Effects of relaxation on psychobiological wellbeing during pregnancy

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Full Title: Effects of relaxation on psychobiological wellbeing during pregnancy: A randomized controlled trial

Prenatal maternal stress is associated with adverse birth outcomes and may be reduced by relaxation exercises. The aim of the present study was to compare the immediate effects of two active and one passive 10-min relaxation technique on perceived and physiological indicators of relaxation. 39 healthy pregnant women recruited at the outpatient department of the University Women's Hospital Basel participated in a randomized controlled trial with an experimental repeated measure design. Participants were assigned to one of two active relaxation techniques, progressive muscle relaxation (PMR) or guided imagery (GI), or a passive relaxation control condition. Self-reported relaxation on a visual analogue scale (VAS) and state anxiety (STAI-S), endocrine parameters indicating hypothalamic-pituitary-adrenal (HPA) axis (cortisol and ACTH) and sympathetic-adrenal-medullary (SAM) system activity (norepinephrine and epinephrine), as well as cardiovascular responses (heart rate, systolic and diastolic blood pressure) were measured at four time points before and after the relaxation exercise. Between group differences showed, that compared to the PMR and control conditions, GI was significantly more effective in enhancing levels of relaxation and together with PMR, GI was associated with a significant decrease in heart rate. Within the groups, passive as well as active relaxation procedures were associated with a decline in endocrine measures except epinephrine. Taken together, these data indicate that different types of relaxation had differential effects on various psychological and biological stress systems. GI was especially effective in inducing self-reported relaxation in pregnant women while at the same time reducing cardiovascular activity.

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