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## **A SELF-DETERMINATION THEORY BASED INTERVENTION TO PROMOTE AUTONOMOUS MOTIVATION AND PHYSICAL ACTIVITY ENGAGEMENT AMONG PATIENTS WITH RHEUMATOID ARTHRITIS**

J.L. Duda<sup>1</sup>, P.C. Rouse<sup>2</sup>, J.J. Veldhuijzen van Zanten<sup>1</sup>, G.S. Metsios<sup>3</sup>, N. Ntoumanis<sup>4</sup>, C.-A. Yu<sup>1</sup>, S.A.M. Fenton<sup>1</sup>, Y. Koutedakis<sup>3</sup>, G.D. Kitas<sup>5</sup>.

<sup>1</sup>*School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, Birmingham;*

<sup>2</sup>*Department for Health, University of Bath, Bath;* <sup>3</sup>*Faculty of Health, Education and WellBeing,*

*University of Wolverhampton, Wolverhampton, United Kingdom;* <sup>4</sup>*School of Psychology and Speech*

*Pathology, Curtin University, Perth, Australia;* <sup>5</sup>*Department of Rheumatology, The Dudley Group NHS Foundation Trust, Russell 's Hall Hospital, Dudley, United Kingdom*

**Background:** Rheumatoid arthritis (RA) is a chronic inflammatory disease that causes joint pain, swelling and stiffness with eventual structural damage leading to physical dysfunction. People with RA tend to experience fatigue, psychological distress, and are at risk for CVD. Regular physical activity (PA) can attenuate such disease-related symptoms and improve function and QOL in RA patients. Self-determination theory is a contemporary theory of motivation that has been successfully applied to behaviour change interventions seeking to promote the adoption and maintenance of health behaviours (e.g., exercise on prescription, smoking cessation) (1,2).

**Objectives:** To examine whether an intervention grounded in SDT fosters basic need satisfaction, autonomous motivation towards PA engagement and levels of objectively assessed PA engagement in patients with RA following a 3 month exercise programme.

**Methods:** Data were collected as part of the Physical Activity in Rheumatoid Arthritis (PARA) study, a randomised control trial comparing two 3 month exercise programmes. Patients in the experimental arm also received a psychological intervention aiming to foster basic need satisfaction and autonomous regulations for PA through contacts with a SDT trained PA advisor. Data were collected at baseline, immediately post intervention (3 months), and at 6 and 12 month follow up. Social psychological variables relevant to SDT were assessed via validated questionnaires at each time point. In order to determine habitual levels of PA engagement, a subsample of participants were also asked to wear an accelerometer (GT3X) for 7 days.

**Results:** Follow up data pertaining to psychological measures were available for 44 participants (intervention, N=34, control, N=24). Of these, 67% (N=39) provided valid accelerometer data ( $\geq 3$  days for  $\geq 10$  hours including  $\geq 1$  weekend day). At 3 months (post intervention), perceptions of autonomy support from the PA advisor were significantly related to intervention participants' competence need satisfaction ( $\beta=0.49$ ,  $p<0.01$ ). Participants in the intervention arm also reported significantly higher competence need satisfaction compared to participants in control arm ( $F(1,56)=7.98$ ,  $p<0.01$ ). For participants with valid accelerometer data, competence need satisfaction at 3 months significantly positively predicted change in autonomous motivation from baseline to 3 months across both groups ( $\beta=0.34$ ,  $p<0.05$ ). In addition, change in autonomous motivation significantly positively predicted moderate PA at 3 months ( $\beta=0.36$ ,  $p<0.02$ ).

**Conclusions:** Findings suggest that a SDT-grounded PA intervention promotes adaptive motivational processes that may encourage increased engagement in moderate PA in RA patients engaged in a tailored exercise programme.

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