

Paper

The Preliminary Reliability and Validity of the Survey for Eating Disorders (SEDs): A Self-Report Questionnaire for Diagnosing Eating Disorders

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The present study examined the reliability and validity of the Survey for Eating Disorders (SEDs), a self-report questionnaire intended to assess eating disorders (ED) according to the classification in the DSM-IV. This appraisal was conducted with a clinical sample of subjects with ED (N=45), and a student sample (N=124). In the clinical sample, the SEDs was validated against the Eating Disorder Examination (EDE) which is considered to be the 'gold standard' for the assessment of ED. In this sample, there were only two false positive cases of 45 on the SEDs, when patients were reassessed by the EDE interview. Thus, the positive predictive value was as high as 0.96. In the student sample, the SEDs was validated against the Eating Disorders Inventory (EDI) where the results showed strong evidence of concurrent and discriminant validity, and very high test-retest reliability (2 weeks). The SEDs is relatively brief and easy to administer, and these preliminary findings support its reliability and validity. Copyright © 2002 John Wiley & Sons, Ltd and Eating Disorders Association.

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INTRODUCTION

The need for easily administered and cost-effective instruments for screening and establishing the diagnoses of eating disorders (ED) has been pointed out by many clinicians and researchers. The most

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well-validated instrument for assessment of the specific psychopathology is the Eating Disorder Examinations (EDE) (Fairburn and Cooper, 1993). The EDE is an investigator-based, semi-structured clinical interview, and it is generally considered to be the 'gold standard' for the assessment of ED (e.g. Wilson and Smith, 1989; Rosen *et al.*, 1990; Fairburn and Beglin, 1994). However, EDE is a complex, time consuming, evolving instrument (Wilfley *et al.*, 1997) and the proper use of it requires extensive training to ensure that the interviewers fully understand the concepts being assessed (Fairburn and Cooper, 1993; Wilfley *et al.*, 1997). The need for reliable and validated, inexpensive self-report questionnaires that provide ease of distribution and anonymity is obvious. Several questionnaires have been developed to assess ED and associated symptomatology. Among these questionnaires, the most commonly used are the Eating Disorder Inventory (Garner *et al.*, 1983) and the Eating Attitudes Test (Garner and Garfinkel, 1979). Other questionnaires such as the Binge Scale (Hawkings and Clement, 1980) and the BULIT-R (Thelen and Farmer, 1991) are more specifically designed to assess binge eating behaviour or bulimia nervosa. One major shortcoming of the currently available self-report questionnaires is the use of difficult and undefined key terms such as binge eating without a specific definition of binge eating, or the absence of clear-cut measures for establishing various diagnoses of ED corresponding to a recognized classification system such as the DSM-IV (American Psychiatric Association, 1994) or International Classification of Diseases (World Health Organization, 1993). Another shortcoming is the lack of information about the time frame for the occurrence of the ED symptoms (Wilson, 1993). Furthermore, some of these questionnaires (e.g. EDI) should not be used alone as a diagnostic instrument (Garner, 1991).

A self-report questionnaire with the potential of addressing most of the above-mentioned shortcomings is the Survey for Eating Disorders (SEDs), developed by Göttestam and Agras (1995). It provides ED diagnoses based on DSM-IV (American Psychiatric Association, 1994). The SEDs has been used in several population-based studies (Göttestam and Agras, 1995; Göttestam *et al.*, 1995, 1998; Taraldsen *et al.*, 1996; Ghaderi and Scott, 1999) and shows good face validity. However, the reliability and validity of the SEDs have not been fully established yet.

In summary, justification for development and validation of SEDs is based on the need for short and cost-effective instruments for ED. The current instruments such as the EAT or EDI (Garner *et al.*, 1983, 1984), BULIT-R (Thelen and Farmer, 1991) or the Binge Scale (Hawkings and Clement, 1980) cannot fulfil this need for different reasons. The aim of the current study is to establish the reliability and validity of the SEDs as an instrument for detecting and diagnosing ED.

METHOD

Subjects

Subjects belonged to either a group of patients (with bulimia nervosa, binge eating disorder or eating disorders not otherwise specified) or undergraduate psychology students.

The patient group

The patient group consisted of 45 women who were recruited from the responders ($N=75$) to a local newspaper advertisement for a study examining treatment for binge eating-related ED. The advertisement was formulated in such a way as to minimize the false positive cases. Thirty women were excluded after the initial telephone screening since they used psychopharmacological drugs, were on other treatments for ED, or did not meet the criteria for ED, leaving a total number of 45 participants with a mean age of 27.6 years ($SD=10.0$). Of those, 9 per cent were married, 2 per cent divorced, 19 per cent were currently living with a partner and 70 per cent were single. The mean Body Mass Index (BMI) for this group was 24.7 ($SD=6.0$), calculated from the reported weight and height measures in the interview.

The student group

The student group consisted of 124 students (81 per cent females, and 19 per cent males) recruited from the master's programme for clinical psychology. The mean age of the students was 28.7 years ($SD=6.3$). Of those, 17 per cent were married, 3 per cent divorced, 27 per cent were currently living with a partner and 53 per cent were single. The students' BMI was determined from self-reported height and weight (Beumont *et al.*, 1988). The mean BMI was 22.2 ($SD=4.1$). Validity of self-reported measures of height and weight has been confirmed against anthropometric measures (Whitaker *et al.*, 1989).

Procedure

Procedure in the patient group

After comprehensive telephone screening, a composite of questionnaires including the SEDs, were sent out to the potential participants in the treatment study (those who initially were estimated to meet the criteria for an eating disorder, and none of the exclusion criteria, i.e. 45 of 75 subjects). In the telephone screening, the subjects were asked to briefly describe their eating problems. If they presented any forms of binge eating or compensation behaviours, they were asked to present a couple of concrete examples of recent binge eating episodes, and/or

compensation behaviours. No comments were made as to whether they fulfilled the criteria for any ED during the telephone screening. Furthermore, they were asked about current weight status, use of psychopharmacological drugs (which was an exclusion criteria), ongoing treatments for eating disorders (also an exclusion criteria), and earlier treatments. The main reason for excluding was use of psychopharmacological drugs for the vast majority of the excluded subjects. After the subjects responded to the questionnaires ($N=45$), they were scheduled for an assessment interview by means of the Eating Disorder Examination (EDE). The diagnoses of bulimia nervosa¹ and binge eating disorder² were established by the EDE, but no operational definitions are given for the other forms of eating disorders not otherwise specified (EDNOS) in the EDE manual. However, besides the binge eating disorder, two more categories of EDNOS could be identified by using the information from the EDE. The first category comprised subjects who met the criteria for bulimia nervosa, with the exception that binge eating and inappropriate compensatory behaviour occurred at a frequency less than twice a week for a duration of less than 3 months. The second category consisted of individuals who regularly used inappropriate compensatory behaviours after subjective episodes of binge eating.

Procedure in the student group

The students were given course credits for anonymously responding to a composite of questionnaires that would be followed by another set of questionnaires after 2 weeks. Since the students responded anonymously to the questionnaires, they were asked to respond to six questions (favourite book, favourite music, film, etc.) and to remember them in order to respond the same way the next time. This was to enable us to relate the two sets of questionnaires administered at different time points to the same individuals. The first questionnaire was returned by 144 students, and 124 responded to the second. The mean number of days between the first and second response to the questionnaires was 14 ($SD=8$) days. The diagnostic classification according to SEDs at the second time was assessed blind to the first data set scores on the SEDs.

¹The DSM-IV requires two binge eating episodes per week to make a diagnosis of bulimia nervosa (BN), but the Oxford definition is that there should have been at least 12 'objective bulimic episodes' over the past 3 months. In order to establish the diagnosis of BN corresponding to the DSM-IV, 24 'objective bulimic episodes' over the past 3 months were required. A similar frequency requirement was made for the 'compensatory behaviours'.

²The working definition of binge eating disorder, suggested by Fairburn and Cooper (1993) was used, but with the same frequency of binge eating as for BN in this study.

Instruments

Diagnostic questionnaire according to DSM IV

The SEDs was developed by Göttestam and Agras (1995). It was slightly modified in order to address the potential shortcomings that were pointed out by the constructors of the questionnaire. Since different individuals may define binge eating in very different ways, a definition of binge eating according to DSM-IV (American Psychiatric Association, 1994) was presented to the responders before the questions about occurrence of binge eating. Another modification concerns questions about purging behaviour. These questions were combined into four questions, asking about occurrence, method, frequency and duration of purging. This modified version of the SEDs consists of 36 questions, 18 of which are necessary for diagnosis, four are demographic questions and the other questions provide helpful information on age of onset for dieting and binge eating, and antecedents as well as triggers of dieting and binge eating.³ The procedure for establishing the diagnoses was in line with the criteria requirements in the DSM-IV. For example, a subject diagnosed as having bulimia nervosa had to report repeated binge eating episodes characterized by eating in a discrete period of time (e.g. within any 2-h period), substantial intake of food that is definitely larger than most people would eat during the same period of time and under similar circumstances, and a sense of loss of control over eating during the episode. Further it was required that the subject reported recurrent inappropriate compensatory behaviour in order to prevent weight gain. The binge eating and the inappropriate compensatory behaviours must occur on average at least twice a week for 3 months. In addition to these behavioural criteria, if the subject also reported that her self-evaluation always (or very often) is unduly influenced by body shape and weight, then she would be considered as having a diagnosis of bulimia nervosa according to DSM-IV. For the diagnosis of binge eating disorder, the same set of requirements were made except that the subject should not report use of compensatory behaviours and that the duration of binge eating should be at least 6 months. An equally stringent procedure was used to establish diagnoses of anorexia nervosa, and the other forms of eating disorders not otherwise specified as was used for binge eating disorder.

Eating Disorder Examination (EDE)

The EDE (Fairburn and Cooper, 1993) is a semi-structured interview that assesses the two key behavioural aspects of ED and provides

³A complete list of items of the SEDs, and the scoring procedure is provided in Appendix 1.

frequency ratings for their occurrence that may be used to generate operationally defined eating disorder diagnoses. It provides four subscales (Restraint, Shape concern, Weight concern, and Eating concern). Purging and non-purging compensatory behaviours and three types of overeating (of which the Objective Bulimic Episodes (OBE) are equivalent to the DSM-IV binge eating) can be assessed with the EDE.

Eating Disorders Inventory-2 (EDI-2)

The EDI-2 is a widely used self-report measure of symptoms of ED. It consists of 91 questions, 64 of which are from the original version of the EDI (Garner *et al.*, 1984) that provides standardized subscales on eight dimensions that are clinically relevant to ED. The additional 27 items add three new constructs that form the EDI provisional subscales (Garner, 1991). A cut-off score of 14 on the subscale of Drive for thinness has been used to identify subjects with ED. The Swedish version of the EDI has been validated (Norrving and Sohlberg, 1988) and normative information for the Swedish population of students and patients is available. In the Swedish version, the item–subscales correlations, and the internal consistencies of the subscales were highly satisfactory, and replicated the corresponding findings in the original EDI manual (Garner, 1991). However the Swedish controls scored significantly lower than their North American counterparts in six of the eight subscales although the patient group in the Swedish validation study had EDI subscale means very similar to those reported by Garner *et al.* (1983) except in the bulimia scale where they scored lower. In the present study, as in the Swedish validation study, the participants' responses to the EDI were scored according to the instructions in the original manual (Garner *et al.*, 1983). In other words, the most pathological responses scores 3 points, the adjacent response scores 2, and the next 1, with the remaining three scoring 0 points.

Statistical analyses

To test–retest the derived diagnoses from the SEDs at the two points in time, Wilcoxon matched pairs test was used. Wilcoxon matched pairs test was also used to test the derived diagnoses from the SEDs and EDE. The differences between the students with past, current or no diagnoses of ED on the EDI was tested by means of ANOVA. The Tukey *post hoc* test for unequal group sizes (Spjotvoll Stoline HSD test) was then used for establishing group differences.

RESULTS

The patient group

In this group, the Wilcoxon matched pairs test showed no significant difference between the derived diagnoses from the SEDs and the EDE ($t=186$, $z=0.96$, $p=0.34$). Thirty-one patients diagnosed by SEDs with BN, BED or EDNOS were diagnosed into the same categories when interviewed by the EDE. Seven patients diagnosed with BN on the SEDs received an EDNOS diagnosis on the EDE (i.e. they were over-diagnosed by the SEDs). In contrast, two patients diagnosed with BED on the SEDs received a BN diagnosis on the EDE and three patients with the EDNOS on the SEDs were diagnosed with BN or BED on the EDE (i.e. they were under-diagnosed by the SEDs). Furthermore two subjects who met the criteria for EDNOS on the SEDs did not meet the criteria for any formal ED diagnosis on the EDE (i.e. two false positive cases of 45). In total, these results show that SEDs might be regarded as an accurate instrument for diagnosing cases of ED, although some 'under-diagnosing' and 'over-diagnosing' occurs. The sensitivity of the SEDs is very high, but the specificity of the instrument cannot be calculated due to the nature of the patient group (i.e. cases that did not seem to meet ED diagnostic criteria were excluded after the telephone screening and were not assessed by SEDs or EDE). On the other hand, the positive predictive value of the instrument for detecting cases of ED is as high as 0.96, since there were only two false positive cases out of 45.

The student group

The test-retest reliability of the SEDs was examined by comparing the derived diagnostic categories from the students' responses to the SEDs at time point 1 and 2. All the students diagnosed (according to their responses on the SEDs the first time) with a current diagnosis of ED ($N=5$), a past diagnosis of ED ($N=18$), and no ED-diagnoses ($N=101$) were reclassified into the same categories when their second time responses to the SEDs (after about 2 weeks) were coded. The results demonstrate a very high level of reliability of the instrument. The means and the standard deviations of the EDI subscales for the student sample, divided into three groups (with past, current or no ED) are shown in Table 1.

The group of students with a current ED had higher scores on all the EDI subscales except Interpersonal distrust compared to the students with past or no history of ED. The EDI Drive for thinness scores for the

Table 1. Summary of the results of the EDI subscales, mean (SD), for the student group

EDI subscales	Students with no ED N=101	Students with past history of ED N=18	Student with a current ED N=5
Drive for thinness	1.4 (2.8)	6.1 (6.3)	13.6 (5.5)
Bulimia	0.3 (0.9)	0.9 (1.6)	7.4 (3.2)
Body dissatisfaction	6.3 (6.0)	14.3 (8.2)	15.0 (7.8)
Ineffectiveness	1.8 (2.7)	3.5 (3.6)	6.0 (2.8)
Perfectionism	3.1 (3.1)	5.2 (3.1)	6.8 (5.8)
Interpersonal distrust	1.6 (2.6)	0.9 (1.5)	0.8 (0.4)
Interceptive awareness	1.3 (2.6)	1.9 (2.5)	9.0 (7.0)
Maturity fears	1.6 (1.8)	3.2 (4.3)	3.8 (4.4)
EDI-total score	17.5 (14.6)	36.1 (19.7)	62.4 (16.9)

five students who were identified by the SEDs as having a current diagnosis of ED were 5, 12, 17, and 19. The mean EDI Drive for thinness for this group was significantly higher (on Tukey *post-hoc* test) than for those with a past diagnosis of ED or no ED (see Table 1). Two of the students with a current ED diagnosis were diagnosed with bulimia nervosa, two with binge eating disorder and one with eating disorders not otherwise specified (EDNOS, related to binge eating and not anorexia nervosa). The mean score for the EDI Bulimia subscale for students with a current ED diagnosis was significantly higher (on Tukey *post-hoc* test) than the mean score for subjects diagnosed with a past history of ED, and students with no ED diagnoses. When these three groups of students (with current, past or no diagnosis of ED) were compared concerning the total scores of EDI (sum of the eight original subscales), the mean total of EDI for students with a current ED diagnosis was significantly higher than the mean score for the students with a past history of ED, and students with no ED diagnosis ($F(2, 111)=27.8, p=0.000001$). All three groups were significantly different from each other on the Tukey *post hoc* test ($p=0.001, 0.0001, \text{ and } 0.024$ respectively), showing evidence of concurrent and discriminant validity of the SEDs. In the group comparisons using the EDI, although the smaller group had a larger variance, the probability of Type I error still remained within acceptable levels for statistical reasoning and induction.

DISCUSSION

The SEDs showed high test-retest reliability in the current study, by complete convergence of the derived diagnoses between assessment

time 1 and 2 in the student group. The questions in the SEDs are formulated with unambiguous and simple words. A clear definition of binge eating is presented before the questions about binge eating, and most of the questions are profoundly behavioural in nature. These factors facilitate the process of responding to the questions and increase the level of certainty of the responses. This might be the reason for the high test–retest reliability of the instrument. This pattern of high test–retest reliability was also observed in a population-based study (Ghaderi and Scott, 1999) where some of the participants, for different reasons, were asked to fill in the SEDs a second time 1–4 weeks after their initial response.

The SEDs also showed evidence of concurrent validity when compared to the students' responses to the EDI. Students who met the diagnostic criteria for a current ED diagnosis according to the SEDs had significantly higher scores on all the EDI subscales including the EDI Drive for thinness and Bulimia. The only exception was the Interpersonal distrust subscale. Furthermore, the total sum of the EDI for these students was significantly higher than the total EDI for students with no ED diagnosis or students with a past history of ED.

The corresponding mean score for the Drive for thinness and Bulimia subscale of the EDI for students with a current ED diagnosis according to the SEDs was in line with the recommended cut-off scores for these subscales and significantly different from controls (students with no ED diagnosis). Although the mean EDI–Bulimia subscale is 10.5 for combined ED in the EDI manual (Garner, 1991), Swedish patients in the validation study (Norrning and Sohlberg, 1988) scored lower on EDI Bulimia subscale ($M=7.7$). In the present study, students diagnosed with a current ED had a mean Bulimia subscale score of 7.4, which is in line with the mean score reported by Norring and Sohlberg in the Swedish group. This score is clearly above the cut-off at the maximum score of control subjects ($M=6.0$) in the validation study (Norrning and Sohlberg, 1988) that eliminated all controls and left only patients (positive predictive value, as a percentage=100). The total sum of the EDI subscales was also significantly higher for the students with a current ED diagnoses (according to the SEDs) than for students with a past or no history of ED. This may also be regarded as strong evidence of concurrent validity of the SEDs. There was a drop-out rate of about 14 per cent in the student group from the first to the second assessment. This drop-out consisted of students with no history of ED, and the concluding results remained unchanged when these students were entered into the analyses. Accordingly, these results are not presented in the present study.

In the patient group, there were only two false positive cases of 45 on the SEDs, when patients were reassessed by the EDE interview. This gives the SEDs a high positive predictive value (0.96) with regard to classifying subjects with ED as patients. Concerning the correct classification of ED diagnostic categories (BN, BED, and EDNOS), the SEDs has a relatively high positive predictive value ($31/45=0.69$). In contrast to the other self-report measures of ED that lead to over-diagnosing, the SEDs both over-diagnose some cases ($N=7$) and under-diagnose others ($N=5$). This might be explained by the difference in the interpretations of binge eating by different subjects, or failure to recall the frequency and duration of binge eating or compensatory behaviours. This contrasts with the clinical interview (EDE) which offers structured help for accurate retrieval. Scrutinizing the data for patients who were over-diagnosed by the SEDs showed that in all cases they had an insufficient number of objective episodes of binge eating on the EDE although they reported at least two such episodes per week during the last 3 months on the questionnaire (SEDs). There were three reasons for under-diagnosing by the SEDs. Three of these patients reported no or less than the criteria frequency of compensatory behaviours during the 3-month period prior to screening. One reported having fewer binge eating episodes than twice weekly during 3 months and another one reported a duration of 5 months of regular binge eating, thus not fulfilling the 6-month requirement for diagnosis of binge eating disorder.

Regarding the limitations of the current study, three shortcomings need to be addressed in future studies. One is the absence of cases of anorexia nervosa both among the student and the patient group. However, the questions about the key features of anorexia are less ambiguous than questions regarding binge eating and a higher level of reliability and validity could be expected. The second limitation was that the students who met the criteria for a current ED diagnosis according to the SEDs were not interviewed with the EDE. However, this procedure was not possible because of the anonymity of the students. Finally, the last limitation involves the sample size. Considering the low prevalence of ED, a larger sample size is generally more desirable, since it provides a larger number of potential ED cases that can be examined for establishing the psychometric properties of the SEDs. Despite these limitations, the present study shows preliminary evidence for the reliability and validity of the SEDs as a means of screening and diagnosing ED in line with the DSM-IV.

In summary, the Survey for Eating Disorders (SEDs) can be regarded as a sensitive instrument with high positive predictive value, that is

considered to be the most important factor for identifying cases in a population (Williams *et al.*, 1982).

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APPENDIX 1: SEDS ITEMS AND CODING

1. Age: _____ (years)
2. Sex: Female Male
3. Civil status: Married Divorced/separated Living together Single
(No. 3 can be modified if needed)
4. Highest level of education: Uncompleted primary school
(No. 4 can be modified if needed) Primary school
 Completed vocational education
 Secondary school
 College/university
5. Current work situation: Employed: Profession:
(No. 5 can be modified if needed) Student: Studying:
 Home-keeper
 Unemployed; since:
 Sick leave or other
6. *Current weight: _____ kg
7. *Current height: _____ cm

8. †Highest weight ever (for females; not during pregnancy): _____ kg
 9. How much do you want to weigh now: _____ kg
 10. †How often do you weigh yourself or measure your body size?
 Almost never More than twice a week
 A few times per year Once a day
 1–3 times per month More than once a day
 Once a week

The term ‘binge eating’ will be used in several of the following questions. ‘Binge eating’ is defined as eating, in a discrete period of time (e.g. within any 2-h period), an amount of food that is **definitely larger** than most people would eat during a similar period of time and under similar circumstances. Furthermore, ‘binge eating’ comprises a sense of lack of control over eating during the episode (e.g. a feeling that one cannot stop or control what and how much one is eating).

11. *Have you ever experienced periods of binge eating, when you ate an unusually large amount of food, and felt out of control with your eating? (BN:A)
 No, never
 Yes, during the past 3 months Last time: _____
 Yes, before the past 3 months Last time: _____

If you have answered ‘no’ to question 11, please go on to question 26.

If you have answered ‘yes’ to question 11, please continue below:

12. At what age did the first episode of binge eating start? _____
 13. Were there any particular events in your life that preceded or coincided with the onset of your first binge eating period?
 A. Marital problems G. Started dieting
 B. Excessive training H. Sickness
 C. Moved from the home I. Accident
 D. Was depressed J. Lost my job
 E. Divorce/separation K. Bereavement & grief
 F. Relational problem L. Other Please specify:

14. *Please describe the binge eating episodes: (BED;B)
 (The response alternatives for 14 A-H are: No, Sometimes, Often and Always)
 A. Do/did you eat rapidly?
 B. Do/did you feel you cannot stop eating
 C. Do/did you prefer to eat alone while overeating?
 D. Do/did you eat definitely large amounts on such occasions?
 E. Would other people think you eat/ate very large amounts of food on such occasions?
 F. Do/did you eat until you feel pain or uncomfortably full
 G. Do/did you feel disgusted with yourself, depressed or very guilty after binge eating?
 H. Do/did you eat large amounts of food when you did not feel physically hungry during these episodes?
 I. Have you been markedly distressed or upset about your binge eating? (BED:C)
 Not at all Slightly Moderately Markedly Extremely
 15. *Have you had repeated episodes of binge eating? (BN:A)
 No
 Yes, during the past 3 months
 Yes, earlier (please, specify when): _____
 16. *In the periods of binge eating, on average, how often do you/did you binge? (BN:C)
 Less than once a month 2–3 times a week
 1–2 times a month Daily
 Once a week More than once a day

17. *Have you, on average, had at least two binge eating episodes per week over a 3-month period? (BN:C)
 No
 Yes, during the last 3 months
 Yes, but before the past 3 months → (please specify when)?
18. *Have you, on average, binged at least 2 days a week over a 6-month period (BED:D)
 No
 Yes, during the last 6 months
 Yes, but before the past 6 months → (please specify when)?
19. What starts a binge episode?
 A. Feeling hungry No Sometimes Yes
 B. A feeling in the stomach No Sometimes Yes
 C. Anxiety No Sometimes Yes
 D. I feel depressed/down No Sometimes Yes
 E. I have been on a diet No Sometimes Yes
 F. I feel insecure/ineffective No Sometimes Yes
 G. Frustration/rage No Sometimes Yes
 H. Other No Sometimes Yes Please specify:
20. What stops a binge episode?
 A. Pain in the stomach No Sometimes Yes
 B. Interrupted by others No Sometimes Yes
 C. I feel 'high' No Sometimes Yes
 D. I feel disgust No Sometimes Yes
 E. I throw up No Sometimes Yes
 F. Other No Sometimes Yes Please specify:
21. *Have binge eating and your efforts to prevent weight gain solely occurred during the periods when you were extremely underweight and felt a definite fear of weight gain? (BN:E)
 Always Very often Often Sometimes Seldom Never
22. *Have you ever thrown up, fasted, or taken laxatives, diuretics or exercised intensively after a binge episode?
 No Yes
23. *Have you regularly thrown up, taken laxatives, diuretics, undergone severe dieting or fasting, or exercised intensively in order to avoid gaining weight after binge eating? (BN:B)(BED:E)
 No, never
 Yes, during the last 3 months
 Yes, before the last 3 months When was it? _____

If you have answered 'no' to question 23, please go on to question 27.

If you have answered 'yes' to question 23, please continue below:

24. How old were you when you for the first time used any of these methods in order to lose weight or prevent weight gain?
 Age: _____ (years)
25. When did you last do that? _____
26. *Different strategies for losing weight or for preventing weight gain are listed below: (BN:B & C)
 (1) Forcing oneself to throw up after meals or a binge episode
 (2) Using laxatives
 (3) Using diuretics
 (4) Using anorectic drugs
 (5) Fasting

- (6) Intensive, excessive training or
- (7) Chewing and spitting out large amounts of food, but not swallowing

Have you used any of these strategies or a combination of these at least two times a week over a 3-month period, mainly to control your weight (to lose weight or to avoid gaining weight)?

- No
- Yes, during the past three months → Please describe which strategies (indicate the number) and how often: _____
- Yes, earlier → Please describe when, which strategies (indicate the number) and how often: _____

27. †Do any of your family members often go on a diet?
 No
 Yes (please specify who) _____

28. Have you ever gone on a diet to lose weight?
 No
 Yes → Are you on a diet now? Yes No

If you have answered 'no' to question 28, please go on to question 33.

If you have answered 'yes' to question 28, please continue below:

29. How old were you the first time you started dieting? _____
30. Which of the following strategies have you been using in order to lose weight?
- | | |
|--|--|
| A. Skipping meals <input type="checkbox"/> | G. Intensive exercise <input type="checkbox"/> |
| B. Reducing portions <input type="checkbox"/> | H. Eating less sweets <input type="checkbox"/> |
| C. Eating less carbohydrate <input type="checkbox"/> | I. Fasting <input type="checkbox"/> |
| D. Taking laxatives <input type="checkbox"/> | J. Eating less fat <input type="checkbox"/> |
| E. Taking anorectic drugs <input type="checkbox"/> | K. Throwing up <input type="checkbox"/> |
| F. Taking diuretics <input type="checkbox"/> | L. Other (specify) <input type="checkbox"/> |
31. What was your lowest weight, after a dieting period: _____ kg
32. How many kilos did you lose to reach this weight level (as in question 30)? _____ kg

33. *To what extent does your body shape and/or weight influence your self-esteem in general? (AN:C and BN:D)

Not at all Slightly Moderately Markedly (greatly) Unduly (extremely)

34. *(Only women): Has your menstruation ceased (at least 3 consecutive months) during periods of binge eating, dieting, fasting, or hard exercise? (AN:D)

- No, never
- Yes, during the past 3 months
- Yes, before the past 3 months When: _____

35. *Have you for a period of time had a strong, definite fear of gaining weight, or becoming fat, even if your weight was in or below the 'normal range'? (AN:B)

- No, never
- Yes When: _____ (Your weight at that time: _____ kg)

36. *Which of the following statements describe your current weight status best? (AN:C)

- (a) My weight is normal
- (b) I am overweight
- (c) I am obese
- (d) I am underweight
- (e) I am very underweight

37. *Have you ever weighed less than others thought you should weigh? (AN:A)
 No

Yes

If so,

(a) What is/was the reason for this? _____

(b) How old were you? _____ (years)

(c) How much did you weigh? _____ kg

(d) How tall were you? _____ cm

(e) Did you want to loose more weight, or did you feel that parts of your body were still too fat when your weight was at its lowest?

Yes No

38. Do you have an occupation that requires you to maintain a certain weight?

No Yes what occupation? _____

39. *Compared to other things in your life, how important is your weight or shape for your self-esteem in general? (AN:C and BN:D)

- Weight or shape is not more important than other things in my life for my self-esteem
- Weight or shape is a little more important than some other things in my life for my self-esteem
- Weight or shape is more important than most, but not all things in my life for my self-esteem
- Weight or shape is the most important thing in my life for my self-esteem

*The 18 questions marked with * are necessary for making ED diagnosis.

†Questions 8, 10 and 27 were not part of the original SEDs.