



Depression among Middle-aged Persons

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Metabolic syndrome (Mets) is a multifactorial disease characterized by abdominal obesity, elevated blood glucose, high blood pressure, and an altered lipid metabolism [1,2]. Development of Mets is associated with increasing age, inadequate physical activity, smoking, alcohol use, and high-fat or high-calorie diets [3,4]. The prevalence of Mets was 34.7% in 2011–2012 among Americans [5]. In particular, women and people aged ≥ 60 years had a higher prevalence of Mets than the overall prevalence [5]. Among Korean adults > 19 years of age, the average prevalence of Mets was 18.8% in 2010, and the prevalence was even higher among women and individuals > 50 years of age [4]. In a longitudinal study, Mets was identified as a major risk factor for cerebral and cardiovascular diseases [6]. Thus, it is critical to identify risk factors in order to decrease morbidity and mortality from complications due to Mets in high-risk populations such as the Korean elderly and women [4].

Depression is a significant predictor of type 2 diabetes mellitus (T2DM) and cardiovascular diseases [7–9]. Depression is also significantly associated with Mets [10]. Previous studies have shown that depression was a critical risk factor for the development of Mets in middle-aged and older people [11,12]. Depression was significantly associated with the development of Mets among American and European populations [13], but it was not a significant predictor of Mets among the Japanese population regardless of sex [14]. A study discussed that populations with different sociocultural backgrounds have different health risks due to genetic and socioeconomic heterogeneity [15]. In particular, the difference in the level of psychological stress and social support, as well as lifestyle, such as diet, may alter the prevalence of Mets among ethnic groups [16,17]. Toker et al. [18] proposed that depression may be associated with Mets among women, but not among men. According to the previous studies, depression is significantly associated with the development of Mets, and it worsens the severity of Mets among African-American women, but not among men [19,20]. In a longitudinal study, it was found that depression may also be a significant predisposing factor for the development of Mets among Finnish women, but not among men [21]. Owing to these findings, the significance of the effects of depression on the development of Mets may vary by sex.

In the current issue of *Osong Public Health and Research Perspectives*, a study aimed to identify the association between depression and the development of Mets among middle-aged and older Korean adults on the basis of sex [22]. The authors adopted a cross-sectional design to perform a secondary analysis of data from the 2010–2014 Korean National Health and Nutrition Examination Survey. A total of 4,342 individuals (1,938 men and 2,404 women) were analyzed. Mets was defined in accordance with the criteria used for clinical diagnosis. Depression was assessed with a question on clinical depression. The association between depression and

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the development of Mets with or without adjustment for covariates was identified by performing logistic regression analysis on weighted data, using a complex sample procedure.

The authors found that there were more women who were depressed than men. Before covariate adjustment, depression was significantly associated with the development of Mets among women (odds ratio [OR], 1.586; 95% confidence interval [CI], 1.152–2.183), with a higher triglyceride level among men (OR, 1.679; 95% CI, 1.001–2.818). After covariate adjustment, depression was significantly associated with higher waist circumference among women (adjusted OR [aOR], 1.532; 95% CI, 1.046–2.245) and higher triglyceride level (aOR, 1.511; 95% CI, 1.029–2.219); hence the depression has the significant association with Mets. Conversely, depression did not have significant effects on the de-

velopment of Mets among men.

Authors concluded that depression was associated with the development of Mets among middle-aged and older Korean women and suggested that healthcare providers in communities should assess women with depression for the presence of Mets components. Interventions for relieving depressive symptoms should also be provided to women at risk for Mets.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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