

## Diagnosis

### A simple 5 item questionnaire accurately detected eating disorders in women in primary care

Luck AJ, Morgan JF, Reid F, et al. *The SCOFF questionnaire and clinical interview for eating disorders in general practice: comparative study*. *BMJ* 2002;325:755-6.

**QUESTION:** Does a simple 5 item questionnaire (SCOFF questionnaire) accurately detect eating disorders in primary care?

#### Design

Blinded comparison of the SCOFF questionnaire and a clinical diagnostic interview based on *DSM-IV* criteria.

#### Setting

2 general practices in southwest London, UK.

#### Patients

341 sequential women (18-50 y) attending the primary care clinics.

#### Description of test and diagnostic standard

Women were verbally asked the 5 SCOFF questions\*: Do you ever make yourself **sick** because you feel uncomfortably full? Do you worry you have lost **control** over how much you eat? Have you recently lost more than **one** stone (approximately 6 kg) in a 3 month period? Do you believe yourself to be **fat** when others say you are too thin? Would you say that **food** dominates your life? Each positive response (yes) is given 1 point. The questionnaire took about 2 minutes to complete.

The diagnostic standard was a clinical diagnostic interview of 10-15 minutes based on *DSM-IV* criteria.

#### Main outcome measures

Sensitivity, specificity, and likelihood ratios.

#### Main results

3.8% of women had an eating disorder (1 woman had anorexia nervosa, 3 had bulimia nervosa, and 9 had an eating disorder not otherwise specified). Based on a receiver operating characteristic curve, the cut point for a possible eating disorder was set at  $\geq 2$  positive responses out of 5. The sensitivity, specificity, and likelihood ratios for the SCOFF questionnaire are shown in the table. Of 328 women who did not have an eating disorder, 34 had a false positive result.

#### Conclusion

The 5 item SCOFF questionnaire detected most cases of eating disorder in women in a primary care setting, although the number of false positive results may be quite high.

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Diagnostic characteristics of the SCOFF questionnaire for detecting eating disorders in women in primary care†

Sensitivity (95% CI)	Specificity (CI)	+LR	-LR
85% (55 to 98)	90% (86 to 93)	8.16	0.17

†Diagnostic terms defined in glossary; LRs calculated from data provided in article. Based on a cut point of  $\geq 2$  positive responses out of 5.

#### COMMENTARY

Eating disorders are difficult to diagnose; up to 50% of cases are undetected.<sup>1-2</sup> For young women, the risk of anorexia is 0.5-1%, with an associated mortality rate of approximately 4-10%;<sup>1,3,4</sup> the risk of bulimia is 2-5%.<sup>1,5,6</sup> Eating disorders not otherwise specified may be twice as prevalent.<sup>1,2</sup>

The results of the study by Luck *et al* indicate that the 2 minute SCOFF questionnaire can detect and rule out eating disorders in primary care. All 4 cases of anorexia and bulimia were detected by the SCOFF. Two missed cases of eating disorders not otherwise specified were attributed to patient denial or non-disclosure. The number of false positive results (34 of 328 women who did not have an eating disorder) and the low positive predictive value of 24% are more a function of low disease prevalence than the effectiveness of the tool, as shown by the positive and negative likelihood ratios of 8.16 and 0.17, respectively. When the SCOFF is used as a screening tool (similar to screening mammography) to prompt further assessment, the value of identifying these treatable illnesses in younger women outweighs the false positive rate.

The SCOFF questionnaire has not been assessed for use in clinical situations where the pretest probability of disorder is greater than that of the general population. That is, when clinical suspicion of disorder exists, the SCOFF questionnaire may have a lower false positive rate. However, such findings would be less generalisable, relying upon physicians to first consider the diagnosis.

The SCOFF questionnaire is a useful screening tool that can be used to rule out eating disorders (negative predictive value of 99%) in general practice, keeping in mind that 10% of patients may have false positive results. Final diagnosis of eating disorders should be based on the results of further evaluation.

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