

To the Editors:

## Psychological distress among university students

We write in response to the paper titled “Psychological distress among students from five universities” (1). It has weaknesses in its design, statistics, analysis and interpretation.

### *Design*

The study population of 350 comes from 5 universities, but the selection of the sample is not adequately described. Were the random sample stratified according to the university or the year of entry, and did they calculate the desirable sample size?

Selection of the control sample is also unclear. Does the “respective communities” (mentioned only in the abstract) mean that each student was matched for the area they hail from? This is important as the authors use a variable rural, sub-urban and urban sample in their analysis and conclusions.

### *Analysis of General Health Questionnaire (GHQ) scores*

Analysis of GHQ scores only by dichotomising them to psychologically distressed and non-distressed by a cut-off score is misleading, because the GHQ is a screening

questionnaire, higher the GHQ scores, higher the probability of underlying distress or common mental disorder. Therefore, mean scores and difference between the means with their

essed in both samples). It is wrong to pool psychologically distressed in two groups that are being compared. The correct comparison of distressed males would have been 69.2% (71/104) vs 64.1% (43/67) [distressed males/total distressed in the university sample vs distressed males/total distressed in the community sample) and the difference, 5.1% is not significant. SE of the difference is 7.07 and therefore 95% CI would be 8.65 to 18.95. As CI includes 0 the difference is

not significant. One reason for this wide confidence intervals and non-significance (type II error) may be due to low power resulting from inadequate sample size because it had not been calculated in advance (4).

Had they used the same principle for calculating females' percentages, the figures given in the paper are completely wrong (32/171 should be 18.7% and 24/171 is 14%). Correct comparison should be 30.8% (32/104) vs 35.8% (24/76). Had they correctly applied Chi-square to the Table 1, the value would be 0.47, which is not significant.

The word limitation for correspondence prevents us from critically evaluating this paper any further.

### References

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2. Gardner MJ, Altman DG. Confidence intervals rather than P values: estimation rather than hypothesis testing. *British Medical Journal* 1986; **292**: 746-50.
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4. Altman DG. Practical statistics for medical research. London: Chapman and Hall, 1997: 169.

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