

Early Puberty in Girls is Associated with Disordered Eating

Results from a National Survey of Israeli Youth

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Introduction

Disordered eating (DE) encompasses a range of unhealthy behaviors (ie. dieting, fasting, binge eating, skipping meals, self-induced vomiting) that may lead to adverse mental and physical outcomes. These behaviors are considered predictors for clinically diagnosed eating disorders. Studies suggest a role of pubertal timing in the etiology of DE, particularly in females. This study aimed to explore the relationship between early puberty and DE in Israeli girls.

Methods

Data from female participants in the Israel Youth Health and Nutrition Survey (2015-16), carried out by the Israel Center for Disease Control were used in this study. A self-administered questionnaire that included the SCOFF questionnaire was used along with anthropometric measurements. Early puberty was determined by menarcheal age <11.5 years. Those who responded affirmatively to at least two SCOFF items were classified as having symptoms of DE. Multivariable logistic regression analyses examined the relationship between early puberty and DE, controlling for potential confounders.

Results

In total, 2415 girls, aged 12-18 years, were included in the study. Among them, 12.7% had early pubertal development. Adjusted for age, population group, socioeconomic status, and weight status, early puberty was significantly associated with a 46% increased prevalence of DE, as well as with 3 of the 5 SCOFF items.

Conclusion

Early puberty in Israeli girls was associated with an increased prevalence of DE. In light of the alarmingly high prevalence of DE in the study population, identifying those with early sexual development and possible referral for appropriate assessment and treatment of DE is warranted. This will help to prevent the development of future, undesirable health problems, including clinical eating disorders.

Characteristics of Study Participants According to Pubertal Timing

Variable	Early puberty (N=306)	Controls (N=2109)	p-value
Age, years	15.0 ± 1.6	15.2 ± 1.6	0.037
Socioeconomic status, % low	125 (39.5)	855 (37.7)	0.55
Population group, % Jews	201 (78.9)	1335 (76.5)	0.42
Age at menarche, years	10.7 ± 0.5	12.7 ± 0.9	<.001
Weight status:			<.001
Underweight, %	0 (0)	29 (1.66)	
Normal weight, %	159 (59.0)	1326 (70.4)	
Overweight, %	73 (27.4)	421 (21.9)	
Obese, %	36 (13.6)	124 (6.1)	
Disordered eating (≥2 positive responses), %	197 (64.7)	1151 (54.2)	0.001

Calculated with the application of sample weights of the Israeli Youth Health and Nutrition Survey. Data are mean ± SD or n (%).

Associations Between Early Puberty and Disordered Eating [Multivariable models*]

Outcome: SCOFF items and score (Yes versus No)	OR (95% CI)
Do you make yourself sick because you feel uncomfortably full?	2.03 (1.41-2.91)
Do you worry you have lost control over how much you eat?	1.15 (0.88-1.49)
Have you ever lost more than 3 kg in weight over a three-month period?	1.46 (1.12-1.91)
Do you believe yourself to be fat when others say you are too thin?	1.31 (1.01-1.70)
Would you say that food dominates your life?	1.20 (0.92-1.56)
Disordered eating (≥ two affirmative responses)	1.46 (1.11-1.92)

*Models were adjusted for age, socioeconomic status, population group, and weight status.