension. Health literacy is relevant in all parts of the continuum of care, disability, and health, for the prevention and early detection of disease as well as for diagnosis and decision making for self-care (Schaeffer et al., 2017).

In terms of seeking/accessing information, disease prevention is mostly done using cell phones and computer devices. People with higher levels of health literacy will have better health information-seeking behavior (Lee et al., 2021) and tend to be able to obtain sufficient health information from various sources (Suka et al., 2015). Higher health literacy will enable a person to analyze the information obtained and determine the appropriate and reliable information (Chen, 2017). Inadequate health literacy is associated with an incorrect understanding of written information and problematic communication with health workers (Brooks et al., 2013). Individuals with low levels of literacy are less likely to make decisions about their health, such as worse health-threatening behaviors, higher health care costs and poor health status (Guo et al., 2018).

The results of the focus group discussion obtained an agreement that the use of digital literacy can be a solution to improve the health literacy of Bangkalan families in preventing hypertension. Furthermore, the materials from health literacy are made simpler but on target. Supported by more complex forms of communication such as interactive video. Community involvement in distributing educational videos containing short and simple messages in an effort to improve joint health through WA groups in the community. The use of the right application in increasing the knowledge of hypertension patients can increase the independence of hypertension management (Duan et al., 2020).

The higher the level of health literacy that the family has in preventing hypertension, the higher their independence and health status will be. Independent families will be able to use health services if a family has hypertension(Wahyuningsih, 2019). Good health literacy will have an impact on the family's ability to recognize health problems related to hypertension, decide on treatment actions, carry out treatment, and modify the environment. Furthermore, with good health literacy, families are able to take advantage of health service facilities(Al-Fayyadh et al., 2022), actively prevent hypertension and share health information.

3) The Independence Level of the Family's Ability in Preventing Hypertension

Data shows that the level of family independence is already at the independent level, most families are ready to use health services if a family has hypertension. Families are mostly able to recognize health problems related to hypertension, decide on treatment actions, carry out treatment, and modify the environment. In utilizing health service facilities, most of them are in the good category. Family independence in terms of being active in preventing hypertension and sharing health information is mostly in the active category. Family independence has a significant effect on the ability of families to prevent hypertension. It is known that in carrying out prevention, the family has been able to decide on health check-ups, nutrition settings, weight management and activity

patterns and the average body is in the good or even very good category. But there is prevention in the category of less and even unable to do prevention, manage stress and avoid cigarette smoke.

Independent families can recognize health problems related to hypertension, which greatly influences family involvement to carry out various prevention efforts. As previous studies have described families that can evaluate family history, it has great potential to educate and motivate entire families about their family's health risks and raise awareness about the importance of preventive health practices (Hunt et al., 2003). Moderate to vigorous physical activity, especially aerobic exercise, and improving cardiorespiratory fitness and reducing the incidence of hypertension (Bakker et al., 2018) require family involvement. Family involvement is needed in hypertension management to identify opportunities and challenges and inform treatment strategies. Patients will experience information difficulties if family support is not always available (Fort et al., 2020).

Family independence is very important in preventing hypertension by recognizing problems and modifying the environment. Families must understand and be able to modify the environment to prevent hypertension. Previous studies have explained that the effects of hypertension from air pollution are more prominent among men, smokers, drinkers, individuals with high-fat diets, and those who have a high level of physical activity, so modifications need to be made. behavior and environment to prevent hypertension (Li et al., 2020). Independent families will try to find information to take appropriate preventive steps. Many families are not aware of their family history and risk of developing hypertension problems until they start contacting relatives and collecting data to see the full picture (Fort et al., 2020).

Seeking information on preventing hypertension is also done by doing health literacy. Someone with hypertension who has good literacy also has lower sodium levels than someone else who has low health literacy ability (Luta et al., 2018). The dimension of health literacy can be seen from the way patients manage their own health actively by

being actively involved in finding good health information and the ability to understand health information from health care providers. This can be a predictor of improving the quality of life of patients, one of which is patients with PTM who adhere to long-term treatment (Elisabeth Stømer et al., 2020).

Families who are able to decide what actions should be taken in an effort to hypertension will make it easier for families to provide care. Things that need to be controlled in the prevention of hypertension are diet patterns, avoiding cigarette smoke and managing stress. Diet control and avoidance of exposure to secondhand smoke by the family is very necessary because non-compliance often occurs. Fitriah et al.'s research (2019) stated that the pattern of hypertension prevention carried out by the Bangkalan Regency family from indicators, namely regular health checks, indicators of diligent activity and diet described as not yet optimal. Even for the category of avoiding cigarette smoke or managing stress, it shows that there are still many who are in the less category. Family independence in preventing hypertension is needed because the family has a duty to handle health problems at home.

Independent families always use health services to maintain their health status, including avoiding hypertension. People who use health service facilities can know and carry out early detection and prevention efforts against the incidence of hypertension compared to people who do not use health service facilities. If the risk factors are known, it will be easier to do prevention (Shahrir, M., & Sabilu, Y. 2021). Families who are already at a high level of independence will be able to carry out family tasks while preventing hypertension.

4) Implications and limitations
The results of this study can be used as input to be related sectors that the use of digital literacy can be a solution to improve people's health literacy skills. Materials from health literacy are made simpler but right on target. Supported by more complex forms of communication such as interactive video. Community involvement in distributing educational videos containing short and

simple messages to improve joint health through WA groups in the community. The use of the right application in increasing the knowledge of hypertension patients can increase the independence of hypertension management.

CONCLUSION

The results showed that the demographic characteristics of the family had an effect on health literacy in preventing hypertension. The culture and social structure of the Bangkalan community on health literacy in preventing hypertension. Families with good health literacy will be able to increase independence in preventing hypertension. Families who achieve a high level of independence will be able to prevent hypertension.

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AUTHOR CONTRIBUTION

The first author (F) contributed to preparing research proposals, developing research methods and instruments, and conducting data analysis and discussion. The second author (S) contributed to the preparation of research proposals, submission of ethical feasibility, data collection, and editing in the preparation of reports. The third author (R) contributed to the preparation of proposals, obtaining research permits, collecting data and processing of research data. And all members contributed to the preparation of the manuscript for publication.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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