

Prevalence of Self-Induced Vomiting and Laxative/Medication Abuse Among Female Adolescents: A Longitudinal Study

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(Accepted 13 November 1992)

In order to assess the prevalence and stability of weight reduction techniques utilized by adolescent females, three comprehensive samples of middle school and high school students (ages 12–18) were surveyed in the springs of 1984, 1989, and 1992. All participants were enrolled in the same school district to ensure that the groups were demographically equivalent. The results demonstrated a significant decrease in the use of appetite suppressants among high school students. However, middle school females reported a significant increase in medication use and self-induced vomiting during the same 7-year period. Laxative abuse has persisted unchanged for a small segment of both populations. © 1993 by John Wiley & Sons, Inc.

Numerous studies have documented that adolescent females are in battle with their bodies. In the elusive quest for the thin ideal, body dissatisfaction is epidemic and aggressive measures of weight control/reduction are the norm (Johnson, Tobin & Lipkin, 1989; Kelly & Patten, 1985; Mellin, Irwin, & Scully, 1992; Rosen & Gross, 1987).

The extent of maladaptive eating patterns and weight control techniques among teenage girls needs further exploration. Several researchers have studied weight-related issues with high school students (Crowther, Post, & Zaynor, 1985; Mumford, Whitehouse, & Chowdry, 1992; Rosen & Gross, 1987; Wadden, Brown, Foster, & Linitz, 1991). However, it is difficult to judge the significance of epidemiologic change without comparative data. Only repeated assessments over an extended time period with the same cohort can effectively address this question. Likewise, comparative

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population-based longitudinal data are needed to determine the age at which weight concerns and dysfunctional weight control behaviors develop in females.

This study was designed to assess the prevalence and stability of self-induced vomiting, and the utilization of appetite suppressants and laxatives over a 7-year period. Both middle school and high school females were surveyed three times during the time period to shed further light on any trends evidenced. Thus, this study greatly expands previous epidemiologic efforts.

METHOD

Subjects

Data were collected in the springs of 1984, 1989, and 1992 from all female students (ages 12–18) enrolled in middle school (grades 7–8) or high school (grades 9–12) in a suburban school district within the metropolitan area of Buffalo, New York. The samples were collected from the same schools to ensure that the groups were demographically equivalent. The school district had a 99% Caucasian student body of middle socioeconomic status.

Measure and Procedure

Each student was asked to complete a survey containing questions about methods of weight modification. The questionnaire assessed whether or not the subjects had engaged in laxative use, self-induced vomiting, or consumption of appetite suppressants. All questions were answered on a “yes” or “no” basis. Participants were surveyed on a single day in 1984, 1989, and 1992 during their physical education class, a mandatory course for all students in the school district.

RESULTS

Response summaries and chi-square values are presented in Table 1. Statistical analyses were computed to determine: (a) longitudinal change among the three survey assessments for high school students, (b) longitudinal change during the same time periods for middle school females, and (c) concurrent differences between middle school and high school youngsters during 1982, 1989, and 1992.

High school students engaged in significantly fewer extreme weight reduction techniques (i.e., purging and medication use) during the later years. In each case, the percentage of students reporting these behaviors was lower in 1992 than in 1984. However, a trend toward increased utilization appears for self-induced vomiting with this cohort between 1989 and 1992.

In stark contrast, middle school students consistently reported *increased* use of weight control techniques between 1984 and 1992. Only laxative abuse resulted in nonsignificant chi square values. The largest escalation occurred in purging (approximately 8% increase).

In both the 1984 and 1989 samples, there were significant differences between middle school and high school student responses to every question with the exception of laxa-

Table 1. Comparison of 1984, 1989, and 1992 responses

Variable ^{a,b}	High School Middle School	1984	1989	1992	χ^2
		<i>n</i> = 311 <i>n</i> = 131	275 120	253 114	
Have you ever used drugs/medications such as Dexatrim or Acutrim to help you lose weight?					
	High school	28.0% (87)	14.2% (39)	11.9% (30)	29.20****
	Middle school	.8% (1)	1.7% (2)	6.1% (7)	7.39*
χ^2		42.80****	14.07***	2.83 (ns)	
Have you ever used laxatives such as ExLax or Correctol to help you lose weight?					
	High school	5.5% (17)	4.4% (12)	3.2% (8)	6.35 (ns)
	Middle school	1.5% (2)	0% (0)	1.8 (2)	4.23 (ns)
χ^2		3.48 (ns)	5.40*	.59 (ns)	
Have you deliberately vomited in an effort to lose weight?					
	High school	16.1% (50)	13.5% (37)	15.4% (39)	10.19*
	Middle school	3.8% (5)	3.3% (4)	11.4% (13)	8.49*
χ^2		12.72***	9.20**	2.98 (ns)	

^aAll values reflect positive responses. For example, 68.8% of high school students in 1984 answered in the affirmative to the first question.

^b*dfs* = 2 for 1984, 1989, to 1992 comparisons; *dfs* = 1 for high school to middle school comparisons.

p* < .05, *p* < .01, ****p* < .001, *****p* < .0001.

tive use. Proportionately more high school females had induced vomiting and/or used diet pills. However by the 1992 sample, the two cohorts did not differ significantly in their responses to any item.

DISCUSSION

There are two findings within this study that extend beyond previous research and are of significance to the professional community. First, it appears that very young adolescent females (i.e., middle school students ages 12–14) began the weight-related battle with their bodies at the onset of puberty. The significant increase in purging and diet pill consumption during the last 7 years with this young cohort requires renewed professional attention.

Second, the reversal in the trend toward less involvement with extreme weight control measures with older adolescents is significant. The increased use of self-induced vomiting during the last 3 years is striking evidence that the propensity to abandon drastic weight control techniques may have been short lived.

The results of this study strongly suggest that middle school females need further education regarding natural weight/fat gain during puberty, normative reference points for body mass, and appropriate methods of weight modification. Likewise, professionals should not succumb to the conclusion that the dieting craze of the last 20 years is rapidly declining. These results would suggest that proficient vigilance by the mental health community is still imperative.

REFERENCES

- Crowther, J. H. C., Post, G., & Zaynor, L. (1985). The prevalence of bulimia and binge eating in adolescent girls. *International Journal of Eating Disorders, 4*, 29–42.
- Johnson, C., Tobin, D. L., & Lipkin, J. (1989). Epidemiologic changes in bulimic behavior among female adolescents over a five-year period. *International Journal of Eating Disorders, 8*, 647–655.
- Kelly, J. T., & Patten, S. E. (1985). Adolescent behaviors and attitudes toward weight and eating. In J. E. Mitchell (Ed.), *Anorexia and bulimia: Diagnosis and treatment* (pp. 191–204). Minneapolis: University of Minnesota Press.
- Mellin, L. M., Irwin, C. E., & Scully, S. (1992). Prevalence of disordered eating in girls: A survey of middle-class children. *Journal of the American Dietetic Association, 92*, 851–853.
- Mumford, D. B., Whitehouse, A. M., & Chowdry, I. Y. (1992). Survey of eating disorders in English-medium schools in Lahore, Pakistan. *International Journal of Eating Disorders, 11*, 173–184.
- Rosen, J. C., & Gross, J. (1987). Prevalence of weight reducing and weight gaining in adolescent girls and boys. *Health Psychology, 6*, 131–147.
- Wadden, T. A., Brown, G., Foster, G. D., & Linowitz, J. R. (1991). Salience of weight-related worries in adolescent males and females. *International Journal of Eating Disorders, 10*, 407–414.