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The Use of Traditional Health Services and Their Determinants in The Coastal Area of Laha Village of Ambon City, Indonesia

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ABSTRACT

Traditional health services are one of the alternative treatments used by the community in Indonesia. Some even preferred using traditional health services as the primary treatment than modern health services. This study analyzed factors associated with using traditional health services in the coastal area of Laha Village, Ambon City. Data were derived from a household health survey conducted in the coastal area of Laha Village in November 2022. The dependent variable was the use of traditional health services. Independent variables included demographic status, lifestyle, and the history of illness. This analysis employed multivariate logistic regression methods to analyze factors associated with using traditional health services. We found an increased odds of using traditional health services in respondents aged >60 years (aOR=4.13; 95%CI: 1.47-11.55; p=0.007), who owned a family medicinal plants (aOR=25.18; 95%CI: 12.41-51.07 p<0.001), and who never smoked cigarettes (aOR=3.45; 95%CI: 1.31-9.05; p=0.012). This study also examined the association between the history of illness respondents had and the use of traditional health services. We found a significant association between the history of joint diseases (aOR=2.34; 95%CI: 1.37-4.02; p=0.002) and injury (aOR=0.30; 95%CI: 0.16-0.56; p<0.001) with the use of traditional health services. This study shows the need for health promotion efforts on the utilization of traditional health services in the community to increase knowledge and correct understanding regarding the utilization of traditional health services.

Keywords: Coastal areas, traditional health services, family medicinal plants

Introduction

Traditional health services have a long history around the world. These services encompass efforts to maintain health and prevent disease through knowledge, skills, beliefs, and experiences derived from explainable and unexplainable cultures (WHO, 2023). In 2023, the World Health Organization (WHO) reported that traditional medicine was used in 65-80% of medical procedures worldwide (WHO, 2023). Traditional health services continued to be in high demand, mainly due to their affordability, especially in areas where traditional medicine practitioners were the only primary source of health care (Chali et al., 2021). Studies showed that religious and cultural beliefs and socioeconomic factors contributed to the high use of traditional health services (Kristoffersen et al., 2019; Oviedo-Solís et al., 2022). A study from India reported that traditional health services were widely used to treat cancer or malignancy, arthritis/rheumatism, high cholesterol, stroke, diabetes, and kidney disease (Rudra et al., 2017).

The use of traditional health services is also highly popular in Indonesia (Pengpid & Peltzer, 2018). Approximately 70% of Indonesia's traditional medicine practitioners lived in rural sites. This accounted for the high utilization of traditional health services in rural areas (Harmanto, 2013). The 2018 Basic Health Research of Indonesia reported that 44.2% of households surveyed

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still used traditional health services, showing an increased trend from 30.1% in 2013 (Kemenkes, 2021; Kemenkes, 2018). Different types of plants, animals, and minerals were used in traditional medicine, as more than 2,500 types of plants were considered medicinal (Elfahmi et al., 2014).

Maluku, one of the provinces of Indonesia, has a diverse range of traditional health services (Aprilla, 2020). As the largest archipelago province in the country, geographical constraints in Maluku sometimes become obstacles for the community to access modern health care services (Oktaviani, 2022). This was also aggravated by the limited distribution of health workers, particularly in remote areas (Badan Pusat Statistik Provinsi Maluku, 2023). The use of traditional health services is also common in the community living in Ambon City, the capital of Maluku Province (Dinas Kesehatan Provinsi Maluku, 2019). A preliminary observation in Laha Village of Ambon City, which was also a fostered village of the Faculty of Medicine Universitas Pattimura, found that it was typical for the Laha community to use traditional health services, despite the village's availability of modern health services. Therefore, using data from the 2018 household health survey from Laha (Kemenkes RI, 2018), this study examined factors associated with using traditional health services. The results could be used by program managers to formulate necessary regulations and guidelines regarding the rational use of traditional health services in Laha Village and Ambon City in general.

Material and Methods

Data source and study sites

Data were derived from a household health survey conducted in November 2022 in Laha Village, Ambon City, by the Faculty of Medicine Universitas Pattimura. Laha Village is located in the coastal area of Ambon City, with a total population of 6.833 in 2022 (Badan Pusat Statistik Provinsi Maluku, 2022). Respondents in this study were the population of Laha Village who, at the time of data collection, were willing to become respondents.

Sampling methods and respondents

The survey used a convenient sampling method. This analysis used information from 654 respondents who lived in the coastal areas of Laha Village.

Instruments

The survey used a questionnaire adapted from the 2018 Basic Health Research questionnaire (Badan Penelitian dan Pengembangan Kesehatan, 2018). The questionnaire was in Bahasa Indonesia and uploaded to the Commcare application. Data collected were entered electronically using Android-based devices. The questionnaire covered several topics, including socio-demographic characteristics, dietary consumption, mental health, traditional health services, and history of illnesses.

Data collection procedure

Before data collection, a research permit from the administrative leaders in Laha Village was obtained. The data collection activities were conducted for ten days by final-year students of the Faculty of Medicine, Universitas Pattimura.

Variables

The dependent variable in this study was the use of traditional health services in the past year. This variable was formed based on the question: 'Have you utilized traditional health services in the past year?' When respondents answered 'yes,' they were coded 1 and 0 if otherwise.

The independent variables in this study were divided into two groups: 1) socio-demographic and lifestyle characteristics, and 2) history of illnesses of respondents. Socio-demographic and lifestyle characteristics consisted of age (<25 years, 25-59 years, and ≥60 years), gender (male and female), occupation (not working and housewife, regular income worker, and irregular income

worker), utilization of family medicinal plants (having and not having family medicinal plants), heavy physical activity (yes/no) and smoking status (every day, not every day, and never smoking). Vigorous physical activity was defined as performing strenuous physical activity continuously every day for at least 10 minutes each time.

History of illnesses of respondents consisted of diarrhea in the past month (yes and no), Acute Respiratory Infection (ARI) in the past month (yes and no), joint disease (yes and no), hypertension (yes and no), and injury (yes and no). Respondents were classified as having diarrhea, ARIs, and joint diseases if a health worker had diagnosed them in the past month. Respondents were categorized as having hypertension if they had high blood pressure when checked by a field worker at the interview or had been diagnosed with hypertension by a doctor. The injury variable referred to any injury that disrupted respondents' daily activities in the past year, regardless of the type and part of the body affected. Code "1" was given for each illness when respondents answered " yes " and "0" if otherwise.

Statistical analysis

In the first stage, descriptive statistics were used to examine the distribution of all variables in the analysis. In the second stage, bivariable logistic regression was performed to obtain each potential predictor's unadjusted odds ratio (OR) to measure the estimated association between the dependent and independent variables. In the final stage, multivariable logistic regression was performed to obtain the adjusted odds ratio (OR). All analyses were performed using STATA/MP 17.0.

Analytical framework

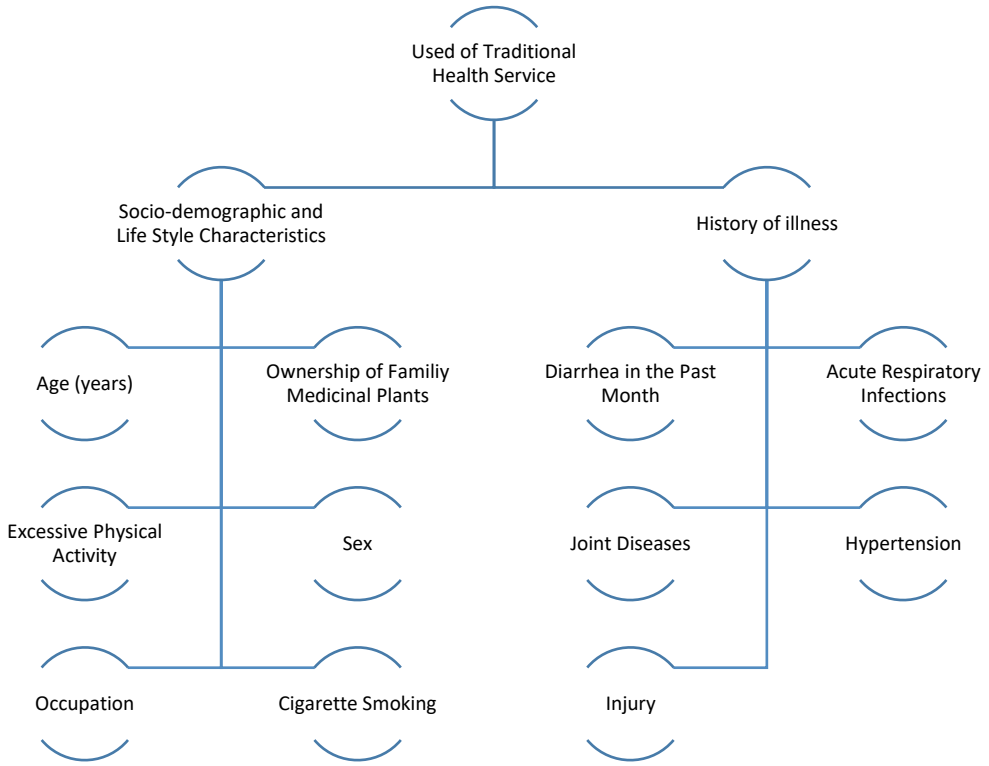

Figure 1. Analytical framework

Ethics clearance

Ethics approval for the household health survey was retrieved from the Faculty of Medicine ethics commission, Universitas Pattimura No. 160/FK-KOM.ETIK/VIII/2022. All respondents were asked to sign the informed consent form before participating in this study.

Results and Discussion

This analysis used information collected from 654 respondents living in the coastal areas of Laha Village of Ambon City. Table 1 shows the frequency distribution of respondents based on sociodemographics and lifestyle. We found that 14.4% of respondents living in the coastal areas of Laha used traditional health services. These results align with the study in coastal regions of North Minahasa (Wullur et al., 2022), where 18% of respondents in the coastal areas utilized traditional health services.

In this analysis, the highest percentage of respondents using traditional health services were found in the age group of >60 years (31.1%). The respondents who owned family medicinal plants also showed a high percentage (70.4%) of using traditional health services. Females had a higher rate of using traditional health services than males. Interestingly, respondents with rigorous physical activity had a high percentage of utilizing traditional health services than those who did not perform rigorous physical activity.

Table 1 shows the results of the univariable logistic regression to examine factors associated with using traditional health services. The significant predictors were age >60 years, ownership of family medicinal plants, and smoking status. After conducting multivariate logistic regression analysis, we found that factors significantly associated with using traditional health services were the ownership of family medicinal plants and the respondent's age. Respondents who owned family medicinal plants had higher odds of using traditional health services than those who did not (aOR=29.00; 95%CI: 14.2-59.22; *p<0.001*). This finding was supported by previous literature (Gonzalez, 2021), showing that every family who had a medicinal plant garden had a higher tendency to utilize traditional medicine. We also found that respondents aged >60 years had a higher likelihood of using traditional health services than younger respondents (<25 years) (aOR=4.13; 95%CI: 1.47-11.55; *p=0.007*). Pengpid and Peltzer (2018) reported that Indonesians aged >60 years had a higher tendency to utilize traditional health care. This may be due to the public's view that traditional health services have fewer adverse side effects than modern medicine (Wahyuni, 2021; Sudirman & Skripsa, 2020).

In the second multivariate logistic regression analysis model, each type of illness was included to examine its association with using traditional health services (Figure 2). The odds of using traditional health services were significantly associated with hypertension (aOR=2.34; 95%CI: 1.12-4.86; *p=0.023*), joint disease (aOR=2.87; 95%CI: 1.56-5.31; *p=0.001*), and injury (aOR=0.25; 95%CI: 0.12-0.51; *p<0.001)*. This finding indicates that traditional health services were still a standard option in the community of Laha when health problems occurred. Some people perceived traditional medicine as having fewer adverse side effects than modern methods (Wahyuni, 2021). Additionally, financial reasons could be one of the underlying factors, as traditional medicine was considered cheaper than modern medicine (World Health Organization, 2013). This could also be why the rural community uses traditional health services rather than modern medicine.

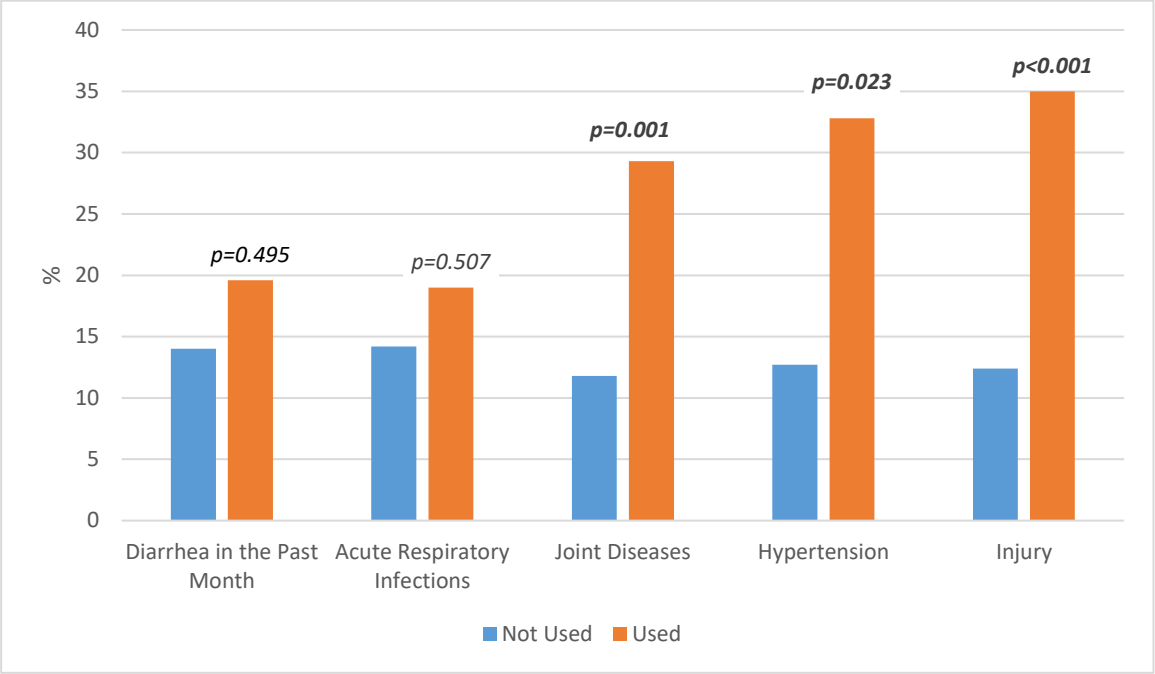

Figure 2. Percentage of respondents utilizing traditional health services and types of health problems experienced

We found that the odds of using traditional health services in respondents who never smoked cigarettes were three times that of those who smoked daily (aOR=3,45; 95%CI: 1,31-9,05; p=0,012). This may be people who are more aware of health and disease prevention, avoid risky behavior, avoid not consuming cigarettes, and prefer traditional medicine as part of disease prevention efforts. This result is supported by the research of Yuhara et al. (2020), which explains that the level of knowledge about traditional health is directly proportional to its utilization. In addition, economic problems may be one of the reasons respondents smoked and utilized more traditional health services, which were classified as cheaper than modern health services (Alfarizi, 2022; Adiyasa & Meiyanti, 2021).

This study also found that using traditional health services was significantly associated with ownership of family medicinal plants. The odds of using traditional health services were 25.18 times that of respondents who did not own any family medicinal plants (aOR=25.18; 95%CI: 12.41-51.07; p=<0.001). This was similar to other studies reporting that those who owned a family medicinal plant tended to use traditional health services more than those who did not own one (Gonzalez, 2021; Prasad, 2022; Subositi & Wahyono, 2019). This indicates that health education should be a priority, especially among community members who own family medicinal plants. The education should address various issues, including side effects, how to use them, and traditional medicine's legality and safety aspects.

Table 1. Univariable and multivariable analysis

Variables		n	%	Traditional Health Services		p	Univariable				Multivariable (1)			
				n	%		OR	(95 %	CI)	p	aOR	(95 %	CI)	p
Socio-demographic and Life Style Characteristics														
Age (years)														
	<25	100	15.5	10	10		1.00				1.00			
	25-59	485	75.1	66	13.6	*<.001*	1.41	0.70	2.86	*0.331*	1.55	0.65	3.68	*0.311*
	>60	61	9.4	19	31.1		4.07	1.74	9.51	*<0.001*	4.13	1.47	11.55	***0.007***
Medicinal Herb Garden														
	Do not have	620	92	59	9.5	*<.001*	1.00				1.00			
	Have	54	8	38	70.4		22.58	11.87	42.94	*<0.001*	25.18	12.41	51.07	***<0.001***
Excessive Physical Activity														
	No	340	50.4	41	12.1	*0.082*	1.00				1.00			
	Yes	334	49.6	56	16.8		1.46	0.95	2.26	*0.083*	1.37	0.81	2.31	*0.227*
Sex														
	Male	257	39.4	35	13.6	*0.474*	1.00				1.00			
	Female	396	60.6	62	15.7		1.17	0.75	1.84	*0.475*	0.83	0.39	1.78	*0.650*
To be continued…														

Occupation														
	Not working + House Wife	401	61.4	60	15		1.00				1.00			
	Formal Workers	119	18.2	20	16.8	*0.666*	1.14	0.66	1.99	*0.625*	1.16	0.54	2.49	*0.698*
	Informal Workers	133	20.4	17	12.8		0.83	0.46	1.48	*0.535*	0.91	0.37	2.22	*0.843*
Cigarette Smoking														
	Every day	132	20	11	8.3		1.00				1.00			
	Not every day	31	4.7	6	19.4	*0.061*	2.64	0.89	7.80	*0.079*	1.93	0.50	7.47	*0.339*
	Never	496	75.3	80	16.1		2.11	1.09	4.10	*0.027*	3.45	1.31	9.05	***0.012***
Traditional Health Service														
	Not used	577	85.6											
	Used	97	14.4											

Strengths and limitations of the study

This study used information from a large number of respondents, and the results obtained can represent conditions in the coastal area of Laha Village, Ambon City. Based on the researcher's knowledge, only some analyses have been conducted to assess the use of traditional health services and their determinants in the coastal area of Laha Village, Ambon City. These results are expected to provide input for program holders to design appropriate interventions for communities that use traditional health services. This study has several limitations. As in other cross-sectional studies, the results of this analysis can only describe the presence/absence of relationships between independent and dependent variables instead of the causal relationships. In addition, some variables lacked detailed information, such as the lack of detailed information on the routine use of traditional health services. The answers given by respondents came from memory based on experience, so there is potential for recall bias in the answers given. The types of illnesses included in the results are those reported by respondents at the time of data collection, not those that led respondents to seek traditional treatment.

Conclusion

This study showed an increased likelihood of using traditional health services in communities aged >60 years, those with family medicinal plants, and smoking habits. Respondents with a history of joint diseases and injury were also more likely to use traditional health services. Improving general community awareness regarding using traditional health services should become a priority. Health promotion interventions are essential to raise community awareness about traditional health services' safety and side effects.

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