multivariate linear regression analyses were run, adjusting for peace index, wealth and inequalities, and urbanisation at country level. A sensitivity analysis including sanitation and food security was run. Interaction with country gross domestic product per capita was assessed.

Results: Based on data for 230 countries, country forestry area is negatively associated with the prevalence of mental health disorders in 2016 (β −0.02 (195% C.I. −0.04/−0.01). This association was maintained in sensitivity analyses, and found mainly in lower- and upper-middle income countries. Change in forestry area is not associated with mental health prevalence nor estimated DALYs due to mental health.

Conclusion: This is the first study showing that forestry area at country level is associated with a lower prevalence of mental health disorders. If these results are replicated at individual level, this would suggest that public health implications should play a strong role in weighting ecological decisions, such as optimising forestry area coverage.

The Physical Health Conditions in People With Gambling Disorder

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Aims: Gambling Disorder is a mental health condition in which people experience impaired ability to control or stop gambling behaviours despite adverse consequences. It is associated with psychiatric co-morbidities and risk factors for physical health conditions. There is growing exploration into physical health conditions associated with gambling disorder and this study sought to further contribute towards understanding that association. The first aim was to describe rates of physical health conditions. The second aim was to explore potential associations between physical health conditions and individuals' sociodemographic characteristics.

Methods: Dataset one comprised aggregated anonymised subject-level data from clinical trials conducted in participants with gambling disorder (n=423). Dataset two comprised aggregated anonymised patient data from the NHS Southern Gambling Service (n=352). Descriptive characteristics of people with versus without physical health co-morbidities were presented. Statistical tests were undertaken to compare those with versus without physical health co-morbidities, independent t-tests were utilised to compare continuous variables whereas Chi Square or Fisher's Exact test were utilised when comparing categorical variables.

Results: In dataset one 42.9% reported one or more physical health condition, the most frequent reported physical health conditions were musculoskeletal, cardiovascular, and endocrine and metabolic conditions. People in dataset one with physical health condition(s) versus without had significantly older age. In dataset two 27.1% reported one or more physical health condition, with respiratory, musculoskeletal, and endocrine and metabolic being the most reported. The presence of physical health conditions, musculoskeletal conditions, and endocrine and metabolic conditions was associated with significantly older age and female sex.

Conclusion: Increased age in individuals with gambling disorder is a crucial sociodemographic factor regarding physical health morbidity. In dataset two being female was identified as a risk factor for having physical health morbidity. Implementation of treatments targeting these risk factors may reduce the public health and individual health burden of gambling disorder.

BioMeQ-MD: Developing Biomechanical Interventions for Major Depression

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Aims: Changes in body biomechanics – that is, changes in gait, posture, and balance – have been identified during episodes of major depressive disorder (MDD). Whilst biomechanical changes are related to the level of disability experienced by people with MDD, such changes are rarely asked about by clinicians or addressed directly by interventions. As part of a project studying whether interventions that target biomechanics might be helpful for MDD, we are conducting an initial non-patient study quantifying biomechanics, mood and anxiety, before and after physiotherapist-directed interventions.

Methods: Twenty young people (aged 19–21) from a higher education setting have completed baseline measurements so far. The baseline protocol consists of questionnaire measures, a happy–sad emotional bias task, and a comprehensive biomechanical assessment including walking tasks, static and dynamic balance tasks, and postural measures.

The baseline walking-task metrics described here were collected using a force plate flush with the floor of a 10-metre walkway. Participants were asked to walk at a comfortable pace across the walkway six times. Walking speed was recorded, and the plate measured reaction forces from which were derived peak/mean forces in three dimensions, as well as variability in these forces across the six repetitions. There were no exclusion criteria for baseline analyses, other than physical disability preventing completion of key measures.

Results: In the fifteen participants (13 male) for whom baseline analyses are complete, mean PHQ-8 (self-reported depressive symptoms) ranged from 0–11 (none to low-moderate), and mean GAD-7 (self-reported anxiety) ranged from 0–25 (none to severe). One participant was taking sertraline, the others reported no mental health medications. Ratings of pain and mobility difficulties were low (EQ-5D domains, scored 1–5: fourteen participants scored 1, one participant scored 2).

Whilst there were no significant relationships between PHQ-8 total score and baseline gait metrics, mean reaction time to sad faces on the emotional bias task was correlated with *variability* in vertical and horizontal walking forces (28–50% variance explained, r^2, across individual metrics, p=0.042–0.003). Greater GAD-7 total score was associated with greater walking speed and mean vertical and horizontal force (32–39% variance explained, p=0.029–0.012).

Conclusion: Gait variability was associated with a sensitive mood marker (average reaction time to sad faces), in this non-patient sample with low levels of self-reported depression. Self-reported anxiety was associated with average walking force and speed. Ongoing work is examining changes in metrics following