



■ Editorial

# The Interconnected Nature of Smoking, Depression, and Obesity in Behavioral Medicine

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The field of behavioral medicine is increasingly recognizing the interconnected nature of lifestyle factors such as smoking, depression, and obesity. Recent studies offer valuable insights into these interrelationships and underscore the necessity for integrated intervention strategies.

In a study titled “Unhealthy weight control behaviors according to the status of combustible cigarette and noncombustible nicotine or tobacco product use among Korean adolescents with experience attempting to reduce or maintain their body weight: the 15th Korea Youth Risk Behavior Survey, 2019,” researchers analyzed the weight control behaviors of 25,094 Korean adolescents.<sup>1)</sup> They found that those who used either combustible cigarettes or noncombustible nicotine or tobacco products (NNTPs) were significantly more likely to engage in unhealthy weight control behaviors. This association was particularly pronounced among NNTP-only users, highlighting a critical area for public health interventions aimed at reducing smoking and promoting healthy weight management among youths. Such interventions could include educational programs focusing on the risks associated with NNTPs and promoting healthier weight control methods.

In line with this, the letter by Cordero,<sup>2)</sup> “Exploring behavioral and pharmacological interventions against excessive tobacco use,” discusses the prevalence and determinants of tobacco use among Indonesian adolescents. The authors advocate for combined behavioral and pharmacotherapeutic approaches to combat smoking. Behavioral therapies, such as cognitive behavioral therapy (CBT) and motivational inter-

viewing, alongside pharmacological treatments like nicotine replacement therapy (NRT) and varenicline, have shown promise in reducing smoking rates. This multifaceted approach is essential for addressing the complex behavioral patterns associated with tobacco addiction and ensuring long-term cessation success. For instance, implementing school-based CBT programs combined with accessible NRT could significantly lower smoking rates among adolescents.

Depression is another critical factor influencing overall health and behavior. The study “Factors associated with depression among working-age household heads in Korea: a cross-sectional household study,” reveals that depression rates are significantly higher among unemployed individuals, those with low income, poor health, and severe disabilities.<sup>3)</sup> The findings suggest that socioeconomic and health disparities are key drivers of depression. Therefore, targeted mental health interventions and social support systems are crucial for mitigating depression’s impact on this demographic. Policies could include providing subsidized mental health services and creating job programs for the unemployed to alleviate some of the underlying socioeconomic pressures.

The relationship between hormonal levels and metabolic health is exemplified in the study “Relationship between serum total testosterone concentration and metabolic syndrome in premenopausal obese women.”<sup>4)</sup> This research found that lower total testosterone concentrations were associated with metabolic syndrome in premenopausal obese women. The study underscores the need for comprehensive health assessments that include hormonal evaluations, particularly for women at risk of metabolic syndrome, to devise personalized

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and effective treatment plans. Health initiatives could involve routine screening for hormonal imbalances in women presenting with metabolic syndrome risk factors.

The coronavirus disease 2019 (COVID-19) pandemic has also highlighted the role of information dissemination in public health. The review “Understanding the ‘infodemic’ threat: a case study of the COVID-19 pandemic,” examines the dual-edged sword of digital information platforms.<sup>5)</sup> While these platforms facilitate the rapid dissemination of public health information, they also propagate misinformation, contributing to vaccine hesitancy and other harmful behaviors. The review advocates for an interdisciplinary approach to combat misinformation, emphasizing the need for prevention, deterrence, and education to maintain public trust and promote health literacy. Governments could develop stricter regulations on social media platforms to curb the spread of false information and implement public education campaigns to promote digital literacy.

Finally, the study “Association between chronic atrophic gastritis and bone mineral density among women older than 40 years of age in Korea,” explores the link between chronic atrophic gastritis and bone mineral density.<sup>6)</sup> The results indicate that women with chronic atrophic gastritis have significantly lower bone mineral density and a higher risk of osteopenia or osteoporosis, particularly postmenopausal women. This finding calls for increased screening and preventive measures for bone health in women with gastrointestinal conditions. Healthcare providers should consider regular bone density screenings for women diagnosed with chronic atrophic gastritis, especially as they approach menopause.

The convergence of smoking, depression, and obesity within behavioral medicine necessitates a holistic approach to health interventions. By addressing these interconnected factors through integrated behavioral and pharmacological strategies, public health initiatives can more effectively promote overall well-being and mitigate the long-term consequences of these pervasive issues. Future research and policy development should continue to explore these intersections to de-

velop comprehensive, multifaceted health interventions.

## CONFLICT OF INTEREST

Joung Sik Son has been an associate editor of the Korean Journal of Family Medicine but had no role in the decision to publish this review. Except for that, no other potential conflict of interest relevant to this article was reported.

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## REFERENCES

1. Bong AR, Cho YG, Park HA, Kim KW. Unhealthy weight control behaviors according to the status of combustible cigarette and noncombustible nicotine or tobacco product use among Korean adolescents with experience attempting to reduce or maintain their body weight: the 15th Korea Youth Risk Behavior Survey, 2019. *Korean J Fam Med* 2024;45:223-30.
2. Cordero DA Jr. Exploring behavioral and pharmacological interventions against excessive tobacco use. *Korean J Fam Med* 2024;45:231-2.
3. Nguyen TT, Nguyen VC. Factors associated with depression among working-age household heads in Korea: a cross-sectional household study. *Korean J Fam Med* 2024;45:207-14.
4. Kim KJ, Lee JH, Kim SJ, Yu BY, Kang JH. Relationship between serum total testosterone concentration and metabolic syndrome in premenopausal obese women. *Korean J Fam Med* 2024;45:215-22.
5. Andrew A. Understanding the “infodemic” threat: a case study of the COVID-19 pandemic. *Korean J Fam Med* 2024;45:183-8.
6. Lee S, Yun JM, Park JH, Kwon H. Association between chronic atrophic gastritis and bone mineral density among women older than 40 years of age in Korea. *Korean J Fam Med* 2024;45:199-206.