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A prospective study of mental health outcomes in morbidly obese patients

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**Aim:** To determine if co-morbidities have an effect on mood in a cohort of morbidly obese patients.

**Methods:** Sequential linear regression analysis conducted on health and demographic data, using two validated anxiety/depression scales combined [Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7)] as the primary outcome.

**Results:** Complete outcome data was recorded on 410 patients. 211 (51.4%) had 1 or 2 reported co-morbidities; of which hypertension and anxiety/depression were the most common. One hundred and seven patients (26.4%) were recorded as having diabetes. The outcome measures of PHQ-9 and GAD-7 were found to be strongly and significantly correlated ( $r=0.822$ ;  $p<0.001$ ); hence analysis was conducted on a combined outcome. Occurrence of arthritis and anxiety/depression were both statistically significant at the 5% significance level ( $p=0.049$  for arthritis;  $p<0.001$  for anxiety/depression), with the presence of both conditions being associated with lower functionality. Age appeared to show some substantive association with the outcome ( $p=0.069$ ); with increasing age being associated with slightly improved functionality. BMI, gender and the presence of other co-morbidities, including diabetes, did not exhibit any substantive relationship with the outcome measure.

**Summary:** There is insufficient evidence to conclude that either BMI, gender or diabetes affect scores measured on the combined PHQ-9/GAD-7 outcome. Of the various co-morbidities reported by patients, arthritis and, particularly, reported anxiety/depression have the greatest effect on combined scale scores.