ORIGINAL RESEARCH

Cultural penetration in preventing hypertension in the Ammatoa Kajang Tribe Community, Indonesia: An Epidemiologic Perspectives of Non-communicable Diseases

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Introduction

The World Health Organization (WHO) states that non-communicable diseases cause 71% of deaths globally with the highest position being caused by cardiovascular disease and hypertension accounting for 23.7% of the causes of death[1]. If left untreated, hypertension can develop into chronic kidney disease, stroke, heart disease, and etc[2]. South Sulawesi is one of the provinces in Indonesia that experiences fluctuations in the prevalence of hypertension. Based on Riskesdas data in 2018, the prevalence of hypertension based on population data Age 18 was diagnosed by a doctor or taking anti-hypertensive drugs, South Sulawesi is in fourth place with a total of 21,142 cases[2].

Based on the theory of H. L. Bloom, the degree of public health referred to as socio-psychosomatic health well being resultant consists of four factors: environment, behavior, genetics, and health services. Several studies have shown a link between cultural factors and individual behavior[3,4]including habits and responses to health or illness in society[5].

The results of cross-cultural studies show that each culture and society has a specific explanation regarding health maintenance efforts and disease healing methods[6]. Ethnic, cultural, and social group differences greatly affect disease and health. The traditional medicine system is not just a medical and economic phenomenon, yet, more broadly as a socio-cultural phenomenon [7].

Ammatoa Kajang is one of the areas located in Bulukumba district, South Sulawesi province, which until now still recognize and apply local cultural wisdom and their ancestral heritage. One of them is the local wisdom of the

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community in preventing and overcoming disease problems that are often suffered by the indigenous people of the Ammatoa Kajang tribe [8].

Based on preliminary data at the Tanah Toa Kajang Public Health Center, which is the closest health center and the most frequently visited by indigenous peoples of the Ammatoa Kajang tribe, it is known that from the data for the 10 highest diseases at Tanah Toa Health Center in 2021, hypertension is in first place or the highest prevalence cases in Indonesiawith the number of hypertension sufferers as many as 257 cases. Although research related to hypertension has been carried out, including hypertension in adolescents [9], productive age [10], employee [11],andpregnant mother[12]. However, only sufficient research has been conducted regarding the role of culture in preventing hypertension in South Sulawesi. Therefore, researchers are interested in getting a cultural description on preventing hypertension in the people of the Ammatoa Kajang Tribal Area, Bulukumba, South Sulawesi.

Method

This type of research is a qualitative with an ethnographic approach and supported by a phenomenological approach. This approach to comprehending cultural phenomena, which includes some requirements not present in quantitative research[13]. The informants in this study were nine people consisting of hypertension sufferers, families of hypertension sufferers, health workers, and traditional leaders of the Ammatoa tribe. The sampling technique used is the purposive sampling.

Data collection methods were carried out in two ways: observation and interviews. Observations were made on the living habits of the people at the research location, to obtain valid evidence in the research including people's behavior or daily activities which are useful in the information validation process. Meanwhile, information related to experiences, opinions, beliefs, knowledge of norms, values, attitudes and responses is carried out using in-depth interview techniques using interview guides that have been made previously and developed according to needs in the field.

Data processing and analysis is carried out by means of data reduction, data presentation, and drawing conclusions. Nvivo will be used in processing research data due to maximizing interview results. Nvivo is an application (Software) used to carry out analytical data processing on qualitative data which makes it easier for researchers to analyze data from interviews and direct observations. Testing the validity of the data is carried out by means of source triangulation, namely the technique of collecting information from various sources. The principle of triangulation is that information must be collected or sought from different sources, yet it cannot be grouped together. Triangulation is carried out to strengthen the data, to make researchers confident in the correctness and completeness of the data.

Result and Discussion

Perceptions of the Ammatoa Kajang indigenous people regarding hypertension

The results of the interviews showed that the public's understanding of hypertension in this study was still sufficient. The majority of informants said that they only understand the concept of hypertension as high blood pressure without knowing other information, such as the division of categories of low blood pressure, normal blood pressure, and high blood pressure. This is due to the limited access of people in this area to information related to hypertension. However, according to the American guideline altered the edge values for hypertension definition to $\geq$ 130/80 mmHg. The categories inside the hypertensive bunch are diminished to two (stage 1,

characterized as blood pressure values between 130–139 and/or 80–89 mmHg and stage 2, ≥ 140/90 mmHg)[14].

The prohibition of using modern tools has resulted in most of the indigenous people of the AmmatoaKajang tribe being blind to the internet so that their literacy of information, including health information, is very limited. In addition to technological factors, the customary area is located far from the highway and the prohibition on the use of vehicles in this area causes the interaction of health workers or indigenous peoples to be very limited. As a result, these indigenous peoples rarely receive health information from local health workers.

In the aspect of health anthropology studies regarding cultural factors, as stated by one of the informants, namely HR, the area of the AmmatoaKajang tribal is an area that is still very thick with the culture of their ancestors; they only occasionally visit the primary health centre or commonly known as *Puskesmas* and rarely attend health counseling. They visitShaman or commonly known as *Sanro* more often or take traditional medicine, except when they have seriousillness, they were sent to *Puskesmas*. The informant also said that in the area of the Ammatoa tribal is not allowed to use modern tools such as cellphones, electricity, and others.

Public perception regarding factors that cause hypertension

Indigenous people's perceptions regarding the factors that cause hypertension are vary such as consuming excessive salt, too much thought to the factor of *nipitabai* (witchcraft/*teluh*), and etc. According to one of the informants of this study, a person's blood pressure can be high because of a disease transmission from someone who is not happy with the sufferer. In addition, the effect of many thoughts (stress) accelerates the entry of witchcraft into the body. Even so, some informants said that a person's high blood pressure was caused by the food they consumed such as salty food, coconut milk, and durian.

Research conducted byWahyuni and Pratiwi, 2022showed that depression, anxiety, and stress had a significant relationship to blood pressure in hypertensive patients[15]. Stress occurs because there is pressure from the environment that causes psychological demands where blood pressure increases during stress. In addition to psychological factors, the role of food also contributes to the incidence of hypertension, especially foods high in sodium/salt (salted fish, MSG.) or lower blood pressure[16,17].

Efforts to prevent and treat hypertension in the Ammatoa tribal area

The results of research interviews that have been conducted in the traditional area of the AmmatoaKajang Tribe found that there are several things that are usually done by the community if they feel dizzy, namely *a'ling* (reducing) consuming foods that contain high salt, reducing consumption of coconut milk and regulating sleep hours properly. In addition, other activities that they also do are *sahatu* (traditional sauna in the style of Kajang) and diligently doing the *A'dakkabangkeng* tradition (walking barefoot). If those are do not work, they will go to a *Sanro* to get traditional ingredients made from papaya leaf shoots or water that has been given a spell. When they feel a headache, the sufferer's family usually serves bitter-tasting vegetables such as stir-fried bitter melon (*Pare*) both fruit and leaves. They do this because of the recommendation that has been passed down from generation to generation by their family.

The activities carried out by indigenous tribal

communities actually have a positive effect on their blood pressure. This habit of the Kajang tribe is in line with research which states that efforts to prevent hypertension can be carried out with several efforts, namely implementing a healthy lifestyle by doing regular physical activity, the need for adequate sleep, a relaxed mind, avoiding caffeine, cigarettes, alcohol, and reducing stress. Apply a healthy diet by avoiding or reducing foods that contain high fat, high calories, oily, cholesterol, coconut milk, excessive salt, and the use of high sugar content[18].

Some special traditional rituals such as drinking water given by a *Sanro*, doing *sahatu* (traditional sauna style Kajang) and diligently doing the *A'dakkabangkeng tradition* (walking barefoot) are also very beneficial for health. Walking is a basic form of human movement, which has long-term physiological benefits, namely to improve physical and mental health, lose weight and increase fitness. Therefore, the benefits they feel from walking are increasing, such as psychological health, lowering the risk of heart disease, and the risk of other non-communicable diseases such as diabetes mellitus, hypertension, and other diseases[19].

Sahatu is a traditional Kajang-style sauna which is usually done by the Kajang community. *Sahatu* is a traditional therapeutic method commonly used by the Kajang people as a substitute for modern medicine. The ingredients used in *sahatu* are herbal ingredients derived from leaves such as balakacida leaves (*Chromolaena Odorata*), castor leaves (*Ricinus communis*), duckweed leaves, and betel leaves mixed in water and hot iron to produce steam. This therapeutic method can be used as an alternative to accelerate the body's metabolism. Such as burning fat in the body through sweat, strengthening bones, and can accelerate blood circulation in the body. Scientifically, warm water has a physiological impact on the body, firstly it affects blood vessels where the warm water makes blood circulation smooth, stabilizes blood flow and heart work as well as loading factors in the water which will strengthen the muscles and ligaments that affect the joints of the body.[20]. In addition to *sahatu*, the habit of consuming bitter melon in indigenous peoples is very good for health. Some of the content in pariahs such as potassium, fiber, water, magnesium is very good for the flexibility of blood vessels[21].

The results of the interview with the head of the Tanah Toa health center stated that the Tanah Toa area is an area that is still very strong and upholds the cultural beliefs of their ancestors, especially the people of the Ammatoa tribal area. They often go to the *Sanro* for treatment than to the Tanah Toa health center. They will go to the health center when their illness is severe. The same thing was stated by the traditional leader of the AmmatoaKajang tribe who said that the people of the AmmatoaKajang tribal area usually visit the community health center when their illness is severe and cannot be treated by a *Sanro*. The perception of the people of the AmmatoaKajang tribal area regarding special rituals in an effort to maintain themselves and their families related to hypertension.

Conclusion

The conclusion of this study is that the indigenous people of the AmmatoaKajang tribe do not understand information related to hypertension with various perceptions related to the causes of hypertension ranging from food factors to witchcraft. Regarding efforts to prevent and treat hypertension, it shows that indigenous tribal peoples make efforts to *a'ling* (reduce) high-salt foods, *sahatu* (traditional sauna-style kajang) and the tradition of *a'dakkabangkeng* (walking

barefoot), drinking herbal medicines derived from from*raung* (leaves) and visiting *Sanro* (shaman).

Although some habits need to be maintained, efforts are still needed to improve the health literacy of indigenous peoples through a cultural approach (customary leaders), through media that can be accepted by all elements of indigenous peoples such as posters or leaflets or other methods that are in accordance with the characteristics of indigenous peoples.

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