

Description of Blood Pressure in Tuak Consumers in Porsea District

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ARTICLE INFO	ABSTRACT
<i>Keywords:</i> Blood pressure, hypertension, alcohol, palm wine	Hypertension is a disease that has become a big problem in the world. Based on WHO's data in 2018, this hypertension affects about 22% of the world's population, and about 25.8% of the Indonesian population aged 18 years. One of the risk factors for hypertension was consuming alcohol. Palm wine is a traditional drink that contains alcohol. The purpose of this study was to determine the description of blood pressure, frequency and quantity of palm wine consumption in adult men in Porsea District. This study used a descriptive method with a cross-sectional approach. Using 98 adult males as a sample. Blood pressure examination wascarried out in accordance with the provisions of JNC VIII using a stethoscope and aphygmomanometer. Provisions of the quantity and frequency of palm wine consumption were measured using a questionnaire. With 100 adult males as subjects which is consuming palm wine in Porsea District, based on the quantity of palm wine consumption, the distribution with the most was level 3 drinkers (63.0%). Based on the frequency of palm wine consumption with the most is frequent drinkers (80.0%). Based on blood pressure, the highest distribution was those with grade I hypertension (40.0%). Most of the research subjects belonged to the group of level 3 drinkers, frequent drinkers, and most experienced level I hypertension. So based on this data, palm wine can indirectly affect the increase pf blood pressure in adult males in Porsea District
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1. INTRODUCTION

Hypertension is a disease that is a big problem in the world. Hypertension is generally defined as a resting systolic blood pressure (SBP) above 140 mmHg or a resting diastolic blood pressure (DBP) above 90 mmHg. Based on dataAccording to WHO in 2018, this disease affects 22% of the world's population, and around 36% of the population in Southeast Asia. Meanwhile, in Indonesia WHO data shows that 25.8% of Indonesia's population aged ≥ 18 years suffer from hypertension. Hypertension meris a condition that cannot be underestimated because it can cause other health problems such as CHD (Coronary Heart Disease). Based on data from the Centers for Disease Control and Prevention (CDC), men have a greater chance of developing hypertension, around 31.0%, compared to women, 29.7%. According to WHO the risk factors for hypertension are divided into 2, which can be modified and which cannot be modified. Modifiable risk factors include an unhealthy diet (consumption of excess salt, a diet high in saturated fat, and low intake of fruits and vegetables), lack of physical activity, consumption of tobacco (smoking) and alcohol, and obesity. Non-modifiable factors are family history of hypertension, age over 65 years, and co-morbidities such as diabetes or kidney disease.

According to Maria Carmen Viana's research, which used 7,655 research subjects, aged 35 to 74 years, it appears that alcoholic drinkers who have a habit of drinking more than 2-3 times a week have a 70% chance of experiencing an increase in blood pressure. Research by Ian B. Puddey also states that alcohol and blood pressure are a causal relationship. 9 Research by I Gusti Ayu Ninik Jayanti with a sample of 87 tourism workers shows that there is a significant relationship between the type of drink and the incidence of hypertension. The author is interested in conducting research on the description of blood pressure in palm wine drinkers in the community in Porsea District.



2. METHODS

Research Design This research is a descriptive study with a cross sectional approach. Place and time of research This research was conducted in Porsea District from October to November 2022. The target population in this study were adults in Porsea District. The reachable population in this study is the adult male community in Porsea District. The sample and sample selection method used in this study were people in Porsea District who met the inclusion criteria and did not meet the exclusion criteria. The sampling technique in this study used purposive sampling (judgment sampling). The calculation of the sample size in this study used a categorical descriptive formula.

3. RESULTS AND DISCUSSION

This research was conducted in Porsea District which consisted of 100 adult males consuming palm wine and smokers as research subjects and all of them met the exclusion and inclusion criteria set by the researchers. The research subjects were selected through a purposive sampling method (judgment sampling). The age group with the most research subjects was the group with an age range of 40-49 years, namely 35 people (35%). The least age group is the age group with a range of 18-28 years totaling 8 people (8%).

Table 1 Distribution of Respondents by Age					
Age (Years) Frequency (n) Percentage (%)					
18-28	8	8.0			
29-39	28	28.0			
40-49	35	35.0			
50-60	29	29.0			
Total	100	100.0			

The quantity of palm wine consumption in one day among 100 research subjects, which is the smallest group, is the level 1 drinker category with a total of 1 person (1%) and the largest group is the level 3 drinker category with a total of 62 people (62%).

Table 2 Distribution of Respondents Based on the Quantity of Tuak Consumption					
Quantity (cups/day) Frequency (n) Percentage (%)					
Level 1 drinker (≤2 cups/day)	1	1.0			
level 2 drinker (2-3 glasses/day)	37	37.0			
Level 3 drinker (>3 glasses/day)	62	62.0			
Total	100	100.0			

The distribution of respondents based on the frequency of palm wine consumption in 100 research subjects, there were 2 people (2%) who were drinkers with the criteria of being rare or it could be said to be the criterion with the smallest number of groups. The research subjects with moderate criteria totaled 18 people (18%), while the largest group was drinkers with frequent criteria with a total of 80 people (80%).

Table 3 Distribution of Respondents Based on Palm Oil Consumption Frequency

Frequency (times/week)	Frequency (n)	Percentage (%)
Seldom (1-3 times/week)	2	2.0
Currently (4-6 times/week)	18	18.0
Often (≥7 times/week)	80	80.0
Total	100	100.0

The palm wine drinkers are checked for blood pressure. There were 19 people (19%) who had normal blood pressure. The research subjects who experienced pre-hypertension were 30 people (30%). The research subjects who had grade 1 hypertension were the largest group with a total of 40 people (40%). Subjects with grade 2 hypertension were the least group with 11 people (11%).



Table 4. Distribution of Respondents Based on Blood Pressure					
Blood pressure (mmHg)	Frequency (n)	Percentage (%)			
Normal (120/80mmHg)	19	19.0			
Pre Hypertension (120/80 – 139/89mmHg)	30	30.0			
Grade 1 hypertension (140/90 – 159/99mmHg)	40	40.0			
Grade 2 hypertension (≥160mmHg)	11	11.0			
Total	100	100.0			

The relationship between the frequency of palm wine consumption and the degree of hypertension can be seen from the results of the cross tabulation between the frequency of palm wine consumption and the degree of hypertension.

Table 5	Distribution b	petween the	frequency o	of palm	wine c	onsumption	and the	degree o	f
			have out						

nypertension					
Blood pressure	Frequency				
(mmHg)	Seldom	Currently	Often	Total	
120/80 mm Hg	1	2	16	19	
120/80 – 139/89 mm Hg	1	6	23	30	
140/90 – 159/99 mm Hg	0	9	31	40	
≥160mmHg	0	1	10	11	
Total	2	18	80	100	

The results of the cross-tabulation between the frequency of palm wine consumption and the incidence of hypertension, the highest group when viewed from the frequency is included in the frequent category with a total of 80 people (80%) and 41 of them have high blood pressure. While the group with the smallest number according to frequency is the group of drinkers who are included in the category of infrequent drinkers (2%).

The correlation between the quantity of palm wine consumption and the degree of hypertension can be seen from the results of the cross tabulation between the quantity of palm wine consumption and the degree of hypertension. The biggest group is drinkers with level 3 drinking category with a total of 62 people and 52 of them have high blood pressure. While the smallest group based on quantity, is the group of drinkers with the category of level 1 drinkers with a total of 1 person and the subject also has high blood pressure.

nypertension					
Blood pressure		Quantity			
(mmHg)	Level 1	Level 2	Level 3	Total	
	Drinker	Drinker	Drinker		
120/80 mm Hg	0	9	10	19	
120/80 - 139/99	1	11	18	30	
140/90 – 159/99 mm Hg	0	17	23	40	
≥160mmHg	0	0	11	11	
Total	1	37	62	100	

Table 6 Distribution between the frequency of palm wine consumption and the degree of

The frequency of palm wine consumption and the quantity of palm wine consumption shows that based on frequency, the largest group is drinkers who fall into the category of frequent drinkers with a total of 80 people (80%) and 59 of them fall into the criteria for level 3 drinkers. Meanwhile, the smallest group based on the frequency of palm wine consumption is drinkers who fall into the category of rare drinkers with a total of 2 people (2%) where 1 of them is a level 1 drinker, and the other one is a level 2 drinker.



Frequency

		rrequency			
		Seldom	Currently	Often	Total
Quantity	Level 1 drinker	1	0	0	1
-	Level 2 drinker	1	15	21	37
	Level 3 drinker	0	3	59	62
Total		2	18	80	100

Table 7 Distribution of Palm Oil Consumption Quantity with Palm Oil Consumption Frequency

This research was conducted by involving 100 people as research subjects, all of whom were adult males aged 18-60 years. Of the 100 study subjects, the largest group was the group with first-degree hypertension with a total of 40 people (40%), followed by a group that was categorized into the pre-hypertension group, namely 30 people (30%). Based on the results of this study, it can be concluded that out of the 100 people who consume palm wine who are the subjects of research in Porsea District, there are more people who have blood pressure above normal compared to people who have normal blood pressure. As explained in the literature review, after further study, The mechanism by which alcohol causes hypertension is because alcohol consumption can stimulate the release of epinephrine or adrenaline which causes vasoconstriction or narrowing of blood vessels and causes water and sodium accumulation. The results of this study are in line with research conducted by I Gusti et al, which stated that out of 100 people who consumed palm wine in Bali who were used as research subjects, there were 62 people who had blood pressure above normal.

The results of the quantity of palm wine consumption on the degree of hypertension can be seen that the level 3 drinking group is the group with the highest number, namely 62 people. Of the 62 people who were included in the level 3 drinking group, there were 52 people who had high blood pressure. This is in line with research conducted by Jane et al, which stated that the higher the quantity of alcohol consumption, the risk of experiencing high blood pressure will also be higher, and vice versa if the quantity of alcohol consumption is smaller, the risk of experiencing high blood pressure will also be higher. small. Meanwhile, in the results between the frequency of palm wine consumption and the degree of hypertension, it can be seen that the group with the most number is the drinking group which is included in the criteria of frequent drinkers. Of the 80 subjects of this study, There are 41 people who have high blood pressure. This is in line with the results of research conducted by Ida Ayu on 33 respondents. The data shown from the results of this study there were 13 people (39.4%) included in the group of frequent drinkers. The data from this study also showed that the group of frequent drinkers was the group with the largest number of research subjects, and of the 13 people, there were 7 people (53.8%) who had high blood pressure. In the research conducted by Putu concerning the relationship between the level of palm wine consumption and hypertension, he explained that there was a significant relationship between the level of palm wine consumption and hypertension. This is also in accordance with the results of the data shown in the study of Susiani et al regarding the analysis of factors associated with the risk of developing hypertension which states that consuming more than 2 glasses of alcohol per day can increase blood pressure. However, alcohol (wine) is not the only risk factor that can cause hypertension. This is also in accordance with research conducted by Susiani et al which states that there are several things that are risk factors for the cause of hypertension, namely, genetics, age, sex, race, and also lifestyle.

4. CONCLUSION

Based on the frequency and quantity of palm wine consumption in this study, palm wine could indirectly affect the increase in blood pressure in men.

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