I Don't Want to Think About It!: A Qualitative Study of Hypertensive Women's Awareness and Perception of Heart Disease

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ABSTRACT

***Background**: Research has shown an increasing number of young women between the ages 35 and 54 having heart attacks. However, data demonstrated a persisting failure to raise women's awareness of cardiovascular disease risk. Moreover, very little has been done to date in low- and middle-income countries to educate women on cardiovascular disease risks and the high mortality rates for women. **Aims**: The aim of this study was to explore hypertensive women's awareness and perceptions of heart disease. **Methods**: A qualitative research design using semi-structured interviews was performed. Data were analyzed using an inductive thematic analysis approach. **Results**: In total, 25 women participated in this study. Three main themes emerged: (1) perception of heart disease and its risk factors, (2) 'I don't want to think about it': perspectives on future risk, and (3) strategies to prevent heart disease. From the participants' narratives, it was evident that the women in this study had limited knowledge related to heart disease. Although all participants suffered from hypertension, the women still underestimated their risk of developing heart disease in the future. Many women believed that praying to God and maintaining an optimistic mindset could protect them from heart disease. **Conclusion**: The study's findings highlight a clear indication of the need to implement renewed strategies for educating women about cardiovascular health tailored to target the rural populations in Indonesia. Raising women's awareness might reduce their risk of suffering from cardiovascular disease in the future.*

***Keywords**: Awareness, Cardiovascular disease, Health promotion, Perception, Qualitative research, Women.*

INTRODUCTION

CVD (Cardiovascular Disease) has been widely associated with male illness (Emslie, 2005; Lockyer & Bury, 2002); however, the latest nationwide study in the US reported an increasing number of women's mortality under 65 from heart disease (S. U. Khan et al., 2022). Recent studies have found an increasing number of women in their late forties and early fifties that have heart attacks (Arora et al., 2020; S. U. Khan et al., 2022).

Prompt recognition of the symptoms of a heart disease and prompt access to emergency care after the onset of heart disease symptoms are critical to the achievement of optimal acute medical therapies for women (DeVon et al., 2011). Unfortunately, the studies found that women were more likely than men to experience delays in getting their first medical contact after the symptoms occurred (Bugiardini et al., 2017). Although the actual reasons for this delay from the patients' perspectives are still unclear, it might be related to women's lack of knowledge regarding heart disease signs and symptoms. Several studies reported that many women with chest pain often considered their pain as normal and searched information from unreliable sources (McSweeney et al., 2016; Mehta et al., 2016).

Regardless the massive efforts and national awareness campaigns by many organizations to increase women's awareness of heart disease for the last decade, the latest study found that there has been a decline in women's awareness of CVD and its symptoms (Cushman et al., 2021). As in the previous survey, many women still did not realize that heart disease is the number one cause of death for women and instead identified cancer as the leading cause of death. Moreover,

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many women still perceived themselves to be at a low risk for heart attack before the menopause (Sniderman et al., 2016). Ironically, studies of young heart attack patients show that women with heart disease were less likely to receive timely heart disease medications and aggressive treatments (Arora et al., 2020; Bugiardini et al., 2017) and also less likely to be told by their physicians that they were at risk for heart disease before the attack (Bucholz et al., 2017). This complex situation probably explains why women delay seeking treatment after the onset of signs and symptoms of heart disease.

Patients' awareness of the disease and their ability to recognize its signs and symptoms are vital so that they can receive timely CVD treatments. Despite CVD being the number one cause of death among women in Indonesia, studies exploring women's awareness of CVD could not be found. Investigating women's knowledge and awareness about CVDs in community settings would provide a basis for healthcare providers in designing appropriate and culturally relevant educational programs for women to close the gender gap of heart disease knowledge and care. Therefore, the aim of our study is to investigate the awareness and perceptions of heart disease among women with hypertension in rural and suburban areas of Yogyakarta, Indonesia.

METHODS

This study employed a qualitative descriptive study design. This study was supported by a constructionist epistemology, which assumes that "meanings are constructed by human beings as they engage with the world they are interpreting" (Crotty, 1998). This qualitative study conforms with the tenets laid out in the Declaration of Helsinki (Rickham, 1964) and was approved by the Institutional Review Board at the university (No. 157/EC-KEPK FKIK UMY/V/2020).

This research was conducted in four districts in Yogyakarta province that represent rural and suburban areas from June to August 2020. The researchers used purposive sampling to select the participants. The inclusion criteria for the participants were: (1) women who were above 18 years old; and (2) women who had been diagnosed with hypertension by a physician, received hypertension medication, or had a history of systolic blood pressure (SBP) ≥140 mmHg and/or a diastolic blood pressure (DBP) ≥90 mmHg. Health cadres in *Posbindu,* which is an integrated community-based intervention for non-communicable diseases surveillance, helped the researchers to recruit participants.

The participants were informed verbally of the overall purpose of the study before they signed the informed consent form. Semi-structured and in-depth interviews were conducted between June and August 2020. The interviews focused on the participants' perceptions about heart disease risk factors, their awareness and perceptions of heart disease, prevention strategies, and their future risk perceptions.

We followed the steps of inductive thematic analysis as outlined by Braun and Clarke (2006). We conducted verbatim transcription. We began the data analysis by reading and re-reading the transcripts and revisited audio recordings to get the data's immersion. Afterwards, we coded the interview transcripts line-by-line using the data analysis software Atlas.ti 8. Once all the data were coded, we searched for patterns and themes and reviewed the themes until we produced the final analysis. The authors met regularly to discuss and review the themes until consensus was reached. In writing the report for this study, we adhered to the 32-item consolidated criteria for reporting qualitative research (COREQ) developed by Tong, Sainsbury and Craig (2007).

To ensure the trustworthiness of this study, we followed the steps outlined by Lincoln and Guba (1985), including credibility, transferability, dependability, and confirmability.

To ensure the findings' credibility, we spent sample time in data collection and analysis. We also kept memos regarding sampling, data collection, and data analysis to record analytic decisions throughout the study. Transferability was strengthened by providing a detailed description of the research setting, method, participants, and theoretical assumptions underpinning the study. Dependability was maintained using Atlas.ti 8 to store and manage data to facilitate the audit trail.

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RESULTS AND DISCUSSION

In total, twenty-five women (n = 25) with hypertension (Table 1) participated in this study. Women's age ranged from 43 to 66 years (mean [SD], 52.52 [6.04] years), received a hypertension diagnosis between 5 months and 30 years (mean [SD], 9,74 [10.30] years] before the interview, and 19 out of 25 women (76%) took blood pressure medication regularly.

Table 1. Participants' characteristics

No.	Age	Education	Medication	Time since diagnosis
1	55	PS	Yes	5 months
2	51	SHS	Yes	6 years
3	55	PS (DO)	Yes	7 months
4	45	PS	Yes	17 years
5	56	PS	Yes	2 years
6	46	SHS	Yes	20 years
7	47	Bachelor	Yes	4 years
8	66	PS	Stopped	10 years
9	53	PS	Stopped	23 years
10	46	SHS	Yes	18 years
11	60	JHS	Yes	28 years
12	62	SHS	Yes	32 years
13	50	SHS	Yes	16 years
14	65	PS	Yes	30 years
15	47	SHS	Yes	11 years
16	49	SHS	Stopped	2 years
17	49	JHS	Yes	5 months
18	50	SHS	Stopped	2 years
19	51	SHS	Stopped	10 years
20	50	SHS	Stopped	2 years
21	43	SHS	Yes	2 years
22	56	SHS	Yes	3 years
23	55	SHS	Yes	2 years
24	55	JHS	Yes	1 years
25	51	SHS	Yes	1 years

PS: Primary school
JHS: Junior high school
SHS: Senior high school
DO: Drop out

From the data analysis, we identified three major themes, namely: (1) perception of heart disease and its risk factors, (2) 'I don't want to think about it': perspectives on future risk, and (3) strategies to prevent heart disease.

Perception of heart disease and its risk factors

During the interview, we asked participants' perception related to heart disease, in terms of its definition, risk factors, and signs and symptoms.

a) Risk factor of heart disease

The participants described heart disease as a severe disease that happened unexpectedly and could attack everyone, even those who practiced a healthy lifestyle. CVD risk factors as described by participants could be divided into two types: 1) modifiable risk factors (i.e. high blood pressure, smoking, stress, overweight/obesity, lack of physical activity, and unhealthy diet), and 2) non-modifiable risk factors (i.e. age, sex, and family history). Participants explained:

> *"I think older people are at a higher risk of suffering from heart disease…" (P18)*
>
> *"If the parents suffered from heart disease, there is a higher chance of the children will also suffer from it." (P20)*

Almost all participants attributed emotional stress as the primary cause of heart disease. Several stress sources, including job stressors, family responsibilities, financial issues, physical exhaustion, or unexpected stressful event could lead to heart disease. For this reason, according to participants' description, heart disease's most prominent risk factor for both men and women came from their minds. One participant who suffered from hypertension for 30 years stated:

> *"Yeah, I think it's all started from the mind. If the mind has a lot of burden, then the blood pressure will increase. If the mind is calm, the blood pressure will go down. It doesn't matter what you eat; if your mind has lots of burdens, then it will affect your blood pressure." (P14)*

Moreover, the study participants agreed that eating unhealthy food (i.e. oily food, salty food, or containing high fat) could lead to a heart attack. One participant that had a college degree education explained,

> *"Poor eating habit could lead to high cholesterol level, I mean from fatty food, it can cause obesity, and then it also causes high cholesterol level. Also, salty food… but apart from that, if you are too tired or do not have enough rest, and stress can also cause heart disease…" (P7).*

b) Symptoms of heart disease

The results of the interview showed that participants acquired information related to heart disease directly from experiences of others in their environment, and from the internet. The interview revealed an apparent lack of knowledge among the participants regarding the manifestation of heart disease symptoms. Most of the study

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participants expressed that they did not know the signs and symptoms when someone had a heart attack. Only a few participants recognized chest pain as a major presentation of heart disease.

"When someone had a heart attack, suddenly they would feel sore from the chest area to the arms and then spread all over the body." (P23)

The women also identified excessive sweating and breathlessness as heart disease symptoms:

"I personally have never experienced it.[…] From what I heard from my relative, in the beginning he was like sweating a lot, we thought that he was catching a cold. That's all that I know about the symptoms, so from cold sweat, and then breathlessness." (P12)

The participants believed that heart attack usually occurs suddenly without warning. They mentioned fainting and collapsing, as well as tingling sensations in the hands or arms as symptom of heart disease. However, other symptoms such as upper back pain, upper body discomfort, indigestion, nausea/vomiting were not surfaced during the discussion.

Misconceptions regarding heart disease

Data analysis showed that the women in this study did not consider heart disease as the major health threat to women. Fifteen out of twenty-five participants stated that cancer is the greatest health threat among women in Indonesia. In fact, heart disease has been identified as the leading cause of death in women in the country. The results of this study are evidenced by the participants' statements below:

"To my knowledge cancer causes the highest death, yes, because it is chronic disease. So, when people suffered from it, between 90% cannot be saved and only 10% can still be saved." (P17)

"Women usually suffered from cancer I think, cervical cancer, breast cancer…" (P21)

Although many participants believed that men are at a higher risk for heart disease, one participant argued that women are at a higher risk because women had a tendency to overthink things more than men. Regarding this, the participant described women as having a 'weak mind.' She explained:

"I think women might be at a higher risk of heart disease, you know, because women have a weak mind...weak mind led to a weak heart." (P8)

The study participants understood that underlying medical conditions, such as hypertension and diabetes, are the risk factors for developing heart disease in the future. However, they believed that overthinking was the most important risk factor for heart disease, as described by one participant:

"High blood pressure, diabetes, eating habits, overthinking, exhaustion... all of that can lead to heart disease. However, I think overthinking is the most dangerous one. That's why I try to stop overthink and just relax…" (P2)

I don't want to think about it': Perceptions on future risk

During the interviews, the women were asked whether they considered themselves likely or unlikely to develop a complication of hypertension or suffering from a heart attack in the future. Although all participants suffered from hypertension, they tended to underestimate their personal risk of future heart disease.

a. **Avoidance**

Being asked about the risk of suffering from heart disease in the future, many participants preferred to use avoidance strategy. Instead of thinking about the negative possibilities that could happen to them in the future, they choose to revolve their thoughts into positive mindset. Many women believed that praying to God could protect them from suffering heart disease in the future. A participant stated,

"I don't want to think about it. I always pray to God so I will stay healthy, always in good condition, and not contracting any disease." (P3)

b. **Positive thinking**

The participants explained that overthinking about future risk would make them worry and. in turn, it would negatively affect their health. Therefore, they believed that maintaining optimism and a positive mindset was the key to protecting them from any disease. During the interview, the women mentioned that, as long as they were on medication, they did not need to further contemplate their future risk because they considered themselves at low risk.

"I try to keep an optimistic outlook on life. Keep your thoughts positive because your thoughts become your words. So yeah, just do the best that I

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can. Sometimes I worry, but I don't want to exaggerate the problem because it will make me feel stressed. So, I just take it easy. If I followed the medication regimen, all would be fine." (P7)

Strategies to prevent heart disease

During the interview, the women discussed some strategies that can be adopted to prevent heart disease in the future.

a. 'Not thinking too hard': managing stress

It is interesting that all women in this study believed that the key aspect to prevent them from suffering heart disease in the future was by avoiding stress. They stated that it was crucial to create a calm mind during stressful times. As explained by one participant,

"Don't think too hard; yes, the key is not to think too hard. You should just take life easy; you should just be relaxed and enjoy your life... Sometimes I feel anxious or angry, so I just recite Astaghfirullah (meaning: I ask Allah's forgiveness)." (P12)

b. Making lifestyle changes

Overall, the participants agreed that a heart-healthy diet was one of the most important aspects in preventing heart disease. Regarding this approach, the participant mentioned several strategies to stay healthy, such as increasing the intake of fruits and vegetables, reducing the salty, oily, and fatty food, and drinking plenty of water. However, according to participants, putting this knowledge into practice was a different story.

"The dietary pattern to prevent heart disease… we should reduce the consumption of fatty food, such as food contained coconut milk, fried food. (P16)

Not only managing their diet, but participants also cited the importance of physical exercise. Doing physical exercise regularly, once or twice a week, was considered good to maintain their health and prevent CVD. One participant explained:

"…it doesn't need to be a heavy exercise, you can just walk, most importantly you do it at least 15 to 30 minutes per day. I think that's enough. We should make time for it." (P18)

The study's findings demonstrated gaps and inaccuracies in knowledge related to heart disease among Indonesian women. One of the reasons for this limited knowledge might be related to the participants' education levels as most of them only finished high school education and lower. The evidence showed that the lack of knowledge was more apparent among women from ethnic minority groups (i.e. Hispanic, Black, and Asian) and lower level of education (Coke & Hayman, 2021; Cushman et al., 2021; Mohammad et al., 2018).

Our study finding is in line with the findings of previous studies conducted among women in other countries which reported that women had inadequate knowledge and awareness related to heart disease (Galbraith et al., 2011; Hamner & Wilder, 2008; S. Khan et al., 2016; Mohammad et al., 2018). As a result of a nationwide survey conducted in the United States, Cushman *et al.* (2021) reported a significant decline in women's awareness regarding heart disease as the leading cause of death between 2009 and 2019. In contrast, there has been an increase in the recognition in breast cancer as the leading cause of death among women in same time period. The same results were also found in this study; participants considered that heart disease was not a major death threat like cancer. In fact, the data showed that heart disease kills nearly seven times as many women as breast cancer (Prevention, 2020).

The lack of health initiatives to educate women about cardiovascular disease could be the reason for this poor perceptions and awareness (Cushman et al., 2021). The Indonesian Government has taken several initiatives to overcome cardiovascular disease, but the educational program to educate people about CVD is just limited to the "Integrated Health Training Post" / Posbindu (Hussain et al., 2016). Posbindu is a national community-based program in Indonesia that aims to evaluate risk factors for non-communicable diseases, such as CVD, and provide early detection services for adults in the rural area (Indonesia Ministry of Health, 2012). Unfortunately, the knowledge and skills of community health volunteers (cadres), as the main role of this program, are lacking. Hence, this can impact the process of disease early detection and their role in educating people (Putri & Andriyani, 2018). Therefore, education about life-

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threatening heart disease in hypertensive women, including signs and symptoms as well as risk factors, needs some improvements and a new strategy.

An interesting finding from our study was that the participants used avoidance method when they were asked about their future risk of suffering from heart disease. Instead of thinking about negative possibilities in relation to their health in the future, they emphasized the importance of prayer to God to protect them from suffering from heart disease. They believed that the illness comes from God, so it is only God who can protect them from any disease. In Indonesia, religion becomes a fundamental part of people's lives, and it was reflected in participants' descriptions in this study. Islam is the country's dominant religion, involving about 87% of the total population (Indonesia et al., 2013). An earlier study among Indonesian women with diabetes revealed three keys to happiness based on participants' narratives, including prayer, being grateful, and surrendering to God's will (Pitaloka & Hsieh, 2015). This study's finding is consistent with a previous study that reported religion and spirituality as crucial factors in coping with cardiovascular disease (Najafi Ghezeljeh et al., 2014; Seah et al., 2016). It is also in line with the assertion from Mackenzie *et al*. (2000), who reported one's relationship with God forms the foundation of their well-being.

Although the women in this study suffered from hypertension, they still underestimated their personal risk of future heart disease. When women were asked about their risk perceptions for developing heart disease in the future, many of them wanted to avoid thinking about the future risk of disease; instead, they desired to approach life with a positive attitude. In this viewpoint, it is argued that thinking about future risk causes anxiety, and this anxiety makes the body more vulnerable to disease, which impairs health. Similar findings were reported in previous studies that found young women with acute myocardial infarct (AMI) failed to assess their own risk of heart disease even though they had a family history of CVD (Lichtman et al., 2016). It indicates the need for health education to increase awareness of hypertensive women about the risk of heart disease so they can take preventive measures.

There has been growing evidence suggesting that positive psychological attributes such as optimism were associated with lower risks of chronic health conditions, especially cardiovascular diseases (DuBois et al., 2015; Kubzansky et al., 2018). Boehm *et al*. (2011) reported that positive psychological well-being could improve cardiovascular health and reduce the future risk of suffering from CVD. This study's findings revealed an underlying interpretation of a close relationship between body and mind, in which future risk of heart disease could be reduced by positive mindsets (Kirkegaard et al., 2013).

The participants in this study attributed the most important risk factor for heart disease to emotional stress. This condition indicated that individuals who bore anxiety and suffered stress were at a higher chance to develop heart disease irrespective of their sex or age. This finding is corroborated by previous evidence, which has also suggested that psychological and emotional stress could have an impact on the onset and course of ischemic heart disease, especially in women (Khayyam-Nekouei et al., 2013; Wekesah et al., 2019; Yusuf et al., 2004). Although previous studies have claimed that stress was attributed to lifestyle and social expectations adopted by men (Ruston & Clayton, 2002), in the current study, the women felt that they had equally stressful lives as men. These stressors were mainly related to their multiple responsibilities in the family and society. Therefore, our findings revealed that managing stress was identified as the main strategy to prevent people from suffering heart disease in the future.

The need for health promotion

Participants had poor perceptions and awareness of heart disease. Therefore, health promotion regarding heart disease in hypertensive women needs special attention, especially among low-educated women in rural and suburban areas. The lack of awareness could contribute to delayed health-seeking behavior (S. Khan et al., 2016). This study showed that participants tended to underestimate their possible risk of heart disease, although all participants suffered from hypertension. Education about heart disease, including definitions, signs and symptoms, and risk

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factors, is the primary health promotion program that needs to be conducted. Hopefully, it can improve hypertensive women's awareness regarding the risk of heart disease.

This study has made meaningful contributions to awareness and perceptions of heart disease among Indonesian women. However, there are a few limitations that should be considered when interpreting the results. The researchers conducted this study in the rural and suburban areas in Yogyakarta, and all participants were from lower education levels. Due to logistic reasons, the researchers only could recruit a small number of participants in each sub-district. Therefore, this study's findings might not reflect larger Indonesian women's perspectives. Secondly, the researchers believe that including views from women from different socioeconomic backgrounds (urban, highly educated, high income) could have provided a more in-depth insight into women's awareness of heart disease in Indonesia. Hence, further research on Indonesian women from different socioeconomic backgrounds will support a more in-depth insight of Indonesian women's awareness and perceptions of cardiovascular disease.

CONCLUSION

This study found a clear gap and misconception about heart disease knowledge and perceptions, which could contribute to delayed health-seeking action among Indonesian women. These findings were probably related to the absence of health initiatives to educate women on Indonesia's CVD as well as the participants' low educational background. This study revealed that most women preferred to avoid any thoughts about their CVD future risk and emphasized the importance of prayer to God and an optimistic mindset to protect them from the disease. Our study's findings suggest a considerable need to develop and implement strategies for educating women about cardiovascular risk and health tailored to target the rural populations in Indonesia. More importantly, this education program should be culturally appropriate, include peer-to-peer relationship, and can be offered within workplaces. Future studies should be directed to investigate women's awareness of heart disease from different socioeconomic backgrounds as well as the effect of cardiovascular health education intervention on women's awareness in a low-resource setting in Indonesia.

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