

1-2.

Optimal physical activity is associated with the reduction of depressive symptoms via neuroticism and resilience

(社会人大学院博士課程 4 年精神医学分野)

○中島 一樹

(大学病院：メンタルヘルス科)

志村 哲祥、橘川 応之、伊藤俊一郎

本屋敷美奈、市来 真彦、井上 猛

榊屋 二郎

(八王子：メンタルヘルス科)

玉田 有

(茨城：メンタルヘルス科)

東 晋二

【Background】 Personality traits, such as neuroticism, which is results in vulnerability to stress, and resilience, a measure of stress coping, are closely associated with the onset of depressive symptoms, whereas regular physical activity habits have been shown to reduce depressive symptoms. In this study, the mediating effects of neuroticism and resilience between physical activity and depressive symptoms were investigated by a covariance structure analysis.

【Methods】 Between April 2017 and April 2018, 526 adult volunteers were surveyed using self-administered questionnaires. Demographic information, habitual physical activity duration, neuroticism, and resilience were investigated. This study was conducted with the approval of the Medical Ethics Committee of Tokyo Medical University.

【Results】 The dose-response curve of physical activity duration and depression scores were U-shaped: the optimal physical activity duration for the lowest depression score was 25.7 hours/week. We found that the greater the difference from optimal physical activity duration (DOT), the higher the neuroticism and lower the resilience, and more severe the depressive symptoms. Covariance structure analysis demonstrated that neuroticism and resilience significantly and completely mediated the effects of DOT on depressive symptoms.

【Conclusion】 Our study suggests that there is an optimal physical activity duration that reduces depressive

symptoms, and that a greater deviation from the optimal physical activity duration has increased depressive symptoms through neuroticism and resilience.

1-3.

Trait anxiety and depressive rumination mediate the effect of perceived childhood rearing on adulthood presenteeism

(社会人大学院博士課程 4 年メンタルヘルス科)

○嶋崎 彬文

(大学病院：メンタルヘルス科)

出口 彩香、積 知輝、石井 義隆

岩田 愛雄、本屋敷美奈、井上 猛

榊屋 二郎

(八王子：メンタルヘルス科)

玉田 有、藤村 洋太

【Background】 Productivity loss due to physical or mental problems in the workplace, which is called presenteeism, leads to huge financial losses. Personal and working environment factors as well as physical and mental illnesses are related to presenteeism, but the mechanism remains fully unclarified. This study analyzed the effects of perceived childhood rearing on presenteeism of adult volunteer workers, and the mediator effects of trait anxiety and depressive rumination.

【Methods】 In 2017 and 2018, a cross-sectional paper-based survey was conducted, and written consent from 447 adult workers was obtained. Demographic information and results from the Parental Bonding Instrument, trait anxiety of State-Trait Anxiety Inventory Form Y, Ruminative Responses Scale, and Work Limitations Questionnaire were surveyed. Multiple regression analyses and structural equation modeling were conducted.

【Results】 The low quality of rearing from parents in childhood, low care and high overprotection, indirectly worsened current presenteeism via trait anxiety and depressive rumination. Presenteeism was directly worsened by trait anxiety and depressive rumination, and low quality of rearing from parents directly affected trait anxiety and depressive rumination, and trait anxiety affected depressive rumination.

【Conclusion】 This study clarified the long-term influ-

ences of the low quality of childhood rearing on adulthood presenteeism via trait anxiety and depressive rumination. Therefore, assessing the quality of childhood rearing, trait anxiety, and depressive rumination may help to elucidate the causes of presenteeism in the workplace and how to combat it.

1-4.

Mediating Effects of Trait Anxiety and State Anxiety on the Effects of Physical Activity on Depressive Symptoms

(大学院博士課程 4 年精神医学分野)

○橘川 応之

(大学病院：メンタルヘルス科)

志村 哲祥、中島 一樹、森下 千尋
本屋敷美奈、市来 真彦、井上 猛
榊屋 二郎

(八王子：メンタルヘルス科)

玉田 有

(茨城：メンタルヘルス科)

東 晋二

【Background】 Previous studies have reported that physical activity can prevent the onset of depression and reduces anxiety. In the present study, the hypothesis that total physical activity time influences depressive symptoms via state and trait anxiety was tested by a path analysis.

【Methods】 Self-administered questionnaires were used to survey 526 general adult volunteers from April 2017 to April 2018. Demographic information, physical activity, and state and trait anxiety were investigated.

【Results】 The association between physical activity time and depressive symptoms was expressed as a U-shape curve. The results of the covariance structure analysis showed that differences from the optimal physical activity time (DOT) had direct positive effects on state and trait anxiety. DOT affected depressive symptoms only via trait anxiety, and this was a complete mediation model.

【Conclusion】 The present study suggests that an optimal physical activity time exists for depressive symptoms. The path model demonstrated an associa-

tion between the three factors of optimal physical activity time, trait anxiety, and depressive symptoms, and the effect was fully mediated by trait anxiety.

1-5.

関節リウマチ患者に対するセファランチン®の薬効評価

(東京薬科大学：薬学部 臨床薬理学教室)

○杉山健太郎、Liu Wei-yi、松澤 佑斗

小山琉希矢、黒田 菜々、若松 花歩

田中 祥子、山田 陽城、鈴木 賢一

(大学病院：リウマチ膠原病内科)

太原恒一郎、沢田 哲治

【目的】 関節リウマチ (RA) の治療は、メトトレキサートを第一選択薬とした薬物療法が導入され、完全寛解を目標に行われている。しかしながら効果不十分の症例では、炎症性サイトカインに直接作用する高額な生物学的製剤を併用する。本研究では、健常者、RA 患者を対象に安価で副作用の少ない既存の医薬品であるセファランチン®に着目して同薬剤の薬効評価を試みた。

【方法】 本研究室で独自に開発された免疫抑制薬の薬物感受性試験¹⁾を用いて健常者と RA 患者を対象にセファランチン®の薬効評価を行った。同法に従って末梢血単核細胞 (PBMC) を分離し、T 細胞マイトゲンとしてコンカナバリン A、各濃度のセファランチン®を添加して PBMC 増殖を 50% 抑制する濃度 (IC₅₀) を求めた。また Human Inflammatory Cytokine CBA kit を用いて高活動性 RA 患者、低活動性 RA 患者を対象として PBMC が分泌する 6 種類の炎症性サイトカイン (IL-6、IL-8、IL-10、TNF- α 、IL-1 β 、IL-12p70) を測定した。

【結果】 健常者、RA 患者のセファランチン®の薬物感受性については、両群に PBMC 増殖抑制効果が得られたが、有意差は認められなかった。一方、炎症性サイトカイン定量試験では、セファランチン®が低活動性 RA 患者の IL-1 β 、TNF- α を高活動性 RA 患者の IL-1 β 、IL-6、IL-8 そして TNF- α を有意に減少させた。

【考察】 セファランチン®は、放射線による白血球減少症や円形脱毛症・枇糠性脱毛症に適応を持つが RA には、適応を持たない。しかしながらセファラ