

Prevalence and course of anxiety and depression among patients selected for bariatric surgery

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Aims. To determine the prevalence of anxiety and depression amongst participants with severe or complex obesity randomised and selected for bariatric surgery in a large multi-centre trial.

To describe the change in prevalence of anxiety and depression amongst participants who had undergone bariatric surgery, within 6 months of randomisation and at 12 months post-randomisation. **Method.** The By-Band-Sleeve (BBS) study is a multi-site randomised controlled trial evaluating the surgical management of severe or complex obesity and is the largest trial of its kind. Participants completed the Hospital Anxiety and Depression Scale (HADS) on study enrolment (pre-randomisation) and at 12 months post-randomisation. In this sub-study, we describe provisional data concerning the baseline prevalence of anxiety and depression along with change in median HADS symptom score amongst those who actually underwent bariatric surgery.

Result. 758 participants met the criteria for study inclusion with 716 (94.46%) and 712 (93.93%) individuals fully completing questionnaires for HADS-A and HADS-D. At pre-randomisation, the prevalence of possible (HADS A/D = 8-10) and probable (HADS A/D >11) anxiety or depression was 46.19% (n 330/716) and 48.17% (n 48.17%) respectively. Paired and complete HADS-A and HADS-D questionnaires were available for 70.25% (n 503/716) and 69.94% (n 498/712) participants. There was a highly statistically significant decrease in median HADS-A and HADS-D scores at 12 months post-randomisation (Wilcoxon signed-rank test $p < 0.001$). This was coupled with a statistically significant reduction in the proportion of cases with possible and probable anxiety (−9.54%, $p < 0.001$) and also depression (−22.21%, $p < 0.001$) at 12 months post-randomisation.

Conclusion. Our results characterise the high rate of psychological comorbidity amongst patients with severe or complex obesity selected for bariatric surgery. Whilst bariatric surgery remains the most clinically effective treatment for severe obesity, its effects on long-term post-operative mental health outcomes are less clear. These findings contribute to the growing body of evidence calling for increased pre/post-operative mental health surveillance and integrated care for this cohort of patients.

Confusion and a cough: an experience of COVID-19 in dementia patients

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Aims. To assess the clinical presentation and outcomes of COVID-19 positive patients with dementia and to evaluate the suitability of the “4C mortality score.” Older adults with dementia are a vulnerable patient group therefore it was predicted that this patient demographic would have poorer outcomes and high mortality rates. Ward 24 is an organic old age psychiatry ward in

University Hospital Monklands, Lanarkshire for patients with advanced dementia. Older adults have been found to have atypical presentations and non-specific symptoms in COVID-19, however given COVID is still a new and evolving disease, little is known about the impact on dementia patients. The 4C mortality score was designed to predict in-hospital mortality for hospitalised COVID-19 patients using a number of clinical parameters.

Method. Data were collected retrospectively from all inpatients on ward 24 testing positive for COVID-19 between October and December 2020. Data were collected using online MIDIS entries, paper notes, NEWS charts and Clinical Portal. A 4C mortality score was calculated for each patient using an online calculator based on the data collected.

Result. 15 patients tested positive for COVID-19; 47% male and 53% female, age range between 64 and 92 years old. 67% of patients had 3 or more comorbidities and 89% had either a high or very high 4C mortality score. Mortality from COVID-19 was 13% and 20% of patients required oxygen. 27% of patients were asymptomatic, these patients also had the lower risk mortality scores. 67% presented with pyrexia, 33% had a cough and 13% had breathlessness. Non-specific symptoms were also seen; 53% had fatigue, 20% had diarrhoea and 20% had unresponsive episodes. Post COVID delirium was seen in 20% of patients.

Conclusion. Mortality rates were lower than expected, indicating that the 4C mortality score might not be appropriate to use in this patient demographic due to confounding factors. Atypical symptoms were common in patients, with a variability of clinical presentations within the patient demographic. These findings suggest the importance of having a low threshold for COVID-19 infection even in the absence of typical symptoms. Development of an alternative risk stratification tool would be beneficial for this patient group, with further studies needed on a larger scale to facilitate this.

Heart rate variability and emotion regulation in adults with eating disorders or obesity: a systematic review

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Aims. Emotion regulation (ER) impairments are central trans-diagnostic phenomena across the spectrum of eating disorders (EDs) and obesity, where maladaptive eating behaviors act to suppress negative emotions. Self-report assessments are the most commonly used tools for assessing an individual's ER capacity, however, subjective self-reporting is limited by a tendency toward response bias and issues with common method variance. Prior empirical and theoretical research supports the use of heart rate variability (HRV) to objectively assess individual differences in ER capacity. Several studies have examined the association between HRV and ER in EDs and obesity. However, to date, no review synthesising the overall findings exists. This review aimed to summarise the empirical evidence that has examined the relationship between ER and HRV in adults with EDs/obesity, in addition to assessing the validity of HRV as a physiological biomarker of ER in these populations.

Method. A comprehensive search was performed on PubMed, MEDLINE and PsycINFO, with identified studies screened against a priori inclusion/exclusion criteria. Eligible studies underwent quality-assessment using the Joanna Briggs Institute Critical Appraisal Tools, and data were synthesised qualitatively.

Result. 17 publications were included, consisting of data on participants with obesity, binge eating disorder (BED), bulimia nervosa (BN), anorexia nervosa (AN), and/or subclinical presentations. Studies were small (average sample size $n = 46.4$), predominantly female (87.9%), and were highly variable in methodology, with different diagnostic tools, self-report measures, and emotional tasks/paradigms used.

Conclusion. The evidence suggests that HRV is a valid, objective biomarker of ER impairments in AN, BN, BED, emotional eating, and obesity. Despite some inconsistencies, likely attributable to methodological heterogeneity, EDs/obesity appear to be characterised by irregular resting state vagal activity and abnormal stress reactivity. Furthermore, the autonomic dysfunction observed across EDs/obesity may be reversible by novel effective interventions such as HRV-biofeedback or PlayMancer videogame therapy.

Vitamin D deficiency in a high secure forensic psychiatry hospital: A clinical audit and service evaluation

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Aims. To assess concordance with guidelines on monitoring vitamin D levels and prescribing prophylaxis or replacement. To assess the association between the implementation of local guidelines and prevalence of vitamin D deficiency.

Background. Vitamin D deficiency is associated with various adverse health outcomes including osteoporosis, fractures and myalgia. Most recently, vitamin D deficiency has been hypothesised as a risk factor for severe COVID-19 infection. Risk factors for vitamin D deficiency include incarceration, ethnicity, diet and a diagnosis of psychiatric disorder. Vitamin D deficiency is known to be prevalent among individuals within forensic mental health institutions.

Local Trust guidelines advise that vitamin D levels should be checked within one-month of hospital admission, followed by checks at three-monthly intervals. Recommendations for prescribing depend on patients' vitamin D levels; deficient ($<25\text{nmol/L}$), insufficient ($25 < 50\text{nmol/L}$) or adequate ($50\text{-}150\text{nmol/L}$). We assessed concordance with these guidelines at Broadmoor Hospital, UK.

Method. Medical records, laboratory results and drug charts were assessed for a total of 75 patients across 15 wards. Data were collected using a standardised audit tool, including; date of admission, admission vitamin D level, most recent vitamin D level and the dose and frequency of vitamin D prescribed.

Result. 76.4% of patients had their vitamin D levels checked within one month of admission. 66.7% of patients had their vitamin D checked within the last 3 months. For patients with an admission vitamin D level recorded, 43.6% had deficient vitamin D levels, 43.6% had insufficient levels and 12.7% had adequate levels. For patients with a more recent serum vitamin D level, 14.5% had deficient levels, 38.7% had

insufficient levels and 46.8% had adequate levels. For patients with a documented serum vitamin D level, 21.4% were prescribed the correct dose, 22.9% were under-dosed, 14.3% were over-dosed and 41.4% received no dose where guidelines suggested they should.

Conclusion. Comparison of admission and most recent vitamin D levels suggests a general improvement in prevalence of vitamin D deficiency associated with the implementation of local guidelines. However, we identify significant areas for improvement. A substantial proportion of patients lacked admission or regular monitoring of vitamin D levels and a substantial proportion of patients were under-dosed or received no dose where guidelines suggested they should have. We propose that better concordance with guidelines may improve clinical outcomes further. This may prove especially important during the COVID-19 pandemic, given a potential association between vitamin D deficiency and severity of respiratory infection.

HappyMaps: a single hub of resources on children and young people's mental health for parents and professionals

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Aims. Mental health issues in children and young people are a growing concern and the benefits of intervening early are well established for many mental health problems, but existing Child and Adolescent Mental Health Services (CAMHS) are often overstretched with variable waiting times for assessment. Many children also have problems which do not reach the referral thresholds and parents are left to find advice elsewhere. Existing resources for parents are scattered across many different websites and therefore difficult to access both for parents and professionals working with young people. With this in mind, and in consultation with CAMHS Bristol and many other stakeholders (including parents themselves) we designed an easily navigable website intended as a single comprehensive portal of resources for parents of children with mental illness and difficulties.

Method. Qualitative research methods were used to gather information about how the website should be designed and also to gather feedback once the website was live. Focus groups were performed with parents/carers and stakeholder discussions took place to inform the design of the website. Once the website was live, surveys via a Survey Monkey link on the website and Google Analytics were used to evaluate the website.

Result. 60,000 users have utilised the website since the launch in March 2019. Two thirds of users are women and one third are men. Most popular webpages that are visited are primary, secondary, help-in-a-crisis and self-help for young people. Positive feedback has been collected from both parents/carers and service providers. The website has continued to develop and is now a registered charity and has received community lottery funding, which will allow for further evaluation and developments.

Conclusion. HappyMaps has been successful in providing a single hub of information for parents/carers, GPs, CAMHS workers and teachers. Future work involves evaluating the website and attracting interest from other CAMHS teams and professionals in other areas of the UK so that they can create HappyMaps sections for their populations.