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Promotion of Metabolic Health Literacy among Women with Metabolic Syndrome

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Abstract

Promotion of metabolic health literacty can be used to prevent the development of metabolic syndrome and its complications. This research finding showed three strategies that included:

- Raising individuals' awareness
- Encouraging modification of healthier behaviors.
- Reflecting on self-management behaviors. It should be integrated to metabolic health education for all.

Keywords: Metabolic Syndrome; Health Literacy

Abbreviations: HDL-C: High-Density Lipoprotein Cholesterol; STW: Sixty Thai Women.

Introduction

Metabolic syndrome is common metabolic health problem among population worldwide leading to many chronic diseases including diabetes, coronary heart disease, hypertension, stroke, renal failure, cancer, Alzheimer's disease. Its known risk factors are genetic and health behaviors. Unhealthy dietary patterns, overconsumption of carbohydrate, sugar, fructose, trans fat and animal fat, resulting in hyperglycemia, dyslipidemia, insulin resistance, advanced glycation end products, endothelial dysfunction and atherosclerosis. In addition, low physical activities and lack of doing regular exercise cause overweight, obesity, accumulation of subcutaneous fat, visceral fat, large adipocyte cells and abnormal cytokines production.

Typically, pathogenesis of the metabolic syndrome is progressive manifestation. It could prevent, improve the condition, or delay the development of consequence complications. Health literacy is composed of several skills including interaction, comprehension, numeracy, information seeking, application, critical thinking and decision making, responsibility, and evaluation. Individual having enriched health literacy would show effective preventive health practice whereas those having limited health literacy are more likely to have multimorbidity. Prior research studies reveal the association of health literacy on modification of healthy lifestyles and reduction of the prevalence of metabolic syndrome [1-7]. Little is known about the metabolic health literacy. Promotion of metabolic health literacy should be helpful to prevent the development of the metabolic syndrome or improve its clinical symptoms and associated complications. This study aimed to explore strategies to promote metabolic health literacy among Thai women with metabolic syndrome.

Research Methods

Descriptive qualitative research is designed to gain more understanding about the promotion of metabolic health literacy. Sixty Thai Women with metabolic syndrome were recruited in the study. Data were collected using open-

ended questions and semi-structure interviews related to perception of metabolic syndrome, lifestyles, dietary patterns, physical activities, exercise, and self-management. Data were analyzed using content analysis.

Results

The participants had at least one manifestation of the metabolic syndrome that included excess waist circumference, elevated blood glucose level, triglyceride, blood pressure and lower high-density lipoprotein cholesterol (HDL-C). Their mean waist circumference was 68.69 cm. Mean fasting plasma glucose was 113.37 mg/dL. Mean triglyceride was 181.78 mg/dL. Mean systolic blood pressure was 143 mm Hg. Mean diastolic blood pressure was 98 mm Hg. Mean HDL-C was 45 mg/dL. Their mean age was 32.5 years. Mean body mass index was 27.58 kg/m^2. They perceived that metabolic syndrome was the disease of women with obesity and it is difficult to prevent and managed. The results showed suggested strategies to promote metabolic health literacy were raising awareness, encouraging modification of healthier behaviors, and reflecting on her health.

1. Raising individuals' awareness. It was composed of two strategies:

- Promoting of clearly understanding of its risk factors and
- Realizing of health problems.

2. Encouraging modification of healthier behaviors. It was composed of two strategies:

- Sharing decision-making and
- Integrating exercise into daily life.

3. Reflecting on self-management behaviors. It was composed of two strategies:

- Normalizing desired health and
- Overcoming the disease.

Discussion

Thai women with metabolic syndrome perceived that metabolic syndrome was the disease of women with obesity because most of them were overweight or obese. Obesity is the main risk factor for the development of metabolic syndrome because it causes insulin resistance and releasing of interleukin, tumor necrotic factors and other cytokines leading to endothelial dysfunction, atherosclerosis and pro-inflammatory state. Prevention of metabolic syndrome is difficult because they need to modify their dietary patterns and lifestyles. Individual who has high health literacy is more likely to adopt healthier behaviors as recommended [8-10]. Women with inadequate health literacy should be advised to participate in metabolic health promotion program and engage in self-management strategies to improve the manifestations of the metabolic syndrome and its complication. Firstly, their awareness to prevent the development of metabolic syndrome should be raised by providing sufficient knowledge to build clearly understanding of its risk factors. For women who experienced some metabolic health problems that included elevated fasting blood glucose, dyslipidemia and hypertensive disorders, they are realized the impacts of the metabolic syndrome and fear of chronic diseases and death. Therefore, they initiate to seek medical treatment and try to modify health behaviors.

Second, effective strategies to encourage modification of healthier behaviors should be implemented. Sharing decision-making to change dietary patterns should be discussed and suggested to promote self-management behaviors [11,12]. In addition, doing favorite exercise would be integrated into daily life in order to promote muscular glucose uptake and improve insulin sensitivity. Third, reflecting on self-management behaviors could promote metabolic health literacy because they hope to improve the problems and have normal health. In conclusion, healthy goal setting to overcome the metabolic syndrome should be planned and followed up. Laboratory results of blood testing including fasting blood glucose, triglyceride, and HDL-C were the important triggers to initiate modification of healthier behaviors and reflect their achievement in self-management of the metabolic syndrome.

Conclusion

Metabolic syndrome and its complications could be prevented by promotion of metabolic health literacy employing three suggested strategies: raising individuals' awareness, encouraging modification of healthier behaviors, and reflecting on self-management behaviors.

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