



PHENOMENOLOGICAL STUDY OF PATIENT EXPERIENCES WITH METABOLIC SYNDROME

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ABSTRACT

Metabolic syndrome is a cluster of interrelated metabolic risk factors that have the potential to cause chronic complications such as type 2 diabetes mellitus and cardiovascular disease. This condition affects not only physical aspects but also the psychological and social dimensions of patients. This study aimed to explore the experiences of patients with metabolic syndrome in their daily lives after being diagnosed. A qualitative approach with a phenomenological method was employed to explore and understand the lived experiences of patients with metabolic syndrome. Data were collected through Focus Group Discussion (FGD) and observations involving eight patients aged 56-60 years diagnosed with metabolic syndrome (seven women and one man), each presenting at least three diagnostic components. Data were analyzed using the Miles and Huberman Model, which includes data reduction, data display, and conclusion drawing/verification. Five main themes were identified: (1) initial post-diagnosis experiences, including denial and anxiety; (2) the impact of metabolic syndrome on physical and psychological conditions; (3) family support in emotional, functional, and acceptance forms; (4) adaptation and coping, consisting of self-initiated efforts, treatment adherence, and following healthcare professionals' recommendations; and (5) life changes after diagnosis, including lifestyle modification, spiritual strengthening, challenges, and the formation of new habits. Patients with metabolic syndrome undergo complex emotional and adaptive processes. Family and healthcare professional support play important roles in helping patients adjust to this chronic condition. These findings contribute to the development of nursing practice based on a holistic bio-psycho-socio-spiritual approach.

Keywords: metabolic syndrome; patient experiences; phenomenology

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INTRODUCTION

Metabolic syndrome is a cluster of metabolic risk factors such as abdominal obesity, insulin resistance, hypertension, dyslipidemia, and elevated blood glucose levels, which increase the risk of developing type 2 diabetes mellitus and cardiovascular disease (Orno et al. 2022). This condition has become a significant global health problem as its prevalence continues to rise in line with lifestyle changes in modern societies, which tend to be sedentary and characterized by high-fat and high-sugar dietary patterns (Ali et al. 2023). Globally, the prevalence of metabolic syndrome ranges from 12% to 37%, while in Indonesia it is reported at 21.66%, with higher prevalence among men (Herningtyas & Ng, 2019). Specific data on the prevalence of metabolic syndrome in Indonesia remain limited; however, it can be inferred from the increasing cases of non-communicable diseases (NCDs) such as obesity, hypertension, and diabetes mellitus (Anggraini, 2024). The 2023 Basic Health Research (Riskesdas) reported that the prevalence of obesity, as a major component of metabolic syndrome, reached 28%, with higher proportions in urban areas (Mulyani et al., 2023).

Metabolic syndrome not only causes physical impairments but also affects the psychological and social aspects of patients. Patients often experience anxiety, stress, and difficulties in making lifestyle changes recommended by healthcare professionals (Luisi et al, 2019). These barriers complicate patients' self-management efforts and reduce their quality of life. Moreover, dietary and physical activity modifications frequently lead to frustration and confusion, especially among individuals who have long been accustomed to unhealthy lifestyles. Some patients even report

feeling like a burden to their families, which further worsens emotional distress and hinders adaptation to the chronic condition.

Understanding patients' subjective experiences is essential for developing more empathetic and patient-centered nursing care. However, studies exploring the direct experiences of individuals with metabolic syndrome remain limited. Therefore, this study aimed to explore the lived experiences of patients with metabolic syndrome using a phenomenological approach to gain a deeper understanding of the emotional, social, and spiritual aspects they encounter.

METHOD

This study employed a qualitative approach with a phenomenological design to explore the subjective experiences of patients with metabolic syndrome in depth. Participants were selected using purposive sampling based on specific criteria relevant to the study objectives. A total of eight participants were involved, consisting of seven women and one man aged 56–60 years who had been diagnosed with metabolic syndrome and presented with ≥ 3 main components such as central obesity, hyperglycemia, hypertension, and dyslipidemia. Inclusion criteria included patients aged 50–65 years, having undergone treatment for at least six months, able to communicate well, and willing to sign informed consent and participate in all research procedures. Exclusion criteria included patients with cognitive impairments, acute conditions, severe complications, or those unwilling to be recorded during the FGD. Before data collection, researchers provided written and verbal explanations regarding the study's purpose, benefits, and confidentiality. Informed consent was then voluntarily signed by all participants. Data were collected through Focus Group Discussion (FGD) and field observations, with each session lasting 15–30 minutes and audio-recorded with participants' permission. Data analysis used the Miles and Huberman model, which includes data reduction, data display, and conclusion drawing and verification. This study received ethical approval from the Health Research Ethics Committee of the Faculty of Health Sciences, Universitas Muhammadiyah Surakarta, under approval number 1449/KEPK-FIK/VII/2025.

RESULT

A total of eight participants were involved in this study, consisting of seven women and one man aged 56–60 years. Their educational backgrounds varied, ranging from no formal education to senior high school. Most participants worked as housewives or private employees, while some were no longer employed. The majority had a history of chronic illnesses, namely diabetes mellitus ($n=6$) and hypertension ($n=5$), and five participants had lived with metabolic syndrome for more than five years. Their physical activity levels ranged from light to moderate. Most participants had no history of smoking, while one participant had quit smoking after being diagnosed with diabetes.

Theme 1: Initial Emotional Experiences Post-Diagnosis

Participants described complex emotional experiences when they were first diagnosed with metabolic syndrome. This theme consists of two subthemes: initial denial and feelings of anxiety..

Subtheme 1: Denial (Initial Rejection)

Several participants initially showed denial regarding their condition. They found it difficult to accept the reality that their bodies were experiencing metabolic disturbances. Some participants stated that they did not believe the examination results and sought assessments at several hospitals before eventually following the advice of healthcare professionals, as illustrated in the following statements:

“At first I didn't believe it, but eventually I followed the midwife's advice” (P2)

“I didn't believe it at first... but after the doctor explained it, I began to accept it” (P5).

Subtheme 2: Feelings of Anxiety

Anxiety emerged as a common reaction among participants after receiving the diagnosis. The forms of anxiety varied, ranging from concerns about their physical condition and family burden to confusion about the disease, as reflected in the following expressions:

“Yes, I felt anxious, afraid that something might happen and it would get worse” (P1)

“Anxious... and afraid of becoming a burden to the family” (P3).

Theme 2: Impacts of Metabolic Syndrome

The impacts of metabolic syndrome on participants’ lives consisted of two main aspects: physical impacts and psychological impacts.

Subtheme 1: Physical Impacts

Physical disturbances were the first signs recognized by most participants, as illustrated in the following statements:

“I realized it because of a wound on my foot that became festering” (P1)

“My eyes feel tired and blurry when I try to see” (P3).

“Frequent urination, easily fatigued” (P2)

Subtheme 2: Psychological Impacts

In addition to physical impacts, metabolic syndrome also caused psychological pressures such as anxiety and stress, reflected in the following expressions:

“I was anxious, I kept thinking about it for several days” (P6)

“When I have a lot on my mind, my whole body feels tired, and my blood pressure and sugar levels increase” (P2).

Theme 3: Family Support

Family support played an important role in helping participants adapt to their condition. This theme consists of three subthemes: emotional support, functional support, and family acceptance.

Subtheme 1: Emotional Support

Families provided support in the form of attention, advice, and motivation to maintain health, as reflected in the following statements:

“My children advised me not to overexert myself and to reduce sweet foods” (P2).

“If my sugar rises even a little... my whole family becomes confused and worried” (P7)

“My family just accepts it... they even keep encouraging me” (P8)

Subtheme 2: Functional Support

Functional support appeared through practical actions, such as assisting with health check-ups and preparing healthy meals, as illustrated in the following expressions:

“My child said... just follow what the doctor says, manage the diet” (P1).

“My family told me to go for frequent check-ups” (P6)

“My children advised me not to tire myself out and to reduce sweet foods.” (P2)

Subtheme 3: Family Acceptance

Participants felt a sense of calm because their families were able to accept their condition without placing blame, as shown in the following statements:

“My family has accepted my condition; what matters is maintaining my diet” (P8).

“My family just accepts it... they even keep encouraging me” (P7)

Theme 4: Adaptation and Coping

Participants developed various forms of adaptation and coping mechanisms to adjust to their condition, including self-initiated efforts, adherence to medical check-ups and medication, and following healthcare professionals' recommendations.

Subtheme 1: Self-Initiated Efforts

Most participants attempted to maintain their dietary intake and reduce stress, as illustrated in the following statements:

"I control my food intake, keep my mind calm, and avoid heavy work" (P1).

"I eat vegetables and fruits" (P3)

Subtheme 2: Adherence to Check-ups and Medication

Adherence to routine medical check-ups and medication consumption was an essential part of the adaptation process, reflected in the following expressions:

"I regularly go for check-ups, frequently monitor my blood sugar, and take my medication routinely" (P7).

"I follow the doctor's recommendations... and take my medication regularly" (P8)

Subtheme 3: Healthcare Professionals' Recommendations

Healthcare professionals were perceived as having scientific authority, leading participants to follow all medical advice, as reflected in the following statements:

"Yes, I follow everything, all the recommendations" (P1)

"I follow the doctor's advice because the doctor understands my condition better" (P8).

Theme 5: Life Changes After Diagnosis

After being diagnosed, participants experienced various changes, including lifestyle modification, spiritual strengthening, challenges in maintaining changes, and the formation of new habits.

Subtheme 1: Lifestyle Changes

Participants realized the importance of improving their diet and increasing physical activity, as illustrated in the following statements:

"Exercising more often, improving my diet" (P7).

"I drink more water now" (P8)

Subtheme 2: Spiritual Strengthening

Some participants strengthened themselves through spiritual approaches, reflected in the following expressions:

"I worship more often and feel more focused on Allah" (P2).

"I pray and worship more often, asking for continuous health and patience" (P4)

Subtheme 3: Challenges in Implementing Changes

Some participants experienced difficulties in maintaining healthy lifestyle consistency, as shown in the following statements:

"Sometimes it's hard to control my diet, I crave fried foods" (P7).

"I don't exercise regularly every day" (P8)

Subtheme 4: Formation of New Habits

After adapting, participants began to establish healthy routines in their daily lives, as illustrated in the following expressions:

"Exercising every day and not forgetting to take my medication" (P1).

"Exercising regularly every morning, and maintaining my diet" (P3).

DISCUSSION

Theme 1: Initial Emotional Experiences of Diagnosis

Participants experienced various emotional reactions when they were first diagnosed with metabolic syndrome, such as denial, anxiety, and fear. In the early stage, some participants exhibited denial as a form of self-protection, for example by delaying treatment or underestimating their condition. This phenomenon aligns with the findings of Kent-Marvick et al. (2024), who reported that individuals at risk of cardiometabolic disease often experience a phase of denial before eventually becoming motivated to make changes after receiving education and support. Additionally, Martinez Leal et al. (2024) found that patients with metabolic syndrome frequently demonstrate ambivalence before accepting their condition after receiving explanations from healthcare professionals. Anxiety emerged due to concerns about potential complications and the lifestyle changes they would need to undertake. Mohebi et al. (2024) emphasized that patients with metabolic syndrome experience a decline in psychological quality of life because of the emotional burden associated with chronic illness. However, over time, participants began to show acceptance by adhering to medical check-ups and modifying their diet. This process reflects a transition from stress to positive adaptation, consistent with the findings of Skoglund et al., (2022), who highlighted the role of healthcare education and family support in enhancing patients' acceptance of chronic illness.

Theme 2: Impacts of Metabolic Syndrome

The impacts of metabolic syndrome on participants' lives included both physical and psychological aspects. Physically, participants experienced fatigue, visual disturbances, slow-healing wounds, and limitations in daily activities. This is consistent with pathophysiological theories stating that chronic hyperglycemia leads to neuropathy and impaired peripheral perfusion (Eid et al, 2023). The visual fluctuations experienced by participants also align with findings from Wang et al, (2023), who explained that long-term hyperglycemia results in oxidative stress and the accumulation of advanced glycation end-products (AGEs). These conditions reduce patients' quality of life, as evidenced by Park et al. (2024), who reported that lifestyle interventions can improve daily functioning and physical symptoms such as hypertension and obesity. Psychologically, metabolic syndrome triggers anxiety, stress, and fear of complications. Zhang et al. (2023) demonstrated that individuals with metabolic syndrome have a 1.6 times higher risk of depression compared to healthy individuals. Psychological stress and metabolic disturbances mutually influence each other. Ekan Faozi et al. (2024) further emphasized that unresponsive healthcare services increase patient anxiety and reduce physiological stability, whereas empathetic therapeutic communication can alleviate stress and strengthen adaptive coping.

Theme 3: Family Support

Family support was an important factor in the adaptation process of patients with metabolic syndrome, encompassing emotional support, functional support, and acceptance. Syfa & Yuniartika (2022) found that family support plays a crucial role in increasing individuals' participation in Posbindu visits, whereas low support leads to non-adherence in health monitoring. These findings are consistent with the present study, in which family support in the form of reminders, motivation, and accompaniment during medical check-ups helped participants become more consistent in practicing health behaviors. For patients with metabolic syndrome, such support functions as a reinforcing factor that strengthens their commitment to lifestyle changes, including dietary regulation, physical activity, and adherence to treatment. Emotional support in the form of attention, advice, and encouragement has been shown to improve treatment adherence (Chen et al., 2023).

In addition, functional support—such as providing healthy meals and reminding patients about medical check-ups—assists them in maintaining their lifestyle modifications. These findings are in line with Scholl et al. (2024), who reported that family social support enhances self-management, reduces stress, and improves patients' quality of life. Family acceptance also plays a major role in helping patients move from denial toward self-acceptance (Skoglund et al., 2022). (Hudiyawati et

al. (2025) further explained that healthcare professionals can strengthen the role of families through systematic and educational instructions. Moreover, Kent-Marvick et al. (2024) emphasized that patients are more motivated to make lifestyle changes when they receive emotional support from their families, as such support fosters a sense of responsibility and meaning toward their own health.

Theme 4: Adaptation and Coping

Participants demonstrated various forms of adaptation and coping strategies, including independent efforts, adherence to medication and routine check-ups, and following healthcare professionals' recommendations. They began adjusting their diet, engaging in light physical activity, and managing stress. These findings align with Skoglund et al. (2022), who stated that effective self-management requires personal motivation, family support, and healthcare monitoring. Adherence to medication and regular check-ups was also reinforced by family support (Chen et al., 2023), which served as a reminder and a source of motivation. In addition, Martinez Leal et al. (2024) and Scholl et al. (2024) found that patients adapt more easily after receiving education and direct interaction with healthcare professionals. Health education has been shown to increase patient knowledge by up to 47%, which influences behaviors related to preventing complications Purwanti et al. (2023). A good understanding of the disease promotes more adaptive self-care behaviors (Putri & Purwanti, 2024). Dewi & Faozi (2023) reported that patient participation in Prolanis improves quality of life through routine health monitoring, structured education, and social support within the community. Ongoing education and guidance help patients understand the importance of healthy eating patterns, physical activity, and medication adherence. These findings are consistent with the results of this study, in which participants felt more confident and motivated after receiving clear explanations from healthcare professionals. Consistent assistance has been shown to strengthen patients' commitment to maintaining healthy behaviors. Overall, educational interventions and structured support are essential components in enhancing patients' adaptation and management of metabolic syndrome.

Theme 5: Life Changes After Diagnosis

After the diagnosis, participants experienced significant lifestyle changes across physical, psychological, and spiritual aspects. They began reducing their intake of high-fat and high-sugar foods, increasing physical activity, and maintaining regular rest. These findings align with Mohebi et al. (2024), who explained that lifestyle modifications can improve overall quality of life. However, some participants continued to face challenges in maintaining a healthy diet, such as cravings for foods that do not comply with medical recommendations. This is consistent with Krishnasamy et al. (2024), who reported that difficulties in resisting unhealthy food are a common phenomenon that must be addressed through behavioral change strategies and sustained social support.

Additionally, participants reported the development of new habits such as exercising regularly and undergoing routine health check-ups. According to Scholl et al. (2024), such habits are more likely to be maintained when supported by family and a positive social environment.

Some participants also demonstrated increased spirituality by strengthening their relationship with God as a coping mechanism. This aspect enhances acceptance and reduces psychological distress, consistent with Andrian & Purwanti (2023), who found that spirituality helps patients with chronic illness find meaning in life and reduces levels of depression.

CONCLUSION

This study identified five main themes that illustrate the experiences of patients with metabolic syndrome: initial emotional reactions to diagnosis, physical and psychological impacts, family support, adaptation and coping strategies, and life changes after diagnosis. In the early phase, patients experienced denial, anxiety, and fear, which gradually transformed into acceptance after

receiving education and family support. Metabolic syndrome exerts extensive effects on both the physical and psychological conditions of patients; however, family and healthcare provider support were found to play essential roles in the adaptation process and in promoting treatment adherence. Following the diagnosis, patients demonstrated positive lifestyle changes and enhanced spirituality as forms of coping. This study provides a scientific contribution by strengthening the understanding of the psychosocial dynamics experienced by individuals with metabolic syndrome, as well as highlighting the importance of family and healthcare support in promoting successful chronic disease management through a holistic and humanistic approach.

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