**DIET AND MENTAL HEALTH IN PREGNANCY: NUTRIENTS OF IMPORTANCE BASED ON LARGE OBSERVATIONAL COHORT DATA**

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**Objective**:

To determine associations between dietary intake and well-being in pregnancy.

**Methods:**

This retrospective cohort analysis combined three studies; The ROLO Study (a Randomised cOntrol trial of a LOw glycemic index diet in pregnancy), the PEARS study (Pregnancy Exercise And nutrition Research Study with smartphone app support) and a probiotic Randomised control trial. All data were collected prior to study interventions (16 weeks). Dietary intakes during pregnancy were determined using 3-day food diaries. The WHO-5 item Well-Being Index was used to assess mental well-being. Initial associations were evaluated using Pearson correlations, and further defined with multiple regression analysis adjusted for age, BMI, HP deprivation index and MET scores.

**Results:**

1,521 women were included in the analysis; mean age 32+4 years and BMI 27kg/m2 (IQR 17-56kg/m2). The mean well-being score was 59%. Regression analysis showed that fibre (B = 0.07, p=0.02), magnesium (B=0.08, p<0.01), niacin (B=0.09, p<0.01), thiamine (B=0.07, p=0.01) and folate (b=0.08, p=0.02) were all positively and significantly associated with well-being in a pregnant population. Benjamini-Hochberg procedure to correct for multiple testing was applied; and significance remained.

**Conclusion**:

Maternal nutrition and well-being are related during early pregnancy. Our findings suggest that fibre, magnesium, and particular B vitamins may be of importance for promoting positive mental well-being during pregnancy.

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