



Pain of Hypertension Patients in Community Setting: Under Working Area of Wanaraja Public Health Centre

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INTRODUCTION

Hypertension is a prevalent global health issue. According to the World Health Organization the prevalence of hypertension was estimated that approximately 1.13 billion people worldwide had hypertension. This number has been steadily increasing over the years due to various factors such as population growth, aging populations, and lifestyle changes (WHO, 2023; Mills et al., 2020; PAHO, 2020). According to the results of the Basic Health Research in 2018, the incidence of hypertension in Indonesia is ranked 6th out of 10 categories of chronic non-communicable diseases. The prevalence of hypertension in Indonesia, which was obtained from the results of blood pressure measurements, has increased from 25.8% in 2013 to 34.1% (Kemenkes RI, 2018). Some study in Garut District, hypertension was suffered

by not only the elderly, adults and even teenagers were also starting to experience it (Puspita et al., 2019; Puspita et al., 2023).

The expansion of hypertension varies across countries and regions, and it is influenced by factors such as socioeconomic status, access to healthcare, dietary habits, physical activity levels, and prevalence of risk factors like obesity and smoking (Mills et al., 2020). Epidemiological studies and surveillance systems are conducted by health organizations and research institutions to monitor the prevalence and trends of hypertension in different populations (Mills et al., 2020; Ezzati, 2021).

Hypertension is a significant risk factor for various cardiovascular conditions, including coronary artery disease, heart failure, and stroke. These cardiovascular conditions can cause chest pain (angina), myocardial infarction (heart attack), or cerebrovascular events, which can be accompanied by pain symptoms. Uncontrolled or inadequately managed of hypertension can lead to severe cardiovascular events that can be life-threatening. The development of cardiovascular complications can be associated with increased mortality risk (Olvera et al., 2021; WHO, 2021).

The presence of pain, in turn, can further impact cardiovascular health and exacerbate symptoms. Sleep disorders: Pain and hypertension can be interconnected with sleep disorders. Chronic pain can disrupt sleep patterns, leading to sleep deprivation or poor-quality sleep. Sleep disorders, such as obstructive sleep apnea, have also been associated with hypertension. Sleep disturbances and pain can create a vicious cycle, exacerbating each other's effects on overall health (CDC, 2021; Haack et al., 2020; Ramadan et al., 2019)

The recognition of pain as a significant and complex phenomenon that affects individuals. Pain is a fundamental aspect of human suffering. It can have a profound impact on an individual's quality of life, affecting their ability to perform daily activities, engage in work, maintain relationships, and experience overall well-being. Pain is a prevalent health issue worldwide (Maresova et al., 2019; Koesling & Bozzaro, 2021;). Chronic pain affects a significant portion of the population, leading to substantial healthcare costs and economic burden (Margolis et al., 2019).

Hypertension in Garut district has always been the 10 (ten) main diseases whose sufferers are always increasing (Dinas Kesehatan Garut, 2017). Early detection of sufferers can be done through the pain felt by sufferers. Since pain shows an experience of physiological and psychological patient's condition, the examination of pain is essential due to its profound impact on individuals, its prevalence and economic burden, the potential for diagnostic and

therapeutic advancements, the presence of comorbidities, and its public health implications. By conducting research on pain, scientists and healthcare professionals can identify effective prevention strategies, early interventions, and more targeted treatments, thus reducing healthcare costs and improving resource allocation.

METHODS

This research is a quantitative descriptive study to describe the pain experienced by people with hypertension. The population of this study were residents who detected hypertension during psychological home visit in the working area of the Wanaraja Health Center. The hypertension client detected under Wanaraja Public health care in 2022 was 2. 586 people. The sample in this study were obtained by purposive sampling. The residents who were since caught with hypertension, able to read, have good hearing function, and wanted to take part in the study were involved to fill the standard Visual Analogue Scale (VAS) instrument to measure pain perception. Several of 142 participants joined this study. The analysis used univariate analysis to analyze the frequency of demographic characteristic (gender and age), hypertension, and pain perception level of the participants. The SPSS version 26 is used to analyze the variable.

RESULTS

The following data were the result of the study: demographic characteristics, pain perception and hypertension conditions.

Table 1. Demography Characteristic of Respondent

Characteristic		Frequency	Percentage (%)
Gender	Male	33	23.2
	Female	109	76.8
Age (year)	Teenager <26	1	0.7
	Adult (26-44)	23	16.2
	Middle Age (45-59)	59	41.5
	Elderly (60-74)	51	35.9
	Old Elderly (75-90)	8	5.6

From the table, it is known that 77% of the respondents were women (109 respondents) and a small proportion were men (23%). In terms of age, there was one teenage respondent who detected hypertension (0.7%), the rest were in the range of adulthood, middle age and the elderly (16.2%; 41.5%; 35.9%; respectively).

Table 2. Pain Perception (n=142)

Level of Pain	Frequency	Percentage (%)
Heavy	11	7.7
Moderate	95	66.9
Light	28	19.7
No pain	8	5.6
Total	142	100.00

Pain that is felt according to VAS measurements, is in the category of pain that is not felt until the pain is severe. The categories are as follows: severe pain 8%, mild pain 20%, moderate pain 67% and no pain 5%.

Table 3. Hypertension of Respondent (n=142)

	Blood Pressure	Frequency	Percentage (%)
Systole	Hypertension stage 1	5	3.5
	Hypertension stage 2	127	89.4
	Crysis hypertension	10	7.0
Dyastole	Normal	1	0.7
	Hypertension stage 1	18	12.7
	Hypertension stage 2	122	85.9
	Crisis hypertension	1	0.7

From the table above, it is known that the systolic and diastolic blood pressure of the respondents were in the stage 2 hypertension category (89% for systolic and 86% for diastolic). The data also shows that there are 10 or 7% of systolic respondents in the hypertensive crisis category, but only 1 or 0.7% of diastolic respondents are in the hypertensive crisis category. In addition, even though in systolic all respondents were in the hypertension category, there was a respondent whose diastolic blood pressure was normal.

DISCUSSION

Determining the perception of pain in people with hypertension in the community in this study can be done using the Visual Analogue Scale (VAS) instrument. This tool of VAS could potentially help health care and researchers precisely assess pain in a simple (Escalona-Marfil et al., 2020). Further about demographic, this study was in line with previous study in Guntur Public Health area that the hypertension patients were mostly female and in different age (Puspita et al., 2019). Both gender and age can be influenced by the experience of pain. Pain perception, chronic pain condition, and pain expression between men and women may be caused by differences in reported pain levels. Pain perception on some research showed that there may be differences in pain perception between genders. Generally, women tend to have a lower pain threshold and are more sensitive to pain compared to men. This difference may

be influenced by hormonal factors, genetic factors, and psychosocial factors (Bement, 2022). Another research explained that chronic pain conditions are more prevalent in one gender over the other. For example, conditions like fibromyalgia and migraine headaches are more commonly reported by women (Ruschak et al., 2023; Casale et al., 2021). On the other hand, men may be more likely to experience certain types of pain, such as cluster headaches (Lund et al., 2019; Allena et al., 2019).

Pain is expressed by gender and affected by norms and cultural expectations. It can influence how individuals express and communicate pain. Societal factors may shape the way men and women perceive and report their pain, leading to potential differences in pain reporting and seeking medical help (Wyatt, 2013).

Pain is felt by the patients is also influenced by many factors, such as developmental stages, chronic conditions, and pain tolerance. Pain perception can vary across different stages of life. Infants and young children may have a limited ability to communicate their pain, making it challenging to assess and manage. Older adults may experience age-related changes that affect pain perception, as discussed in the previous response. More, the prevalence of certain chronic pain conditions can change with age. For instance, conditions like rheumatoid arthritis or osteoarthritis tend to be more common in older adults, while conditions like growing pains are more frequently reported in children. Generally, older adults may have a reduced pain tolerance compared to younger individuals due to physiological changes and increased comorbidities (Perry et al., 2018; Mullins et al., 2022). However, pain tolerance is a complex interplay of various factors and can vary from person to person (Lautenbacher et al., 2017; Dagnino & Campos, 2022).

Tables 2 and 3 show that although all respondents were in the systole hypertension category and almost all were in diastole, the pain sensations that emerged from the respondents were different. Respondents who perceived severe and moderate pain were 74.6%, while the hypertension category, both systolic and diastolic in grade 2 hypertension and hypertensive crisis, was in the range of 80% -95%. Hypertension (high blood pressure) itself does not directly cause differences in pain sensation (Tackling & Borhade, 2018). Hypertension is often associated with other health conditions such as cardiovascular disease, diabetes, or kidney problems. These conditions can cause nerve damage or affect blood flow, potentially leading to altered pain perception or sensations (Tackling & Borhade, 2018). It is important to note that pain is a complex experience that can be influenced by various factors, including individual differences, psychological factors, and overall health. Each person's perception and experience

of pain can be unique, and it may vary among hypertension patients due to the factors mentioned above (Fillingim, 2019).

It is important to note that both systolic and diastolic pressures play a role in diagnosing and managing hypertension. In the past, diastolic pressure was considered more important as it was believed to be a better predictor of cardiovascular risk (Campo et al., 2002). However, recent evidence suggests that systolic pressure is a more critical factor, particularly in older adults (Astutik et al., 2020). As the data shows, there are some respondents who have systolic hypertension, but diastolic not. The respondents who fall into the blood pressure category isolated systolic hypertension. Where the systolic increases but the diastolic does not.

Hypertension can affect either systolic or diastolic pressure independently, or both together. Isolated systolic hypertension, where only the systolic pressure is elevated, is quite common in older adults. This occurs due to age-related changes in the arteries and increased stiffness, making it harder for the arteries to expand and contract (Tan & Thakur, 2019). As the data shown in the table 2, there was about 40% of the hypertension respondent were at aged 60 years and more. This study showed that 0.7 % of hypertension respondents were teenagers. It was in line with previous study that in Guntur Public Health Center, Garut District, that teenager can hypertensive. This indicates that hypertension has begun to be experienced by teenagers in Garut District (Puspita et al., 2019).

CONCLUSIONS

VAS instrument is an instrument that can assess pain in a community setting, such as pain felt by hypertension sufferers. It is important to note that pain and hypertension can be associated with increased mortality risk. Thus, it is important for health workers, especially nurses, to assess in-depth related to pain in hypertensive patients to avoid unwanted complications.

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