BRIEF REPORT

The Turkish Version of the Eating Disorder Examination Questionnaire: Reliability and Validity in Adolescents

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Abstract

The Eating Disorder Examination Questionnaire (EDE-Q) is the self-report questionnaire version of the Eating Disorder Examination Interview. The aim of the current study was to validate a Turkish version of the EDE-Q in a sample of Turkish primary and high school students (626 girls and 299 boys) in Istanbul. Subjects also completed the Eating Attitudes Test, the General Health Questionnaire and the Body Image Satisfaction Questionnaire, and they were weighed. Girls had higher scores on all EDE-Q subtests. EDE-Q scores increased as body mass ındex increased. EDE-Q total score and subscales were highly correlated with the Eating Attitudes Test and the Body Image Satisfaction Questionnaire, supporting its validity. A small test–retest reliability study provided satisfactory results. The present study suggests that the Turkish version of EDE-Q is an acceptable, reliable and valid measure in nonclinical adolescent samples. More psychometric studies are needed concerning wider age ranges and various clinical samples.

Keywords
eating disorders; Eating Disorder Examination Questionnaire; validity; reliability

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Introduction and aims

The Eating Disorder Examination Questionnaire (EDE-Q) (Fairburn & Beglin, 1994) is the self-report questionnaire version of the Eating Disorder Examination Interview (EDE) (Fairburn & Cooper, 1993). The EDE is widely regarded as the instrument of choice for the assessment and diagnosis of eating disorders according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994; Garner, 2002). Studies of the validity of the EDE-Q have demonstrated a significant correlation between the EDE-Q and EDE in assessing the major characteristics of eating disorder psychopathology in nonclinical populations (Fairburn & Beglin, 1994; Mond, Hay, Rodgers, Owen & Beumont, 2004). Acceptable internal consistency, test–retest reliability and temporal stability have also been demonstrated (Luce & Crowther, 1999; Mond et al., 2004). For this reason, the EDE-Q has been increasingly used as a self-report measure in many epidemiologic and clinical studies of eating disorders (Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001; Wilfley, Schwartz, Spurrell, & Fairburn, 1997).

Eating disorders have been described in both typical and atypical forms in non-Western, developing countries (Anthony & Yager, 2007). Turkey is a rapidly developing country, and its people are influenced by both European and Asian values. The aim of the current study was to validate a Turkish version of the EDE-Q in a young Turkish population to obtain a reliable and cost-effective assessment instrument that can be used in large population studies.

Method

Participants and procedure

In 2005 and 2006, a set of questionnaires, including the EDE-Q, was administered to groups of students in 24 primary and high schools representing low, middle and high socio-economic status in Istanbul. Both girls (N = 626) and boys (N = 299) took part; mean age was 15.52 years (SD = 1.88, range 12–18 years). Third-year and senior students from Istanbul University, Department of Psychology, were involved in the administration process, and questionnaires were presented in random order. A retest study was carried out within a 15-day interval on a subset of subjects.

Measures

Turkish version of the Eating Disorder Examination Questionnaire

The EDE-Q was translated into Turkish by two psychologists, and blind back translations were carried out by three other psychologists, all of whom were advanced in English. According to the translations and back translations, the items were chosen by the researchers for the scale on the basis of face validity.

Eating attitudes test

The Eating Attitudes Test (EAT-40) is a 40-item self-report measure widely used for screening anorexia nervosa and bulimia nervosa (Garner & Garfinkel, 1979). Participants rate each item on a six-point scale ranging from 'never' to 'always'. The Turkish version of the EAT was developed by Savaşır and Erol (1989).

Turkish version of the general health questionnaire

The General Health Questionnaire (GHQ) is a commonly used measure for assessing general psychological health. It was originally developed by Goldberg et al. (1997). It uses a four-point Likert scale and has 12-item or 28-item versions. In the Turkish validation study of the GHQ (Kılıç, 1996), the psychometric properties of the 12-item and 28-item versions of the GHQ were investigated. The present study utilised the 28-item version.

Body image satisfaction questionnaire

The Body Image Satisfaction Questionnaire (BISQ) is a questionnaire designed to measure perceived satisfaction with body image. The Turkish version was developed by Gökdogan (1988) based on the 'Body Image Questionnaire' by Berscheid, Walster, and Bohrnstedt (1973). Modifications were made to some items to improve cultural appropriateness. Items in the Turkish version are rated on a five-point Likert scale. The measure consists of 25 statements for girls and 26 statements for boys. Test–retest reliability of the Turkish version is reported to be $r = .88$.

Sociodemographic information form

A structured self-report form, including questions on weight, height and demographic variables concerning the participant and his/her parents, was developed by the researchers. The weights and heights of the students were measured via weight and height scales at their schools.

Results and discussion

No significant gender differences were found on frequency distributions of sociodemographic variables and body mass index (BMI) using Chi-squared tests, whereas significant gender differences were found by using the Mann–Whitney U test on the EDE-Q total score and all subscales ($p < .001$), EAT-40 ($p < .001$), GHQ ($p < .001$), BISQ ($p < .001$) and BMI ($p < .01$). To test whether EDE-Q scores changed as a function of the BMI, the participants were first grouped in terms of BMI categories based on the World Health Organization classification and International Classification of Diseases (10th revision) criteria for anorexia nervosa (World Health Organization, 1992): anorexic (BMI < 17.50), underweight (BMI = 17.51-18,50), subnormal (BMI = 18.51-20.00), normal (BMI = 20.01-25.00), overweight (BMI = 25.01-30.00) and obese (BMI > 30.01). Kruskal–Wallis analysis of variance was then conducted for each EDE-Q score set and significant differences were observed between BMI categories and mean scores of the total EDE-Q and on each of the subscales.

Test–retest reliabilities were examined on a subset of subjects: 52 girls and 26 boys. Results are presented in Table 1 and were satisfactory for the EDE-Q total score ($r = .91$), while ranging from $r = .43$ (binge eating) to $r = .89$ (weight concern) for subscales. For the purpose of testing the criterion-related validity of EDE-Q, the correlations were also computed for the EDE-Q in relation to BMI, EAT-40, GHQ and BISQ, and are also presented in Table 1. All the correlations were significant except for those obtained from the group of boys, where no significant relationship was observed between the binge eating subscale of the EDE-Q and the GHQ. Internal consistency of the EDE-Q was examined using Cronbach's alpha and was found to be

Table 1 Test–retest reliability and criteria-related validity results on Turkish Eating Disorder Examination Questionnaire

	Gender	EDE-Q	EDE-Q-BE	EDE-Q-R	EDE-Q-EC	EDE-Q-SC	EDE-Q-WC
Retest	Whole	.911***	.430***	.786***	.827***	.887***	.888***
(N = 26)	Boys	.910***	.608**	.741***	.754***	.929***	.874***
(N = 52)	Girls	.912***	.400**	.812***	.856***	.871***	.892***
BMI	Whole	.358***	.096***	.299***	.247***	.336***	.361***
	Boys	.263***	.211***	.165**	.268***	.200***	.255***
	Girls	.455***	.113**	.366***	.317***	.427***	.466***
EAT-40	Whole	.497***	.248***	.418***	.473***	.447***	.467***
	Boys	.264**	.278***	.287***	.183**	.238***	.270***
	Girls	.534***	.247***	.436***	.500***	.487***	.501***
GHQ	Whole	.418***	.244***	.246***	.413***	.423***	.396***
	Boys	.183**	.089	.144*	.221***	.138*	.182**
	Girls	.419***	.242***	.243***	.430***	.415***	.402***
BISQ	Whole	−.258***	−.093*	−.170***	−.200***	−.272***	−.236***
	Boys	−.254***	−.166**	−.136*	−.290***	−.214***	−.249***
	Girls	−.239***	−.085*	−.153***	−.190***	−.249***	−.219***

*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.
EDE-Q, Eating Disorder Examination Questionnaire; BISQ, Body Image Satisfaction Questionnaire; EAT-40, Eating Attitudes Test; GHQ, General Health Questionnaire; BMI, body mass index; BE, binge eating; R, restraint; EC, eating concern; SC, shape concern; WC, weight concern.

Table 2 Cronbach's alpha and item–total scale correlations for Eating Disorder Examination Questionnaire total and subscales

	Cr. A	Item–total correlations	Item numbers
EDE-Q	.93	.24(item#19)-.75(item#11)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28
EDE-Q-BE	.63	.20(item#16)-.59(item#14)	13, 14, 15, 16, 17, 18
EDE-Q-RC	.81	.52(item#2)-.68(item#3)	1, 2, 3, 4, 5
EDE-Q-EC	.70	.26(item#19)-.57(item#20)	7, 9, 19, 20, 21
EDE-Q-SC	.86	.46(item#8)-.72(item#11)	6, 8, 10, 11, 23, 26, 27, 28
EDE-Q-WC	.78	.47(item#8)-.61(item#22)	8, 12, 22, 24, 25

EDE-Q, Eating Disorder Examination Questionnaire; BE, binge eating; R, restraint; EC, eating concern; SC, shape concern; WC, weight concern.

high (0.93) for the scale as a whole, and 0.70 or above for all subscales except binge eating, which was 0.63. Alpha values for each subscale and item–total correlations are summarised in Table 2.

Taken as a whole, the findings of the present study suggested that the Turkish version of EDE-Q was both reliable and valid. It can be used in nonclinical populations of adolescents. However, caution should be paid when using the questionnaire for diagnostic purposes because of the weak psychometric properties of the binge eating subscale and relatively low correlations with some of the scales. Further psychometric studies concerning wider age ranges and various clinical samples are needed.

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