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ABSTRACT: The School Environment And Health-Risk Behaviors In High School Students In Okinawa, Japan

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# Introduction

In Japan, it is compulsory for all children from ages 6 to 15 years to attend elementary and junior high school. Most of them (97%) go on to senior high school. As students spend their time in the school setting almost all day, the school environment has a significant impact on not only academic performance but also health outcomes of the students. In the West, many studies have indicated that students who had positive perceptions of their school environment were significantly less likely to report somatic complaints and to engage in health-risk behaviors. However, it is not clear about how Japanese students' perceptions of the school environment are associated with their health outcomes.

This study aims to examine the relationships between the school environment and their health-risk behaviors among high school students in Okinawa, Japan.

# Methods

A self-administered anonymous questionnaire survey was conducted in a classroom setting from November to December 2002. The study sample consisted of 2,852 students in grades 10 through 12 (ages 15-18) at 25 public senior high schools throughout Okinawa. Schools were chosen from 17 general high schools and 8 vocational high schools. Health-risk behaviors studied included nonuse of seatbelts, suicide ideation, cigarette smoking, alcohol drinking, sexual intercourse, and physical inactivity. The school environment variables, which were adapted from the questionnaire used in the WHO Health Behaviour in School-aged Children Study (HBSC), contained students' perceptions of autonomy and control, unrealistic expectation, support from teacher, and support from classmates.

# Results

Among high school students, 43.9% rarely or never wore a seatbelt, 7.7% seriously considered attempting suicide, 17.4% smoked cigarettes, 40.8% drank alcohol, 23.5% had sexual intercourse, and 46.1% reported physical inactivity.

In the logistic regression model, controlled for sociodemographic variables, students who perceived a high level of autonomy and control were significantly less likely to engage in all health-risk behaviors except for physical inactivity. Students who had unrealistic expectations were more likely to engage in suicide ideation and alcohol drinking, but less likely to engage in nonuse of seatbelts and physical inactivity. Students with high classmate support were less likely to consider attempting suicide and to report physical inactivity, but more likely to drink alcohol. Teacher support was not significantly associated with most of the health-risk behaviors.

#### Discussion

The school environment variables examined were found to have independent effects on the prevalence of health-risk behaviors in Japanese high school students. As students' perceptions of autonomy and control were negatively related to engaging in most health-risk behaviors, it is reasonable that reinforcing their perceptions of autonomy and control may be an important strategy to protect against health-risk behaviors. Interestingly, high-level classmate support was positively associated with the prevalence of alcohol drinking. It is possible that alcohol consumption may occur as a result of peer pressure.

Recently, the Japanese government has been developing a health policy based on the idea of health promotion. The findings suggest that interventions which improve the psychosocial school environment are needed in order to create a health-promoting school.