

## ANSWERING REVIEWERS



May 20, 2014

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 10518-review.doc).

**Title:** Functional gastrointestinal disorders in eating disorder patients: altered distribution and predictors using ROME III compared to ROME II criteria.

**Author:** Xiaojie Wang, Georgina M Luscombe, Catherine Boyd, John Kellow, Suzanne Abraham.

**Name of Journal:** *World Journal of Gastroenterology*

**ESPS Manuscript NO:** 10518

The manuscript has been improved according to the suggestions of reviewers

1. Format has been updated.
2. Revision has been made according to the suggestions of the reviewer

**Reviewer 00068574**

The authors compared the prevalence of FGIDs among ED patients using ROME III and ROME II criteria and showed that ROME III criteria were useful to increase the detection of functional gastroduodenal disorders. They also found predictors of FGIDs using ROME III criteria. In general, the text should be shorter and focused on the most relevant results.

**1. Clear conclusions should be shown.**

*Inserted last paragraph of Discussion 'Conclusions. ROME III confers higher precision in diagnosing FGIDs particularly with the inclusion of the chronicity requirement of symptom onset at least 6 months prior, compared to 3 months with ROME II. It would be improved if self-induced vomiting was excluded from cyclic vomiting syndrome in addition to its exclusion from functional vomiting. Two of the new ROME III criteria, PDS and U-FBD, are prevalent among ED patients. Starvation, less exercise and depression predicted PDS, and somatisation U-FBD. As found previously for ROME II laxative use predicted IBS and somatisation FH [9, 16]. ROME III appears to have less psychological input to the diagnosis of FGIDs than ROME II.'*

**2. Abstract: The meaning of abbreviations should be indicated.**

*Indicated or removed where appropriate.*

**3. The different ED diagnostics groups (AN-R...) could be replaced with "ED diagnostic subtypes" to simplify the text.**

*Changed according to suggestions throughout paper.*

**4. "EDNOS-P and BN combined": this combination is not clinically relevant and is only used to obtain statistically significant data. It should be removed**

*Removed*

**5. The conclusion is too vague:**

*Rewritten 'Conclusions. ROME III confers higher precision in diagnosing FGIDs and if self-induced vomiting is excluded from the diagnosis of cyclic vomiting. Two of the new ROME III criteria, PDS and U-FBD, are common in among ED patients. Certain FGIDs can be predicted by certain eating behaviours: starvation (PPD), exercise (PPD) and laxative use (IBS). Psychological factors appear to be more influential in ROME II than ROME III.'*

**6. Methods -Page 8: "Age, BMI, and psychological and behavioural predictors of the presence or absence of the common (prevalence greater than 20%) ROME III FGIDs and the presence of more than three FGID diagnoses were tested using logistic regression analysis": Why more than 20%?**

*Added 'The prevalence of greater than 20% was chosen in order to obtain adequate numbers for statistical analysis.'*

**7. "Initially three logistic regressions were conducted: with age and BMI; the behavioural variables; and the psychological variables." It is surprising to carry out 3 multivariate analyses. Usually we first made an univariate analysis of each parameter and multivariate analysis with parameters with  $p < 0.20$  or those known to be associated.**

Building a final logistic regression model based on results of preliminary models containing similar groups of predictors (e.g. just psychological variables, or just behavioural variables as potential predictors) is a technique we used previously when exploring predictors of ROME II diagnoses (see Boyd et al., 2005: Psychological features are important predictors of functional gastrointestinal disorders in patients with eating disorders). The emphasis was on conserving the number of analyses conducted. With a sample size of 100 and 11 potential predictor variables, the approach of conducting 11 univariate analyses and one final multivariate analysis results in 12 tests overall. Our approach limited the number of multiple comparisons to four (three preliminary and one final).

**8. Results -page9 "Prevalence of FGID categories": sentences lines 2 to 4 and lines 6 to 9 should be combined to clarify the text and the sentence: lines 4 to 6 could be removed since no statistical significance was observed. -page 10:**

*Done.*

**9. "Predictors of commonly occurring FGIDs": Cyclic vomiting is associated with self-induced vomiting: this is not an originally planned analysis. This is not the hypothesis to be tested but**

**only data fishing. This analysis should be removed.**

Done.

- 10. Discussion page 11: lines 11-13: there is no data suggesting that exercise is protective against PDS. It is simply a predictor. Lines 13-15: what do the authors mean? Is there a link with the previous sentence?**

Rewritten to clarify 'Our data also suggests less exercise is associated with PDS. This is in keeping with our previous study finding that there was a worsening of oesophageal disorders among patients undertaking excessive, intense exercise as a means of weight control. [16]. The amount and intensity of exercise of eating disorder patients can be extreme [23] and could result in upper gastrointestinal problems which commonly occur in marathon runners [34]. This should not be interpreted to mean light to moderate exercise should not be undertaken, in fact the reverse is true, moderate exercise improves depression [1].'

- 11. There is no conclusion of the main results**

Inserted 'Conclusions. ROME III confers higher precision in diagnosing FGIDs particularly with the inclusion of the chronicity requirement of symptom onset at least 6 months prior, compared to 3 months with ROME II. It would be improved if self-induced vomiting was excluded from cyclic vomiting syndrome in addition to its exclusion from functional vomiting. Two of the new ROME III criteria, PDS and U-FBD, are prevalent among ED patients. Starvation, less exercise and depression predicted PDS, and somatisation U-FBD. As found previously for ROME II laxative use predicted IBS and somatisation FH [9, 16]. ROME III appears to have less psychological input to the diagnosis of FGIDs than ROME II.'

#### **Reviewer 00069023**

- 1. Manuscript is too short**

Added to discussion but not elsewhere unless to clarify or as requested (Reviewer one thought the manuscript was too long).

- 2. Conclusion is unclear to maintain study outcomes-**

Redone -see reviewer one points 5. and 11.

- 3. Statistical analysis: Why not include sex body weight race..?**

Reply -All were female (stated) and BMI contains weight (body weight divided by height squared) -units for BMI are kg/m<sup>2</sup>, 98% were Caucasian and therefore numbers too low for significance.

- 4. Query for logistic regression**

As for Reviewer one 7.

- 5. Table 5 is the most important of the outcomes in this manuscript but the authors did not mention this in the results or discussion.**

Done in expanded and clarified Discussion.

#### **Reviewer 00068556**

There was no question from this reviewer.

3. References were corrected.

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely,

A handwritten signature in purple ink, appearing to read 'Suzanne Abraham'.

A/Prof Suzanne Abraham, PhD

Department of Obstetrics and Gynaecology

Building 52, Royal North Shore Hospital, St Leonards, NSW 2065, Australia.