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Pregnancy enhances facial recognition of anger: Transition from early to late pregnancy

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Introduction: Pregnancy and the postpartum period involve several physiological adaptations crucial for offspring care. Recent research has highlighted reproduction-related brain plasticity in human mothers. Associations with aspects of maternal caregiving suggest adaptive changes that facilitate a woman's transition to motherhood. However, the dynamic changes that affect a woman's brain are not merely adaptive, and they likely confer a vulnerability for the mental disorders. To elucidate the pathophysiology of psychiatric problems that occur during the perinatal period, gaining insights into the physiological changes in brain function due to pregnancy is crucial.

Objectives: Although it has been hypothesized that pregnancy enhances social cognitive functions in mothers to adapt to the offspring care, there are few reports to support this hypothesis. This study aims to investigate whether social cognitive functions change during the first pregnancy, with a focus on maternal adaptation to offspring care.

Methods: The study included a first pregnancy group and a never-pregnant control group. We conducted a prospective study comparing pregnant women between two-time points (T1, T2); at less than 21 weeks of gestation [T1] and those after 30 weeks of gestation [T2]. To assess the effects of pregnancy and gestational age (< 21 weeks or 30 weeks or more), both the control (never-pregnant) group and pregnant group were evaluated at two time points with similar intervals. The Emotion Recognition Task [ERT] of the Cambridge Neuropsychological Test Automated Battery (CANTAB) was performed to examine the emotion recognition of six basic emotions in facial expressions. We analyzed a cohort of 26 participants in the pregnant group and 25 in the control group. We performed a two-way repeated measures analysis of variance with pregnancy status and gestational period (T1, T2) as independent variables.

Results: Significant interactions between group and time points (T1, T2) were observed only for Unbiased Hit Rate Anger ($p < 0.01$); facial recognition accuracy for anger increased with the progression of pregnancy. There were no significant interactions for Unbiased Hit Rate Sadness, Happiness, Fear, Disgust, or Surprise.

Conclusions: This is the first study to demonstrate that facial recognition of anger enhances with the progression of pregnancy, utilizing never-pregnant women as a never-pregnant control group. The results of this study contribute to the physiological effects of pregnancy on the brain and cognitive function and have potential for further study of perinatal mental health problems.

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Quality of Life Assessment in Female Rheumatoid Arthritis Patients

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Introduction: Rheumatoid arthritis (RA) is a chronic inflammatory disease that significantly impacts patients' quality of life (QOL), affecting both physical and mental well-being. QOL is predictive of morbidity and mortality, making its consideration increasingly important in treatment decisions.

Objectives: This study aims to assess the Quality of Life in Female Rheumatoid Arthritis patients.

Methods: The study included 87 female patients with confirmed RA, diagnosed by an experienced rheumatologist based on the ACR 1987 or ACR/EULAR 2010 criteria. Quality of life was assessed using the World Health Organization Quality of Life assessment, short form (WHOQOL-BREF scale). The scoring ranged from 0 to 100 for each domain. Disease activity was assessed using the Disease Activity Score (DAS28), and functional disability was evaluated using the Health Assessment Questionnaire (HAQ).

Results: The study included 87 patients with a mean age of 54.7 ± 12.2 years and a mean disease duration of 12 ± 9.1 years. The majority of patients had a medium socioeconomic level (81.6%), and a low cultural level with 31% being illiterate, 6% attending university, and 76.9% unemployed. Regarding marital status, 74.7% were married. RA was erosive in 77% of patients, deforming in 68%, and 40% were seropositive (FR and/or anti-CCP). Extra-articular manifestations were present in 34.5% of patients. Sixty-seven patients (77%) were on disease-modifying antirheumatic drugs (DMARDs), with 67.8% on methotrexate. Eighteen percent were treated with biological agents. Corticosteroids were used by 47.1% of patients, while 12.6% used non-steroidal anti-inflammatory drugs, and 6.9% used both. Disease activity varied, with 9.2% having low activity, 43.7% moderate activity, and 24.1% high activity based on DAS28. The mean HAQ index was 1.1 ± 0.8 , indicating moderate to severe disability for more than 60% of patients. The mean WHOQOL scores were substantially reduced in the physical health (43 ± 16.2), psychological health (50.3 ± 14.4), social relationships (51.5 ± 18.6), and environment domains (46.8 ± 15). There was a significant inverse correlation between HAQ and the physical health ($r = -0.52$, $p < 0.001$), psychological ($r = -0.57$, $p < 0.001$), social relationships ($r = -0.37$, $p = 0.001$), and environmental domains ($r = -0.45$, $p < 0.001$) of QOL. There was no correlation between any domain of QOL and DAS28.

Conclusions: Patients with RA experience reduced QOL across multiple domains, including physical function, mental health, and social relationships. Functional disability, as reflected by HAQ, is the most significant factor affecting QOL in RA. The WHOQOL-BREF should be considered a valid outcome measure for