

Perception of diet control and physical activity housewives: experiences and barrier

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ABSTRACT

There is a change in lifestyle due to the current era of globalization. This study aims to explore the perception of a healthy diet and physical activity in controlling blood glucose among housewives. This research design uses qualitative methods. The study was conducted in Yogyakarta from January to March 2020. The instrument used was an in-depth interview guide. The characteristics of the respondents are 20 housewives aged 26-65 years and residents of Yogyakarta. In-depth interviews guideline. The instrument was used to obtain answers to questions related to physical activity and diet control, including barriers and their actions in controlling blood glucose. The data collection was through in-depth interview techniques with open questions. Participants were determined by purposive sampling with the maximum variation approach. The instrument utilized an interview guide. The research data were analyzed utilizing open code. The analyzing data process through data transcripts, coding, categorization and determining themes. In ensuring the research validity, triangulation was carried out. The majority of respondents didn't do physical activity and control their eating patterns. Most of them assume that walking and cycling at least 10 minutes every day is enough to maintain health, including blood glucose. The conclusion in this study is the majority housewife don't know how to control diet and physical activity proper. This is caused by the lack of knowledge about a healthy lifestyle.

KEYWORDS

Housewives;
Physical Activity;
Diet Control;
Blood Glucose;
Healthy Lifestyle



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1. Introduction

Lifestyle forms the character of a person that influences their behavior, work, activity, recreation, and eating habits. Moreover, lifestyle is affected by globalization which determines the level of one's health. The globalization era raises new diseases due to lifestyle changes. The emergence of these diseases is related to unhealthy lifestyles such as smoking, consuming alcohol, fast food/junk food, lack of physical activity, and long working hours. Increasing the number of fast-food restaurants causes a shift in eating patterns. This time many people prefer to consume foods high in fat, high in salt and sugar and consume fewer fruits, vegetables, and fiber which are essential for body. Besides, lifestyles such as smoking can affect one's health. Some diseases often found due to smoking are cancer, high blood pressure, respiratory disease, and heart disease. Research on lifestyle has been studied by previous researchers. Exploring the data: How sleep is inferior to a list design, sleep disturbances, and lifestyle factors were investigated by Maisey [1]. Effective psychological therapy to improve lifestyle behavior in (pre)pregnant women: A systematic review researched by van der Windt [2]. The use of mobile stroke risk scales and lifestyle guidelines promoting a healthy lifestyle and reducing stroke risk factors was investigated by Dharma [3]. A systematic mapping review of the relationship between pregnancy intentions and lifestyle behaviors related to health or psychological well-being was investigated by Hill [4]. Lifestyle and neurodegeneration in middle age as revealed on functional magnetic resonance imaging: A systematic review investigated by Topiwala [5].

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The metagenomics approach to genome assembly of *Polymyxa betae* allows a comparative analysis to decipher the intracellular parasitic lifestyle of the plasmodiophorids studied by Decroës [26]. Perceived changes in lifestyle behavior and mental health and well-being of primary school children during Canada's first COVID-19 lockdown were studied by Maximova [27]. The relationship between lifestyle and deviant driving behavior among Iranian car drivers was investigated by Dabirinejad [28]. Acceptance of lifestyle advice on cervical, breast and bowel cancer screening was investigated by Stevens [29]. Demographic and lifestyle determinants of time spent in physical activity among Malaysian adolescents were investigated by Cheah [30].

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A lifestyle-changing causes non-communicable diseases (NCD) to occupy the first position as the leading cause of death worldwide, which is 60% of the number of deaths. Approximately 50% are caused by cardiovascular disease. World Health Organization (WHO) estimated that at least 17.9 million people died in 2016 due to cardiovascular disease. In the Asia-Pacific region, including Indonesia, cardiovascular disease was expected to reach 9.3 million deaths or one-third of total deaths in 2012.

The cardiovascular disease consists of several conditions that cause interference with the heart and blood vessels, examples are stroke, high blood pressure, heart failure, and cardiac arrest. In high blood pressure conditions usually do not cause signs and symptoms. Many people call it the silent killer. Meanwhile, diabetes mellitus (DM) is also a metabolic disease caused by an unhealthy lifestyle. This condition causes beta cell dysfunction. High blood pressure, DM, smoking, lack of physical activity, and being overweight and obesity are risk factors for cardiovascular disease. Two factors cause high blood pressure. They are factors that can be changed, such as lifestyle and factors that cannot be fertilized, such as heredity. In 2017, high blood pressure caused disability and premature death at all ages. Lack of physical activity, in addition to increasing the risk of cardiovascular disease and DM, also causes high blood pressure, being overweight and osteoporosis. People with less physical activity risk about 20% to 30% to experience premature death. Also, the risk of developing type 2 DM (T2DM) also increases. At least 27% of the causes of T2DM are physical inactivity. Diabetes mellitus (DM) is the fourth leading cause of disability worldwide.

The theory of Health Belief Model (HBM) is a theory that can be used to predict a person's healthy behavior. The contribution of this community service is to apply the HBM theory to the community. This theory emphasizes that every patient is susceptible to a disease. The main factors that support the success of the theory are modifying factors (knowledge), sociodemographic factors (which can influence health perceptions) and belief factors. The higher the belief of DM patients about the possibility of

complications (perceived susceptibility), the higher their healthy behavior. Behavior change is influenced by motivation and perception. Motivation and perception about the importance of recognizing blood glucose are important things to have. In 2017, high blood pressure, high fasting blood glucose, and high BMI (body mass index) were the leading causes of death in women 10. The World Health Organization stated that 35.9% of women in Indonesia were overweight and obese in 2016. Moreover, the number of people with diabetes reaches 7.3% of the total population. Based on the Basic Health Research Report of the Ministry of Health of the Republic of Indonesia, PTM such as obesity, hypertension, and DM have increased, while physical activity and consumption of fruit vegetables have not changed compared to 2013. Although evidence continues to emerge regarding the benefits of physical activity and diet control, little attention is paid to housewives. independent living and moving ladder. This study aims to determine the perception of healthy eating patterns and physical activity to control blood glucose in housewives.

2. Method

This study used a qualitative design conducted in Kotagede, Yogyakarta, Indonesia. The study conducted an in-depth interview session in housewife community. The respondent were twenty housewives, aged 26-65 years old. The in-depth interview was used to get answers about questions related to the participant's physical activity and control diet, including barriers and their actions to control blood glucose. The selection of respondents used an accidental sampling technique. Respondents were selected based on inclusion criteria, which were: married women who lived with middle to low-class families and would like to be research respondents. The procedure of participants was initially contacted by phone to establish eligibility and informed consent. They were interviewed in their home or at a convenient location by a single interviewer. These formal interviews took about 45 to 60 minutes to complete. Interviews schedule an interview schedule was created to provide structure. It was developed after a comprehensive literature review and drawing from our experience in physical activity and diet control research. The interview focused on perceptions of physical activity and diet control.

Each interview was fully transcribed verbatim and read at least six times to establish a broader understanding of the meaning of the participant's dialogue, during which qualitative content analysis was conducted. The analysis process involved the breaking down of transcribed data into smaller units. Units or topics of information were sentences and occasionally paragraphs that conveyed discrete information. Paragraphs were used so that the contextual meaning was not lost. The data were then coded according to the content and then the material was categorized. The coded data were managed by open code. The categorized data were organized around two major headings perceptions of physical activity and diet control.

3. Results and Discussion

3.1. Characteristics of Respondents

The majority of the respondents belong to the productive age with the most proportion of 46-65 years (55%) are shown in [Table 1](#). All respondents have completed primary education, and 90% of female respondents are junior high school graduates. Only about 25% of respondents work in an office and get a regular salary, while 75% of respondents are housewives.

3.2. Perception of Physical Activity

The majority of respondents didn't do physical activity moderate intensity for at least 30 minutes every day (60%). Most of them only walking and cycling for at last 10 minutes every day. They do not either do physical activities such as sports and fitness. Respondents do moderate physical activities are 40% with an average time of 30 minutes in one day. The majority (60%) don't have time to physical activity every

30 minute per day or 60 minute per two day. But most of them spent an average of at least 1 hour lying or sitting in one day.

Table 1. Characteristic of Respondents

No.	Characteristics	N= 20	Percentage (%)
1.	Gender Woman	20	100
	Total	20	100
2.	Age	12	60
	a. 26-45	12	60
	b. 46-65	8	40
	Total	20	100
3.	Occupation		
	a. Wage earner	0	0
	b. Not a wage earner	4	20
	c. Does not work	16	80
	Total	20	100

A lot of barriers can prevent a person from doing physical activity, both coming from internal and external problems. Being lazy, having no time, and being exhausted after work became the barriers to work out for the respondents. The following is a statement from one of the respondents.

"I can't work out every day. I am tired of working... I feel lazy, and there's no time to exercise" (Female, 47 years old).

"I don't know the recommended physical activity ..." (Female, 40 years old)

"Every morning I have been doing physical activity by cooking in the kitchen for at least one hour" (female, 37 years old).

3.3. Perception of Control Diet

The amount of preferable food makes it difficult for some people to regulate their diet. Some respondents experience problems because they could not reduce fried foods and only ate what they had at home. The following is an excerpt from the statement conveyed by the respondent.

"... I eat whatever I have at home." (Female, 43 years old)

"I cannot leave fried foods. I rarely eat vegetables ..." (Female, 54 years old)

"I don't know the recommended control diet..." (Female, 40 years old)

"Boiled food has no taste ... it tastes bad" (female, 28 years old)

There was 75% of respondents who had never taken diabetic medicine. About 10% of respondents had taken high blood diabetic medicine, and the rest had no idea of it. About 95% of respondents said that they did not have high blood sugar. There was 95% of respondents who had family members with type 2 diabetes mellitus (DM) and mothers were the family member who suffered the most from DM (55%). Only about 35% of respondents ate vegetables or fruit every day with the highest proportion of vegetables being 1.5 cups and fruit mixture around 25%. Poor diet causes at least 12 million deaths worldwide. Less fruit consumption attribute about 2.9 million deaths, and 1.9 million is due to a lack of vegetable consumption. The number of vegetables consumed per house in Indonesia, especially Java, only reaches 5 kg/week. This amount is lower than the FAO recommendation. The consumption of vegetables and fruit is essential for health as it contains a variety of vitamins, minerals, and fiber that are good for health.

Table 2. Results of coding in domain in Housewives

Domain	Coding
Barriers to physical activity	1. Constraints during exercise
	2. It is hard to set the time.
	3. Don't know the right way to exercise.
Barriers to eating patterns	1. Difficulty controlling eating
	2. Economic factor problems
	3. Don't understand the portion and composition of a healthy diet
Experience	1. Feel healthy
	2. Often eat fried foods
	3. Always use a little sugar
	4. Difficult to manage time
	5. More important work to live
	6. Healthy food is not delicious
Environmental support	1. No family support
	2. No friends

Besides the lack of vegetable consumption, calorie consumption per capita in Indonesia is still below the standard of 2,147.09 kcal. The most consumed calorie sources in Yogyakarta are whole grains (673.97 kcal) and granulated sugar. Granulated sugar, consumed as much as 72.79 kcal is almost twice the calorie value of vegetables which is only 39.99 kcal. According to the World Health Organization (WHO) in 2015, sweet food is a component that must be reduced because it does not provide any nutrients for the body. Previous study showed that there is a community habit to could not be refused of food when visiting people's houses. Some patients have a culture of having to eat all foods served, including fried foods.

Reducing sugar consumption can reduce the risk of weight gain, which is a risk factor for diabetes mellitus (DM). In 2015, The Global Burden of Diseases Study reported about 39 thousand deaths worldwide related to the consumption of high sugar foods. Also, around 80% of DM patients will be at risk of developing cardiovascular autonomic dysfunction. Besides sugar, excessive consumption of fried foods (fatty foods) will cause obesity and a high risk of DM. The risk of type 2 diabetes mellitus (T2DM), hypertension, and heart failure increases due to the consumption of fried foods. In 2010, World Health Organization (WHO) stated that overweight and obesity reached levels that needed to be watched out in both developed and developing countries, including in Indonesia. This problem continues to increase every year.

The primary health motivator was significantly correlated with disease and fitness exposure. The pre-elementary study show that suggests that women with a personal or family history of lifestyle-related disease, including obesity, saw weight loss as a means of health improvement and disease prevention. Work, family obligations and poor access to facilities were barrier to control blood glucose. Lack of self-efficacy and social support is also an obstacle for patients in managing T2DM.

Besides maintaining a healthy diet, moderate exercise, and physical activity can help maintain physical health to control blood glucose. World health organization (WHO) recommends people aged 18- 64 years to do moderate physical activities such as cycling or jogging for 150 minutes/week. Regular moderate physical activity for at least 30 minutes a day can reduce the risk of developing cardiovascular disease, DM, and obesity. For those who do not have time, it is advisable to do physical activities flexibly and differently every day to get rid of boredom. Doing household chores cannot be equated with moderate physical activity as recommended.

Domestic physical activity work cannot prevent the occurrence of DM disease when compared to moderate exercise such as brisk walking. Descriptions of perceptions of support for physical activity are conflicting. Some respondents felt that the community had 'deleted it', while others felt quite supported. The social environment is consistently found to affect participation in physical activity. However, the public has no encouragement about their sporting habits and there is little observable support for sports. This is due to the lack of facilities and infrastructure provided by the government. In addition, they find it difficult to quality food because of economic problems

4. Conclusion

This study shows that most housewives are still lacking in physical activity and diet control. It is because there is no time to exercise and economic problems to provide healthy food. This research still has some shortcomings and requires further detailed study related to factors that influence physical activity and dietary regulation of housewives.

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Author Contribution

This study used a qualitative design conducted in Kotagede, Yogyakarta, Indonesia. The study conducted an in-depth interview session in housewife community

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Conflict of Interest

The authors declare no conflict of interest.

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