A Self-Management Program for Cancer Survivors With Metabolic Syndrome Using Intervention Mapping

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Purpose of the Study
Cardiovascular disease (CVD) in cancer survivors has a negative impact on life expectancy, mortality, and quality of life. Metabolic syndrome (MetS) is a phenomenon in which an individual develops the key risk factors of CVD, and studies have determined that this syndrome increases the risk of CVD approximately two-fold meaning that cancer survivors must be particularly monitored for this condition. Thus, cancer survivors must recognize the association between MetS and CVD, and medical interventions seeking to prevent such survivors from contracting MetS have largely focused on improving lifestyles and habits.

Lifestyle intervention is the initial strategy for the prevention and treatment of MetS, and that possessing a healthy lifestyle is an essential factor for delaying or preventing the onset of MetS in vulnerable populations, including cancer survivors. Self-management involves an individual’s direct participation in the management of his/her own health, and is defined as an individual’s capability to manage both their physical and mental symptoms, consequent treatment, and lifestyle.

Intervention mapping (IM) protocol is a method of systematically designing an evidence-based intervention program that assesses personal and environmental factors associated with key health-related issues, and it also involves the application of theoretical methods and practical strategies that combat these factors and consequently resolve the issue. The purpose of this study was to apply intervention mapping protocol to develop a self-management program for cancer survivors with metabolic syndrome.

Methods
To develop the self-management program, the IM protocol was applied as follows: 1) a needs assessment was performed, using data sourced from a literature review, questionnaire, and one-on-one interviews conducted in a previous related study; 2) the objectives of the intervention were formulated and the determinants of self-management behaviors for cancer survivors with metabolic syndrome were identified; 3) theory-based methods and practical applications were selected; 4) an intervention program was developed; finally, 5) implementation and evaluation plans were developed.

Results
The final self-management program aims to improve the health status of cancer survivors with metabolic syndrome through the use of tailored self-management interventions. It consists of twelve weekly sessions that emphasize self-management, such as through enhancing nutrition and exercise. More specifically, the topics of the self-management program are as follows: Session 1) Group introductions, explanation of the program and of the importance of self-management education. Session 2) Description of the definition, diagnosis, etiology, and effects of MetS, and of the characteristics of the condition and of prevention methods. Session 3) Education regarding stress-coping skills and methods of communicating with health-care providers. Session 4) Lesson on healthy nutrition, including education regarding the importance of a balanced, healthy diet. Session 5) Feedback regarding members’ daily records of their meals and Q&A with a nutritionist. Session 6) Instruction regarding physical exercise and stretching. Session 7) Feedback on weekly exercise and Q&A with an exercise specialist. Session 8) Overall review of the program and first post-investigation. Sessions 9–11) Home training using an elastic band and ball and walking (participants were encouraged to perform home training after a demonstration from an exercise specialist and to give feedback over the phone). Session 12) Program conclusion and second post-investigation using phone or e-mail. Further, the program seeks to ensure the maintenance of healthy lifestyles through focusing on determinants such as attitude, self-efficacy, social influence, knowledge, and skills.

Conclusion
The IM protocol provided a useful framework for systematically designing a self-management program for cancer survivors with metabolic syndrome. In particular, it will help cancer survivors maintain a healthy lifestyle through engaging in self-management and will ultimately contribute to improving cancer survivors’ health. The next step is to evaluate the impact this intervention has on health status.

This study was supported by the National Research Foundation of Korea (NRF) funding grant (2018R1A1A1A05018386).