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Examining the Principal Factors Affecting Generalized Anxiety Disorder in Korean Adolescents: Findings from the Korea Youth Health Behaviour Survey, 2021

James Pelegrino*

Department of Psychology, Neuro Research Center, USA

Introduction

According to data from the Korea Health Insurance Review and Assessment Service (2021), the number of individuals receiving treatment for Generalized Anxiety Disorder (GAD) has been increasing annually, rising from 75,127 in 2016 to 83,195 in 2020. The lifetime prevalence rate is notably high as well, with approximately 5% of Koreans experiencing GAD [1]. However, due to the presence of more ambiguous symptoms compared to other types of anxiety disorders, it is challenging to distinguish GAD symptoms from those of normal anxiety. Moreover, since some individuals may not recognize their condition as a disorder, it is less likely to be detected early or classified as problematic behavior. Consequently, without proper treatment, GAD can become chronic, leading to other mental health issues such as social phobia, panic disorder, and depression [2].

Associated data from the Korea National Health Insurance Corporation (2019) by age group of patients treated for anxiety disorders (including GAD, panic disorder, obsessive-compulsive disorder, and post-traumatic stress disorder) showed the highest rate of increase among those in their 20s (86.2%), followed by teenagers (46.5%) and individuals in their 30s (45.9%). Additionally, Lim reported that approximately 11.2% of Korean adolescents belonged to the high-risk group for GAD, indicating a much higher prevalence of GAD in youth compared to adults.

Discussion

According to the psychosocial developmental theory of Erikson, adolescence, spanning from ages 12 to 20, represents a transition from childhood to adulthood- a critical period to explore oneself, contemplate future-related conflicts, and form identity. Erikson considered the process of coping and adapting to the external environment crucial at each developmental stage [3], and the prolonged COVID-19 pandemic has disrupted this process among adolescents. It can be argued that not only was students' academic anxiety amplified in a situation where regular school attendance was challenging, but also mental health issues such as GAD became more prevalent due to factors like social isolation and parental neglect manifesting in complex interactions. Considering the impact of COVID-19, it is imperative to raise social awareness about the issue of GAD in youth at this crucial time and implement appropriate preventive measures [4,5].

Previous research has shown that GAD in adolescence is associated with psychosocial issues, academic challenges, and low self-esteem, and it can develop into a chronic handicap without effective treatment over time. At this stage, the severity of symptoms tends to fluctuate, and significant stresses are the primary exacerbators of GAD symptoms. Specifically, age and chronic illness have been identified as negative predictors of GAD. However, adolescents with GAD struggle to identify anxiety disorders due to the absence of observable behavioral changes, despite adaptation issues and other types of illnesses being associated with adulthood. Therefore, early and thorough diagnosis of GAD is crucial for determining the most effective treatment option [6].

Additionally, identifying the at-risk group earlier by identifying the significant factors contributing to GAD in adolescents is essential. In this study, we focused on Korean middle school students and aimed to determine the relative impact of various variables on their GAD.

Data from the 2021 survey of the seventeenth Youth Health Behaviour Survey were collected and analyzed in accordance with the disclosure and control guidelines for raw data to understand the health behaviors of Korean adolescents. The survey population comprised middle and high school students in Korea as of April 2021, and the sampling method included stratification, distribution, and sampling stages. The population was stratified into 117 layers, and after classifying 17 cities and counties into large, medium, and small categories, it was further categorized into 39 regions based on geographical accessibility, the number of schools, population, living environment, smoking rate, and drinking rate [7]. Four hundred middle schools and four hundred high schools were selected during the sample distribution phase. Using the stratified colony sampling method, the school was selected as the primary sampling unit, and one class from each grade was randomly selected from the sample school. All students in the sampled class were surveyed. A total of 59,426 students, excluding long-term absentees, disabled children, and students with text-decoding problems, were surveyed, and 54,848 students from 796 schools participated in the survey, with a response rate of 92%.

A current issue in Korean society is the cramming education system and intense competition for college admission. According to a related study, British teenagers, who are known to have relatively high academic commitment among European countries, study for 6.9 hours per day, much less than the 11.5 hours of Korean students. Additionally, according to the OECD's Program for International Student Assessment (PISA), the academic achievement scores of Korean youths are consistently higher than the world average every school year. In Korea's competitive social structure, where the academic clique is recognized as one of the vital attainments, the middle and high school period holds great significance for gaining an edge in the college admission competition [8].

Adolescence is a time when emotional and intellectual interactions form a more complex structure than in childhood, and underestimation

*Corresponding author: James Pelegrino, Department of Psychology, Neuro Research Centre, USA, E-mail: jamesrino@gmail.com

or overestimation of the self are prevalent. For this reason, neuroticism and mental confusion are often experienced in adolescence. These developmental characteristics accompany the pressure of survival in a competitive system, so the middle and high school period in Korea presents a very high risk of developing GAD, excessive anxiety, and tension symptoms. Therefore, in the present study, we focused on the factors influencing GAD in Korean middle and high school students to provide fundamental information for the development of a national intervention program for GAD [9]. This is necessitated by the challenge of mediating all the factors that affect GAD, as well as the need to focus on more than a single influencing factor.

Conclusion

This study aimed to comprehensively understand the effects of sociodemographic, negative emotion, and physical activity factors on GAD in Korean middle and high school students using the Korea Youth Health Behaviour Survey (2021). First, we found that sociodemographic factors (sex, school year, academic performance, and economic status) affect GAD. Second, the results of the independent t-test analysis showed a significant difference in GAD according to sex and between middle school and high school students. Third, the results of the ANOVA analysis of GAD according to the five categories of academic performance and socioeconomic status showed a significant difference in GAD depending on academic performance and economic status. Fourth, multiple regression analysis was conducted to identify which factors significantly affect GAD and which predictors have the greatest impact. The results of multiple regression analysis showed that sex, economic status, perceived stress, sadness, suicidal thoughts, loneliness, physical activity, high-intensity exercise, and muscle-strengthening exercise significantly affected GAD, while school year and academic performance were found to have no significant impact on GAD. Perceived stress was found to be the predictor that had the greatest impact on GAD, followed by loneliness, sadness, and suicidal thoughts. Fifth, although the explanatory power of the three physical activity factors was not high, they were all found to have a significant impact on GAD. High-intensity activity and muscle-strengthening exercise showed an inverse correlation with GAD, and high-intensity exercise and muscle-strengthening exercise were more effective in reducing GAD than regular physical activity. Therefore, we concluded that the risk of GAD in middle and high school students increases when the level of perceived stress is high, and high-intensity exercise and muscle-strengthening exercise were the most effective in reducing GAD.

Acknowledgement

Conflict of Interest

None

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