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The Determinants of Community Activeness Behavior in Participating the Integrated Non- Communicable Disease Service Post (Posbindu PTM) at Pantai Raja Health Center

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ABSTRACT

The increase of mortality due to non-communicable diseases poses a serious threat to public health. Around 41 millions people passed away because of non-communicable diseases such as heart attack, cancer, Chronic respiratory diseases and diabetes. The aim of this study is to determine the determinants of community activeness behavior in participating in Integrated Non-Communicable Disease Service Posts (Posbindu PTM). This quantitative analytical research utilized a cross-sectional design, conducted from January to March 2023 with 194 respondents, carried out in the Pantai Raja District of Kampar Regency. The analysis employed univariate, bivariate, and multivariate analyses. The research findings indicate that the proportion of community activeness in participating in Posbindu PTM is 91 individuals (46.9%), with correlated variables being age with a 4 times likelihood, education with a 3 times likelihood, support from cadres with a 2 times likelihood, attitude with a 2 times likelihood, and occupation with a 2 times likelihood towards activeness in participating in Posbindu PTM. It is hoped that the health center will innovate NCD programs such as developing a NCD screening application accessible via computers or smartphones to facilitate self-screening. Furthermore, organizing communication training for cadres is essential. Cadres are expected to continuously provide education to increase community interest in attending Posbindu PTM.

Keywords : Age, education, attitude, occupation, cadre support, Posbindu PTM

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INTRODUCTION

Posbindu PTM is one of the health promotion efforts, namely community empowerment through Community-Based Health Efforts (UKBM). It involves the active participation of the community in controlling risk factors independently and continuously. The development of Posbindu PTM can be integrated with existing community-based efforts. It is an integral part of the healthcare system, organized based on the existing NCD issues in the community and encompassing various promotive, preventive efforts, and referral patterns (Ministry of Health of the Republic of Indonesia, 2012).

Nationally, the percentage of villages/urban wards conducting Posbindu activities in 2020 was 59.42% (48,559 villages/urban wards). In Riau province, the percentage was 46% (868 villages/urban wards) in 2020 (Ministry of Health of the Republic of Indonesia, 2021). However, these achievements have not yet met the targets set by the National Strategic Plan for NCDs (Renstra P2PTM) for 2020-2024, which aims for 80% coverage of villages/urban wards conducting early detection and control of NCDs (Ministry of Health, 2020).

Several factors contributing to low community visits to Posbindu PTM include knowledge, attitude, access to Posbindu, family support, and cadre support (Yandrizal et al., 2016; Dwisetoyo et al., 2020). The role of healthcare workers also contributes to the low visitation to Posbindu PTM. Healthcare workers play a crucial role in providing information and education about the purpose and benefits of Posbindu PTM (Ginting, 2019). Another contributing factor is employment status. Individuals who are unemployed have a greater opportunity or chance to utilize available services (Supriyatna et al., 2020).

The impact of low community visits to Posbindu PTM is the lack of control over non-communicable disease risk factors, resulting in disease complications. By understanding NCD risk factors such as smoking, lack of physical activity, unbalanced diet, alcohol consumption, high blood pressure, high blood sugar, high cholesterol, and others, individuals are expected to become more self-aware in controlling their risk factors and seek help from healthcare providers in healthcare facilities (Sudayasa et al., 2020).

According to the Health Profile Data of Kampar District in 2021, there are 237 Posbindu PTMs out of 250 villages. All health centers have Posbindu PTMs, but not all villages have them. This is because there are still remote villages that are difficult to reach (Kampar District Health Office, 2021). Pantai Raja Health Center is one of the health centers in Kampar that serves five villages: Pantai Raja, Hangtuah, Sialang Kubang, Lubuk Sakat, and Kampung Pinang. Each village has one Posbindu, and it operates once a month. Posbindu PTM continued to operate monthly in 2021 despite the COVID-19 pandemic.

Based on initial interviews with the responsible person for the PTM program at Pantai Raja Health Center, it was found that the low visitation to Posbindu PTM is due to the community's focus more on treatment rather than early prevention. Many uncontrolled NCD cases impact health conditions, sometimes requiring hospitalization. The majority of those who actively visit Posbindu PTM complain of NCD risks at age ≥ 45 years.

The research objective is to identify the determinants of community activeness behavior in participating in the Integrated Non-Communicable Disease Service Post (Posbindu PTM) in the Work Area of Pantai Raja Health Center, Kampar District in 2023.

METHODS

This study uses an observational analytical quantitative approach with an Analytic Cross-Sectional Study design. The aim is to simultaneously examine the relationship between causal factors (Independent Variables) and effect factors (Dependent Variables) in a population, meaning all variables, both independent and dependent, are observed/measured at the same time (Lapau, 2015). The research was conducted in all Posbindu PTMs within the work area of Pantai Raja Health Center, totaling five Posbindu PTMs, in February 2023. The population in this study comprises individuals aged ≥ 15 years who visit Posbindu PTM in the work area of Pantai Raja Health Center. To determine the minimum sample size, the Sample Size For One Sample Test Of Proportion table was utilized (Level of Significance 5%; Power 90%) with Alternative Hypothesis: 1 Sided (WHO, 1986 in Lampau, 2013). Samples were selected using simple random sampling. The Inclusion Criteria include respondents aged ≥ 15 years, residing in the Pantai Raja health center area for at least 1 year, individuals who attend and are registered in the Posbindu PTM registration, and willing to participate as

respondents. The independent variables in this study include age, occupation, education, gender, income, knowledge, attitude, access to Posbindu PTM, family support, Posbindu cadre support, needs, and the role of healthcare workers, while the dependent variable is Activeness in Participating in Posbindu PTM. Statistical analysis includes univariate analysis to generate frequency distribution descriptions of each variable presented in tabular form. Bivariate analysis is performed to examine the relationship between two variables, i.e., independent and dependent variables. Chi-square test is utilized in bivariate analysis. Multivariate analysis is conducted to determine the relationship between independent and dependent variables, calculating the Prevalence Odds Ratio (POR) and eliminating the influence of confounding variables. The multivariate analysis used in this study is multiple logistic regression to obtain the best and simplest model that describes the relationship between the dependent variable and independent variables. The research procedure for multivariate analysis includes Bivariate Selection, Modeling Stage, Confounding, and Interaction Testing (Modification Effects).

RESULT

According to the Table 1 below, it shows that there are 91 individuals (46.9%) actively participating in Posbindu PTM, 67 individuals (34.5%) are aged ≥ 45 years, 72 individuals (37.1%) are unemployed, 79 individuals (40.7%) have high education, 103 individuals (53.1%) are male, 86 individuals (44.3%) have sufficient income, 50 individuals (25.8%) have good knowledge, 80 individuals (41.2%) have a positive attitude, Posbindu access is easily reachable for 123 individuals (63.4%), 102 individuals (52.6%) receive family support, 66 individuals (34%) receive cadre support, 140 individuals (72.2%) find the services beneficial, and 111 individuals (57.2%) recognize the role of healthcare workers.

Table 1. Frequency Distribution Based on Dependent and Independent Variables in the Work Area of Pantai Raja Health Center, Kampar District in 2023.

Dependen Variable	F (n=194)	%
o.		
Activeness in Participating in Posbindu PTM		
Inactive	103	53,1
Active	91	46,9
o		
Independen Variable		
Age		
< 45 years	127	65,5
≥ 45 years	67	34,5
Occupation		
Working	122	62,9
Unemployment	72	37,1
Education		
Low (Primary)	115	59,3
High (High School)	79	40,7
Gender		
Male	103	53,1
Female	91	46,9
Income		
Insufficient	108	55,7
Sufficient	86	44,3
Knowledge		
Less	144	74,2
Good	50	25,8
Attitude		

	Negative	114	58,8
	Positive	80	41,2
	Posbindu Access		
	Unreachable	71	36,6
	Reachable	123	63,4
	Family Support		
	Unsupportive	102	52,6
	Supportive	92	47,4
	Cadre Support		
0	Unsupportive	128	66,0
	Supportive	66	34,0
	Needs		
1	Unbeneficial	54	27,8
	Beneficial	140	72,2
	Healthworker Role		
2	No role	83	42,8
	In role	111	57,2
	Total	194	100

According to the statistical test results in Table 2, out of the 12 variables, p-values < 0.05 were obtained. Therefore, out of the 12 variables, they are associated with the community's activeness behavior in participating in the Integrated Non-Communicable Disease Service Post (Posbindu PTM) in the work area of Pantai Raja Health Center, Kampar District in 2023.

Table 2. Determinants of Community Activeness Behavior in Participating in the Integrated Non-Communicable Disease Service Post (Posbindu PTM) in the Work Area of Pantai Raja Health Center, Kampar District in 2023

	Age	Activeness Participating Posbindu PTM				Total	T value	R	PO (95% CI)
		Inactive	Inact	Acti	ve				
Years	< 45	0	3%	7	7%	27	00	,000	6 (1,752-6,052)
Years	≥ 45	3	4,3%	4	5,7%	7	00		
	Total	03	3,1%	1	6,9%	94	00		
	Occupation								
	Working	4	0,7%	8	9,3%	22	00	,009	6 (1,261-4,142)
	Unemployment	9	0,3%	3	9,7%	2	00		
	Total	03	3,1%	1	6,9%	94	00		
	Education								

Low (Primary)	9	0,0%	6	0,0%	15	00		1,98
High (High School)	4	3,0%	5	7,0%	9	00	,012	5 (1,1 10-3,549)
Total	03	3,1%	1	6,9%	94	00		
Gender								
Male	4	2,1%	9	7,9%	03	00		2,18
Female	9	2,9%	2	7,1%	1	00	,011	8 (1,2 31-3,889)
Total	03	3,1%	1	6,9%	94	00		
Income								
Insufficient	6	1,1%	2	8,9%	08	00		2,08
Sufficient	7	3%	9	7%	6	00	,018	1 (1,1 70-3,702)
Total	03	3,1%	1	6,9%	94	00		
Knowledge								
Less	3	7,6%	1	2,4%	44	00		2,04
Good	0	0%	0	0%	0	00	,047	1 (1,0 60-3,930)
Total	03	3,1%	1	6,9%	94	00		
Attitude								
Negative	9	0,5%	5	9,5%	14	00		2,07
Positive	4	2,5%	6	7,5%	0	00	,020	5 (1,1 60-3,709)
Total	03	3,1%	1	6,9%	94	00		
Posbindu Access								
Unreachable	0	2,3%	1	7,7%	1	00		0,50
Reachable	3	9,3%	0	0,7%	23	00	,032	1 (0,2 77-0,906)
Total	03	3,1%	1	6,9%	94	00		
Family Support								
Unsupportive	5	5,0%	5	5,0%	00	00		0,50
Supportive	8	1,7%	6	8,3%	4	00	,029	8 (0,2 86-0,901)
Total	03	3,1%	1	6,9%	94	00		
Cadre Support								

Unsupportive	6	9,4%	2	0,6%	28	00		2,11
Supportive	7	0,9%	9	9,1%	6	00	,022	1 (1,154-3,863)
Total	03	3,1%	1	6,9%	94	00		
Needs								
Unbeneficial	2	0,7%	2	9,3%	4	00		0,50
Beneficial	1	7,9%	9	2,1%	40	00	,048	1 (0,265-0,948)
Total	03	3,1%	1	6,9%	94	00		
Healthworker Role								
No role	9	4,9%	4	5,1%	3	00		0,49
In role	4	6,7%	7	3,3%	11	00	,043	9 (0,266-0,937)
Total	03	3,1%	1	6,9%	94	00		

Based on the multivariate analysis conducted with 7 (seven) modeling iterations of variables resulting in a p-value < 0.05, variables significantly associated with community activeness in participating in Posbindu PTM are age, the role of healthcare workers, Posbindu access, education, cadre support, attitude, and occupation. Conversely, variables not associated with activeness in participating in Posbindu PTM are gender, needs, income, knowledge, and family support. The most dominant variable affecting community activeness in participating in Posbindu PTM is age, with a likelihood of 3.755 times, followed by education with a likelihood of 2.973 times, cadre support with a likelihood of 2.387 times, attitude with a likelihood of 2.307 times, and occupation with a likelihood of 2.210 times, indicating that age is the most dominant variable affecting community activeness in participating in Posbindu PTM. Variables associated with community activeness in participating in Posbindu PTM are age, the role of healthcare workers, Posbindu access, education, cadre support, attitude, and occupation. Variables not associated with community activeness in participating in Posbindu PTM are gender, needs, income, knowledge, and family support. Confounding variables in this study are gender, needs, income, knowledge, and family support.

DISCUSSION

The Determinants of Behavior Influencing Community Participation in Integrated Non-Communicable Disease (NCD) Service Posts (Posbindu PTM).

Age is one of the predisposing factors, specifically a socio-demographic factor. According to Green's theory in Notoatmodjo (2012), socio-demographic factors such as social status (based on income, education, occupation, residential area, and others), age, gender, ethnic group, family, and history influence health-related behaviors. The variable of age can be used to group targets or individuals for planning purposes. More specifically, planning to increase the coverage of visits to posbindu. This research is similar to a study conducted by Rusmiati (2021), which found a significant relationship between age and value ($p=0.004$). Ratnaningsih (2021) also indicates a relationship between age and the level of posbindu visits ($p=0.004$). People above 45 years old are less active in visiting posbindu. The age group above 45 years old is mostly composed of individuals who are no longer productive, especially in rural areas where they previously spent more time outside the home, such as in the fields. In this situation, they spend more time at home, even though their population is not large. However, they feel a positive impact from visiting posbindu compared to spending time at home.

There is a relationship between occupation and community participation in posbindu PTM, and the multivariate results show that occupation is related to community participation in posbindu PTM. This research is consistent with a study by Mashdariah (2019), which shows no significant relationship between employment status and the role of the community in Posbindu PTM activities in Gresik District, as well as with a study by Rayhana (2017), which shows no relationship between occupation and the utilization of Posbindu PTM. Research conducted by Yusnani (2023) indicates a significant relationship between tool support and non-working mothers' participation in Posbindu PTM in Medan City. Non-working individuals who are active in posbindu are generally interested in new activities that benefit them. In this case, posbindu activities initiated by health centers are often attended by non-working individuals, allowing them to utilize their free time for health check-ups and to assess the health status they perceive.

Education is related to the community's activeness in participating in Posbindu PTM. A high level of education is not necessarily accompanied by awareness and good knowledge about Posbindu itself, thus leading to a lack of understanding of its benefits. Low levels of education tend to result in low knowledge about the importance of health (Mardhiyati, 2019). The findings of this study are consistent with research conducted by Rochimat (2022), which found significant differences in the intention of the community to visit Posbindu PTM among the three levels of education (p -value 0.035), and research conducted by Nasruddin (2017) differs from the findings of the researchers, with $p=0.052 > 0.05$, indicating no significant relationship between the level of education and the utilization of Posbindu. People with higher education levels are not very active in posbindu; individuals or communities with better or higher education generally do not feel the importance of coming to posbindu because they can obtain all the activities available at posbindu without having to visit. People with higher education always strive to increase their knowledge and insight in their own way, such as accessing various information they need through the internet, including in the field of Health, so the information they obtain is much more comprehensive.

Attitude is related to the community's activeness in participating in posbindu PTM. Attitude is a factor that plays a role in health behavior. Attitude does not automatically translate into action; to realize this attitude, concrete action and other supporting factors are needed to condition and facilitate this attitude. Attitudes are formed because of personal experiences, the influence of important others, cultural influence, mass media, educational institutions, religious institutions, and emotional factors. This research is consistent with Ginting's study (2019), which found a sig- p value of $0.017 < 0.05$, meaning that attitude significantly influences the utilization of Posbindu PTM. Sandra's study (2018) also found Chi-square test results with a P value = 0.003 (P -value < 0.05), indicating that attitude is significantly related to the utilization of Posbindu PTM. Valentina's study (2023) also found a relationship between attitude and the utilization of Posbindu PTM ($p=0.001$). Despite the positive attitudes, not many are active in posbindu; posbindu activities organized by health centers are well received by the community, but they are not immediately willing to actively participate by visiting various activities at posbindu. This phenomenon contradicts statements and actions, where the community is aware of the benefits of posbindu activities but is unwilling to come and utilize the existence of posbindu. This may be due to the weak determination of the community to improve their health status.

There is a relationship between access to posbindu and the community's activity in participating in posbindu PTM. Access to healthcare services in this case refers to the distance, which is the measure of the proximity of one's home or residence to the Posbindu where health services are provided for the community in their area. According to the National Education Department, distance is the space between two objects or places, namely the distance between the home and Posbindu (Ginting, 2018). Arfan (2017) indicates that distance is the ability of humans to organize observations. Distance is one of the factors that affects the elderly in visiting or not visiting Posyandu. In this case, the elderly have a perception in analyzing the distance of healthcare services, as distance is one of the supporting factors that enables someone to behave. Research conducted by Ginting (2018) found that travel distance has a sig- p value of $0.041 < 0.05$, meaning there is a relationship between travel distance and the utilization of Posbindu PTM in the elderly, and research conducted by Supriyanto (2020) found a significant relationship between the distance of healthcare facilities and visits to Posbindu PTM in the elderly in the working area of Basuki Rahmad Public Health Center, Bengkulu City ($p=0.000$).

There is a relationship between the role of cadres and the community's activity in participating in posbindu PTM. Green's theory in Notoatmodjo (2012) states that the role of cadres is one of the supporting factors in health behavior because it is a factor that accompanies behavior, providing rewards and playing a role in maintaining or eliminating behavior. The implementation of Posbindu PTM is carried out by health cadres who already exist or by several individuals from each group/organization/institution/workplace who are

willing to organize Posbindu PTM. Cadres, in addition to their duties and functions, must also be able to communicate effectively, including persuading and motivating groups and communities. Cadres must also be able to nurture all aspects related to Posbindu (Trilianto, 2020). Research conducted by Trilianto (2020) found that cadre support has a sig-p value of $0.000 < 0.05$, meaning there is a relationship with the utilization of Posbindu PTM. Pebri's research (2021) found a relationship between the role of cadres and the utilization of elderly posyandu, as seen from the Chi-square test results with a value of $P = 0.029$. Cadres have shown positive support, but it has not significantly impacted community visits to posbindu. This may be because the support provided by cadres has not fully been able to change the interests and desires of the community in utilizing posbindu, where support in the form of concrete actions and behaviors is not accompanied by abstract support such as communication in symbolic language like body language that is not friendly, which sometimes goes unnoticed by cadres, thus resulting in a low number of community visits to posbindu.

The role of healthcare workers is related to the community's activity in participating in Posbindu PTM. Healthcare workers also play a crucial role in enhancing the quality of healthcare services to the community so that people can improve their awareness, willingness, and ability to lead healthy lives, thus achieving the highest possible level of health as an investment in the development of socially and economically productive human resources. Healthcare workers consist of several personnel whose work is interrelated, including doctors, dentists, nurses, midwives, and other medical personnel. Research conducted by Ginting (2018) found a result of $0.415 > 0.05$, meaning there is no relationship between healthcare worker support and the utilization of Posbindu PTM in the elderly. Purdiyani's research (2018) found a relationship between healthcare worker support and the utilization of Posbindu PTM. This can be seen from the Chi-square test results with a value of $P = 0.002$. Healthcare workers, as the frontline in improving the health status of the community, including through posbindu activities, have already played their role effectively. However, the low interest of the community in visiting posbindu may be due to the fact that while healthcare workers have played their role qualitatively well, quantitatively, the number of healthcare workers involved in posbindu is not representative enough. As a result, the message conveyed to the community may not be effectively delivered, leading to a low number of community visits to posbindu. Consequently, the programs planned within these initiatives may not be fully realized.

Determinants of Behavior That Do Not Affect the Community's Activity in Participating in Integrated Non-Communicable Disease Prevention Posts (Posbindu PTM) in the Work Area of Pantai Raja Public Health Center, Kampar District, 2023.

Gender is not related to the community's activity in participating in Posbindu PTM. The higher number of women visiting is due to the fact that female respondents generally have more time at home, such as managing household chores, allowing them more time to visit Posbindu PTM compared to male respondents who are often outside the home earning a living (Supriyatna, 2020). This research is consistent with a study conducted by Mashdaryah (2019), which shows no significant relationship between gender and the role of the community in Posbindu PTM activities in Gresik District. This differs from the research conducted by Kurnia (2017), which found a relationship between gender and visits by productive-age individuals to Posbindu PTM. Women are more active in visiting posbindu than men. This could be because women, as homemakers, feel they have a greater role in determining the well-being of their families, including health. Therefore, they feel it is important to understand various aspects related to their family's health and actively visit posbindu. On the other hand, men spend more time outside the home earning income for their families, so they may not feel the need to visit posbindu.

Needs are not related to the community's activeness in participating in posbindu PTM. This study contradicts the research conducted by Salam (2020), which showed results indicating a relationship between needs and the activity of visits to Integrated Non-Communicable Disease Service Posts (Posbindu PTM) in the Work Area of Summersari Health Center, and research conducted by Sari (2018), which found a significant relationship between the need for Posbindu PTM and the utilization of Posbindu PTM. The community's need for posbindu is very high, yet visits to posbindu are not frequent. This can be attributed to the fact that the community's needs can change over time, and at certain times, the needs they expect can already be met elsewhere and at different times, such as the need for health information. Sometimes, people can obtain this information on their own, such as by accessing information on the internet, and as a result, they may not visit posbindu, even though they had previously planned to do so.

Income is not related to the community's activeness in participating in posbindu PTM. Socio-economic conditions have not been proven to be a factor influencing the activity of elderly visits to posyandu. Socio-economic conditions measured in this study include family income, where low family income can also affect the overall family's condition. The issue of visits to posbindu PTM is suspected to contribute to the ability to provide funds to make individuals healthy for health needs and purposes (Maryati, 2020). This study aligns with research conducted by Lestari (2015), which found no influence of socio-economic factors on the activity of elderly visits to posbindu. In contrast, research conducted by Maryati (2020) found a relationship between income and visits to Posbindu PTM in West Tulang Bawang District. Despite sufficient income, only a few people are actively coming to posbindu. This may be due to the fact that with sufficient income, people have various alternatives to obtain health services, such as visiting health clinics, hospitals, and so on. Therefore, people with sufficient income may not see the need to visit posbindu.

Knowledge is not related to the community's activity in participating in posbindu PTM. This study contradicts the research conducted by Mashdariyah (2019), which found a significant relationship between the level of knowledge and the role of the community in Posbindu PTM activities in Gresik District, as well as the research conducted by Kurnia (2017), which found a relationship between respondents' knowledge and the visits of productive-age community members to Posbindu PTM Puri Praja. Valentina's research (2023) found a relationship between knowledge and the utilization of Posbindu PTM. Despite having good knowledge, only a few people come to posbindu. This may be because their good knowledge can be disregarded if they do not visit posbindu, or they may compensate in other ways, such as accessing the internet as a source of knowledge to learn about various symptoms or causes of specific diseases without having to visit posbindu.

Family support is not related to the community's activity in participating in posbindu PTM. This study aligns with the research conducted by Kurnia (2017), which found no relationship between family support and the visits of productive-age community members to Posbindu PTM Puri Praja. In contrast, Supriyatna's research (2020) found that family support is related to the utilization of Posbindu PTM. This study contradicts Valentina's research (2023), which found a relationship between family support and the utilization of posbindu PTM. Family support that encourages visiting posbindu is not directly proportional to the level of visits. This may be due to the weak interest of individuals in utilizing posbindu services, where family support is only an external factor and may not be able to change the beliefs of individuals to come to posbindu. The willingness of individuals to come to posbindu arises from within themselves, and family support only acts as a supporting factor.

CONCLUSIONS

The proportion of community participation in posbindu PTM is 91 people (46.9%), with the dominant variables being age with a 4-fold chance, education with a 3-fold chance, cadre support with a 2-fold chance, attitude with a 2-fold chance, and occupation with a 2-fold chance of participating in posbindu PTM. The variables related to the activity of posbindu PTM are age, occupation, education, attitude, access to posbindu, cadre support, and the role of healthcare workers (p value < 0.05).

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