

Problematic eating attitudes among college and university dietetics students in an urban area of Japan.

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Abstract : This study was designed to survey the prevalence of problematic eating behaviors among dietetics students. The Eating Attitude Test (EAT) was distributed to college and university dietetics students and students of other majors in the Nagano city area. For dietetics freshmen, the survey was repeated again after an interval of 5 months. The incidence of disordered eating attitudes was significantly greater in the dietetics majors than in other students. The incidence was significantly higher in dietetics freshmen than in dietetics juniors and seniors. The five-month follow up study of the dietetics freshmen revealed some improvements in eating attitude, but the difference was not statistically significant. These results imply that college and university students majoring in dietetics have greater problems associated with food than control students and that their eating attitudes improve as a result of exposure to dietetics education.

Key Words : eating disorders, eating attitude test, food preoccupation, prevention

Introduction

The number of recorded eating disorder cases in Japan has been increasing in the past years (Pike et al., 2003). Eating disorders consist of such subcategories as anorexia nervosa, bulimia nervosa, and unspecified eating disorders which include binge eating disorder. Earlier studies suggested that eating disorders are a kind of culture-bound syndrome of modern Western countries (Yap, 1969). Different family relationships, ideals of beauty and dietary practice in Oriental cultures, including Japan, were thought to limit the risk of eating disorders. However, reports on eating disorders are increasing in non-Western cultures and non-developed countries (Suematsu and Kuboki, 1988, Mumford et al., 1991, Nishizono-Maher, 1994, Lee et al, 1996, Becker et al., 2002).

Some studies have indicated that female college students majoring in dietetics have more

problems associated with eating behaviors than other students (Crockett and Littrell, 1985, Worobey and Schoenfeld, 1999). Nonetheless, the nutritional information they are provided with is expected to adjust their eating behavior and reduce their vulnerability to eating disorders (Reinstein et al., 1992). Little information is provided, however, about the prevalence of disordered eating among Japanese dietetics students and very few studies have ever been published on the effectiveness of nutritional education as a preventive measure against eating disorders.

The present study sought to determine whether more disordered eating attitude is prevalent in dietetics students than in other students in Nagano city, Japan. The study also looked at the effects of dietetics education in modifying their eating attitudes. To accomplish these objectives, self-report multiple choice questionnaires about eating attitudes were given to female college and university students in various fields in the city.

Methods

We used the Eating Attitude Test (EAT) (Garner and Garfinkel, 1979) to evaluate the subjects'

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eating behavior and the symptoms of their eating disorders. The EAT is a standardized self-report measure of eating disorder symptoms and is widely used for epidemiological and clinical purposes. Its original 40-item version (EAT40) and a factor-analyzed 26-item short version (EAT26) (Garner et al., 1982) have been translated into many languages and cultural norms including Japanese. The usefulness of EAT has been validated not only as a screening test for eating disorders but also in identifying disordered eating problems among non-clinical population (Button and Whitehouse, 1981). A cutoff score of 30 has been established for the EAT40 and 20 for the EAT26 to differentiate between anorexia nervosa patients and normal young female control. In the present study, we considered scores above 30 on the EAT40 and above 20 on the EAT26 as indicators of significantly disordered eating attitudes that imply possible clinical eating disorders.

Female university undergraduates and female college students in the Nagano city area were approached and asked to complete the EAT40 questionnaires in November 2002. The students were informed about the purpose of the study and protection of their privacy. The participants' anonymity was assured throughout the study. The dietetics group was composed of college students who were majoring in dietetics and university students who were following courses to become school teachers of household administration. The control group was composed of liberal arts majors in the same college. One hundred eighty seven students agreed to participate in the study. For freshmen majoring in dietetics, a follow up study using EAT26 was performed in April 2003.

Chi-square test was used to analyze the percentage of students in each group whose EAT

scores were above the cutoff points.

Results

Table 1 shows the number of students whose EAT40 scores were above or under the cutoff point. The ratio of high-scorers (whose eating behavior and thought about food were considered to be disordered) to others was 12 to 108 (11.1%) in the dietetics students, compared with 2 to 77 (2.6%) in the control liberal arts students. The percentage of students with disordered eating attitudes was significantly greater in the dietetics students than in the control students (chi square value with Yates' correction = 3.526, d.f. = 1, $P = 0.031$, Fisher's P value = 0.046).

Table 2 compares the ratio of high scoring freshmen and higher grade dietetics students. The ratio of students with disordered eating attitudes was significantly lower in the juniors and seniors (chi square value with Yates' correction = 6.022, d.f. = 1, $P = 0.014$, Fisher's P value = 0.009). A follow up study of the dietetics freshmen was performed 5 months after the first survey using EAT26. Because of the anonymity of the self-report questionnaire, the participants in November 2002 and April 2003 surveys were considered non-paired groups. Table 3 shows that the ratio of dietetics freshmen with

Table1 Comparison of the number of dietetics and control students whose EAT40 scores are above or under the cutoff point.

	Dietetics	Liberal arts (Control)	S u m
Above 30	12 (11.1%)	2 (2.6%)	14
Under 30	96	75	171
S u m	108	77	185

EAT26 scores above the cutoff point to others was 6 to 34 (17.6%) in November 2002, compared with 5 to 40 (12.5%) in April 2003 (chi square value with Yates' correction = 0.086, d.f. = 1, $P = 0.770$, Fisher's P value = 0.745). No significant difference in the ratio of high-scorers was revealed after 5 months of education, although a slight chance of improvement could be seen.

Discussion

Few epidemiological studies on eating disorders have focused on students majoring in dietetics. In the present study, the ratio of students who have EAT40 scores higher than cutoff point was greater in dietetics students than in liberal arts students, and the ratio is greater in dietetics freshmen than in higher grade students. The study have limitation of locality and the small size of samples, which might contribute to the large group variance. However, these results suggest that some young women with problematic eating attitudes might have a tendency to choose dietetics or related majors, and their eating behavior may be partially restored after a period of time.

There are possible explanations as to why some young women with problematic eating attitudes tend to choose dietetics. Problematic eating

attitudes including excessive dieting, binge eating and an extreme desire for oral control are derived from a comparably strong preoccupation with food. This food preoccupation could be unconsciously transformed and realized as an interest in food and nutrition. Although there is little evidence to support discussion about such unconscious reasons, well-designed research on the career decision making process of individuals who are vulnerable to eating disorders is beneficial in understanding the social and psychological factors of eating disorders.

Some experimental prevention strategies for eating disorders have been tried and reported by mental health and education specialists (Piran, 1999, Wade et al., 2003). One of the most practical and successful approaches was the Piran's prevention trial conducted at a ballet school. Ballet students are one of the highest-risk groups for eating disorders. Piran's holistic prevention program has been in practice more than a decade and has reduced the ratio of students with problematic eating attitudes from about 50 % to 15 % (Piran, 1999). In our study, the percentage of students with high EAT scores also decreased from 23.5 % in freshmen to 5.4 % in juniors and seniors. Based on these results, it is reasonable to suggest that the curriculum for dietetics students can improve the eating attitude of

Table2 Comparison of the number of dietetics freshmen and higher grade students whose EAT40 scores are above or under the cutoff point.

	Freshmen	Juniors and seniors	S u m
Above 30	8 (23.5%)	4 (5.4%)	12
Under 30	26	70	96
S u m	34	74	108

Table3 Comparison of the number of dietetics freshmen whose EAT26 scores are above or under the cutoff point in November 2002 and in April 2003.

	November 2002	April 2003
Above 20	6 (17.6%)	5 (12.5%)
Under 20	28	35
S u m	34	40

vulnerable groups. In order to examine the effect of dietetics education from a different aspect, we followed up the freshmen in Table 2 and surveyed them again 5 months after the first study, as shown in Table 3. Unfortunately, the small improvement we detected was not significant enough to prove the effects of education. A longer time course study (one year or more) is necessary to reevaluate the improvement of eating attitudes presented in Table 2.

Despite our results which suggest the vulnerability of dietetics students to eating disorders, clinical dietitians are generally expected to play an important role in the treatment of eating disorders. This apparent gap between the vulnerability of dietetics students and the expected professional ability of the graduates can be bridged by the dietetics education they receive. Our results imply that the regular curriculum for dietetics students might have some preventive effect in reducing risk factors of eating disorders. Studies of additional education programs focusing on the prevention of eating disorders are more likely to be productive.

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