

学 位 論 文 の 要 旨

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学 位 論 文 名 Factors Related to the Awakening Mood for Seventh-grade Students
in a Rural Area of Japan

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論 文 内 容 の 要 旨

INTRODUCTION

Bad sleep behaviors are not good for the health of youths. Youths' negative mood when waking up occurs as a result of bad sleep. A negative awakening mood is related to decrease in both their concentration levels and children's academic ability, and increase sleepiness during the daytime. The awakening mood of children is closely related to their psychological problems. Especially, Seventh grade is a period of growth in which youths experience sudden physical and psychological changes. In addition, how to get along with their friends and parents also changes during this period. These changes influence both their behaviors and other psycho-social factors. However, few studies have investigated the influence of negative awakening mood on both the physical signs and the psycho-social factors among junior high school students.

The purpose of our study is to clarify what factors are related with negative feeling on awakening, especially physical signs and psycho-social factors, among seventh grade in a rural area of Japan.

MATERIALS AND METHODS

This present study design was a cross-sectional questionnaire study in A city, rural Japan. Subjects were all seventh-grade students in the junior high school during 2012 to 2014. The

consent forms and the questionnaires for this study were distributed by the class teachers. The students and their parents or guardians were asked to fill out the consent form. Of 588 subjects, 504 students (boys: 252, girls: 252) had eligible responses.

The questionnaires consisted of lifestyle and affection. The lifestyle questions had sleeping and breakfast. Concerning awakening moods, for the question, “I wake up feeling pleasant in the morning,” the subjects were divided into two groups, “positive awakening mood” and “negative awakening mood”. The questionnaire also asked subjects regarding their psycho-social characteristics, mainly affection for themselves and their family.

The study also used data from blood tests and physical examination in annual health checkups. Blood samples were drawn from an antecubital vein of fasting participants. For the blood test, the total cholesterol (T-CHO), high-density lipoprotein (HDL), low-density lipoprotein (LDL), and triglyceride (TG) in serum levels were measured enzymatically.

The comparisons between groups of students with positive awakening mood and negative awakening mood were examined using chi-squared tests or Student t-tests by gender. Multiple logistic regression analysis was used to assess the contribution of negative awakening mood to independent variables with statistical differences. For analysis software, the Statistical Package for the Social Sciences (SPSS Japan Inc., Version 12.0J, Tokyo, Japan) was used.

The study was approved by the Institutional Review Board in Faculty of Medicine, Shimane University.

RESULTS AND DISCUSSION

Among boys, the group with a negative awakening mood had later awakening times and ate breakfast less often, with statistical differences. Among girls, the group with a negative awakening mood significantly had later bedtimes, shorter sleeping times, and ate breakfast less often. By the data of biological parameters, there were no significant difference between the quality of awakening moods and all biological parameters in both gender. Then, compared with those boys with a positive awakening mood, boys with a negative awakening mood answered either “no” or “probably not” significantly more often to the questions, affection for themselves, having positive traits, affection for their family, and affection for their friends. For girls, the percentages of “no” and “probably not” were higher for all items in the group with a negative awakening mood than that in the group with a positive awakening mood group, which is similar to the boys. Although there were no relationships by feeling on awakening among boys by the multiple logistic regression analysis, only less affection for their friends was positively

associated with a negative feeling on awakening among girls.

Our study indicated relationships between a negative awakening mood and less affection for their friends among only girls. Not getting along with their friends is a big problem among female junior high school students. Students with negative awakening moods had lower affection for themselves and had lesser positive traits. Those who had a negative awakening mood tended to be unable to accept themselves affirmatively. Our results suggest that girls are more likely to encounter problems in their friendships than boys.

Our study also found the relationships between negative awakening moods and late sleeping time or a short sleeping time only among girls. It seems that a late sleeping bedtime leads to chronic sleep deprivation. The chronic sleep deprivation has an effect on a person's feelings of irritation. The irritation is related with less affection for their friends due to the chronic sleep deprivation after sleeping hours are reduced by late bed-in time. There is also a relationship between a negative awakening mood and skipping breakfast among both genders. The reasons for skipping breakfast may have shifted from time management to physical symptoms, reflecting the background for mental state. Thus, skipping breakfast may lead to an altered mental state, resulting to both an increased feeling of irritability and less affection for friend.

Our study could not find the relationship between awakening moods and each biological parameter in annual health check-ups. The awakening mood may be an indicator that shows a psychological state before it become evident as physical symptoms. This may suggest that improving lifestyle-related behaviors leads to not only decrease the risks for sleep disorders and depression but also being able to get along with friends.

CONCLUSION

In conclusion, we clarified that among seventh-grade students, those with a negative awakening mood tended to give negative responses to the psychosocial items in a rural Japan. Especially, there was a positive relationship between a negative awakening mood and less affection for friends among girls. We could not find the associations between awakening moods and biological parameters obtained during health check-ups. Our results suggest that improving their awakening mood may lead to having favorable friendships. We propose that improving lifestyle-related behaviors related to awakening moods contributes to their maintaining good physical and psychological health during adolescence.