

# **Mediating Effect of Vitamin Intake on the Relationship Between Depression and Health-related Quality of Life in Cancer Survivors (Using the Korea National Health and Nutrition Examination Survey in 2020)**

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## **Abstract**

This study aimed to investigate relationship between depression and health-related quality of life in cancer survivors and mediating effect of vitamin intakes on the relationship. This study utilized data collected in the 8th Korea National Health and Nutrition Examination Survey in 2020. Health-related quality of life was negatively correlated with depression, and positively correlated with thiamine, riboflavin, niacin, vitamin E intake. Mediation analysis revealed that only riboflavin and vitamin E intake had significant mediating effects. This study provides a foundation for future research aimed at improving the quality of life of cancer survivors through the use of vitamins.

**Key Words:** Cancer survivors, Riboflavin, Vitamin E, Quality of life

## **1. Introduction**

Cancer is a leading cause of disease globally [1], and an estimated 32.5 million people worldwide survive up to five years after being diagnosed with cancer [2]. In South Korea, the 5-year survival rate for cancer patients, who account for 3.2% of the total population, is as high as 70.7% [3]. With the aging population and advances in medical technology, the number of cancer survivors in South Korea is increasing steadily. The term 'cancer survivorship' generally refers to all individuals who are affected by the duration of cancer survival from the time of diagnosis until death [4]. In the United States, the National Coalition of Cancer Survivorship recognized the various psychosocial needs experienced by those living with cancer.

An analysis of the Korea National Health and Nutrition Examination Survey (KNHNE) from 2010 to 2015 showed that cancer survivors experienced constraints in daily living and social activities due to physical or mental disabilities [5], which affect their quality of life. Health-related quality of life (HRQoL) is a subjective perception of well-being in terms of physical, mental, and social health aspects, and indicates how well individuals function in their lives [6]. HRQoL is becoming increasingly important, as it is used not only as a tool for assessing various aspects of health status in disease prevention and treatment decisions but