adjustment for covariates (including sex, maternal education, family social class, parental conflict, bullying and maternal depression).
Results After adjusting for potential confounders, we found no evidence for an association between screen time and anxiety (OR = 1.02; 95% CI 0.95–1.09). There was weak evidence that greater screen time was associated with a small increased risk of depression (OR = 1.05, 95% CI 0.98–1.13).
Conclusions Our results suggest that young people who spend more time on screen-based activities may have a small increased risk of developing depression but not anxiety. Reducing youth screen time may lower the prevalence of depression. The study was limited by screen time being self-reported, a small sample size due to attrition and non-response, and the possibility of residual confounding. Reverse causation cannot be ruled out.
Disclosure of interest The authors have not supplied their declaration of competing interest.
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EV0390

Cross-cultural adaptation, reliability, and validity of the revised Korean version of Ruminative Response Scale

W. Kim
Inje University Seoul Paik Hospital, Psychiatry, Seoul, Republic of Korea

Objective Rumination is a negative coping strategy defined as repetitive and passive focusing on negative feelings such as depression. The Ruminative Response Scale (RRS) is a widely used instrument to measure rumination, but there is continuing argument about the construct validity of the RRS, because of probable overlap between the measurement of depression and that of rumination. The RRS-Revised, which removed 12 items of the RRS, is suggested as a more valid instrument for measuring rumination. Therefore, we translated RRS-R into Korean and explored the reliability, validity and factor structure in patients with major depressive disorders.
Methods Seventy-nine patients with major depressive disorder took the Korean version of RRS, RRS-R, State Trait Anxiety Inventory, Beck Depression Inventory and Penn State Worry Questionnaire. We performed exploratory factor analysis of RRS-R, and tested construct validity, internal reliability and test-retest reliability.
Results The internal and test-retest reliability of RRS-R was high. Factor analysis revealed that RRS-R is composed of two factors. "Brooding" factor explained 56.6% and "Reflection" factor explained 12.5%. RRS-R, especially "Brooding" factor, was highly correlated with other clinical symptoms such as depression, anxiety and worry.
Conclusions In this study, we find out the RRS-R is more reliable and valid than the original RRS in Korean patients with depression because the RRS-R is free from the debate about the overlap of item with BDI. We also revealed that "Brooding" is highly correlated with depressive symptoms. RRS-R may be a useful instrument to explore the implication of "Brooding" in depression.
Disclosure of interest The author has not supplied his/her declaration of competing interest.

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EV0391

The role of disturbed circadian clocks in the development of depression-like behavior and metabolic comorbidity in mice

D. Landgraf[1,*], R. Barandas[2], J.E. Long[1], C.D. Proulx[3], M.J. McCarthy[1], R. Malinow[3], D.K. Welsh[1]
[1] *University of California- San Diego, Department of Psychiatry and Center for Circadian Biology, San Diego, USA*
[2] *Hospital de Santa Maria- Centro Hospitalar Lisboa Norte, Department of Psychiatry, Lisbon, Portugal*
[3] *University of California- San Diego, Department of Neurosciences, San Diego, USA*
* *Corresponding author.*

Major depressive disorder (MDD) is often associated with disturbed circadian rhythms. However, a definitive causal role for functioning circadian clocks in mood regulation has not been established. We stereotactically injected viral vectors encoding short hairpin RNA to knock down expression of the essential clock gene *Bmal1* into the brain's master circadian pacemaker, the suprachiasmatic nucleus (SCN). In these SCN-specific *Bmal1*-knockdown (SCN-*Bmal1*-KD) mice, circadian rhythms were greatly attenuated in the SCN. In the learned helplessness paradigm, the SCN-*Bmal1*-KD mice were slower to escape, even before exposure to inescapable stress. They also spent more time immobile in the tail suspension test and less time in the lighted section of a light/dark box. The SCN-*Bmal1*-KD mice also showed an abnormal circadian pattern of corticosterone, and an attenuated increase of corticosterone in response to stress. Furthermore, they displayed greater weight gain, which is frequently observed in MDD patients. Since the circadian system controls important brain systems that regulate affective, cognitive, and metabolic functions, and neuropsychiatric and metabolic diseases are often correlated with disturbances of circadian rhythms, we hypothesize that dysregulation of circadian clocks plays a central role in metabolic comorbidity in psychiatric disorders. In fact, circadian rhythm disturbances have been linked to individual psychiatric and metabolic disorders, but circadian aspects of such disorders have not been considered previously in an integrated manner. Treating and preventing disturbances of circadian clocks in patients suffering psychiatric and metabolic symptoms may be a central element for therapies targeting both disorders concurrently.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0392

Cerebral correlates of emotional interference processing in the elderly with subthreshold depression: A functional fMRI study

J. Li*, H. Zhou
Chinese Academy of Sciences, Institute of Psychology, Beijing, China
* *Corresponding author.*

Introduction Compared to healthy controls, adults with major depressive disorder (MDD) showed stronger activation in dorsolateral prefrontal cortex (DLPFC) and anterior cingulate cortex (ACC) in resolving emotional conflict. Whether subthreshold depression (StD) at an advanced age is also accompanied by similar changes in brain activation in coping with emotional conflict remained unknown.
Objectives By using face-word Stroop task, the current study explored the neural correlates of emotional interference processing in old adults with StD.

Methods Participants were 19 community-dwelling older adults with StD assessed by the Center for Epidemiologic Studies Depression scale (CES-D) scores. We collected magnetic resonance images of their brain compared to images of 18 healthy aged-matched adults. We used SPM to analyze differences in brain activations in emotional interference processing between the two groups.
Results Results showed that elderly individuals with StD have stronger activation in DLPFC, ACC, default mode network (DMN) and visual extrastriate cortex compared to healthy controls. Furthermore, the brain activations of the DLPFC, DMN and visual extrastriate cortex were significantly associated with participants' behavioral interference effect in StD.
Conclusions Stronger brain activation in DLPFC, ACC, DMN and extrastriate cortex in old adults with StD suggests that the working efficiency of their brain is quite low and their cognitive control is impaired to some extent.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0393

Clinico-psychopathological features of the resistant depression

S. Lukmonov*, N. Yadgarova
Tashkent Medical Academy, Psychiatry and Narcology, Tashkent, Uzbekistan
* *Corresponding author.*

Objective To study the clinical - psychopathological characteristics of patients with resistant depression.
Materials and methods We examined 96 patients aged 18–48 years (mean age 34.7 0 ± 1.0 years). The investigated patients were divided into two groups: 1st -TRD with positive affectivity - 59 (61.4%); 2nd - curable depression - 37 (38.6 %). Selection of patients was made according to following criteria: ICD - 10: (F31) - bipolar disorder; (F32) - depressive episode; (F33) - recurrent depressive disorder.
Results In group 1 patients received amitriptyline (TCA) - 50 mg - 2 times/day in one of 2 consecutive courses (within 6 weeks) and they showed no clinical benefit. In group 2 patients received amitriptyline - 50 mg 2 times/day for 2 consecutive courses. When analyzing the number of depressive episodes the statistically greater number was observed 1-3 episodes in group 2 - in 45.9% of patients than in group 1 - 16.9%, predominant 5-8 episodes - in 44.1% of patients in group 1, than in group 2 - 13.5%. Remissions, observed in group 2, were characterized by longer duration and have a higher quality than in patients of group 1. There is a tendency to shorten remission especially in group 1.
Conclusion The highest correlation dependence showed such factors as: frequency of depressive episodes, duration of episode 1, severity of depressive episode 1, quality of remission after depressive episode 1, number of responders at early stages of antidepressant therapy of I-st attack.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV0394

Comparison of behavioral activation therapy and treatment as usual among depressed patients in secondary psychiatric care

K. Luoto[1,2,*], A. Koivukangas[1,2], A. Lassila[2], E. Leinonen[1], O. Kampman[1,2]
[1] *University of Tampere, Psychiatry, Tampere, Finland*
[2] *The Hospital District of South Osthrobothnia, Psychiatry, Seinäjoki, Finland*
* *Corresponding author.*

Introduction Evidence-based brief therapies are needed to reduce a marked heterogeneity affecting treatment of depression within the public psychiatric care. They should be easy to implement and use for a large group of patients.
Objectives To develop and implement an effective brief treatment protocol for depressed patients treated in public psychiatric secondary care.
Aim To explore and compare the outcome of depressed patients receiving either behavioral activation therapy (BA) or treatment as usual (TAU).
Methods Two hundred and forty two depressive patients referred to adult public secondary psychiatric care formed the BA treated study group. The TAU treated control group ($n = 205$) was collected from the hospital districts database and matched by the hospitalization rate, Alcohol Use Disorders Identification Test (AUDIT) and Beck Depression Inventory (BDI). All patients received antidepressive medications. In the study group, Montgomery–Åsberg Depression Rating Scale (MADRS) was conducted four times within 24 months follow-up. In both groups, the ability of functioning was controlled by Global Assessment of Functioning scale (GAF).
Results In the study group, depressive symptoms alleviated systematically and significantly during follow-up (Table 1). The improvement in GAF scores was significantly better in the study group throughout the follow-up (Table 1).
Conclusions BA can be implemented and used effectively for depressive patients in public psychiatric secondary care. BA is superior to TAU in terms of functional recovery.

Table 1

Table

	Follow-up (months from baseline)	Group	N	Mean	SD	p	Effect Size
ΔMADRS[1]	6	study	156	9.9	9.8	<0.001	1.02[3]
	12	study	135	13.0	9.3	<0.001	1.39[3]
	24	study	95	14.5	8.1	<0.001	1.78[3]
GAF score[2]	0-6	study	167	59.8	11.5	<0.001	0.27[4]
		control	159	54.1	13.3		
	6-12	study	128	63.9	13.4	<0.001	0.33[4]
		control	134	56.9	14.7		
	12-24	study	94	66.1	11.9	<0.001	0.48[4]
		control	98	56.9	15.2		

[1] Mean change (decrease) in Montgomery–Åsberg Depression Rating Scale (MADRS) compared to baseline
[2] Mean score in Global Assessment of Functioning scale (GAF) during the given follow-up period
[3] Within study group compared to baseline
[4] Between groups

[1] Mean change (decrease) in Montgomery–Åsberg Depression Rating Scale (MADRS) compared to baseline.
[2] Mean score in Global Assessment of Functioning scale (GAF) during the given follow-up period.
[3] Within study groups compared to baseline.
[4] Between groups.

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