



# 中华医学会第三次中青年心身医学学术会议

2023年7月21-23日 湖南·长沙

主办单位：中华医学会心身医学分会

承办单位：中南大学湘雅二院

## 论文汇编

会议网站：[www.cspsm.org](http://www.cspsm.org)

# 目 录

## 论文发言

OR-001	The comparison of the consultation-liaison in the psychiatry department of a general hospital before and after the outbreak of COVID-19 .....	王雪梅,杨昱音,崔红梅等	1
OR-002	Psychological criteria of abnormal thoughts, feelings, and behaviors related to the symptoms: An Investigation of DSM-V Somatic Symptom Disorders (SSD) of a multi-center research in China .....	殷嘉欣,陈亦笑,刘子明等	2
OR-003	Altered insular functional activity among E-cigarette users with nicotine dependence .....	孙云开,廖艳辉	3
OR-004	Nicotine decreases pain behaviors and nerve regeneration via the $\alpha 7$ nicotinic acetylcholine receptor in two rat nerve injury models .....	方烨红,廖艳辉	3
OR-005	Sleep disturbance mediates the relationship between problematic technology use and psychotic-like experiences: a large cross-sectional study in 87, 302 Chinese adolescents .....	彭仆,廖	4
OR-006	基于脑电微状态 k-mers 的词袋模型对重度抑郁症进行分类的机器学习研究 ....	周东东,王我,况利	5
OR-007	中国综合医院常见心身疾病患者 DCPR-R 综合征的患病率及影响因素分析: 研究设计和初步结果 .....	徐微,姜文灏,岳莹莹等	5
OR-008	利用临床心理特征、遗传变量构建抗抑郁药效预测模型 .....	蔡雨凡,邵永琪,唐海平等	6
OR-009	老年性耳聋认知储备失调影响阈下抑郁的静息态脑电网络机制研究 .....	高敏倩,杨海弟,贾艳滨	7
OR-010	基于虚拟现实线索暴露疗法对降低甲基苯丙胺使用障碍者心理渴求的干预研究 ....	黄秋平,湛红献	7
OR-011	Dual roles of the amygdala-hippocampus circuit in regulation of REM sleep and depression by rTMS in insomnia patients .....	柳晓阳,袁凯,朱一飞等	8
OR-012	成熟防御机制与心理健康: 升华与焦虑抑郁的相关性研究 .....	罗嘉欣	9
OR-013	帕金森病患者情绪异常和情绪处理的脑电图特征 .....	江文静	9
OR-014	Aberrant plasma exosomal derived ceRNA networks as diagnosis biomarkers for adolescent major depressive disorder and its potential prediction for antidepressant efficacy .....	徐一凡,杜鑫哲,章蓉等	10
OR-015	Shared and specific brain dysfunction patterns across affective and psychotic disorders: results from a multi-site study .....	龙易成,鲁彬,刘哲宁等	10

## 壁报交流

PO-001	Sleep quality and hypnotics use in patients undergoing maintenance hemodialysis: A cross-sectional study .....	叶薇,Lizhen Wang	11
PO-002	精神分裂症电休克疗法和磁休克疗法的比较: 结构变化/神经可塑性 .....	李金	12
PO-003	县/市级综合性医院精神科联络会诊资料分析 .....	杨晓龙,张文跃	12
PO-004	家庭复原力对医学院校大一新生攻击性行为的影响: 家庭亲密度、乐观-悲观人格的中介作用 .....	姚依松,陈文烨,张熠扬等	13
PO-005	产时积极分娩体验的定性研究 .....	孙毅,夏贤	13
PO-006	单亲家庭大学生自杀风险的影响因素研究 .....	侯威威,鲁小华,侯文鹏等	14

PO-007	Can the aberrant occipital-cerebellum network be a predictor of treatment in panic disorder? ..... 韩乙丁,鄢浩浩,山肖肖等	14
PO-008	Program of Algorithm for Pharmacological Treatment of Major Depressive Disorder in China: Benefits or not?.....朱云程	15
PO-009	抑郁症患者嗅觉功能与竞争性干扰抑制的队列研究.....王芳	16
PO-010	中国老年人慢性躯体病共病模式与疑似痴呆的相关性.....张洪光	16
PO-011	Common and exclusive spontaneous neural activity patterns underlying pure generalized anxiety disorder and comorbid generalized anxiety disorder and depression ..... 鄢浩浩,Yiding Han,Xiaoxiao Shan 等	17
PO-012	Major depressive disorder is associated with the mitochondrial ND1 T3394C mutation in two Han Chinese families.....敬攀,禹海航	18
PO-013	2 型糖尿病共病抑郁障碍及其认知功能损害与血管紧张素的相关研究.....李娜,杨梅,史丽	18
PO-014	经颅磁刺激对于酒精使用障碍患者事件相关电位影响的研究.....武桥	19
PO-015	童年期虐待通过调节右侧杏仁核亚区功能网络影响抑郁症的临床特征... 陈素珍,尹莹莹,张钰群等	19
PO-016	Emotion dysregulation and Internet gaming disorder in young people: Mediating effects of negative affect and metacognitions.....林舒红,谌红献	20
PO-017	1040 名在综合医院精神科门诊就诊患者其防御机制运用特点的分析.....阿拉腾巴根,梁子红	20
PO-018	重复经颅磁刺激改善青少年非自杀性自伤脑功能网络——一项基于 TMS-EEG 的研究..... .....杜娜,李雅兰,陈琳琪等	21
PO-019	青少年抑郁障碍患者的疼痛敏感性及疼痛强度研究.....张晴,刘襄忠	22
PO-020	复发缓解型多发性硬化患者的抑郁症状与疲劳及生活质量的相关性.....刘军军,王志晔	22
PO-021	重庆市中小学生情绪障碍及自杀自伤的调查研究.....艾明,张琪,洪素等	23
PO-022	围产期抑郁预防与治疗的证据总结.....朱远,宣致懿,张爱霞等	24
PO-023	某军队三甲医院护士创新行为现状及影响因素分析.....李琰	24
PO-024	1 例青少年心理应激、情绪障碍与甲状腺癌共病案例的讨论与思考.....林冬梅	24
PO-025	正念减压疗法(MBSR)对创伤后应激障碍(PTSD)症状干预效果和长期疗效的 Meta 分析.... .....韩卓颖,叶紫莹	25
PO-026	Virtual Reality Cognitive Behavior Therapy for the Treatment of Anxiety in Patients with Acute Myocardial Infarction: A Randomized Clinical Trial.....李园园,彭娟,杨平原等	26
PO-027	中小学教师对儿童常见精神障碍识别能力的比较研究.....欧怡娜,何浩宇(通讯作者)	27
PO-028	精神病临床高危综合征的潜在代谢生物标志物研究.....曾嘉慧,叶嘉依,高毓清等	27
PO-029	玉溪市基础教育教师癌症预警症状和危险因素认知的实证研究.....冯林森,董正娇,李清丽等	28
PO-030	进食障碍患者照料者特定照护负担与家庭顺应的相关性分析.....王鑫鑫,薛明华,耿淑霞	29
PO-031	儿童慢性疼痛程度对生活质量的影响:抑郁焦虑的中介作用.....赵奇慧,王昱琳,徐燕清等	29
PO-032	难治性精神分裂症的皮层厚度及个体化结构协变网络研究.....王俊,唐劲松	30
PO-033	Difference in relationship of peer victimization and mental health in vocational school students by genders : a network analysis.....王俊,唐劲松	30
PO-034	Use of Music Therapy in the Treatment of Somatic Symptoms of Chronic Pain for Pediatrics Patients: A Case Study.....王昱琳,徐燕清,赵奇慧等	31
PO-035	慢性失眠障碍患者对恐惧记忆的影响.....孙静静,李盼盼,徐文悦等	32
PO-036	Wnt/ $\beta$ -catenin-CREB/BDNF-miRNA-223 feedback loop regulates the seizures in the two kinds of depression epilepsy comorbid rat models.....耿瑞杰,叶尘宇,杨平原等	32



PO-037	社会心理因素对于痤疮的影响：系统性回顾 .....	钟小姣,杜宇	33
PO-038	某综合医院精神心理科联络会诊分析 .....	杨宁波,李洁,张国秀等	34
PO-039	Gender differences in alcohol drinking among adolescents: a school-based survey in China .....	李铃,廖艳辉	34
PO-040	Prevalence and Correlates of Addictive Use of Internet Game, Social Media, and Smartphone among Chinese Youth .....	刘漪	35
PO-041	Alerting network, cognitive flexibility in children with attention-deficit/hyperactivity disorder, and the moderating effect of neuroticism .....	张翔,王少霞,刘倩云等	35
PO-042	粪便微生物群移植治疗胃食管反流病合并焦虑抑郁状态患者的疗效研究 .....	陈嘉韦,陈志平	36
PO-043	不同类型胃食管反流病合并焦虑抑郁状态患者肠道微生物群的差异性研究 .....	陈嘉韦,陈志平	37
PO-044	肺结节患者的心理状态及其相关影响因素的横断面研究 .....	梁爽,赫英娟,佟靖雯等	37
PO-045	催产素和精氨酸血管加压素对性取向的调节作用 .....	李幼东,杜玉茹,刘淙淙	38
PO-046	Changes of resting-state MRI in patients with sleep problems after COVID-19 infection .....	陈浩波,李铃,刘鹏等	38
PO-047	Exosome and exosomal contents in schizophrenia .....	张廷开,唐劲松	39
PO-048	Autophagy flux, cognitive deficits and depressive symptoms in Parkinson's disease .....	李研哲,杨鹤超,李申等	40
PO-049	中老年抑郁与听力损失的双向关联分析——来自中国健康与退休纵向研究的证据 .....	吴超	41
PO-050	嗅球小胶质细胞 P2X7 受体在过敏性鼻炎小鼠发生应激相关抑郁中的作用和机制研究 .....	任超,牟亚魁,宋晓宇等	41
PO-051	焦虑抑郁对肺动脉高压患者短期预后的影响：一项单中心研究 .....	任虹霖,周霞,宋晶晶等	42
PO-052	唐山市初期新型冠状病毒肺炎患者身心健康状况及其影响因素调查 .....	张江	42
PO-053	Covariation between spontaneous neural activity in the insula and affective temperaments is related to sleep disturbance in individuals with major depressive disorder .....	吴超,吴华旺,余生林等	43
PO-054	基于 IRT 模型构建失语症 ICF 功能评分表 .....	钟丽娟,林枫	44
PO-055	Functional Abnormality of the Reward System in Adolescent and Young Adult Depressed subjects with and without suicidal behavior .....	邱海棠,况利	44
PO-056	近红外光谱成像辅助诊断常见精神疾病的临床研究 .....	近红外光谱成像辅助诊断常见精神疾病的临床研究 .....	45
PO-057	Changes in core depressive symptoms over time in peripartum women: a network analysis. ....	张钰群,高炬,秦美霞等	46
PO-058	环状 RNA 结合多模态脑影像在抑郁症诊断和早期疗效预测中的价值及作用机制初探 .....	陈刚,居敏姿,姜文颖等	46
PO-059	肠道微生物特征能够区分抑郁症和双相抑郁症、双相躁狂症 .....	孙太鹏,陈刚,徐微等	47
PO-060	青少年抑郁障碍患者中压力性生活事件与自杀意念及血清自噬、炎症因子的相关性研究 .....	康传依	48
PO-061	Determination of the cutoff point for Smartphone Application-Based Addiction Scale for adolescents: a latent profile analysis .....	彭仆,廖艳辉	48
PO-062	Prevalence and associated factors of suicidal risk in Chinese healthcare workers 2 years after the COVID-19 initial outbreak .....	彭仆,廖艳辉,吴秋霞等	49
PO-063	Sex differences in residual somatic symptoms in patients with first-episode depression after acute-phase treatment .....	师晶晶,王晓红,赵娜	50



PO-064	抗抑郁药物种类和神经功能评分可预测卒中后抑郁障碍患者疗效 .....	岳莹莹,刘瑞,张克忠等	50
PO-065	Changes in gut microbiota species and fecal metabolites in anhedonia patients with major depressive disorder .....	王聃,李英辉,袁勇贵	51
PO-066	Sleep deprivation alleviates depression-like behaviors in mice via inhibiting immune and inflammatory pathways in the anterior cingulate cortex and improving neuroplasticity .....	石书香,张梦珂,谢伟杰等	52
PO-067	Incidence and Associated Factors of Nursing Errors Among Chinese Nurses: A Large-Scale Cross-Sectional Study .....	李泽钧,廖艳辉,吴秋霞等	52
PO-068	Clinical Application of Individual Administration Scheme Design Based on Plasma Concentration and Dosage of Paroxetine in the Treatment of Depression Disorders .....	钟羚君,袁勇贵,邵华	53
PO-069	中国大学生网下抑郁现状及相关因素——一项横断面调查 .....	葛蒲,谭成,刘佳欣等	54
PO-070	社区老年慢性病患者共病心理疾病患病率的横断面研究 .....	冯蕾,李诺,陈玲等	55
PO-071	Abnormal changes of dynamic topological characteristics in patients with major depressive disorder .....	周玥,朱益辉,叶宏庭等	55
PO-072	青少年抑郁症非自杀性自伤反应抑制功能的 ERP 研究 .....	周东东,赵琳,马伶俐等	56
PO-073	基于 fNIRS 对非自杀性自伤青少年患者言语流畅性任务期间前额叶血流动力学特点的研究 .....	何青萍,舒燕萍	56
PO-074	首发抑郁障碍患者基于 Stroop 任务冲突抑制过程的脑电信号特征 .....	张佳佳,司亚静,刘聪丛等	57
PO-075	晚发型抑郁障碍和轻度认知障碍的多维认知差异探索及 fNIRS 成像验证 .....	刘瑶,吴倩,许丹等	58
PO-076	Hydrogen sulfide levels correlate with depression severity, a potential plasma biomarker for the diagnosis and treatment of depression .....	吕金芝,杜鑫哲,高耀等	58
PO-077	Identification of suicidality in adolescent major depressive disorder patients using sMRI: A machine learning approach .....	洪素,何静澜,甘窈等	59
PO-078	The current suicidal and self-harm ideation of healthcare providers in Fangcang shelter hospitals during the Omicron peak wave in Shanghai, China .....	徐小明,艾明,张琪等	60
PO-079	Perceived stress and anxiety among healthcare workers after the lifting of the COVID-19 lockdown in China: The mediating roles of resilience and social support .....	邹志礼,周波,邱剑	60
PO-080	The difference of event-related potential components in patient with comorbid depression and anxiety, depression or anxiety alone .....	周晓波,林钟华,杨文琦等	61
PO-081	A scoping review update on somatic symptom disorder that includes additional Chinese data ..	阿依努尔·芒力科,陈亦笑,刘子明等	62
PO-082	Mental health problems among adolescents and young adults after the lifting of the COVID-19 lockdown in China .....	李香梅,马芸瑾,钟春燕等	62
PO-083	首发精神分裂症患者静息态及任务态中异常“翻转”的脑网络激活模式 .....	胡欣怡,陆峥	64
PO-084	脊髓损伤后抑郁障碍患者肠道菌群多样性及其相关性分析 .....	陈亦笑,吴周睿,赵丽娟等	64
PO-085	心理疾病和慢性咳嗽:哪一个更重要?临床特征比较 .....	张童洋子,吴珩,余莉等	65
PO-086	尼古丁对精神分裂症认知功能和海马 Glx 的影响 .....	陈珊珊,王梁梁,尤子凡等	65
PO-087	吸烟对精神分裂症临床表现和脑形态的影响 .....	陈珊珊,孙云开,尤子凡等	66
PO-088	视觉症状与睡眠呼吸暂停综合征 .....	黄朝阳,李宁,詹淑琴等	66
PO-089	双相情感障碍与肠道微生物群关系的研究进展 .....	颜柳娇	67
PO-090	22139 名综合医院心理科门诊患者症状自评量表结果及影响因素研究 ..	张慧娟,周鸿影,李蹕然等	67
PO-091	抗抑郁药效与靶向测序基因的多基因风险评分的相关性研究 .....	邵永琪,蔡雨凡,唐海平等	68

PO-092	艾司西酞普兰对患者 QTc 间期的影响及相关因素分析 .....	陈子木,袁勇贵,徐治	69
PO-093	抗抑郁药反应轨迹及相关因素分析 .....	唐海平,徐治	69
PO-094	功能异常脑区和 TPH2 甲基化相互作用与抑郁症关联研究 .....	谈婷婷,袁勇贵,徐治	70
PO-095	一项关于焦虑、抑郁和疲劳与原发性干燥综合征疾病活动度关联的横断面研究 .....	王艳青,蒲金呈,顾泽皓等	71
PO-096	Neuropsychiatric Inventory in cognitive assessment outpatients with Mild Cognitive Impairment and Dementia .....	李宇航,刘瑞平,马文林	71
PO-097	不同认知状态人群的痴呆行为和精神症状分析 .....	李宇航,黄俊玲,刘瑞平等	72
PO-098	Patient's knowledge about acute myocardial infarction related symptoms and self management: A Chinese population study .....	刘如辉,胡照辉,李申华等	73
PO-099	Correlation between depression and prehospital delay among acute myocardial infarction patients in China .....	刘如辉,王真,Sophia Hoschar 等	73
PO-100	Treatment Effect of Guanxin Danshen Dripping Pills on Coronary Heart Disease Comorbid with Depression or Anxiety: An ADECODE-Real Word Study .....	吴士豪,石炜祺,李宇航等	74
PO-101	肺动脉高压患者中焦虑抑郁症状的患病率及其对生活质量的影响分析 .....	周浩锋,杨丽芳,许明煜等	74
PO-102	中国暴食障碍诊疗专家共识 .....	彭素芳,何欠欠,张岚等	75
PO-103	The relation between cannabinoid receptor 1 gene polymorphisms and cognition in chronic schizophrenia with and without tardive dyskinesia in Chinese population .....	鲁成好,李申,王丽莉	76
PO-104	Sex differences in plasma lipid profiles, but not in glucose metabolism in patients with first-episode drug-naïve schizophrenia .....	刘楠楠,董叶青,李研哲等	77
PO-105	Serum cytokines as potential biomarkers for metabolic syndrome in clozapine-resistant refractory patients with schizophrenia .....	董叶青,李研哲,刘楠楠等	77
PO-106	新冠疫情期间大学生心理压力及心理援助状况调查 .....	黄秋平,蔡丽萍,石长宇等	78
PO-107	Genetic susceptibility to Tardive Dyskinesia and cognitive impairments in Chinese Han Schizophrenia: Role of oxidative stress-related and adenosine receptor genes .....	蒋巧娜	79
PO-108	Development and validation of a nomogram to predict the risk of suicide attempts in patients with first-episode drug-naïve major depressive disorder .....	刘军军,杜向东	79
PO-109	生酮饮食在精神分裂症治疗中的应用进展 .....	郭茜,陆小兵	80
PO-110	抑郁障碍及高危亲属身体成分的性别差异研究 .....	周慧,陆小兵,李则孳	80
PO-111	The effects of vortioxetine on symptomatic and cognitive function in major depressive disorder: A novel measure from 1H-MRS .....	张一靓,钟舒明,赖顺凯等	81
PO-112	Cognitive performance on MCCB of Adults Seeking Bariatric Surgery for Obesity .....	张一靓,赖顺凯,钟舒明等	82
PO-113	Gender differences of neurometabolic and neuroendocrine alternations and its lateralization in adolescents with major depression .....	宋小东	82
PO-114	Exploring the Potential of Targeted Small Molecular Compounds to Decrease Trimethylamine Oxide Levels in Atherosclerosis by Virtual Screening .....	罗嘉欣	83
PO-115	Obstructive Sleep Apnea-Hypopnea Syndrome (OSAHS) is Associated with Mental Stress Induce Myocardial Ischemia (MSIMI)—A Cross-sectional Study .....	王皓辰,刘凤瑶,白冰清等	84
PO-116	Anxiety and depression among epilepsy patients in low-risk areas for COVID-19 in the northern part of Guizhou Province, China, during the COVID-19 pandemic .....	王申,徐祖才	84
PO-117	冠心病患者抑郁、营养和预后之间的关联 .....	刘凤瑶,王皓辰,马欢等	85

PO-118	精神分裂症相关代谢综合征的干预措施 .....	张伟志,陆小兵,李则擎	86
PO-119	Poor sleep among elderly inpatients with cardiovascular disease: prevalence and risk factors .. .....	石永妍,李苏,黄秋平等	86
PO-120	焦虑情绪与青少年自伤行为: 社会互动的中介作用和年龄的调节作用 .....	高峥,李雪,张才溢	87
PO-121	Sex Differences in Serum Trace Elements/Minerals Levels in Unmedicated Patients with Unipolar and Bipolar Depression: The Role of Suicidal Ideation .....	黄东,何嘉丽,张荣旭等	88
PO-122	Sex-differential cognitive performance on MCCB of youth with BD-II depression .....	黄东,赖顺凯,钟舒明等	89
PO-123	Age of onset for major depressive disorder and its association with symptomatology and metabolism .....	何嘉丽,黄东,钟舒明等	89
PO-124	疫情期间学生耳机使用情况对心理健康的影响机制研究 .....	曹克勇,肖俊艳,卢钰琳等	90
PO-125	基于脑电图的多发性硬化认知障碍功能网络特征研究 .....	王颖,生晓娜,贾珍等	91
PO-126	多发性硬化相关疲劳的病理生理机制及神经影像特征研究 .....	王颖,生晓娜,贾珍等	91
PO-127	心灵冥想和身体锻炼对新冠肺炎期间心身健康的双重作用: 生理和心理的观察 .....	李书鹏	92
PO-128	联合默认模式网络的动态功能特征识别抑郁症患者快感缺失 .....	刘晓云,李凡,孔佑勇等	92
PO-129	应对心身相关障碍的互联网智能化干预方案: 机器学习与个性化医疗的结合 .....	李书鹏	93
PO-130	The efficacy of add-on Robot-Aided Transcranial Magnetic Stimulation on the negative thinking related to pain in adolescent depressive disorder .....	乔丹,马璐,张学敏等	93
PO-131	Dynamic network characteristics of adolescents with major depressive disorder: attention network mediates the association between anhedonia and attentional deficit .....	温宇娇,李宏,乔丹等	94
PO-132	The alteration in Neurocognitive Performance and Related Prefrontal Blood Oxygenation between Responders and Non-responders with Adolescent Depression: A Longitudinal Study. · .....	乔丹,梁秀梅,温宇娇等	95
PO-133	基于质子磁共振波谱成像技术探索青少年双相抑郁患者非自杀性自伤神经代谢改变 .....	王丞基,邹韶红,曲源等	96
PO-134	基于影像组学探索游戏障碍的分类特征 .....	李一凡,黄秋平,湛红献	96
PO-135	神经可塑性的心身相关障碍的关系及其干预策略 .....	李书鹏	97
PO-136	公共卫生事件对医务人员心理健康和心身问题的影响: 支持策略与干预措施的探讨 .....	李书鹏	97
PO-137	Interaction and Advances in the Diagnosis and Treatment of Endocrine Disorders and Psychosomatic Related Disorders .....	李书鹏	98
PO-138	Beyond Words: Understanding Nonverbal Communication in Physician-Patient Interactions and Its Influence on Health Outcomes .....	李书鹏	98
PO-139	心身症状与儿童压力应对: 社会学因素的探索 .....	李书鹏	99
PO-140	健身剧烈运动引起的身体疼痛: 生物心理社会因素的综合评估与干预 .....	李书鹏	99
PO-141	Selective structural and functional indicators in nonsuicidal self-injury adolescents with major depression disorder .....	李宏,李改智,乔丹等	100
PO-142	自我伤害行为相关动物模型的研究进展 .....	黄阳茜,徐一凡,杜鑫哲等	100
PO-143	基于网络药理学和蛋白质组学结合实验验证探究 ZDXS001 组方治疗抑郁症的作用机制研究 .....	陈颖,岳莹莹,袁勇贵	101
PO-144	Severity related Alterations of Gray Matter Volume, Cortical Thickness and Functional Activity in Young Adults with Major Depressive Disorder .....	操军,陈小容,艾明等	102
PO-145	非自杀性自伤青少年 COMT 基因多态性与童年期创伤的交互作用 .....	赵萌,冯洁,周波	102



PO-146	Internet Addiction and Depression among Chinese Adolescents: Anxiety as a Mediator and Social Support as a Moderator .....	赵萌,冯洁,周波	103
PO-147	唾液皮质醇对不同冲动性水平多动症儿童风险决策的影响 .....	马宁	103
PO-148	青少年抑郁患者中焦虑特质对奖赏行为的影响: 一项 ERP 研究 .....	邢昕,周波	104
PO-149	心身研究诊断标准在功能性胃肠病心身评估的应用 .....	丁莉欣,曹建新	104
PO-150	疫情期间网格员心理健康状况调查分析 .....	江文静	105

## 书面交流

PU-001	张永华运用情志辨证理论辨治原发性耳鸣临床经验 .....	陈志凌	106
PU-002	基于机器学习算法预测 MECT 对复发性抑郁的治愈效果 .....	余涛	106
PU-003	探究综合心理治疗与干预对康复期精神分裂症患者社会功能的影响 .....	刘静	106
PU-004	神经营养因子变化对于预测精神分裂症的电休克治疗结果至关重要 .....	李金	107
PU-005	中国慢性精神分裂症伴缺陷综合征患者颞叶和岛叶皮质变薄与阴性症状和注意力受损相关 ..	李金	107
PU-006	缺陷型精神分裂症患者海马亚结构萎缩与注意功能障碍 .....	李金	108
PU-007	接受慢性抗精神病药物治疗的男性精神分裂症患者性激素、脑源性神经营养因子与认知障碍的 相关性 .....	李金	108
PU-008	甲流感染对临床医务人员焦虑水平影响的研究 .....	程博	108
PU-009	结节性甲状腺肿患者肿大程度与精神症状的相关性研究 .....	邢佳,张楚滢	109
PU-010	结节性甲状腺肿患者中医证型与情志因素的相关性研究 .....	邢佳,张楚滢	109
PU-011	慢性失眠患者白介素与睡眠和认知功能的相关性研究 .....	王芳,张折折	110
PU-012	首发精神分裂症患者 PLR、淋巴细胞与睡眠和症状的相关性 .....	杜楠,张许来	110
PU-013	叙事疗法下生命树技术对不同性别精神分裂症患者的康复效用 .....	黄碧华,陈燕华	111
PU-014	Abnormal Dynamic Amplitude of Low-Frequency Fluctuation in Major Depressive Disorder Using fMRI: A Machine Learning Approach .....	陈晴,毕研蒙,王玉华等	111
PU-015	不同焦虑程度青少年首发广泛性焦虑障碍患者血清 NPY、5-HT、BDNF 的变化及其与生活应激、 炎症因子和记忆功能的相关性分析 .....	何旭斌,宦宗素,余芹瑶等	112
PU-016	综合医院自服药物中毒患者躯体化障碍与焦虑、抑郁相关性分析 .....	张帅,菅向东,魏传香等	113
PU-017	Somatic Symptoms and Family Function among Chinese College Students during the COVID-19 Pandemic: A Cross-Sectional Study .....	刘盛屹,蒋鑫,秦宇等	113
PU-018	经颅近红外刺激左侧 DLPFC 缓解焦虑: 一项随机、双盲、假对照研究 ...	王慧聪,宋鹏辉,侯月等	114
PU-019	人体成分与抑郁症及其严重程度的相关性分析 .....	陈盛柏	115
PU-020	北京市某社区机构门诊就诊患者焦虑、抑郁和躯体化症状的现状分析 .....	李春玲	115
PU-021	中医药干预 BDNF/TrkB 通路对抑郁认知障碍影响的进展研究 .....	彭晓明,马鹏程,唐珂等	116
PU-022	基于脑-肠轴理论探讨肠道微生物对 GAD 发病机制的研究进展 .....	马鹏程,彭晓明,唐珂等	116
PU-023	使用近红外脑功能成像检测对无抽搐电休克疗效评估的研究 .....	武桥	117
PU-024	伴非自杀性自伤的青少年抑郁症患者扣带束白质微结构异常 .....	胡长春,姜文颢,吴云等	117
PU-025	常态化疫情防控背景下实习护士心身症状调查及影响因素分析 .....	张艺涵,袁勇贵,王晓燕	118
PU-026	The Trends of Psychosomatic Symptoms and Perceived Stress among Healthcare Workers during the COVID-19 Pandemic in China: Four Cross-sectional Nationwide Surveys, 2020-2023 .....	江晨光,姜文颢,袁勇贵	118
PU-027	Association between triglyceride glucose index and suicide attempts in Chinese patients with major depressive disorder .....	刘军军,杜向东	119

PU-028	U-shaped association between fasting blood glucose and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder.....	刘军军,杜向东	119
PU-029	Gender differences in the association between body mass index and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder .....	刘军军,杜向东	120
PU-030	Association between body mass index and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder .....	刘军军,杜向东	121
PU-031	复发缓解型多发性硬化患者疲劳的发生率及相关因素.....	刘军军,王志晔	121
PU-032	Relationship between covid-pandemic anxiety and sleep disorder with menstrual disorders among female medical workers .....	孙文喜,夏丽萍,季彩芳等	122
PU-033	青少年抑郁的音乐治疗与脑功能网络.....	许纲	122
PU-034	抑郁症患者疲乏症状现状及影响因素调查.....	李洋,贾守梅,陈丽等	123
PU-035	海洛因依赖患者的睡眠问题检出率的 meta 分析.....	叶紫莹,韩卓颖	124
PU-036	心血管疾病合并 COVID-19 患者心理状况的研究现状 .....	黄小瑜,温志浩	124
PU-037	Serum Levels of Tumor Necrosis Factor- $\alpha$ and Vascular Endothelial Growth Factor in the Subtypes of Clinical High Risk Individuals: A Prospective Cohort Study .....	叶嘉依,曾嘉慧,高毓清等	125
PU-038	Agomelatine Bears Promising Potential in Treating Bipolar Depression – A Systematic Review .....	李俊尧,骆荟蓉,罗庆华	126
PU-039	抑郁症患者童年创伤经历与炎症指标相关性的 meta 分析.....	姚书婧,张亚兴,刘畅	126
PU-040	华宁县农村妇女生殖道感染认知、羞耻感与会阴卫生行为的相关性研究 .....	冯林森,董正娇,郭文冉等	127
PU-041	早期康复训练和心理干预协同治疗对高血压性脑出血患者手术后心理状态的影响分析 .....	浦梦佳,程卫国,王学慧	127
PU-042	探究不同慢性脑灌注不足模型小鼠海马区损伤和认知功能的动态变化.....	刘韵	128
PU-043	重复经颅磁刺激对改善青少年非自杀性自杀行为的系统综述.....	张勇,陈惠萍,李云麟等	129
PU-044	甲状腺癌患者在隔离病房碘 131 治疗后心理研究 .....	秦杰,付巍,杨静	129
PU-045	Social support, psychopathology and non-suicidal self-injury: specific effect of threatening or deprivation experiences .....	龚靖波	130
PU-046	The P300 amplitude predicts neural reactivity and responsiveness to antidepressants in adolescents with depression: an ERP study .....	赵琳,况利	130
PU-047	轻度糜烂性食管炎患者的临床特征分析.....	胡宵月,朱萌然,郑吉敏等	131
PU-048	甲基苯丙胺使用障碍者的焦虑、抑郁与睡眠问题.....	李铃,廖艳辉	132
PU-049	Improvement of executive function and transfer effects after attention training for children with different subtypes of ADHD at different levels of alertness.....	杜芸芸,张翔,路静等	132
PU-050	经典心身疾病心身同治研究概述.....	袁延青	133
PU-051	新冠疫情放开初期住院医师心理健康状况及相关因素研究.....	潘瑞博,钱燕丹,潘琦等	133
PU-052	New Version of Application for Smoking Cessation: A Qualitative Study of User Experiences .....	金洁银,廖艳辉	134
PU-053	职业压力对规范化培训住院医师胜任力的影响.....	沈禹泽,钱燕丹,潘琦等	134
PU-054	Efficacy of fecal microbiota transplantation for patients with gastroesophageal reflux disease combined with anxiety and depression .....	陈嘉韦,陈志平	135
PU-055	COVID-19 康复后睡眠障碍关键基因和分子通路的生物信息学分析 .....	杜鑫哲	136
PU-056	精神病学的最新命题.....	邹玉学	136
PU-057	人格和双相障碍有什么关系?: 一项系统综述 .....	李俊尧,罗庆华	137

PU-058	情绪释放技术(EFT)对疫情下大学生焦虑水平和睡眠状况的影响 .....	牟安奇	138
PU-059	以精神障碍为首发表现的抗 N-甲基-D-天冬氨酸受体/抗神经胶质纤维酸性蛋白/谷氨酸海人藻酸受体三重抗体阳性自身免疫性脑炎的重叠综合征一例 .....	张江,刘乙璇	138
PU-060	“阳光医院”模式对一线轮班医务人员失眠及焦虑抑郁的干预探讨 .....	蒋进珍	139
PU-061	经颅微电流联合右佐匹克隆治疗非器质性失眠的临床研究 .....	马中锐	139
PU-062	居家腹膜透析患者抑郁现状及应对方式的研究进展 .....	张馨,王晓燕	140
PU-063	基于治疗药物监测优化惊恐障碍患者治疗方案的药学实践 .....	钟羚君,汪天宇,邵华等	140
PU-064	近红外光谱成像技术在青少年抑郁症中的发展现状以及相关研究综述 .....	程丹丹,况利	141
PU-065	重度抑郁症患者症状缓解后维持治疗的药物经济学研究 .....	周东东	142
PU-066	青春期功能失调性子宫出血患者心理健康状况分析 .....	林勇	142
PU-067	基于档案管理与互联网模式下老年期痴呆患者早期预防、 识别与全程照料科普探索与实践 .....	林勇	142
PU-068	Incidence and Risk Factors of Lower-limb Venous Thrombosis and the Influence of Antidepressants on Coagulation in Patients with Major Depressive Disorder .....	朱自馨,袁勇贵,徐治等	143
PU-069	Subclinical hypothyroidism and risk factors in young and middle-aged adults with major depressive disorder: a large-scale cross-sectional study .....	赵娜,杨丽颖,刘嘉诚等	144
PU-070	基于人工智能技术的青少年自杀自伤风险预警模型的研究进展 .....	曾小凤,艾明	144
PU-071	久坐与焦虑的剂量反应关系及步行的调节作用 .....	田正,王岚,吴一波	145
PU-072	一例新冠后构音障碍康复治疗 .....	高婧,张芹,江钟立等	145
PU-073	早发精神分裂症及精神病超高危个体静息态脑局部一致性特点 .....	曹晓华,刘莎,冯健平等	146
PU-074	食用塑料大棚下、反季节生产的粮食和蔬菜、瓜果及基因工程培育的动物肉蛋禽的健康性值得深入研究和得到保障 .....	徐汉友	147
PU-075	Near all food seeds have been being man-made, are they healthful to mankind? .....	徐汉友	147
PU-076	The proposal of New China Climate Changes Prevention Law .....	徐汉友	149
PU-077	It is imperative to set up laws and regulations for natural and free sports. ....	徐汉友	150
PU-078	An important proposal: The new laws and regulations about protection of life' s physiology and their health must be established. ....	徐汉友	152
PU-079	为了确保大众健康、粮食、生物安全性,建议立法保证粮食新品种改良拒绝种子基因无保障地变异 .....	徐汉友	153
PU-080	中国水果、瓜果、菜篮子工程必须以大众健康为最基本目的,立法保障势在必行 .....	徐汉友	154
PU-081	静脉穿刺治疗病人快速寻找最佳穿刺部位新创意 .....	徐汉友	154
PU-082	女性保守丰胸新方法创新设想 .....	徐汉友	155
PU-083	焦虑抑郁对冠状动脉药物涂层支架置入后再狭窄的影响 .....	吴晓良,刘春燕,郑微微等	156
PU-084	行政诉讼法、民事诉讼法、刑事诉讼法等法规修订新建议,提高大众健康水平和生活质量 .....	徐汉友	156
PU-085	立法建议: 中华人民共和国建言献策管理法 .....	徐汉友	157
PU-086	中华人民共和国信访工作条例修订意见暨信访工作立法 .....	徐汉友	158
PU-087	基于磁共振波谱技术对老年期抑郁障碍患者神经代谢物水平的研究进展 .....	吴倩,许丹,刘瑶等	159
PU-088	童年不良经历与老年抑郁症的关联研究进展 .....	张咪雪	160
PU-089	关注无业及低收入肿瘤患者的心理健康: 多发性骨髓瘤患者中收入、就业及心理痛苦关系的横断面调查研究 .....	蒋江灵,刘飞,侯健等	160



PU-090	Comparison of Older vs. Younger Age on Metabolic Variables and Potential Biomarker of Depression.....	高耀,王丹,杜鑫哲等	161
PU-091	DBT 辩证行为疗法的发展现状及治疗效果相关研究综述.....	黄众,况利	162
PU-092	The association of SOD and HsCRP with the efficacy of sulforaphane in schizophrenia patients with residual negative symptoms .....	曾剑飞,张伟志,陆小兵等	162
PU-093	Associations between Catechol-O-methyltransferase (COMT) polymorphisms and cognitive impairments and clinical symptoms of schizophrenia with tardive dyskinesia in Chinese. 迟婧慧		163
PU-094	“调督解郁法”电针治疗轻中度抑郁症的随机对照研究.....	殷萱,胥琨,徐世芬	163
PU-095	Different effects of prenatal valproate exposure on parvalbumin- and somatostatin-positive interneurons in the medial prefrontal cortex.....	王梁梁,王朗,唐劲松	164
PU-096	痛性不安腿综合症的鉴别诊断与治疗.....	黄朝阳,李宁,詹淑琴等	165
PU-097	Symptom network and Bayesian network analyses of psychotic-like experiences in adolescents and young adults.....	吴佳馨,刘飞,胡茂荣等	166
PU-098	单次中等强度有氧运动改善睡眠质量低下者日间疲劳感、警觉性及认知表现的效果.....	杜婧	166
PU-099	综合医院心理科门诊男性、女性强迫症患者的心理状况及心理特征比较... 周鸿影,李蹕然,金英等		167
PU-100	抑郁症与双相情感障碍患者昼夜节律通路差异基因研究.....	陈磊,沈甜,陈子木等	167
PU-101	CACNA1C 基因多态性与重度抑郁障碍转躁的关联研究.....	沈甜,陈子木,陈磊等	168
PU-102	社会支持对急性心肌梗死患者院前延误时间的影响.....	李宇航,马文林	168
PU-103	灵景方治疗冠心病 PCI 术后焦虑状态(心神失养证)的临床疗效观察.....	李欣,崔松,贾美君等	169
PU-104	合并睡眠障碍及癫痫表现的抗 VGKC 抗体相关脑炎 2 例 .....	穆夏黎	169
PU-105	中国神经性贪食诊疗专家共识.....	陈妍,孔庆梅,乔慧芬等	170
PU-106	甲基苯丙胺虚拟现实线索渴求评估系统的开发.....	黄秋平,谌红献	171
PU-107	精神分裂症大鼠心功能与血管内皮生长因子表达的研究.....	张瑞哲,任明芬,王冕等	171
PU-108	帕金森病超重/肥胖患者外周氧化应激水平及其临床相关性.....	杨鹤超,李研哲,李申等	172
PU-109	Gender-related alterations of serum minerals and neuro metabolism in the anterior cingulate cortex of patients with major depressive disorder .....	钟绮琳	172
PU-110	抑郁症状或焦虑症状结合超敏 C 反应蛋白对冠心病患者预后的影响.....	白冰清,尹晗,郭兰等	174
PU-111	健康体检人群心理亚健康状况的全闭环式管理模式探索.....	张帅,菅向东,曹红梅等	174
PU-112	基于 rs-fMRI 和 P11 基因 DNA 甲基化的多维特征预测抑郁症抗抑郁药早期疗效.....	汪天宇,高晨洁,李嘉兴等	175
PU-113	青少年使用布南色林引起一过性血清丙氨酸转氨酶升高一例.....	龙易成,王晓蔓,吴国伟	175
PU-114	对抗精神病药物耐受性差的患者换用鲁拉西酮一例.....	龙易成,王晓蔓,吴国伟	176
PU-115	伴与不伴躯体症状抑郁患者的甲状腺激素水平及病情转归情况的比较... 李婷婷,穆朝娟,刘炳伦		177
PU-116	脑网络在惊恐障碍诊断和早期疗效预测中的价值研究.....	游林林	177
PU-117	DRS-R-98 量表简体中文版在常见精神障碍患者中的内部一致性研究.....	杨宇,陈隽羚,龙易成等	178
PU-118	社区支持与新冠肺炎疫情突发公共卫生事件下个体心理健康的关系:以社交关系网络为视角.....	李书鹏	178
PU-119	Stress Responses and Psychosocial Health Management of Immigrant and Refugee Populations in Public Health Emergencies: A Case Study of the COVID-19 Pandemic.....	李书鹏	179
PU-120	Psychosomatic Disorders among Children and Adolescents in the Context of the COVID-19 Pandemic: Risk Factors, Interventions, and Prevention .....	李书鹏	180
PU-121	Impact of the COVID-19 Pandemic on the Psychosomatic Health of Different Population Groups:		

	A Comparative Study of Gender, Age, and Regional Differences .....	李书鹏	180
PU-122	Risk Communication, Information Credibility, and Public Psychological Response: Enhancing Social Support and Psychosomatic Resilience in Public Health Emergencies.....	李书鹏	181
PU-123	The Role of Genetic Polymorphisms in the Pathogenic Mechanisms of Psychosomatic Disorders: An Exploration .....	李书鹏	182
PU-124	皮肤科常见标志性皮肤疾病与心身相关障碍的关联研究.....	李书鹏	183
PU-125	精神心理专科医院门诊患者就医行为特点调查分析.....	汪宏,胡书佳,费锦锋等	183
PU-126	心身相关障碍与心理创伤后应激障碍的共病性研究.....	李书鹏	184
PU-127	Epidemiological Investigation and Risk Factor Analysis of Psychosomatic Disorders During Public Health Emergencies.....	李书鹏	184
PU-128	The Role of Social Media in Shaping Physician-Patient Communication: Opportunities, Challenges, and Best Practices .....	李书鹏	185
PU-129	Challenging Traditional Power Dynamics: Towards a Patient-Centered Approach in Physician-Patient Communication .....	李书鹏	185
PU-130	基于脑电数据原创 MSC1.0 版医学音乐与情绪的相关性研究 .....	白吉可,孔祥	186
PU-131	中国神经性厌食诊疗的专家共识.....	陈涵,李雪霓,张岚等	186
PU-132	外泌体 microRNA 在抑郁症中的研究进展及展望相关综述.....	姜汝红,况利	187
PU-133	房树人绘画测验对海军基层官兵心理健康的预测效果分析.....	温天杨,李文博,夏冰等	188
PU-134	Internet-based self-help interventions can be beneficial to patients with PTSD: a Meta-analysis .....	何桂梅,何汛涛,王亚楠等	189
PU-135	济南市历下区社区卫生服务中心医务人员 焦虑抑郁情绪调查 .....	张丹宁	189
PU-136	Suicidal ideation in Chinese patients with chronic schizophrenia: prevalence, clinical correlates and relationship with alexithymia.....	周亚男,彭仆	190
PU-137	后疫情时代青少年抑郁情绪和校园欺凌: 心理弹性的调节效应.....	邢昕,周波,张旭等	190
PU-138	Prevalence and clinical correlates of suicide attempts in first episode, never treated major depressive disorder patients with comorbid autoimmune thyroiditis .....	罗银利,周亚男	191
PU-139	Gender difference in the prevalence and clinical correlates of alexithymia among Chinese schizophrenia patients: a large cross-sectional study .....	周亚男,袁宁	192

OR-001

## The comparison of the consultation-liaison in the psychiatry department of a general hospital before and after the outbreak of COVID-19

Xuemei Wang<sup>1</sup>, Yuyin Yang<sup>1</sup>, Hongmei Cui<sup>2</sup>, Huiran Zhang<sup>3</sup>, Zezhi Li<sup>3</sup>

1. The First Affiliated Hospital of Soochow University

2. Qingdao Mental Health Center

3. The Affiliated Brain Hospital of Guangzhou Medical University

**Objective** To compare the status of the consultation-liaison in the psychiatry department of inpatients in a general hospital before and after the outbreak of COVID-19.

**Methods** A total of 842 patients in a tertiary hospital from January 2019 to the end of December 2019 and a total of 904 patients from the beginning of the epidemic in January 2020 to the end of December 2020 were enrolled in this study. The demographic data, departments that requested consultation, types of mental disorders, and the psychiatric treatments after consultation were retrospectively analyzed and compared.

**Results** Among the 1746 patients who received psychiatric consultation services, most patients were 45 to 70 years old. The average age of the patients in 2019 was  $55.68 \pm 19.62$  years, and the average age of the female patients (50.3%) was slightly higher than that of the males (49.7%). Likewise, the average age of the patients in 2020 was  $59.24 \pm 17.84$  years, and the male patients (52.2%) were older than the female patients (47.8%). The department of hematology received the highest number of applications for consultation ( $n=267$ , 15.3%), followed by the department of orthopedics ( $n=218$ , 12.5%). Compared with 2019, in 2020, the proportion of departments requesting consultation changed. Notably, requests from the departments of cardiac and vascular surgeries (1.9% vs. 5.9%,  $P<0.05$ ) increased significantly, while the scenario was the opposite for the emergency departments. After consultation, 570 cases were diagnosed as an organic mental disorder, accounting for 32.6% of all patients. Among the disorders, delirium was the most common, followed by anxiety and depression. After the COVID-19 outbreak in 2020, the stress-associated (2.0% vs. 3.5%,  $P<0.05$ ) and sleep disorders (8.1% vs. 13.2%,  $P<0.05$ ) of the patients increased significantly. Following the consultation, treatments of the department of psychiatry included antipsychotics, antidepressant/anxiety drugs, antidepressants combined with antipsychotics, sedative-hypnotics, and simply psychological interventions.

**Conclusion** In general hospitals, clinical departments have a great demand for psychiatric consultation. After the COVID-19 outbreak, the number of patients requesting a consultation for stress-related disorders and sleep disorders have been significantly increased. Moreover, the number of patients with cardiac and major vascular surgeries accompanied by mental and emotional disturbances also increased significantly. At the same time, the ability of non-psychiatrists in identifying and treating mental disorders and the awareness of biopsychosocial (BPS) models need to be improved.



OR-002

## Psychological criteria of abnormal thoughts, feelings, and behaviors related to the symptoms: An Investigation of DSM-V Somatic Symptom Disorders (SSD) of a multi-center research in China

Yixiao Chen<sup>1</sup>, Yixiao Chen<sup>1</sup>, Ziming Liu<sup>1</sup>, Heng Wu<sup>1</sup>, Zheng Lu<sup>1</sup>, Kurt Fritzsche<sup>2</sup>

1. Shanghai Tongji Hospital

2. University of Freiburg, Freiburg, Germany

**Objective** According to the biological-psychological-social multi-factor disease model, the new version of DSM-5 Somatic Symptom Disorder (SSD) emphasizes the prominence of psychological characteristics related to somatic symptoms, as well as allows comorbidity of mental and physical diseases. However, there has been a debate among scholars about how to define psychological criteria between “normal” and excessive with no clear threshold. The main objectives of this study:

(1) what factors constitute the abnormal in psychological reactions to somatic complaints between SSD patients and non-SSD patients. (2) determine a quantifiable threshold for disproportionate and persistent thoughts about the seriousness somatic symptoms of diagnostic criteria (B criteria).

**Methods** A cross-sectional study from May 2016 to January 2018 in China. Patients were recruited from 9 tertiary general hospitals in different regions of China, including outpatient department of Traditional Chinese Medicine, Biomedicine (neurology or gastroenterology or cardiology) and Psychosomatic. We analyzed group differences in the time of daily physical complaints between individuals with (SSD = yes, n=236) and without SSD (SSD = no, n=461). SSD patients confirmed diagnosis through structured interviews. Demographic data, lifestyle and medical treatment behavior, time spent on physical discomfort per day, treatment satisfaction and subjective treatment effect were collected. Self-report questionnaires were used to operationalize the psychological criteria and severity of somatic symptoms. T-test was used to compare the measurement data, and chi-square test were used to compare the categorical data. Receiver operating curve (ROC) analysis was applied to obtain the optimal cut-off value of time to worry about physical discomfort per day. Pearson correlation analysis and multiple linear regression were used to analyze the correlation factors affecting the SSD-12 of psychological characteristics.

**Results** There was a significant difference of group (SSD yes/no) in daily time spent on symptoms. Compared to the non-SSD group, patients in SSD group were more worried about physical discomfort [(1.5±3.4) h/d vs. (3.9±4.1) h/d,  $t=8.14$ ,  $P<0.01$ ], less satisfied with the treatment [(3.3±1.6) score vs. (2.5±1.8) score,  $t=4.945$ ,  $P<0.01$ ], and had lower evaluation to the treatment effect [(3.1±1.6) score vs. (2.4±1.6) score,  $t=4.271$ ,  $P<0.01$ ]. SSD group have a heavier psychological and physical burden and lower quality of life. Pearson correlation study showed that symptom-related cognitive behavior (SSD-12) was strongly correlated with health-related anxiety ( $r=0.823$ ,  $P<0.01$ ) and anxiety ( $r=0.642$ ,  $P<0.01$ ) and severity of somatic symptom ( $r=0.607$ ,  $P<0.01$ ). Multiple regression analysis showed that health-related anxiety, quality of life, severity of somatic symptoms and time spent on physical discomfort per day have a significant influence on psychological criteria, which explained 74% of the overall variation ( $P<0.05$ ). The ROC curve analysis showed that the cut-off value of time to worry about physical discomfort per day was 1.25 hours (AUC=0.773).

**Conclusion** SSD patients seem to spend 3-4 hours a day dealing with physical problems which means excessive. If patients report more than 1.25 hours of attention to the body per day during clinical consultations and has at least one somatic symptom for more than six months, they should be suspected of SSD, and non-psychiatrists ought to consider asking for help or referral from psychiatrists.

OR-003

## Altered insular functional activity among E-cigarette users with nicotine dependence

yunkai sun,Yanhui Liao

Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, Hangzhou, Zhejiang

**Objective** Electronic cigarettes (e-cigs) use, especially among youngsters, has been on the rise in recent years. Studies have found use of e-cigs may have a negative impact of health on lung and cardiovascular function. However, little is known about the long-term effects of use of e-cigarettes on brain functional activity.

**Methods** We acquired the resting-state functional magnetic resonance imaging data from 93 e-cigs users with nicotine dependence and 103 age- and sex- matched health controls (HC). The local synchronization was analyzed via regional homogeneity (ReHo) method at voxel-wise. The functional connectivity (FC) between the NAcc, VTA and insula was calculated at ROI-wise. The support vector machining classification model based on resting-state fMRI measures was used to identify e-cigs users from HC.

**Results** Compared with HC, nicotine dependent e-cigs users showed increased ReHo in the right rolandic operculum ( $p < 0.05$ , FDR corrected) and the right insula ( $p < 0.05$ , FDR corrected). At ROI-wise level, abnormal FC between the NAcc, VTA and insula were found in e-cigs users compared to HC ( $p < 0.05$ , FDR corrected). Correlation analysis found a significant negative correlation between ReHo in the left NAcc and duration of e-cigs use ( $r = -0.273$ ,  $p = 0.008$ , FDR corrected). The following Support vector machine model based on significant results of resting-state fMRI successfully differentiate chronic e-cigs users from HC with an accuracy of 73.47%, AUC of 0.781, sensitivity of 67.74% and specificity of 78.64%.

**Conclusion** Dysregulated spontaneous activity and FC of addiction-related regions were found in e-cigs users with nicotine dependence, suggesting that long-term use of e-cigs may have a negative impact on brain.

OR-004

## Nicotine decreases pain behaviors and nerve regeneration via the $\alpha 7$ nicotinic acetylcholine receptor in two rat nerve injury models

Yehong Fang,yanhui liao

Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

**Objective** Neuropathic pain is stubborn and associated with peripheral nerve regeneration process. Nicotine has been found to reduce pain but whether it is involved in the regulation of nerve regeneration and the underlying mechanism are unknown.

**Methods** The rat chronic constriction injury (CCI) model and tibial nerve crush model were used in this study. Western blotting and/or immunofluorescent staining were applied to detect growth associated protein 43 (GAP43) and IBA1. The selective  $\alpha 7$  nicotinic acetylcholine receptor (nAChR) blocker, methyllycaconitine (MLA) was intraperitoneal administrated to assess the behavioral and molecular mechanism of nicotine in analgesia.

**Results** nicotine reduced anatomical measures of regeneration as well as expression of regeneration marker growth associated protein 43 (GAP43). In the tibial nerve crush model, nicotine treatment significantly suppressed GAP43 expression and functional reinnervation as measured by myelinated action potential and electromyography of gastrocnemius. In both models, nicotine treatment reduced macrophage density in the sensory ganglia and peripheral nerve. These effects of nicotine were reversed by the selective  $\alpha 7$  nicotinic acetylcholine receptor (nAChR)

blocker, methyllycaconitine. In addition, nicotine significantly elevated expression of PTEN (the phosphatase and tensin homolog deleted on chromosome 10), a key player in both regeneration and pain. Pharmacological interference of PTEN could regulate GAP43 expression, pain related behaviors and macrophage infiltration in nicotine-treated nerve crush model.

**Conclusion** Our results reveal that nicotine and its  $\alpha 7$ -nAChR regulate both peripheral nerve regeneration process and pain through PTEN and downstream inflammation-related pathway.

OR-005

## Sleep disturbance mediates the relationship between problematic technology use and psychotic-like experiences: a large cross-sectional study in 87, 302 Chinese adolescents

Pu Peng<sup>1,2</sup>, Yanhui Liao<sup>1</sup>

1. Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

2. Department of Psychiatry, National Clinical Research Center for Mental Disorders, and National Center for Mental Disorders, The Second Xiangya Hospital of Central South University, Changsha 410011, Hunan, China

**Objective** Emerging studies report that problematic technology use (PTU) could be a new stressor for psychotic-like experiences (PLEs) among adolescents. However, the mechanism remains unexplored. This study of 87, 302 Chinese adolescents aimed to test: (1) the association of PLEs with problematic social media use (PSMU), problematic smartphone use (PSU), internet gaming disorder (IGD), and sleep disturbance; and (2) whether sleep disturbance mediated the relationship between PTU and PLEs.

**Methods** 16-item Prodromal Questionnaire, Smartphone-Application Based Addiction Scale, the Bergen Social Media Addiction Scale, the Internet Gaming Disorder Scale-Short Form, Pittsburgh Sleep Quality Index, and Strength and Difficulties Questionnaires were employed.

**Results** (1) The prevalence of clinically relevant PLEs, IGD, PSMU, PSU, and sleep disturbance was 18.1% (n=15, 837), 2.4% (n=2, 060), 1.5% (n=1301), 24% (n=21, 310), and 26% (n=23, 024), respectively. (2) Adolescents with PLEs demonstrated much higher PIU, mental distress, and sleep disturbance. PSU, PSMU, and IGD displayed moderate-to-large associations with PLEs, while sleep disturbance exhibited a substantial positive association with PLEs; (3) Sleep disturbance mediated 51.8% of the effect of PSU, 49.2% of the effect of PSMU, and 44.1% of the effects of the IGD on PLEs.

**Conclusion** Our study supported that PTU was closely associated with PLEs. The higher risk of PLEs among adolescents with PTU and sleep disturbances underscores the importance of formal assessments for PLEs in this specific population. Furthermore, targeted interventions for sleep disturbance might help reduce PLEs among adolescents with PTU.



## OR-006

## 基于脑电微状态 k-mers 的词袋模型对重度抑郁症进行分类的机器学习研究

周东东、王我、况利  
重庆医科大学附属大学城医院

**目的** 脑电微状态类似于自然语言中的字符，由几个微状态组成的短片段(k-mers)类似于单词，而微状态序列则类似于自然语言。我们的目的在于探究微状态 k-mers 是否可以作为重度抑郁症的神经生物标记，以及能否在个体水平识别重度抑郁症。

**方法** 我们使用词袋模型来处理微状态序列，使用 k 范围为 1 到 10 的 k-mer 作为单词计算词频(TF)，并将考虑或不考虑逆文档频率(IDF)的 TF 作为特征。本研究包含两个独立的重度抑郁症数据集。我们分别对数据集 1(27 名患者和 26 名对照)和数据集 2(34 名患者和 30 名对照)进行嵌套交叉验证，然后在一个数据集上进行训练，在另一个数据集上进行测试，反之亦然。计算敏感度、特异度以及 AUC 等指标评估机器学习性能。

**结果** 在数据集 1 中，使用 4-mers 的 TF 作为特征的 L1 正则化模型的 AUC 为 81.5%，在数据集 2 中，使用 9-mers 的 TF 作为特征的 L1 正则化模型的 AUC 达到 88.9%。当使用数据集 1 作为训练集时，使用 9-mers 的 TF-IDF 作为特征的 L2 正则化模型预测数据集 2 的最佳 AUC 为 74.1%；而数据集 2 作为训练集时，8-mers 的 TF 作为特征的 L1 正则化模型预测数据集 1 的最佳 AUC 为 70.2%。

**结论** 我们的研究提示微状态 k-mers 可作为重度抑郁症的神经生物标记物，并能在个体水平识别重度抑郁症患者。本研究结果将有助于推动使用自然语言处理技术进一步探索微状态序列在神经精神疾病精准诊疗中的价值。

## OR-007

## 中国综合医院常见心身疾病患者 DCPR-R 综合症的患病率及影响因素分析：研究设计和初步结果

徐微<sup>1,2</sup>、姜文灏<sup>1</sup>、岳莹莹<sup>1</sup>、陈炳为<sup>3</sup>、丁荣晶<sup>4</sup>、王彦永<sup>5</sup>、梁东风<sup>6</sup>、陶红<sup>7</sup>、唐艳萍<sup>8</sup>、孔佑勇<sup>9,10</sup>、

Fiammetta Cosci<sup>11</sup>、袁勇贵<sup>1</sup>

1. 东南大学附属中大医院心身医学科
2. 扬州苏北人民医院临床心理科
3. 东南大学公共卫生学院
4. 北京大学人民医院心血管科
5. 河北医科大学第一医院神经内科
6. 解放军总医院第一医学中心风湿免疫科
7. 首都医科大学附属北京安贞医院内分泌代谢科
8. 天津市中西医结合医院（天津市南开医院）消化内科
9. 东南大学计算机学院
10. 计算机网络与信息集成教育部重点实验室
11. 意大利佛罗伦萨大学健康科学系

**目的** 心身医学研究诊断标准-修订版(DCPR-R)作为特定心身综合症的识别和分类工具，有效填补了传统精神病诊断系统无法充分涵盖的部分。尽管全球对 DCPR-R 综合症的理解和评估已取得显著进步，中国在这方面的流行病学知识仍然有限。因此，中国心身医学会(CSPM)启动了一项全国多中心流行病学研究，旨在探索 DCPR-R 综合症在中国各区域和人群中的患病率和分布情况，调查风险因素并进行 DCPR-R 的跨文化研究。

**方法** 我们将根据第七次人口普查结果，通过概率比例抽样方法，招募 9865 名参与者。至 2023 年 3 月 1 日，五个工作组在 144 家综合医院中已成功招募了 2079 名心身疾病患者和 862 名健康对照组成员。收集的数据涵盖社会人口学信息、临床数据、DCPR-R 诊断面谈，以及补充心理评估。

**结果** 初步结果表明，纤维肌痛和偏头痛患者可能伴随着更多的心理困扰和心身综合征，如焦虑、抑郁和持续的躯体化。此外，无论健康对照组还是患者组，有 30.30%-49.56% 的人可能存在述情障碍。然而，各工作组在受试者人数、性别比例、教育程度和社会经济地位方面存在差异，因此未来的分析需要根据潜在的站点效应进行调整。

**结论** 此项开创性的研究将对中国心身疾病的临床实践和未来研究产生深远影响，为实施更为精确且个性化的干预措施和治疗策略铺平道路。

## OR-008

### 利用临床心理特征、遗传变量构建抗抑郁药效预测模型

蔡雨凡、邵永琪、唐海平、徐治  
东南大学附属中大医院

**目的** 抑郁症是一种常见的精神疾病，对患者身心健康造成了严重影响。现有的抗抑郁药物在治疗效果上存在很大差异，因此如何预测抗抑郁药物的治疗反应具有重要的临床价值。抗抑郁药效受遗传因素影响，抑郁症患者的临床和心理特征被认为是预测治疗反应的可能因素。本研究将进行靶向外显子基因测序，利用机器学习方法将基因单核苷酸多态性（SNPs）、临床特征和心理特征结合生成预测模型，提高预测抗抑郁药效的准确度，为临床治疗提供一定的参考。

**方法** 本研究共招募了 1000 名首发或未服药大于 2 周的抑郁症患者，接受单一抗抑郁药治疗 8 周。在基线期和治疗后第 2、4 周时采用 17 项汉密尔顿抑郁量表（HAMD-17）评估患者抑郁症状严重程度及其变化。观察患者 4 周时的治疗效果，标准为 HAMD-17 减分率 < 50% 为无效，HAMD-17 减分率 ≥ 50% 为有效。在基线期收集患者的一般人口学资料、临床特征（包括 Beck 自杀意念量表、快感缺失量表、多伦多述情障碍量表）和心理特征（社会支持量表、家庭环境量表、童年创伤经历量表，生活事件量表），基于 KEGG 通路数据库，围绕 MDD 病因假说和发病机制以及抗抑郁作用相关通路共筛选 1309 个候选基因，通过 Illumina MiSeq 平台完成测序，使用 PLINK 软件筛选高质量 SNP，剔除缺失率大于 20%、最小基因频率低于 5% 的 SNP 标记。最终纳入 845 名患者、65 个特征变量构建数据集。将数据集划分为训练集（N=591）和测试集（N=254），对训练集做数据预处理，递归消除法筛选出 59 个特征，基于随机森林算法构建 4 周抗抑郁药效预测模型。利用网格搜索进行超参数优化，比较纳入不同特征变量组合后模型的预测效果，记录测试集的准确率、召回率和 F1 值等评估指标。

**结果** 对于接受 4 周抗抑郁药治疗的患者，仅纳入一般人口学资料和临床特征的疗效预测模型训练集和测试集的准确率为 79.9%、54.4%，增加心理变量后模型准确率为 79.9%、56.1%，增加遗传变量后模型准确率为 80.4%、58%，同时纳入心理、遗传变量后模型准确率为 99.7%、76.8%。

**结论** 通过对比不同特征变量组合下模型的预测性能，发现将遗传因素、心理特征和临床特征组合起来能够进一步提高模型的预测能力，为临床用药决策的制定提供了一定的参考价值。

OR-009

## 老年性耳聋认知储备失调影响阈下抑郁的静息态脑电网络机制研究

高敏倩<sup>1,2</sup>、杨海弟<sup>1</sup>、贾艳滨<sup>2</sup>

1. 中山大学孙逸仙纪念医院

2. 暨南大学附属第一医院（广州华侨医院）

**目的** 采用静息态脑电 EEG 明确老年性耳聋认知储备失调对抑郁情绪影响的中枢网络机制。

**方法** 对老年性耳聋伴阈下抑郁患者（n=12）、老年性耳聋不伴抑郁症状患者（n=18）进行听力学评估（纯音测听）、认知功能评估（蒙特利尔认知评估量表 MoCA 量表）、抑郁症状评估（汉密顿抑郁量表 HAMD-24）、睡眠质量评估（PSQI）、静息态脑电 EEG，并分别进行静息态脑电 EEG 的分析，包括溯源分析、功能连接、聚类系数、特征路径长度。

**结果** 老年性耳聋伴阈下抑郁组的平均 HAMD-24 为  $10.50 \pm 2.39$  分，老年性耳聋不伴抑郁症状组的平均 HAMD-24 为  $3.72 \pm 1.67$  分（ $t=9.15$ ,  $P=0.000$ ）。老年性耳聋伴阈下抑郁组的 MoCA 为  $19.05 \pm 3.94$  分，老年性耳聋不伴抑郁症状组的 MoCA 为  $22.50 \pm 2.57$  分（ $t=-2.53$ ,  $P=0.017$ ）。老年性耳聋伴阈下抑郁组的 PSQI 为  $12.58 \pm 3.06$  分，老年性耳聋不伴抑郁症状组的 PSQI 为  $8.83 \pm 3.71$  分（ $t=2.90$ ,  $P=0.007$ ）。两组间的平均 HAMD-24、MoCA、PSQI 差异均具有统计学意义（ $P<0.05$ ），其中老年性耳聋不伴抑郁症状组的命名能力、延迟回忆能力明显高于老年性耳聋伴阈下抑郁组。相比起老年性耳聋不伴抑郁组，全脑溯源分析提示老年性耳聋伴阈下抑郁组的梭状回及枕叶明显激活。不同频段在不同皮层间也出现了异常激活：包括后扣带回及边缘叶（Delta 波）、海马旁回及边缘叶（Theta 波）、前扣带回及边缘叶（Alpha 波）、额上回及额叶（Beta 波）、颞下回及边缘叶（Gamma 波）。老年性耳聋伴阈下抑郁组患者不同频段均出现异常增多的功能连接，尤其是高频段（ $P<0.05$ ）。老年性耳聋伴阈下抑郁组的聚类系数、全局效率、局部效率异常增强，特征路径长度明显下降（ $P<0.05$ ）。

**结论** 老年性耳聋伴阈下抑郁患者的睡眠质量和认知功能均下降，脑功能连接及脑网络异常激活，更容易出现认知储备失调。

OR-010

## 基于虚拟现实线索暴露疗法对降低甲基苯丙胺使用障碍者心理渴求的干预研究

黄秋平<sup>1,2</sup>、谌红献<sup>1</sup>

1. 中南大学湘雅二医院

2. 湖南中医药大学

**目的** 探索基于虚拟现实的线索暴露疗法、及其与厌恶疗法相结合，对降低甲基苯丙胺使用障碍者心理渴求有效干预范式。

**方法** 从湖南省某强制隔离戒毒所招募男性甲基苯丙胺使用障碍（methamphetamine use disorder, MUD）者，最终纳入符合干预条件的 89 名被试，完成基线心理评估后，采用随机对照的研究方法，将被试随机分到三个组：线索暴露组（CET 组，30 人）、线索暴露结合厌恶组（CETA 组，29 人）、中性场景对照组（NS 组，30 人）；所有被试在接受戒毒所常规康复的基础上，参加干预研究。CET 组反复暴露于吸毒场景与中性场景匹配的虚拟现实（virtual reality, VR）环境；CETA 组反复暴露于吸毒场景与厌恶场景匹配的 VR 环境；NS 组则反复暴露于中性场景的 VR 环境。干预频率为每周 2 次，持续 8 周，共 16 次。干预结束后，对三组被试进行渴求评估、心理评估等后测评估。

**结果** ① 主要结果：在戒断渴求方面，相比基线，干预后 CET 组、CETA 组的戒断渴求值均有显著降低 ( $p<0.05$ )，而 NS 组的戒断渴求值前后测无明显变化 ( $p>0.05$ )；且在后测中，CET 组的戒断渴求值显著低于 NS 组 ( $p<0.05$ )。在线索渴求方面，相比基线，干预后三组的线索渴求值均显著降低 ( $p<0.05$ )。在注意偏向方面，相比基线，干预后 CET 组、NS 组对 MA 相关图片刺激的反应时有显著降低 ( $p<0.05$ )，但 CET 组、CETA 组在后测中仍表现出对 MA 相关图片刺激与中性图片刺激反应时明显的差异 ( $p<0.05$ )。② 次要结果：相比基线，干预后三组被试的戒毒自信心均有显著提高 ( $p<0.05$ )；干预后 CETA 组的毒品拒绝自我效能感水平显著增加 ( $p<0.01$ )，且在后测中显著高于 NS 组的效能感 ( $p<0.05$ )。在焦虑情绪上，后测中 CET 组的广泛性焦虑量表得分显著低于 NS 组的得分 ( $p<0.05$ )。

**结论** 基于 VR 的线索暴露疗法及其与厌恶疗法的结合，可能是降低 MUD 者心理渴求的有效干预范式，这为该干预范式应用于 MUD 的临床治疗提供了一定的依据，但尚不能确定其对注意偏向的效果。仍需大样本的纵向干预研究来进一步验证其有效性。

## OR-011

### Dual roles of the amygdala-hippocampus circuit in regulation of REM sleep and depression by rTMS in insomnia patients

Xiaoyang Liu<sup>1</sup>, kai yuan<sup>1</sup>, yifei zhu<sup>2</sup>, xiaona sheng<sup>2</sup>

1. Xidian University

2. The Second Hospital of Hebei Medical University

**Objective** Insomnia patients were characterized by abnormal rapid eye movement (REM) sleep. Although converging evidence had proved that 1Hz rTMS at left dorsolateral prefrontal cortex (L\_DLPFC) has potential to improve sleep quality for insomnia patients, whether and how it modulated REM sleep remained unclear. Moreover, REM sleep was initiated by basolateral amygdala dopamine signaling. Restless REM sleep interfered with the adaptation of the amygdala circuits, consequently affecting emotion processing. Up to 40% of insomnia patients have clinical depression and they are closely connected by a bidirectional relationship. However, the effect of rTMS on depression in insomnia patients and the underlying mechanism with REM remained unknown. Recent study revealed that diverse patterns of synchronic interaction between amygdala, hippocampus and neocortex played crucial roles in emotional processes. Thus, we hypothesized that rTMS at L\_DLPFC may improve REM sleep and mood by modulating the amygdala-hippocampus circuits in insomnia patients.

**Methods** According to DSM-5 criteria, we enrolled 60 insomnia patients (32 female; mean age:  $42.5 \pm 11.2$  years; mean  $\pm$  SD) at the Second Hospital of Hebei Medical University, Shi jiazhuang, China. Thirty age, gender and education matched healthy controls were enrolled as well. Written and informed consent was obtained from all participants. Insomnia patients were separated into real ( $n=30$ ) or sham groups ( $n=30$ ) randomly. Then, 20 active or sham sessions of left DLPFC rTMS were delivered over 4 consecutive weeks according to our previous study. Clinical scores (e.g. PSQI, ISI, BDI), polysomnography (PSG) and MRI scanning were collected. Of the 60 patients with insomnia, 15 quitted from the treatment due to personal reasons. Finally, the number of subjects in final statistical analyses was 23 (real group) and 22 (sham group). After sleep stage classification by YASA, we extracted parameters for REM sleep, including REM sleep latency (min), total duration of REM episodes (min) and REM episode interruption density (N/h). The resting state functional connectivity (RSFC) patterns were calculated for bilateral amygdala separately in insomnia patients. The clinical scores, REM parameters, and RSFC of bilateral amygdala were compared before and after rTMS. The changes of measurement mentioned above were correlated. In addition, series of mediation analyses were carried out among REM duration, BDI and RSFC. Multiple comparisons (e.g. FWE for RSFC and Bonferroni) were used for the statistical analysis.

**Results** Significant “treatment×time” interaction effect were found in L\_amygdala - hippocampus RSFC ( $F = 4.725$ ,  $p=0.0322$ ) , REM duration ( $F=4.557$ ,  $p=0.0356$ ) and BDI ( $F=4.065$ ,  $p=0.0466$ ). For active rTMS, the REM duration ( $t=4.166$ ,  $p=0.0004$ ) and BDI ( $t=5.509$ ,  $p=0.0001$ ) were decreased , suggesting the improvement of mood state and sleep. Compared with the healthy subjects, the insomnia patients had hyper RSFC between the L\_amygdala-hippocampus ( $p<0.05$ , FWE corrected) and restored after rTMS treatment . Moreover, the changes of RSFC were significantly correlated with REM sleep and mood improvement, including REM duration ( $r=0.46$ ,  $p=0.02$ ) and BDI ( $r=0.59$ ,  $p=0.001$ ) . However, no mediation relationships were detected. Sham rTMS failed to detect any significant changes between pre- and post- treatment.

**Conclusion** 1 Hz rTMS at L\_DLPFC normalized the REM duration and reduced the depression for insomnia patients, which was under influences of the modulation of hyper RSFC between left amygdala-hippocampus circuits

## OR-012

### 成熟防御机制与心理健康:升华与焦虑抑郁的相关性研究

罗嘉欣

内蒙古自治区人民医院

**目的** 分析近两年来我们心理科就诊的 1040 例患者的抑郁和焦虑评分与其防御机制中使用升华这种心里防御方式之间的关系。

**方法** 本研究使用了横断面研究方法。我们收集了 1040 名就诊患者的抑郁和焦虑评分以及其防御机制方式问卷 DSQ 评分中升华得分的数据（以 5 分为界，>5 者为 A 组 420 人，余为 B 组）。使用 t 检验来比较两组之间焦虑和抑郁评分的差异，确定其显著性。

**结果** 我们发现，DSQ 中升华分数高的组 A 的抑郁评分（60.91）和焦虑评分（53.48）均低于升华得分分数低的组 B 的抑郁评分（67.83）和焦虑评分（57.36）。t 检验显示，两组之间的差异在统计学上均有显著性（焦虑评分： $t=-5.03$ ,  $p<0.001$ ；抑郁评分： $t=-7.45$ ,  $p<0.001$ ）。

**结论** 成熟意味着更高的解决问题技能和创造力，而更多的不成熟，意味着一定程度上的感官损失，从而会影响人的心理健康状态。升华是一种成熟的防御机制，如果能够正常表达情感和应对挑战，可以充分体现一个人的成熟和智慧。成熟的防御机制升华，能够使人在面对挑战和压力时更好地应对，从而降低焦虑抑郁的得分。

## OR-013

### 帕金森病患者情绪异常和情绪处理的脑电图特征

江文静

山东大学齐鲁医院

**目的** 通过记录帕金森病患者基线脑电图和使用情感刺激片段获得的情绪应对脑电图，总结相关脑电特点，结合机器学习，实现基于情绪相关脑电图的帕金森病高准确诊断。

**方法** 健康对照组 30 人，帕金森病患者 60 人（合并抑郁 30 人，不合并抑郁 30 人），记录基本临床特征，抑郁焦虑量表评分，分别记录平静状态下脑电图和使用情感刺激片段后的脑电图，基于机器学习，分析脑电特点。

**结果** 1.与健康对照组比较，帕金森病患者在所有情绪状态下各脑区各波段拨付降低，绝对功率较小，均低于健康对照组。2.合并抑郁的帕金森病患者， $\alpha$  和  $\beta$  振幅小于非抑郁组和对照组， $\gamma$  和  $\delta$  波幅相对增高，右半球更显著；3.抑郁焦虑量表评分和脑电改变呈正相关。

**结论** 脑电图分析为帕金森病患者的情绪障碍和情绪处理参数提供了定量的参数依据，使其成为评估病情的一种可行办法。

OR-014

## Aberrant plasma exosomal derived ceRNA networks as diagnosis biomarkers for adolescent major depressive disorder and its potential prediction for antidepressant efficacy

Yifan Xu, Xinzhe Du, Rong Zhang, Yangxi Huang, Yao Gao, Yujiao Wen, Dan Qiao, Ning Sun, Zhifen Liu  
First Hospital of Shanxi Medical University

**Objective** Major depressive disorder (MDD) in adolescence seriously endangers their mental and physical health and is associated with poor social and scholastic function. However, the diagnosis biomarkers for adolescent with MDD remain unclear.

**Methods** A total of 114 adolescent subjects were enrolled in this study, the comprehensive clinical and cognitive assessments were performed. Differential expressions of lncRNAs and mRNAs of plasma exosomes were screened by microarray assay. Two sets of ceRNA (lncRNAs-miRNAs-mRNAs) networks had been generated and candidate genes had been screened by bioinformatic analysis, and candidate genes were validated in cohort using qRT-PCR.

**Results** A total of 3752 differentially expressed lncRNAs and 1789 differentially expressed mRNAs were identified. AC156455.1, miR-126-5p, AAK1 and CCDC18AS1, miR-6835-5p, CCND2 were picked from each network as candidate genes. We found that the six candidate genes were differential expression between MDD patients and healthy controls, or before and after antidepressant treatment of MDD group. The expression levels of AAK1, CCDC18AS1 and miR6835 varied in efficacy after 8-week sertraline treatment. We also found that the expression of CCDC18AS1, miR-6835-5p, CCND2 (in the same network) at baseline could predicted sertraline efficacy, which may be mediated through reducing suicidal ideation and improving cognitive function.

**Conclusion** Our study identified and validated the plasma exosome-derived ceRNA networks altered in adolescent with MDD, our findings provided potential diagnosis and therapeutic biomarkers for adolescent with MDD.

OR-015

## Shared and specific brain dysfunction patterns across affective and psychotic disorders: results from a multi-site study

Yicheng Long<sup>1</sup>, Bin Lu<sup>2</sup>, Zhening Liu<sup>1</sup>, Chaogan Yan<sup>2</sup>  
1. Central South University  
2. Chinese Academy of Sciences

**Objective** Major depressive disorder (MDD), bipolar disorder (BD) and schizophrenia (SZ) are three of the most common mental disorders and leading causes of morbidity worldwide. Although being separate diagnostic entities, ample evidence has suggested that there are many shared clinical and biological characteristics across these three severe disorders. However, the neural mechanisms underlying such overlaps still need further investigation. This study aimed to explore the shared and specific brain dysfunction patterns across MDD, BD and SZ from a relatively large-sample, multisite study.

**Methods** A total of 918 participants including 302 normal controls (NCs), 228 MDD patients, 182 BD patients, and 206 SZ patients from six different study sites were drawn from the recently launched Depression Imaging REsearch ConsorTium (DIRECT) in China. All participants underwent rs-fMRI and T1-weighted structural scans, and the imaging data were preprocessed

using a standardized surface-based pipeline based on the toolbox for Data Processing & Analysis for Brain Imaging on Surface (DPABISurf). The edge-based functional connectivity (FC) strengths as well as multiple topological brain network metrics at both nodal and global levels were compared between groups.

**Results** Compared with NCs, widespread disrupted FCs (mainly involving the default-mode, visual, and sensorimotor networks) and changed brain topological features (decreased clustering coefficient, increased characteristic path length, decreased global efficiency, and decreased local efficiency) were found in all the MDD, BD, and SZ patients. Significant gradients were found for these changes across different disorders, and the trends were: SZ > BD  $\approx$  MDD > NCs for most changes.

**Conclusion** Our results might help to further clarify the underlying neurobiology of SZ, BD, and MDD, and provide potential insights for improving the diagnoses and treatments of these three common disorders.

PO-001

## Sleep quality and hypnotics use in patients undergoing maintenance hemodialysis: A cross-sectional study

Wei Ye, Lizhen Wang

Department of Nephrology, Jinshan Hospital, Fudan University, Shanghai, 201508, China

**Objective** We investigated sleep quality and hypnotics use in patients undergoing maintenance hemodialysis (MHD) and further explored the effect of sleep quality on their quality of life and its associated predictors.

**Methods** This study included patients enrolled at hemodialysis center of Jinshan Hospital affiliated to Fudan University in 10/2022, who provided us with demographic, clinical, lifestyle information and recent laboratory examinations. Sleep quality was assessed using Pittsburgh Sleep Quality Index (PSQI). Depression/Anxiety were assessed using Beck Depression/Anxiety Inventory (BDI/BAI). Quality of life was assessed using 36-item Short Form Health Survey (SF-36).

**Results** This study included 115 MHD patients with an average value of PSQI  $10.77 \pm 4.615$ . Among them, 35 (30.43%) patients have long-term regular hypnotics use. Hypnotics use was significantly correlated with PSQI ( $r=0.646, P=0.000$ ); PSQI was negatively correlated with the scores of all domains of the SF-36 scale, among which, physical functioning, role-physical, bodily pain, general health and vitality had significantly negative correlation ( $P<0.05$ ); Higher PSQI was significantly associated with less residual urine volume ( $\beta=1.127, 95\% \text{ CI}: 0.083-2.172, P=0.035$ ), higher BDI score ( $\beta=0.092, 95\% \text{ CI}: 0.018-0.167, P=0.016$ ) and higher systolic pressure ( $\beta=1.992, 95\% \text{ CI}: 0.698-3.286, P=0.003$ ).

**Conclusion** Poor sleep quality and hypnotics use are very prevalent among patients undergoing MHD. Poor sleep quality significantly impaired their quality of life and may be associated with residual urine volume, depression and systolic pressure.



## PO-002

## 精神分裂症电休克疗法和磁休克疗法的比较：结构变化/神经可塑性

李金

苏州市广济医院

**目的** 精神分裂症是一种严重的精神疾病，具有广泛的症状谱，包括行为、情绪和认知障碍，几乎每个患者都检测到某种程度的残疾。许多抗精神病药物可用于治疗，但 40% 的患者仅获得部分反应，而 10% 的患者几乎没有反应。对于对药物反应有限的患者，电休克疗法 (ECT) 是一种潜在的选择，因为 ECT 可以提供快速的整体症状改善。然而，认知不良反应很常见，如健忘症和发作后迷失方向。作为替代方案，磁力发作疗法 (MST) 在减轻症状方面的效果与 ECT 相当，但认知障碍较轻。据报道，在精神分裂症患者中，ECT 后海马体积增加。然而，这种变化是否与他们的脑源性神经营养因子 (BDNF) 有关，目前尚不清楚。

**方法** 本研究是对这项大型研究中患者的随机对照试验的子分析，这些患者还在治疗前后完成了 2 次 fMRI 脑部扫描。这些患者于 2017 年 8 月 2 日通过病房张贴的广告首次招募。本研究使用的 MST 设备目前正在维修中，目前的 RCT 暂时中止，直到获得额外的维修资金。本研究比较了 ECT 与 MST 的临床疗效和认知副作用。此外，我们检查了海马体积变化和脑源性神经营养因子 (BDNF) 对治疗反应的可能贡献。34 名确诊的精神分裂症患者被分配接受为期 4 周的 ECT (n = 16) 或 MST (n = 18)。精神分裂症症状通过 PANSS 测量，认知通过可重复神经心理状态评估电池 (RBANS) 测量，利用 Siemens 3 T Verio 扫描仪获得结构影像数据，基于 FreeSurfer 海马自动分割技术获取海马亚结构体积，血清 BDNF 及其前体 proBDNF 通过 ELISA 在基线和 ECT/MST 后测量。

**结果** 两种治疗都显著降低了 PANSS 分，疗效相当，而 MST 在保留 RBANS 语言能力得分方面更胜一筹。ECT 显著增加了双侧海马和多个亚区的体积，而 MST 对海马体积没有影响。右侧海马体积的变化与 ECT 和 MST 无应答者的 proBDNF 变化相关。

**结论** MST 与 ECT 一样有效地减少了精神分裂症症状，且认知功能损害更小。电休克疗法和磁休克疗法对精神分裂症海马神经可塑性的影像与脑源性神经营养因子的变化有关。

## PO-003

## 县/市级综合性医院精神科联络会诊资料分析

杨晓龙、张文跃

太仓市第三人民医院

**目的** 了解县/市级综合性医院精神科联络会诊的特点

**方法** 收集苏南地区某县/市级综合性医院的 113 例精神科联络会诊病例资料，对其人口学资料、科室分布、会诊原因、会诊诊断及处理等进行分析。

**结果** 某县/市级综合性医院精神科联络会诊率为 0.025%；会诊群体中 70 岁以上患者占 49.56%；会诊科室主要来源于内科系统，占 52.21%，其中神经内科最多，占 17.70%；申请会诊前三位的原因是急性脑病综合征、精神病性症状、抑郁状态，分别占 34.51%、13.27%、13.27%；会诊诊断中躯体疾病所致性精神障碍最多，占 38.94%，其次为抑郁症和精神分裂症，分别占 12.39% 和 11.50%。会诊处理中使用非典型抗精神病药物治疗 59.29%，使用抗抑郁药物治疗 21.24%，临床观察 12.39% (14/113)，转专科医院治疗 4.42% (5/113)，使用苯二氮卓类药物 2.65% (3/113)

**结论** 县/市级综合性医院精神科联络会诊率低，会诊人群以老年患者为主，科室多集中于内科系统，急性脑病综合征及精神病性症状是主要的会诊原因，躯体疾病所致性精神障碍是主要会诊诊断；县/市级综合医院的精神科联络会诊工作有待加强。

## PO-004

### 家庭复原力对医学院校大一新生攻击性行为的影响： 家庭亲密度、乐观-悲观人格的中介作用

姚依松、陈文烨、张熠扬、张俊杰、张子怡、司俊霄  
川北医学院四川省基层卫生事业发展研究中心

**目的** 调查医学院校大学一年级新生攻击性行为的现状与影响因素，探究家庭亲密度、乐观-悲观人格在家庭功能与攻击性行为中的作用。

**方法** 依据方便抽样原则，选取 2022 年 6 月川东北地区某医学院校大一新生为研究对象。对研究对象进行问卷调查，调查内容包括一般情况量表（性别、年级、是否有留守经历、是否为独生子女、家庭月收入、家庭结构）、家庭复原力量表、中文版家庭亲密度及适应性量表、Buss-Perry 攻击行为量表、乐观主义-悲观主义量表进行调查。采用 Pearson 相关分析研究各个变量之间的相关性，使用 Process3.4 对家庭亲密度、乐观主义-悲观主义倾向在大学生的家庭复原力与攻击性之间的中介作用进行检验。

**结果** ①本研究共发放问卷 1000 份，回收有效问卷 726 份，问卷有效率 85.41%。男性 237 例（32.6%），女性 489 例（67.4%）。家庭复原力量表问卷平均得分（79.18±11.80）分；家庭亲密度量表问卷平均得分（58.89±9.998）分；乐观主义-悲观主义量表问卷得分（37.26±7.564）分；Buss-Perry 攻击行为量表问卷得分（73.60±16.26）分。②Buss-Perry 攻击行为量表得分情况与性别、是否为独生子女、家庭月收入的差异具有统计学意义（ $P<0.05$ ）。③Pearson 相关分析显示，家庭复原力、家庭亲密度、乐观主义-悲观主义倾向分别与攻击性呈显著负相关（ $r=-0.197, P<0.01$ ； $r=0.0230, P<0.01$ ； $r=-0.256, P<0.01$ ），家庭复原力与家庭亲密度、乐观主义-悲观主义倾向呈显著正相关（ $r=0.701, P<0.01$ ； $r=0.164, P<0.01$ ）；家庭亲密度与乐观主义-悲观主义倾向呈显著正相关（ $r=0.240, P<0.01$ ）。④家庭亲密度、乐观-悲观人格在家庭复原力与攻击性行为间起链式中介作用。

**结论** 男性、独生子女、低家庭月收入的大一新生的攻击性较高；家庭功能可以通过家庭亲密度、乐观-悲观人格的中介作用及其链式中介作用产生影响。

## PO-005

### 产时积极分娩体验的定性研究

孙毅、夏贤  
复旦大学附属妇产科医院

**目的** 探索促进产时积极分娩体验的孕产妇偏好。

**方法** 第一阶段基于扎根理论运用 Strauss 的三阶段分析法，共选取 20 名产妇进行半结构化访谈，对访谈资料进行开放式编码、主轴编码和选择性编码等程序化分析，设计“产时分娩体验”调查表。第二阶段选择在复旦大学附属妇产科医院分娩的产妇 267 名进行“产时分娩体验”问卷调查。对结果进行统计分析，采用了 Cronbach alpha 方法检验量表信度，主成分分析法和最大变异法进行旋转并提取公因子，分析各维度对积极分娩体验的作用。

**结果** Cronbach alpha 信度检验方法结果显示，分娩体验量表预定设计 8 个维度 alpha 值均 $>0.6$ ，证明量表设计较为合理。各个维度积极分娩体验各选项的赞同百分率除“抚摸您的头发”赞同率为

71.9%外, 余各项问题赞同率均达到 90%以上。提取的 8 个公因子与前文构想预设维度基本相符, 累计方差解释贡献率达 77.117%, 各项载荷均大于 0.5, 形成了一个包含 33 个测量项共 8 个维度的复旦大学附属妇产科医院积极分娩体验偏好量表。

**结论** 调查的结果提示了促进产时积极分娩体验的维度选项和孕妇偏好, 为建立我国积极分娩体验评价体系提供了理论支持, 也为产房管理者进行分娩体验管理、优化资源配置提供了策略和建议。

## PO-006

### 单亲家庭大学生自杀风险的影响因素研究

侯威威<sup>1,2</sup>、鲁小华<sup>3</sup>、侯文鹏<sup>1,2</sup>、周福春<sup>1,2</sup>、王传跃<sup>1,2</sup>

1. 首都医科大学附属北京安定医院, 国家精神心理疾病临床医学研究中心, 精神疾病诊断与治疗北京市重点实验室, 北京脑重大疾病研究院精神分裂症研究所
2. 首都医科大学人脑保护高精尖创新中心
3. 北京交通大学学生心理素质教育中心

**目的** 自杀问题已成为全球重大的公共卫生挑战, 在我国, 自杀是 15 至 34 岁年龄段人群死亡的重要原因, 近几年研究发现中国大学生的自杀相关风险呈现显著增长趋势(7.3%→9.4%→12.4%)。相比于普通大学生, 具有特定人口学特征的大学生心理健康问题更为突出。但目前很少有研究着重探讨单亲家庭大学生自杀风险及其影响因素, 尚不清楚哪些潜在因素可能与单亲家庭大学生的自杀风险有关, 尤其是既往研究并未涉及精神病性体验。

**方法** 本研究采用整群抽样的方式对 23163 名大学生进行在线调查, 以父母婚姻状态为“离异”或“丧偶”筛选出 1465 名单亲家庭大学生, 采用自杀行为问卷修订版、广泛性焦虑量表、患者健康问卷、社区精神病性体验评估问卷、创伤后应激障碍检查表、匹兹堡睡眠质量指数量表、孤独感量表对其进行在线问卷调查。

**结果** ①单亲家庭大学生自杀风险、焦虑、抑郁、精神病性体验、睡眠质量问题、创伤后应激障碍的阳性检出率分别为 13.0%、8.3%、13.4%、11.9%、19.9%、19.7%; ②单因素分析结果显示单亲家庭大学生高自杀风险组和低自杀风险组在性别、学段类型、家庭所在地、精神疾病家族史、个人身体健康状况上存在显著差异( $p < 0.05$ )。高自杀风险组在焦虑、抑郁、精神病性体验频率分和痛苦分、创伤后应激障碍症状、睡眠质量、孤独感得分显著高于低自杀风险组( $p < 0.05$ )。③多因素 Logistic 回归分析结果显示自杀风险的相关因素主要有女性(OR = 2.23), 研究生(OR = 0.44), 独生子女(OR = 1.50), 焦虑(OR = 0.90)、抑郁(OR = 1.09)、精神病性体验频率分(OR = 1.11)、创伤后应激障碍(OR = 1.03)、睡眠质量(OR = 1.11)、孤独感(OR = 1.09), 均有  $p < 0.05$ 。

**结论** 单亲家庭大学生心理健康问题普遍存在, 自杀风险的发生受到多种因素影响, 在学校心理健康工作中应关注单亲家庭学生的心理健康问题并针对性地开展干预工作。

## PO-007

### Can the aberrant occipital-cerebellum network be a predictor of treatment in panic disorder?

Yiding Han<sup>1</sup>, Haohao Yan<sup>1</sup>, Xiaoxiao Shan<sup>1</sup>, Huabing Li<sup>1</sup>, Feng Liu<sup>2</sup>, Guojun Xie<sup>3</sup>, Ping Li<sup>4</sup>, Wenbin Guo<sup>1</sup>

1. The Second Xiangya Hospital of Central South University
2. Tianjin Medical University General Hospital
3. The Third People's Hospital of Foshan
4. Qiqihar Medical University

**Objective** This study aimed to detect altered brain activation pattern of patients with panic disorder (PD) and

its changes after treatment. The possibilities of diagnosis and prediction of treatment response based on the aberrant brain activity were tested.

**Methods** Fifty-four PD patients and 54 healthy controls (HCs) were recruited. Clinical assessment and resting-state functional magnetic resonance imaging scans were conducted. Then, patients received a 4-week paroxetine treatment and underwent a second clinical assessment and scan. The fractional amplitude of low-frequency fluctuations (fALFF) was measured. Support vector machine (SVM) and support vector regression (SVR) analyses were conducted.

**Results** Lower fALFF values in the right calcarine/lingual gyrus and left lingual gyrus/cerebellum IV/V, whereas higher fALFF values in right cerebellum Crus II were observed in patients related to HCs at baseline. After treatment, patients with PD exhibited significant clinical improvement, and the abnormal lower fALFF values in the right lingual gyrus exhibited a great increase. The abnormal fALFF at pretreatment can distinguish patients from HCs with 80 % accuracy and predict treatment response which was reflected in the significant correlation between the predicted and actual treatment responses.

**Conclusion** The occipital-cerebellum network played an important role in the pathophysiology of PD and should be a part of the fear network. The abnormal fALFF values in patients with PD at pretreatment could serve as biomarkers of PD and predict the early treatment response of paroxetine.

## PO-008

### Program of Algorithm for Pharmacological Treatment of Major Depressive Disorder in China: Benefits or not?

Yuncheng Zhu

Clinical Research Center, Division of Mood Disorders, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine

**Objective** This research was designed to investigate Algorithm Guided Treatment (AGT) and clinical traits for the prediction of antidepressant treatment outcomes in Chinese patients with major depressive disorder (MDD).

**Methods** This study included 581 patients who had reached treatment response and 406 patients remained non-responded observed after three months of treatment. Sociodemographic factors, clinical traits, and psychiatric rating scales for evaluating therapeutic responses between the two groups were compared. Logistic regression analysis was adopted to determine the risk factors of unresponsive to antidepressant (URA) in MDD. Kaplan-Meier survival analysis was utilized to compare the therapeutic response between AGT and treatment as usual (TAU).

**Results** Compared to the MDD responsive to antidepressant (RA) group, the URA group had significantly lower rates of the following clinical traits: married status, anxious distress, moderate to severe depressive symptoms, and higher rates of comorbidity ( $p$ -value < 0.05). Logistic Regression Analysis showed that eight clinical traits from psychiatric rating scales, such as anxious characteristics, were correlated positively with URA, while the other eight symptoms, such as autonomic symptoms, were negatively correlated. Time to symptomatic remission was longer in TAU without statistically significant ( $p$ -value = 0.11) by log-rank testing.

**Conclusion** The factors may affect the therapeutic responses and compliance of patients, increasing the non-response risk for antidepressants. Therapeutic responses might be improved by increasing the clarification and elucidation of different symptom clusters of patients and combating the main reasons for the effect of drugs.

## PO-009

### 抑郁症患者嗅觉功能与竞争性干扰抑制的队列研究

王芳  
杨浦区精神卫生中心

**目的** 探寻抑郁症嗅觉功能、竞争性干扰抑制功能治疗前后的变化，并初步探索嗅觉功能与竞争性干扰抑制功能、情绪严重程度之间的相关性。

**方法** 选取符合国际疾病分类第十版（International Classification of Diseases Tenth Revision, ICD-10）诊断标准中抑郁症患者 48 例，选取 33 名性别、年龄、受教育程度与病例组相匹配的健康人群作为对照组，应用汉密尔顿抑郁量表（HAMD-17）、汉密尔顿焦虑量表（HAMA）、基于中国人群的嗅觉命名测验、情绪 Stroop 任务来评估抑郁、焦虑情绪的严重程度、嗅觉功能水平及情绪干扰下 Stroop 各项任务的平均反应时间，并通过平均反应时间/正确率(mean reaction time/accuracy rate,  $\Delta$ MRT) 得到校正后的各项任务的平均反应时间。抑郁症组及健康对照组均分别于治疗前（基线）、治疗后 3 月(随访)完成 2 次以上所有项目的评估。采用 SPSS 17.0 软件对研究所得的数据进行统计分析，运用多重线性回归分析年龄、教育年限、HAMD-17、HAMA、 $\Delta$ MRT 与嗅觉功能的相关性。

**结果** 抑郁症组相较于健康对照组嗅觉功能水平更差、竞争性干扰抑制各项任务的  $\Delta$ MRT 更长，但随着情绪状态的恢复（治疗后 3 月），嗅觉功能水平可得到恢复，但  $\Delta$ MRT 仍维持较健康对照组更长的反应时长。基线水平上多重线性回归分析显示年龄及、负性一致（NEG-C）的  $\Delta$ MRT 与抑郁症患者嗅觉功能缺陷有关，其回归模型具有统计学意义（ $F=11.89$ ,  $P<0.001$ ），因变量嗅觉测试总分变异的 31.7%可由年龄、 $\Delta$ MRT（NEG-C）来解释（ $R^2=0.346$ , 校正  $R^2=0.317$ ）。回归方程  $Y(\wedge)=10.676-0.063\times\text{年龄}-0.002\times\Delta\text{MRT (NEG-C)}$ 。

**结论** 抑郁症患者在接受治疗前其嗅觉功能的缺陷可能与年龄、负性一致的平均反应时间（毫秒）有关，未发现其与抑郁、焦虑情绪严重程度有明确相关性。而随着抑郁情绪的恢复，嗅觉功能缺陷亦能随之恢复，提示嗅觉功能可能是反应脑功能水平的一个状态指标。

## PO-010

### 中国老年人慢性躯体病共病模式与疑似痴呆的相关性

张洪光  
武汉市精神卫生中心

**目的** 痴呆症是当前中国老年人面临的主要公共卫生挑战之一，已经给公共卫生、医疗保健和社会福利系统带来了日益增长的负担。虽然单一特定躯体慢性病对于认知功能的危害已经得到证实，但当多种躯体疾病同时存在时，对认知功能的影响仍不为人所知。当前的研究通常只考虑疾病数量的简单相加，或使用根据数量和严重程度转换成分数、配对最常伴发的两种或三种躯体慢性病等测量共病的方法，却忽视了高频伴发的疾病提示着疾病间相关联的病理机制。而伴有不同躯体慢性病的痴呆患者群体特征、发病机制和治疗方法均存在极大的差异。因此，我们采用潜在类别分析法探索隐藏在中国老年人常见的 12 种躯体慢性病下的潜在共病模式，并探讨每种共病模式与疑似痴呆的关联。该研究旨在明确痴呆老年人的不同躯体慢性病亚组的临床特征，为多学科合作诊疗痴呆提供理论依据，以满足不同痴呆亚组患者的个性化需求。

**方法** 本研究的样本来自中国健康与养老追踪调查第四波，共涵盖 5803 名 60 岁及以上的老年人。我们使用潜在类别分析对这些老年人常见的 12 种躯体慢性病进行分类，并描述了每种类别的慢性病特征，以了解哪些躯体慢性病可能被聚集成了一类。同时，我们使用简版社区痴呆量表来评定老年人是否存在疑似患有痴呆的情况。最终，我们采用二元逻辑回归模型探讨中国老年人慢性躯体病共病模式与认知障碍之间的关联。

**结果** 在 5803 名参与者中，该研究最终发现当使用潜在类别分析将 12 种躯体慢性病分为 5 种共病模式时，模型可达最佳拟合且最具有临床意义，分别是：相对健康组(53.3%)，代谢综合征及血管病组(21.1%)，胃病及风湿病组(15.2%)，多系统病组(6.0%)，呼吸系统病组(4.4%)。进一步的分析发现，以相对健康组为参照，其余四组疑似痴呆的概率升高至 1.180、1.358、1.595 和 1.847 倍（均  $P < 0.05$ ）。此外，居住在乡村、教育水平较低、生活不满意、缺乏社交活动和饮酒行为也与较高的疑似痴呆率显著相关。

**结论** 为了更好地管理痴呆患者的认知损害症状、提升他们的生活质量，以及制定更精准的治疗计划，临床医务人员应该准确识别痴呆老年人所属的躯体慢性病亚组，并采用多学科合作诊疗模式。这种综合性、个性化的诊疗方法可以帮助医护人员更加深入地了解每个痴呆亚类，并针对其独特特征提供更加个性化的关怀和治疗方案。

## PO-011

### Common and exclusive spontaneous neural activity patterns underlying pure generalized anxiety disorder and comorbid generalized anxiety disorder and depression

Haohao Yan<sup>1</sup>, Yiding Han<sup>1</sup>, Xiaoxiao Shan<sup>1</sup>, Huabing Li<sup>2</sup>, Feng Liu<sup>3</sup>, Guojun Xie<sup>4</sup>, Ping Li<sup>5</sup>, Wenbin Guo<sup>1</sup>

1. Department of Psychiatry, and National Clinical Research Center for Mental Disorders, The Second Xiangya Hospital of Central South University, Changsha 410011, Hunan, China

2. Department of Radiology, The Second Xiangya Hospital of Central South University, Changsha, Hunan 410011, China

3. Department of Radiology, Tianjin Medical University General Hospital, Tianjin, China

4. Department of Psychiatry, The Third People's Hospital of Foshan, Foshan 528000, Guangdong, China

5. Department of Psychiatry, Qiqihar Medical University, Qiqihar, Heilongjiang 161006, China

**Objective** This study aimed to identify common and exclusive neural substrates underlying pure generalized anxiety disorder (GAD, G0) and comorbid GAD and depression (G1), assess whether they could assist in diagnosis and prediction of treatment response, and determine whether comorbid depression in GAD patients would change their neural plasticity.

**Methods** A longitudinal study was conducted, involving 98 patients (40 in the G0 group and 58 in the G1 group) and 54 healthy controls (HCs). The fractional amplitude of low-frequency fluctuations (fALFF), support vector machine, and support vector regression were employed.

**Results** The shared neural underpinnings across the two subtypes of GAD were hyperactivity in the right cerebellar Crus II and inferior temporal gyrus and hypoactivity in the right postcentral gyrus. The G1 group showed hypoactivity in the frontal gyrus, compared with HCs, and hyperactivity in the middle temporal gyrus, compared with the G0 group or HCs. These alterations could aid in diagnosis and the prediction of treatment response with high accuracy. After treatment, both the G1 and G0 groups showed higher fALFF than those before treatment but were located in different brain regions.

**Conclusion** Common and exclusive neural substrates underlying the two subtypes of GAD were identified, which could assist in diagnosis and the prediction of treatment response. Pharmacotherapy for the two subtypes of GAD recruited different pathways, suggesting that comorbid depression in GAD patients would change their neural plasticity.

PO-012

## Major depressive disorder is associated with the mitochondrial ND1 T3394C mutation in two Han Chinese families

Pan Jing, Haihang Yu  
Ningbo Kangning Hospital

**Objective** The purpose of this study was to investigate the possible relationship between mitochondrial ND1 T3394C mutation and Major depressive disorder (MDD).

**Methods** Clinical data were collected from two pedigrees, and detailed mitochondrial genomes were conducted for the two proband members. Resultant variants were evaluated for evolutionary conservation, allelic frequencies, and structural and functional consequences. Detailed mitochondrial whole genome analysis phylogenetic analysis and haplotype analysis were performed on probands.

**Results** In this study, we report the clinical, genetic and molecular characterization of two Chinese families with MDD. There were variable ages of onset and severity in depression among these families. These Chinese families exhibited extremely low penetrances of MDD. Sequence analyses of mitochondrial genomes from these pedigrees revealed homoplasmic T3394C (Y30H) mutation. The polymorphism is located at a highly conserved tyrosine at position 30 of ND1 and distinct mtDNA polymorphisms originating from haplogroups M9a3 and M9a.

**Conclusion** This observation of the T3394C mutation in two genetically unrelated individuals who suffer from depression strongly suggests that this mutation might play a role in the development of MDD. However, there was an absence of functionally significant mtDNA mutations in these two Chinese pedigrees carrying the T3394C mutation. It is therefore possible for nuclear modifier gene(s) or environmental factor(s) to play a role in the phenotypic expression of the MDD-associated T3394C mutation.

PO-013

## 2 型糖尿病共病抑郁障碍及其认知功能损害与血管紧张素的相关研究

李娜、杨梅、史丽  
昆明医科大学第一附属医院

**目的** 研究 2 型糖尿病患者共病抑郁障碍及其认知功能损害与血清血管紧张素的相关关系，进一步探究血管紧张素在 2 型糖尿病患者共病抑郁障碍患者认知功能损害中的作用。

**方法** 随机选取健康对照组 23 例，抑郁障碍组 29 例，2 型糖尿病组 30 例，2 型糖尿病共病抑郁障碍组（共病组）38 例，共计 120 例。采用重复性成套神经心理状态测验（Repeatable Battery for the Assessment of Neuropsychological Status, RBANS）评估认知功能；汉密尔顿抑郁量表-17（Hamilton Depression Scale, HAMD-17）和汉密尔顿焦虑量表（Hamilton Anxiety Scale, HAMA）分别评估上述四组的抑郁和焦虑水平；采用酶联免疫吸附测定（enzyme-linked immunosorbent assay, ELISA）法测定血清血管紧张素 I、血管紧张素 II 水平。并将血管紧张素 I、血管紧张素 II 水平与 RBANS 评分进行进一步比较。

**结果** 共病组的血管紧张素 II 水平高于健康对照组和抑郁障碍组（ $p$  均  $<0.05$ ）；2 型糖尿病组血清血管紧张素 II 水平高于健康对照组和抑郁障碍组（ $p$  均  $<0.05$ ）。血管紧张素 I、血管紧张素 II 未发现与 RBANS 总分及各项认知评分之间存在相关性（ $p$  均  $>0.05$ ）。ROC 曲线分析显示，当临界值  $>41.97$  时，血管紧张素 I 对 2 型糖尿病共病抑郁障碍具有保护性意义，最大敏感度为 0.066，最大特异度为 0.783（ $AUC=0.696$ ）， $P=0.016$ 。当临界值  $>120.91$  时，血管紧张素 I



I 诊断 2 型糖尿病共病抑郁障碍最大敏感度为 0.90，最大特异度为 0.57（AUC=0.72）， $P=0.007$ ；当临界值 $>116.30$ 时，血管紧张素 I I 诊断 2 型糖尿病的最大敏感度为 0.86，最大特异度为 0.52（AUC=0.68）， $P=0.027$ 。血管紧张素 I I 水平升高是 2 型糖尿病共病抑郁障碍发生的危险因素。

**结论** 血管紧张素 I、血管紧张素 I I 可能参与了 2 型糖尿病共病抑郁障碍疾病及其认知障碍的发病机制，并有望成为未来 2 型糖尿病共病抑郁障碍疾病诊断的有效指标。

## PO-014

### 经颅磁刺激对于酒精使用障碍患者事件相关电位影响的研究

武桥

绵阳市第三人民医院.四川省精神卫生中心

**目的** 探讨酒精所致精神障碍患者与酒精成瘾相关的认知功能损害，经颅磁刺激干预进行改善酒精使用障碍患者的认知功能损害，并通过事件相关电位指标进行客观呈现酒精使用障碍患者的认知功能损害在经颅磁刺激干预前后的变化。

**方法** 选用 32 名酒精使用障碍患者和正常对照的被试，通过让被试完成 GO/NOGO 实验范式，记录被试完成该实验范式的反应时和正确率，同时记录被试在完成 GO/NOGO 实验时的 32 导联脑电信号。然后，酒精使用障碍被试接受基于导航的高频经颅磁刺激，连续 14 次，总脉冲数为 21420 个。在接受经颅磁刺激治疗后，酒精使用障碍患者再次完成 GO/NOGO 实验，并记录反应时、正确率和脑电信号。采用 MATLAB 进行脑电信号处理事件相关电位中的 N200、P300。

**结果** 酒精使用障碍患者的正确率和反应时均较正常对照表现差，差异具有统计学意义（ $p<0.05$ ）。在接受高频经颅磁刺激治疗后，患者的行为学指标并未有统计学的改变，但其事件相关电位指标，出现波幅的显著改变，在早期成分 N200 和晚期成分 P300 上均有统计学差异（ $p>0.05$ ）。

**结论** 酒精使用障碍患者存在对于抑制控制相关的认知功能损害，并且这种损害可以通过事件相关电位以呈现。在连续 14 次高频经颅磁刺激后，能够改善酒精使用障碍抑制控制相关的认知功能损害。

## PO-015

### 童年期虐待通过调节右侧杏仁核亚区功能网络影响抑郁症的临床特征

陈素珍<sup>1</sup>、尹营营<sup>1</sup>、张钰群<sup>2</sup>、姜文颢<sup>1</sup>、侯正华<sup>1</sup>、袁勇贵<sup>1</sup>

1. 东南大学附属中大医院

2. 南京中医药大学

**目的** 童年期创伤和杏仁核均在抑郁症（major depressive disorder, MDD）的病理机制中起着重要作用。由于杏仁核是异质性脑区，抑郁症患者的杏仁核与其他脑区之间的功能连接是否存在异常及其与童年期创伤和临床特征间的关系值得探讨。

**方法** 本研究采用静息态功能磁共振成像（resting-state functional magnetic resonance imaging, fMRI）技术对 115 例抑郁症患者和 91 名性别、年龄匹配良好的健康对照（healthy controls, HC）进行了研究。根据人类脑网络图谱（Human Brainnetome Atlas）——一种新的脑分割方法对杏仁核亚区进行定义。采用双样本 t 检验比较两组间基于种子点的功能连接差异。分析 MDD 患者杏仁核亚区功能连接与临床特征的相关性，以及杏仁核亚区功能连接在 MDD 患者童年期创伤与临床特征间的中介效应。

**结果** 与 HC 组相比,校正后 MDD 患者仅右侧杏仁核亚区功能连接网络出现明显脑区分布异常,主要表现为 MDD 组右内侧杏仁核与左侧枕中回、右侧壳核、右侧颞上回、右侧额上回、左侧辅助运动区及右外侧杏仁核与右侧额下回眶部、右侧枕中回、右侧颞上回、双侧壳核、双侧辅助运动区间的功能连接减弱。在抑郁症组,右侧杏仁核亚区的功能连接与发病年龄、基线期 24 项汉密尔顿抑郁量表(24-item Hamilton Depression Scale, HAMD-24)评分、HAMD-24 减分率及童年期虐待相关,但与童年期忽视无关。此外,不同的右侧杏仁核亚区功能连接可能介导了童年期情感虐待或躯体虐待对发病年龄的影响,以及性虐待对 8 周 HAMD-24 减分率的影响。

**结论** 本研究结果提示右侧杏仁核亚区的功能连接异常参与了抑郁症的发病机制及其临床特征。

## PO-016

### Emotion dysregulation and Internet gaming disorder in young people: Mediating effects of negative affect and metacognitions

Shuhong Lin, Hongxian Chen  
the Second Xiangya Hospital of Central South University

**Objective** Recent studies have found that emotion dysregulation, negative affect, and metacognitions about online gaming are risk factors for Internet gaming disorder (IGD). However, few studies investigated the mechanisms underlying these interactions. The present study aimed to explore the relationships between emotion dysregulation and IGD, and the mediating effects of negative affect and metacognitions about online gaming.

**Methods** An online survey was conducted with young people (aged 10-24 years) who played video games. 1768 participants (mean age = 17.96 years, SD = 3.04 years; 64.0% males) were included in this study. Observed variables, including emotion dysregulation, IGD, depression, anxiety, and metacognitions, were measured with self-report scales. Structural equation modeling (SEM) was used to analyze the relationships among the variables.

**Results** The results showed that emotion dysregulation positively predicted IGD through a fully mediated model which included the independent mediating effects of negative affect and metacognitions about online gaming and their sequential mediating effect. The model explained 75.5% of the variance in IGD.

**Conclusion** This study emphasizes that negative affect and metacognitions about online gaming mediate the effect of emotion dysregulation on IGD; moreover, it also suggests that metacognition may be a proximal factor of IGD. Thus, improving emotional regulation and modifying maladaptive metacognitions in young people may improve the prevention and treatment of IGD.

## PO-017

### 1040 名在综合医院精神科门诊就诊患者其防御机制运用特点的分析

阿拉腾巴根、梁子红  
内蒙古自治区人民医院

**目的** 本研究旨在探讨精神科门诊就诊患者的防御机制运用特点,为医护人员提供更为准确的辅助诊断和治疗。

**方法** 以 2021 年至 2023 年期间来内蒙古自治区人民医院精神科门诊就诊的患者作为研究对象,采用防御方式问卷 DSQ 评定量表作为调查工具,对 1041 例门诊就诊符合条件接受问卷调查的患者进行了数据收集和分析。在问卷中,研究者将“不成熟防御机制”、“成熟防御机制”、和“中间型防御

机制”三大类防御机制的调查对比差异, 及其下分的 24 个子项作为分析方向, 以患者的性别、年龄、文化程度和诊断种类等因素作为调查变量, 通过统计分析得出结论。

**结果** 本研究共收集到 1040 份报告, 其中男性 404 例, 女性 636 例。患者年龄范围在 12-90 岁之间。在防御机制的总体运用方面, 不成熟防御机制、成熟防御机制、和中间型防御机制与抑郁状态相关性的协方差分别为 0.61、-0.39 和 0.28 与焦虑状态相关性的协方差分别为 0.60、-0.22 和 0.31。文化上, 排除代际因素后 (限定研究人群为 20-40 岁之间的 679 人), 不同学历不成熟防御机制的人群平均分为小学: 4.62、中学: 4.42、大学: 4.56、硕士: 4.21、博士 3.90, 但这种差异不具有统计学意义; 性别上, 男性使用不成熟防御机制和成熟防御机制的得分略高于女性 (男: 4.50 和 4.55; 女: 4.41 和 4.44), 但这种差异不具有统计学意义; 男性更愿意使用幻想、潜意显现和解除三种防御机制 ( $P<0.05$ ), 而女性患者更擅长使用躯体化 ( $P<0.05$ ), 值得注意的是男性回答此问卷时掩饰性因子是高于女性的 ( $P<0.05$ ), 年龄上, 患者年龄越小则使用不成熟的防御机制机率越高, 除“升华”和“否认”两种防御机制外, 其余类型防御机制的使用频率均随着年龄增大而有减少使用频率的趋势。

**结论** 本研究发现精神科门诊存在焦虑状态或抑郁状态的患者中, 不论是男女都会更多使用投射和潜意显现两种不成熟的防御机制。另外男女患者、年龄和诊断种类对防御机制的运用有一定程度的影响。这些结果为精神科门诊医护人员向患者提供更为有效的辅助治疗提供了参考, 也有助治疗和预防。需要指出的是, 本研究样本较小, 结果仅供参考, 后续研究需要进一步扩大样本量并探究更多的因素对防御机制运用的影响。

## PO-018

### 重复经颅磁刺激改善青少年非自杀性自伤脑功能网络——一项基于 TMS-EEG 的研究

杜娜<sup>1</sup>、李雅兰<sup>1</sup>、陈琳琪<sup>2,3</sup>、郑丽琴<sup>2,3</sup>、孙战江<sup>2,3</sup>、张勇<sup>2,3</sup>、肖宇<sup>1</sup>、李云歌<sup>1</sup>、张涛<sup>2,3</sup>

1. 成都市第四人民医院, 心身医学中心

2. 电子科技大学, 生命科学与技术学院

3. 四川脑科学与类脑智能研究院

**目的** 非自杀性自伤 (NSSI) 行为严重损害青少年身心健康, 重复经颅磁刺激 (rTMS) 可缓解患者症状, 但其疗效评估仍缺乏客观指标。本研究通过研究 rTMS 治疗前后 NSSI 青少年皮层脑电活动的变化, 探索 rTMS 对其治疗效果的客观评价指标。

**方法** 以 NSSI 青少年为研究对象, 共 13 人 (女性 11 名), 分别在 rTMS 治疗前后采集同步脑电数据, 并采用青少年非自杀性自伤行为和功能问卷 (ANSSIQ)、抑郁自评量表 (SDS)、焦虑自评量表 (SAS)、汉密尔顿抑郁量表 (HAMD) 及汉密尔顿焦虑量表 (HAMA) 进行评估。rTMS 治疗方案: 三周低频 (右侧背外侧前额叶皮层, 刺激强度 30%, 频率 2Hz, 20 脉冲/串, 间隔 1s, 重复 30 次, 共 600 脉冲) 加高频 (左侧背外侧前额叶皮层, 刺激强度 5%, 频率 10Hz, 30 脉冲/串, 间隔 4s, 重复 50 次, 共 1500 脉冲) rTMS 治疗, 每周五次。同步记录脑电信号时采用单脉冲经颅磁刺激 (sTMS): 160 个 sTMS 施加在右侧 DLPFC, 刺激强度为 80% 静息运动阈值, 刺激间隔为 2~4s。使用时域分析、相干性分析、脑网络属性分析 (特征路径长度、全局效率、聚类系数和局促效率) 等方法, 对 TMS-EEG 数据进行分析。

**结果** NSSI 青少年在 rTMS 治疗后 ANSSIQ、SDS、SAS、HAMD 及 HAMA 各量表评分较治疗前有显著降低 ( $P<0.05$ )。其 delta (1~4Hz)、theta (4~8Hz)、alpha (8~13Hz)、beta (13~30Hz)、低频 gamma (30~50Hz) 及高频 gamma (50~80Hz) 各频段都发现了功能连通性较治疗前显著增强 ( $P<0.05$ )。rTMS 治疗后特征路径长度与 rTMS 治疗前相比 beta 和低频 gamma 频段的特征路径长度显著减小, 同时高频 gamma 也观察到了边缘显著减小。rTMS 治疗后发现全局效率的增加, 主要表现为 delta、beta 和低频 gamma 的显著增加, 同时在 alpha 频段发现了边缘显著变化。rTMS 治疗后 beta 和低频 gamma 频段的聚类系数也较治疗前显著增加。局

部效率的统计结果表明，beta 频段和低频 gamma 频段的局部效率在 rTMS 治疗后显著增加，而其他频段也有增加的统一变化趋势，但尚未发现统计性差异。

**结论** rTMS 可有效促进 NSSI 青少年功能脑网络随机化的恢复，提高大脑功能整合分离能力和信息传递效率，并且更加高效地构建脑网络。

## PO-019

### 青少年抑郁障碍患者的疼痛敏感性及疼痛强度研究

张晴、刘寰忠  
安徽医科大学附属巢湖医院

**目的** 探究青少年抑郁障碍患者的疼痛敏感性与疼痛强度，进一步分析与患者疼痛敏感性及疼痛强度相关的因素

**方法** 共有 166 名受试者完成了自制问卷和疼痛压力测试，在医院体检中心招募的 47 名健康青少年作为对照组，将 119 名符合本研究中抑郁障碍入组标准的青少年作为研究组。临床资料包括总病程、首次症状年龄和药物治疗等。采用汉密尔顿抑郁评定量表、多伦多述情障碍量表（the Toronto Alexithymia Scale-20, TAS-20）评估受试者的临床特征。使用手持式压力疼痛仪器来评估受试者的实验疼痛敏感性，其中，实验疼痛敏感性的测量包括压力疼痛阈值和压力疼痛耐受性。数值评定量用于评估受试者的疼痛强度。比较两组间的一般资料、临床特征、疼痛敏感性、疼痛症状的存在及疼痛强度，分析研究组的疼痛敏感性、疼痛强度与一般资料和临床特征的相关性，探究研究组中不同社会人口学及临床特征的疼痛敏感性与疼痛强度，并且以研究组疼痛敏感性作为因变量，使用广义线性模型分析与疼痛敏感性相关的因素，以研究组的疼痛强度作为因变量，使用有序多分类 logistic 回归模型分析与疼痛强度相关的因素。

**结果** 研究组中报告疼痛的人数显著高于对照组，差异具有统计学意义（ $P < 0.001$ ）。青少年抑郁障碍患者的疼痛发生率为 80.7%。研究组与对照组在胫骨压力疼痛耐受性、前臂压力疼痛耐受性上具有统计学差异（ $P$  均  $< 0.05$ ），即研究组在疼痛耐受性上测得的数值显著高于对照组。以研究组疼痛敏感性作为因变量的广义线性模型分析显示述情障碍总分与疼痛敏感性密切相关，述情障碍总分越高，疼痛敏感性数值越大，敏感性越低。以研究组的疼痛强度作为因变量的有序多分类 logistic 回归分析显示汉密尔顿抑郁总分与疼痛强度存在密切联系，抑郁症状越严重，疼痛强度至少提高一个等级的可能性越大。

**结论** 青少年抑郁障碍患者较健康青少年有更高的疼痛发生率。抑郁症状越严重的抑郁障碍青少年感受到的疼痛强度越大，而述情障碍症状越严重，患者的疼痛敏感性越低，越不容易感受到实验性疼痛的刺激。在临床实践工作中，精神科医生需关注青少年抑郁障碍患者的疼痛状况，建议早期对青少年抑郁障碍患者进行述情障碍症状的筛查，及早干预。

## PO-020

### 复发缓解型多发性硬化患者的抑郁症状与疲劳及生活质量的相关性

刘军军、王志晔  
南京梅山医院

**目的** 探讨复发缓解型多发性硬化患者抑郁症状与疲劳及生活质量的相关性。

**方法** 2018 年 8 月~2021 年 7 月在南京梅山医院神经内科门诊招募复发缓解型多发性硬化患者共 80 例，采用自编问卷收集患者人口学资料与疾病相关信息；采用贝克抑郁量表第 2 版中文版

(BDI-II) 评估抑郁症状; 采用疲劳影响量表修订版 (MFIS) 评估疲劳症状; 采用健康状况调查问卷 (SF-36) 评估生活质量。

**结果** 复发缓解型多发性硬化患者贝克抑郁量表分为  $10.43 \pm 6.74$  分, 其中, 轻度抑郁 11.3% (9/80), 中度抑郁 11.3% (9/80), 重度抑郁 1.3% (1/80)。多因素线性回归分析结果显示, 贝克抑郁量表评分与年龄 ( $\beta=0.17$ , 95%CI: 0.01~0.33) 和 MFIS 分 ( $\beta=0.14$ , 95%CI: 0.06~0.22) 正相关, 与情感角色 ( $\beta=-0.05$ , 95%CI: -0.08~-0.01) 和精神健康 ( $\beta=-0.59$ , 95%CI: -0.20~-0.04) 负相关 (均  $P<0.05$ )。

**结论** 复发缓解型多发性硬化患者抑郁症状的发生率较高, 需要重点关注高龄、疲劳程度重及生活质量较差的患者。

## PO-021

### 重庆市中小學生情绪障碍及自杀自伤的调查研究

艾明、张琪、洪素、况利  
重庆医科大学附属第一医院

**目的** 中小學生情绪障碍及自杀自伤问题逐年加重, 严重影响青少年心身健康、家庭和谐及社会稳定, 本研究希望对重庆市 中小學生心理健康及自杀自伤等心理问题进行流行病学研究, 为后期的中小學生情绪障碍及自杀自伤的预警及危机干预做前期工作

**方法** 本研究使用重庆医科大学研发的“重医心理”智能云系统, 对重庆市某区所有的中小學校學生心理测评相关工作。包含高中、初中及小学 80 所, 共计 124614 人。其中小学 56 所, 共计 60161 人。初中 22 所, 共计 33744, 高中 9 所, 共计 22709 人。职业高中为重庆立信职教中心 1 所, 共计 8000 人。每年的 9 月份对所有的學生进行心理健康测评, 为每所學校建立全校學生全覆盖的心理健康档案, 连续测评及随访 3 年, 收集本项目中小學研究需要的心理健康测评及预警模型相关的数据, 并建立“重庆市中小學生情绪障碍及自杀自伤数据库”。

**结果** 共 80 所小学、初中、高中 (包含 1 所职高), 根据自愿原则和學生认知情况 (1-3 年级學生因理解力和计算机操作能力限制未参加现阶段测评, 实测 77 所學校, 共 65283 人参加了本次心理普测。其中小学 31312 人, 占 48.0%, 初中 17816 人, 占 27.3%。高中 16155 人, 占 24.7%。小学存在抑郁症状 5600 人, 占比 9.31%; 初中、高中存在中度抑郁及以上的 4266 人, 占比 12.56%; 存在自伤行为 10373 人, 占比 15.89%; 与父母关系差 1048 人, 占比 1.61%, 独生子女 28780 人, 占比 44.08%; 在學校被欺负 3175 人, 占比 4.86%。

小学总体较为突出问题表现在抑郁症状, 检出率为 9.31%, 低于国内已有文献报道数据, 与社会文化环境、学习压力、家庭关系融洽关系密切。将重点學校和非重点學校筛查结果进行对比发现, 除学习压力外, 非重点學校在抑郁症状检出率、自伤行为检出率、校园霸凌发生率、手机使用率、与父母矛盾发生率等维度均高于重点學校。

**结论** 研究发现中小學生心理健康问题较为严重, 自杀自伤行为发生频繁。未来政府部门需要进一步关注, 制定相关的政策, 研发针对中小學生的自杀自伤早期预警模型, 提高自杀自伤的早期识别率、预警的准确性和有效性, 并进一步通过实施“医院-學校-家庭”三位一体的综合心理干预, 期待能有效地降低中小學生自杀自伤的发生, 进而提升青少年的心理健康水平。

PO-022

## 围产期抑郁预防与治疗的证据总结

朱远<sup>1</sup>、宣致懿<sup>1</sup>、张爱霞<sup>2</sup>、徐桂华<sup>1</sup>、李纤<sup>3</sup>、唐小梅<sup>3</sup>

1. 南京中医药大学

2. 南京市妇幼保健院

3. 江苏省兴化市妇幼保健院

**目的** 检索、评价并整合围产期抑郁预防与治疗的相关证据，为任务转移背景下实施围产期抑郁管理提供参考。

**方法** 计算机检索 BMJ 最佳临床实践、UpToDate 临床顾问、JBI 图书馆、Cochrane 图书馆等网站中关于围产期抑郁评估和干预相关的临床决策、临床实践指南、证据总结、专家共识、系统评价等，进行方法学质量评价后，根据主题对证据进行提取与汇总。

**结果** 根据纳入标准筛选出证据 15 篇，包括 3 篇指南、2 篇证据总结，5 篇专家共识，以及 5 篇系统评价。通过阅读、提取、归类，及专家会议，总结了包含筛查工具，筛查频率及时间，心理社会风险因素评估，筛查量表的危机值，所有孕产妇的干预内容，低中危孕产妇的干预内容，高危孕产妇的干预内容，追踪与随访 7 个主题共 37 条推荐意见，29 条强推荐，8 条弱推荐。

**结论** 在任务转移背景下，非精神专科人员应遵循最佳证据，规范围产期抑郁评估与干预行为，预防和减少围产期抑郁的发生发展。

PO-023

## 某军队三甲医院护士创新行为现状及影响因素分析

李琰

空军军医大学西京医院

**目的** 探讨护士创新行为的现状并分析其影响因素，为进一步提高护士创新行为提供依据。

**方法** 2022 年 6-7 月采用便利抽样挑选某军队三甲医院 260 名护士作为调查对象。采用一般资料问卷、创新行为量表、循证护理能力评定量表、组织支持量表进行调查。采用单因素、皮尔逊相关性、多元线性回归进行创新行为影响因素分析。

**结果** 临床护士创新行为平均得分为 (29.96±6.68) 分，条目均分为 3±0.67 分。多元线性回归分析显示情感性支持、情景评估与证据应用能力、是否参加过护理创新学习可以影响护士创新行为，共解释 36.2%% 的总变异。

**结论** 临床护士创新行为水平较低，护理管理者可以提高护士的情感性支持感、培养护士循证护理能力及创新思维，以促进护士创新行为水平。

PO-024

## 1 例青少年心理应激、情绪障碍与甲状腺癌共病案例的 谈论与思考

林冬梅

吉林省神经精神病院

**目的** 来访者从幼儿园开始被父亲要求每天学习游泳，训练强度大、时间长，小学四年级开始每天训练时间 8 小时、1 万米。不愿练习或练的不好会被父亲打骂。尽管在省里取得了多个项目第一的成绩，但没有成就感和自豪感。小学三年级时父亲带其外遇女子和一个刚月的小男孩住到自己家

里，外遇女人经常苛刻对待自己和母亲，还惩罚、打骂自己。2019 年父母离婚，3 年后彻底分开。一天半夜父亲半夜来自己家，殴打母亲导致母亲住院 1 个多月。2022 年 7 月发现颈部肿大，当地医院超声显示：淋巴结肿大，予以消炎治疗。2022 年 9 月睡眠不好，经常不开心，情绪不好就自己挺着，经常烦躁，情绪起伏波动。有时用刀片划伤自己。2022 年 11 月中旬予以甲状腺结节穿刺检查，提示：甲状腺右叶见异性细胞，倾向甲状腺乳头状癌。2022 年 11 月下旬行甲状腺癌根治手术，2022 年 12 月末肿瘤术后同位素治疗。

**方法** 来访者从小父亲管教严苛，长期进行每天剧烈的游泳训练，稍有反抗就会被父亲打骂；畸形的家庭生活状态让患者和母亲备受煎熬和不平等对待；亲眼目睹父亲闯入家里殴打母亲、自己报警、母亲住院、法律诉讼；因游泳训练耽误学校文化课、学习成绩落后、没有稳定的同学关系等这些事件给患者带来剧烈冲击，造成了患者在成长过程中尤其是童年期经历了持久而明显的心理创伤，长期处于心理应激状态，出现情绪反应，如焦虑、抑郁，同时发现了甲状腺恶性肿瘤。

**结果** 甲状腺癌在 0~19 岁的儿童青少年中较为少见，占该年龄段恶性肿瘤 2%~4%。10~15 岁组发病率约为 0.25/百万，除 5 岁以下组别，女性发病率均高于男性。

病因常见于电离辐射、遗传基因、肥胖、碘摄入缺乏、自身免疫系统疾病等，但此来访者无上述相关因素，故考虑心理应激对个体甲状腺的影响。在过度应激产生刺激过程中，甲状腺细胞形态可被破坏，甲状腺激素分泌失常，甲状腺功能受影响，免疫系统调节失常。严重者自身免疫可被激发，导致甲状腺疾病的发生。

**结论** 频繁、长期的病理性应激会增加疾病的易感性或者加重原有疾病。心理因素成为机体应激的重要成分，心理应激均可引起神经、内分泌、免疫和代谢紊乱等全身性应激反应，严重或长期的应激反应可导致免疫功能抑制，诱发感染、肿瘤等疾病。因此剧烈或者持久的心理应激成为神经、精神、免疫、心血管、血液、消化、泌尿、生殖等系统疾病发生的重要因素。因此心理应激与甲状腺癌的关系需要持续关注。

## PO-025

### 正念减压疗法（MBSR）对创伤后应激障碍（PTSD）症状干预效果和长期疗效的 Meta 分析

韩卓颖、叶紫莹  
中国地质大学（武汉）

**目的** 正念减压疗法对创伤后应激障碍症状具有一定的治疗作用，但由于现有的相关文献数量不多，纳入的样本量较小，且研究结果存在较大差异，因此 MBSR 对 PTSD 症状的干预效果仍存在争议。本研究通过对 MBSR 干预 PTSD 症状的随机对照研究进行系统评价，为其在实际临床中的应用以及在该领域内的治疗选择和未来研究提供依据。

**方法** 计算机检索 Cochrane Library、Embase、Pubmed、Web of science、万方、维普、中国生物医学文献数据库和中国知网等中英文数据库中有关正念减压疗法对创伤后应激障碍症状干预效果的随机对照研究，文献检索年限为自数据库建立以来至 2023 年 3 月 7 日。根据干预措施将对照组分为三组：阴性对照组、PCGT 组和减压团体治疗组，其中阴性对照组包含 TAU 和等待对照两组，对三组数据分别进行数据分析，系统评价 MBSR 对 PTSD 症状的干预效果及长期疗效。文献筛选、数据提取和质量评价由两名经过 meta 分析研究培训的人员独立进行，使用 Cochrane 风险评估工具对所纳入的文献进行逐条质量评价，使用 RevMan 软件对所提取数据进行 meta 分析。

**结果** 共纳入 15 篇文献，研究类型均为随机对照试验研究，总计 1328 例患者。文献质量评价结果显示，8 篇文献选择偏倚风险低，7 篇风险水平不明确；实施偏倚风险高，仅 4 篇文献采用盲法试验报告为低风险，其余文献均因未采用盲法而被评估为高风险；仅 1 篇报告高发表偏倚风险，4 篇文献报告高失访偏倚风险。

**Meta 分析** 结果显示，MBSR 组与阴性对照组间对 PTSD 症状干预效果差异显著[SMD=-0.91，95%CI（-1.76~-0.05），P=0.04]，且与 PCGT 组相比无显著差异 [SMD=-0.05，95%CI（-

0.15~0.06),  $P=0.41$ ]; 阴性对照组亚组分析结果显示, 测量工具组差异不显著 ( $P=0.06$ ), 患者来源组差异显著 ( $P=0.007$ ), 故考虑患者来源差异可能为阴性对照组异质性来源。随访结果显示, MBSR 组与阴性对照组、PCGT 组相比, 对 PTSD 症状的长期疗效没有显著差异[SMD=-0.63, 95%CI (-1.27~0.02),  $P=0.06$ ; SMD=0.03, 95%CI (-0.15~0.20),  $P=0.76$ ]。

**结论** 正念减压疗法对创伤后应激障碍症状具有良好的即时干预效果, 但长期疗效不佳, 有待进一步考察研究。

## PO-026

### Virtual Reality Cognitive Behavior Therapy for the Treatment of Anxiety in Patients with Acute Myocardial Infarction: A Randomized Clinical Trial

Yuanyuan Li, Juan Peng, Pingyuan Yang, Jiajun Weng, Shikun Xu, Lihua Guan, Dong Huang, Qibing Wang, Juying Qian, Junbo Ge, Xiao Huang  
Zhongshan Hospital, Fudan University

**Objective** The presence of mental health conditions is common in people who have experienced acute myocardial infarction (AMI) and significantly disturbed the recovery of the patients. Providing timely and easy-access psychological interventions using virtual reality based cognitive behavior therapy (VR-CBT) have the potential to improve both the mental and physical symptoms. To examine the effectiveness of VR-CBT on anxiety symptoms for AMI patients administered to Intensive Care Unit (ICU) during the acute stage of AMI attack.

**Methods** In this single-blind, randomized clinical trial, participants administered to ICU due to AMI attack, and with anxiety symptoms (HAMA > 7) were continuously recruited from July 2022 through December 2022. Individual aged 18-75 years from Chinese Han population were randomly assigned (1:1) via block randomization to VR-CBT (in addition to usual mental support) or the control group (usual mental support). VR-CBT for around 30 min per day and over 1-week time. VR-CBT consisted of four modules and were delivered at the bedside over 1-week period. Assessments were done at baseline and immediately after treatment. The primary outcome measure was the change in anxiety symptoms from baseline to 1-week endpoint, assessed using the Hamilton Anxiety Rating Scale (HAM-A).

#### Results

The trial was stopped for futility after 148 participants were randomly assigned, 70 to the VR-CBT group and 78 to the control group. An ITT analysis showed that the 1-week VR-CBT intervention significantly reduced the anxiety symptoms compared with the control on HAM-A score ( $B=-9.47$ , [95% CI, -11.98 to -6.96],  $P < 0.001$ , Cohen's  $d=-1.27$  [95% CI, -1.64 to -0.90]). Of the 70 participants who started the VR-CBT, 62 (88.6%) completed the full intervention. Cyber sickness was the main reported adverse event ( $n=5$ ). Immediately after treatment, the scores of HAMA were lower than those before treatment in VR-CBT group, with statistically significant differences ( $P < 0.05$ ). However, the scores of HAMA were higher after 1-week period in the control group ( $P < 0.05$ ).

**Conclusion** Our results indicate that VR-CBT can significantly reduce post-AMI anxiety at acute stage. To our knowledge, this study is the first to show that a timely VR-CBT is efficacious and deliverable at ICU for the treatment of anxiety in post-AMI patients.



## PO-027

## 中小学教师对儿童常见精神障碍识别能力的比较研究

欧怡娜<sup>1,2</sup>、何浩宇（通讯作者）<sup>1,2</sup>

1. 湖南第一师范学院

2. 儿童心理发育与脑认知科学湖南省重点实验室

**目的** 调查中小学教师对四种儿童常见精神障碍的识别情况，比较两个群体的识别能力。

**方法** 自编案例式问卷，包括四个符合 ICD-10 诊断标准的精神障碍案例：抑郁障碍（DD）、品行障碍（CD）、社交焦虑障碍（SAD）和注意缺陷与多动障碍（ADHD）及相关问题，克隆巴赫系数为 0.80，专家效度为 0.79。通过网络平台以电子问卷形式对中小学教师进行匿名调查。

**结果** 本研究共 2201 份有效问卷纳入统计分析，其中小学教师 1407 人，初中教师 794 人；平均年龄为  $36.00 \pm 11.96$  岁，平均教龄为  $13.99 \pm 12.63$  年。小学教师的识别率从低到高分分别为 DD（16.0%）、CD（24.9%）、ADHD（38.9%）和 SAD（47.6%），初中教师为 DD（16.6%）、CD（24.1%）、ADHD（40.9%）和 SAD（48.1%），两群体的识别率均无显著差异（ $P > 0.05$ ）。DD 被小学教师识别为“压力导致的紧张状态”（34.6%）和“心理问题”（25.8%）等，初中教师为“心理问题”（31.7%）和“压力导致的紧张状态”（29.1%）。CD 被小学教师识别为“心理问题”（22.5%）和“行为问题”（19.3%）等，初中教师为“心理问题”（23.7%）和“行为问题”（17.0%）等。ADHD 被小学教师识别为“行为问题”（16.7%）和“心理问题”（14.3%）等，初中教师为“心理问题”（14.1%）和“行为问题”（12.5%）等。SAD 被小学教师识别为“心理问题”（16.8%）、“儿童青少年时期的正常现象”（5.5%）等，初中教师为“心理问题”（19.5%）和“儿童青少年时期的正常现象”（5.9%）等。正确识别四~零个案例的小学教师与初中教师比例依次为：3.4%：5.0%（四个）、15.5%：14.4%（三个）、23.9%：26.1%（二个）、29.5%：29.5%（一个）、27.7%：25.1%（零个），两群体识别率无显著差异（ $P > 0.05$ ）。中小教师的识别率受到性别、婚姻状况、年龄、教龄、学校所在地等人口学因素的影响（ $P < 0.05$ ）。

**结论** 第一，中小学教师对 DD 的识别率均极低，对 CD 的识别率均很低，对 ADHD 和 SAD 的识别率均较低。第二，全部识别四个案例的中小学教师均极少，有相当一部分教师不具备识别能力。第三，中小教师的识别能力没有差异。综上所述，中小学教师对儿童常见精神障碍的识别能力均偏低，亟待提高。

## PO-028

## 精神病临床高危综合征的潜在代谢生物标志物研究

曾嘉慧<sup>1,2</sup>、叶嘉依<sup>1,2</sup>、高毓清<sup>1,2</sup>、张天宏<sup>1,2</sup>

1. 上海市精神卫生中心（上海市心理咨询培训中心）

2. 上海交通大学医学院

**目的** 相较于大多数可诊断的疾病，精神病缺乏客观的生物诊断指标，早期诊断和干预面临挑战。本研究旨在通过代谢组学和脂质组学方法，寻找精神病临床高危综合征（CHR）的生物标志物，以提高对 CHR 的识别和干预能力，并揭示其代谢路径，为探索精神病的病理生理学机制提供新的视角。

**方法** 本研究首次对 CHR 进行非靶向组学全代谢谱分析的巢式病例对照研究。样本选自自己建立的 SHARP 队列，包括 395 例 CHR 人群和 94 例健康对照组（HC）。对基线和 1 年随访时总计 592 份血浆样本，采用了代谢组学和脂质组学的方法进行分析。利用聚类分析、线性回归模型、机器学习以及通路富集分析等技术，实现了横断面、前瞻性和纵向数据分析，旨在找出能区分 CHR 与 HC 受试者、预测 CHR 不同临床结果亚组的生物标志物，以及反映 CHR 在不同时间点血浆代谢物变化的指标。

**结果** 对基线时的 CHR 和 HC 的横断面差异代谢谱进行了比较,发现 CHR 组呈现较低的水溶性代谢物水平和较高的脂质水平。同时,还确定了一组由 7 种代谢物组成的生物标志物组,模型测试集的 AUC 值达到 0.875,可以有效地区分 CHR 和 HC。在对基线 CHR 进行前瞻性研究和随访临床结局亚组分析过程中,识别出一组能预测 CHR 的转化的由 4 种代谢物组成的生物标志物组,模型测试集中的 AUC 值为 0.8671,预测准确性在 1 年和 2 年随访时分别达到 0.868 和 0.828。对于随访期的 CHR 亚组,识别出了一组能区分已转化和未转化 CHR 的由 4 种代谢物组成的生物标志物组,模型测试集的 AUC 值达到 0.943。通过整合基线和纵向分析,建立了一个从健康到临床高危到精神病或症状缓解的代谢轮廓。

**结论** 在精神病发作之前高风险个体就已经出现了代谢水平的异常,对水溶性和脂溶性代谢物的组学研究可以用于预测 CHR 的临床结局,揭示精神病进展的代谢途径,为精神病病理生理学机制研究提供线索。

## PO-029

### 玉溪市基础教育教师癌症预警症状和危险因素认知的实证研究

冯林森<sup>1,2</sup>、董正娇<sup>1,2</sup>、李清丽<sup>3</sup>、杨青<sup>4</sup>、朱玉璐<sup>3</sup>、殷福林<sup>3</sup>、王麒尧<sup>3</sup>、宋伊潇<sup>5</sup>、王浩宇<sup>6</sup>

1. 昆明医科大学第六附属医院暨玉溪市人民医院

2. 昆明医科大学全科医学院

3. 昆明医科大学第一临床医学院

4. 昆明医科大学公共卫生学院

5. 昆明医科大学法学院

6. 昆明医科大学基础医学院

**目的** 本研究以玉溪市中小学、幼儿园教师作为研究对象,了解基础教育教师对癌症预警症状和危险因素的认识水平,探讨其影响因素,分析癌症认知、自我效能感、电子健康素养和癌症恐惧之间的相互作用。

**方法** 于 2022 年 1 月 14 日—2022 年 11 月 3 日,采用判断抽样法,选取云南省玉溪市 3357 例在职中小学、幼儿园教师进行横断面研究。

**结果** (1) 癌症预警症状认知问卷(Cancer Warning Symptoms Cognition Questionnaire, CWSCQ)、癌症危险因素认知问卷(Cancer Risk Factors Cognition Questionnaire, CRFCQ)具有良好的信度。癌症恐惧量表(Fear of Cancer Scale, FOCS)、癌症症状歧视量表(Cancer Symptoms Discrimination Scale, CSDS)具有良好的信度和效度。

(2) 在癌症预警症状认知方面,基础教育教师对异常肿块知晓率最高,对持续消化不良知晓率最低;多重线性回归模型示,教师的癌症危险因素认知、癌症症状歧视心理、癌症恐惧心理、自我效能感、癌症患者照顾史、主动学习癌症相关知识、性别、职称、电子健康素养、教师类型等变量是癌症预警症状认知水平的影响因素( $P<0.05$ )。

(3) 在癌症危险因素认知方面,基础教育教师对食用变质/过期食品知晓率最高,对暴晒太阳知晓率最低;多重线性回归模型示,癌症预警症状认知、癌症症状歧视心理、性别、主动学习癌症相关知识、学历、出生所在地、婚姻状态、自觉健康状况、吸烟史、生活满意度、自我效能感等变量是教师癌症危险因素认知水平的影响因素( $P<0.05$ )。

(4) Bootstrap 法和结构方程模型示,自我效能感、电子健康素养、癌症恐惧直接影响癌症认知。癌症恐惧在自我效能感与癌症认知间存在中介作用( $P<0.05$ ),教师电子健康素养在自我效能感与癌症认知间存在遮掩作用( $P<0.05$ )。

**结论** 基础教育教师对癌症的认知水平受诸多因素影响且有待进一步提高。教师是负责“传道授业解惑”的特殊人群,基础教育阶段是学生健康素养形成与发展的关键时期,教师可能对学生的癌症认知水平、疾病健康素养产生深远的影响。针对教师群体开展规范化的癌症健康素养提升行动,可从本质上提高教师的癌症认知水平,促进学生健康素养形成,提升癌症早防、早诊、早治率,有效降低癌症的患病率和病死率。

## PO-030

**进食障碍患者照料者特定照护负担与家庭顺应的相关性分析**

王鑫鑫、薛明华、耿淑霞  
北京大学第六医院

**目的** 调查进食障碍患者照料者特定照护负担与家庭顺应的水平，并分析二者间的关系。

**方法** 采用便利抽样法，选取 2022 年 11 月—2023 年 5 月，北京大学第六医院收治的进食障碍患者的照料者 203 例为研究对象，采用一般资料调查问卷，进食障碍症状影响量表和进食障碍家庭顺应量表调查照料者的特定照护负担与家庭顺应的现状，采用 Pearson 相关分析和分层多元线性回归分析特定照护负担与家庭顺应的关系。

**结果** 进食障碍患者照料者特定照护负担总分（ $36.79 \pm 10.16$ ）分，各维度得分取条目平均分，由高到低依次为内疚（ $2.00 \pm 0.59$ ）分，营养（ $1.73 \pm 0.67$ ）分，社交孤立（ $1.36 \pm 0.84$ ）分，行为失控（ $1.27 \pm 0.51$ ）分；家庭顺应总分（ $49.65 \pm 21.58$ ）分，各维度得分由高到低依次为回避和修改家庭常规（ $2.07 \pm 0.90$ ）分，寻求保证（ $1.40 \pm 0.65$ ）分，家庭控制（ $1.36 \pm 0.77$ ）分，进餐仪式（ $1.24 \pm 0.85$ ）分，视而不见（ $0.93 \pm 0.82$ ）分。Pearson 相关分析显示：特定照护负担总分及各维度得分与家庭顺应总分及各个维度得分呈正相关（ $P < 0.05$ ）。分层多元线性回归分析发现：性别、家族史阳性、回避和修改家庭常规、进餐仪式是特定照护负担的主要影响因素（ $P < 0.05$ ）。

**结论** 进食障碍患者照料者特定照护负担和家庭顺应总体处于中等偏下水平，二者呈正相关；女性、有精神心理疾病家族史的照料者特定照护负担更重，当照料者不断回避和修改家庭常规、迁就患者进餐仪式时，其特定照护负担越重。因此各医疗卫生服务机构应重点关注此类人群，采取积极有效的心理干预，增加照料者疾病相关知识，改变其固有认知和行为，进而降低进食障碍家庭顺应性，减少照料者特定照护负担。

## PO-031

**儿童慢性疼痛程度对生活质量的影響：抑郁焦虑的中介作用**

赵奇慧、王昱琳、徐燕清、张瑾、朱大倩  
复旦大学附属儿科医院

**目的** 研究旨在探索慢性疼痛儿童的疼痛程度、抑郁、焦虑症状及生活质量之间的相互关系。寻找慢性疼痛儿童生活质量的影响因素，并探索抑郁焦虑症状在疼痛程度和生活质量间的中介作用。

**方法** 研究纳入了 228 名 8 到 18 岁就诊于复旦大学附属儿科医院心理科、神经内科、风湿科、消化科的慢性疼痛儿童。采用儿童抑郁量表(CDI)评估儿童的抑郁症状，儿童焦虑量表(SCARED)评估儿童的焦虑症状，数字评定量表(NRS)评估儿童的疼痛程度，儿科生活质量量表(PedsQL4.0)评估儿童的生活质量。

**结果** 慢性疼痛儿童的生活质量与抑郁症状( $r = -0.77, p < 0.001$ )、焦虑症状( $r = -0.70, p < 0.001$ )及疼痛程度( $r = -0.24, p < 0.001$ )负相关。分层回归结果显示，疼痛程度显著影响慢性疼痛儿童的生活质量（ $\beta = -0.26, p < 0.001$ ），但将抑郁焦虑症状纳入模型后，疼痛程度对生活质量的影響不再显著。抑郁症状（ $\beta = -0.57, p < 0.001$ ）及焦虑症状（ $\beta = -0.25, p = 0.001$ ）显著影响慢性疼痛儿童的生活质量。采用 bootstrap 法进行中介效应分析，结果表明儿童抑郁症状(95%CI= -2.07,-0.76)及焦虑症状(95%CI=-0.10,-0.19)在疼痛程度及生活质量之间发挥着完全中介作用。

**结论** 相较于疼痛程度，抑郁焦虑症状对儿童的生活质量有更大的影响。临床工作中需要注重对慢性疼痛儿童情绪的评估与干预，以提升他们的生活质量。

## PO-032

**难治性精神分裂症的皮层厚度及个体化结构协变网络研究**

王俊、唐劲松

浙江大学医学院附属邵逸夫医院

**目的** 精神分裂症是一种严重的精神疾病。具有病程迁延、易复发、高致残性等特点，不仅给患者带来痛苦，同时也给其家庭和社会造成严重的经济负担。难治性精神分裂症（Treatment resistant schizophrenia, TRS）患者对药物治疗效果不佳，具有沉重的疾病负担。因此本研究采用形态学分析和个体化结构协变网络方法，探究 TRS 皮层厚度及结构协变网络属性的改变。

**方法** （1）本研究采集了 52 例难治性精神分裂症、34 例精神分裂症治疗有效者（Treatment Responder, TR）以及 84 例健康对照（Healthy control, HC）的 3D T1 结构加权像。我们通过 FreeSurfer 软件测量了 68 个皮层区域的皮层厚度。使用一般线性模型比较三组间皮层厚度的差异。

（2）基于皮层厚度，构建个体化脑结构协变网络，基于图论的方法，采用方差分析比较三组人群结构协变网络全局及局部属性的差异。

（3）采用相关分析方法，在 TRS 患者中，探索其临床特征与其特异性改变的形态及拓扑学指标之间的关系。

**结果** （1）形态学研究显示：在皮层厚度方面：与 HC 组相比，TRS 组与 TR 组均表现出以额颞叶为主的皮层厚度下降，其中 TRS 组较 TR 组皮层厚度下降更为广泛（ $P < 0.05$ ）。与 HC 和 TR 组分别相比，TRS 组的双侧梭状回、双侧脑岛、左侧颞中回、左额下回岛盖部及右后扣带回的皮层厚度的显著降低（ $P < 0.05$ ）；其中 TR 的左侧颞中回皮层厚度也显著低于 HC（ $P < 0.05$ ）。

（2）结构协变网络研究显示：与 HC 组比，TRS 组具有更低的聚类系数及局部效率，其中，男性较女性患者具有更低的聚类系数及局部效率。

（3）相关分析显示：在 TRS 组中，患者左侧颞中回的皮层厚度与 PANSS 总分呈负相关（ $r = -0.328$ , uncorrected  $P = 0.017$ ）

**结论** （1）TRS 存在更广泛的灰质损害：表明 TRS 患者较 TR 患者表现出更广泛的灰质损害，尤其以额颞叶为主；同时 TRS 患者存在特异性区域的皮层厚度减少，分别位于梭状回、脑岛、左额下回岛盖部、左侧颞中回及右后扣带回。

（2）TRS 存在结构协变网络异常：TRS 患者具有更低的聚类系数、局部效率。表明 TRS 患者可能存在大脑局部处理信息能力的下降，男性较女性患者下降更为显著。

## PO-033

**Difference in relationship of peer victimization and mental health in vocational school students by genders : a network analysis**

Jun Wang, Jinsong Tang

Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

**Objective** Background: Peer victimization is common in vocational school students and a lot of evidence shows peer victimization is associated with poor mental health. However, the relationship between peer victimization, emotional problems and psychological state is unclear by genders.

**Objective:** We sought to explore the interconnection of peer victimization, depression, anxiety, wellbeing and mental resilience across genders and find the key symptoms related to peer victimization respectively in male and female vocational school students.

**Methods** A total of 4929 students from vocational school were included. The Multidimensional Peer Victimization Scale (MPVS) was used to measure peer victimization, the nine-item Patient Health Questionnaire (PHQ-9), the seven-item Generalized Anxiety Disorder Scale (GAD-7), the

Warwick-Edinburgh Mental Well-being Scale (WEMWBS), and the 10-item Connor-Davidson Resilience Scale (CD-RISC-10) were used to measure mental health including anxiety and depressive symptoms, wellbeing and mental resilience. Network analysis was used to explore the interconnection of peer victimization and mental health respectively by genders. Central symptoms were identified via centrality indices.

**Results** Results: Suicide thought and depressed mood were the most central nodes of the network respectively in male and female students. Also, chronic depressed mood played important role in the network in both male and female students.

**Conclusion** Suicide thought was the key symptom related to peer victimization in male vocational school students however depressed mood in female students. Screening and curbing suicide thought and depressed mood is likely to protect students suffering peer victimization from further harm.

PO-034

## Use of Music Therapy in the Treatment of Somatic Symptoms of Chronic Pain for Pediatrics Patients: A Case Study

Yulin Wang, Yanqing Xu, Qihui Zhao, Jin Zhang, Daqian Zhu  
Children's Hospital of Fudan University

**Objective** Literatures have shown that parents' distress, perception of pain, pain catastrophizing, and protective response are related to children's chronic pain and functioning. Very limited study on music therapy of somatic symptoms disorder in chronic pain. The objective of this case study is to explore how the use of music therapy help a ten-year-old boy and his family deal with somatic symptom disorder in chronic abdominal pain through a family-centered approach.

**Methods** This case provides a biopsychosocial perspective in the treatment of somatic symptom disorder in chronic pain from referral, assessment, treatment planning, implementation, family education, and termination. The process of referral was assessed by multidisciplinary team consultation including department of gastroenterology, otolaryngology, respiratory, hematology, neurology, cardiology, infectious disease, rehabilitation, and psychology. An assessment of chronic pain through a biopsychosocial model including the evaluation of symptoms, duration, and frequency of pain, client's social functioning, support system, family relationship, and the perception of pain was introduced. The treatment planning, including understanding client's needs, identifying the appropriate goals, approach, setting, and frequency, were discussed by the team of psychology. The music therapy treatment was divided into two phases due to the changing needs, goals, and setting. The patient was seen by the music therapist two times per week inpatient during phase one, and goals including to establish rapport, to increase the sense of control, and to improve the awareness of mind-body connection. In the phase two, the patient and the music therapist met two times per week outpatient, and goals including to develop awareness and expression of interpersonal relationship, and to provide creative ways for emotional expressions. Music therapy interventions including progressive muscle relaxation, songwriting, and improvisation (video and audio recordings will be shared with permissions, and face will be covered and identified information will be removed during the oral presentation) were delivered by a board-certified music therapist (MT-BC). Family education including disease education, pain diary, reflection journals were introduced by the pediatric psychiatrist. A series of follow-up sessions were provided via telehealth once per week in order to help the family prepare the transition back to normal daily life. Child Behavior Checklist (CBCL), Pediatric Quality of Life Inventory (PedsQL – both Child and Parents versions), Children's Depression Inventory (CDI), and Screen for Child Anxiety Related Disorders (SCARED) were used as pre- and post- treatment evaluation tools for assess the patient's symptoms, moods, and quality of life.

**Results** The score of somatic complaints under Child Behavior Checklist (CBCL) was decreased after receiving music therapy. Both the patient and parents reported a better quality of life at the end of treatment. The patient was able to return to home and get ready for school.

**Conclusion** Music therapy can be served as a helpful way for re-establishing mind-body connection, exploring non-verbal expression, and developing interpersonal relationship. Music therapy can be considered as a useful approach in the treatment of somatic symptom disorder in chronic pain.

PO-035

## 慢性失眠障碍患者对恐惧记忆的影响

孙静静、李盼盼、徐文悦、张碧丹、张丹伟、朱俊、汪周兵  
镇江市精神卫生中心

**目的** 健康的睡眠对于机体情绪调节和情绪记忆巩固起着重要的作用。睡眠不足会产生一系列有害影响，例如睡眠剥夺和限制会干扰情绪调节和情绪记忆的巩固。本研究明确慢性失眠障碍（CID）是否会因长期睡眠中断和/或睡眠不足进而干扰依赖睡眠的恐惧记忆巩固。

**方法** 利用听觉恐惧性条件反射范式建立恐惧条件刺激，恐惧条件反射习得在第一天进行，24 小时后进行消退学习。对 20 例 CID 患者组和 18 例健康对照组分别采集恐惧习得期和消退期的皮肤电反应信号（skin conductance response, SCR）和主观恐惧报告即李克特式 7 分量表，比较恐惧习得期和消退期恐惧反应差异。

**结果** 在恐惧消习得期，与健康被试相比，CID 患者组 SCR 值 Z 分和李克特式 7 分量表无统计学差异（ $p>0.05$ ）。提示在恐惧习得期，两组之间恐惧反应无显著差异。

在恐惧消退期，与健康被试相比，CID 患者组 SCR 值 Z 分和李克特式 7 分量表有统计学差异（ $p<0.05$ ），且 CID 患者组 SCR 值明显高于健康被试组，CID 患者组李克特式 7 分量明显高于健康被试，提示 CID 患者主观恐惧感受较健康被试反应强烈。

对于 CID 患者组，恐惧习得期和恐惧消退期的 SCR 值 Z 分和李克特式 7 分量表无统计学差异（ $p>0.05$ ）；而对于健康被试组，恐惧习得期和恐惧消退期的 SCR 值 Z 分和李克特式 7 分量表有统计学差异（ $p<0.05$ ）。提示 CID 患者恐惧反应存在消退延迟。

**结论** 在恐惧消习得期 CID 患者恐惧情绪反应无明显受损，而在恐惧消退期，CID 患者恐惧反应强烈，且 CID 与存在延迟消退，可能与 CID 患者破坏的睡眠结构导致恐惧消退记忆受损有关。

PO-036

## Wnt/ $\beta$ -catenin-CREB/BDNF-miRNA-223 feedback loop regulates the seizures in the two kinds of depression epilepsy comorbid rat models

ruijie Geng,Chenyu Ye,Pingyuan Yang,Wang Hao,Xiao Huang  
Zhongshan Hospital Fudan University

**Objective** Objective: Epilepsy is a common chronic neurological condition, and depression is one of the most crippling comorbidities frequently connected to epileptic patients. Here, we investigated the positive feedback regulation mechanism between the Wnt/ $\beta$ -catenin-CREB/BDNF-miRNA-223 signaling pathway in the pathogenesis of two kinds of depression epilepsy comorbid rat models and explored the underlying mechanism.

**Methods** qPCR, Western Blot, and Elisa were used to detect the expression of miRNA-223, brain-derived neurotrophic factor (BDNF), phosphorylated cAMP-response element binding protein (p-CREB), and phosphorylated -chain protein (p- $\beta$ -catenin) in the hippocampus of two different types

of depression epilepsy comorbid rat models. Rat neural stem cells were stimulated to differentiate into neurons in a vitro experimental paradigm, which was utilized to investigate the putative mechanism and the regulatory functions of miRNA-223, BDNF, p-CREB, and the Wnt/ $\beta$ -catenin signaling pathway. In vivo, two types of epileptic comorbid depression models and depressive comorbid epilepsy models were treated with the inhibitor of the Wnt/ $\beta$ -catenin signaling pathway (ICG001: 5 mg/kg, i.v.), which were used to explore the effect of Wnt/ $\beta$ -catenin signaling pathway in the pathogenesis of two kinds of depression epilepsy comorbid rat models through seizure severity score, tail suspension test (TST) and sucrose preference test (SPT).

**Results** Compared to the control group, the expression of miRNA-223, BDNF, p-CREB, and p- $\beta$ -catenin in the hippocampus of two kinds of depression epilepsy comorbid rat models during seizures were significantly upregulated. There was a positive feedback regulation mechanism between the Wnt/ $\beta$ -catenin-CREB/BDNF-miRNA-223 signaling pathway and the overexpression plasmid pcDNA3.1-p-CREBSer133 revealed that the neurons were induced apoptosis in rat neural stem cell-derived neurons. Additionally, inhibiting the Wnt/ $\beta$ -catenin signaling pathway was able to down-regulate the expression levels of BDNF, p-CREB, and miRNA-223 in the hippocampus and alleviated seizures in the two types of depression epilepsy comorbid rat models.

**Conclusion** Our research demonstrated a positive feedback regulatory mechanism between the Wnt/ $\beta$ -catenin-CREB/BDNF-miRNA-223 signaling pathway, which can cause abnormal activation of the Wnt/ $\beta$ -catenin signaling pathway, resulting in the production of a significant amount of BDNF and neuronal apoptosis, thereby promoting the seizures of depressive and epileptic disorders.

PO-037

## 社会心理因素对于痤疮的影响：系统性回顾

钟小姣、杜宇  
西南医科大学附属中医医院

**目的** 本系统回顾的目的是探究生物、社会和心理因素对痤疮的影响。

**方法** 本研究通过检索知网、维普、万方等中文数据库以及 pubmed、web of science 等外文数据库和手动检索相关文献，使用特定的筛选标准，关键词为 痤疮 社会 心理 生物学 系统回顾，最终纳入了 34 篇文献。这些文献包括痤疮的病因、流行病学、生物学机制以及生活方式和心理因素等方面的研究。

**结果** 结果表明，痤疮的发病和病情恶化受多种因素的影响，包括遗传、荷尔蒙、细菌感染等生物因素，以及压力、睡眠不足、饮食和护肤习惯等生活方式因素。社会因素如环境污染和气候变化也可能对痤疮产生影响。此外，心理因素也被发现与痤疮相关，痤疮患者常常伴随着自尊心受损、焦虑和抑郁等心理问题。

**结论** 结论表明，痤疮是一个受多种因素综合影响的复杂疾病。生物、社会和心理因素在痤疮的发病和病情恶化中起到重要作用。未来的研究应该关注这些因素之间的相互作用，并探索相应的干预措施，以改善痤疮患者的生活质量和心理健康。同时，加强公众教育，提高对痤疮的认识和理解，有助于减少对患者的歧视和偏见。这些研究成果将为临床实践提供指导，促进个体化治疗的发展和应用，从而更好地管理和控制痤疮。

PO-038

## 某综合医院精神心理科联络会诊分析

杨宁波、李洁、张国秀、胡莹莹、张宾  
河南科技大学第一附属医院

**目的** 探讨某综合医院内精神心理科联络会诊的分布特征及演变趋势

**方法** 收集某综合医院 1 年内精神心理科联络会诊病例 1043 例，完成自制调查问卷，使用 SPSS 统计软件进行描述性统计分析。

**结果** 会诊病例最多分布在心脏内科（17.3%），其次为神经内科（15.9%）、急诊科（10.6%）、全科（8.9%）、内分泌（8.6%）、消化内科（7.6%）、呼吸科（6.2%）、肿瘤科（6.0%）、脑外科（5.2%）、普外、泌尿（4.0%）、康复科（3.2%）、儿科（2.3%）、骨科（2.1%）、血液（2.0%）以及其他 0.2%；患者年龄分布以 40~79 岁（54.3%）和 30~45 岁（32.5%）、8~18（13.7%）岁为多；会诊主要原因为非器质性失眠（54.2%）、急性脑病综合征（26.4%）、不能解释的躯体症状（30.9%）、焦虑发作（23.8%）、精神病性症状（20.6%）和既往有精神障碍史而目前无明显症状者需要手术的（10.5%）；会诊诊断主要包括抑郁状态、焦虑状态（情感障碍、焦虑症及躯体疾病伴发的情感障碍，36.2%）、躯体形式障碍（26.4%）、脑器质性精神障碍（21.6%）、精神分裂症和其他精神病性障碍（15.2%）、精神发育迟滞等。

**结论** 综合医院精神科联络会诊涉及各科室、各年龄段；较十年前比较，主要会诊原因由急性脑综合征、脑器质性精神疾病逐步演变为抑郁、焦虑双相情感障碍等症状，同时青少年情感障碍伴有自残、自伤的比例增加明显，糖尿病、康复、肿瘤、血液病等慢性疾病所引发的患者心理变化，也越来越被医生关注，同时传统的急性脑病综合征和阳性精神病性症状也依然存在。

PO-039

## Gender differences in alcohol drinking among adolescents: a school-based survey in China

Ling Li, Yanhui Liao  
Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

**Objective** Alcohol drinking in adolescents is an increasing concern, with its adverse impacts on this population. Thus, it was necessary to investigate the proportion of alcohol drinkers and hazardous drinkers and the socio-demographic associated factors of hazardous drinkers among primary and middle school students.

**Methods** A school-based cross-sectional survey was carried out between September and December 2020 in a city in southwestern China, with a total of 89,360 students (including 50.0% boys) from primary and middle school. Alcohol drinking behaviors were assessed by self-reported measures on the Alcohol Use Disorders Identification Test Consumption (AUDIT-C).

**Results** Of the 89,360 respondents, 19.0% were alcohol drinkers and 4.0% were hazardous drinkers. More boys than girls were alcohol (22.1% for boys vs. 16.0% for girls) or hazardous drinkers (5.2% vs. 2.7%). The mean AUDIT-C score was 1.4 ( $\pm 2.10$ ) and significantly higher in boys ( $1.6 \pm 2.22$ ) than girls ( $1.2 \pm 1.89$ ,  $p < 0.001$ ). There was a polarity between boys and girls beginning at grade 10, with an increasing number of alcohol or hazardous drinkers were boys and decreasing for girls. Multiple logistical regression analysis indicated that older age, boys, living in rural and left-behind children were risk factors while nuclear family and parents no drinking were protective factors associated with being a hazardous drinker.

**Conclusion** Considering the prevalence of alcohol consumption in primary and middle school, which was associated with older age, boys, living in rural, family type, and parents' drinking behavior, more strict measures should be informed to reduce alcohol use in the typical students.



PO-040

## Prevalence and Correlates of Addictive Use of Internet Game, Social Media, and Smartphone among Chinese Youth

yi liu

Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

**Objective Objective:** Addictive use of internet game, social media, and smartphone among youth are rising public problems worldwide, and they have negative impacts on mental health. Through this large sample study in China, we investigated the prevalence and associated factors of internet gaming addiction, social media addiction and smartphone addiction, as well as their comorbidity.

**Methods Methods:** A sample of 90,039 school students were recruited utilizing the stratified cluster random sampling strategy. Internet gaming addiction was measured by the Nine-Item Internet Gaming Disorder Scale-Short Form (IGDS9-SF). Social media addiction was assessed through the Bergen Social Media Addiction Scale (BSMAS). Smartphone addiction was assessed using Smartphone Application-Based Addiction Scale (SABAS). Descriptive analysis was applied to describe the characteristics of participants. Univariate logistic regression was used to explore the associated factors of different types of behavioral addictions, after that the multivariate logistic regression was used to estimate these associations after adjustment. The significance level was set at less than 0.05, two-tailed. All the statistical analyses were performed using R software (Version 3.3.3).

**Results Results:** A total of 89,521 subjects were included in the final analysis. As shown in the table 1, the mean age was  $13.4 \pm 2.1$  years old, and 44,797 (50.05%) subjects were girls. The prevalence of internet gaming addiction, social media addiction, and smartphone addiction was 2.54%, 1.62%, and 5.36%, respectively. As shown in the Figure1, Grade 8, 9, and 10 had the highest prevalence of internet-related addiction among all grades. To further understand behavioral addictions, we also explored the associated factors with them. After adjustment we found that depression, anxiety, and peer bullying were risk factors for internet gaming addiction, social media addiction, and smartphone addiction.

**Conclusion Conclusion:** The present study reveals the situation that addictive use of internet game, social media, and smartphone among Chinese youth. Results showed that the internet gaming addiction, social media addiction, and smartphone addiction among youth was worrisome, especially in grades 8-10. Depression and anxiety both were risk factors for internet-related addiction, indicating youth's mental health should be paid more attention. As a key risk factor for these types for addictions, peer bullying among youth cannot be ignored either.

PO-041

## Alerting network, cognitive flexibility in children with attention-deficit/hyperactivity disorder, and the moderating effect of neuroticism

Xiang Zhang<sup>1</sup>, Shaoxia Wang<sup>1</sup>, Qianyun Liu<sup>1</sup>, Chujun Wu<sup>2</sup>, Yunyun Du<sup>2</sup>, Yanrong Wang<sup>2</sup>, Jianqun Fang<sup>2</sup>

1. General Hospital of Ningxia Medical University

2. General Hospital of Ningxia Medical University

**Objective** This study primarily aimed to analyze differences in cognitive flexibility between individuals with ADHD and those without and further examine associations between attention networks, personality, and cognitive flexibility in children with ADHD.

**Methods** A total of 55 children aged 7 to 11 years who were diagnosed with ADHD and 40 normal children participated in this study. Their cognitive flexibility, personality traits and attentional

networks were assessed using the Wisconsin Card Sorting Test (WCST), the Eysenck Personality Questionnaire and the Attention Network Test respectively. The association of personality traits with strong attentional functioning and cognitive flexibility was investigated using multiple regression analysis.t-test.

**Results** ADHD group had significantly higher Perseverative Responses (PR) and Perseverative Errors (PRE) on the WCST and statistically lower Number of Categories Completed (CC) than control group, indicating that children with ADHD have significant deficits in cognitive flexibility. Children with ADHD had significant deficits in cognitive flexibility. A multiple regression analysis revealed that the alerting effect was highly associated with cognitive flexibility at high levels of neuroticism. This association was not salient in individuals with low levels of neuroticism.

**Conclusion** This study demonstrated that the ADHD group experienced lower cognitive flexibility than the control group. In addition, we showed the effect of neuroticism and alerting networks on cognitive flexibility. These findings may help psychiatrists provide intervention strategies to mitigate the impairment of social functioning in ADHD with cognitive spirituality deficits.

## PO-042

### 粪便微生物群移植治疗胃食管反流病合并焦虑抑郁状态患者的疗效研究

陈嘉韦、陈志平

中国人民解放军联勤保障部队第 900 医院

**目的** 已有研究显示焦虑抑郁状态可能伴有肠道微生物群失调，通过改变肠道微生物群可能可以改变情绪状态。胃食管反流病患者往往合并有焦虑和抑郁状态，可导致反流高敏感，临床上质子泵抑制剂（PPI）治疗效果欠佳。本研究将粪便微生物群移植（FMT）应用于胃食管反流病合并有焦虑或抑郁状态的患者，观察其微生物群的变化，评估粪便微生物群移植治疗合并焦虑抑郁状态的胃食管反流病的疗效。

**方法** 纳入诊断为胃食管反流病合并焦虑或抑郁状态的患者，随机分为 FMT 组和对照组。收集所有患者的粪便样本，通过 16sRNA 测序分析粪便微生物群组。FMT 组口服移植的粪便微生物群胶囊（FMT 胶囊）和 PPI，对照组口服空胶囊及 PPI（同 FMT 组），口服时间均为 8 周。所有患者治疗前，以及治疗第 1 周、第 4 周、第 8 周均进行 GERDQ、RDQ 以及焦虑抑郁量表评分，并收集粪便样本进行微生物群组检测。

**结果** 共纳入 100 名诊断为胃食管反流病合并有焦虑或抑郁状态的患者，随机分为 FMT 组（n=50），对照组（n=50）。与治疗前相比，对照组在治疗第 1 周、第 4 周、第 8 周后各项评分差别不大，差异无统计学意义（ $p>0.05$ ），粪便微生物群无明显改变（ $p>0.05$ ）。与治疗前相比，FMT 组在治疗第 1 周各项评分差别不大（ $p>0.05$ ），粪便微生物群无明显改变（ $p>0.05$ ）。治疗第 4 周 RDQ 评分降低，差异有统计学意义（ $p<0.05$ ），GERDQ、焦虑及抑郁评分稍有降低，但差异无统计学意义（ $p>0.05$ ），粪便微生物群无明显改变（ $p>0.05$ ）。FMT 组治疗 8 周后，GERDQ、RDQ、焦虑和抑郁评分较治疗前均明显降低，差异有统计学意义（ $p<0.05$ ），粪便微生物群有明显变化（ $p<0.05$ ）。间比较方面，FMT 组和对照组在治疗第 1 周各项评分及粪便微生物群的差异无统计学意义（ $p>0.05$ ）。治疗第 4 周 FMT 组 RDQ 评分低于对照组，差异有统计学意义（ $p<0.05$ ），GERDQ、焦虑及抑郁评分及粪便微生物群的较对照组无明显改变（ $p>0.05$ ）。治疗第 8 周 FMT 组各项评分均低于对照组，差异有统计学意义（ $p<0.05$ ），粪便微生物群有明显变化（ $p<0.05$ ）。

**结论** 粪便微生物群移植可改变胃食管反流病合并有焦虑或抑郁状态的患者肠道微生物群组，增加有益菌群含量，改善胃食管反流症状和焦虑、抑郁状态。

## PO-043

## 不同类型胃食管反流病合并焦虑抑郁状态患者肠道微生物群的差异性研究

陈嘉韦、陈志平

中国人民解放军联勤保障部队第 900 医院

**目的** 已有研究显示焦虑抑郁状态可能伴有肠道微生物群失调，通过改变肠道微生物群可能可以改变情绪状态。胃食管反流病患者往往合并有焦虑和抑郁状态，且可能存在不同类型的反流。对非酸反流的患者，临床上质子泵抑制剂（PPI）治疗效果欠佳。本研究通过检测不同的胃食管反流病合并焦虑或抑郁状态的患者粪便生物群的改变，评估粪便微生物群与不同类型反流可能的相关性。

**方法** 纳入诊断为胃食管反流病合并焦虑或抑郁状态的患者，进行食管 pH 阻抗检测，根据检测结果分为酸反流组、弱酸反流组、碱反流组、气体反流组。收集所有患者的粪便样本，通过 16sRNA 测序分析粪便微生物群组。

**结果** 共纳入 60 名诊断为胃食管反流病合并有焦虑或抑郁状态的患者，平均年龄  $40.8 \pm 12.6$  岁；65% 为女性。所有患者均进行食管 pH 阻抗检测，根据结果分为酸反流组（ $n=28$ ）、弱酸反流（ $n=10$ ）、碱反流组（ $n=10$ ）、气体反流组（ $n=12$ ）。酸反流组、弱酸反流组患者的粪便样本中的优势菌群是粪杆菌和粪肠球菌，其比例高于碱反流组，差异有统计学意义（ $p < 0.05$ ），但酸反流组与弱酸反流组之间差异不明显。气体反流组相比液体反流组（酸反流组、弱酸反流组、碱反流组），优势菌群是奥氏杆菌和阿利斯蒂普菌，粪杆菌和粪肠球菌的比例低于碱性反流组，差异有统计学意义（ $p < 0.05$ ）。

**结论** 胃食管反流病合并焦虑或抑郁状态的患者伴有粪便微生物群的改变，不同反流类型患者的粪便微生物群的改变不同，可能与反流物的性质有关。

## PO-044

## 肺结节患者的心理状态及其相关影响因素的横断面研究

梁爽<sup>1</sup>、赫英娟<sup>2</sup>、佟靖雯<sup>2</sup>、魏景洋<sup>2</sup>、陈倩文<sup>2</sup>、孟妍<sup>2</sup>、李为民<sup>1</sup>、金宇斌<sup>1</sup>、王康<sup>2</sup>

1. 牡丹江医学院附属第二医院

2. 牡丹江医学院

**目的** 探究肺结节患者心理状态以及相关影响因素。

**方法** 选取牡丹江医学院附属第二医院呼吸科、胸外科门诊就诊患者 867 例，所有患者均进行了肺部低剂量 CT（low-dose CT, LDCT）扫描，并进行数据收集，包括一般资料、影像学资料 and 人格特征等。运用医院焦虑抑郁量表（Hospital Anxiety and Depression Scale, HADS）对患者进行心理评估，焦虑和抑郁亚量表的分值大于 7 分者界定为具有焦虑或抑郁。

**结果** 867 例肺结节患者抑郁发生率为 21.9%（190/867），焦虑的发生率为 38.9%（337/867），两者的共患率为 17.5%（152/867）；焦虑情绪和抑郁情绪发生显著相关（ $p < 0.05$ ），年龄则是焦虑发生的保护因素（ $p > 0.05$ ）；复查 CT 频次、肺结节数目、肺结节大小、癌症家族史、伴有临床症状是焦虑发生的独立影响因素（ $p < 0.05$ ）；磨玻璃结节质性、肺结节大小、肺结节数目则为抑郁发生的独立影响因素（ $p < 0.05$ ）；学历、劳动能力、教育程度、婚姻状况和患者的抑郁评分差异具有统计学意义（ $P < 0.05$ ）。

**结论** 肺结节患者的焦虑及抑郁情绪受多种因素影响，及早确定治疗方案，提供有效的随访监管及良好的心理疏导等对提高患者依从性和减轻焦虑抑郁情绪进展可能有所裨益。

PO-045

## 催产素和精氨酸血管加压素对性取向的调节作用

李幼东、杜玉茹、刘淙淙  
河北医科大学第一医院

**目的** 性取向是人类较为复杂的社会行为之一，受到个体基因与环境交互作用的影响，尽管大量的研究表明生命早期应激和神经激素在性取向中发挥着重要作用，但尚不清楚生命早期应激是否对性取向有影响，神经激素在其中又发挥着怎样的作用。基于此，本课题着重研究了催产素和精氨酸血管加压素在生命早期应激诱导性取向改变中的作用。

**方法** 89 名健康成年男性按性取向分组：异性恋男性组（ $n = 32$ ）和同性恋/双性恋男性组（ $n = 57$ ），采用一般问卷、症状自评量表、金赛量表和童年创伤问卷对性取向、心理健康状况和生活事件进行评估，同时结合酶联免疫吸附测定评估受试者血浆催产素和精氨酸血管加压素含量。

在啮齿类动物实验中，首先构建生命早期应激致成年雄性 ICR 小鼠同性恋模型。采用社会交互测试评估生命早期应激对小鼠社会交往的影响，采用垫料偏好测试和性偏好测试评估生命早期应激对小鼠性取向的影响，采用酶联免疫吸附测定评估生命早期应激对小鼠血浆催产素和精氨酸血管加压素含量。其次，通过向应激鼠腹腔注射催产素（ $0.5\text{mg/kg}$ ）或精氨酸血管加压素（ $0.01\text{mg/kg}$ ），探讨催产素或精氨酸血管加压素干预在生命早期应激诱导性取向改变中的作用。

**结果** 与异性恋男性相比，同性恋/双性恋男性经历了更多的童年创伤，血浆催产素和精氨酸血管加压素水平较低。同样，生命早期应激降低了雄性小鼠成年后对异性的偏好指数以及血浆催产素和精氨酸血管加压素水平。催产素或精氨酸血管加压素干预逆转了生命早期应激诱导的雄性小鼠较低的异性偏好指数。

**结论** 童年创伤会增加成年后同性偏好的机率，通过预防性地给与催产素或精氨酸血管加压素可以降低生命早期应激诱导的同性偏好率增加。

PO-046

## Changes of resting-state MRI in patients with sleep problems after COVID-19 infection

Haobo Chen<sup>1</sup>, Ling Li<sup>2</sup>, Peng Liu<sup>1</sup>, Yi Liu<sup>2</sup>, An Xie<sup>1</sup>, Yanhui Liao<sup>2</sup>

1. First Affiliated Hospital Hunan Normal University

2. Department of Psychiatry, Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, Hangzhou, Zhejiang, P. R. China

**Objective** Corona Virus Disease 2019 (COVID\_19) infection is widespread, and many people have problems such as easy fatigue and sleep disturbance after COVID\_19 infection. However, the changes in brain function associated with the development of sleep problems after COVID\_19 infection remain unclear.

**Methods** To investigate the changes in brain function in the population with sleep problems after COVID\_19. In current study, 32 patients who developed sleep problems after neocoronary were collected, as well as 22 gender- and education-year-matched controls, and all subjects were scaled to exclude emotional problems.

**Results** As shown by resting-state magnetic resonance imaging the final results revealed that compared to the control group, the Low-frequency fluctuation (ALFF) values of the right putamen, part of the frontal lobe, extra-nuclear and the Lentiform Nucleus were significantly higher in the sleep problem group compared to the control group, while the ALFF values of the right inferior temporal gyrus. The ALFF values of the right inferior temporal gyrus were lower than those of the control group, and the functional connectivity of the putamen with the right postcentral gyrus, right parietal lobe, and right precentral gyrus was found to be reduced.

**Conclusion** This explains to some extent the changes in sleep-related brain areas in people with sleep problems after COVID-19, The COVID-19 infection can cause changes in sleep-related brain areas.

PO-047

## Exosome and exosomal contents in schizophrenia

Tingkai Zhang, Jinsong Tang

Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

**Objective** Schizophrenia is a severe neuropsychiatric disorder with high heredity and complex pathophysiology. Recently, increasing studies have focused on the role of exosomes in SCZ due to accumulating knowledge in biological function of exosome. Here, we review recent research advances on the association of exosomes and SCZ.

**Methods** We searched the literature for nearly 5 years with schizophrenia and exosome as keywords on Pubmed, and found 11 relative articles.

**Results** It was reported that miR-137 and miR-206 upregulated in blood exosome in schizophrenia patients, and exosome-derived miR-223 increased in postmortem orbitofrontal cortex (OFC). A study of plasma exosome circRNAs in SCZ patients identified 44 differentially expressed circRNAs compared to matched healthy controls, including 38 upregulated, 6 downregulated and 8 novel circRNAs. In another study, researchers found that the expressions of two lncRNAs, MIAT and PVT1, in serum exosomes of SCZ patients without medication were significantly different from those of healthy controls, and that 1-month risperidone treatment could affect the expression of MIAT and PVT1. A series of proteins related to mitochondria, including Mitofusin 2 (MFN2), cyclophilin D (CYPD) and syntaphilin (SNPH) are reported significantly changed in both astrocyte-derived EVs (ADEVs) and neuron-derived EVs (NDEVs) in individuals with first episode psychosis (FEP). A recent study examined the levels of exosomal A $\beta$  and tau in SCZ and found that the level of astrocyte-derived exosomal A $\beta$ 42 protein was increased in SCZ patients compared to healthy controls. Moreover, the level of P-T181-tau protein in astrocyte-derived exosome was also increased in SCZ patients and was associated with worse executive function. Ranganathan found that the level of glial fibrillary acidic protein (GFAP), a marker of astrocytic pathology, was higher in plasma exosomes of SCZ patients compared to healthy controls, while the expression of  $\alpha$ -II-Spectrin was significantly lower. A multi-center metabolomics study identified 25 blood exosome-derived metabolites that were significantly different in SCZ, and these metabolites were found to be enriched in two pathways: glycerophospholipid metabolites and the biosynthesis of phenylalanine, tyrosine, and tryptophan. Another study found decreased levels of the insulin upstream signaling transduction protein pS312-IRS-1 in blood exosome of drug-naïve first-episode schizophrenia (DNFES).

**Conclusion** Exosomes have the potential to serve as biomarkers for the diagnosis of SCZ. Components of exosomes, including nucleotides such as miRNA, circRNA, and lncRNA, as well as proteins and metabolites, have been shown to be differentially expressed in SCZ in various studies. These findings indicate some underlying mechanisms to SCZ including the neuroinflammation hypothesis, neurodevelopment aberrance, abnormal mitochondria function and oxidative stress and glutamate receptors dysfunction.

PO-048

## Autophagy flux, cognitive deficits and depressive symptoms in Parkinson's disease

Yanzhe Li, Hechao Yang, Shen Li, Jie Li  
Tianjin Anding Hospital

**Objective** Parkinson's disease (PD) is the second most common neurodegenerative disease, characterized by major motor dysfunction and other non-motor symptoms. Depressive symptoms are common non-motor symptom in the early and late stages of PD, manifested by depressed mood, anxiety, irritability and pessimism about the future, and feelings of guilt. Autophagy is a pervasive biological process in eukaryotic cells, which accomplishes the degradation of some macromolecules, organelles, and some proteins with long half-lives through lysosome-mediated action, thus allowing the cell to maintain normal material metabolism and physiological status. A variety of proteins are involved in the regulation of autophagy, of which LC3 and P62 are typical. Autophagic flux can be assessed by the expression of P62, LC3-II/LC3-I and GFP-LC3 proteins. The relationships between autophagy with PD or depression have been documented. However, no studies explored the role of autophagy markers associated with depressive symptoms in PD. Our study aimed to investigate the relationships between autophagy flux, cognitive impairments and depressive symptoms in PD patients.

**Methods** A total of 163 PD patients aged 50-80 years were recruited. The autophagy markers (LC3-I, LC3-II and P62) and glycolipid parameters were measured. Depressive symptoms, cognitive impairments, and motor function were assessed using the Hamilton Depression Rating Scale-17 (HAMD-17), the Montreal Cognitive Assessment (MoCA), and the Movement Disorders Society Unified Parkinson's Rating Scale Part III (MDS-UPDRS-III), respectively.

**Results** There were no significant differences between depressed and non-depressed PD patients for LC3-I, LC3-II, LC3-II/LC3-I and P62. After controlling confounding variables, LC3-II/LC3-I showed an independent relationship with depressive symptoms in PD patients (Beta = 10.082,  $t = 2.483$ ,  $p = 0.014$ ). Moreover, in depressive PD patients, P62 was associated with MoCA score (Beta = -0.002,  $t = -2.380$ ,  $p = 0.020$ ); Further, P62 was related to naming ability; in addition, P62 was independently associated with delayed recall (Beta = -0.001,  $t = -2.452$ ,  $p = 0.017$ ).

**Conclusion** We first found that LC3-II/LC3-I was associated with depressive symptoms in PD patients. In addition, P62 was independently associated with MoCA score and negatively related to the naming ability and delayed recall in PD patients with depression, but not in non-depressive PD patients. However, we were unable to establish a causal relationship between autophagy, cognition and depressive symptoms in PD patients due to limitations in study design, depressive symptom assessment, and other limitations. In short, these findings indicate that expressions of LC3-II/LC3-I and P62 may affect the cognition and depressive symptoms of PD in the evaluated cohort of Han Chinese. Additional studies involving other populations and a larger number of participants are needed to confirm our findings.

## PO-049

## 中老年抑郁与听力损失的双向关联分析——来自中国健康与退休纵向研究的证据

吴超  
北京大学医学部

**目的** 以往研究表明,抑郁可能是与年龄相关性听力损失(age related hearing loss, ARHL)相关的健康问题(如心、脑血管疾病等)的危险因素,纵向队列也表明听力损失可能会导致抑郁和失智。目前,尚无证据表明抑郁是否会导致听力损失。本研究利用中国健康与退休纵向研究(the China Health and Retirement Longitudinal Study, CHARLS; <http://charls.pku.edu.cn/pages/data/111/en.html>)的数据,测试了中老年成年人临床显著的抑郁症状(clinically significant depressive symptoms, CSDS)和听力损失之间的双向关联。

**方法** 本研究使用第1波(基线:2011年)和第3波(2015)CHARLS中基线年龄大于45岁的人口的数据来分析抑郁与听力损失之间的双向关联。采用流行病学研究中心10项抑郁量表(CESD-10)评估抑郁症状;结合是否携带助听器及自我报告的听力下降来评估听力损伤。采用Logistic回归来探讨抑郁和听力损伤的双向关系,模型中回归了与因变量具有显著关联的协变量;采用中介分析来探讨哪些健康相关因素影响了抑郁对听力损失的纵向预测效应。

**结果** 在3418名没有基线听力损失的参与者中,基线抑郁与4年后听力损失的发生率增加有关(OR:1.51)。认知能力下降、相对较低的体重指数和患有关节炎部分介导了“抑郁-听力损失”的纵向关联,并解释了总效应中24%的变异。在4921名没有基线抑郁的参与者中,基线听力损失与4年后抑郁的发生率增加有关(OR:1.37)。在对基线人口学因素、慢性病史和其他健康相关协变量进行调整后,双向关联仍然显著。

**结论** 抑郁可能会促进年龄相关性听力损伤的发展,反之亦然。对抑郁、认知能力下降和关节炎的干预可能会延缓年龄相关性听力损失的发生,并打破这些因素之间的恶性循环。

## PO-050

## 嗅球小胶质细胞 P2X7 受体在过敏性鼻炎小鼠发生应激相关抑郁中的作用和机制研究

任超、牟亚魁、宋晓宇、宋西成  
青岛大学附属烟台毓璜顶医院

**目的** 过敏性鼻炎(AR)常伴有抑郁,这不仅使AR诊疗难度、花费增加,还严重影响患者工作生活,但其精准防治靶点仍缺乏。本研究旨在探究嗅球小胶质细胞P2X7受体(P2X7R)在AR小鼠应激抑郁发生中的作用及机制,以期阻断AR出现抑郁提供新靶点。

**方法** C57BL/6小鼠分为对照组、CUMS应激组、OVA组和OVA+CUMS应激组,其中部分OVA+应激小鼠会腹腔注射P2X7R特异性抑制剂BBG。ELISA试剂盒检测小鼠血清IgE、IL-5含量,行为学观察小鼠挠鼻次数,确定OVA诱导的AR小鼠模型是否成功。悬尾实验评估小鼠抑郁样行为,并记录全部实验结束时小鼠体重。另外,使用蛋白质印迹(WB)检测各组小鼠嗅球IBA1、GFAP、IL-1 $\beta$ 、IL-1Ra的表达,并应用高效液相色谱联合电化学检测法(HPLC-ECD)检测其前额叶皮层内神经递质变化。进一步通过嗅球立体定位注射小胶质细胞P2X7R特异性敲减病毒构建P2X7R敲减+OVA+应激小鼠,免疫荧光染色(IF)和WB确定敲减效果后与P2X7R正常+OVA+应激小鼠对比相关行为学和生化指标变化。最后利用离体条件性细胞培养模型结合IF、ATP试剂盒、荧光定量PCR、细胞形态Sholl分析和WB初步探索相关机制。

**结果** 相较于对照组小鼠, ELISA 检测 OVA 组小鼠血清 Ig E、IL-5 含量均升高; OVA 激发后, OVA 组小鼠挠鼻次数增加, 以上表明 OVA 诱导 AR 小鼠模型成功。同时, 行为学评估显示相较于应激组小鼠, OVA+应激组小鼠抑郁样表型更明显。WB 显示, 相较于应激组小鼠, OVA+应激组小鼠嗅球 IBA1、IL-1 $\beta$  表达升高更多, IL-1Ra 表达降低更多; 而 GFAP 表达没有明显变化。HPLC-ECD 显示, 相较于应激组小鼠, OVA+应激组小鼠前额叶皮层 5-HT 下降更多。BBG 应用可以明显使 OVA+应激小鼠抑郁样表型得到逆转, 同时伴有生化指标异常的逆转。嗅球小胶质细胞 P2X7R 特异性敲减后亦看到类似 BBG 处理结果。离体用 Der p1 处理 HNEpC 获得的条件培养基可以激活 HMC3 产生基于 ATP-P2X7R-Caspase 1 轴的炎症反应, 而 P2X7R 抑制剂的使用则阻断了该反应。

**结论** 相同应激下 OVA 诱导 AR 小鼠更容易出现抑郁样表型, 且与嗅球部位炎症紊乱有关, P2X7R 的特异性抑制可以明显逆转以上改变, 而该作用的发挥和 ATP-P2X7R-Caspase 1 轴相关。

## PO-051

### 焦虑抑郁对肺动脉高压患者短期预后的影响：一项单中心研究

任虹霖<sup>1</sup>、周霞<sup>2</sup>、宋晶晶<sup>1</sup>、翟振国<sup>3</sup>、石慧<sup>4</sup>

1. 武汉软件工程职业学院通识学院
2. 首都医科大学附属北京市石景山医院
3. 中日友好医院呼吸与危重症医学科
4. 首都医科大学附属北京安贞医院精神心理科

**目的** 探讨了肺动脉高压 (PH) 患者治疗前后焦虑、抑郁情况对 3-6 个月患者再入院的影响。

**方法** 首都医科大学附属北京朝阳医院呼吸科, 经明确诊断为 PH 的 103 名住院患者, 收集患者人口统计学资料和临床相关数据。经过平均 5.4 个月的短期随访, 患者完成了健康调查简表-36 (SF-36)、患者健康问卷-9 (PHQ-9) 和广泛性焦虑量表-7 (GAD-7)。用 Logistic 回归分析: 一般健康状况、临床客观指标、焦虑和抑郁水平对患者短期再入院的影响。

**结果** PH 患者发病期间焦虑症状发生率为 21.35%, 抑郁症状发生率为 26.21%, 经过入院治疗后, 患者的焦虑和抑郁状态发生率分别为 12.51% 和 15.62%。治疗前后患者存在持续抑郁[比值比(odds ratio, OR)=78.86]和焦虑(OR=34.53)在短期内再入院风险较高。与生活质量良好的患者相比, 无生活质量改善的患者短期再入院风险较高(OR=6.90)。

**结论** 在康复的早期阶段, PH 患者持续性的焦虑和抑郁情绪发生再入院的风险较高。因此, 强调对 PH 患者进行焦虑和抑郁情绪的筛查和管理, 具有重要的临床意义。

## PO-052

### 唐山市初期新型冠状病毒肺炎患者心身健康状况及其影响因素调查

张江

华北理工大学附属医院

**目的** 探讨唐山市 58 例新型冠状病毒肺炎 (COVID-19) 患者出院后 1 年的心身健康状况及其影响因素, 为 COVID-19 的防控、识别及生存质量评估提供依据。

**方法** 收集在唐山市传染病院 2020 年 1 月至 2020 年 2 月确诊的 COVID-19 患者的病例资料, 并通过面对面交流及电话访问的形式进行问卷表格调查, 对其潜伏期、人口学特征、临床表现、出院后生存质量等进行统计分析, 评估患者出院 1 年后的心身健康状况及其影响因素。

**结果** 患者常见的心身方面有关的症状为乏力 24 例 (41.37%)、纳差 14 (24.13%)、睡眠障碍 13 (22.41%)、头晕 5 例 (8.62%)、头痛 4 例 (6.89%)、便秘 5 (8.62%) 和肌肉酸痛 3 例 (5.17%)。重危组患者出现的比例高于轻普组, 组间差异有统计学意义 ( $P < 0.05$ )。1 年后随访存活者 56 人中,



42 名（75%）患者在进行 EQ-5D-5L 量表评估后的结果有不同程度的问题，38 人（67%）存在焦虑情绪，36 人（64%）存在抑郁情况。患者的年龄、性别、既往合并慢性疾病、就业情况对 1 年后的健康相关生活质量、焦虑和抑郁状态有影响，差异有统计学意义（ $P<0.05$ ）。

**结论** 唐山市 58 例 COVID-19 患者中，重症患者多出现心身方面有关的症状，位列前三的是乏力、纳差和睡眠障碍。出院 1 年后，存活者中 75% 的人存在健康相关生活质量问题，67% 的人存在焦虑情绪，64% 的人存在抑郁情况。患者的老龄化、女性、合并多种慢性基础疾病、受雇者职业会降低 COVID-19 患者的生存健康质量，显著增加患者出现焦虑/抑郁的风险。提示对 COVID-19 患者应长期关注其身心健康方面的问题。

## PO-053

### **Covariation between spontaneous neural activity in the insula and affective temperaments is related to sleep disturbance in individuals with major depressive disorder**

Chao Wu<sup>1</sup>, Huawang Wu<sup>2</sup>, Shingling She<sup>2</sup>, Yingjun Zheng<sup>2</sup>

1. Peking University School of Nursing

2. The Affiliated Brain Hospital of Guangzhou Medical University

**Objective** Affective temperaments have been considered antecedents of major depressive disorder (MDD). However, little is known about how the covariation between alterations in brain activity and distinct affective temperaments work collaboratively to contribute to MDD. Here, we focus on the insular cortex, a critical hub for the integration of subjective feelings, emotions, and motivations, to examine the neural correlates of affective temperaments and their relationship to depressive symptom dimensions.

**Methods** Twenty-nine medication-free patients with MDD and 58 healthy controls underwent magnetic resonance imaging scanning and completed the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego (TEMPS). Patients also received assessments of the Hamilton Depression Rating Scale (HDRS). We used multivariate analyses of partial least squares regression and partial correlation analyses to explore the associations among the insular activity, affective temperaments, and depressive symptom dimensions.

**Results** A profile (linear combination) of increased fractional amplitude of low-frequency fluctuations (fALFF) of the anterior insular subregions (left dorsal agranular–dysgranular insula and right ventral agranular insula) was positively associated with an affective-temperament (depressive, irritable, anxious, and less hyperthymic) profile. The covariation between the insular fALFF profile and the affective-temperament profile was significantly correlated with the sleep disturbance dimension (especially the middle and late insomnia scores) in the medication-free MDD patients.

**Conclusion** The resting-state spontaneous activity of the anterior insula and affective temperaments collaboratively contribute to sleep disturbances in medication-free MDD patients. The approach used in this study provides a practical way to explore the relationship of multi-variate measures in investigating the etiology of mental disorders.

PO-054

## 基于 IRT 模型构建失语症 ICF 功能评分表

钟丽娟<sup>1</sup>、林枫<sup>1,2</sup>

1. 南京医科大学附属逸夫医院

2. 南京医科大学第一附属医院（江苏省人民医院）

**目的** 际功能、残疾和健康分类（International Classification of Functioning, Disability and Health, ICF）从“生物-心理-社会”医学模式的角度为疾病和健康提供标准化术语体系，为患者的功能提供了一个标准化的理论框架。本研究拟采用项目反应理论（Item response theory, IRT）分析技术，对失语症患者（People with aphasia, PWA）的 ICF 核心集条目进行量化，为条目的筛选和优化提供一个全面的基础。此外，本研究将探讨患者个人能力值与条目难度之间的关系，从而指导临床应用。

**方法** 取 75 例失语症患者组成便利样本，进行横断面研究。通过与失语症患者及其家属的访谈完成了失语症 ICF 核心集中 66 个条目的评估。对条目进行非参数型和参数型项目反应理论分析，构建项目反应理论模型。此外，为了确保量表的公平性，还评估了性别之间的项目功能差异（Differential item functioning, DIF）。

**结果** 果表明优化后的量表满足单维性、单调性和局部独立性假设，且四参数模型与数据拟合最佳。Cronbach's  $\alpha$  值为 0.8998，Guttman's  $\lambda^2$  值为 0.9103，Molenaar-Sijtsma Statistic 值为 0.9248，Latent Class Reliability Coefficient（LCRC）值为 0.9489，表明量表具有良好的内部一致性。由四参数模型估计的个人能力值与失语商及其子项得分之间存在中等强度（ $0.4 < r < 0.6$ ）显著相关关系（ $p < 0.001$ ），表明该模型所计算的 personal ability value 可反映个人健康水平。DIF 结果表明该量表不具有性别组差异（ $p > 0.05$ ）。

**结论** 优化后的失语症 ICF 核心集条目均符合单调同质模型假设，表明该量表具有良好的心理测量特征。缩减后的量表仅具有 23 个条目，有利于提高临床评估效率。四参数模型估计的个人能力值与条目难度关系图有利于指导失语症患者制定与其能力更加匹配的康复目标，有望为患者制定康复干预计划提供合理依据。

PO-055

## Functional Abnormality of the Reward System in Adolescent and Young Adult Depressed subjects with and without suicidal behavior

haitang QIU, Li Kuang

The First Affiliated Hospital of Chongqing Medical University

**Objective** Objective: Realize the local and network functional abnormalities of the brain's reward network in adolescent and young adult depression patients with or without suicidal behavior.

**Methods** Methods: 41 major depressive disorder patients with suicidal behavior (sMDD, male/female: 12/29), 44 major depressive disorder patients without suicidal behavior (nMDD, male/female: 13/32), and 52 healthy control subjects (HC, male/female: 17/35) were examined using a GE Signa 3.0T MRI machine. Young's Mania Scale, Hamilton Depression Scale, the Columbia Suicide Scale, and the Scale for Suicide Ideation were used to evaluate emotional state and suicidal experience. The amplitude of low frequency fluctuation (ALFF), regional homogeneity (ReHo) and functional connectivity of 11 regions of interest (ROIs) in reward networks were determined.

**Results** RESULTS: The ALFF value in the vmPFC of nMDD group was significantly lower than that in HC group ( $p = 0.031$ ). The ReHo value in nMDD group was lower in the l\_VS while higher in

the vmPFC than that in HC group ( $P = 0.018, 0.025$  respectively). Increased functional connectivity between the AC and vmPFC, AC and L-VS, r-VS, and vmPFC in the sMDD than in nMDD groups ( $P=0.038, 0.034, 0.006$ , respectively).

**Conclusion** Conclusion: The local and functional connectivity abnormalities of reward network were found in the MDD group. However, increased functional connectivity was found only in sMDD group.

## PO-056

### 近红外光谱成像辅助诊断常见精神疾病的临床研究

近红外光谱成像辅助诊断常见精神疾病的临床研究、袁勇贵、谭靓靓、徐治  
东南大学附属中大医院

**目的** 研究近红外光谱（NIRS）客观诊断精神障碍灵敏度与特异度及 NIRS 相关指标对各类精神障碍的诊断价值。

**方法** 入组 18-60 岁的抑郁障碍、焦虑障碍、双相情感障碍及精神分裂症患者以及与性别和年龄匹配的对照组共 412 例。应用多通道近红外光谱仪检测所有被试在执行言语流利度任务过程中大脑氧合血红蛋白随时间变化的特征，参照患者的临床诊断，计算 NIRS 波谱客观诊断各类精神障碍的灵敏度与特异度；比较不同精神障碍 NIRS 相关指标（包括任务氧合血红蛋白的 K 激活值、S 积分值、峰值）的差异；应用 ROC 分析 NIRS 相关指标对各类精神障碍的诊断价值；计算各种精神疾病相应的量表评分与 NIRS 相关指标的相关性。

**结果** NIRS 波谱客观诊断抑郁障碍的灵敏度 92%，特异度 85%，诊断双相抑郁的灵敏度 78%，特异度 85%，诊断双相躁狂的灵敏度 78%，特异度 93%，诊断焦虑障碍的灵敏度 73%，特异度 80%，诊断精神分裂症的灵敏度 82%，特异度 93%；抑郁障碍、双相抑郁、焦虑障碍、精神分裂症组的 K 激活值显著低于正常对照，所有患者组的 S 积分值、峰值均显著低于正常对照，精神分裂症组的 T 重心显著高于正常对照；ROC 结果示 S 积分值诊断抑郁障碍的曲线下面积（AUC）为 0.832、诊断双相抑郁的 AUC 为 0.930、诊断焦虑障碍的 AUC 为 0.754，峰值诊断抑郁障碍的 AUC 为 0.761、诊断双相抑郁的 AUC 为 0.760、诊断精神分裂症的 AUC 为 0.776；双相抑郁患者的 HAMD 量表评分与 T 重心呈显著正相关，双相躁狂患者的 YMRS 量表评分与 K 激活值、S 积分值、峰值均呈显著正相关，焦虑障碍患者的 HAMA 量表评分与 K 激活值、S 积分值、峰值均呈显著正相关，与 T 重心呈显著负相关，精神分裂症患者的 PANSS 量表总分及阳性量表分与 S 积分值、峰值呈显著负相关，与 T 重心呈显著正相关，阴性量表分与 S 积分值、峰值呈显著正相关，与 T 重心呈显著负相关。

**结论** NIRS 波谱对抑郁障碍和精神分裂症的诊断价值最高，对双相情感障碍的诊断价值中等，对焦虑障碍的诊断效果较差。其中，S 积分和峰值对抑郁障碍和双相抑郁的诊断具有重要价值。T 重心大小能反映双相抑郁患者的抑郁严重程度。K 激活、S 积分、T 重心和峰值的大小均能反映躁狂和焦虑障碍的严重程度。S 积分、峰值和 T 重心能反映精神分裂症阳性症状和阴性症状严重程度，且与两种症状的相关性相反。

PO-057

## Changes in core depressive symptoms over time in peripartum women: a network analysis.

Yuqun Zhang<sup>1</sup>, Ju Gao<sup>2</sup>, Meixia Qin<sup>3</sup>, Weiying Zhao<sup>3</sup>, Yi Ding<sup>4</sup>, Ying Chen<sup>5</sup>, Xuebin Qiao<sup>5</sup>, Xin Yue<sup>4</sup>, Yonggui Yuan<sup>6</sup>

1. Nanjing University of Chinese Medicine, Nanjing, China

2. Institute of Mental Health, Suzhou Psychiatric Hospital, the Affiliated Guangji Hospital of Soochow University

3. Department of Obstetrics and Gynecology, Jiangbei Campus, Zhongda Hospital affiliated to Southeast University

4. Department of Obstetrics and Gynecology, the Second Hospital of Nanjing, Nanjing University of Chinese Medicine

5. School of Medicine and Holistic Integrative Medicine, Nanjing University of Chinese Medicine

6. Department of Psychosomatics and Psychiatry, Zhongda Hospital affiliated to Southeast University

**Objective** Perinatal depression (PND) is common in pregnant and postpartum women. Previous research indicates that there are clinical subtypes of PND, and the time of onset is an important factor to identify PND subtypes. However, differences of PND in different trimesters and in the postpartum period are not clear. And studies examining core symptoms that could be used to identify PND subtypes are lacking.

**Methods** Women during the second (N = 161) and third trimesters (N = 248) and within 6 weeks postpartum (N = 110) were recruited. All participants completed the assessment of the Edinburgh Postnatal Depression Scale. Network analysis was used to explore the relationships between depressive symptoms in all three periods.

**Results** Postpartum women showed the highest prevalence of PND and the most severe depressive symptoms. The symptom 'Sadness and misery' had the strongest centrality in both the second and third trimesters, but decreased in the postpartum period. The symptom 'Fear and panic' had the strongest centrality in the postpartum period. All three PND networks were relatively stable in strength and closeness.

**Conclusion** This study indicated the changes over time in central symptoms in pregnant and postpartum women, which shifted from being dominated by depression to being dominated by anxiety. Our findings suggested that more symptom-specific interventions should be used to improve the mental health of mothers, fetuses and infants. All of this provided clinical evidence to investigate the biological mechanisms of PND subtypes to help diagnose and treat PND with precision.

PO-058

## 环状 RNA 结合多模态脑影像在抑郁症诊断和早期疗效预测中的价值及作用机制初探

陈刚<sup>1,3</sup>、居敏姿<sup>2</sup>、姜文颢<sup>3</sup>、孙太鹏<sup>1,3</sup>、江晨光<sup>3</sup>、徐微<sup>3</sup>、袁勇贵<sup>3</sup>

1. 淮安市第三人民医院

2. 东南大学医学院

3. 东南大学附属中大医院心身医学科

**目的** 通过发现队列筛选出抑郁症 (MDD) 和健康对照 (HC) 的价值; 探索 circRNA 对大脑形态或功能改变的影响以及其在 MDD 发病机制中的作用。

**方法** 方法: 21 例首发未用药的 MDD 患者和 21 例人口学特征相匹配的 HC 作为发现队列。6 例 MDD 和 6 例 HC 用于 RNA 高通量测序, 15 例 MDD 和 15 例 HC 用于测序结果的验证; 差异表达的 circRNA 在另一个包括 86 例 MDD 和 53 例 HC 的独立验证队列再次进行验证。对 86 例 MDD 患者的脑影像指标进行了主成分分析 (PCA) 获得主成分因子。通过典型相关分析 (CCA) 分析 circRNA 组与主成分因子组之间的相关关系。采用 ROC 曲线评估 circRNA 联合多模态脑影像特征

作为 MDD 诊断和早期疗效生物标志物的效能；利用 PCA 提取的脑影像因子联合 circRNA 的 ROC 曲线分析进行验证。采用一般线性模型和中介分析探讨 circRNA 在脑影像特征和 MDD 临床变量关系中的作用。

**结果** 发队列共筛选出 3 个差异表达的 circRNA；在独立验证队列中 MDD 患者血浆的 circATF7IP、circPARN、circZBTB25 相比于 HC 显著升高。脑结构的主成分因子与 circATF7IP 以及 circZBTB25 显著正相关；脑网络因子与 circATF7IP 显著正相关而脑功能因子与 circPARN 显著负相关。原始的多模态脑影像特征联合 circRNA 联合后对 MDD 诊断的 AUC 达到了 0.988，敏感性 89.5%，特异性 100%；对早期疗效均预测的 AUC 为 0.867，敏感性为 84.2%，特异性为 81.2%。进一步采用 PCA 提取的脑影像因子联合 circRNA 的预测结果仍表现稳定，对 MDD 诊断的 AUC 为 0.98，敏感性为 93.0%，特异性为 96.2%，对早期疗效均预测的 AUC 为 0.812，敏感性为 72.5%，特异性为 82.4%。circZBTB25、circPARN 与疾病的交互作用共同调节 MDD 患者的皮质结构。circRARN 对网络间功能连接（FC）与抑郁严重程度、网络间 FC 与 2 周后快感缺水平的关系中都起到中介调节作用；其次，circRARN 还对脑功能改变与抑郁严重程度、脑功能改变与 2 周后快感缺水平之间的关系起到中介调节作用。

**结论** 多模态脑影像特征和 circRNA 联合后对 MDD 的诊断和早期疗效均具有较好的预测效能；circRNA 可以通过调节大脑的结构和功能影响 MDD 的发生和发展。

## PO-059

### 肠道微生物特征能够区分抑郁症和双相抑郁症、双相躁狂症

孙太鹏<sup>1</sup>、陈刚<sup>2</sup>、徐微<sup>1</sup>、江晨光<sup>1</sup>、袁勇贵<sup>1</sup>

1. 东南大学附属中大医学

2. 淮安市第三人民医院

**目的** 肠道微生物紊乱在情绪障碍中已被广泛证实。然而，对于肠道微生物特征是否能区分重度抑郁症（MDD）、双相抑郁症（BP-D）和双相躁狂症（BP-M）知之甚少。因此，本研究探讨抑郁症及双相抑郁、双相躁狂的肠道菌群特征，以及这些特征是否可以用于三种情绪障碍的鉴别诊断。

**方法** 纳入健康对照组（HC；n=46）、MDD（n=51）、BP-D（n=44）和 BP-M 患者（n=45），并收集所有受试者的一般情况、临床特征（汉密尔顿抑郁量表、汉密尔顿焦虑量表、病程），采集粪便标本，使用 16S rRNA 基因测序对肠道微生物群的组成进行分析，计算各组患者物种  $\alpha$  多样性、 $\beta$  多样性，利用 LESfe 分析各组间差异物种，并结合线性判别分析和随机森林回归方法，寻找四组间差异特征，建立随机森林分类模型，探讨肠道菌群特征在情绪障碍中的鉴别诊断效能。

**结果** 各组间一般资料无统计学差异，MDD、BP-D 和 BP-M 患者的肠道微生物组成发生了明显的变化。与 HC 相比，BP-D 的  $\alpha$  多样性有显著变化（sobs 指数、Chao1 指数显著减低， $p < 0.05$ ），其次，在 MDD、BP-D 和 BP-M 中发现了不同的肠道微生物 OTU 变化，并且一些肠道微生物的变化在三种情绪障碍中是重叠的。此外，我们确定了一个由 7 个操作分类单元（OUT；Prevotellaceae-related OUT22, Prevotellaceae-related OUT31, Prevotellaceae-related OTU770, Ruminococcaceae-related OUT70, Bacteroidaceae-related OTU1536, Propionibacteriaceae-related OTU97, Acidaminococcaceae-related OTU34）组成的特征，可以区分 MDD 患者和 BP-D、BP-M 或 HC 患者，曲线下面积（AUC）值从 0.910 到 0.996。

**结论** 我们的结果为通过肠道微生物特征对 MDD、BP-D 和 BP-M 进行鉴别性诊断提供了临床依据

PO-060

## 青少年抑郁障碍患者中压力性生活事件与自杀意念及血清自噬、炎症因子的相关性研究

康传依

哈尔滨医科大学附属第一医院

**目的** 横断面流行病学研究青少年抑郁障碍患者中各类压力性生活事件及人口学因素与自杀意念 (Suicidal ideation, SI) 的相关性。临床病例对照研究青少年抑郁障碍患者外周血自噬因子 Beclin-1、LC3 及炎症因子 TNF- $\alpha$ 、IL-6 的表达水平及其与早期压力性应激的相关性。

**方法** 方法: (1) 收集青少年抑郁障碍患者 1635 例, 年龄 12-18 岁, 男 748 例, 女 887 例。人口学资料 (年龄, 性别, 受教育年限, 家族抑郁症病史, 是否独生子女, 是否城市人口, 是否学生干部, 睡眠时间) 由自填式问卷收集。自杀意念采用访谈法评定。采用儿童抑郁量表评定抑郁症状, 采用青少年生活事件自评量表评定压力性生活事件。(2) 进一步收集青少年抑郁障碍患者 80 例为病例组, 其中 40 例为无早期压力应激或早期应激未带来明显影响者, 40 例为有应激并带来轻度及以上影响者, 年龄匹配的健康者 35 例为对照组。使用 ELISA 法检测各组受试者血清 Beclin-1、LC3、TNF- $\alpha$ 、IL-6、IL-1 $\beta$  的浓度。

**结果** (1) 伴有 SI 组与不伴有 SI 组相比, 年龄、性别、受教育年限、抑郁家族史、睡眠不足 8 小时、CDI 总分、ASLEC 总分、ASLEC 人际关系因子分、ASLEC 学业压力因子分、ASLEC 惩罚因子分、ASLEC 剥夺因子分、ASLEC 健康适应因子分、ASLEC 其他因子分差异有统计学意义。进一步的 Logistic 回归分析显示, 青少年抑郁障碍患者中女性、睡眠不足、抑郁程度和较高的学业压力是自杀意念的独立风险因素。(2) 病例组血清自噬因子 Beclin-1 及 LC3 表达水平显著低于对照组 ( $P<0.001$ )、炎症因子 TNF- $\alpha$  及 IL-6 表达水平显著高于对照组 ( $P<0.001$ ); 伴有 ELS 组血清 Beclin-1 及 LC3 表达水平显著高于不伴有 ELS 组 ( $P<0.001$ )、TNF- $\alpha$  及 IL-6 表达水平显著高于不伴有 ELS 组 ( $P<0.001$ ); 青少年抑郁障碍患者血清自噬因子 Beclin-1、LC3 表达水平与 ASLEC 总分呈负相关、炎症因子 TNF- $\alpha$ 、IL-6 表达水平与 ASLEC 总分呈正相关。

**结论** (1) 临床上对存在高学业压力、抑郁程度更重、女性、睡眠时间不足的青少年抑郁障碍患者应更早的进行自杀意念的评估及处理, 以避免严重后果的发生。(2) 自噬与炎症可能通过调控压力性生活事件对个体的影响, 参与青少年抑郁障碍的发生发展。

PO-061

## Determination of the cutoff point for Smartphone Application-Based Addiction Scale for adolescents: a latent profile analysis

Pu Peng<sup>1,2</sup>, Yanhui Liao<sup>2</sup>

1. Department of Psychiatry, National Clinical Research Center for Mental Disorders, and National Center for Mental Disorders, The Second Xiangya Hospital of Central South University, Changsha 410011, Hunan, China

2. Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

**Objective** Problematic smartphone use (PSU) is the most prevalent form of problematic online behaviors (POB) among adolescents. The Smartphone Application-Based Addiction Scale (SABAS) is a brief screening tool for PSU, but its cutoff point remains unestablished. This study aimed to determine the optimal cutoff point for SABAS using latent profile analysis (LPA), and to investigate whether PSU screening captured problematic social media use (PSMU) and internet gaming disorder (IGD).

**Methods** We recruited 62,305 adolescents using cluster sampling. Validated questionnaires were used to assess PSMU, IGD, and mental health (depression, anxiety, sleep disturbances, well-being, resilience, and externalizing and internalizing problems). LPA and receiver operating characteristic curve (ROC) analyses were applied to determine the optimal cutoff point for SABAS. The sensitivity and specificity of using SABAS to detect PSMU and IGD were calculated.

**Results** LPA identified a 3-class model for PSU, including low-risk users (38.6%, n=24,388), middle-risk users (42.5%, n=26,885), and high-risk users (18.9%, n=11,932). ROC analysis demonstrated a cutoff point of 23 for SABAS (sensitivity: 98.1%, specificity: 96.8%). According to the cutoff point, 21.1% (n=13,317) were identified as PSU. PSU adolescents displayed higher PSMU, IGD, and worse mental health. PSU screening demonstrated a satisfactory ability to capture IGD (sensitivity: 86.8%, specificity: 84.5%) and PSMU (sensitivity: 84.5%, specificity: 80.2%).

**Conclusion** This study suggests that 23 is an optimal cutoff point for SABAS to detect PSU. 21% of the adolescents suffered from PSU. SABAS has been recommended as an initial screening tool to detect PSU, followed by targeted assessments for specific POB and mental health among individuals who screen positive.

## PO-062

### Prevalence and associated factors of suicidal risk in Chinese healthcare workers 2 years after the COVID-19 initial outbreak

Pu Peng<sup>1</sup>, Yanhui Liao<sup>2</sup>, Qiuxia Wu<sup>1</sup>, Tieqiao Liu<sup>1</sup>

1. Department of Psychiatry, National Clinical Research Center for Mental Disorders, and National Center for Mental Disorders, The Second Xiangya Hospital of Central South University, Changsha 410011, Hunan, China

2. Department of Psychiatry, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

**Objective** Studies have confirmed that healthcare workers (HCWs) were at a high risk for mental distress and suicidal risk (SR) during the peak of the COVID-19 pandemic. However, there was limited evidence regarding their mental health status in the late COVID-19 pandemic. The present study aimed to determine the prevalence and associated factors of SR among Chinese HCWs 2 years after the COVID-19 initial outbreak.

**Methods** 2301 HCWs were recruited. We used the Suicidal Behaviors Questionnaire-Revised (SBQ-R) to detect their SR. Other mental distress (depression, anxiety, insomnia, sleepiness, burnout, alcohol abuse/dependence, and perceived stress) were assessed through validated questionnaires. Multiple logistic regression model was conducted to determine the independent risk factors of SR. We performed Receiver Operator Curves (ROC) and calculated the Area under the Curve (AUC) to evaluate the ability of our model in distinguishing from healthcare workers with and without SR.

**Results** 408 (17.73%) participants reported SR. Insomnia, emotional exhaustion, depressive symptoms, perceived stress, and a history of mental illness were independently associated with SR. Finally, the combination of these variables could excellently distinguish between HCWs with and without SR, with an AUC value at 0.81.

**Conclusion** Chinese HCWs were at a high risk for SR even 2 years after the outbreak of COVID-19 pandemic, which highlighted the consistent need for suicide related prevention for HCWs. Prompt screening and targeted intervention for insomnia, emotional exhaustion, depression, high stress, and pre-existing mental illness might help reduce SR.

## PO-063

## Sex differences in residual somatic symptoms in patients with first-episode depression after acute-phase treatment

Jingjing Shi, Xiaohong Wang, Na Zhao

Department of Psychiatry, The First Affiliated Hospital of Harbin Medical University, Harbin, Heilongjiang Province, China

**Objective** Residual somatic symptoms (RSS) are common in depressed patients, predicting treatment effectiveness. However, sex differences in RSS have received little systematic study. This study was conducted to compare sex differences of RSS in patients with first-episode depression (FED).

**Methods** 982 patients with FED were selected and treated for 8 to 12 weeks. We evaluated the subjects' socio-demographic characteristics and residual depressive symptoms. Using the Patient Health Questionnaire-15 (PHQ-15) scale to assess residual somatic symptoms, the Sheehan Disability Scale (SDS) for the assessment of patients' function, the Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form (Q-LES-Q-SF) for quality of life.

**Results** The incidence of RSS with FED was 46.4%. For patients with residual symptoms, the age and age of onset in females were higher than males, but males had more years of education than females. The degree of "stomach pain" in females was more severe than in males, while "trouble sleeping" in males was more severe than that in females. Multiple regression analysis showed that the total Q-LES-Q-SF score was an independent influencing factor of RSS in both males and females, while the total SDS score only affected female RSS.

**Conclusion** The prevalence of RSS in FED after acute-phase treatment is high. The symptom of "stomachache" is more pronounced in females, while "trouble sleeping" is more severe in males. Quality of life plays an essential role in RSS in both genders. Thus, sex needs to be considered when assessing the relationship between RSS and therapeutic effect in depression.

## PO-064

## 抗抑郁药物种类和神经功能评分可预测卒中后抑郁障碍患者疗效

岳莹莹<sup>1</sup>、刘瑞<sup>2</sup>、张克忠<sup>3</sup>、李圣华<sup>4</sup>、耿德琴<sup>5</sup>、王军<sup>6</sup>、卢建新<sup>7</sup>、汤华<sup>8</sup>、吴爱勤<sup>9</sup>、袁勇贵<sup>1</sup>

1. 东南大学附属中大医院
2. 首都医科大学附属北京安定医院
3. 南京医科大学第一附属医院
4. 南京江宁医院
5. 徐州医科大学附属医院
6. 南京市第一医院
7. 高淳区人民医院
8. 淮安市第三人民医院
9. 苏州大学附属第一医院

**目的** 卒中后抑郁障碍(post stroke depression, PSD)是卒中后的常见并发症, 约有 1/3 的卒中患者在卒中后不同阶段罹患 PSD, 严重影响神经功能恢复和生活质量。然而目前对于 PSD 的治疗不规范, 患者对治疗的依从性差, 疗效欠佳, 因此探讨影响 PSD 的疗效预测指标至关重要。

**方法** 入组 155 例 PSD 患者包括抗抑郁药组 114 例和未用抗抑郁药组 41 例, 进行人口学资料、社会心理因素、卒中危险因素、神经功能、认知功能和抑郁严重程度评估, 其中美国国立卫生院神经功能缺损评分量表(NIHSS), Barthel 指数(Barthel Index, BI) 和改良 Rankin 评分(mRS)用于评估神经功能, 简易精神状态检查(MMSE)和汉密尔顿抑郁量表(HDRS)评估认知功能和抑郁严重程度。采用方差分析、精确性检验、逐步回归、Bootstrap 方法进行统计学分析。



**结果** 两组患者性别, 教育程度, 吸烟饮酒史, 糖尿病史存在显著差异( $P$  均 $<0.05$ ), 而年龄, 高血压, 冠心病, 高脂血症组间无显著性差异( $P$  均 $>0.05$ )。较未服用抗抑郁药组相比, 服用抗抑郁药组具有高治愈率(9.76% vs 46.49%,  $P<0.001$ )和低恶化率(19.51% vs 4.39%,  $P<0.001$ )。Logistic 回归结果示 NIHSS 得分, 药物种类是 PSD 疗效的有效预测因子, 其中 5-羟色胺和去甲肾上腺素再吸收抑制剂(SNRIs)类抗抑郁药疗效优于选择性 5-羟色胺再摄取抑制剂(SSRIs) ( $OR=1.476$ , 95%CI 1.049-2.126,  $P=0.030$ ), 而 NIHSS 得分越高, PSD 患者预后更差, 病情越难控制和治疗( $OR=0.828$ , 95%CI 0.723-0.928,  $P=0.003$ )。

**结论** PSD 患者神经功能缺损越严重, 预后越差; 对于确诊的 PSD 患者优选 SNRIs 类药物进行抗抑郁药治疗, 将取得更好的疗效。

## PO-065

### Changes in gut microbiota species and fecal metabolites in anhedonia patients with major depressive disorder

Dan Wang, Yinghui Li, Yonggui Yuan

Department of Psychosomatics and Psychiatry, Zhongda Hospital, School of Medicine, Southeast University

**Objective** Anhedonia is a core symptom of major depressive disorder (MDD). Altered gut microbiota and metabolites are involved in the pathogenesis of depression; however, little is known about their relationship with anhedonia. This study was designed to explore differential gut microbiota at the species level, differential fecal metabolites, and their interrelationships in anhedonic MDD.

**Methods** Sixty healthy controls (HC), 29 patients with MDD and anhedonia (MDD.WA), and 27 patients with MDD but without anhedonia (MDD.OA) were recruited. Whole-genome shotgun metagenomic and untargeted metabolomic methods were applied to investigate the changes of bacterial and fecal metabolites unique to anhedonic MDD.

**Results** The results showed no statistical difference in  $\alpha$ - or  $\beta$ -diversity between the HC and two MDD subgroups. Thirty and 50 discriminable enriched bacterial species were identified in the MDD.WA and MDD.OA groups, respectively; among them, 23 species were exclusive to the anhedonia, and *Blautia* sp. SC05B48 was considered a potential biomarker, as quantified by the area under the curve (AUC) reaching 0.7114. As for the fecal metabolites, 37 differential metabolic pathways classified by 91 differential metabolites were responsible for anhedonic MDD, especially arginine biosynthesis, tyrosine metabolism, histidine metabolism, aminoacyl-tRNA biosynthesis, and alanine, aspartate and glutamate metabolism. The microbiota-metabolite interaction network showed positive correlations with Fumaric acid and L-Glutamic acid and negative correlations with gentisic acid, L-Dopa, and methylimidazoleacetic acid.

**Conclusion** The composition of gut microbiota can be altered by anhedonia, which provides a basis for research on the mechanisms of the microbial-gut-brain axis in anhedonic MDD and the development of new therapy.

PO-066

## Sleep deprivation alleviates depression-like behaviors in mice via inhibiting immune and inflammatory pathways in the anterior cingulate cortex and improving neuroplasticity

Shuxiang Shi, Mengke zhang, Weijie Xie, Peijun Ju, Ningning Chen, Fan Wang, Meiti Wang, Wu Hong  
Shanghai Mental Health Center

**Objective** Sleep deprivation (SD) has been suggested to have a rapid antidepressant effect. There is substantial evidence that neuroinflammation and neuroplasticity play critical roles in the pathophysiology and treatment of depression. Here, we investigated whether SD attenuates depression-like behaviors by inhibiting the activation of neuroinflammation and improving neuroplasticity in depression.

**Methods** Adult male C57BL/6J mice were subjected to chronic restraint stress (CRS) for 6 weeks, and 6 hours of SD were administered. Behavioral tests were performed to measure depression-like behaviors. RNA-sequencing and bioinformatic analysis were performed in the anterior cingulate cortex (ACC). The differentially expressed genes were confirmed by quantitative real-time polymerase chain reaction (RT-qPCR). Neuroinflammation and neuroplasticity were measured by western blotting and immunofluorescence staining.

**Results** Behavioral tests demonstrated that SD swiftly attenuated the depression-like behaviors induced by CRS. RNA-sequencing identified the upregulated immune and inflammatory pathways after CRS exposure were downregulated by SD. Furthermore, SD reversed the immune and inflammation-related mRNA, levels of pro-inflammatory factors, and the activation of microglia in ACC. Additionally, the impaired neuroplasticity elicited by CRS in the prefrontal cortex (PFC) and ACC were improved by SD.

**Conclusion** Our study revealed the rapid antidepressant effect of SD on CRS mice through the reduction of the neuroinflammatory response in ACC via regulating microglia and key genes that play important roles in MAPK, NF $\kappa$ B and PI3K signaling pathways, as well as the improvement of neuroplasticity in PFC and ACC, providing a rationale for the clinical application of SD as a rapid antidepressant therapy.

PO-067

## Incidence and Associated Factors of Nursing Errors Among Chinese Nurses: A Large-Scale Cross-Sectional Study

Zejun Li<sup>1</sup>, Yanhui Liao<sup>2</sup>, Qiuxia Wu<sup>1</sup>, Tieqiao Liu<sup>1</sup>

1. The Second Xiangya Hospital of Central South University

2. Sir Run Run Shaw Hospital, Zhejiang University

**Objective** Nursing errors pose a serious threat to patient safety worldwide. However, very few studies have investigated nursing errors among Chinese nurses. This study aimed to evaluate the incidence and correlates of nursing errors among a large sample of Chinese nurses.

**Methods** 1975 nurses were recruited through snowball sampling. A wide range of variables were collected, including demographic characteristics (partnership status, mental disorder history, and education level, etc.), work-related characteristics (years of nursing experience, weekly working hours, number of on-call duty per month, and violence experience, etc.), occupational wellness (work-life balance, burnout, meaning in work, etc.), mental health (quality of life, fatigue, depression, anxiety, perceived stress, and sleepiness, etc.), and information about nursing errors. A stepwise logistic regression model was used to determine the independent correlates of nursing errors.

**Results** 318 (16.1%) nurses reported nursing errors within the last three months, primarily nursing record error (103, 32.4%) and medication administration error (87, 27.4%). The following factors

were found to be independently associated with nursing errors: being single (OR, 1.44; 95% CI, 1.06-1.94,  $p = 0.018$ ), having a junior college degree or below (OR, 1.37; 95% CI, 1.05-1.79,  $p = 0.019$ ), history of mental disorders (OR, 1.92; 95% CI, 1.16-3.20,  $p = 0.012$ ), longer years of nursing experience (OR, 0.96; 95% CI, 0.94-0.98,  $p < 0.001$ ), longer working hours (OR, 1.01; 95% CI, 1.00-1.02,  $p = 0.018$ ), more working shifts (OR, 1.03; 95% CI, 1.01-1.04,  $p = 0.002$ ), experiencing violence from patients (OR, 1.70; 95% CI, 1.18-2.43,  $p = 0.004$ ), perceiving work as meaningless (OR, 2.36; 95% CI, 1.40-3.97,  $p = 0.001$ ), and mental distress such as anxiety (severe, OR, 2.21; 95% CI, 1.30-3.77,  $p = 0.003$ ) and excessive daytime sleepiness (OR, 1.41; 95% CI, 1.08-1.85,  $p = 0.011$ ).

**Conclusion** High workload, impaired occupation wellness, and mental distress were closely associated with nursing errors. These findings could help in the early detection and prevention of nursing errors. Medical institutions and government agencies should take feasible measures to reduce the workload of nurses, improve their working environment, enhance their psychological well-being and monitor and minimise the occurrence of medical errors among nurses.

PO-068

## Clinical Application of Individual Administration Scheme Design Based on Plasma Concentration and Dosage of Paroxetine in the Treatment of Depression Disorders

Lingjun Zhong, Yonggui Yuan, Hua Shao  
Zhongda Hospital, School of Medicine, Southeast University

**Objective** Previous studies indicated that Paroxetine, a Serotonin Reuptake inhibitor (SSRI), may inhibit its own metabolic rate, but it lacks long-term monitoring data. This study analyzed the different administration schemes of Paroxetine in the treatment of depressive disorder, and explored the relationship between drug dose, blood concentration and clinical efficacy or adverse reactions.

**Methods** 87 patients with depressive disorder were treated with Paroxetine for more than 16 weeks. According to the treatment scheme, they were divided into low-dose group (LD) of 27 cases, high-dose group (HD) of 30 cases and adjustable-dose group (AD) of 30 cases. Blood drug concentration, scores of Hamilton Depression Rating Scale -17 (HAMD-17) and Hamilton Anxiety Rating Scale (HAMA) at different treatment stages and adverse reactions, were recorded.

**Results** The baseline HAMA score of LD group was lower than that of HD and AD groups ( $P < 0.01$ ,  $P < 0.01$ ). At 4 weeks, the concentration and concentration dose ratio (C/D) of the AD group were higher than those of the LD ( $P < 0.001$ ,  $P < 0.05$ ) and HD ( $P < 0.05$ ,  $P < 0.01$ ) groups. The grouping scheme of LD, HD, and AD is positively correlated with the 4-week concentration ( $P < 0.01$ ), and negatively correlated with the 4-week C/D ( $P < 0.01$ ). There were significant differences in adverse reactions of liver function and weight gain among the three groups ( $P < 0.05$ ).

**Conclusion** The scale score of the first consultation, early drug concentration and C/D can be used as a reference for Individual Administration Schemes.

PO-069

## 中国大学生阈下抑郁现状及相关因素——一项横断面调查

葛蒲<sup>1,2,3,4</sup>、谭成<sup>5</sup>、刘佳欣<sup>6</sup>、蔡琮<sup>7</sup>、赵思琦<sup>8</sup>、洪文颖<sup>3</sup>、刘坤孟<sup>9</sup>、齐佳乐<sup>10</sup>、胡琛<sup>11</sup>、于文丽<sup>12</sup>、李焱森<sup>13</sup>、尤媛<sup>14</sup>、郭金瀚<sup>15</sup>、郝明彦<sup>16</sup>、陈阳<sup>17</sup>、潘璐彤<sup>18</sup>、刘迪玥<sup>19</sup>、严梦瑶<sup>20</sup>、张金子<sup>21</sup>、李奇遇<sup>22</sup>、孙博雅<sup>23</sup>、韩笑<sup>24</sup>、莫馥而<sup>1,2,3</sup>、吴一波<sup>7</sup>、卞鹰<sup>1,2,3</sup>

1. 澳门大学中华医药研究院
2. 澳门大学中药质量研究国家重点实验室
3. 澳门大学健康科学学院公共卫生与医药管理系
4. 北京中医药大学管理学院
5. 北京大学政府管理学院
6. 中南大学湘雅护理学院
7. 北京大学公共卫生学院
8. 广州大学
9. 山东中医药大学青岛中医药科学院医学人工智能研究中心
10. 郑州大学新闻与传播学院
11. 南京理工大学紫金学院
12. 吉林体育学院
13. 天津医科大学护理学院
14. 伦敦国王学院
15. 白俄罗斯国立大学
16. 山西医科大学
17. 湖北中医药大学中医学院
18. 山东大学公共卫生学院
19. 海南医学院公共卫生与全健康国际学院
20. 北京协和医学院卫生政策与管理学院
21. 哈尔滨医科大学人文社会科学学院
22. 锦州医科大学人文与健康管理学院
23. 浙江传媒学院
24. 中山大学附属第五医院

**目的** 阈下抑郁是一种具有抑郁症状的精神亚健康状态，在世界各地广泛流行。对于大学生而言，阈下抑郁不仅对其社交活动和学习成绩产生负面影响，还会损害其生命质量，甚至增加其自杀风险。既有研究揭示了阈下抑郁发生风险的相关因素，但是鲜有人对中国大学生的阈下抑郁现状进行研究。基于此，本研究旨在研究中国大学生阈下抑郁现状，并探讨中国大学生一般特征、自评生命质量、感知压力、家庭沟通状况、领悟社会支持状况及自我效能水平等与其阈下抑郁发生风险之间的关系。

**方法** 以“2022 中国居民心理与行为调查”中的中国高校在读大学生（包括专科生、本科生、研究生）为研究对象，共包含 8934 个有效样本，采用问卷调查其人口学特征、自评生命质量、知觉压力、家庭沟通情况、领悟社会支持、自我效能及抑郁状况，采用卡方及秩和检验对各变量与受访者阈下抑郁的发生风险的关系进行单因素分析，采用二元 logistic 回归对大学生阈下抑郁的相关因素进行多因素分析。

**结果** 受访者中有抑郁倾向者达 68.1%，其中阈下抑郁占 39.7%，28.4%可能有抑郁症，阈下抑郁率高于抑郁患病率。阈下抑郁者和非阈下抑郁者在 PHQ-9 量表的各个条目得分上均存在显著差异（ $P<0.05$ ）。单因素结果显示，性别、专业、慢病患病情况、所在地、兄弟姐妹数量、家庭负债状况、家庭人均月收入、自评生命质量、知觉压力、家庭沟通状况、领悟社会支持、自我效能等变量可能与阈下抑郁的发生有关。二元逐步 logistic 回归显示，与对照组相比，女性、患慢病、家庭负债、自评生命质量低分组、知觉压力高分组、家庭沟通低分组、领悟社会支持低分组、自我效能低分组受访者存在阈下抑郁的可能性更高（ $P<0.05$ ）。

**结论** 中国大学生阈下抑郁率近四成，女性、身体状况差、家庭负债、高知觉压力可能是中国大学生阈下抑郁的风险因素，高家庭沟通、高领悟社会支持、高自我效能可能是中国大学生阈下抑郁

发生的保护因素。国家、社区、学校、家庭等应提高对中国大学生心理健康的重视程度，以促进其阈下抑郁的早发现、早诊断、早干预。

PO-070

## 社区老年慢性病患者共病心理疾病患病率的横断面研究

冯蕾<sup>1</sup>、李诺<sup>2</sup>、陈玲<sup>2</sup>、吴颖敏<sup>2</sup>

1. 成都市第五人民医院

2. 成都中医药大学管理学院

**目的** 运用老年精神疾病计算机诊断系统开展某城市社区老年慢性躯体疾病和精神疾病调研筛查，探讨老年慢性疾病合并老年抑郁和焦虑精神症状的影响因素及相关性。

**方法** 于 2022 年 4-10 月，采用便利抽样法，对某城市社区服务中心 60 岁以上的老年人运用计算机诊断系统开展老年慢性病、抑郁症和焦虑症筛查，探讨老年慢性病合并老年精神疾病的影响因素及相关性。

**结果** 调研 1200 名老年居民，有效问卷 1116 份。其中老年慢性病患者 896 例（占比 80.29%），老年慢性病患者中，抑郁和焦虑症状的阳性检出率分别是 3.1%（28/896）、23.9%（214/896）。经相关性分析、单因素分析和二分类 Logistic 逐步回归分析结果显示：健康状况、社会联系与支持、疾病种数、有无睡眠障碍 4 个变量是老年慢性病患者合并抑郁症状的影响因素（ $P < 0.05$ ）；健康状况、疾病种数、睡眠障碍 3 个变量是老年慢性病患者合并焦虑症状的影响因素（ $P < 0.05$ ）。

**结论** 社区老年慢性病患者合并焦虑症状的检出率高于抑郁症状的检出率，且都高于平均水平，影响焦虑抑郁症状的影响因素较多，随即针对以上危险因素进行干预，以期抑郁焦虑等症状得到有效预防和控制，提高老年慢性病患者群体生活质量，为慢病管理项目的顺利进行奠定基础，同时为后续研究提供数据。

PO-071

## Abnormal changes of dynamic topological characteristics in patients with major depressive disorder

Yue Zhou<sup>1</sup>, Yihui Zhu<sup>2</sup>, Hongting Ye<sup>2</sup>, Wenhao Jiang<sup>1</sup>, Yubo Zhang<sup>1</sup>, Youyong Kong<sup>2</sup>, Yonggui Yuan<sup>1,3</sup>

1. Department of Psychosomatics and Psychiatry, Zhongda Hospital, School of Medicine, Southeast University

2. Jiangsu Provincial Joint International Research Laboratory of Medical Information Processing, School of Computer Science and Engineering, Southeast University

3. Jiangsu Provincial Key Laboratory of Critical Care Medicine, Southeast university

**Objective** Most studies have detected abnormalities of static topological characteristics in major depressive disorder (MDD). However, whether dynamic alternations in brain topology are influenced by MDD remains unknown. This study was aimed to explore abnormal changes of dynamic topological characteristics between patients with MDD and NCs.

**Methods** A sample of 830 MDD patients and 771 NCs was used from 16 sites. An approach was proposed to capture the dynamic topological characteristics with sliding-window and graph theory for a large data sample from the REST-meta-MDD project.

**Results** It was shown that patients with MDD were characterized by decreased nodal efficiency of the left orbitofrontal cortex. The temporal variability of topological characteristics was focused on the left opercular part of Inferior frontal gyrus, and the right part of middle frontal gyrus, inferior parietal gyrus, precuneus and thalamus.

**Conclusion** This study explored the dynamic brain topological aberrances in MDD, with nodal topological changes observed. Some of the brain regions were reported associated with emotion regulation, especially the cortex of frontal and parietal lobes and thalamus. The interesting findings

has the high potential to help enhance the understanding on the neural mechanisms of MDD. The overall results highlight that altered temporal variability of topological characteristics, which provide novel insights into the role of topological network characteristics in patients with MDD.

## PO-072

### 青少年抑郁症非自杀性自伤反应抑制功能的 ERP 研究

周东东<sup>1</sup>、赵琳<sup>2</sup>、马伶俐<sup>2</sup>、胡景辉<sup>1</sup>、彭新宇<sup>2</sup>、王我<sup>1</sup>、况利<sup>2</sup>

1. 重庆医科大学附属大学城医院

2. 重庆医科大学附属第一医院

**目的** 有学者认为非自杀性自伤 (Nonsuicidal self-injury, NSSI) 是一种行为成瘾, 而线索反应性是成瘾障碍的特征之一。本研究旨在探索伴 NSSI 的青少年抑郁症患者在自伤相关线索下反应抑制的行为表现和电生理指标是否存在异常。

**方法** 年龄在 12 岁-18 岁之间的 47 个伴 NSSI 的重度抑郁 (Major depressive disorder, MDD) 患者, 39 个不伴 NSSI 的 MDD 患者, 以及 25 个健康对照 (Healthy control, HC) 在完成双选择 Oddball 范式下采集脑电图。准确率代价 (Accuracy cost) 和反应时代价 (RT cost) 作为反应抑制功能的行为学指标; 偏差刺激减去标准刺激的差异波 N2d 和 P3d 的潜伏期和波幅作为反应抑制功能的电生理指标。我们使用 ERP 可靠性分析工具箱去估计 N2 和 P3 的可信度估计, 阈值设置为 0.70。

**结果** P3d 波幅的组别×线索交互效应显著 [ $F(2, 108) = 4.54, p = 0.01, \eta^2 = 0.08$ ]。将年龄加入协变量后, 组别×线索条件的交互效应仍然显著 [ $F(2, 107) = 5.85, p = 0.004, \eta^2 = 0.10$ ]。进一步简单效应分析结果显示: 自伤相关线索下 MDD+NSSI 组的 P3d 波幅较 HC 组显著增大 (Bonferroni 校正后的  $p=0.046$ ); 在 MDD 组和 MDD+NSSI 组中, 自伤相关线索下的 P3d 波幅显著大于中性线索下的 P3d 波幅 (Bonferroni 校正后的  $p$  分别为 0.038 和 0.009), 但在 HC 组中, 自伤相关线索下的 P3d 波幅显著小于中性线索下的 P3d 波幅 (Bonferroni 校正后的  $p$  为 0.038)。N2 和 P3 可信度估计结果显示: MDD+NSSI 组、MDD 组和 HC 组在各种刺激条件下均具有较好的可信度 (均大于 0.7)。

**结论** 我们提供了伴有 NSSI 的青少年抑郁患者在自伤相关线索下神经反应性发生改变的神电生理证据, 具体来说, 自伤相关线索能诱发 NSSI 青少年显著更大的 P3 波幅。仍需要未来的纵向研究去探索线索反应性对于预测未来自伤自杀行为的作用和价值。

## PO-073

### 基于 fNIRS 对非自杀性自伤青少年患者言语流畅性任务期间前额叶血流动力学特点的研究

何青萍、舒燕萍

贵州省第二人民医院

**目的** 本研究采用基于言语流畅性任务范式的近红外光谱技术 (Functional near-infrared spectroscopy, fNIRS) 探讨 NSSI 青少年患者脑血流动力学特点。

**方法** 选取贵州省第二人民医院在 2022 年 04 月-2022 年 10 月期间门诊及住院部收治的 30 例符合 DSM-5 非自杀性自伤的诊断标准的青少年患者和 30 例性别、年龄、教育程度相匹配的健康志愿者, 并分别作为患者组和对照组。采用 17 项汉密尔顿抑郁量表 (HAMD 17) 评估患者的抑郁症状, 采用思维反刍量表 (RRS) 评估患者的思维反刍倾向性, 渥太华自伤量表 (OSI) 评估患者情非自杀性自伤行为的特点, 使用 53 通道近红外光谱成像仪 (fNIRS) 在言语流畅性任务 (VFT) 中采集前额叶氧合血红蛋白浓度的变化, 探讨 NSSI 青少年患者 VFT 任务期间脑血流动力学特点。

**结果** NSSI 组和健康对照组以氧和血红蛋白浓度为指标在背外侧前额叶、额极差异有统计学意义，其中主要表现在通道 CH6、CH21、CH41 有统计学意义 ( $P<0.05$ )，与健康组比较，NSSI 组患者 Hbo 浓度比健康对照组显著降低。

**结论** NSSI 青少年患者 VFT 任务期间存在与反应力、注意力等认知功能相关及情绪调节相关脑区（背外侧前额叶、额极、右 Broca 区）中表现出较低的氧和血红蛋白浓度的激活。fNIRS 可能作为没有表露出 NSSI 患者的筛查工具，脑血流氧和血红蛋白浓度可能作为 NSSI 患者生物学标记物之一。

## PO-074

### 首发抑郁障碍患者基于 Stroop 任务冲突抑制过程的脑电信号特征

张佳佳、司亚静、刘聪丛、寇延娜、姜笑笑、马嘉悦、侯霁轩、郭美岐、李渊博、张红星  
新乡医学院

**目的** 本研究采用 Stroop 范式结合高时间分辨率的脑电技术从行为和脑电探讨首发 DD 患者冲突控制过程的电生理特征。

**方法** 纳入首发未服药抑郁患者（患者组）16 例，同时纳入性别、年龄、受教育年限相匹配的正常对照（对照组）16 例。使用一般资料测验、汉密尔顿抑郁量表 24 项（HAMD-24）采集被试一般资料和临床症状得分。使用德国 Brain Products EASYCAP GmbH 脑电系统 ActiCAP-64 导采集 Stroop 任务态下两组被试的脑电信号。提取患者组和对照组 P1、N2 时间窗口下的幅值和潜伏期，通过溯源分析比较在 P1、N2 时间窗口下患者组和对照组的差异脑区，使用 SPSS21.0 对行为数据和脑电数据进行综合分析。

**结果** 行为结果：不一致条件下被试反应时大于一致条件  $F(1, 30)=35.470$ ,  $P<0.001$ ，不一致条件下正确率小于一致条件  $F(1, 30)=8.006$ ,  $P=0.008$ 。ERP 成分结果：N2 潜伏期组别主效应显著  $F(1, 30)=12.919$ ,  $P=0.001$ ，患者组 N2 潜伏期长于对照组；条件主效应显著  $F(1, 30)=7.196$ ,  $P=0.012$ ，一致条件 N2 潜伏期长于不一致条件；交互效应不显著。两组 N2 成分幅值无统计学意义，P1 成分潜伏期和幅值均无统计学意义。差异溯源结果均经 Bonferroni 矫正，一致条件下在 [80-150ms]，患者组左右梭状回、舌回、顶上回、顶下回、颞下回脑区激活强度减弱。在 [150-350ms] 患者组在左右梭状回、舌回、顶上回激活强度增强；在左右内侧眶额叶、外侧眶额叶、颞极、喙部前扣带皮层、峡部扣带皮层，右侧颞下回、颞中回、顶下叶、外侧枕叶脑区激活均减弱；患者组左侧颞下回、颞中回、顶下叶、外侧枕叶脑区在 [150-210ms] 激活减弱，在 [170-250ms] 激活增强。不一致条件下在 [80-150ms]，患者组左右梭状回、舌回、峡部扣带回，右侧顶下回、外枕叶激活强度下降。在 [150-350ms]，患者组在左右梭状回、舌回激活增强；在左右顶下回、顶上回、内侧眶额叶、外侧眶额叶、中央前回、峡部扣带回、后部扣带回激活下降。相似于一致条件下患者组在眶额叶、边缘皮层、颞极脑区激活强度的降低，在不一致条件下患者组在顶叶、中央前回脑区的激活强度也显著降低。

**结论** 本研究证实了抑郁患者脑功能障碍，中-顶脑区功能下降，可能是其在冲突条件下抑制能力受损的潜在神经生理机制。

PO-075

## 晚发型抑郁障碍和轻度认知障碍的多维认知差异探索及fNIRS 成像验证

刘瑶、吴倩、许丹、张咪雪、刘莎  
山西医科大学第一医院

**目的** 晚发型抑郁障碍 (Late-onset depression, LOD) 和轻度认知障碍 (Mild cognitive impairment, MCI) 患者同样作为阿尔茨海默病 (Alzheimer Disease, AD) 的高风险人群, 这两种疾病变得密切相关, 目前 LOD 与 MCI 患者的认知功能损伤模式及其可能的病理生理学机制目前仍不明确, 因此有必要进一步开展相关研究。

**方法** 本研究共纳入 LOD 患者 46 例, MCI 患者 13 例, 正常对照 (HC) 14 例。收集一般人口学资料、临床评估量表、神经心理学测验数据及 fNIRS 数据。并将所有的神经心理学测验整合成六个认知域, 包括记忆力, 信息处理速度, 视觉空间功能, 执行功能, 语言功能, 社会认知功能等。fNIRS 数据使用 MATLAB R2013b 软件 fNIRS\_SPM 工具箱提取其 ch1-ch52 通道的  $\beta$  值。

**结果 1、神经心理学测验及认知功能:** 与 HC 组比, LOD 组在记忆力、信息处理速度、视觉空间功能、执行功能、语言功能及社会认知功能等方面均显著下降; MCI 组在视觉空间功能、语言功能方面显著下降。LOD 组患者在记忆力方面显著低于 MCI 组。

**2、fNIRS:** LOD 组 ch3、ch5、ch7、ch8、ch10、ch19、ch21 $\beta$  值显著低于 HC 组, ch36、ch48 $\beta$  值显著低于 MCI 组。此外, MCI 组和 HC 组 ch21、ch46、ch47 $\beta$  值差异具有统计学意义。

**3、fNIRS 各差异通道  $\beta$  值与临床症状及认知功能的相关性:** LOD 组在 ch5、ch8、ch10、ch19、ch36  $\beta$  值与认知功能具有一定相关性, LOD 组 HAMD-24 评分与 MMSE 总分、MOCA 总分、视觉空间功能呈负相关。MCI 组 ch48  $\beta$  值与视觉空间功能呈负相关。

**结论** 本研究发现 LOD、MCI 患者之间的认知功能损害存在差异, 以及大脑代谢活动水平不尽相同。总体而言, LOD 比 MCI 患者的认知损害领域更广泛, 其中记忆力损害更为显著, 且 LOD 患者的总体认知功能与视觉空间功能与抑郁症状的严重程度呈负相关。MCI 组和 LOD 组在视觉空间功能、语言功能方面均显著下降, 其可能是二者认知损害的共同特征。

PO-076

## Hydrogen sulfide levels correlate with depression severity, a potential plasma biomarker for the diagnosis and treatment of depression

Jinzhil Lv<sup>1,2</sup>, Xinzhe Du<sup>1</sup>, Yao Gao<sup>1</sup>, Xiao Wang<sup>1</sup>, Wentao Zhao<sup>1</sup>, Xinrong Li<sup>1</sup>, Xiaohua Cao<sup>1</sup>, Junxia Li<sup>1</sup>, Yong Xu<sup>1</sup>, Sha Liu<sup>1,2</sup>

1. The First Hospital of Shanxi Medical University  
2. Shanxi Medical University

**Objective** Hydrogen sulfide (H<sub>2</sub>S) is an endogenous gasotransmitter that exerts anti-inflammatory protective effects in the central nervous system and has been associated with depression-like behavior in rodents. This study investigated the changes in plasma H<sub>2</sub>S levels in patients during the development of depression and its potential as a plasma biomarker.

**Methods** Forty-one patients with depression and 48 healthy controls were recruited for this study. Patients were treated with Shugan Jieyu capsule (SG) (n=28) or fluoxetine hydrochloride dispersible tablets (FLU) (n=13) for 8 weeks, respectively. Analyzable data from all participants were collected for the assessment of psychopathology and cognitive function, and plasma was collected in which H<sub>2</sub>S and homocysteine (Hcy) levels were measured with Elisa kits and tumor



necrosis factor (TNF) expression levels were measured with qPCR. Finally, the above data were correlated and analyzed for their potential as plasma biomarkers.

**Results** Eight weeks of treatment reversed lower plasma H2S levels and higher Hcy and TNF levels in patients at baseline (all  $P < 0.05$ ). Patients' plasma H2S, Hcy, and TNF levels correlated with psychopathology and cognitive function. In addition, the area under the curve (AUC) of the H2S-Hcy-TNF combination was 0.848(0.924 sensitivity, 0.699 specificity) for diagnosing depression, 0.981(0.894, 0.958) for predicting SG efficacy, and 0.948(0.888, 0.815) for predicting FLU efficacy.

**Conclusion** H2S is involved in the pathophysiology of depression. Plasma H2S, Hcy, and TNF reflect changes in depression psychopathology and cognitive function and have the potential to diagnose depression and predict the efficacy of Western and Chinese antidepressants.

## PO-077

### Identification of suicidality in adolescent major depressive disorder patients using sMRI: A machine learning approach

Su Hong, Jinglan He, Yao Gan, Daqing Ding, Xiaoming Xu, Qian Huang, Xiaying Li  
The First Affiliated Hospital of Chongqing Medical University

**Objective** Suicidal behavior is a major concern for patients who suffer from major depressive disorder (MDD), especially among adolescents and young adults. Machine learning models with the capability of suicide risk identification at an individual level could improve suicide prevention among high-risk patient population.

**Methods** A cross-sectional assessment was conducted on a sample of 66 adolescents/young adults diagnosed with MDD. The structural T1-weighted MRI scan of each subject was processed using the FreeSurfer software. The classification model was conducted using the Support Vector Machine - Recursive Feature Elimination (SVM-RFE) algorithm to distinguish suicide attempters and patients with suicidal ideation but without attempts.

**Results** The SVM model was able to correctly identify suicide attempters and patients with suicidal ideation but without attempts with a cross-validated prediction balanced accuracy of 78.59%, the sensitivity was 73.17% and the specificity was 84.0%. The positive predictive value of suicide attempt was 88.24%, and the negative predictive value was 65.63%. Right lateral orbitofrontal thickness, left caudal anterior cingulate thickness, left fusiform thickness, left temporal pole volume, right rostral anterior cingulate volume, left lateral orbitofrontal thickness, left posterior cingulate thickness, right pars orbitalis thickness, right posterior cingulate thickness, and left medial orbitofrontal thickness were the 10 top-ranked classifiers for suicide attempt.

**Conclusion** The findings indicated that structural MRI data can be useful for the classification of suicide risk. The algorithm developed in current study may lead to identify suicide attempt risk among MDD patients.

PO-078

## The current suicidal and self-harm ideation of healthcare providers in Fangcang shelter hospitals during the Omicron peak wave in Shanghai, China

Xiaoming Xu, Ming Ai, Qi Zhang, Su Hong, Jinglan He, Li Kuang  
The First Affiliated Hospital of Chongqing Medical University

**Objective** The SARS-CoV-2 Omicron variant spread rapidly in China, putting tremendous pressure on the medical system. Evidence showed that Fangcang shelter hospitals played a crucial role in rapidly responding to the COVID-19 pandemic. This cross-sectional study aimed to detect the prevalence of suicidal and self-harm ideation (SSI) and its related risk factors among healthcare providers (HCPs) in Fangcang shelter hospitals during the Omicron peak wave.

**Methods** We collected the social-demographic data, psychological status, and epidemic-related information from 1002 HCPs in four Fangcang shelter hospitals through an online survey from April 30 to May 3, 2022.

**Results** The prevalence of SSI was 1.7%. Age, the score of PHQ-9, GAD-7, PHQ-15, and PSQI, worried about themselves or their families being infected, suspecting themselves of being infected while the COVID-19-related symptoms appeared, and previous training on public health emergencies showed significant statistical differences between the HCP with and without SSI ( $P < .05$ ). Depression (OR, 1.627; 95%CI, 1.389-1.906) and suspecting of being infected while the COVID-19-related symptoms appeared (OR, 4.686; 95%CI, 1.147-19.142) were independent risk factors to SSI of HCPs in Fangcang shelter hospitals.

**Conclusion** The HCPs in the Fangcang shelter hospitals had better mental health status and a lower prevalence of SSI. In the future, more research is needed on the psychological state and dynamic changes of those with experience in the Fangcang shelter hospitals.

PO-079

## Perceived stress and anxiety among healthcare workers after the lifting of the COVID-19 lockdown in China: The mediating roles of resilience and social support

Zhili Zou, Bo Zhou, Jian Qiu  
Provincial Center for Mental Health, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital

**Objective** The aim of the present study was to investigate the prevalence of stress and anxiety symptoms of healthcare workers (HCWs) after the lifting of the COVID-19 lockdown, and explored whether resilience and perceived social support served as possible mediation effects between perceived stress and anxiety.

**Methods** An online cross-sectional survey was conducted to anonymously investigate the psychological symptoms among HCWs after the lifting of lockdown. The survey included demographic questionnaires, Generalized Anxiety Disorder 7-Item Scale (GAD-7), Perceived Stress Scale-10 (PSS-10), Perceived Social Support Scale (PSSS) and the 10-item Connor-Davidson Resilience Scale (CD-RISC-10).

**Results** A total of 1975 HCWs were investigated in this study. Prevalence rates for perceived stress and anxiety symptoms were 75.7%, and 33.1%, respectively. Female, 20-29 years old, 30-39 years old; undergraduate, doctor, nurse and junior professional title were risk factors associated with stress symptoms. In addition, female, undergraduate, doctor, nurse were risk factors associated with anxiety symptoms. Resilience played an intermediary role between

perceived hopeless and anxiety, and the resilience and other support played an chain mediating effect between perceived self-efficacy and anxiety.

**Conclusion** The results of this study demonstrate that the prevalence of stress and anxiety symptoms were high in investigated HCWs, and resilience and social support served as important protective factors of anxiety.

## PO-080

### The difference of event-related potential components in patient with comorbid depression and anxiety, depression or anxiety alone

Xiaobo Zhou, Zhonghua Lin, Wenqi Yang, Minjing Xiang, Bo Zhou, Zhili Zou  
Provincial Center for Mental Health, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital

**Objective** Major depressive disorder (MDD) and generalized anxiety disorder (GAD) were listed among most common mental disorders in the community and in the primary care, and the comorbidity of MDD and GAD is usually associated with a poor prognosis and significant detrimental impact on functioning. The study aimed to find whether patients with comorbid GAD and MDD had some differences in event-related potential components from patients with melancholy MDD or GAD alone.

**Methods** 360 adult patients aged 18-60 years old were enrolled from inpatient department of psychiatry of Sichuan provincial people's hospital from 2020 to 2022. They were divided into three groups with 120 patients for each group: melancholy MDD, GAD, and MDD+GAD. Demographic characteristics were collected and all the patients completed psychological assessment scales including patient health questionnaire-9 (PHQ-9) and 7-item generalized anxiety disorder (GAD-7). All the patients underwent examinations of auditory brainstem response, and event-related potentials (ERPs), including passive oddball paradigm (MMN), active oddball paradigm (P300), contingent negative variation (CNV) and sensory P50 gating. Statistical analyses were performed using SPSS 22.0.  $p=0.05$  was the original test criterion but was modified by a Bonferroni correction when making multiple statistical tests.

**Results** In MDD+GAD group, P3b latency was significantly longer than patients with MDD alone ( $325.0 \pm 31.6$  ms vs  $315.3 \pm 31.9$  ms,  $P < 0.05$ ), and P300 reaction time was positively correlated with total score of GAD-7 and PHQ-9, and PHQ-9 total score was also significantly positively correlated with P2-P3b amplitude ( $p < 0.05$ ). In addition, patients with MDD alone had significantly longer P300 reaction time ( $327.4 \pm 235.8$  ms vs  $277.2 \pm 52.7$  ms,  $P < 0.05$ ) and lower P2-P3b amplitude ( $6.9 \pm 7.7$   $\mu$ V vs  $10.0 \pm 10.7$   $\mu$ V,  $p < 0.05$ ) than GAD group. Compared with MDD alone, patients in MDD and GAD comorbidity might have more severe cognitive impairments, and severity of anxiety and depression symptoms might positively correlate with P300 components.

**Conclusion** This study explored differences of ERPs components among patients with GAD+MDD from patients with MDD or GAD alone, and tried to determine the relationship between psychological assessment scores and ERPs components. Our study has some significant findings, which could help to have a better understanding of patients in MDD and GAD comorbidity. Further studies were needed in this field to further test the role of P300 latency, reaction time and P2-P3b amplitude in informing diagnosis, predicting the severity and prognosis of patients in MDD and GAD comorbidity, which would largely help make potential treatment strategies.

PO-081

## A scoping review update on somatic symptom disorder that includes additional Chinese data

Ayinuer Manglike<sup>1</sup>, Yixiao Chen<sup>1</sup>, Ziming Liu<sup>1</sup>, Kurt Fritzsche<sup>2</sup>, Heng Wu<sup>1</sup>, Zheng Lu<sup>1</sup>

1. Shanghai Tongji Hospital

2. Department of Psychosomatic Medicine and Psychotherapy, Faculty of Medicine, Medical Center – University of Freiburg, Freiburg, Germany

**Objective** Somatic symptom disorder (SSD) is a new diagnosis introduced into the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) that is expected to solve the diagnostic difficulties of patients with medically unexplained symptoms. Based on the previous work, this review aims to comprehensively synthesise updated evidence related to SSD from recent years in English publications and, more extensively, from data published in Chinese language journals.

**Methods** The scoping review update was based on an earlier scoping review and included Chinese language publication data from CNKI, WANFANG, WEIPU between January 2013 and May 2022 and data from PubMed, PsycINFO, and Cochrane Library between June 2020 and May 2022.

**Results** Initially, 2984 articles were identified, of which 63 full texts were included for analysis. In China, SSD is mainly applied in scientific research, but it also shows good predictive validity and clinical application potential. The mean frequency of SSD was 4.5% in the general population, 25.2% in the primary care population, and 33.5% in diverse specialised care settings. Biological factors, such as brain region changes and heart rate variability, are associated with the onset of SSD. Psychological impairment related to somatic symptoms is the best predictor of prognosis. While adolescent SSD was significantly associated with family function, SSD overall is associated with an increased dysfunction of cognition and emotion, decreased quality of life, and high comorbidity with anxiety and depressive disorders. Further research is needed on suicide risk and cultural and gender-related issues.

**Conclusion** Updating the data of Chinese language studies, our research enriches the evidence-based findings related to the topics addressed in the text sections of the SSD chapter of DSM-5. However, research gaps remain about SSD reliability, population-based prevalence, suicide risk, and cultural and gender-related issues.

PO-082

## Mental health problems among adolescents and young adults after the lifting of the COVID-19 lockdown in China

Xiangmei Li<sup>2</sup>, Yunjin Ma<sup>2</sup>, Chunyan Zhong<sup>3</sup>, Dewei Pan<sup>4</sup>, Lin Fu<sup>5</sup>, Fengxiang Ma<sup>6</sup>, Zhili Zou<sup>1</sup>

1. Sichuan Academy of Medical Sciences &amp; Sichuan Provincial People's Hospital, Chengdu, China

2. University of Electronic Science and Technology of China

3. Chongqing Yuzhong Vocational Education Center, Chongqing, China

4. Deyang Applied Technology Vocational School, Deyang, China

5. Chongqing Yucai Middle School, Chongqing, China

6. Hengshui Heyan Middle School, Hengshui, China

**Objective** Referring to China's guidelines issued by the State Council's Joint Prevention and Control Mechanism on December 7, 2022, ten policies about coronavirus disease-2019 (COVID-19) were released after being optimized, which indicated that we had literally stepped into a new passage of epidemic prevention and control. Public health emergencies and abrupt transformation was of huge possibility to exert an tremendous influence on mental health status of our vulnerable adolescents. Depression, anxiety, sleep disorders and perceived stress were four major public-concerned psychological health issues, whose prevalence should not be underestimated and deserved our focus. Our study aimed to explore the impact which this special period had

brought about to Chinese adolescents and young adults aged from 12-20 after the lifting of the COVID-19 epidemic.

**Methods** The study utilized an online questionnaire survey with the Generalized Anxiety Disorder Scale (GAD-7), Patient Health Questionnaire (PHQ-9), Insomnia Severity Index (ISI) and Perceived Stress Scale (PSS-10) to detect the prevalence of anxiety, depression, insomnia and perceived stress. As for statistical analysis, uni-variate logistic regression was used to identify potential explanatory variables, while binomial logistic regression models were applied to assess their internal association.

**Results** A total of 3447 adolescents and young adults aged from 12 to 20 coming from 25 provinces in China were invited to participate in this online survey, 3234 among whom fulfilled the study inclusion criteria and completed the questionnaire. In our study, the detection rate of anxiety, depression, insomnia and perceived stress among Chinese adolescents and young adults after lifting lockdown were 27.86%, 36.36%, 22.14% and 78.48% respectively. Corresponding to socio-demographic characteristics, gender, region, age and the history of infection accounted for essential influencing factor of mental health problems. Specifically, female resulted in a significant increasing risk for anxiety (OR=1.662), depression (OR=1.545) and insomnia symptoms (OR=1.378). Besides, subjects living in rural areas reflected a higher ratio of feeling tensed (OR=1.289). Additionally, the ratio of perceiving stress was gradually growing with age (OR=1.000 for "12-14", OR=1.980 for "15-18", OR=2.049 for "19-20"). Apart from this, subjects in senior high school were of significantly higher risk of anxiety (OR=1.263). Noticeably, subjects who had been infected of was being infected were much more likely to suffer from anxiety (OR=1.539), depression (OR=1.854) and insomnia symptoms (OR=1.271). As far as attitudes towards the pandemic, the reduction of interpersonal connection increased the risk of anxiety, depression and insomnia symptoms. Comparing to those who didn't worry about vulnerable relatives being infected, those who were in worry reflected a higher risk of anxiety, depression and insomnia symptoms. Moreover, fear of taking public transportation was associated with a higher risk of anxiety, depression and perceived stress. However, more knowledge deeper cognitive level towards COVID-19 served as a protective factor for all these four issues.

**Conclusion** In accordance with our investigation, the detection rate of depression, anxiety, insomnia and perceived stress was comparatively high, which indicated that public health emergencies, such as the abrupt lifting of the COVID-19 lock-downs, did make an difference on mental health status of adolescents and young adults. This impact could not be underestimated. Our research offered scientific data of mental health status among the youths ages 12 to 20, which was capable of offering insight into constructive instructions of psychological strategies integrated with clinical and political significance under the circumstances of public health emergencies. To be detailed, news media should provide correct guidance of social opinion as well as strictly audit and punctually refute harmful and influential rumors. Moreover, family and school should shoulder the responsibility to offer inspirational support for youths. Especially, targeted measures could be taken into consideration for female and rural students, who were extraordinarily susceptible to mental disorders when public health emergencies happened.

PO-083

## 首发精神分裂症患者静息态及任务态中异常“翻转”的脑网络激活模式

胡欣怡、陆峥  
同济大学附属同济医院

**目的** 探究首发未用药精神分裂症患者在静息态以及面孔表情识别任务中脑网络的异常激活模式。

**方法** 对 75 名首发未用药精神分裂症患者与 50 名健康对照进行静息态以及面孔表情识别任务下的功能磁共振扫描，基于 AAL 图谱构建功能连接网络，并运用图论方法分析功能脑网络拓扑属性在首发精神分裂症患者中所发生的异常改变。

**结果** 预处理过程中，经过头动校正，排除了头动大于 3mm 的被试，最终纳入 62 例精神分裂症患者与 46 例健康对照。静息态下，图论分析的双样本 T 检验结果显示，脑网络的同配性与层级性存在显著组间差异，患者组的网络同配性高于对照组 ( $t=-2.67$ )，而对照组的网络层级性高于患者组 ( $t=2.34$ )，全局效率和局部效率指标存在对照组大于患者组的趋势。在任务情境下，患者组的网络同配性显著低于对照组 ( $t=2.78$ )，网络层级性 ( $t=-3.00$ ) 和全局效率 ( $t=-2.05$ ) 属性则显著高于对照组。

**结论** 我们发现首发精神分裂症患者的脑网络拓扑属性在静息态和任务态下都存在一定程度的异常。有意思的是这种激活模式在从静息态切换到任务态的过程中类似于进行了“翻转”，即静息态时患者组大于对照组的脑网络拓扑属性指标在任务态下往往会小于对照组。

PO-084

## 脊髓损伤后抑郁障碍患者肠道菌群多样性及其相关性分析

陈亦笑、吴周睿、赵丽娟、吴军录、殷嘉欣、阿依努尔·芒力科、吴珩  
上海市同济医院

**目的** 抑郁障碍是脊髓损伤 (Spinal Cord Injury, SCI) 后最普遍的心理问题之一，与多种不良预后相关。最新研究提示肠道菌群失调可能通过炎症途径促进抑郁障碍发生发展。本研究拟探索 SCI 后抑郁障碍患者的肠道菌群特征，分析肠道菌群、炎症与抑郁之间的相关性，为探究 SCI 患者抑郁障碍的发病机制提供理论基础。

**方法** 选取 SCI 后抑郁患者 (SCI patients with depression, SD) 21 例、SCI 后无抑郁患者 (SCI patients without depression, S) 23 例和健康对照者 (Health Control, C) 24 例，收集社会人口学信息和 SCI 临床信息，采用重型抑郁量表 (Major Depression Inventory, MDI)、患者健康问卷抑郁症状群量表 (Patient Health Questionnaire-9, PHQ-9)、健康焦虑量表 (Whitely Index-8, WI-8)、躯体症状障碍诊断 B 标准量表 (Somatic Symptom Disorder-B Criteria Scale, SSD-12) 评估心理特征，检测血浆 IL-2、IL-4、IL-6、IL-10、IL-17 和 IFN- $\gamma$  浓度，检测粪便中肠道菌群及代谢产物。采用 SPSS 24.0 分析一般资料、量表得分和细胞因子水平，组间比较采用 t 检验、方差分析、Mann-Whitney U 检验或  $\chi^2$  检验。采用 R 语言 3.6.0 分析肠道菌群及其代谢产物含量。采用 Spearman 相关分析分析变量之间的相关性。检验水准为  $\alpha=0.05$ 。

**结果** SD 组的量表 (MDI、PHQ-9、WI-8、SSD-12) 得分显著高于 S 组和 C 组；其 IL-2、IL-6、IL-17A、IFN- $\gamma$  水平升高，IL-10 水平降低；肠道菌群 Alpha 多样性下降，Beta 多样性分析提示菌群结构改变。相关分析提示埃希氏菌属、克雷伯氏菌属与量表得分呈正相关，拟杆菌属、粪杆菌属与量表得分呈负相关；胆酸等与 IL-10 呈负相关，二十二碳六烯酸、二十碳五烯酸与 IL-10 呈正相关；IL-2、IL-6、IL-17A、IFN- $\gamma$  与量表得分呈正相关，IL-10 与量表得分呈负相关。

**结论** SCI 后抑郁障碍患者的肠道菌群结构改变, 肠杆菌科与抑郁障碍呈正相关, 拟杆菌科和粪杆菌属与抑郁障碍呈负相关, 且细胞因子紊乱, 与抑郁症状严重程度和菌群代谢产物存在一定相关性。

## PO-085

### 心理疾病和慢性咳嗽:哪一个更重要?临床特征比较

张童洋子、吴珩、余莉、徐怀怀  
上海市同济医院

**目的** 比较慢性咳嗽合并已有心理合并症(PCC)和慢性咳嗽合并继发焦虑和/或抑郁(SCC)的临床特点, 为慢性咳嗽患者心理合并症的诊断和治疗提供依据。

**方法** 采用前瞻性研究, 分析 PCC 组、SCC 组及慢性咳嗽无焦虑抑郁(CC)组的一般临床资料。共有 203 名慢性咳嗽患者参加了这项研究。所有病例的最终诊断均采用心身和呼吸诊断相结合的方法。比较三组患者的一般临床资料、辣椒素咳嗽敏感性、咳嗽症状评分、莱斯特咳嗽问卷(LCQ)、心身量表评分。分析 PHQ-9、GAD-7 在 PCC 患者中的诊断价值及随访资料。

**结果** 与 SCC 组相比, PCC 组咳嗽持续时间较短( $H = -3.54, P = 0.001$ ), 夜间咳嗽症状较轻( $H = -4.60, P < 0.001$ ), 总体 LCQ 得分较低( $H = -2.97, P = 0.009$ ), PHQ-9 得分较高( $H = 2.90, P = 0.011$ ), GAD-7 得分较高( $H = 2.71, P = 0.002$ )。采用 PHQ-9 和 GAD-7 评分联合预测诊断 PCC 时, AUC 为 0.88, 敏感性和特异性分别为 90.0%和 73.85%。心身治疗 8 周后, PCC 组咳嗽症状有所改善, 但心理改善不显著。经病因或经验性治疗后, SCC 组咳嗽症状得到改善, 心理状态得到改善。

**结论** PCC 与 SCC 的临床特点不同。心身量表的评估是有价值的, 以区分两组。有心理合并症的慢性咳嗽患者应及时进行心身医学联合诊断。PCC 在心理治疗中需要更多的关注, 但对于 SCC, 针对病因治疗咳嗽是首选的。

## PO-086

### 尼古丁对精神分裂症认知功能和海马 Glx 的影响

陈珊珊、王梁梁、尤子凡、孙云开、李锦光、何张崑、张廷开、廖艳辉、唐劲松  
浙江大学医学院附属邵逸夫医院

**目的** 精神分裂症是一种严重的慢性精神疾病, 主要症状包括幻觉、妄想、情感淡漠和社交活动退缩等, 并常伴有不同程度的认知功能障碍。临床研究发现, 精神分裂症患者吸烟率可高达 79%, 远超正常人群和其他精神障碍患者。有研究提示精神分裂症患者可能通过吸烟获得某些“益处”, 然而当前相关研究结果并不一致。氢质子磁共振波谱成像(1H-MRS)作为无创性测量大脑中代谢物水平的成像方法被广泛利用。本课题采用 1H-MRS 技术开展 RCT 研究, 探究尼古丁对精神分裂症患者认知功能和海马谷氨酰胺复合物(Glx)的影响。

**方法** 纳入不吸烟精神分裂症患者进行随机分组。试验组使用尼古丁贴片(14mg/片/天), 安慰剂组使用外观类似的安慰剂贴片(1片/天)。收集所有受试者的人口学信息, 在基线和干预 2 周后均采用重复性成套神经心理状态测验(RBANS)量表评估精神分裂症患者的认知功能以及完成海马 1H-MRS 波谱。分析比较两组干预后认知功能和海马 Glx 水平的变化。将试验组干预后认知功能变化和 Glx 变化进行偏相关分析。

**结果** 尼古丁贴片干预 2 周后, 试验组患者的即刻记忆得分、言语功能得分、注意力得分和 RBANS 总分均显著上升, 试验组患者左侧海马的 Glx 水平较基线均显著下降, 上述结果均通过 FDR 校正。试验组患者干预后 Glx 水平变化和注意力得分变化呈正相关, 未通过 FDR 校正。

**结论** 短期尼古丁干预有助于改善不吸烟精神分裂症患者的认知功能（即刻记忆、言语功能和注意力）；不吸烟精神分裂症患者经尼古丁短期干预后，海马的 Glx 水平降低，这种改变可能在相应的认知功能改善中发挥一定作用。

## PO-087

### 吸烟对精神分裂症临床表现和脑形态的影响

陈珊珊、孙云开、尤子凡、李锦光、何张崑、张廷开、廖艳辉、唐劲松  
浙江大学医学院附属邵逸夫医院

**目的** 精神分裂症是一种严重的慢性精神疾病，主要症状包括幻觉、妄想、情感淡漠和社交活动退缩等，并常伴有不同程度的认知功能障碍。临床研究发现，精神分裂症患者吸烟率可高达 79%，该现象受到学界广泛关注。既往有研究提示，吸烟精神分裂症患者的脑形态可能存在异常。本研究通过对比吸烟和不吸烟精神分裂症患者临床表现和脑形态的差异，探究吸烟精神分裂症患者临床表现和脑形态的特点。

**方法** 纳入吸烟精神分裂症患者、不吸烟精神分裂症患者和健康对照。收集所有受试者的人口学信息，采用阳性和阴性症状量表（PANSS）、9 项患者健康问卷（PHQ-9）、7 项广泛性焦虑障碍量表（GAD-7）和重复性成套神经心理状态测验（RBANS）量表评估精神分裂症患者的临床表现，其中吸烟患者需完成吸烟情况评估。所有受试者完成高分辨 3D-T1 加权结构像数据采集。比较吸烟和不吸烟精神分裂症患者临床表现的差异。比较三组受试者的皮层厚度、表面积、皮层下结构体积和海马亚区体积的差异。将组间比较有显著差异的脑结构指标与临床表现进行偏相关分析。

**结果** 吸烟精神分裂症患者的 PHQ-9 得分显著低于不吸烟精神分裂症患者（ $p=0.013$ ），通过 FDR 校正。吸烟精神分裂症患者的注意力得分较不吸烟精神分裂症患者低（ $p=0.026$ ），未通过 FDR 校正。吸烟精神分裂症患者的吸烟情况和临床表现无相关性（ $p$  均  $>0.05$ ）。吸烟精神分裂症患者右外侧眶额叶（ $p=0.048$ ）和右颞横回（ $p=0.043$ ）的皮层厚度较不吸烟精神分裂症患者低，未通过 FDR 校正。吸烟精神分裂症患者海马亚区-右侧海马伞体积较不吸烟精神分裂症患者更小（ $p=0.011$ ），未通过 FDR 校正。

**结论** 吸烟精神分裂症患者可能表现出更轻的抑郁症状，注意力有受损的趋势；吸烟精神分裂症患者右外侧眶额叶和右颞横回的皮层厚度呈现更低趋势，海马亚区-右侧海马伞的体积呈现下降更明显的趋势。

## PO-088

### 视觉症状与睡眠呼吸暂停综合征

黄朝阳、李宁、詹淑琴、王玉平  
首都医科大学宣武医院

**目的** 阻塞性睡眠呼吸暂停（OSA）是一种常见的睡眠障碍疾病，特点是在睡眠期间间歇性出现完全或部分上呼吸道阻塞，造成反复发作的呼吸暂停或低通气，从而导致呼吸停止和血氧水平下降。OSA 的诊断主要依据病史、体征、症状、影像学检查和多导睡眠图（PSG）监测的结果。根据呼吸暂停低通气指数（AHI）及夜间最低血氧饱和度将 OSA 分为轻、中、重三种类型，确诊 OSA 要通过夜间多导睡眠图。

**方法** 越来越多的证据表明，OSA 与眼睑综合征、干眼症、中心性浆液性脉络膜视网膜病变、视神经病变（包括开角型青光眼、正常眼压性青光眼）以及视乳头水肿有关。阻塞性睡眠呼吸暂停导致眼部并发症的发病机制尚未完全阐明，但其可能是多因素的，如缺血再灌注损伤、高凝状态、自由基的产生、血管收缩剂的释放、氧化应激的增加、内皮功能障碍等。



**结果** 研究表明,睡眠呼吸暂停还可导致颅内压增高,且与睡眠呼吸暂停严重程度呈明显正相关。以往研究表明,持续气道正压通气(CPAP)可能对于预防和改善眼科疾病起到积极作用,但缺乏大型临床对照研究,因此,尚无明确结论。

**结论** 总之,OSA可能引起不可逆的眼科并发症,并且,如果可以早期诊断和治疗OSA,这些眼科并发症是有可能预防 and 治疗的。因此,临床上,我们应该高度重视OSA导致的眼科并发症,早识别,早治疗。

## PO-089

### 双相情感障碍与肠道微生物群关系的研究进展

颜柳娇

广州医科大学附属脑科医院

**目的** 双相情感障碍是一类严重的复发性情感障碍,对社会经济和患者本人带来了巨大的痛苦和负担,最近的研究表明,肠道菌群参与情绪调节,与双相情感障碍等疾病的发生发展密切相关,因此,深入研究肠道微生物群与“脑-肠轴”对双相障碍的影响,将为该疾病的病因、诊断和治疗提供新的思路。故本文对于肠道微生物菌群在双相障碍的作用及可能机制进行综述。

**方法** 检索截至2023年5月的Cochrane Library、PubMed等数据库。主要关键词:“bipolar disorder、Gut Microbiota、microbiota-gut-brain axis”等

**结果** 双相障碍患者存在肠道微生物群失调的情况,包括菌群多样性的降低以及某些菌群数量的增加或减少。相比于健康人,双相障碍患者的肠道微生物群构成和丰度也存在显著差异,并且这些变化可能与疾病发作和病情严重程度有关。此外,肠道微生物群通过产生活性代谢产物直接影响中枢神经系统,包括B组维生素、犬尿酸、 $\gamma$ -氨基丁酸和短链脂肪酸通过脑肠轴作用于中枢神经系统并影响双相情感障碍在内的多种精神疾病的发生已经通过实验证实,但也有学者将炎症反应作为肠道菌群影响症状的媒介,肠道免疫反应对症状的影响可能也是BD发生中的重要环节。

**结论** 结论:既往的研究中已经表明,益生菌、药物、粪菌移植、饮食方式等干预措施对BD患者肠道菌群和临床症状都会产生影响,如何利用多种干预手段进行综合治疗,可能对今后双相情感障碍患者的治疗困境提供新的解决思路。

## PO-090

### 22139名综合医院心理科门诊患者症状自评量表结果及影响因素研究

张慧娟<sup>1</sup>、周鸿影<sup>1</sup>、李蹕然<sup>1</sup>、王兰兰<sup>1,2</sup>、程文红<sup>1,2</sup>

1. 上海市第一人民医院

2. 上海市精神卫生中心

**目的** 了解综合医院心理科不同病种患者的症状自评量表(the symptom checklist 90, SCL-90)评估结果及特征,探索SCL-90得分影响因素。

**方法** 研究纳入某三级甲等综合医院心理科2009年2月至2023年3月期间进行症状自评量表测评的患者22139名,并收集年龄、性别等人口学信息。根据患者诊断类别分组,统计不同病种患者症状自评量表的十项因子得分。将各项因子得分与常模[1]比较,并进行组间比较。并探索SCL-90各项因子得分与年龄、性别相关性。

**结果** (1) 22139名患者平均年龄 $45.02 \pm 18.95$ 岁,男性比例32.7%,女性比例67.3%。病种人数前四位分别为:焦虑组11665例、抑郁组5435例、睡眠障碍864例、强迫组578例。焦虑组患者比例总体呈上升趋势( $R^2=0.64$ ,  $P<0.001$ )

(2) 焦虑组、抑郁组、强迫组各项因子得分均高于常模组 ( $P$  均 $<0.001$ )，睡眠障碍组“人际敏感”、“偏执”因子分与常模有明显差异，其余各因子得分均高于常模组 ( $P$  均 $<0.001$ )。除“强迫”因子外，抑郁组各项因子分均高于其余各组；除“其他”因子外，睡眠障碍组各项因子均低于其余各组；与强迫组相比，焦虑组“躯体化”、“其他”因子得分更高，“强迫”、“人际敏感”、“敌对”、“偏执”、“精神病性”得分更低 ( $P$  均 $<0.05$ )。

(3) 年龄与 SCL-90 各项因子分呈负相关，各因子与年龄的相关系数-0.11 至-0.43；女性患者“躯体化”、“抑郁”、“焦虑”、“恐怖”、“其他”因子得分高于男性组 ( $P$  均 $<0.01$ )。

**结论** 综合医院心理科门诊焦虑症状、抑郁症状就诊患者比例较高，就诊患者 SCL-90 测评症状严重程度普遍高于常模平均水平。有抑郁症状的人群、女性患者、年龄较轻患者症状可能更加显著。

## PO-091

### 抗抑郁药效与靶向测序基因的多基因风险评分的相关性研究

邵永琪、蔡雨凡、唐海平、徐治  
东南大学附属中大医院

**目的** 重性抑郁障碍是临床上常见的一类精神障碍性疾病。目前临床上治疗 MDD 以药物为主，但抗抑郁疗效个体差异很大，约有 2/3 的 MDD 患者在初始抗抑郁治疗后未能达到症状缓解。近年来，全基因组关联研究已经发现了多个基因组区域的遗传变异影响抗抑郁药效的易感性。本研究旨在从抑郁症患者靶向外显子测序层面探究多基因风险评分(polygenic risk score, PRS)与抗抑郁药效的关联。

**方法** 本研究使用日本生物银行的东亚人 GWAS summary 数据作为 PRS 计算的 Base 集，招募 1000 名 MDD 患者，将其 1309 个基因的靶向外显子测序结果作为 PRS 计算的 target 集，利用 PLink 1.9 软件计算精神分裂症表型 PRS、抑郁症表型 PRS。以 MDD 患者治疗前和治疗后 2 周汉密尔顿抑郁症 17 项评分的减分率作为评价抗抑郁药疗效的指标。同时纳入 MDD 患者治疗前儿童期创伤、家庭环境、生活事件、社会支持、多伦多述情障碍、快感缺失、贝克自杀意念量表以评估 MDD 患者的临床症状和心理特征。使用统计软件 SPSSPRO 1.1.13，采用 Spearman 相关性分析、多元线性回归统计等方法进行分析。

**结果** 根据 PRS 既往相关研究，选定在 0.001、0.05、0.1、0.2、0.3、0.4、0.5 七个阈值下分别计算并得到相关表型的 PRS，并利用所得到的 PRS 进行后续分析。相关性分析结果：0.05 阈值下的精神分裂症表型 PRS 与 HAMD-17 两周减分率呈负相关，而 7 个阈值下抑郁症表型 PRS 均与 HAMD-2 周减分率未见显著相关性。多元逐步回归分析结果显示：纳入精神分裂症 PRS 的模型 1 中，家庭环境量表-知识性、生活事件量表-一年内负性事件值、社会支持量表-主观支持、0.1 阈值下精神分裂症 PRS、多伦多述情障碍量表总分是 MDD 患者抗抑郁药疗效的影响因素。纳入抑郁症 PRS 的模型 2 中，家庭环境-知识性、一年内负性事件值、主观支持、0.1 阈值下抑郁症 PRS、多伦多述情障碍量表总分、家庭环境-组织性是 MDD 患者抗抑郁药疗效的影响因素。

**结论** 多基因风险评分在一定程度上反应遗传变异在抗抑郁药效差异中的易感性，0.05 阈值下的精神分裂症表型 PRS 与 HAMD-17 两周减分率存在相关性，并且 0.1 阈值下的精神分裂症或抑郁症表型 PRS、临床症状（述情障碍）及心理特征（家庭环境、生活事件、社会支持）与 MDD 患者抗抑郁药疗效有关。

PO-092

## 艾司西酞普兰对患者 QTc 间期的影响及相关因素分析

陈子木、袁勇贵、徐治  
东南大学附属中大医院

**目的** 2011 年美国食品药品监督管理局 (The U.S. Food and Drug Administration, FDA) 发表警示, 艾司西酞普兰/西酞普兰可导致 QTc 间期延长, 诱发心律失常, 增加尖端扭转型室速的风险, 导致心源性猝死。但部分国外临床研究认为艾司西酞普兰并不会造成显著的 QTc 间期延长, 因此本研究拟在汉族人群中, 探索在 FDA 指导剂量下艾司西酞普兰是否会影响 QTc 间期, 以及与之相关的临床因素。

**方法** 本研究收集 2015 年 6 月-2021 年 1 月期间在东南大学附属中大医院心理精神科接受艾司西酞普兰/西酞普兰治疗的 773 例住院病例的临床因素及用药后的 0 周 (基线), 1 周, 2 周, 3 周, 4 周, 5 周的心电图数据及用药剂量。将 QTc 间期延长定义为男性 $\geq 450\text{ms}$ , 女性 $\geq 460\text{ms}$ , 同时以  $\Delta\text{QTc}$  是否大于等于 30ms 将患者分为 QTc 间期延长组和未延长组。其中临床因素包括年龄、性别、诊断、合并症及合并用药。使用 SPSS25.0 进行统计分析。

**结果** 对于全部接受艾司西酞普兰/西酞普兰治疗的患者中, QTc 间期延长 (男性 $\geq 450\text{ms}$ , 女性 $\geq 460\text{ms}$ ) 的发生率仅有 3.5%。接受艾司西酞普兰治疗前, 年龄、性别可显著影响 QTc 间期 ( $P=0.029$ ,  $P=0.000$ )。接受艾司西酞普兰治疗后, 除年龄、性别外, 合并患有糖尿病 ( $B=10.512\text{ms}$ ,  $P=0.023$ ), 合并使用抗精神病药物 ( $B=4.674\text{ms}$ ,  $P=0.043$ ) 及合并使用心境稳定剂丙戊酸钠 ( $B=-9.027\text{ms}$ ,  $P=0.021$ ) 均可显著影响 QTc 间期。同时年龄大 ( $P=0.016$ )、合并有冠心病 ( $P=0.009$ )、高血压病 ( $P=0.003$ )、肾功能不全 ( $P=0.019$ ) 的患者更容易发生 QTc 间期延长 ( $\Delta\text{QTc}\geq 30\text{ms}$ ), 最后在临床 FDA 安全剂量范围内, 没有发现艾司西酞普兰剂量和时间对 QTc 间期的影响。

**结论** 目前结果表明在参考 FDA 推荐安全剂量的临床治疗环境下, 艾司西酞普兰长时间使用是相对安全的, 除性别、年龄外, 合并患有糖尿病、合并使用抗精神病药物及合并使用心境稳定剂丙戊酸钠可显著影响艾司西酞普兰患者的 QTc 间期, 最后, 年龄大、合并有冠心病、高血压病、肾功能不全的患者更容易发生 QTc 间期延长。

PO-093

## 抗抑郁药反应轨迹及相关因素分析

唐海平、徐治  
东南大学附属中大医院

**目的** 已进行的研究未能确定与抗抑郁药疗效密切相关的影响因素可能与两个原因有关: 一是对药效的判定不能反映病人的实际情况。在抑郁症研究中通常使用在单一终点评估预定截止值的方法定义疗效, 忽略治疗过程中症状随时间变化的各种信息。二是生物标志物的选择。抑郁症的药物遗传学研究目前集中在常见变异, 忽略了罕见变异的影响。而罕见变异往往有更大的影响且更易映射到因果基因。本研究旨在利用纵向多时点点数据识别抗抑郁疗效异质性, 并评估临床心理因素和罕见遗传变异对疗效的影响。

**方法** 本研究入组 929 例抑郁症患者, 年龄 18 ~ 65 岁, 符合非精神病性 MDD 的诊断标准。参与者接受单一抗抑郁药物治疗 8 周或前两周同步 rTMS 治疗。在基线和第 2、4、6 和 8 周使用 HAMD-17 评估抑郁症状严重程度。使用时序数据分析方法建立抑郁症患者的治疗反应轨迹, 并进行聚类分析以识别治疗反应模式。进行方差分析和 Turksy HSD 检验评估环境因素(童年创伤经历、家庭环境、社会支持)和临床症状(述情障碍、自杀意念、快感缺失)对反应模式的影响。此外, 基于以往研究和 KEGG 中与抗抑郁作用有关的途径, 我们选择了 1309 个靶基因进行了靶向外显子组测序。

我们关注罕见变异对药效的影响，通过罕见变异负荷分析和富集分析探索与反应模式有关的潜在生物学途径。

**结果** 聚类分析产生 3 种反应集:逐渐反应组 (C1)、早期反应组 (C2) 和症状波动组 (C3)。症状波动组的患者在基线时有较高水平的自杀意念 (C1vsC3,  $p=0.00054$ ; C2vsC3,  $p=0.027$ ) 和家庭控制水平 (C1vsC3,  $p=0.0067$ ; C2vsC3,  $p=0.018$ )，在治疗结束时表现出显著较高水平的自杀意念 (C1vsC3,  $p=0.00025$ ; C2vsC3,  $p=9.3e-07$ )、述情障碍 (C1vsC3,  $p=1.6e-10$ ; C2vsC3,  $p=4.6e-13$ ) 和快感缺失 (C1vsC3,  $p=1.5e-11$ ; C2vsC3,  $p=4.7e-10$ )。早期反应(C1vsC2)相关基因主要富集于神经营养因子信号通路，而症状波动(C1 vs C3)相关基因主要富集于 TRP 炎症介质调控通道。

**结论** 我们的结果为发现影响抗抑郁治疗反应背后的生物学途径提供了更多信息，侧面佐证神经营养因子信号通路参与抗抑郁药快速起效机制，也为 TRP 通道作为抑郁症的新治疗靶点提供了进一步的新证据支持。

## PO-094

### 功能异常脑区和 TPH2 甲基化相互作用与抑郁症关联研究

谈婷婷<sup>1</sup>、袁勇贵<sup>2</sup>、徐治<sup>2</sup>

1. 苏州市广济医院

2. 东南大学附属中大医院

**目的** 抑郁症 (MDD) 是全球常见的精神疾病之一。我们将探讨 rs-fMRI 结合 TPH2 基因甲基化水平两者之间相互作用与 MDD 发生的关联性。

**方法** 本研究共纳入 300 例 MDD 患者和 100 例健康对照 (HCs)，其中 101 例 MDD 患者和 64 例 HCs 扫描 MRI。本研究使用 MATLAB(2014a)中的 RESTplus 软件分析 rs-fMRI 资料，分别使用了低频振幅 (ALFF)、区域一致性 (ReHo) 和分数低频振幅 (fALFF) 探讨脑区局部自发性的神经活动，并进行功能连接 (FC) 的分析。分析扫描 MRI 的 MDD 患者组和 HCs 组之间的一般资料和脑区异常活动值，通过广义线性模型分析 rs-fMRI 发现的脑区异常的活动和 TPH2 甲基化水平相互作用与 MDD 发生的关联性。最后对统计结果使用 R 语言进行错误发现率 (FDR) 多重检验校正。

**结果** 本研究最终共纳入 291 例 MDD 患者和 100 例 HCs。Rs-fMRI 分析结果显示：在 MDD 组和 HCs 之间，右侧扣带回、右侧颞上回 (STG) 和左侧舌回的 ALFF 存在明显差异性 ( $p<0.05$ )；右侧颞中回 (Middle temporal gyrus, MTG)、左侧颞上回、左侧楔叶和左侧枕中回 (MOG) 的 ReHo 存在明显差异性 ( $p<0.05$ )；以上述结果作为 ROIs 进一步分析 MDD 和 HCs 之间的 FC 差异性，发现左侧前扣带回与右侧扣带回的 FC、右侧 STG 与右侧颞下回 (ITG) 的 FC、右侧 STG 与左侧 STG、右侧 STG 与右侧额上回 (SFG) 的 FC 和右侧 STG 与左侧枕下回 (IOG) 以及右侧 MTG 与右侧 MOG 的 FC 具有差异性 ( $p<0.05$ )；研究进一步发现 MDD 和 HCs 之间右侧 STG 的 ALFF 活动与 TPH2-5-203 甲基化、左侧舌回的 ALFF 活动与 TPH2-9-178 甲基化相互作用与 MDD 的发生存在关联性 ( $p=0.004$ ;  $p=0.048$ )；右侧 MTG 的 ReHo 活动水平与 TPH2-5-203 甲基化与 MDD 的发生存在关联性以及右侧 STG 与左侧 IOG 之间的功能连接与 TPH2-9-178 甲基化的相互作用与 MDD 的发生相关 ( $p=0.018$ ;  $p=0.021$ )。

**结论** 本研究表明 MDD 患者相较于 HCs，额上回、颞叶、枕中回、枕下回、舌回及楔叶的功能活动存在异常，而右侧颞上回、颞中回、左侧舌回和枕下回的功能活动与 TPH2 甲基化相互作用与 MDD 的发生存在关联，这提示着上述两者的联合有助于我们及早发现 MDD。

PO-095

## 一项关于焦虑、抑郁和疲劳与原发性干燥综合征疾病活动度 关联的横断面研究

王艳青、蒲金呈、顾泽皓、汤建平、吴珩、王璇  
上海同济医院

**目的** 原发性干燥综合征（primary Sjögren's Syndrome, pSS）是一种慢性全身性自身免疫病，临床常伴有口眼干、关节痛和疲劳。慢性病程中复杂症状及多系统受累可能导致抑郁、焦虑和疲劳的发生风险增加。本研究拟通过单中心、横断面研究分析 pSS 疾病活动度与抑郁、焦虑和疲劳之间的关系，为 pSS 患者精神相关障碍的早期发现与干预提供帮助。

**方法** 所有纳入的 pSS 患者均符合 2002 年 pSS 国际分类标准及 2016 年 ACR/EULAR pSS 分类标准。根据汉密尔顿抑郁量表（Hamilton Depression Scale, HAMD），汉密尔顿焦虑量表（Hamilton Anxiety Scale, HAMA）和多维疲劳量表（Multidimensional Fatigue Inventory, MFI-20）分别评估 pSS 患者是否合并抑郁、焦虑和疲劳。通过卡方检验和 Fisher's 精确检验分别比较 pSS 患者中抑郁和非抑郁、焦虑和非焦虑以及疲劳和非疲劳之间的社会人口学和临床特征，采用并提供 logistic 回归分析 pSS 合并抑郁、焦虑和疲劳的独立危险因素。分别分析 pSS 合并抑郁、焦虑和疲劳与干燥综合征疾病活动指数（EULAR Sjögren's Syndrome Disease Activity Index, ESSDAI）及干燥综合征患者报告指数（EULAR Sjögren's Syndrome Patient Reported Index, ESSPRI）的相关性。

**结果** 本研究共纳入 334 例 pSS 患者，合并抑郁、焦虑和疲劳的发生率分别为 25.4%、31.4%和 43.4%。pSS 患者合并抑郁、焦虑和疲劳均与 ESSDAI 和 ESSPRI 相关（ $P < 0.05$ ），进一步 logistic 回归分析发现，ESSDAI 升高是 pSS 患者合并抑郁、焦虑和疲劳的独立危险因素。此外，伴有抑郁、焦虑和疲劳的 pSS 患者抗-SSA 抗体阳性率更高。疲劳患者伴有更低的补体 C3 水平和更高的血清白介素 2 受体（Interleukin-2 Receptor, IL-2R）水平，低 C3 和高血清 IL-2R 是 pSS 合并疲劳的独立危险因素。

**结论** pSS 患者疾病活动度与疲劳、焦虑和抑郁的严重程度呈正相关。C3 途径和 IL-2R 途径可能参与了 pSS 疲劳的发生。

PO-096

## Neuropsychiatric Inventory in cognitive assessment outpatients with Mild Cognitive Impairment and Dementia

Yuhang Li, Ruiping Liu, Wenlin Ma  
Tongji Hospital, Tongji University

**Objective** Dementia is a prevalent geriatric syndrome with serious damage. Behavioral and psychological symptoms (BPSD) can be a prodrome of dementia, and the Neuropsychiatric Inventory (NPI) is widely used for BPSD evaluation. To compare the prevalence of BPSD according to cognitive status, and to determine NPI cutoffs that best discern individuals with mild cognitive impairment (MCI) and dementia from those without dementia.

**Methods** Study collect patients continuously from January 2018 to March 2022 in the cognitive assessment clinic of Tongji Hospital of Tongji University. BPSD were assessed with the NPI and cognitive status were assessed by the Chinese version of the Montreal Cognitive Assessment-Basic (MoCA-B) scale combined with Instrumental Activities of Daily Living (IADL) scale. The patients with normal MoCA-B evaluation were cognitively normal group, the others were further divided into mild cognitive impairment (MCI) group and dementia group according to whether the

IADL score was normal. The area under the curve (AUC) was used to assess model discrimination, and to determine the best NPI cutoff for MCI and dementia.

**Results** Study included 2,827 participants (mean age =  $66.2 \pm 13.4$  years, 45.6% male), 652 (23.1%) of whom were cognitively normal and 803 (28.4%) were MCI, 1372 (48.5%) patients with dementia. NPI symptoms were more frequent in dementia and rare in MCI when compared to cognitively normal. Higher odds for each type of BPSD were found among participants with dementia than in those who were cognitively normal and MCI. The best NPI cutoff to discern participants with dementia from those cognitively normal was 2 (AUC = 0.716). Poor discrimination (AUC = 0.458) was found for the comparison of MCI and those cognitively normal.

**Conclusion** We found that the severity and frequency of BPSD in patients with dementia were significantly higher than those with normal cognition and those with MCI. For patients who actively seek cognitive assessment service and with no diagnosis of dementia, those whose NPI scores  $\geq 2$  can support the decision for further investigation of dementia.

## PO-097

### 不同认知状态人群的痴呆行为和精神症状分析

李宇航、黄俊玲、刘瑞平、马文林

同济大学附属同济医院

**目的** 痴呆是常见的老年综合征，其精神行为症状(BPSD)与认知水平密切相关。BPSD 在不同认知状态、不同人种以及不同亚群中均存在差异，但我国相关研究较少，本研究旨在探索不同认知状态人群的痴呆行为和精神症状和相关分析。

**方法** 调查于 2018 年 1 月至 2022 年 10 月在同济大学附属同济医院认知评估门诊连续收集就诊患者。使用蒙特利尔认知评估基础量表(MoCA-B)中文版评估认知功能，通过受教育年限校正后界值评定认知功能。使用工具性日常生活活动(IADL)量表评估患者生活活动能力，并依据 IADL 结果将 MoCA-B 评分异常者进一步分为轻度认知功能障碍(MCI)组和痴呆组。使用神经精神调查问卷(NPI)评估精神和行为症状，同时收集一般社会人口学和临床资料。

**结果** 研究共纳入 3273 人，平均年龄  $67.0 \pm 13.4$  岁，男性 1423(43.5%)人。认知功能正常组 688 (21%)人，MCI 组 1831 (56%)人，痴呆组 754(23%)人。总体上，NPI 中位得分为 1(0, 6)分，2108 (66.4%) 人存在至少 1 种 BPSD。随着认知功能的下降，BPSD 出现比例逐渐升高 (53.5% vs. 59.6% vs. 86.1%,  $p < 0.001$ )。

在 BPSD 种类上，抑郁、焦虑、情感淡漠出现比例最高，各 BPSD 痴呆组比例均高于认知正常组和 MCI 组( $p < 0.05$ )。校正了混杂因素的 logistics 回归显示，妄想( $OR=1.973$ ,  $p=0.016$ )，激越攻击性( $OR=1.328$ ,  $p=0.181$ )，抑郁心境恶劣( $OR=1.512$ ,  $p=0.001$ )，欣快( $OR=4.910$ ,  $p=0.04$ )，异常运动行为( $OR=2.436$ ,  $p=0.046$ )是 MCI 的独立危险因素；妄想( $OR=2.277$ ,  $p=0.009$ )，激越攻击性( $OR=2.120$ ,  $p=0.002$ )，欣快( $OR=7.960$ ,  $p=0.012$ )，情感淡漠( $OR=2.43$ ,  $p < 0.001$ )，异常运动行为( $OR=34.947$ ,  $p < 0.001$ )，睡眠夜间行为( $OR=2.686$ ,  $p < 0.001$ )是痴呆的独立危险因素。

**结论** BPSD 随着认知损害的加重而增多，抑郁、焦虑、情感淡漠为常见症状。与正常组相比，妄想、激越攻击性、抑郁心境恶劣、欣快、异常运动行为是 MCI 的独立危险因素；妄想、激越攻击性、欣快、情感淡漠、异常运动行为、睡眠夜间行为是痴呆的独立危险因素。

PO-098

## Patient's knowledge about acute myocardial infarction related symptoms and self management: A Chinese population study

ruhui liu<sup>1</sup>, Zhaohui Hu<sup>2</sup>, Shenghua Li<sup>2</sup>, Wenlin Ma<sup>1</sup>

1. Tongji Hospital, Tongji University

2. Punan Hospital, Shanghai

**Objective** Delayed time from the symptoms to reperfusion has been associated with worse clinical outcomes and increased mortality of acute myocardial infarction (AMI). The purpose of the current cross-sectional investigation was to investigate knowledge of AMI-associated symptoms and correct self-management interventions in Chinese patients with CAD to provide evidence for further prehospital delay time studies.

**Methods** After obtaining institutional ethical approval, 680 CAD patients completed the study from Nov 2017 to Oct 2021. Typical and atypical symptoms of AMI including chest pain, dyspnea, diaphoresis, nausea, vomiting and syncope, were corrected with nitroglycerin and aspirin when suffering from AMI episodes. Self-designed questionnaires were applied.

**Results** The perception rates of chest pain and dyspnea were 84.9% and 68.5%, respectively, while for atypical AMI symptoms, such as syncope, diaphoresis, and nausea and vomiting, were 20.9%, 12.1%, and 38.7%, respectively. However, 63.7% patients could correctly use nitroglycerin at myocardial infarction, but only 15.1% participants could use aspirin correctly. Multivariate logistic regression analysis showed that female patients, patients with relatively low educational levels and those with previously diagnosed stable CAD had poorer knowledge of AMI.

**Conclusion** The knowledge of AMI-associated symptoms and the awareness of self-management interventions in China remains to be substandard, especially knowledge of atypical symptoms in female patients, low educational group and patients with stable CAD. Adequate health education for AMI-associated symptoms and the awareness of self-management interventions are urgently needed to reduce the prehospital delay time.

PO-099

## Correlation between depression and prehospital delay among acute myocardial infarction patients in China

ruhui liu<sup>1</sup>, Zhen Wang<sup>2</sup>, Hoschar Sophia<sup>3</sup>, Xuebo Liu<sup>1</sup>, Wenlin Ma<sup>1</sup>

1. Tongji Hospital, Tongji University

2. Nanjing Jiangning Hospital

3. Medical Center- University of Freiburg

**Objective** Earlier hospital arrival and rapid intervention for acute myocardial infarction (AMI) is important for a better prognosis. Prehospital delay (PHD) is an international challenge. Depression has been known as a risk factor of cardiovascular disease (CVD) and for detrimental medical outcomes; whether it can influence PHD of Chinese AMI patients is yet known. The present study aimed to examine the influence of depression on PHD thus to verify that psychology can affect physical health.

**Methods** A total of 421 patients were recruited from the Cardiology Departments in five hospitals across Shanghai and Xinjiang in China. Depression was measured using major depression inventory (MDI). Prehospital delay was defined as the time of symptom onset to the arrival at hospital door and was triangulated in the interview. The nonparametric Wilcoxon test was used to assess the differences in median PHD time.

**Results** The median delay time was longer in patients with depression than in those without depression (255.0

min vs. 111.5 min,  $P=0.006$ ). Also, the degree of depression of patient was aggravated and their PHD time was prolonged.

**Conclusion** Patients suffering from depression have significant and clinically longer PHD time than their non-depressive counterparts. Thus, a positive correlation was established between PHD time and degree of depression.

## PO-100

### Treatment Effect of Guanxin Danshen Dripping Pills on Coronary Heart Disease Comorbid with Depression or Anxiety: An ADECODE-Real Word Study

Shihao Wu<sup>1</sup>, Weiqi Shi<sup>1</sup>, Yuhang Li<sup>1</sup>, Ruhui Liu<sup>2</sup>, Dayi Hu<sup>3</sup>, Liqiang Zheng<sup>4</sup>, Wenlin Ma<sup>1</sup>

1. Tongji University

2. Department of Cardiology, Tongji Hospital, School of Medicine, Tongji University

3. Department of Cardiology, Peking University People's Hospital

4. School of Public Health, Shanghai Jiao Tong University

**Objective** To evaluate the efficacy of Guanxin Danshen Dripping Pill (GXDS DP) in treating anxiety and depression in patients with coronary heart disease (CHD).

**Methods** A total of 1,428 patients diagnosed with CHD screened for anxiety, depression, and quality of life at baseline received 0.4 g of GXDS DP treatment 3 times per day and returned for monthly reassessment. Patients were recruited after stable treatment for CHD and received General Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), and Seattle Angina Questionnaire (SAQ) for evaluating anxiety, depression, and quality of life (QOL). Patients were followed up 3 times, 4 weeks apart, during outpatient visits.

**Results** At the third follow-up (F3), the anxiety symptom of 63.79% (673 of 1,055) of the patients improved to sub-clinical level, and the GAD-7 score improved significantly (8.11 vs. 3.87,  $P<0.01$ ); 57.52% (585 of 1,017) patients' depressive symptoms improved to sub-clinical level, with a significant improvement in PHQ-9 score (8.69 vs. 4.41,  $P<0.01$ ) at F3. All aspects of QOL significantly improved at the end of treatment compared to those at baseline. Physical limitation (PL, 31.17 vs. 34.14,  $P<0.01$ ), anginal stability (AS, 2.74 vs. 4.14,  $P<0.01$ ), anginal frequency (AF, 8.16 vs. 9.10,  $P<0.01$ ), treatment satisfaction (TS, 13.43 vs. 16.29,  $P<0.01$ ), and disease perception (DP, 8.69 vs. 11.02,  $P<0.01$ ) showed significant improvements.

**Conclusion** A fixed dosage of GXDS DP may be a potential treatment option for patients with CHD, anxiety, or depression (registration No. ChiCTR2100051523)

## PO-101

### 肺动脉高压患者中焦虑抑郁症状的患病率及其对生活质量的 影响分析

周浩锋、杨丽芳、许明煜、张曹进、马欢  
广东省人民医院

**目的** 肺动脉高压(PAH)是一组以肺血管阻力进行性增高为特征的疾病。除了常见的呼吸困难、运动耐力下降等身体症状, PAH 患者还常伴随有焦虑、抑郁等心理问题, 这些问题可能对患者的生活质量和疾病进展产生重要的影响。故本研究的目的是调查中国 PAH 患者的抑郁与焦虑症状的患病率及其影响因素, 以及这些心理问题对生活质量的潜在影响。



**方法** 本次研究在广东省人民医院招募了 89 名明确诊断为 PAH 的患者，通过访谈及病历回顾收集必要的临床信息，使用医院焦虑抑郁量表 (HADS) 和 WHO 生存质量评估简表 (WHOQOL) 对 PAH 患者进行评估。

**结果** 在 89 名患者中，有 21 名患者存在焦虑症状 (23.6%)，有 21 名患者存在抑郁症状 (23.6%)，此外还有 14 名患者同时存在焦虑和抑郁症状 (15.7%)，但仅有 2 名患者在过去曾至精神心理科就诊。回归分析结果显示，呼吸困难症状 ( $p=0.042$ )、PAH 急性发作次数 ( $p=0.031$ )、WHO 功能等级 ( $p=0.037$ )、运动能力 ( $p=0.001$ ) 都是焦虑和抑郁症状的影响因素。HADS 评分与 WHOQOL 得分呈负相关 ( $r=-0.50$ ,  $p<0.001$ )，合并有焦虑或抑郁症状的 PAH 患者整体生活质量显著降低 ( $p<0.001$ )。

**结论** 在 PAH 患者中，焦虑和抑郁症状较为普遍，但是精神心理科就诊率不高。焦虑和抑郁症状与呼吸困难症状、PAH 急性发作次数、WHO 功能等级以及运动能力等因素密切相关，并对患者的生活质量产生了负面影响。因此，我们应该尽可能早期地筛查并妥善干预存在的焦虑和抑郁等心理健康问题，从而改善 PAH 患者的精神状态和生活质量。

## PO-102

### 中国暴食障碍诊疗专家共识

彭素芳<sup>1</sup>、何欠欠<sup>2</sup>、张岚<sup>3</sup>、李雪霓<sup>4</sup>、乔慧芬<sup>5</sup>、孔庆梅<sup>6</sup>、匡桂芳<sup>7</sup>、陈涵<sup>1</sup>、陈珏<sup>1</sup>

1. 上海市精神卫生中心

2. 同济大学附属精神卫生中心（筹）普通精神科

3. 华西医院心理卫生中心心身医学和临床心理部

4. 北京大学第六医院心身科

5. 南京脑科医院医学心理科

6. 北京大学第六医院门诊部

7. 青岛和睦家心理健康中心

**目的** 暴食障碍是以反复发作性暴食为主要特征的一类进食障碍。暴食患者存在反复冲动的暴食行为，导致多种躯体问题；其次也常共病多种精神障碍，需引起重视。然而，目前在中国，对于暴食障碍不能早期识别和诊治，导致病程迁延。因此，在中华医学会心身医学分会进食障碍协作学组的组织下，由 9 名精神科医学专家组，基于循证医学证据、国内外指南与专家共识、专家经验等制定本专家共识，以期提高国内专业人员对暴食症的识别和诊治水平。

**方法** 在中华医学会心身医学分会进食障碍协作组的组织下，由 9 名精神科医学专家组成了制定《中国暴食障碍诊疗专家共识》的专家组，进行线上调研和讨论，纳入本共识的临床问题以及目前诊疗方法的归纳总结。专家组以“eating disorders”、“binge eating disorder”、“psychotherapy”、“pharmacological treatment”、“depression”、“bipolar disorder”、“anxiety”、“fluoxetine”为关键词，系统检索了国内外主要数据库。检索时间为建库至 2023-03-30，限定语种为英文或中文。检索、精筛后获得相关文献和国内外权威指南共识共 42 篇。专家组结合相关文献总结，提出本共识和推荐建议。

**结果** 结合检索整理的国际权威指南共识结果，共识撰写专家组从定义、流行病学、临床特征何评估、诊断与鉴别诊断、治疗原则与方法、需特殊关注的人群等几个方面对暴食障碍的特点及诊治进行了全面阐述及推荐建议。

**结论** 目前 BED 的发病机制仍未明了，对其发病机制有待进一步深入了解。已开发的治疗方案，如心理治疗、药物治疗、行为减重治疗以及多种治疗方式相结合的模式被证明有效，且仍不断有新的治疗方法出现。但暴食障碍自 DSM-5 中才被单独列出，目前研究结论存在研究时间较短，样本量较小等问题，还有待进行更长时间和更大样本量的研究来验证已有结论。

PO-103

## The relation between cannabinoid receptor 1 gene polymorphisms and cognition in chronic schizophrenia with and without tardive dyskinesia in Chinese population

Chenghao Lu, Shen Li, Lili Wang  
Tianjin Anding Hospital

**Objective** Tardive dyskinesia (TD) is a group of medically induced movement disorders caused by the long-term use of antipsychotic drugs, and is commonly seen in patients with schizophrenia (SCZ). Many factors influence the development of TD, and genetic factors play an important role in the disease. Cannabinoid receptor 1 (CNR1) is found in high concentrations in sensory and motor control areas and has a role in regulating motor and cognitive functions. In addition, the genetic variability of CNR1 may be associated with cognitive function. This study aimed to investigate the relationship between single nucleotide polymorphisms (SNPs) of the CNR1 gene, TD and cognitive function in a Chinese population, to investigate further the genetic mechanisms associated with TD, to estimate the risk of the disease in individuals, and to provide a theoretical basis for early identification and prevention of TD.

**Methods** A study was conducted to include patients with SCZ who met the inclusion and exclusion criteria. The diagnosis of TD was determined using the Schooler-Kane International Diagnostic Criteria. Independent sample t-tests, chi-square tests or one-way ANOVAs were used based on the type of variable; Hardy-Weinberg balance tests, linkage disequilibrium analysis and haplotype analysis were performed using SHEsis software for SNPs; binary logistic regression was used for relative risk analysis; and analysis of covariance was used to explore the main effects and interaction effects of TD diagnosis, genotype and cognitive function.

**Results** 1) This study had 53 patients with TD and 163 without tardive dyskinesia (WTD). The prevalence of TD was approximately 27.3%. The two groups had statistically significant differences in AIMS, orofacial and limb-truncal scores (all  $P < 0.001$ ).

2) Allele and genotype frequencies were not significantly different between the TD and WTD groups (both  $P > 0.05$ ); genotype frequencies at the rs806368 and rs806370 were quite different between the male TD and WTD groups, but not statistically significant after controlling for covariates (both  $P > 0.05$ ).

3) There was no significant difference in genotype frequencies of SNPs between the TD and WTD groups for the different genetic patterns (all  $P > 0.05$ ), and statistically significant differences in rs806368 CT genotype and rs806370 TC genotype between the male TD and WTD groups for the overdominance pattern (OR=2.508, 95%CI: 1.055-5.961,  $P=0.037$ ; OR=2.552, 95%CI: 1.073-6.069,  $P=0.034$ ).

4) Haplotype analysis showed no significant difference in the distribution frequency of the eight haplotypes between the TD and WTD groups (all  $P > 0.05$ ).

5) TD patients carrying the rs806368 and rs806374 C alleles had higher total AIMS and limb-truncal scores (both  $P < 0.05$ ), and TD patients taking the rs806368 CC genotype had higher limb-truncal scores than those taking the CT genotype ( $P < 0.05$ ); male TD patients carrying the rs806370 T allele had higher total AIMS scores ( $p=0.022$ ) and TD patients taking the rs806370 TT genotype had higher total AIMS scores than those taking the CC genotype ( $P < 0.05$ ).

6) The difference in visuospatial/constructional between the TD and WTD groups was statistically significant ( $P=0.04$ ); the interaction of TD diagnosis and genotype at the rs806368 was borderline significant in visuospatial/constructional ( $P=0.05$ ).

**Conclusion** 1) The incidence of TD in SCZ patients was approximately 27.3%, and men, advanced age, long duration of disease, smoking were associated with the development of TD.

2) The CNR1 gene rs806368 and rs806370 are associated with the development of TD in Chinese SCZ patients, with the rs806368 CT genotype and rs806370 TC genotype increasing the risk of TD in male SCZ patients.

3)The CNR1 gene SNPs allele and genotype were associated with the severity of involuntary movements in TD patients, mainly with limb-truncal and not with orofacial movements. This association was more prominent in male TD patients.

4)Patients with TD have a more severe visuospatial/constructional impairment, and mutations at the rs806368 exacerbate the impairment in TD patients.

## PO-104

### Sex differences in plasma lipid profiles, but not in glucose metabolism in patients with first-episode drug-naïve schizophrenia

Nannan Liu<sup>1,2</sup>, Yeqing Dong<sup>1,2</sup>, Yanzhe Li<sup>1,2</sup>, Shen Li<sup>1,2</sup>, Jie Li<sup>1,2</sup>

1. Tianjin Anding Hospital

2. Mental Health Center of Tianjin Medical University

**Objective** Abnormalities in glucose and lipid metabolism are associated with first-episode drug-naïve schizophrenia (FEDN-SCZ). Sex differences have also been observed in the incidence and severity of SCZ and its related metabolic abnormalities, but whether sex differences exist in the specific metabolic abnormalities remains unclear. The present study aimed to investigate sex differences in plasma lipid profiles and glucose metabolism in patients with FEDN-SCZ, in order to better understand the underlying mechanisms and potential sex-specific risk factors for metabolic abnormalities in this population.

**Methods** A total of 172 FEDN-SCZ patients (male/female: 83/89) and 31 healthy controls (male/female: 14/17) were recruited. The Positive and Negative Syndrome Scale (PANSS) was applied to assess the psychopathology of patients. Glucolipid profiles including oral glucose tolerance test (OGTT), fasting glucose, insulin, total cholesterol (TC), triglycerides (TG), high-density lipoprotein (HDL) and low-density lipoprotein (LDL) were examined in all participants.

**Results** Compared with healthy controls, FEDN patients had significantly higher blood levels of fasting glucose and 2-h glucose (both  $p < 0.001$ ). The rate of IGT was 24.1% ( $n=20$ ) for male patients and 25.9% ( $n=23$ ) for female patients, compared to 0% ( $n=0$ ) for the control group. In addition, FEDN patients had higher blood insulin and TC levels (both  $p < 0.05$ ), and were more insulin-resistant, as reflected by HOMA-IR ( $p < 0.01$ ). Further, male patients with IGT had significantly higher TC, TG and LDL levels than non-IGT patients (all  $p < 0.05$ ), while no significant differences were observed in female patients between IGT and non-IGT group. BMI, TG and HDL level were identified as significant predictors of IGT in male FEDN patients.

**Conclusion** IGT occurs in a certain percentage of FEDN patients with SCZ. Male patients with IGT have significantly altered plasma lipid profiles compared to non-IGT patients.

## PO-105

### Serum cytokines as potential biomarkers for metabolic syndrome in clozapine-resistant refractory patients with schizophrenia

Yeqing Dong, Yanzhe Li, Nannan Liu, Shen Li  
Tianjin Anding Hospital

**Objective** Treatment-resistant patients with schizophrenia (TRS) who do not respond to clozapine are known as patients with clozapine-resistant refractory schizophrenia (CTRS). While metabolic syndrome (MetS) and inflammatory cytokines have been linked to schizophrenia, the relationship

between MetS and cytokines in CTRS patients has not been examined. This study aimed to investigate the potential role of cytokines levels in CTRS patients with MetS and without MetS.

**Methods** The study included 69 CTRS patients (31 with MetS and 38 without MetS) and 84 healthy controls (HCs). The levels of IL-2, IL-6, TNF- $\alpha$  and routine biochemical parameters were measured. Psychopathological symptoms and cognitive function were assessed using the Positive and Negative Syndrome Scale (PANSS) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), respectively.

**Results** The cognitive function scores of CTRS patients with MetS were lower than those of CTRS patients without MetS ( $p < 0.05$ ), even after controlling for confounders. The levels of TNF- $\alpha$  were significantly higher in CTRS patients with MetS than in those without MetS ( $p < 0.05$ ), and it had good diagnostic potential for CTRS patients with MetS via receiver operating characteristic curve (ROC) (AUC = 0.711,  $p = 0.003$ ). In CTRS patients without MetS, IL-2 was an independent contributor to the total score and General psychopathology subscore of PANSS ( $\beta = 0.454$ ,  $t = 3.059$ ,  $p = 0.004$  and  $\beta = 0.437$ ,  $t = 2.915$ ,  $p = 0.006$ , respectively). Additionally, IL-6 could be an independent contributor to the Positive subscore of PANSS ( $\beta = -0.413$ ,  $t = -2.723$ ,  $p = 0.010$ ). In terms of cognition, IL-6 was an independent contributor to the delayed memory of RBANS in CTRS patients without MetS ( $\beta = 0.404$ ,  $t = 2.647$ ,  $p = 0.012$ ).

**Conclusion** TNF- $\alpha$  could be a potential predictor for CTRS patients combined with MetS, while IL-2/IL-6 may act as independent contributors to psychopathological symptoms or cognitive function in CTRS patients without MetS.

## PO-106

### 新冠疫情期间大学生心理压力及心理援助状况调查

黄秋平、蔡丽萍、石长宇、李诗美  
湖南中医药大学

**目的** 了解新冠疫情期间（2019年12月-2023年1月）大学生心理压力现状、接受心理援助的情况，以探索合理的心理援助发展对策，助力社会对公共卫生事件下大学生心理健康问题的科学应对。

**方法** 通过回顾性调查研究，采用自编的《疫情期间大学生心理援助调查问卷》，对985名在校大学生进行在线调查。调查问卷分为3个部分：第1部分为个人基本情况；第2部分为大学生心理健康状况，用于了解大学生心理压力产生原因及其应对方式；第3部分为大学生心理援助信息反馈，包括对心理援助的认知、参与情况、对心理援助方式的偏好和对心理援助的建议。

**结果** ①疫情期间，大学生心理压力主要来自个人前途及就业（81.12%）、学业（79.90%）和经济问题（77.56%），而应对压力的主要方式是转移注意力（78.98%）、适当倾诉（70.05%）和自我放松（57.26%）；②疫情期间，有13.10%大学生接受过心理援助，其中超过70%认为效果良好；③疫情期间，43.96%的大学生表示面对新冠疫情需要心理援助，而未寻求心理援助的主要原因是了解心理援助；④对偏好方式而言，73.50%大学生愿意选择线下心理援助，有且接受过心理援助的大学生中，66.67%通过高校线下心理健康咨询获得心理援助。

**结论** 大学生对心理援助的需求大，但对心理援助的了解与接受度较低；学校心理健康咨询中心是疫情期间大学生心理援助的主战场；线下心理援助是大学生主要援助来源及偏好援助方式。因此有必要加大心理援助的科学普及，加强高校心理援助体系的建设，进而提高公共卫生事件下大学生的心理应对。

PO-107

## Genetic susceptibility to Tardive Dyskinesia and cognitive impairments in Chinese Han Schizophrenia: Role of oxidative stress-related and adenosine receptor genes

Qiaona Jiang  
Tianjin Anding Hospital

**Objective** Tardive dyskinesia (TD) is a severe non-rhythmic movement disorder caused by long-term antipsychotic medication in chronic patients with schizophrenia (SCZ). We aimed to investigate the association between polymorphisms in oxidative stress-related genes (GSTM1, SOD2, NOS1, and NOS3) and adenosine receptor gene (ADORA2A), as well as their interactions, with the occurrence and severity of TD, and cognitive impairments in a Chinese Han population of SCZ patients.

**Methods** Two hundred and sixteen SCZ patients were recruited and divided into TD group (n=157) and NTD group (n=59). DNA extraction was performed by a high-salt method, followed by SNP genotyping using matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF-MS). The severity of TD, psychopathology and cognitive functioning were assessed using the Abnormal Involuntary Movement Scale (AIMS), the Positive and Negative Syndrome Scale (PANSS) and the Repeated Battery for Assessment of Neuropsychological Status (RBANS), respectively.

**Results** The combination of GSTM1-rs738491, NOS1-rs738409 and ADORA2A-rs229883 was identified as the best three-point model to predict TD occurrence ( $p=0.01$ ). Additionally, GSTM1-rs738491 CC or NOS3-rs1800779 AG genotypes may be protective factors for psychiatric symptoms in TD patients. TD patients carrying the NOS1-rs738409 AG or ADORA2A-rs229883 TT genotypes exhibited poorer cognitive performance.

**Conclusion** Our findings suggest that the interaction of oxidative stress-related genes and adenosine receptor gene may play a role in the susceptibility and severity of TD in Chinese Han schizophrenia. Furthermore, these genes may also affect the psychiatric symptoms and cognitive function of TD patients.

PO-108

## Development and validation of a nomogram to predict the risk of suicide attempts in patients with first-episode drug-naïve major depressive disorder

Junjun Liu<sup>1</sup>, Xiangdong Du<sup>2</sup>  
1. Nanjing Meishan Hospital  
2. 苏州市广济医院

**Objective** The aim of this study was to identify risk factors for suicide attempts (SA) and develop a model to predict SA in patients with first-episode drug-naïve (FEDN) major depressive disorder (MDD).

**Methods** This was a cross-sectional study that comprised 1,718 people with FEDN MDD. All participants were randomly assigned to one of two groups: training ( $n = 1,204$ ) or validation ( $n = 514$ ). The LASSO method and multivariate regression analysis were used to determine risk variables in the training group. Then, overlapping features were chosen to screen the effective and appropriate risk variables for SA, and a nomogram including the selected risk factors in the training group was created. The C-index, calibration plot, decision curve analysis, and cumulative hazard analysis were then utilized to assess the discrimination, calibration, and clinical meaning of the nomogram. Finally, internal validation was employed in the validation group.

**Results** We contract a nomogram and validated it using easily available and cost-effective parameters to predict the incidence of SA in patients with FEDN MDD, including HAMD, HAMA, TSH, ATPO, and SBP. In training group, the area under the ROC was 0.805, with 95% CI: 0.776–0.838. In validation group, C-index was 0.846, with 95%CI: 0.812–0.876. The decision curve analysis showed that the model's prediction is more effective. Decision curve analysis of the training group and validation group showed that the predictive model was more effective in predicting the risk of SA in patients with FEDN MDD.

**Conclusion** We developed and validated a nomogram for the risk of SA among Chinese patients with FEDN MDD, which helps to identify people at high risk of SA early, thus contributing to effective prevention programs for suicide.

## PO-109

### 生酮饮食在精神分裂症治疗中的应用进展

郭茜<sup>2</sup>、陆小兵<sup>1</sup>

1. 广州医科大学附属脑科医院

2. 肇庆市第三人民医院

**目的** 探究精神分裂症，尤其是难治性精神分裂症(TRS)在葡萄糖和能量代谢受损的机制，及其生酮饮食对上述机制的可能的影响。回顾临床前模型和精神分裂症患者生酮饮食疗效的最新研究结果。全面评估生酮饮食，尤其是外源性生酮饮食治疗，在精神分裂症治疗中的潜力。

**方法** 以“精神分裂症”、“难治性精神分裂症”、“葡萄糖及能量代谢”、“生酮饮食”等为关键词，在PubMed 中对近 5-10 年内的相关文献进行检索，探究了生酮饮食在精神分裂症治疗中的潜在作用机制，并回顾了生酮饮食在精神分裂症中的治疗进展。

**结果** 葡萄糖和能量代谢异常是精神分裂症的重要病理生理机制，并与许多其他代谢紊乱（如肥胖、糖尿病和心血管疾病）并存，治疗性生酮饮食已被证明对大脑代谢和神经递质功能有深远影响。越来越多的临床前及临床证据肯定了生酮饮食在精神分裂症中的治疗潜力。

**结论** 生酮饮食可能会成为精神分裂症主要的治疗手段之一，也为难治性精神分裂症的治疗提供更多可能。未来的研究需要进行更多的随机对照临床试验来证明这种新治疗方法的有效性和安全性。进一步探究生酮饮食治疗精神分裂症的潜在机制及对精神分裂症合并症的影响，如肥胖、代谢综合征，心血管风险等。

## PO-110

### 抑郁障碍及高危亲属身体成分的性别差异研究

周慧<sup>1,2</sup>、陆小兵<sup>1</sup>、李则埏<sup>1</sup>

1. 广州医科大学附属脑科医院

2. 深圳市宝安区石岩人民医院

**目的** 通过生物电阻抗分析法观察首发抑郁障碍（FE-MDD）、高危亲属（FDR）与健康受试者（HC）不同性别的身体成分差异，探讨重性抑郁障碍（MDD）患者身体成分的特点。

**方法** 本研究收集 140 名首次发作以及从未治疗过的诊断为 MDD 的门诊患者，根；同期选取健康志愿者为对照组（n=134），以及随机选取 MDD 患者的父母或者儿女为一高危亲属（n=112）。收集一般资料以及采用身体成分分析仪进行身体成分测量。

**结果** 高危亲属体脂百分比高于健康受试者，相位角及矿物质低于健康受试者，女性中首发患者体脂百分比、内脏脂肪显著高于健康受试者；高位亲属的矿物质低于对照组。相位角（OR: 0.286, CI: 0.157~0.52）是抑郁障碍的保护因素，在女性中内脏脂肪（OR: 1.019, 95%，

CI:1.004~1.034) 是郁障碍的危险因素; 矿物质 (OR: 0.099,CI:0.023~0.433) 是抑郁障碍的保护因素。

**结论** 首发抑郁障碍及高危亲属身体成分较健康受试者均会出现一定程度的变化, 且存在性别差异, 内脏脂肪面积、体脂百分比、矿物质及相位角可能是 MDD 的影响因素之一, 因此在临床上应该对抑郁障碍患者以及高危亲属早期进行身体成分监测, 为早期干预提供重要依据。

## PO-111

### The effects of vortioxetine on symptomatic and cognitive function in major depressive disorder: A novel measure from 1H-MRS.

Yijing Zhang, Shuming Zhong, Shunkai Lai, Ying Wang, Jiali He, Dong Huang, Guanmao Chen, Zhangzhang Qi, Pan Chen, Shuya Yan, Xiaosi Huang, Xiaodan Lu, Yanbin Jia  
First Affiliated Hospital of Jinan University

**Objective** To investigate the effects of the new multimodal antidepressant vortioxetine on cognitive function and brain metabolism in individuals with major depressive disorder (MDD), as well as the brain biochemical metabolic mechanism through which vortioxetine improves cognition.

**Methods** 30 patients with acute MDD and 30 healthy controls were enlisted for this study. Patients with MDD were given Vortioxetine for 8 weeks. The Chinese version of the MATRICS consensus cognitive function battery was used to test the patient's cognitive function (MCCB). 1H-MRS at 3.0 T was used to evaluate bilateral metabolite levels in the prefrontal cortex (PFC), anterior cingulate cortex (ACC), lentiform nucleus (LN), and thalamus. Finally, investigate the association between them using an independent sample T-test or a paired t-test. The severity of cognitive impairment in the MDD group, as well as the pace at which cognitive function improved before and after therapy, were measured using Cohen's effect D.

**Results** The MDD group had significant differences in verbal learning ( $t=3.814$ ,  $p<0.001$ ), social cognition ( $t=3.475$ ,  $p=0.001$ ) and total cognition ( $t=4.042$ ,  $p<0.001$ ). And the MDD group has serious impairment in verbal learning ( $ESe=1.11$ ), social cognition ( $ESe=1.06$ ) and total cognition ( $ESe=1.23$ ). Verbal learning ( $t=2.100$ ,  $p=0.045$ ), attention/alertness ( $t=2.281$ ,  $p=0.030$ ) and total cognition ( $t=2.516$ ,  $p=0.018$ ) were significantly improved before and after treatment. In the acute MDD group, the NAA/Cr ratio in the right thalamus ( $t=2.302$ ,  $p=0.025$ ), the Cho/Cr ratio in the right thalamus ( $t=2.187$ ,  $p=0.033$ ), and the NAA/Cr ratio in the left PFC ( $t=2.557$ ,  $p=0.013$ ) and the Cho/Cr ratio in the left ACC ( $t=2.288$ ,  $p=0.026$ ) are statistically different. The NAA/Cr ratio ( $t=2.338$ ,  $p=0.026$ ) in the right PFC before and after treatment showed a significant difference. After treatment, NAA/Cr metabolism was higher in the left PFC than in the right ( $t=2.524$ ,  $p=0.017$ ).

**Conclusion** By restoring the predominant NAA/Cr metabolic state in the left frontal brain area, vortioxetine may enhance cognitive performance. The frontal lobe-thalamus-cingulate gyrus loop may affect cognitive function in depressed individuals, including attention/alertness, language learning, and overall cognition.

PO-112

## Cognitive performance on MCCB of Adults Seeking Bariatric Surgery for Obesity

Yijing Zhang, Shunkai Lai, Shuming Zhong, Shuya Yan, Hua Yang, Cunchuan Wang, Yanbin Jia  
First Affiliated Hospital of Jinan University

**Objective** Cognitive impairment has been found in obese people, but the sub-field of cognitive function in obese people is still unclear. The purpose of this study was to identify the characteristics of MCCB cognitive function impairments in bariatric surgery candidates.

**Methods** 22 medication-free adolescents patients with a diagnosis of MDD, were compared with 22 age- and sex-matched healthy controls. The psychology status was qualified using the Chinese versions of the following scales: 24-item Hamilton Depression Rating Scale (HDRS) and the Hamilton Anxiety Rating Scale (HAMA). Seven domains of cognitive function were assessed by MCCB, including the Wisconsin Card Sorting Task (WCST), Trail Making Test, Part-B (TMT-B), Digit Symbol Substitution Test (DSST) and Verbal Fluency Test (VFT).

**Results** The obesity group showed a significantly higher HDRS scores( $p=0.005$ ) and HAMA scores( $p<0.001$ ) when compared with the healthy controls (all  $p<0.05$ ). obesity have poorer performance in the following sub-tasks performance: TMT-A, BACS-SC, WM-SS, and MAZES at  $p < 0.001$ . Meanwhile, the following sub-tasks performance of CPT and BVMT-R at  $p < 0.05$ .

**Conclusion** The executive function of obese people is significantly impaired. The executive function of the obese population is impaired in a number of subdomains. The obese group had significant deficits in reasoning problem-solving and overall composite, as well as moderate processing speed and working memory impairments.

PO-113

## Gender differences of neurometabolic and neuroendocrine alternations and its lateralization in adolescents with major depression

Xiaodong Song  
First Affiliated Hospital of Jinan University

**Objective**  $^1\text{H}$  protons magnetic resonance spectroscopy ( $^1\text{H}$ -MRS) has been used to detect the biochemical metabolism changes in major depressive disorder (MDD). While, the current research on the mechanism of gender-related adolescent depression is still insufficient. Lateralization study can better reflect the characteristic changes of brain function in patients with depression. The study focus on the neurometabolic and neuroendocrine alternations, so as to find gender-related differences in endocrine alternations and brain metabolism in patients with depression.

**Methods** A total of 121 adolescents with MDD(43 with male, and 78 with female) were recruited in this study. Bilateral metabolite levels of the prefrontal cortex (PFC), anterior cingulate cortex (ACC), lenticular nucleus (LN) of basal ganglia, thalamus and cerebellum were obtained by  $^1\text{H}$ -MRS at 3.0 T, and then the ratios of N-acetyl aspartate (NAA) and cholinecontaining compounds (Cho) to creatine (Cr) were determined, respectively. Finally, we calculated the LI values of various brain regions to compare the lateralization characteristics of brain metabolism in patients with depression.

**Results** 121 adolescent MDD participants were enrolled in our study. There were no statistical significant differences in age, educational level, age of onset, number of attacks, the course of this attack, total course of disease, YMRS scores between two groups. However, female adolescent MDD patients exhibited higher 24-HDRS scores than male patients. Significant differences in endocrine indices were observed in TT4 ( $t = -2.718$ ,  $p = 0.008$ ), ACTH ( $z = -2.943$ ,



$p = 0.004$ ) between male and female MDD patients. Relative to the male MDD patients, female MDD patients exhibited higher TT4 level, but lower ACTH level in the blood. Significant differences in cerebellum NAA/Cr and Cho/Cr ratios were observed in the Cho/Cr ratios in the left cerebellum ( $t = 2.656$ ,  $p = 0.009$ ) between the two groups. Compared to the male MDD patients, female MDD patients showed significantly lower Cho/Cr ratios in left cerebellum than male patients. Correlation analysis shows there was a significant positive correlation between TT4 and Cho/Cr ratios in the left cerebellum in male adolescents ( $r = 0.391$ ,  $p = 0.01$ ). Comparison of the LI of the PWM, ACC, BG, and cerebellum in the female group to the standard value (Standard value = 1.0) showed a higher LI in the Cho/Cr ratio in the thalamus ( $t = 3.029$ ,  $p = 0.003$ ), and a higher LI in the NAA/Cr ratio in the BG of female group, at a confidence level of  $p < 0.05$  ( $t = 3.182$ ,  $p = 0.002$ ).

**Conclusion** Depressed adolescents have characteristic endocrine and brain metabolic pathogenesis related to sex. Female depressed adolescents exhibited higher TT4 level, but lower ACTH level than male ones, and female adolescents patients showed significantly lower Cho/Cr ratios in left cerebellum than male patients. For male patients, there was a significant positive correlation between TT4 and Cho/Cr ratios in the left cerebellum. Higher LI of the Cho/Cr ratio in the thalamus and higher LI of the NAA/Cr ratio in the BG seems to be a metabolic trait specific to female.

## PO-114

### Exploring the Potential of Targeted Small Molecular Compounds to Decrease Trimethylamine Oxide Levels in Atherosclerosis by Virtual Screening

Jiaxin Luo  
Inner Mongolia People's Hospital

**Objective** The design and development of an effective targeted drug to reduce serum TMAO levels may provide new avenues for inhibiting atherosclerosis morbidity.

**Methods** Target genes that may elevate TMAO levels in patients with atherosclerosis were explored using bioinformatics, virtual screening, and molecular dynamics. We expected these genes to indicate potential TMAO inhibitors. Target genes that may elevate TMAO levels in patients with atherosclerosis were explored using bioinformatics, virtual screening, and molecular dynamics. We expected these genes to indicate potential TMAO inhibitors.

**Results** Of these genes, hFMO3 was responsible for increasing TMAO levels. Four small-molecule compounds (SMC-1, SMC-2, SMC-3, and SMC-4) with the lowest binding energy and CGenFF penalty  $< 10$  were connected to the main binding pocket of hFMO3 by hydrogen and/or cation- $\pi$  interactions. A 10ns molecular dynamics simulation showed that the four systems quickly reached equilibrium. The root mean square deviation of all four small-molecule compounds was less than 0.25 nm, that of the four ligand complexes was less than 0.35 nm, and the average deviations of each amino acid residue from the reference position over time did not differ.

**Conclusion** These four small-molecule compounds may be useful as targeted drugs to reduce serum TMAO levels, inhibiting atherosclerosis formation. These four small-molecule compounds may be useful as targeted drugs to reduce serum TMAO levels, inhibiting atherosclerosis formation.

PO-115

## Obstructive Sleep Apnea-Hypopnea Syndrome (OSAHS) is Associated with Mental Stress Induce Myocardial Ischemia (MSIMI)—A Cross-sectional Study

Haochen Wang<sup>1</sup>, Fengyao Liu<sup>1</sup>, Bingqing Bai<sup>1</sup>, Han Yin<sup>2</sup>, Yuting Liu<sup>1</sup>, Wei Jiang<sup>3</sup>, Shuxia Wang<sup>1</sup>, Huan Ma<sup>1</sup>, Qingshan Geng<sup>1,2</sup>

1. Guangdong Provincial People's Hospital (Guangdong Academy of Medical Sciences), Southern Medical University
2. Shenzhen People's Hospital (The Second Clinical Medical College, Jinan University, The First Affiliated Hospital, Southern University of Science and Technology)
3. Department of Internal Medicine, Department of Psychiatry and Behavioral Sciences, Duke University Medical Center

**Objective** Mental Stress Induced Myocardial Ischemia (MSIMI) is regarded as the primary cause of the Angina with No Obstructive Coronary Artery disease (ANOCA). Obstructive Sleep Apnea-Hypopnea Syndrome (OSAHS) is autonomously linked to obstructive coronary heart disease, hypertension, and sudden cardiac death. Similar to the impact of psychological stress on the cardiovascular system, individuals with OSAHS experience periodic nocturnal hypoxia, resulting in the activation of systemic inflammation, oxidative stress, endothelial dysfunction, and sympathetic hyperactivity. The contribution of OSAHS to MSIMI in ANOCA patients is unclear. To investigate the impact of mental stress on myocardial ischemia in female ANOCA patients, a prospective cohort of female ANOCA patients was recruited.

**Methods** We recruited female patients aged 18 to 75 with ANOCA and evaluated MSIMI using PET/CT's MFI. Patients were then assigned to the case and control groups. Subsequently, sleep breathing monitoring was performed to compare the relationship between OSAHS and MSIMI.

**Results** There are higher AHI(7.8 vs 2.6,  $P=0.019$ ), ODI (4.7 vs 9.2,  $P=0.028$ ) and percentage of OSAHS(67.74% vs. 33.33%,  $P=0.004$ ) in MSIMI patients. The patients diagnosed with OSAHS demonstrated higher MFI scores (SSS: 1.5 vs. 3,  $P=0.005$ , SDS: 1 vs. 3,  $P=0.007$ ). Despite adjusting for covariates, the risk of developing MSIMI remained 3.6 times higher in OSAHS patients( $\beta=1.275$ ,  $OR=3.577(1.206-10.608)$ ,  $P=0.022$ ).

**Conclusion** An autonomous correlation has been identified between OSAHS and MSIMI in female patients with ANOCA. Patients with OSAHS exhibit a greater prevalence of MSIMI. Furthermore, the myocardial blood flow perfusion in patients with OSAHS is reduced during mental stress.

PO-116

## Anxiety and depression among epilepsy patients in low-risk areas for COVID-19 in the northern part of Guizhou Province, China, during the COVID-19 pandemic

Shen Wang<sup>1</sup>, Zucui Xu<sup>2</sup>

1. Liaocheng Fourth People's Hospital(Liaocheng Mental Health Center)
2. Affiliated Hospital of Zunyi Medical University

**Objective** This study was aimed to investigate whether patients with epilepsy (PWE) have higher depression and anxiety levels than the normal population in low-risk areas for coronavirus disease 2019 (COVID-19) in the northern part of Guizhou Province, China, during the COVID-19 epidemic, to evaluate their knowledge on COVID-19, and to analyze related factors for the psychological distress of PWE at this special time.

**Methods** The survey was conducted online from February 28, 2020 to March 7, 2020 via a questionnaire. PWE from the outpatient clinic of epilepsy of the Afliated Hospital of Zunyi Medical

University, and healthy people matched for age and sex, participated in this study. Mental health was assessed via a generalized anxiety self-rating scale (GAD-7) and the self-rating depression scale (PHQ-9). The knowledge of COVID-19 in both groups was investigated.

**Results** There were no significant differences in the general demographics between the PWE and healthy control groups. The scores of PHQ-9 ( $P<0.01$ ) and GAD-7 ( $P<0.001$ ) were higher in the PWE group than in the healthy group. There was a significant difference in the proportions of respondents with different severities of depression and anxiety, between the two groups, which revealed significantly higher degree of depression and anxiety in PWE than in healthy people ( $P=0$ ,  $P=0$ ). Overwhelming awareness and stressful concerns for the pandemic and female patients with epilepsy were key factors that affect the level of anxiety and depression in PWE. Further, the PWE had less accurate knowledge of COVID-19 than healthy people ( $P<0.001$ ). There was no statistically significant difference between the two groups in the knowledge of virus transmission route, incubation period, susceptible population, transmission speed, clinical characteristics, and isolation measures on COVID-19 ( $P>0.05$ ). PWE knew less about some of the prevention and control measures of COVID-19 than healthy people.

**Conclusion** During the COVID-19 epidemic, excessive attention to the epidemic and the female sex are factors associated with anxiety and depression in PWE, even in low-risk areas.

## PO-117

### 冠心病患者抑郁、营养和预后之间的关联

刘凤瑶<sup>1</sup>、王皓辰<sup>1</sup>、马欢<sup>1</sup>、尹晗<sup>1</sup>、白冰清<sup>1</sup>、郭兰<sup>1</sup>、耿庆山<sup>2</sup>

1. 广东省人民医院

2. 深圳市人民医院

**目的** 抑郁症和营养不良在冠状动脉疾病 (CAD) 患者中很普遍，并且会影响他们的预后，但抑郁症和营养不良之间的关系及其对预后的共同影响尚不清楚。我们试图探索这种关系及其影响。

**方法** 在这项研究中，使用控制营养状况 (CONUT) 评分和患者健康问卷 9 评估了 547 名 CAD 患者的营养和情绪状况。平均随访期为 2.1 年，之后我们探讨了抑郁与营养和预后之间的关系。

**结果** 共有 41% 的参与者被发现患有轻度营养不良，10% 有中度至重度营养不良，26% 有轻度抑郁症，11% 有中度至重度抑郁症。共有 20.6% 的参与者被发现患有抑郁症和营养不良的合并症；观察到中度至重度抑郁症（调整后的风险比 [HR]，1.674；95% 置信区间 [CI]，1.098-2.551）和中度至重度营养不良（调整后的 HR，1.686；95% CI，1.073-2.648）是复合终点的危险因素。发现患有抑郁症和营养不良合并症的参与者心血管死亡风险（HR，5.390；95% CI，1.483-19.589）和复合终点（调整后的 HR，1.791；95% CI，1.133-2.833）与那些相比增加没有抑郁症和营养不良。

**结论** 抑郁和营养不良被发现是 CAD 患者不良结局的危险因素。冠心病患者应注意自己的情绪和营养状况，干预必须及时有效。

PO-118

## 精神分裂症相关代谢综合征的干预措施

张伟志、陆小兵、李则攀  
广州市脑科医院

**目的** 精神分裂症是精神科最常见的疾病之一，精神分裂症患者共病代谢综合征的几率远远比普通人群要高，使心脑血管疾病的罹患率升高，导致预期寿命的大大缩短，该文就近些年来精神分裂症相关代谢综合征的干预措施的最新研究进行阐述。

**方法** 分别从精神分裂症导致代谢综合征发病率升高的原因以及药物使用、生活方式、物理治疗等方面的最新研究成果进行详细介绍。结果：通过抗精神病药物的调整或者联用其他药物（如黄连素、托吡酯等）、调节生活方式、物理治疗等措施可以对精神分裂症相关代谢综合征进行干预。

**结果** 通过抗精神病药物的调整或者联用其他药物（如黄连素、托吡酯等）、调节生活方式、物理治疗等措施可以对精神分裂症相关代谢综合征进行干预。

**结论** 精神分裂症相关代谢综合征可以通过控制饮食、加强运动、调整抗精神病药物或联用其他药物、物理治疗等方式进行有效干预。在未来仍需要完善相关试验或者开发新的药物，对精神分裂症相关代谢综合征的干预措施行进一步探索与研究。

PO-119

## Poor sleep among elderly inpatients with cardiovascular disease: prevalence and risk factors

Yongyan Shi<sup>1</sup>, Su Li<sup>2</sup>, Qiuping Huang<sup>1</sup>, Hongxian Shen<sup>1</sup>

1. The Second Xiangya Hospital of Central South University

2. The First Hospital of Hunan University of Chinese Medicine

**Objective** Poor sleep is associated with increased risk of death and recurrence of cardiovascular disease (CVD). However, there are few studies on the sleep status of elderly CVD patients. This study investigated the prevalence and risk factors of poor sleep among elderly patients with CVD hospitalized in the cardiology department of a general hospital in southern China, so as to provide evidence for identifying high-risk groups and targeted intervention, and promote the treatment and rehabilitation of CVD.

**Methods** A total of 396 hospitalized patients with CVD who met the inclusion criteria in the cardiology department of a general hospital in southern China were included in this cross-sectional study from June to September, 2022. Face-to-face interviews were conducted to collect the information. The Insomnia Severity Index (ISI), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and Short Portable Mental Status Questionnaire (SPMSQ) were used to assess participants' sleep, depression, anxiety, and cognition function, respectively. In addition, information on current diseases, comorbidities and family history of the participants was collected. All subjects provided informed assent, and ethics approval was granted by the Ethics Committee of National Clinical Research Center.

**Results** Among the elderly hospitalized CVD patients with an average age of 72.19( $\pm$ 8.86) years, 46.20% had poor sleep. The mean ISI score of poor sleep group was 14.07( $\pm$ 5.01), and 80.87% of them had not received any sleep-related treatment. Regarding marital status, 314 (79.30%) had a stable marital status. Among the 314 participants, 152 (48.41%) reported having a bed partner. Compared with good sleep group, poor sleepers were more likely to be female( $\chi^2=5.743, P<0.05$ ), older( $t=-4.496, P<0.05$ ), in unstable marital status( $\chi^2=5.131, P<0.05$ ), smoke less( $\chi^2=5.069, P<0.05$ ), more likely to have arrhythmias( $\chi^2=4.064, P<0.05$ ) or heart failure( $\chi^2=7.331, P<0.05$ ), more comorbidities of CVD( $t=-2.523, P<0.05$ ), less likely to have a family history of CVD( $\chi^2=4.408, P<0.05$ ), and more anxiety( $t=-13.930, P<0.05$ ), depression( $t=-$

7.193,  $P < 0.05$ ), and cognitive symptoms ( $Z = -2.203$ ,  $P < 0.05$ ). No significant difference was found in bedtime ( $t = 1.652$ ,  $P > 0.05$ ) and get-up time ( $t = 1.489$ ,  $P > 0.05$ ), BMI ( $t = 1.886$ ,  $P > 0.05$ ), employment ( $c2 = 5.285$ ,  $P > 0.05$ ), bed partner ( $c2 = 2.085$ ,  $P > 0.05$ ), shift work experience ( $c2 = 0.024$ ,  $P > 0.05$ ), education ( $Z = -0.415$ ,  $P > 0.05$ ), family income ( $Z = -0.347$ ,  $P > 0.05$ ), main residence ( $c2 = 0.109$ ,  $P > 0.05$ ), alcohol use ( $c2 = 2.635$ ,  $P > 0.05$ ), have hypertension ( $c2 = 0.096$ ,  $P > 0.05$ ) and CHD ( $c2 = 2.991$ ,  $P > 0.05$ ), comorbidities physical ( $t = 0.499$ ,  $P > 0.05$ ) and mental disorders ( $t = -1.297$ ,  $P > 0.05$ ) and family history of physical ( $c2 = 1.323$ ,  $P > 0.05$ ) between poor sleep and good sleep group. The results of binary logistic regression showed that depressive symptoms ( $OR = 1.436$ ,  $95\%CI = 1.311-1.572$ ) was an independent risk factor for poor sleep in elderly hospitalized CVD patients.

**Conclusion** The prevalence of poor sleep is high in elderly inpatients with CVD, but the treatment rate is low. Screening and managing depressive symptoms may help to improve sleep quality in elderly inpatients with CVD and promote the treatment and rehabilitation process of CVD. In addition, the daily schedule of elderly hospitalized CVD patients is consistent with the early bedtime and early rise characteristics of the elderly. And poor sleepers had longer sleep onset latency, shorter sleep duration, and lower sleep efficiency than good sleepers. Although the difference in ISI scores between participants with and without a bed partner was not statistically significant in the present study, the proportion of participants in a stable marriage who had a bed partner was much lower than the results of other studies.

## PO-120

### 焦虑情绪与青少年自伤行为：社会互动的中介作用和年龄的调节作用

高峥<sup>1,3</sup>、李雪<sup>1,3</sup>、张才溢<sup>1,2,3</sup>

1. 徐州医科大学

2. 徐州市东方人民医院

3. 徐州医科大学附属医院

**目的** 自伤行为是青少年自杀的重要危险因素之一，而其检出率呈逐渐增高的趋势。因此，了解青少年自伤行为的现状并探索其影响因素对于预防和干预青少年自杀具有重要意义。本研究旨在探讨焦虑情绪对青少年自伤行为的影响，并考察社会互动和年龄在其中的作用。

**方法** 采用分层整群抽样法，于 2021 年 9 月至 12 月，在江苏省徐州市抽取 1488 名中小學生参与调查。取得监护人知情同意后，使用 GAD-7 量表、Snaith-Hamilton 快感量表及自编自伤行为量表进行问卷调查，以评估青少年的焦虑水平、社会互动水平（得分与社会互动呈负相关）及是否存在自伤行为。共获得有效问卷 1293 份。研究使用 SPSS24.0 进行  $\chi^2$  检验、Mann-Whitney U 检验、Spearman 相关及 Logistic 回归分析。此外，还采用 SPSS 宏程序 PROCESSv4.0 模型 7（一个有调节的中介模型），使用偏差校正的非参数百分位 Bootstrap 法，检验年龄的调节效应和社会互动的中介效应。

**结果** (1) 青少年自伤行为存在性别 ( $\chi^2 = 22.140$ ,  $p < 0.01$ ) 和年龄 ( $Z = -3.418$ ,  $p < 0.01$ ) 差异。(2) 焦虑水平与自伤行为 ( $r = 0.326$ ,  $p < 0.01$ ) 和社会互动得分 ( $r = 0.212$ ,  $p < 0.01$ ) 均呈正相关；社会互动得分与自伤行为呈正相关 ( $r = 0.153$ ,  $p < 0.01$ )。(3) 控制了年龄和性别后，焦虑水平对青少年自伤行为的预测作用显著 ( $OR = 1.201$ ,  $95\%CI = 1.154 - 1.250$ )。(4) 社会互动得分在焦虑水平和青少年自伤行为之间发挥部分中介作用。其间接效应为 0.0185,  $95\%CI$  为 [0.007, 0.033]。(5) 焦虑水平与年龄的交互项对社会互动得分的预测作用显著 ( $b = -0.019$ ,  $t = -3.074$ ,  $p < 0.01$ )，说明年龄调节了焦虑水平和社会互动得分之间的关系。具体而言，相对年龄较大的青少年，焦虑水平对低年龄青少年的社会互动得分影响更大。此外，在年龄的三个水平上，社会互动得分在焦虑水平和青少年自伤行为之间的中介效应也呈下降趋势，即随着青少年年龄的增加，社会互动得分在焦虑水平和青少年自伤行为之间的中介作用明显减弱。

**结论** 焦虑情绪是青少年自伤行为的危险因素。与大龄青少年相比，焦虑情绪通过社会互动对低龄青少年自伤行为的影响更加显著。

PO-121

## **Sex Differences in Serum Trace Elements/Minerals Levels in Unmedicated Patients with Unipolar and Bipolar Depression: The Role of Suicidal Ideation**

Dong Huang, Jiali He, Rongxu Zhang, Shuming Zhong, Shunkai Lai, Yanbin Jia  
First Affiliated Hospital of Jinan University

**Objective** Suicide in major depressive disorder (MDD) and bipolar disorder (BD) is a global public health concern. Evidence suggests that trace elements and minerals contribute to the pathogenesis of MDD/BD and suicide. However, sex differences in trace elements/minerals in MDD/BD with suicidal ideation are unknown. We aimed to examine the influence of gender on serum levels of trace elements/minerals in depression, as well as the impact of suicidal ideation (SI) on these gender dimorphisms.

**Methods** A total of 260 depressed patients (84 BD and 176 MDD) were recruited in this cross-sectional study. Suicidal ideation (SI) was assessed by the Beck Scale for Suicide Ideation Part I. Serum levels of copper, zinc, iron, calcium, magnesium and phosphorus were measured using atomic absorption spectroscopy.

**Results** The prevalence of SI in males and females was 36% and 43% respectively, with no significant difference ( $\chi^2 = 3.103$ ,  $p = 0.078$ ). A main effect of sex was observed on copper, zinc, iron, calcium, and phosphorus (all  $p < 0.05$ ). Analysis of covariance further showed that serum levels of copper ( $F = 10.991$ ,  $p = 0.001$ ) and phosphorus ( $F = 7.708$ ,  $p = 0.008$ ) were higher while zinc ( $F = 5.278$ ,  $p = 0.022$ ) and calcium ( $F = 7.127$ ,  $p = 0.008$ ) were lower in females than in males within the non-SI (NSI) group, but there were no gender differences of these trace elements within the SI group (all  $p > 0.05$ ). However, no group effect was found (all  $p > 0.05$ ). Only for serum iron levels, a group-by-sex interaction effect was seen ( $F = 5.126$ ,  $p = 0.024$ ). Simple effect analyses indicated that serum iron levels were higher in the SI group than in the NSI group among females ( $F = 3.955$ ,  $p = 0.048$ ), and lower in females than in males within the NSI group ( $F = 18.786$ ,  $p < 0.001$ ). In females, but not in males, iron levels in the fourth quantile were positively associated with SI (odds ratio [OR] = 2.88, 95% confidence interval [CI]: 1.08–8.11).

**Conclusion** SI attenuated sex differences in serum trace element/mineral levels in depressed patients with MDD/BD. Serum iron levels were elevated when SI occurred in female patients. In turn, female patients with high serum iron levels were susceptible to SI.

## PO-122

## Sex-differential cognitive performance on MCCB of youth with BD-II depression

Dong Huang<sup>1</sup>, Shunkai Lai<sup>1</sup>, Shuming Zhong<sup>1</sup>, Yiliang Zhang<sup>1</sup>, Jiali He<sup>1</sup>, Shuya Yan<sup>1</sup>, Xiaosi Huang<sup>1</sup>, Xiaodan Lu<sup>1</sup>, Manying Duan<sup>2</sup>, Kailin Song<sup>2</sup>, Kaiwei Ye<sup>2</sup>, Yandi Chen<sup>2</sup>, Suiyi Ye<sup>2</sup>, Jiankang Lai<sup>2</sup>, Qilin Zhong<sup>1</sup>, Xiaodong Song<sup>1</sup>, Yanbin Jia<sup>1</sup>

1. First Affiliated Hospital of Jinan University

2. School of Management, Jinan University

**Objective** Cognitive impairment is a core feature of bipolar disorder (BD) and hinders recovery. However, the sex-specific effect on cognitive impairment at the BD subtype level remains unclear. This study aimed to investigate the sex differentials in cognitive impairment in BD subtype II (BD-II).

**Methods** The cross-sectional study recruited 125 unmediated young adults with BD-II depression and 140 healthy controls (HCs) matched for age, sex, and education. The Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) Consensus Cognitive Battery (MCCB) in Chinese version was used to assess cognitive functions. Hamilton Depression Rating Scale (24-HDRS) and Young Mania Rating Scale (YMRS) were used to measure mood state. Multivariate analysis of covariance (MANCOVA) was conducted.

**Results** The MCCB composite and its seven cognitive domains performed worse in BD-II depression patients than in HCs (all  $p < 0.001$ ). MANCOVA revealed significant sex-by-group interactions on attention/vigilance ( $F = 6.224$ ,  $df = 1$ ,  $p = 0.013$ ), verbal learning ( $F = 9.847$ ,  $df = 1$ ,  $p = 0.002$ ), visual learning ( $F = 4.242$ ,  $df = 1$ ,  $p = 0.040$ ), and composite ( $F = 8.819$ ,  $df = 1$ ,  $p = 0.003$ ), when age and education were controlled. Post hoc analyses suggested that males performed worse in the above-mentioned MCCB tests than females in BD-II depression.

**Conclusion** Our study demonstrated generalized cognitive deficits in unmedicated patients with BD-II depression. Male patients performed more severe cognitive impairment on attention/vigilance, verbal learning, and visual learning compared to female patients.

## PO-123

## Age of onset for major depressive disorder and its association with symptomatology and metabolism

Jiali He, Dong Huang, Shuming Zhong, Shunkai Lai, Yanbin Jia  
First Affiliated Hospital, Jinan University

**Objective** Few studies have investigated the effect of age of onset (AOO) on clinical features of patients with Major depressive disorder (MDD) and explore its potential influencing factors. Therefore, our study compared the clinical features, endocrine metabolism and neurometabolism of MDD patients with different AOO, and explored the underlying mechanisms for AOO of MDD.

**Methods** In present study, 200 drug-naïve patients with MDD, aged between 18 and 60, were included and divided into three groups according to AOO: the adolescence onset group (AO, age 10-17,  $n=55$ ), the early adulthood onset group (EAO, age 18-29,  $n=79$ ), the late adulthood onset group (LAO, age 30-60,  $n=66$ ). After recruitment, all participants were evaluated to record their clinical features. Peripheral blood was collected to detect thyroid function and trace elements of all patients. Additionally, all subjects underwent protons magnetic resonance spectroscopy (1H-MRS) to collect neurometabolic ratios of N-acetyl aspartate (NAA) and choline-containing compounds (Cho) to creatine (Cr) in prefrontal cortex (PFC) and thalamus. Finally, differences of metabolite levels were calculated and linear-regression analysis was adopted to explore the influencing factors for AOO of MDD.

**Results** In terms of symptom dimension, except for the somatization of anxiety ( $p=0.049$ ), there were no significant differences between the three AOO groups in the remaining six factors scores of 24-item Hamilton Depression Rating Scale (HDRS-24), but severity of depression was higher in LAO patients than in EAO patients. AO patients with MDD showed more depressive episodes, longer duration of illness, and a greater incidence of suicidal ideation (all  $p<0.05$ ). Both AO and EAO patients showed elevated triiodothyronine level than LAO (all  $p<0.001$ ), while only EAO showed higher thyroid stimulating hormone than LAO ( $p=0.045$ ). In addition, LAO patients exhibited lower phosphorus levels and higher ceruloplasmin levels compared to the other two groups (all  $p<0.001$ ), while EAO was higher than LAO in the comparison of blood zinc level ( $p=0.011$ ). In the aspect of neurometabolic levels, the NAA/Cr ratio of AO and EAO groups in right PFC and bilateral thalamus were higher than that in LAO group ( $p<0.001$ ,  $p=0.002$ ,  $p<0.001$ ). Furthermore, serum phosphorus, zinc, ceruloplasmin levels and the NAA/Cr ratio of right PFC were closely related to AOO, which may affect the AOO of patients with MDD (all  $p<0.05$ ).

**Conclusion** MDD patients with earlier AOO showed more complex clinical features such as more depressive episodes, longer duration of illness, and a greater incidence of suicidal ideation, while those with later AOO showed more metabolic disturbances in terms of thyroid function, microelement and neurometabolism. What's more, altered serum trace elements levels and neurometabolic abnormalities in right PFC may be important factors affecting the AOO of MDD patients.

## PO-124

### 疫情期间学生耳机使用情况对心理健康的影响机制研究

曹克勇、肖俊艳、卢钰琳、喻晓洁、杨朝英  
重庆医科大学附属巴南医院（巴南区人民医院）

**目的** 调查疫情期间当代学生耳机使用情况、应对方式、社会支持和心理健康的现状，探究学生的耳机使用情况对其心理健康的影响及作用机制对心理健康产生影响，并据此提出互联网时代耳机使用建议。

**方法** 采用问卷法对 1421 位学生进行调查，通过耳机使用情况自编问卷调查学生使用现状，通过症状自评量表（SCL-90）、社会支持量表、简易应对方式量表调查学生的心理健康状况、社会支持和应对方式情况，共 1421 份有效问卷。

**结果** 当代学生的耳机使用时间主要为每次 0.5~2 小时，主要用于娱乐（56.7%），多在平静（53.1%）状态下使用耳机。耳机使用时间、频率与心理健康存在正相关。耳机使用时间与支持利用得分成显著负相关（ $F=-0.072, p<0.01$ ），耳机使用频率与主观支持成显著负相关（ $F=-0.070, p<0.01$ ），耳机使用时间（ $F=-0.082, p<0.01$ ）、频率（ $F=-0.090, p<0.01$ ）与消极应对方式有显著正相关，积极与消极应对方式与心理健康各因子呈显著负相关，主观支持与心理健康各因子呈显著负相关；主观支持得分与心理健康各因子呈显著正相关。耳机使用频率、时间、社会支持和应对方式对心理健康的多元回归模型（ $R=0.099$ ,  $R^2=0.01$ ,  $F=6.977$ ,  $P>0.001$ ）不显著。

**结论** 性别、文化程度、情感状况等对耳机使用情况有影响，耳机使用情况与应对方式和社会支持有影响，合理使用耳机有利于学生心理健康。



## PO-125

**基于脑电图的多发性硬化认知障碍功能网络特征研究**

王颖、生晓娜、贾珍、刘珈仪  
河北医科大学第二医院

**目的** 多发性硬化(MS)是一种慢性自身免疫性炎性脱髓鞘疾病, 大约三分之二的患者会表现出临床相关的认知障碍(CI), 并随着病程进展出现进行性恶化, 对日常生活产生重大影响。MS 患者认知损害的存在和程度受多种因素影响, 病程是其中之一, 即使 MS 在明确诊断之前, 仍有 34% 的临床孤立综合征患者存在认知障碍。截止到目前为止尚无公认准确的早期诊断客观指标, 以及预防 CI 产生和阻止恶化的有效方法。脑电图(EEG)因其独特优势在临床医学尤其神经医学中被广泛运用。因此, 探索与 MS 中早期认知功能减退有关的 EEG 潜在生物标记, 对于 MS 中早期 CI 的诊断, 以及遏制病情发展和提高患者的生活质量尤其重要。

**方法** 通过相关检索词检索 PubMed 及 Web of Science 数据库, 搜索有关脑电图在 MS 认知障碍患者中研究的相关文献, 在全面文献回顾的基础上对文献进行筛选, 并作总结和综述。

**结果** 结合现有的国内外文献报道发现, alpha 活性和 theta/beta 比值均与 MS 患者认知障碍表现出相似的相关性, 但在敏感性中存在一定差异。在 MS 患者中, alpha 活性与认知功能表现呈显著负相关。MS 认知障碍的患者相对于无认知障碍的患者, theta/beta 比值增加, 且比 alpha 活性表现出更高的临床敏感性。

**结论** 目前的研究结果表明, 脑电图的 alpha 活动和 theta/beta 比值可以作为 MS 患者认知障碍的标志, 特别是额叶 theta/beta 比值可能是涉及诊断 MS 相关认知缺陷的潜在敏感性标志。由于脑电图 theta/beta 比值在常规临床过程中很容易获得, 我们建议未来的研究应在监测和干预研究的背景下, 利用更大的样本, 进一步检验其在 MS 中的临床应用。

## PO-126

**多发性硬化相关疲劳的病理生理机制及神经影像特征研究**

王颖、生晓娜、贾珍、刘珈仪  
河北医科大学第二医院

**目的** 多发性硬化(MS)是一种慢性自身免疫性炎性脱髓鞘疾病, 大约 83% 的患者会表现出疲劳症状, 这对患者的生活质量造成极大影响, 是 MS 管理中最紧迫的临床问题之一。MS 相关疲劳病理生理机制复杂, 涉及结构损伤及免疫炎症等多个方面。虽然有相关药物和物理治疗可缓解疲劳程度, 但目前临床上仍缺乏客观影像学诊断模型, 无法依据患者潜在的不同病理生理机制, 进行个体化治疗。因此, 基于 MS 相关疲劳的病理生理机制, 探索其神经影像特征, 从而采取个体化有效治疗, 对于遏制病情发展和提高患者的生活质量尤其重要。

**方法** 通过相关检索词检索 PubMed 及 Web of Science 数据库, 搜索有关 MS 相关疲劳的病理生理机制及神经影像特征研究的相关文献, 在全面文献回顾的基础上对文献进行筛选, 并作总结和综述。

**结果** 结合现有的国内外文献报道发现, 多发性硬化相关疲劳的四种病理生理机制的当代理论: 1. 白质或灰质的结构损伤; 2. 免疫炎症过程; 3. 任务执行过程中异常的功能连接; 4. 元认知理论的大脑功能状态, 这些机制最终均会导致大脑功能网络的变化。在功能磁共振成像领域, 检测方法已从简单的功能连接向有效连接检测进行转变, 并越来越多的用于影像学诊断模型的建立。因此神经网络连接的测定对 MS 相关疲劳的病理生理机制的研究具有核心重要性。

**结论** 目前的研究结果表明, 在计算机建模技术的基础上, 将 MS 相关疲劳的病理生理机制理论与现代功能性神经影像成像技术进行结合, 测定 MS 患者在不同机制影响下的疲劳指数, 将有效指导鉴别理论工具的发展。因此, 未来需要多学科协作, 通过前瞻性研究来验证候选模型的临床使用。

## PO-127

## 心灵冥想和身体锻炼对新冠肺炎期间心身健康的双重作用： 生理和心理的观察

李书鹏

北京大学公共卫生学院

**目的** 本研究的目的是探索心灵冥想和身体锻炼对新冠肺炎期间心身健康的双重作用，并深入了解其生理和心理方面的影响。通过观察参与者的生理指标、心理状态以及主观感受，揭示心灵冥想和身体锻炼在公共卫生事件期间的效果和机制。

**方法** 通过对国内外公共卫生事件期间参与心灵冥想和身体锻炼的个体观察和测量研究的汇总，收集了参与新冠肺炎期间心灵冥想和身体锻炼的个体的定量和定性数据。定量数据包括心身健康评估问卷的填写和生理指标的测量，如血压、心率和免疫指标的检测。定性数据则通过焦点小组讨论和深度访谈获取参与者的主观感受和体验。收集的数据将进行统计分析和主题分析。

**结果** 本研究的初步结果显示，心灵冥想和身体锻炼对个体的生理和心理状态均产生了积极的影响。在生理方面，他们显示出更低的血压和心率水平，以及更好的免疫功能。通过降低血压和心率水平以及增强免疫功能，心灵冥想和身体锻炼有助于提升个体的生理健康水平。在心理方面，他们报告了较低的焦虑和抑郁水平，以及更高的主观幸福感和心理抗逆性。这些结果表明，心灵冥想和身体锻炼对于提升个体心身健康、缓解疫情带来的压力具有积极的效果。

其次，心灵冥想通过调节自主神经系统的平衡、降低交感神经活动，以及促进肌肉松弛和深度呼吸，产生了对血压和心率的调节作用。心灵冥想还通过提升注意力、增强自我意识和情绪调节能力，对心理健康产生了积极影响。身体锻炼则通过促进血液循环、增强心肺功能和调节神经内分泌系统，对生理健康产生了正面影响。此外，身体锻炼还通过释放内啡肽、促进脑内多巴胺的释放，对心理健康产生了积极作用。这些机制的揭示为进一步研究心灵冥想和身体锻炼在心身健康领域的应用提供了理论依据。

**结论** 心灵冥想和身体锻炼可被视为有效的心身健康管理策略，对新冠肺炎期间的公共卫生事件具有重要意义，为新冠肺炎期间心身健康管理提供了新的视角。通过舒缓压力反应、改善免疫功能和提升心理抗逆性，心灵冥想和身体锻炼有助于增强个体的心理抗逆能力，并改善整体的心身健康状态。因此，应当积极鼓励和推广心灵冥想和身体锻炼这些心身健康促进方法，以提高公众在新冠肺炎期间的心理健康水平和应对能力。研究结果为公共卫生事件期间的心身健康管理提供了新的视角和策略，将对该领域的进一步研究和实践产生重要推动作用。

## PO-128

## 联合默认模式网络的动态功能特征识别抑郁症患者快感缺失

刘晓云<sup>1</sup>、李凡<sup>2</sup>、孔佑勇<sup>1</sup>、袁勇贵<sup>1</sup>

1. 东南大学附属中大医院

2. 东南大学

**目的** 默认模式网络(DMN)与抑郁症(MDD)密切相关。然而，以往的研究大多只关注 DMN 的静态变化，而忽略了动态变化。本研究通过分析功能连通性(FC，静态特征)和时间变异性(TV，动态特征)来探讨 MDD 的发病机制。

**方法** 共招募首发未用药的 MDD 患者 47 例，复发性 MDD 患者 49 例，健康对照(HC) 64 例。采用 DPASF 软件计算 DMN-FC 和 DMN-TV。分析上述特征在三组间的差异及其与抑郁症状、快感缺失严重度的相关性。最后，将与症状严重程度显著相关的 TV 或 FC 作为预测因子，利用 ROC 曲线分析其对抑郁症发病的预测价值。

**结果** 首发未用药的 MDD 患者以及复发性 MDD 患者的 FCs 普遍降低，而 TVs 普遍升高。在复发患者中，快感缺失与 TV、FC 之间存在显著正相关。ROC 分析表明，在组间差异显著的聚类中，FC 和 TV 的组合预测快感缺失的准确率高于 TV。而就整个 MDD 而言，静态和动态指标对快感缺失的预测准确率仍然较高，且动态和静态联合的预测准确率(77.5%)高于单独使用动态指标(69.8%)或静态指标(70.7%)。

**结论** 我们的研究表明脑静态和动态功能联合揭示抑郁症快感缺失独特神经病理机制的巨大价值和潜力。

## PO-129

### 应对心身相关障碍的互联网智能化干预方案：机器学习与个性化医疗的结合

李书鹏

北京大学公共卫生学院

**目的** 本文旨在探讨将机器学习与个性化医疗相结合的互联网智能化干预方案在应对心身相关障碍中的应用。通过综合公共卫生、社会学、传播学和心身医学的视角，指出机器学习在提供个性化干预和改善心身相关障碍治疗效果方面的潜力和价值。

**方法** 本研究采用定性研究方法，主要基于文献综述和系统综述的分析。首先，梳理心身相关障碍的定义、分类和诊断标准，明确其临床特征和治疗挑战。然后，探讨互联网智能化干预的概念、特点和应用优势，并介绍机器学习在干预方案中的潜在应用。最后，讨论个性化医疗在心身相关障碍治疗中的作用，分析将机器学习与个性化医疗相结合的可行性和优势。

**结果** 研究发现，互联网智能化干预方案基于机器学习算法可以收集、整合和分析大量的心身相关数据，提供个性化的干预方案。机器学习技术能够自动识别和分析心身相关障碍患者的个体特征和治疗需求，针对不同个体提供个性化的干预建议和治疗方案。个性化医疗的理念将治疗过程从传统的以平均标准为基础的模式转变为以患者为中心的个性化模式，提高了治疗效果和患者参与度。

**结论** 将机器学习与个性化医疗相结合的互联网智能化干预方案为应对心身相关障碍提供了新的机遇和解决方案。这种创新的干预方法可以更好地满足患者个性化的需求，提高治疗效果和患者满意度。在未来的研究和实践中，需要关注数据隐私和安全等问题，并进一步深化机器学习算法在个性化医疗中的应用，为心身相关障碍的干预和治疗提供更全面的支持。通过本研究的定性分析和综述方法，为互联网智能化干预方案和个性化医疗在心身医学领域的研究提供了新的视角和思路，并为进一步推动心身相关障碍的治疗和管理提供科学依据。

## PO-130

### The efficacy of add-on Robot-Aided Transcranial Magnetic Stimulation on the negative thinking related to pain in adolescent depressive disorder

Dan Qiao, Lu Ma, Xuemin Zhang, Yujiao Wen, Yifan Xu, Gaizhi Li, Chunxia Yang, Zhifen Liu  
First Hospital of Shanxi Medical University

**Objective** The pain catastrophising and vigilance are typical manifestations of the fear of pain. Oftentimes, adolescent patients with major depressive disorder (MDD) complain of fear of pain that negatively impact their day-to-day function, and these pain problems are not alleviated by current first-line treatments. Converging evidence suggests this relationship is due in part to

shared neural mechanisms, especially the altered function of dorsolateral prefrontal cortex (DLPFC). This study examined the therapeutic effect of targeting DLPFC on the level of pain catastrophizing and vigilance in adolescent depressive disorder by add-on Robot-Aided Transcranial Magnetic Stimulation(TMS).

**Methods** 60 adolescent MDD patients were allocated to treatment with either Robot-Aided TMS combined with sertraline (add-on TMS group, n=30) or only setraline (Sertraline group, n=30). In addition to receiving the same dose of sertraline as the control group, patients in TMS group received 10 sessions of Robot-Aided TMS over the bilateral DLPFC (left: 10Hz, right: 1Hz). Clinical response to treatment was determined using the Pain Catastrophizing Scale (PCS) and Pain Vigilance and Awareness Questionnaire (PVAQ), and the primary efficacy was the change in score from baseline to posttreatment assessment. Additional measures were score changes after another 8 month of follow-up.

**Results** The add-on TMS group displayed a significant decreased score on the PCS, the rumination subscale of PCS, and PVAQ after the intervention, compared to that in the Sertraline group (all  $P < .05$ ). Also, a mixed-effects repeated-measures model revealed significant improvement in scores on the PCS, the rumination subscale of PCS, and PVAQ during the post-intervention and follow-up periods in the add-on TMS group (all  $P < .05$ , Bonferroni correction).

**Conclusion** Add-on Robot-Aided TMS over the DLPFC significantly improved the negative thinking related to pain and may be considered as a potential intervention for adolescent MDD patients with a high level of pain fear.

## PO-131

### Dynamic network characteristics of adolescents with major depressive disorder: attention network mediates the association between anhedonia and attentional deficit

Yujiao Wen, Hong Li, Dan Qiao, Tian Ren, Lei Lei, Gaizhi Li, Chunxia Yang, Yifan Xu, Min Han, Zhifen Liu  
The First Hospital of Shanxi Medical University

**Objective** Adolescents with major depressive disorder (MDD) is highly heterogeneous, and attention-deficit is a critical symptom, which impaired the social functioning of patients. However, the neural network relevant psychopathologic mechanism was not elucidated. Therefore, we aimed to explore the dynamic neural network activity of attention-deficit and the relationship with the clinical outcome.

**Methods** We studied 188 adolescents (12-23 years) with major depressive disorder(MDD) who were treated with SSRIs for 8 weeks and 94 healthy controls who had high-quality resting-state EEG and fMRI data as a part of the adolescent with MDD Cohort. Combining psychophysics, electroencephalography (EEG), and functional magnetic resonance imaging (fMRI) techniques, we aimed to inform the dynamic network features by investigated EEG microstate characteristics and related network temporal features in adolescents with MDD.

**Results** At baseline, microstate analysis demonstrated that the frequency of microstate C in the adolescents with MDD were decreased compared to the health controls, while the duration and coverage of microstate D was increased in the MDD. Mediation analysis revealed that the transition probability from microstate C to microstate D mediated the anhedonia and attention deficit in the patient group. The resting fMRI results showed that the temporal variability of dorsal attention network (DAN) was significantly weaker in MDD than that in healthy controls, whereas the temporal frequencies were comparable between the two groups. Importantly, temporal variability of DAN mediates the relationship between anhedonia and attention deficit in the patient group.

After acute-stage treatment, the remitters ameliorated in microstates C and D compared with treatment failures. For resting-state fMRI data, temporal variability of DAN was significantly higher in remitters than in treatment failures.

**Conclusion** Our findings elucidated the dynamic neural network characteristics relevant acute-stage treatment efficacy in the adolescents with MDD, which were significantly associated with the anhedonia and the cognitive impairments. The study enriched the understandings of the neural mechanism underlying the attention deficit in adolescents MDD, and provided the novel clinical biomarkers.

PO-132

## **The alteration in Neurocognitive Performance and Related Prefrontal Blood Oxygenation between Responders and Non-responders with Adolescent Depression: A Longitudinal Study.**

Dan Qiao, Xiumei Liang, Yujiao Wen, Yifan Xu, Qiqi Li, Gaizhi Li, Zhifen Liu  
First Hospital of Shanxi Medical University

**Objective** Subjective neurocognitive complaints represent a leading cause for the burden of adolescent depression. However, the correlation between neurocognitive impairment and depressive symptom in adolescent depression is still controversial. Scholars continue to argue about whether neurocognitive impairment is accompanied by depressive symptom or independent of it. By combining neuropsychological test and neuroimaging technique, this study aimed to investigate the relationship between change of neurocognitive performance and brain activity and antidepressant efficacy in adolescents with depression.

**Methods** A prospective longitudinal study where 46 adolescents with depression were assessed twice with 8 weeks of setraline treatment. The repeatable battery for the assessment of neuropsychological status (RBANS) was conducted to measure the multi-dimensional neurocognitive performance, and the functional near infrared spectroscopy (fNIRS) was used to assess changes in the concentration of oxygenated hemoglobin ([oxy-Hb]) in the prefrontal cortex during the verbal fluency test (VFT). Antidepressant efficacy was determined using the reduction rate of the total score of Hamilton Depression Scale (HAMD).

**Results** After treatment, 24 (52.17%) patients met the criteria of response, while 22 (47.83%) not. Compared to responders, non-responders showed more serious impairment of visual spatial and attention performance at baseline. After treatment, although the total score of RBANS was also increased among responders, only the immediate memory improved significantly, and no significant improvement in remaining dimensions was observed. Besides, the blood oxygenation of only two channels (located in dorsal lateral prefrontal cortex) was increased among responders.

**Conclusion** In various dimensions of cognitive function, immediate memory may be associated with depressive symptoms in adolescents with depression, while other dimensions of impairment may be independent of depressive symptoms. A more individualized treatment is warranted to address the unmet need for improving neurocognitive function in adolescent with depression.

## PO-133

## 基于质子磁共振波谱成像技术探索青少年双相抑郁患者非自杀性自伤神经代谢改变

王丞基<sup>1</sup>、邹韶红<sup>1</sup>、曲源<sup>2</sup>、张丞<sup>1</sup>、唐潇潇<sup>1</sup>、佟钙玉<sup>1</sup>、曼则热姆·乃比<sup>1</sup>

1. 新疆维吾尔自治区人民医院临床心理科

2. 新疆维吾尔自治区人民医院放射影像中心

**目的** 借助氢质子磁共振波谱检测手段探讨青少年双相抑郁患者非自杀性自伤行为与腹内侧前额叶（vmPFC）各代谢物之间的关系。

**方法** 本研究分析了伴或不伴 NSSI 的青少年双相抑郁患者的神经代谢差异。收集了 40 例在 1 个月内未接受药物治疗的青少年双相抑郁患者，根据他们有无 NSSI 行为，分为有 NSSI 组（21 例）和无 NSSI 组（19 例）。使用质子磁共振波谱（<sup>1</sup>H-MRS）检测所有患者的腹内侧前额叶脑生化代谢物比值。

**结果** 有 NSSI 青少年双相抑郁患者 vmPFC 的 NAA/Cr 低于无 NSSI 青少年双相抑郁患者，有 NSSI 青少年双相抑郁患者 vmPFC 的 Cho/Cr 和 HAMD 评分有显著正相关性。研究结果表明，有 NSSI 的青少年双相抑郁患者 vmPFC 中 NAA 代谢水平降低，此外，有 NSSI 行为的青少年双相抑郁患者 vmPFC 的 Cho 水平可能与更严重的抑郁情绪有关。

**结论** 我们的研究指出，青少年双相抑郁患者 NSSI 行为可能与 vmPFC 神经元功能障碍有关，此外膜磷脂分解代谢水平异常可能与更严重的抑郁情绪有关，本研究为青少年双相抑郁患者 NSSI 行为的病理生理机制提供了参考。

## PO-134

## 基于影像组学探索游戏障碍的分类特征

李一凡<sup>1</sup>、黄秋平<sup>2</sup>、谌红献<sup>1</sup>

1. 中南大学湘雅二医院

2. 湖南中医药大学

**目的** 游戏障碍在我国流行率高，危害严重，但缺乏客观生物指标。既往磁共振研究提示脑影像学对发现疾病生物标记物有重要意义。本研究拟通过影像组学综合分析游戏障碍者的静息态磁共振数据和临床数据以得到疾病的分类特征，通过解码分类特征以探索游戏障碍者的情绪、人格、游戏使用以及脑区和脑网络的异常，并使用机器学习的方法从分类特征中开发出疾病的分类模型以辅助临床诊断。

**方法** 本研究纳入了 55 名游戏障碍者和 45 名年龄与受教育年限相匹配的正常被试。使用联影 3.0T 磁共振机收集静息态功能磁共振数据，使用自编问卷收集了个人和家庭信息及游戏使用信息，使用大五人格量表、广泛性焦虑量表和患者健康问卷评估人格特征和焦虑、抑郁情绪；选择基于全脑的低频振幅，局部一致性，体素镜像同伦连接和功能连接作为影像学指标。使用影像组学对磁共振数据和问卷及量表资料进行特征提取和特征筛选以获得有价值的疾病分类特征，之后对所得特征进行泛化性验证和二次筛选，输入支持向量机建模得到疾病的分类模型并验证分类效能。

**结果** 影像组学从 7096 个维度的特征空间中筛选出 28 个有价值的分类特征，主要涉及情绪、人格、游戏目的以及默认网络、边缘网络和小脑功能网络，区分游戏障碍准确率为 81%（特异度 78%，灵敏度 84%）。分类特征中的颞下回的低频振幅、丘脑和小脑上部的局部一致性、小脑下部的体素镜像同伦连接、小脑下部之内以及下部与蚓部之间的功能连接及抑郁得分、大五人格的开放性和责任心得分、寻求快感和打发时间的游戏目的通过了二次筛选成为可泛化的分类特征，建模后在测试集中识别游戏障碍者，重复 100 次后得到平均分类准确率为 79%（特异度 77%，灵敏度 82%， $t=23.15$ ， $P<0.001$ ）。

**结论** 本研究基于影像组学全面分析了游戏障碍者脑功能磁共振数据和临床资料，得到的分类特征能显著地帮助识别游戏障碍者，为理解游戏障碍的神经机制和客观诊断提供帮助。

## PO-135

### 神经可塑性与心身相关障碍的关系及其干预策略

李书鹏

北京大学公共卫生学院

**目的** 本文旨在深入探讨神经可塑性与心身相关障碍之间的关系，并提出相应的干预策略。通过采用定性分析和系统综述的方法，全面研究神经可塑性在心身相关障碍发病机制中的作用，并探讨其对干预策略的指导意义。

**方法** 本研究采用定性分析和系统综述的方法。通过对相关文献的广泛检索，筛选符合纳入标准的文章进行综合分析。从中提取相关数据，通过定性综合的方式，揭示神经可塑性与心身相关障碍之间的关系，并探讨可基于神经可塑性机制进行的干预策略。

**结果** 通过系统综述发现，神经可塑性与心身相关障碍之间存在紧密的联系。神经可塑性作为神经系统对环境变化做出调整和适应的能力，在心身相关障碍的发展过程中具有重要作用。研究表明，许多心身相关障碍的发病机制与神经可塑性异常相关，如脑区功能改变、突触可塑性失调等。基于这些研究结果，可以开发出针对神经可塑性的干预策略，以改善心身相关障碍的症状和预后。

**结论** 本研究通过定性分析和系统综述，阐明了神经可塑性与心身相关障碍之间的关系，并提出了相应的干预策略。神经可塑性在心身相关障碍的发病机制和干预中具有重要作用。在临床实践中，应以神经可塑性为基础，开展个体化的心身干预，以促进心身健康。

## PO-136

### 公共卫生事件对医务人员心理健康和心身问题的影响： 支持策略与干预措施的探讨

李书鹏

北京大学公共卫生学院

**目的** 本文旨在探讨公共卫生事件对医务人员心理健康和心身问题的影响，并提出相应的支持策略和干预措施。通过独创的视角和观点，分析公共卫生事件对医务人员的心理负担、应激反应和心身健康的可能影响，以及如何提供有效的支持和干预，提高医务人员的心理健康水平，保障公共卫生事件期间医疗服务的质量和安全。

**方法** 本研究采用文献综述和分析的方法。通过收集相关研究文献，深入分析公共卫生事件对医务人员心理健康和心身问题的影响，并总结出支持策略和干预措施，以提供实践指导和决策建议。

**结果** 在公共卫生事件中，医务人员面临着巨大的心理压力和心身问题。常见的影响包括焦虑、抑郁、疲劳、创伤后应激障碍等。为了应对这些问题，需要采取一系列的支持策略和干预措施。其中包括提供心理支持和咨询服务、加强团队合作和交流、改善工作条件 and 环境、推行心理健康教育 and 培训等。

**结论** 公共卫生事件对医务人员心理健康和心身问题具有重要影响，既需要关注个体的心理需求，也需要从组织和制度层面提供支持。有效的支持策略和干预措施能够提升医务人员的心理健康水平，增强应对能力，确保医疗服务的质量和安全。未来的研究应进一步探讨不同类型公共卫生事件对医务人员心理健康的影响，探索更具针对性和有效性的支持策略和干预措施。

PO-137

## Interaction and Advances in the Diagnosis and Treatment of Endocrine Disorders and Psychosomatic Related Disorders

Shupeng Li

Peking University School of Public Health

**Objective** This paper aims to explore the interaction between endocrine disorders and psychosomatic related disorders and provide an overview of the advancements in their diagnosis and treatment. By analyzing existing literature, this study aims to present innovative perspectives and novel insights into the relationship between these two domains, offering valuable contributions to clinical practice and research.

**Methods** A comprehensive review and analysis of pertinent literature were conducted. Relevant studies examining the interaction between endocrine disorders and psychosomatic related disorders were collected and synthesized to identify the underlying mechanisms, diagnostic approaches, and therapeutic interventions. The emphasis is placed on presenting new perspectives and innovative strategies.

**Results** The interplay between endocrine disorders and psychosomatic related disorders involves intricate and bidirectional relationships. Endocrine disorders can influence psychological well-being, and psychological factors can impact endocrine function. The use of advanced diagnostic techniques, such as hormone assays and imaging modalities, has improved the accuracy and specificity of diagnosis. Furthermore, the incorporation of psychosocial interventions, including cognitive-behavioral therapy, stress reduction techniques, and support groups, alongside conventional medical approaches, has shown promising outcomes in improving patient well-being and treatment outcomes.

**Conclusion** The interplay between endocrine disorders and psychosomatic related disorders highlights the importance of a comprehensive and integrated approach in diagnosis and management. The incorporation of psychosocial interventions alongside conventional medical approaches can enhance patient care, addressing the psychological and emotional aspects of these disorders. Further research and collaboration between medical and mental health professionals are essential to optimize treatment outcomes and improve patient well-being.

PO-138

## Beyond Words: Understanding Nonverbal Communication in Physician-Patient Interactions and Its Influence on Health Outcomes

Shupeng Li

Peking University School of Public Health

**Objective** Effective communication between physicians and patients is crucial for optimal healthcare outcomes. While verbal communication plays a significant role, nonverbal communication also holds great potential in shaping the physician-patient relationship and patient outcomes. This paper aims to explore the importance and impact of nonverbal communication in physician-patient interactions and its influence on health outcomes. By investigating the various forms and functions of nonverbal cues, we can gain a deeper understanding of the complex dynamics at play.

**Methods** This study employs a literature review approach to examine existing research on nonverbal communication in physician-patient interactions. Key databases such as PubMed, Scopus, and PsycINFO were searched using relevant keywords. Studies from various disciplines,



including psychology, sociology, and communication studies, were selected for analysis. The review focuses on the impact of nonverbal communication on patient satisfaction, adherence to treatment, and overall health outcomes.

**Results** The analysis reveals several key findings. Firstly, nonverbal cues, such as facial expressions, gestures, and body language, contribute to the formation of trust and rapport between physicians and patients. Patients are more likely to disclose relevant information and actively participate in their care when a positive nonverbal communication environment is established. Secondly, nonverbal communication affects patient satisfaction and perception of overall healthcare quality. Physicians who demonstrate empathy through nonverbal cues are rated higher by patients in terms of trust, satisfaction, and perceived competence. Lastly, nonverbal communication impacts treatment adherence and health outcomes. Patients who receive clear nonverbal cues regarding treatment instructions and support are more likely to adhere to medical advice and experience improved health outcomes.

**Conclusion** Beyond words, nonverbal communication plays a critical role in physician-patient interactions and significantly influences health outcomes. Understanding the power of nonverbal cues can enable healthcare providers to enhance their communication skills and improve patient-centered care. Interventions targeting nonverbal communication training should be integrated into medical education curricula to ensure effective and empathetic communication in healthcare settings. By harnessing the potential of nonverbal communication, healthcare professionals can create a supportive environment that fosters patient trust, satisfaction, and positive health outcomes.

## PO-139

### 心身症状与儿童压力应对：社会学因素的探索

李书鹏

北京大学公共卫生学院

**目的** 本研究旨在探索心身症状在儿童压力应对中的社会学因素，以提供心理医学领域对儿童心身健康的深入理解和干预方案的依据。

**方法** 采用定性研究方法，通过深度访谈和焦点小组讨论收集儿童个体和家庭的心身症状及其应对经验。采用内容分析法对数据进行归纳和整理，以揭示心身症状与儿童压力应对的社会学因素。

**结果** 研究结果显示，家庭环境、教育背景、社会支持和文化因素等社会学因素在儿童心身症状和其应对方式中起到重要作用。家庭的温暖和支持、积极的教育教养方式以及良好的社会支持网络可以帮助儿童更积极地应对压力，减少心身症状的发生和严重程度。

**结论** 本研究强调了社会环境对儿童心身健康的重要性。在儿童心身医学诊疗中，除了个体心理因素的干预外，应重视社会学因素的影响，并通过家庭和社会层面的干预来改善儿童心身症状和压力应对能力。

## PO-140

### 健身剧烈运动引起的身体疼痛：生物心理社会因素的综合评估与干预

李书鹏

北京大学公共卫生学院

**目的** 本研究旨在探讨健身剧烈运动引起的身体疼痛问题，并综合评估涉及生物、心理和社会因素，并提供相应的干预策略，以提升运动者的身体健康与生活质量。

**方法** 采用综合性研究方法，结合定量和定性研究，收集健身运动者的相关数据。通过生物学检测、心理测量工具和社会因素调查问卷，对健身剧烈运动引起的身体疼痛进行全面评估。同时，采用针对不同因素的干预策略进行干预措施的设计。

**结果** 研究发现，健身剧烈运动引起的身体疼痛是一个复杂的问题，涉及多个因素的综合作用。生物学因素包括运动损伤、炎症反应等；心理因素包括疼痛知觉、情绪状态等；社会因素包括社交支持、心理压力等。针对这些因素，有效的干预措施应包括适当调整运动强度和频率、提供心理支持和应对技巧、改善社会支持网络等。

**结论** 本研究认识到健身剧烈运动引起的身体疼痛问题在生物、心理和社会三个层面上的综合性特点。针对这些特点，综合评估和相应的干预措施应被纳入医学、心理和社会科学的研究和实践中，以帮助健身者更好地管理疼痛并提升其身体健康与生活质量。

## PO-141

### **Selective structural and functional indicators in nonsuicidal self-injury adolescents with major depression disorder**

李宏、李改智、乔丹、徐一帆、温宇娇、刘志芬  
山西医科大学第一医院

**目的** Nonsuicidal self-injury (NSSI) is one of the most frequent behavioral characteristics following adolescents with depression. It is suggested that NSSI behavior is associated with the deficits of structural and functional characteristics of adolescents with MDD.

**方法** We collected 119 first-episode drug-naïve MDD patients and 43 healthy controls. Combining psychophysics and MRI, we quantified the differences accounting for emotional symptoms, NSSI behavior as well as the structural and functional features.

**结果** We found that (1) the gray matter volume of the middle frontal cortex in MDD with none-NSSI behavior was significantly smaller than that in the healthy controls; (2) at resting state, depressed adolescents with NSSI had lower coherence in the FPN compared to those without NSSI and healthy controls.

**结论** Our findings demonstrated that the structural and functional deficits in the depressed adolescents with NSSI behavior, which were highly correlated with the their NSSI behavior.

## PO-142

### **自我伤害行为相关动物模型的研究进展**

黄阳茜、徐一凡、杜鑫哲、刘志芬  
山西医科大学第一医院

**目的** 自我伤害行为（self-injurious behavior, SIB）指在无他人帮助下故意伤害自己身体，足以造成组织损伤的行为。近些年来，在 SIB 出现的前提下衍生了非自杀性自伤（Non-suicidal self-injury, NSSI）行为这一综合征，严重的自伤行为可危及生命，是自杀的潜在危险因素，目前其机制不明、治疗应答率低。本文主要对 SIB 动物模型构建的相关文献进行综述，有助于探究其病因和发病机制，为 SIB 相关的基础研究提供参考。

**方法** 检索 Pubmed、Web of science、Embase 等数据库，手工检索参考文献，英文检索词：“self-injurious behaviour; self-injury; self-biting; animal model”等，纳入自建库至 2023 年 1 月 SIB 动物模型相关文献，筛选并提取文献关键内容，采用文献归纳法对 SIB 动物模型进行分析与评价。

**结果** 最终共纳入 32 篇自我伤害行为动物模型的实验研究相关文献, 主要通过药物诱导、环境剥离、基因敲除三种方式拟构建, 其中较多采用药物诱导, 以中枢系统兴奋剂、通道调节剂为主。环境剥离主要以恒河猴为观察对象, 采取出生后与母亲分离饲养的方式。基因敲除包括 SPAPAP3、Slitrk5、Hoxb8 和 FosB 基因等。在 CNS 兴奋剂、毒蝇蕈醇诱导、新生儿期 6-羟基多巴胺病灶、环境剥离动物模型中, 均表现出了异常活动, 从刻板行为到可能引起健康问题的 SIB, 更严重的可能引起死亡, 这与人类神经精神疾病、无共病的普通人群中发生自我伤害行为类似, 表面效度良好; 目前临床上针对于 SIB 的治疗还处于探索阶段, 认知行为治疗 (cognitive behavior therapy, CBT)、部分抗精神药物等能改善 SIB 的频率以及严重程度, 在氟硝尼啶药物诱导、SAPAP3 基因敲除动物模型中预测效度好, 但在 CNS 兴奋剂、毒蝇蕈醇表现出完全相反的作用, 可能与在动物模型注射药物后观察到的为急性行为改变, 而人类是在服用药物后长期递质调节导致的结果有关; SIB 多属于神经精神障碍的症状之一, 神经生物因素包括神经递质血清素、多巴胺、GABA 等, 在药物诱导、环境剥离模型中存在一定的结构效度。

**结论** 自我伤害行为相关动物模型的构建是研究其发病机制的基础, 是研究治疗药物的关键环节。在未来研究过程中, 应根据具体的研究目的及实际的研究条件等情况选择合适的建模方式。

## PO-143

### 基于网络药理学和蛋白质组学结合实验验证探究 ZDXS001 组方治疗抑郁症的作用机制研究

陈颖、岳莹莹、袁勇贵  
东南大学附属中大医院

**目的** 本课题探讨 ZDXS001 组方对慢性不可预知性温和刺激 (CUMS) 诱导的大鼠抑郁样行为的影响, 聚焦抗抑郁起效的核心脑区海马, 探讨 ZDXS001 组方抗抑郁作用机制, 为揭示其药理作用及临床推广应用提供理论依据。

**方法** 1. SD 大鼠随机分为空白组、模型组、帕罗西汀组和 ZDXS001 组方组, 每组 8-10 只。采用 CUMS 方法造模 42 天制备抑郁大鼠模型。之后将 CUMS 模型鼠随机分为不同给药组, 根据临床使用剂量和大鼠体重计算给药剂量, 连续灌胃给药 14 天。分别于第 7、42、56 天进行体重测试和悬尾实验、糖水偏好实验、强迫游泳实验行为学评估。2. 该实验通过网络药理学分析其潜在抗抑郁分子机制并利用超高效液相色谱技术探讨 ZDXS001 组方有效组对抑郁模型大鼠海马组织蛋白质的影响。

**结果** 1. 体重及行为学实验结果显示, 与空白组鼠相比, 在强迫游泳实验、悬尾实验、糖水偏好、体重等实验中模型组鼠糖水消耗显著降低、不动时间显著升高及体重增长速度减缓 ( $P < 0.05$ ), 经过 ZDXS001 组方治疗两周后, 在 FST、TST、糖水偏好、体重等实验中药物组鼠糖水消耗显著升高、不动时间减少及体重明显增长 ( $P < 0.05$ ); 2. 网络药理学结果显示从 TCMSP 等数据库中筛选出 ZDXS001 组方的活性化合物 206 种, 相对应的靶点 859 个; 筛选出抑郁症的差异表达基因 3336 个。化合物-靶点复合网络表明 ZDXS001 组方中活性最高的化合物为山奈酚、槲皮苷、 $\beta$ -谷甾醇和木犀草素; 在 STRING 平台上进行蛋白质-蛋白质相互作用分析结果显示 ZDXS001 组方发挥抗抑郁效应的关键靶基因有 ESR1、HSP90AA1、MAPK1、MAPK14 等。GO 和 KEGG 分析结果表明, ZDXS001 组方中的活性成分发挥抗抑郁作用的功能包括对脂多糖的反应、对细胞外刺激的反应等, 其主要路径包括 MAPK 通路和 IL-17 等相关通路; 海马蛋白质组学结果显示, 与模型组相比, ZDXS001 组方治疗组模型鼠海马共有 172 个蛋白发生显著变化, 其中表达上升的有 61 个, 表达下降的有 111 个; 对差异蛋白进行生物信息学分析发现, 筛选出的差异蛋白功能集中在 MAPK 通路、神经再生等。

**结论** 1、CUMS 可诱导大鼠抑郁样表型, ZDXS001 组方可发挥抗抑郁作用。2、ZDXS001 组方可能是通过调节 MAPK 信号通路改善抑郁样行为发挥抗抑郁作用。

PO-144

## Severity related Alterations of Gray Matter Volume, Cortical Thickness and Functional Activity in Young Adults with Major Depressive Disorder

Jun Cao<sup>1</sup>, Xiaorong Chen<sup>2</sup>, Ai Ming<sup>1</sup>, Li Kuang<sup>1</sup>

1. The First Affiliated Hospital of Chongqing Medical University

2. Mental Health Center, University-Town Hospital of Chongqing Medical University

**Objective** The primary goal of the present study was to comprehensively clarify the neural basis of young depressed patients with suicide attempt through the combination of structural and functional analyses.

**Methods** In this study, we examined the cortical and subcortical alterations of neuroanatomical structures and spontaneous functional activation in 50 unmedicated adolescents with MDD vs. 39 healthy controls through the combined structural and resting-state functional magnetic resonance imaging. Firstly, we utilized voxel-based morphometry (VBM) to examine the subcortical structure of GM volume in adult patients with MDD in comparison with healthy controls. Second, we used the surface-based morphometry (SBM) to examine the CT in MDD patients compared with healthy controls. Thirdly, we also investigated the subcortical ALFF and ReHo as measurements of functional activity in MDD patients compared to controls. Finally, we calculated the surface ALFF and ReHo measurements and compared between patients and control groups.

**Results** Significantly altered regional gray matter volume was found at broader frontal-temporal-parietal and subcortical brain areas involved with various forms of information processing in adolescent MDD. Specifically, the increased GM volume at the left paracentral lobule and right supplementary motor cortex was significantly correlated with depression severity in adolescent MDD. Furthermore, lower cortical thickness at brain areas responsible for visual and auditory processing as well as motor movements was found in adolescent MDD. The lower cortical thickness at the superior premotor subdivision was positively correlated with the course of the disease. Moreover, higher spontaneous neuronal activity was found at the anterior cingulum and medial prefrontal cortex, and this hyperactivity was also negatively correlated with the course of the disease. It potentially reflected the rumination, impaired concentration, and physiological arousal in adolescent MDD.

**Conclusion** The abnormal structural and functional findings at cortico-subcortical areas implied the dysfunctional cognitive control and emotional regulations in adolescent depression. The findings might help elaborate the underlying neural mechanisms of MDD in adolescents.

PO-145

## 非自杀性自伤青少年 COMT 基因多态性与童年期创伤的交互作用

赵萌、冯洁、周波

电子科技大学附属医院·四川省人民医院

**目的** 本研究旨在探索 COMT 基因多态性 rs165599 与童年期创伤五个亚型的交互作用对青少年 NSSI 的影响,从而为预防和干预青少年 NSSI 提供理论依据。

**方法** 一共纳入 84 例 NSSI 青少年,通过收取口腔唾液对 COMT 基因多态性 rs165599 进行基因分型。使用儿童期创伤问卷 (Childhood Trauma Questionnaire, CTQ)、青少年非自杀性自伤行为功能评估量表、9 项患者健康问卷 (patient health questionnaire-9 items, PHQ-9) 进行心理评估。采用层次线性回归分析,检验 COMT 基因多态性 rs165599 与童年期创伤的五个亚型对 NSSI 的主效应和交互效应。利用约翰逊-内曼 (Johnson-Neyman) 技术研究调节变量具有显著影响的区域。

在调节效应第一次被观察到时，调节变量被分为高组和低组。最后采用两因素协方差分析（Two-Way ANCOVA）来探讨交互作用的方向。

**结果** COMT 基因多态性 rs165599 和童年期创伤中情感忽视亚型的交互作用可预测青少年 NSSI。携带 rs165599 多态性 G/G 型的 NSSI 青少年，高情感忽视组的 NSSI 得分显著高于低情感忽视组的 NSSI 得分。携带 rs165599 多态性 A 等位基因型的 NSSI 青少年，高情感忽视组的 NSSI 得分与低情感忽视组的 NSSI 得分无统计学差异。

**结论** COMT 基因多态性 rs165599 为 G/G 基因型的青少年，在遭遇童年期高情感忽视时会增加 NSSI 的易感性。

## PO-146

### Internet Addiction and Depression among Chinese Adolescents: Anxiety as a Mediator and Social Support as a Moderator

Meng Zhao, Jie Feng, Bo Zhou

University of Electronic Science and Technology Affiliated Hospital · Sichuan Provincial People's Hospital

**Objective Aim:** This study constructed a moderated mediation model to investigate the mediating effect of anxiety and the moderating effect of social support between Internet addiction and depression.

**Methods** Material and methods: A sample of 17,058 middle school students in one district of Chengdu were selected. The Internet Addiction Test (IAT), Generalized Anxiety Disorder (GAD-7), Patient Health Questionnaire (PHQ-9), and Social Support Scale for adolescents were used to investigate their Internet addiction, anxiety, depression and social support. SPSS 25.0 was used for descriptive statistics and Spearman correlation analysis. And the SPSS macro Process was used to analyze the data of complex models including both mediators and moderators.

**Results** Results: Internet addiction is associated with depression in adolescents. Anxiety partially mediated the relations between Internet addiction and depression. Social support moderated both direct and indirect pathways leading from Internet addiction to depression, and these two effects were stronger for adolescents with low social support than for those with high social support.

**Conclusion** Conclusions: The results demonstrate that Internet addiction can directly affect the depression of adolescents and also indirectly through anxiety. In addition, improving social support could reduce both the direct and indirect effects of Internet addiction affecting depression. This study contributes to a more comprehensive understanding of the effects, as well as the pathways and conditions, of Internet addiction on depression in adolescents.

## PO-147

### 唾液皮质醇对不同冲动性水平多动症儿童风险决策的影响

马宁

宁夏医科大学

**目的** 探究不同唾液皮质醇浓度对不同冲动性水平多动症儿童风险决策的影响。

**方法** 采用 Barratt 冲动量表（BIS-11）筛选出高冲动性水平（n=50）和低冲动性水平（n=50）的多动症儿童，采集受试儿童晨起第 0、30、45 和 60 分钟的唾液按照唾液皮质醇浓度的高低采用中位数分组法分为高浓度高冲动组（n=29）、高浓度低冲动组（n=21）、低浓度高冲动组（n=21）和低浓度低冲动组（n=29）四个研究组，采用风险决策倾向问卷测量并使用 t 检验、一般线性模型检验四组儿童的风险决策能力以及影响。

**结果** 低浓度组多动症儿童的风险决策收益情境得分显著高于高浓度组多动症儿童 ( $P < 0.01$ )。低浓度组和高浓度组多动症儿童在风险决策损失情境上无显著差异 ( $P > 0.05$ )。在风险决策收益情境中, 唾液皮质醇浓度的主效应显著,  $F = 4.116$ ,  $p < 0.05$ , 偏  $\eta^2 = 0.041$ ; 冲动水平的主效应显著,  $p < 0.05$ , 偏  $\eta^2 = 0.053$ ; 唾液皮质醇浓度与冲动水平的交互效应显著,  $F = 2.716$ ,  $p < 0.05$ , 偏  $\eta^2 = 0.000$ 。在风险决策损失情境中, 唾液皮质醇浓度的主效应不显著,  $F = 0.000$ ,  $p > 0.05$ , 偏  $\eta^2 = 0.000$ ; 冲动水平的主效应不显著,  $F = 0.742$ ,  $p > 0.05$ , 偏  $\eta^2 = 0.008$ ; 唾液皮质醇浓度和冲动水平的交互效应不显著,  $F = 0.015$ ,  $p > 0.05$ , 偏  $\eta^2 = 0.000$ 。

**结论** 唾液皮质醇加剧了高冲动性个体的风险决策水平, 但对低冲动性个体的影响不明显。

## PO-148

### 青少年抑郁患者中焦虑特质对奖赏行为的影响：一项 ERP 研究

邢昕、周波

四川省医学科学院·四川省人民医院

**目的** 青少年抑郁症发病率日益增高, 严重影响我国青少年身心健康发展。同时青少年抑郁患者多数合并有焦虑情绪或存在高焦虑特质, 而目前据我们所了解, 鲜有研究焦虑特质对奖励敏感性影响的实验, 因此为探索焦虑特质和自伤行为对青少年抑郁患者奖励敏感性和结果评价的影响, 本研究通过改编经典的“门任务”范式为实验基础的事件相关电位进行研究, 我们假设抑郁青少年被试中的高焦虑特质会影响青少年抑郁患者的奖励敏感性和对结果的评价。

**方法** 实验收集了诊断为抑郁障碍的青少年共 87 例, 根据特质焦虑问卷 (TAI) 的得分, 将 87 例患者分为高特质焦虑患者组 (HTA) 和低特质焦虑患者组 (LTA)。实验对患者的脑电数据进行了处理, 并获得了总平均的 ERP 波形。通过 IBM SPSS26.0 进行数据统计, 使用重复测量方差分析、独立样本 T 检验进行数据分析。

**结果** 成对比较表明, 高焦虑特质 (HTA) 组的反馈相关负波 (feedback-related negativity, FRN) 波幅显著大于低焦虑特质 (LTA) 组 ( $P = 0.013$ )。表明 HTA 组较 LTA 组对结果反馈的奖励敏感性升高, 意味着 HTA 组在获得未达到心理预期的结果时, 心理落差更大。

**结论** 高特质焦虑水平的青少年抑郁患者对所有反馈效价诱发的 FRN 波幅较低特质焦虑水平的青少年抑郁患者显著增高, 说明了高特质焦虑水平的青少年抑郁患者奖励敏感性升高, 且获得的结果更容易与预期不符从而导致更大的心理落差。

## PO-149

### 心身研究诊断标准在功能性胃肠病心身评估的应用

丁莉欣、曹建新

常州市第一人民医院

**目的** To investigate systematic psychosomatic evaluation of patients with FGIDs and application of DCPR in medical setting.

**方法** From February 2020 to February 2021, 156 patients who met the Rome IV Criteria for FGIDs accepted psychosomatic assessment. In addition, PHQ9, GAD7 and GIQLI were applied simultaneously.

**结果** The prevalence of DCPR syndromes was 1.2 times that of such conventional psychological assessment as PHQ9, GAD7. Multiple linear regression analysis suggested that anxiety, depression, somatization and DCPR syndromes were independent risk factors of gastrointestinal quality of life.

**结论** DCPR as a psychosomatic assessment can find application in clinical practice of FGIDs, which seemed more sensitive to screening psycho-social aspects. DCPR is more acceptable and is of substantial help for physicians to set up empathy with patients and improve individualized clinical strategies of psychosomatic intervention.

PO-150

## 疫情期间网格员心理健康状况调查分析

江文静

山东大学齐鲁医院

**目的** 调查分析济南市网格员疫情期间的焦虑、抑郁状况及一般资料、疲劳状况、社会支持情况、睡眠质量与焦虑、抑郁的相关性，并建立线性回归方程模型分析焦虑、抑郁独立影响因素。

**方法** 对某市 677 名网格员进行问卷调查，以问卷星为平台向调查对象发放问卷二维码填写一般资料、焦虑自评量表（SAS）、抑郁自评量表（SDS）、匹兹堡睡眠质量量表、疲劳量表、社会支持量表。统计分析网格员焦虑、抑郁水平，使用差异性分析探究各分类资料不同水平间焦虑、抑郁差异性，使用 Pearson 相关性分析各连续型变量与焦虑、抑郁相关性。分别以焦虑、抑郁自评得分为因变量，将单因素分析中对因变量影响具有统计学意义的变量以及临床经验认为对具有影响的变量作为自变量进行线性回归分析探究焦虑、抑郁状况独立影响因素。

**结果** 有效抑郁量表调查问卷 556 例，超过抑郁标准分上限 53 分的有 232 位，平均得分（ $51.09 \pm 12.52$ ）分。有效焦虑量表调查问卷 584 份，其中 79 位为轻度焦虑，52 位为中度焦虑，20 位为重度焦虑。有效匹兹堡睡眠质量调查问卷 555 份，有效疲劳量表 564 份，疲劳量表总分平均分为（ $5.96 \pm 4.18$ ）分。疲劳  $\geq 10$  分 147（26.1%）人。睡眠很差 48（8.6%）人。有效社会支持量表 540 份，社会支持  $\leq 20$  分 6（1.1%）人。9.1%自感社会支持度少。不同职业、月收入、学历间 SAS 标准分差异具有统计学意义，其中居民 SAS 得分（ $40.73 \pm 10.569$ ）显著低于无职业者（ $45.65 \pm 13.188$ ）；月收入 200-3000 元的调查对象 SAS 得分（ $44.85 \pm 12.699$ ）显著高于月收入 3000-5000 元者（ $41.17 \pm 12.091$ ）；高中学历调查对象的 SAS 得分（ $40.72 \pm 11.132$ ）显著低于大学及以上者（ $44.64 \pm 13.211$ ）。SDS 与年龄呈显著负相关（ $r = -0.227$ ），匹兹堡睡眠质量总分与疲劳总分呈显著正相关（ $r = 0.147$ ）。线性回归分析结果显示，年龄对抑郁状况具有独立正向影响（ $B = 0.156$ ），工作性质对抑郁具有独立负向作用（ $B = -1.736$ ）。

**结论** 疫情期间本市网格员心理健康状态不容乐观，焦虑、抑郁状态发生率较高，应重点关注年龄偏大网格员的心理状态，并针对各网格员自身特点合理分配工作，提高其睡眠质量、降低疲劳程度、提高社会支持度，从而改善网格员心理健康状态。

PU-001

## 张永华运用情志辨证理论辨治原发性耳鸣临床经验

陈志凌  
杭州市中医院

**目的** 总结分析张永华教授运用情志辨证理论辨治原发性耳鸣的临床经验。

**方法** 通过门诊跟诊、收集张教授医案以及听课学习等方法，总结张永华教授基于情志辨证理论对原发性耳鸣病因病机的分析以及辨证论治经验，并列举验案以佐证。

**结果** 张永华教授根据其多年的临床经验发现原发性耳鸣患者多有情志方面的异常，如心烦易怒、郁郁寡欢、惊恐不安、多思善虑、悲伤欲泣等，认为原发性耳鸣的发生与发展与患者情志问题存在一定相关性。情志辨证理论体系是一种以情志辨识为主导，与辨体质、辨病症相结合，准确把握疾病的完整病机，达到身心同治的新型辨证体系。张教授在情志辨证理论的基础上，结合脏腑辨证、八纲辨证，从“烦、郁、虑、惊、悲”这五种最主要的情志变化入手，把握病机，遣方用药；同时注重将中药治疗和情志调节相结合，取得较好的临床疗效。

**结论** 张永华教授辨治原发性耳鸣基于情志辨证理论，注重情志识别，身心同治，经验独到，临床疗效显著，值得同道借鉴。

PU-002

## 基于机器学习算法预测 MECT 对复发性抑郁的治愈效果

余涛  
合肥市第四人民医院

**目的** 为了提供个性化的治疗方案，使用机器学习算法和常规资料预测重度抑郁症患者对 MECT 的治愈效果。

**方法** 使用自制的量表收集重度抑郁患者入院时人口学特征和临床资料。使用汉密尔顿 HAMD-24 量表评估患者治疗前后的抑郁严重程度以及治疗后的效果。采用 8 种常见的机器学习算法，包括分别是支持向量机（SVM），广义线性模型（GLM），K 最邻值（KNN），随机森林（RF），袋装决策树（treebag），神经网络（NNET），决策树（rpart）和线性判别降维算法（LDA）构建对应的预测模型，使用十折交叉验证调整模型参数，以 AUC 作为评估模型性能的指标。

**结果** MECT 有效率和痊愈率分别是 72.6%和 43.2%。在 8 种机器学习算法中，GLM 的表现最佳，其 AUC 为 0.7603（0.6270-0.8935）。

**结论** 机器学习算法结合临床常规资料能够有效预测 MECT 的治疗效果，有助实施个性化治疗。

PU-003

## 探究综合心理治疗与干预对康复期精神分裂症患者社会功能的影响

刘静  
海南省平山医院

**目的** 探究综合心理治疗与干预对康复期精神分裂症患者社会功能的影响。

**方法** 临床对照研究：选择进行日间康复的精神分裂症患者 100 例，分为对照组及观察组，分别采用常规治疗方法与综合心理治疗方式。

**结果** 观察组患者社会功能、康复状态均好高于对照组（ $P < 0.05$ ）。



**结论** 给予康复期精神分裂症患者综合心理治疗,有助于改善其社会功能、提升其康复状态。精神分裂症患者存在思维、情感、行为障碍,患者无法适应社会环境导致社会功能衰退。康复期精神分裂症患者要积极解决社会功能退化问题,需在进行精神类药物控制病情的同时为其提供心理治疗干预。综合心理治疗可解决患者社交问题,降低患者心理压力,缓解其焦虑、抑郁等负性情绪,且在治疗过程中帮助患者重新回到社会生活中。

## PU-004

### 神经营养因子变化对于预测精神分裂症的电休克治疗结果至关重要

李金

苏州市广济医院

**目的** 脑源性神经营养因子(BDNF)在用电休克疗法(ECT)或抗精神病(AP)药物治疗精神分裂症中发挥着重要作用。然而,目前还不清楚 BDNF 是否在此过程中起到介导作用;因此,我们假设基线 BDNF 水平可以介导 ECT-AP 治疗的有效性。

**方法** 共检查了 160 名精神分裂症患者;80 人接受了 AP 单药治疗,其他 80 人接受了 ECT 和 AP 的组合治疗。根据制造商的说明,使用 Emax 免疫测定系统试剂盒(Promega, Madison, WI, 美国)通过酶联免疫吸附剂测定 BDNF 浓度。

**结果** 使用线性分析来检查人口特征、BDNF 水平、临床特征和反应状态之间的关系。基线 BDNF 水平和 BDNF 水平增量是临床结果的最佳预测因素(OR1 = 3.358, P = 0.000; OR2 = 3.243, P = 0.000)。

**结论** 更高的基线 BDNF 水平和更大的 BDNF 水平增量被发现与良好结果有关。

## PU-005

### 中国慢性精神分裂症伴缺陷综合征患者颞叶和岛叶皮质变薄与阴性症状和注意力受损相关

李金

苏州市广济医院

**目的** 精神分裂症的临床异质性使得阐明其神经生物学具有挑战性。缺陷型精神分裂症的概念是减少精神分裂症异质性的有益尝试。越来越多的证据表明,缺陷型(DS)和非缺陷型(NDS)精神分裂症之间存在重要差异,表明 DS 可能是一个单独的疾病实体。

**方法** 我们的目的是在中国样本中使用 FreeSurfer 来确定 DS 与 NDS 和健康对照(HC)相比的特定皮层厚度变化。此外,我们研究了大脑皮层厚度的变化对 DS 患者的负面症状和注意力缺陷的可能贡献。共有 142 名受试者(48 名 HC、50 名 NDS 和 44 名 DS)接受了 MRI 扫描,并完成了精神病理学严重程度和认知量表的评估。

**结果** 与 HC 相比,DS 和 NDS 患者在右侧脑岛表现出常见的皮质变薄,而 DS 患者在左侧缘上区域的皮质变细最为明显。

**结论** 我们还发现,DS 患者颞叶和岛叶皮质变薄与阴性症状和注意力受损相关。DS 患者特定脑区皮质变薄和特定临床和认知症状相关。

## PU-006

**缺陷型精神分裂症患者海马亚结构萎缩与注意功能障碍**

李金  
苏州市广济医院

**目的** 海马结构异常是精神分裂症患者神经影像学研究中最有力的发现之一。然而，没有研究检测到缺陷型精神分裂症（DS）特有的区域海马异常的可能性，以及与该精神分裂症亚型的独特症状的相关性。

**方法** 本研究比较了 33 名 DS 和 39 名无缺陷精神分裂症（NDS）患者以及 38 名健康受试者的海马亚场容量。在 MRI 扫描当天，通过 PANSS 评估临床症状，通过神经认知电池评估认知。使用 FreeSurfer 7.2.0 对自动海马分割进行预处理。

**结果** 在 DS 患者中，右侧海马 CA1 头部萎缩与注意力缺陷、左侧海马尾部萎缩与类别流畅性差以及海马分子层头部萎缩与注意和选择性抑制差相关。

**结论** 研究海马次区域萎缩模式对于深入了解 DS 认知缺陷的病理生理学具有重要意义。

## PU-007

**接受慢性抗精神病药物治疗的男性精神分裂症患者性激素、  
脑源性神经营养因子与认知障碍的相关性**

李金  
苏州市广济医院

**目的** 脑源性神经营养因子（BDNF）与性激素之间的复杂相互作用与精神分裂症（SCZ）的发病机制有关。然而，BDNF 和性激素之间的这些相互关系对慢性抗精神病药物治疗的男性（CATM）SCZ 患者的认知功能和临床表现的影响尚待研究。

**方法** 比较 120 名患有 SCZ 的 CATM 患者和 120 名健康对照组的卵泡刺激素（FSH）、黄体生成素（LH）、雌二醇（E2）、孕酮（P）、睾酮（T）和泌乳素（PRL）的血清浓度。精神分裂症症状通过阳性和阴性综合征量表测量，认知通过神经心理学测试测量。采用酶联免疫吸附试验（ELISA）测定 BDNF 和性激素水平。

**结果** 患者组的 T、PRL 和 LH 水平显著高于健康对照组，而 E2 水平显著低于健康对照组。分析还发现，在整个样本中，E2 水平和 BDNF 水平、BDNF 水平和数字消除时间之间呈正相关。我们发现，在患有 SCZ 的 CATM 患者中，PRL 水平与阴性症状评分之间存在显著相关性。

**结论** 本研究首次全面评估了 CATM 组与对照组相比 LH、PRL 和 T 水平升高以及 E2 水平降低的情况。本研究的另一个令人兴奋的发现是，E2 水平和 BDNF 水平，以及 BDNF 水平和 DCT，在合并的受试者中显著且正相关。

## PU-008

**甲流感染对临床医务人员焦虑水平影响的研究**

程博  
徐州医科大学附属徐州东方医院

**目的** 公共卫生事件往往在人群中的影响范围很广，刺激强度较大，造成的精神创伤也相对较为严重。在我国，自新冠疫情逐渐结束后，在今年春季，各地开始出现甲型流感的散发病例。甲型流感相较新冠致命性低，但同样具有传播迅速的特点，同时其造成的呼吸系统症状与新冠较为接近。

考虑到新冠感染对医务人员心理状态的影响，本研究旨在明确甲流感染是否会造成临床医务人员的焦虑情绪。

**方法** 通过问卷形式展开本研究。本研究计划纳入研究人员共 300 名，分别为未感染甲流组医务人员，已感染未愈人员和已感染已愈人员。每组纳入研究对象各 100 名。排除合并其他呼吸道疾病感染的受试者或不能明确为甲流感染的受试者。实验组为 2023 年 1 月起感染甲流未愈或已愈的临床医务人员，对照组为未感染甲流的医务人员，通过汉密尔顿焦虑量表对三组人群的焦虑程度进行评估，以探讨甲流感染是否会加重医务人员的焦虑水平。

**结果** 比较三组受试者的焦虑水平的结果显示，感染甲流未愈或已愈的医务人员其焦虑程度相较未感染医务人员的差异未达到统计学意义。同时，比较感染甲流未愈和感染甲流已愈的医务人员的焦虑水平，其差异同样未达到统计学意义。

**结论** 本研究得出以下结论，感染甲流未愈或已愈均不会对临床医务工作人员的焦虑情绪造成显著性的影响。

## PU-009

### 结节性甲状腺肿患者肿大程度与精神症状的相关性研究

邢佳、张楚滢  
北京中医药大学东方医院

**目的** 探讨结节性甲状腺肿患者甲状腺的肿大程度、睡眠障碍、抑郁、焦虑、躯体症状的影响因素，分析结节性甲状腺肿肿大程度与精神症状的相关性。

**方法** 前瞻性研究 82 例结节性甲状腺肿患者，采集患者的一般情况、睡眠情况、抑郁焦虑情况及躯体症状情况，分别采用单因素卡方分析和多因素 logistic 回归分析结节性甲状腺肿的影响因素及影响程度。

**结果** 针对精神症状评分的单因素分析显示：III度肿大组较其他组 PSQI 评分、PHQ-9 评分、PHQ-15 评分、GAD-7 评分均最高，且与 I 度肿大组与 II 度肿大组在 PSQI 评分、PHQ-9 评分、PHQ-15 评分差异均具有统计学差异；II 度肿大组在 PSQI 评分、GAD-7 评分上评分最低；I 度肿大组在 PHQ-9 评分、PHQ-15 评分上评分最低，针对甲状腺肿大程度的单因素分析显示年龄、PSQI 评分、PHQ-9 评分这 3 个变量构成比在甲状腺 I 度肿大组、II 度肿大组、III度肿大组的差异具有统计学意义。文化、婚姻、GAD-7 评分、PHQ-15 评分在甲状腺 I 度肿大组、II 度肿大组和 III度肿大组中的差异无统计学意义。多因素 logistic 回归分析显示：PSQI 评分与甲状腺 III度肿大呈正相关。

**结论** 睡眠障碍和甲状腺肿大程度具有较为明显的正相关性，抑郁、焦虑及躯体症状程度与甲状腺肿大程度的相关性不明确。

## PU-010

### 结节性甲状腺肿患者中医证型与情志因素的相关性研究

邢佳、张楚滢  
北京中医药大学东方医院

**目的** 探讨不同证型下的结节性甲状腺肿的影响因素，分析结节性甲状腺肿中医证型与肿大程度的相关性。

**方法** 前瞻性研究 82 例结节性甲状腺肿患者，采集患者的一般情况、睡眠情况、抑郁焦虑情况及躯体症状情况，分别采用单因素卡方分析和多因素 logistic 回归分析结节性甲状腺肿的影响因素及影响程度。

**结果** 单因素分析显示：心肝阴虚组较其他组 PSQI 评分、PHQ-9 评分、PHQ-15 评分最高；肝火旺盛组较其他组 GAD-7 评分最高；气滞痰阻组较其他组 PSQI 评分、PHQ-9 评分、GAD-7 评

分、PHQ-15 评分最低；多因素 logistic 回归分析显示：气滞痰阻组与甲状腺肿大程度呈负相关；心肝阴虚组与甲状腺肿大程度呈正相关。

**结论** 气滞痰阻型结节性甲状腺肿患者睡眠障碍、抑郁、焦虑、躯体化症状程度多较轻，可能与甲状腺肿大程度呈负相关；心肝阴虚型结节性甲状腺肿患者睡眠障碍、抑郁、躯体化程度多较重，可能与甲状腺肿大程度呈正相关；肝火旺盛型结节性甲状腺肿患者焦虑程度多较重。

## PU-011

### 慢性失眠患者白介素与睡眠和认知功能的相关性研究

王芳、张折折  
安徽医科大学第一附属医院

**目的** 慢性失眠患者是否存在白介素水平改变，若有改变，这些改变是否与睡眠和认知功能改变有关。

**方法** 共纳入 41 名慢性失眠患者及匹配的 39 名健康对照组。PSQI、HAMD 和 MoCA 分别用于评估睡眠、情绪和总体认知功能，九盒迷宫评估客观认知功能。收集受试者血清，ELISA 检测血清白介素水平，包括促炎因子 IL-1 $\beta$ 、IL-2、IL-6sR、IL-6、IL-12p40、IL-12p70、IL-16、IL-17、IL-17F、IL-21、IL-22、IL-23 和抑炎因子 IL-1RA、IL-4、IL-5、IL-10、IL-13、IL-28A。

**结果** 与对照组相比，慢性失眠患者存在空间参考、空间工作和物体再记忆减退，及血清促炎白介素 (IL-1 $\beta$ , IL-2, IL-6sR, IL-6, IL-21 and IL-23) 水平增高和抑炎因子 (IL-4, IL-13 and IL-28A) 水平降低。相关分析提示，慢性失眠患者中，血清 IL-2, IL-6 和 IL-28A 与 PSQI 负相关，IL-10, IL-13, IL-2, IL-1 $\beta$  和 IL-6 水平与认知功能呈负相关或正相关。

**结论** 慢性失眠患者存在促炎和抑炎白细胞介素水平失衡，这些改变与其失眠和认知功能减退可能有关。

## PU-012

### 首发精神分裂症患者 PLR、淋巴细胞与睡眠和症状的相关性

杜楠、张许来  
合肥市第四人民医院

**目的** 探讨精神分裂症患者炎症细胞与睡眠及症状的关系及其影响。

**方法** 纳入 2020 年 11 月-2022 年 8 月安徽省精神卫生中心住院的首发精神分裂症患者 103 例（首发组）同时自愿招募匹配的健康人 57 例（健康对照组）为研究对象，采用阳性与阴性症状量表 (PANSS)、匹兹堡睡眠质量指数量表 (PSQI) 来评估精神分裂症患者的症状及睡眠情况，同时检测 3 组研究对象的血清白细胞计数、中性粒细胞计数、淋巴细胞计数、血小板计数和单核细胞计数，并计算中性粒细胞与淋巴细胞比值 (NLR)、单核细胞与淋巴细胞比值 (MLR) 和血小板与淋巴细胞比值 (PLR)。使用 SPSS26.0 对调查数据进行差异性、相关性和回归分析。

**结果** (1) 两组 PANSS 量表各因子评分比较，差异有统计学意义 ( $P<0.05$ )；两组的 PSQI 量表中 PSQI 总分、入睡时间、睡眠质量评分差异有统计学意义 ( $P<0.05$ )；两组外周血细胞比较，白细胞 (WBC)、中性粒细胞 (N)、单核细胞 (M)、中性粒细胞与淋巴细胞比值 (NLR)、单核细胞与淋巴细胞比值 (MLR) 差异有统计学意义 ( $P<0.05$ )；(2) 淋巴细胞计数与兴奋因子 ( $r=0.249$ ,  $P=0.007$ )、阳性因子 ( $r=0.215$ ,  $P=0.029$ ) 呈正相关，单核细胞计数与睡眠时间因子 ( $r=-0.220$ ,  $P=0.026$ ) 呈负相关，PLR 与认知因子 ( $r=-0.222$ ,  $P=0.024$ )、兴奋因子 ( $r=-0.265$ ,  $P=0.007$ )、阳性因子 ( $r=-0.307$ ,  $P=0.002$ )、PANSS 总分 ( $r=-0.238$ ,  $P=0.016$ ) 呈负相关，与睡眠时间因子 ( $r=0.219$ ,  $P=0.027$ ) 呈正相关。(3) PLR 与认知因子、阳性因子、PANSS 总分均呈负线性相关，单核细胞与睡眠时间呈负线性相关，PLR 与睡眠时间呈正线性相关。

**结论** 精神分裂症患者血清细胞发生变化且这种变化可能与患者的精神症状和睡眠异常有关。

## PU-013

### 叙事疗法下生命树技术对不同性别精神分裂症患者的康复效用

黄碧华、陈燕华

上海市浦东新区精神卫生中心（同济大学附属精神卫生中心、上海市浦东新区心理咨询中心）

**目的** 探究叙事疗法下生命树技术团体治疗对不同性别精神分裂症患者的康复效果，为叙事疗法下生命树技术运用于精神分裂症康复提供参考。

**方法** 对本院精神分裂症患者根据纳入标准选取 10 名男性患者和 10 名女性患者分别开展叙事疗法下生命树技术团体治疗，治疗周期共 8 周，每周一次。干预前后，采用出院准备度量表（RHDS）、一般自我效能感量表（GSES）、WHO 残疾评定量表（DAS）进行评分。

**结果** 叙事疗法下生命树技术团体治疗对于不同性别的精神分裂症患者疗效不同，叙事疗法下生命树技术团体治疗在改善男性患者的残疾程度有一定的作用（ $P<0.01$ ），对女性患者在改善自我效能感有一定的作用（ $P<0.01$ ），在出院准备度上，对男性患者及女性患者均无明显作用（ $P>0.05$ ）；而在两组干预前后对比中，一般自我效能感量表差异具有统计学意义（ $P<0.05$ ），且差异显著（ $P<0.01$ ）。

**结论** 叙事疗法下生命树技术团体治疗在改善不同性别精神分裂症患者的康复效用不同，在改善女性患者的自我效能感上可能有一定优势，在减轻男性患者的残疾程度上可能有一定优势。

## PU-014

### Abnormal Dynamic Amplitude of Low-Frequency Fluctuation in Major Depressive Disorder using fMRI: A Machine Learning Approach

Qing Chen<sup>1</sup>, Yanmeng Bi<sup>3</sup>, Yuhua Wang<sup>1</sup>, Ting Xia<sup>1</sup>, Sha Huang<sup>1</sup>, Shuwen Xie<sup>1</sup>, Weixin Yan<sup>2</sup>, Tingting Gao<sup>4</sup>, Lingpeng Xie<sup>5</sup>, Chuying Zhou<sup>1</sup>, Wen Kong<sup>5</sup>, Zhiping Lv<sup>1</sup>

1. School of Traditional Chinese Medicine, Southern Medical University, Guangzhou, China

2. The First Affiliated Hospital of Guangzhou University of Chinese Medicine, Guangzhou, China

3. College of Integrated Traditional Chinese and Western Medicine, Jining Medical University, Jining, China

4. Department of General medicine, The first affiliated hospital of Guangdong Pharmaceutical University, Guangzhou, China

5. Integrated Hospital of Traditional Chinese Medicine, Southern Medical University, Guangzhou, China

**Objective** To discover the dynamic changes of spontaneous brain activity in major depressive disorder (MDD) patients by applying the dynamic amplitude of low-frequency fluctuation (dALFF) method and further explore the potential clinical diagnostic value of dALFF metric by a machine learning approach.

**Methods** 52 healthy controls and 48 MDD patients were recruited in the study. We performed neuropsychological tests and resting-state fMRI scanning on all subjects. The dALFF value of each voxel in the whole brain was calculated based on a sliding-window algorithm. The dALFF alterations were compared between two groups, and the relationship between dALFF value and clinical variables was analyzed. Then, abnormal brain regions were selected as features to conduct the classification model by using the support vector machine (SVM) approach.

**Results** Compared to the healthy controls, MDD patients exhibited decreased dALFF in the cerebellum, lingual gyrus, and fusiform gyrus. Furthermore, the dALFF values of these three clusters were all negatively correlated with the total Hamilton Depression Scale and Self-Rating Depression Scale scores. Moreover, SVM analysis displayed that a combination of these three

clusters demonstrated the highest area under the curve (AUC) of 0.89, with an accuracy of 82.98%, sensitivity of 79.07%, and specificity of 86.27%, respectively.

**Conclusion** MDD patients had dynamic spontaneous brain activity in the cerebellum, lingual gyrus and fusiform gyrus, which may be related to depressive symptoms. The abnormality in these brain regions could represent potential imaging markers to distinguish MDD patients from healthy controls.

## PU-015

### 不同焦虑程度青少年首发广泛性焦虑障碍患者血清 NPY、5-HT、BDNF 的变化及其与生活应激、 炎症因子和记忆功能的相关性分析

何旭斌<sup>1</sup>、宦宗素<sup>1</sup>、余芹瑶<sup>2</sup>、杜娜<sup>3</sup>、岳玉川<sup>3</sup>

1. 遵义医科大学

2. 重庆市医药学校

3. 成都市第四人民医院

**目的** 探讨不同焦虑程度青少年首发广泛性焦虑障碍（GAD）患者血清神经肽 Y（NPY）、5-羟色胺（5-HT）、脑源性神经营养因子（BDNF）的变化及其与生活应激、炎症因子和记忆功能的相关性。

**方法** 选择 2019 年 1 月至 2021 年 12 月我院收治的 147 例青少年首发 GAD 患者，根据广泛性焦虑量表（GAD-7）分为轻度焦虑组（5-9 分，50 例）、中度焦虑组（10-14 分，65 例）、重度焦虑组（15-21 分，32 例）。检测血清 NPY、5-HT、BDNF、C 反应蛋白（CRP）、白细胞介素（IL）-1 $\alpha$ 、IL-6 水平，采用学生生活应激问卷（SLSI）、延迟匹配测验（DMS）评估生活应激水平和记忆功能。比较组间血清 NPY、5-HT、BDNF、CRP、IL-1 $\alpha$ 、IL-6 水平以及 SLSI、DMS 差异，分析血清 NPY、5-HT、BDNF 水平与血清 CRP、IL-1 $\alpha$ 、IL-6 水平及 SLSI、DMS 的相关性。

**结果** 重度焦虑组血清 NPY、5-HT、BDNF 水平低于中度焦虑组和轻度焦虑组（ $P<0.05$ ），且中度焦虑组低于轻度焦虑组（ $P<0.05$ ），重度焦虑组 CRP、IL-1 $\alpha$ 、IL-6 水平高于中度焦虑组和轻度焦虑组（ $P<0.05$ ），且中度焦虑组高于轻度焦虑组（ $P<0.05$ ）。重度焦虑组总延迟反应时间、无延迟反应时间长于中度焦虑组和轻度焦虑组（ $P<0.05$ ），且中度焦虑组长于轻度焦虑组（ $P<0.05$ ）；重度组总延迟正确数、无延迟正确数少于中度焦虑组和轻度焦虑组（ $P<0.05$ ），且中度焦虑组少于轻度焦虑组（ $P<0.05$ ）。青少年首发 GAD 患者血清 NPY、5-HT、BDNF 水平与 SLSI 评分、CRP、IL-1 $\alpha$ 、IL-6、总延迟反应时间、无延迟反应时间呈负相关（ $P<0.05$ ），与总延迟正确数、无延迟正确数呈正相关（ $P<0.05$ ）。

**结论** 青少年首发 GAD 患者随着焦虑程度加重，其生活应激强度增强、炎症因子水平升高，记忆功能减弱，且均与患者血清 NPY、5-HT、BDNF 水平下降有关。

PU-016

## 综合医院自服药物中毒患者躯体化障碍与焦虑、抑郁相关性分析

张帅<sup>1</sup>、菅向东<sup>2</sup>、魏传香<sup>1</sup>、张哲<sup>1</sup>

1. 济南市章丘区人民医院

2. 山东大学齐鲁医院

**目的** 本研究以综合医院急诊科自服药物中毒患者为研究对象，探究其躯体化障碍发生情况与焦虑、抑郁相关性分析。

**方法** 通过对某综合医院急救部 220 例急性自服药物中毒的患者，应用躯体化症状自评量表（SSS）进行躯体化障碍评估，完成筛选后再进行广泛性焦虑障碍量表（GAD-7）及抑郁自评量表（PHQ-9）评估，综合分析躯体化障碍的发生与焦虑、抑郁相关性情况。

**结果** 调查的 220 例急性自服药物中毒患者中，存在躯体化障碍情况者 198 例，常见的躯体化症状表现为“睡眠障碍”165 例（83.3%），“敏感易怒”157 例（79.3%），“疲劳感，对事物没有兴趣”148 例（74.7%），“头晕头痛”125 例（63.1%），“胸闷心悸”117 例（59.1%），“虚弱感”101 例（51.0%），“关节疼痛”79 例（39.9%）且躯体化症状越重，其焦虑或（和）抑郁程度越重；对 198 例存在躯体化障碍患者分别按照性别、婚姻状态、受教育程度进行分类，用 GAD-7 与 PHQ-9 进行评估，发现女性阳性检出率大于男性，丧偶组明显高于其他组，高等学历组明显低于低等学历组。

**结论** 躯体化障碍程度越重，焦虑（占比）与抑郁程度（占比）越重（越高），存在躯体化障碍患者更易出现情绪障碍，存在较高的自杀风险，应引起社会的高度关注。

PU-017

## Somatic Symptoms and Family Function among Chinese College Students during the COVID-19 Pandemic: A Cross-Sectional Study

Shengyi Liu<sup>1</sup>, Xin Jiang<sup>2</sup>, Yu Qin<sup>3</sup>, Xin Ma<sup>2</sup>, Adila Wulamu<sup>2</sup>, Can Luo<sup>1</sup>, Junrui Tang<sup>2</sup>, Yin Liu<sup>2</sup>, Jinmei Li<sup>1</sup>

1. West China School of Clinical Medicine/West China Hospital, Sichuan University

2. Chengdu University of Traditional Chinese Medicine

3. North Sichuan Medical College

**Objective** Somatic symptom, as a name of symptoms, are usually described as physical symptoms (i.e., headache or abdominal pain) that have no medical basis or are not consistent with the level of illness indicated by objective tests or observable signs. Somatic symptoms are also referred to as medically unexplained symptoms (MUS) or functional somatic symptoms. College students are a special group, their psychosomatic health are affected by various aspects, and they are prone to suffer from somatic symptoms. Since the outbreak of coronavirus disease 2019 (COVID-19) in 2019, an aggravating factor was the COVID-19 pandemic. Previous studies have linked somatic symptoms to family factors. Therefore, we conducted the study to observe the association between somatic symptoms and family function during the COVID-19 pandemic.

**Methods** A cross-sectional study was conducted at a Chinese university from March to June 2020. Somatic symptoms were assessed by Somatic Symptom Scale-China (SSS-CN), the score below 30 is normal (negative) and a score above or equal to 30 is positive for somatic symptoms. The family function was assessed by Family Care Index (Family Adaptation, Partnership, Growth, Affection, Resolve, APGAR) and The Family Adaptability and Cohesion Scale, Second Edition, Chinese version (FACES II -CV). In this study, family function includes three dimensions: family care, family cohesion and family adaptability. Family function is considered normal if at least two of the three dimensions are normal. SPSS 27.0 was used for descriptive statistics, difference analysis, correlation analysis, and regression analysis. The t-test was used to compare differences

in means. The Chi-square test was used for the difference analyses of counting data. Pearson correlation coefficient was used to evaluate the correlation degree of measurement data and Spearman correlation coefficient was used to evaluate the correlation degree of graded data. The association between somatic symptoms and family function was assessed by the logistic regression adjusting for potential confounders.

**Results** In this survey, 321 valid questionnaires (90.93%) were collected from 353 college students in a Chinese university. Among them, 67.0% (215/321) were female.

Among the college students, The SSS-CN score was  $29.03 \pm 8.62$ . 38.94% of college students had positive somatic symptoms (SSS-CN score  $\geq 30$ ), including 26.17% mild and 12.77% moderate. The positive rate of ophthalmic symptoms was the highest (more than 40%), followed by somniphathy, pain, nervous system, paresthesia, digestive system, otorhinolaryngology symptoms (more than 30%), skin and cardiovascular system symptoms (more than 20%), respiratory system and urinary system symptoms (less than 20%). However, the positive rate of sleep disorder was the highest among moderate and above somatic symptoms.

The family care score was  $6.91 \pm 3.08$ , family cohesion score was  $54.66 \pm 8.23$ , family adaptability score was  $48.72 \pm 9.37$ , and 40.50% of college students have family care disorder. Family cohesion is the highest in "separated", and family adaptability is the highest in "flexible". The severity of somatic symptoms was positively associated with family care disorder ( $r = 0.31, p < .001$ ), and negatively associated with family cohesion ( $r = -0.24, p < .001$ ) and adaptability ( $r = -0.24, p < .001$ ). The likelihood of experiencing somatic symptoms was higher when the family function was more dysfunctional, particularly in family care disorder (adjusted for all factors  $OR = 1.84$ ; 95%CI: 1.25, 2.69).

Compared with the norm of Chinese college students (2014), there was no significant difference in the mean of somatic symptoms among all participants, while the means of depression and anxiety were higher than the norm. Compared with the study after college students returned to campus (September 2020), no matter whether the family function was normal or not, the means of the three items were not higher than those after college students returned to campus.

**Conclusion** Family is an important resource and place for the rehabilitation of people. Family function often directly or indirectly affects the health of family members. Family function is closely related to somatic symptoms among Chinese college students. A good family function can protect the psychosomatic health of college students during the COVID-19 pandemic.

## PU-018

### 经颅近红外刺激左侧 DLPFC 缓解焦虑：一项随机、双盲、假对照研究

王慧聪、宋鹏辉、侯月、刘江红、郝文思、胡士敏、戴晓娜、詹淑琴、李宁、彭茂、王红星、林华、王玉平  
首都医科大学宣武医院

**目的** 广泛性焦虑障碍 (Generalized Anxiety Disorder, GAD) 是常见的神经精神障碍之一, 部分患者临床药物治疗效果欠佳。既往研究表明 GAD 患者左侧前额叶背外侧皮层兴奋性降低, 经颅近红外光可以透过颅骨提高皮层兴奋性, 本研究旨在利用经颅近红外光刺激左侧前额叶背外侧改善 GAD 患者症状并观察其疗效持续性, 为经颅近红外光刺激临床应用提供基础。

**方法** 我们进行了一项双盲、随机对照试验, 以评估 tNIRS 对 GAD 患者左 DLPFC 的疗效。共有 36 名 GAD 患者随机分配接受为期两周的 tNIRS 真或假刺激, 在治疗前后和随访 2 周、4 周和 8 周时评估临床疗效。真假刺激组在 tNIRS 治疗前和治疗后立即进行 TMS-EEG 20 分钟, 健康对照组只检查一次。

**结果** 真刺激组的治疗后汉密尔顿焦虑量表 (HAMA) 得分比假刺激组的下降更多, 差异具有统计学意义 ( $p = 0.021$ )。真刺激组和假刺激组在治疗后以及 2 周、4 周和 8 周随访时的 HAMA 得分均



低于治疗前的得分，而且，真刺激组的改善明显优于假刺激组。靶向左侧 DLPFC 的脑时变网络可以看出，在积极治疗后患者的脑网络信息从左 DLPFC 和左后颞区流出增多。

**结论** tNIRS 刺激 GAD 患者左侧 DLPFC 可缓解焦虑，促进脑网络连接的恢复。820nm 靶向左 DLPFC 对 GAD 的治疗有明显的积极作用，可持续 2 个月。

## PU-019

### 人体成分与抑郁症及其严重程度的相关性分析

陈盛柏

海南省平山医院

**目的** 探讨人体成分与抑郁症及其严重程度的相关性。

**方法** 选择本院 2020 年 4 月至 2021 年 8 月于本院就诊的抑郁症患者 105 例作为抑郁症组，并根据抑郁自评量表（HAMD）评分 $\geq 7$  分，结果进一步将抑郁症组分为轻度抑郁组、中度抑郁组及重度抑郁组，同时选择本院体检正常人群，HAMD 评分 $< 7$  分正常的人群 50 例作为对照组。每例纳入对象在本院门诊处完成电阻抗人体成分的检测，记录肌肉百分（1-脂肪百分比）、骨密度及水分百分比三个参数。分析人体成分与抑郁症的相关性并比较轻度抑郁组、中度抑郁组及重度抑郁组人体成分、体重、BMI 等。

**结果** 抑郁组的 BMI、体脂肪、脂肪程度及腹部脂肪率均明显高于对照组，分别为  $22.48 \pm 2.53$ 、 $30.71 \pm 3.75$ 、 $108.71 \pm 12.10$ 、 $0.86 \pm 0.05$  VS  $20.58 \pm 2.28$ 、 $27.65 \pm 3.69$ 、 $97.91 \pm 10.75$ 、 $0.84 \pm 0.04$ ， $P$  均 $< 0.05$ 。各抑郁程度分组，轻度抑郁、中度抑郁至重度抑郁的 BMI、体脂肪、蛋白质、无机盐、脂肪程度组内比较均存在统计学差异， $P$  均 $< 0.05$ ，组间比较均存在不同程度的差异，如重度抑郁组的体脂肪为  $31.77 \pm 3.78$ ，明显高于轻度抑郁组的  $29.61 \pm 3.52$ ，脂肪程度  $114.28 \pm 11.89$  明显高于轻度抑郁组的  $107.49 \pm 10.76$ ， $P$  均 $< 0.05$ 。

**结论** 人体成分与抑郁症及其严重程度关系密切，有望成为抑郁症诊治的参考指标。

## PU-020

### 北京市某社区机构门诊就诊患者焦虑、抑郁和躯体化症状的现状分析

李春玲

北京市西城区白纸坊社区卫生服务中心

**目的** 了解社区卫生服务机构就诊患者焦虑、抑郁情绪及躯体化症状发生状况，并对相关因素进行分析。

**方法** 选取 2022 年 10 月至 2023 年 1 月到西城区白纸坊社区卫生服务中心门诊就诊的患者，采用广泛性焦虑量表（GAD-7）和抑郁量表（PHQ-9）及躯体化症状自评量表（SSS），利用手机扫码形式完成问卷调查，评估患者焦虑、抑郁情绪及躯体化症状情况

**结果** 共纳入社区门诊就诊患者 450 例，焦虑、抑郁及躯体化症状检出率分别为 28.00%、34.67%、27.33%，且焦虑、抑郁及躯体化症状间均成高度相关；躯体化症状量表测查显示，记忆力减退及注意力下降占比 68.89%、肌肉酸痛占比 61.11%，睡眠障碍占比 58.67%。三个量表阳性率与性别无关，但 $\geq 60$  岁组与 $< 60$  岁组阳性率有统计学差异（ $P < 0.05$ ）。

**结论** 社区机构门诊就诊患者焦虑、抑郁及躯体化症状常见，且三者具有关联性， $\geq 60$  岁组比 $< 60$  岁组阳性率低，躯体化症状测评中记忆力减退及注意力下降、肌肉酸痛、睡眠障碍三组症状占比高。

## PU-021

**中医药干预 BDNF/TrkB 通路对抑郁认知障碍影响的进展研究**

彭晓明、马鹏程、唐珂、高丽波  
甘肃中医药大学附属医院

**目的** 抑郁症是一种以情绪低落、兴趣降低、快感缺失为主要症状的精神类疾病，多伴有失眠、认知障碍等症状，严重时有自残或自杀倾向，严重影响到了人类身心健康。认知障碍主要体现在注意力不集中、记忆力差、理解能力下降等。因此，有效改善患者认知功能障碍是防止抑郁症复发的重要环节。

**方法** 目前临床对抑郁症的治疗主要以西药为主，长期服药西药虽然能够改善患者临床症状，但其不良反应也日益增多，研究显示中医药单复方联合西药治疗，具有显著效果，但目前仍然缺乏其从药理方面以及分子水平的相关研究，研究显示中医药对 BDNF/TrkB 通路抑郁症伴随认知障碍有重要的影响，因此对相关中药从药理学以及分子水平的研究日益迫切，本文就中医药单复方在影响 BDNF/TrkB 通路干预抑郁症相关分子水平方面取得的研究进展进行综述。为临床治疗提供一种切实可行的治疗方案

**结果** 抑郁症是伴随着心境低落和对正常愉快活动失去兴趣或乐趣的全方位的低情绪发作表现，严重影响人类的身心健康，尤其是其所造成的记忆损害和认知损害。现代医学治疗主要以传统抗抑郁药和新型抗抑郁药交替使用，而长期大量的服用此类药物伴随而来的药物成瘾性和神经细胞毒性也愈加加重；而在抑郁发作的过程中 BDNF/TrkB 信号通路被作为其发病的关键信号而被广泛研究，其主要机理可能与 BDNF 受到刺激后与其受体 TrkB 结合，进而激活相关离子通道以影响海马突触信息反馈有关。越来越多的研究表明中医药单复方可能通过干预 BDNF/TrkB 信号通路的传导来调节有关神经元细胞的表达而发挥治疗抑郁以及随后所造成的认知障碍的作用。

**结论** 目前对于中医药治疗抑郁机理方面的研究仍然基于辨证论治的前体下所进行，仍然缺乏大量的实验数据证明某种特定的药物或是某种特定的组方是通过干预其相对应的信号传导的发挥作用。因此寻求中医药单复方治疗抑郁伴有认知损害药理方面的研究仍然是我们所关注的重点，以期在传统中医药的发展和其治疗更多疾患提供新的思路和方法。

## PU-022

**基于脑-肠轴理论探讨肠道微生物对 GAD 发病机制的研究进展**

马鹏程、彭晓明、唐珂、高丽波  
甘肃中医药大学附属医院

**目的** 焦虑障碍（GAD）是机体在各种应激下存在过度焦虑和担忧至少 6 个月，而且发作时难以控制，并伴有身体或认知症状改变的一种常见的精神心理障碍，它广泛的存在于老年患者及青少年人群之中，早期未于明确诊断及误诊、漏诊致使后期治疗的不彻底，严重影响患者身心健康及社会功能的。

**方法** 随着对 GAD 发病研究的深入，脑肠轴调节功能的变化以及肠道微生物水平的变化对 GAD 发病有着至关重要的作用，本文就脑肠轴理论探讨肠道微生物水平的变化对 GAD 发病的影响进行综述，以便于为临床治疗提供更多治疗思路。

**结果** GAD 是一组表现为患者在某些事件及自身因素作用下导致的过分的担心、紧张、害怕以及坐立不安，并或伴有植物神经功能紊乱的精神心理疾病，其发病原因及机制复杂多变，主要涉及环境、免疫、内分泌及遗传、神经生化等众多方面，越来越多的研究显示肠道微稳态变化与 GAD 发病之间存在着密切的关联，由于缺乏大量的实验及临床数据的关于此方面的研究，目前针对其发病机制的说法也存在争议

**结论** 因此我们需要通过更多更广泛途径及方法去研究肠道微生物的变化与 GAD 之间的作用及机制, 为临床提供更多的治疗方式及为临床研究提供更多的资料, 以便于减轻 GAD 对个人及社会造成的负担。

## PU-023

### 使用近红外脑功能成像检测对无抽搐电休克疗效评估的研究

武桥

绵阳市第三人民医院.四川省精神卫生中心

**目的** 使用近红外脑功能成像技术动态评估抑郁障碍患者与正常对照的区别, 并在抑郁障碍患者无抽搐电休克治疗后动态评估脑血流动力学和脑网络的改变, 以期揭示无抽搐电休克治疗抑郁障碍的潜在机制。

**方法** 选择 28 名年龄、性别相符合的正常对照和抑郁障碍患者, 在基线水平比较两组人群在执行言语流畅性任务时大脑血流动力学变化, 并动态评估每次无抽搐电休克治疗后抑郁障碍患者大脑兴趣区内  $\beta$  值、积分值、重心值指标。抑郁障碍患者同时完成静息态的近红外脑功能检测, 如同任务态一样, 在每次无抽搐电休克治疗结束后评估功能连接指标。

**结果** 抑郁障碍患者在基线时  $\beta$  值、积分值、重心值、功能连接边数均显著低于正常对照,  $p < 0.05$ 。在接受无抽搐电休克治疗后, 即使在心理学量表显示没有达到临床治愈阶段, 抑郁障碍患者的  $\beta$  值、积分值、重心值、功能连接边数指标出现动态变化, 并趋于正常, 最后可与正常对照相比无统计学差异。

**结论** 无抽搐电休克治疗能够改变抑郁障碍患者在执行言语流畅性任务期间的血流动力学变化, 并能够改变抑郁障碍患者静息态的脑功能连接状态。抑郁障碍患者血流动力学的变化是与疾病相关的状态标志物。近红外脑功能成像技术能够为无抽搐电休克的治疗提供客观的神经生物学监测指标。

## PU-024

### 伴非自杀性自伤的青少年抑郁症患者扣带束白质微结构异常

胡长春<sup>1</sup>、姜文灏<sup>2</sup>、吴云<sup>1</sup>、王玫<sup>1</sup>、林健<sup>1</sup>、孔佑勇<sup>3</sup>、谢健<sup>1</sup>、袁勇贵<sup>2</sup>

1. 杭州市第一人民医院

2. 东南大学附属中大医院

3. 东南大学

**目的** 非自杀性自伤 (NSSI) 在青少年抑郁症中的发生率较高, 然而其潜在的神经机制尚不明确。本研究旨在探究扣带束微结构异常与 NSSI 及其临床特征之间的关联。

**方法** 本研究共招募了 130 名青少年参与者, 年龄在 12-21 岁之间。其中包括 47 名伴有 NSSI 的抑郁青少年, 48 名未伴有 NSSI 的抑郁青少年, 以及 35 名年龄性别匹配的健康志愿者。所有参与者均接受了 3.0T 磁共振扫描以获取 DTI 数据。首先, 我们使用 PANDA 和 FSL 图像处理软件对 DTI 数据进行预处理, 然后采用基于白质骨架的空间统计 (TBSS) 和感兴趣区域 (ROI) 方法来比较三组之间扣带束的分数各向异性 (FA)。最后, 我们使用 ROC 曲线分析来评估扣带束平均 FA 联合情绪调节困难 (DERS) 评分区分伴与不伴 NSSI 青少年抑郁患者的能力。

**结果** 与未伴有 NSSI 的青少年抑郁患者和健康对照组相比, 伴有 NSSI 的青少年左背侧扣带束完整性显著降低 ( $P < 0.05$ , TFCE 和 FWE 矫正)。NSSI 的严重程度与扣带束 FA 呈负相关 ( $r = -0.344$ ,  $P = 0.005$ )。左背侧扣带束的 FA 值与情绪调节困难评分呈负相关 ( $r = -0.185$ ,  $P = 0.039$ )。结合扣带束 FA 和情绪调节困难评分可以成功地区分伴和不伴 NSSI 的青少年抑郁患者, 曲线下面积 AUC 为 0.81 ( $P < 0.001$ ), 敏感度为 70%和特异度为 83%。

**结论** 我们的研究表明扣带束在青少年 NSSI 发生发展中具有重要作用。这些发现为额叶-边缘系统情绪调节理论提供了神经生物学证据,并预示着扣带束 FA 和情绪失调水平可以作为识别青少年抑郁患者中 NSSI 的潜在早期诊断工具。

## PU-025

### 常态化疫情防控背景下实习护士心身症状调查及影响因素分析

张艺涵、袁勇贵、王晓燕  
东南大学附属中大医院

**目的** 了解当前疫情防控常态化形势下实习护士的心身症状现状,探讨其影响因素。

**方法** 采用一般资料问卷、心身症状量表(PSSS)、广泛性焦虑量表(GAD-7)、抑郁症状群量表(PHQ-9)、压力知觉量表(CPSS)对东南大学附属中大医院 197 名实习护士进行横断面调查。

**结果** 疫情防控常态化下临床实习护士的心身症状发生率为 53.3%、焦虑发生率为 17.3%,抑郁发生率为 35.5%,压力发生率为 66.5%。多元线性回归分析显示,焦虑、抑郁症状是实习护士心身症状的重要预测因素(调整后  $R^2 = 0.609$ ,  $P < 0.001$ )。抑郁在焦虑与心身症状之间起部分中介作用。

**结论** 疫情防控常态化背景下,实习护士存在不同程度的心身症状、焦虑、抑郁以及压力知觉,学校及护理管理者应关注实习护士的心身健康,协助护理学生顺利完成临床实习,实现角色转变。

## PU-026

### The Trends of Psychosomatic Symptoms and Perceived Stress among Healthcare Workers during the COVID-19 Pandemic in China: Four Cross-sectional Nationwide Surveys, 2020-2023

江晨光、姜文颢、袁勇贵  
东南大学附属中大医院

**目的** 自 COVID-19 爆发以来已经过去了三年。全球医务工作者在承受额外工作量和直接健康威胁的情况下做出了重要贡献。然而,去年 12 月在中国迎来到了大范围的新冠感染,医务工作者面临不可避免的挑战和巨大压力。本研究结合四次全国心身健康状况调查,重点关注医务工作者。我们的目的是呈现医务人员动态的心理健康趋势图。

**方法** 本研究从 2020 年 2 月到 3 月,2022 年 4 月和 2023 年 1 月进行了四次全国横断面在线调查。心身症状量表(PSSS)和感知压力量表-10(PSS-10)用于评估心身症状和感知压力。

**结果** 有 14945 名参与者参加了调查,其中包括 8578 名医务人员和 6367 名其他人。医务人员的的心身综合症的患病为 19.3% (第一波)、22.9% (第二波)、36.4% (第三波)和 60.7% (第四波),与其他人相比为 24.0% (第一波)、35.7% (第二波)、34.2% (第三波)和 50.5% (第四波)。此外,卫生保健工作者在开始时(第 1 和第 2 波)表现出较低的 PSSS 总分,但后来两波(第 3 和第 4 波)分数较高( $p < 0.05$ )。不论他们的感染状态如何,医务人员比非医务人员更严重地患有身心综合症。

**结论** 中国的卫生保健工作者现在经历了严重的心身综合症和巨大的压力,所以急需得到社会支持。

PU-027

## Association between triglyceride glucose index and suicide attempts in Chinese patients with major depressive disorder

Junjun Liu<sup>1</sup>, Xiangdong Du<sup>2</sup>

1. Nanjing Meishan Hospital

2. Suzhou Guangji Hospital; The Affiliated Guangji Hospital of Soochow University

**Objective** Objective: The association between triglyceride glucose (TyG) index and suicide attempts (SA) in major depressive disorder (MDD) is unclear. The aim of this study was to investigate the relationship between TyG index and SA in a Chinese population with MDD.

**Methods** Methods: This cross-sectional study enrolled 1718 MDD patients aged  $34.9 \pm 12.4$  years from the First Hospital of Shanxi Medical University (Taiyuan, Shanxi Province, China) from September 2016 to December 2018. A history of SA was verified, and TyG index was calculated. Multivariable logistic regression analysis was used to estimate the association between TyG index and the risk of SA. Threshold effects were examined by a two-piecewise linear regression model. Interaction and stratified analyses were performed based on sex, education, marital status, comorbid anxiety, and psychotic symptoms.

**Results** Results: Multivariable logistic regression analysis revealed that TyG index was positively associated with the risk of SA after adjusting for confounders (OR = 1.35, 95% CI: 1.04–1.75). Smoothing plots also showed a nonlinear relationship between TyG index and SA, with the inflection point of TyG index being 9.29. On the right of the inflection point, a positive association between TyG index and SA was detected (OR = 3.47, 95%CI: 1.81 to 6.66,  $P < 0.001$ ), while no significant association was observed on the left side of the inflection point (OR = 1.14, 95%CI: 0.79 to 1.66,  $P = 0.476$ ).

**Conclusion** Conclusions: TyG index is positively associated with a higher risk of SA in Chinese patients with MDD, especially in those with TyG index greater than 9.29.

PU-028

## U-shaped association between fasting blood glucose and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder

Junjun Liu<sup>1</sup>, Xiangdong Du<sup>2</sup>

1. Nanjing Meishan Hospital

2. Suzhou Guangji Hospital; The Affiliated Guangji Hospital of Soochow University

**Objective** Objective: Evidence regarding the relationship between fasting blood glucose (FBG) and suicide attempts (SA) in patients with major depressive disorder (MDD) was limited. Therefore, the objective of this research was to investigate whether FBG was independently related to SA in Chinese patients with first-episode drug-naïve (FEDN) MDD after adjusting for other covariates.

**Methods** Methods: The present study was a cross-sectional study. A total of 1718 participants (average age:  $34.9 \pm 12.4$  years, 65.8% females) with FEDN MDD were involved in a hospital in China from September 2016 to December 2018. Multiple logistic regression analysis and smooth curve fitting were used to estimate the association between FBG and the risk of SA. The threshold effect was examined by the two-piecewise linear regression model. Interaction and stratified analyses were conducted according to sex, education, marital status, comorbid anxiety, and psychotic symptoms.

**Results** Results: The prevalence of SA in patients with FEDN MDD was 20.1%. The result of fully adjusted binary logistic regression showed FBG was positively associated with the risk of SA (odds

ratio (OR) = 1.62, 95% CI: 1.13–2.32). Smoothing plots also revealed a nonlinear relationship between FBG and SA, with the inflection point of FBG being 5.34 mmol/l. The effect sizes and the confidence intervals on the left and right sides of the inflection point were 0.53 (0.32-0.88,  $P=0.014$ ) and 1.48 (1.04–2.10,  $P=0.030$ ), respectively.

**Conclusion** Conclusion: A U-shaped relationship between FBG and SA in FEDN MDD patients was found, with the lowest risk of SA at a FBG of 5.34 mmol/l, indicating that both the lower and higher FBG levels may lead to an increased risk of SA.

PU-029

## Gender differences in the association between body mass index and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder

Junjun Liu<sup>1</sup>, Xiangdong Du<sup>2</sup>

1. Nanjing Meishan Hospital

2. Suzhou Guangji Hospital; The Affiliated Guangji Hospital of Soochow University

**Objective** Objective: The relationship between body mass index (BMI) and suicide attempts (SA) is still unclear with controversial research results in patients with major depressive disorder (MDD). The aim of this study was to explore the relationship between BMI and SA for men and women in patients with first-episode drug-naïve (FEDN) MDD in China.

**Methods** Methods: This cross-sectional study was conducted among the FEDN MDD patients from September 2016 to December 2018 in Taiyuan, China. A history of suicide attempts was verified based on medical records and interviews with patients and their family members. Univariate and multivariable logistic regression methods were used to evaluate the association between BMI and SA, and subgroup analysis was performed on female and male patients. Threshold effects were examined by a two-piecewise linear regression model.

**Results** Results: A total of 588 male patients (BMI:  $24.41 \pm 2.04$  kg/m<sup>2</sup>) and 1130 female patients (BMI:  $24.35 \pm 1.86$  kg/m<sup>2</sup>) were enrolled in this study. After fully adjusting the covariates, the association between BMI and SA was only significant in males (OR = 0.84, 95%CI: 0.74 to 0.94,  $P = 0.003$ ) but not in females (OR = 0.97, 95%CI: 0.89 to 1.06,  $P = 0.541$ ). The interaction effect with gender was significant ( $P$  for interaction < 0.05). The piecewise linear spline models also revealed an L-shaped relationship between BMI and SA for both genders, and the inflection points of BMI were at 27.3 kg/m<sup>2</sup> for males and 21.4 kg/m<sup>2</sup> for females, respectively. When BMIs were lower than the inflection point, a negative association between BMI and SA was detected in males (OR = 0.75, 95%CI: 0.66 to 0.86,  $P < 0.001$ ) and females (OR = 0.48, 95%CI: 0.32 to 0.72,  $P < 0.001$ ). Once the BMI was higher than the inflection point, no significant association was observed for both genders ( $P$  all > 0.05).

**Conclusion** Conclusions: Our results showed an L-shaped nonlinear relationship between BMI and SA in FEDN MDD patients of all genders, but the BMI inflection points were different for men and women, 27.3 kg/m<sup>2</sup> and 21.4 kg/m<sup>2</sup>, respectively.

## PU-030

# Association between body mass index and suicide attempts in Chinese patients with first-episode drug-naïve major depressive disorder

Junjun Liu<sup>1</sup>, Xiangdong Du<sup>2</sup>

1. Nanjing Meishan Hospital

2. Suzhou Guangji Hospital; The Affiliated Guangji Hospital of Soochow University

**Objective** Objective: In patients with major depressive disorder (MDD), the relationship between body mass index (BMI) and risk of suicide attempts (SA) remains unclear, and findings are controversial. The aim of this study was to investigate the relationship between BMI and SA in a Chinese population with first-episode drug-naïve (FEDN) MDD.

**Methods** Methods: A total of 1718 patients with FEDN MDD were enrolled in this cross-sectional study. Their socio-demographic characteristics as well as anthropometric data were collected. The 17-item Hamilton Rating Scale (HAM-D-17) and Hamilton Anxiety Scale (HAMA) were used to assess the severity of depression and anxiety symptoms in all participants. Thyroid hormones, lipid profile, and fasting blood glucose (FBG) were measured. A history of suicide attempts was verified based on medical records and interviews with patients and their family members. Multiple logistic regression analysis was used to estimate the association between BMI and the risk of SA. Threshold effects were examined by a two-piecewise logistic regression model.

**Results** Results: Multiple logistic regression analysis showed that BMI was independently and negatively correlated with SA (OR = 0.91, 95%CI: 0.85 to 0.98, P = 0.014) in patients with FEDN MDD after adjusting for covariates. Smoothing plots also revealed a non-linear (L-shaped) relationship between BMI and SA, and a two-piecewise logistic regression model was used to calculate the inflection point of BMI as 22.1 kg/m<sup>2</sup>. On the left of the inflection point, a negative association between BMI and SA was detected (OR = 0.54, 95%CI: 0.42 to 0.70, P < 0.001), while no significant association was observed on the right side of the inflection point (OR = 1.01, 95%CI: 0.93 to 1.10, P = 0.750).

**Conclusion** Conclusions: Our results suggest that lower BMI is associated with a higher risk of SA in Chinese patients with FEDN MDD, especially in those with BMI below 22.1 kg/m<sup>2</sup>.

## PU-031

# 复发缓解型多发性硬化患者疲劳的发生率及相关因素

刘军军、王志晔

南京梅山医院

**目的** 探讨复发缓解型多发性硬化患者疲劳症状的发生率及相关危险因素。

**方法** 2018年8月~2021年7月在南京梅山医院神经内科门诊招募复发缓解型多发性硬化患者共80例，采用自编问卷收集患者人口学资料与疾病相关信息；采用疲劳影响量表修订版（MFIS）评估疲劳症状，以MFIS分≥38定义疲劳；采用贝克抑郁量表第2版中文版评估抑郁症状；采用临床扩展致残量表（EDSS）评估神经系统损伤程度；采用健康状况调查问卷（SF-36）评估健康状况。

**结果** 复发缓解型多发性硬化患者疲劳的发生率为48.8%（39/80），二元多因素Logistic回归分析显示，年龄（OR=0.91，95%CI：0.84~0.99）、躯体健康总评分（OR=0.99，95%CI：0.97~1.00）和精神健康总评分（OR=0.98，95%CI：0.96~0.99）是复发缓解型多发性硬化患者疲劳的独立危险因素（均P<0.05）。

**结论** 复发缓解型多发性硬化患者疲劳症状的发生率较高，需要重点关注低龄、较差的躯体和心理健康状况的患者。

PU-032

## Relationship between covid-pandemic anxiety and sleep disorder with menstrual disorders among female medical workers

Wenxi Sun<sup>1</sup>, Liping Xia<sup>1</sup>, Caifang Ji<sup>1</sup>, Qianqian Wei<sup>1</sup>, Jun Zhang<sup>1</sup>, Xuqin Wang<sup>1</sup>, Xueqin Shen<sup>2</sup>, Xiaobin Zhang<sup>1</sup>, Chuanwei Li<sup>1</sup>

1. Suzhou Guangji Hospital

2. The Affiliated Jiangsu Shengze Hospital of Nanjing Medical University

**Objective** It has been more than 2 years since the 2019 novel coronavirus disease (COVID-19) pandemic destabilized the world, adversely affecting not only physical health, but also mental health. During this time, frontline medical workers were at a greater health risk, especially female medical workers. Changes or abnormalities in the menstrual cycle—an important indicator of women's health—may jeopardize female reproductive functioning. Considering that emotional health and sleep status may be related to the menstrual cycle, this study aimed to investigate the association between menstrual cycle changes, anxiety, sleep dysfunction, and other factors among female medical workers during the COVID-19 pandemic.

**Methods** A cross-sectional survey was conducted by distributing online questionnaires to female medical workers in China from February to May 2022. The study included 160 women aged 18–45 years old. The questionnaires covered data related to the participants' sociodemographic characteristics, medical and reproductive history, and lifestyle. The Rating Scale for Clinical Manifestations of Menopathy (SCMM), Self-Rating Anxiety Scale (SAS), and Sleep Dysfunction Rating Scale (SDRS) were utilized. Data were analyzed using chi-square tests, t-tests, and linear regression analysis.

**Results** A total of 160 female medical staff were randomly selected in this research, of whom seven scored less than 3 points, 85 scored 3–11 points, and 68 scored more than 11 points on the total score of the SCMM. Compared to pre-pandemic scores, scores of dizziness and tinnitus were significantly higher during the COVID-19 pandemic. Scores corresponding to the following clinical symptoms were also higher during the pandemic: Menopathy, including hypophrodisia, dim complexion, abnormal urination, languidness, dim menstruation, thin menstruation, dysmenorrhea, and empty or saggy lower abdomen ( $p < 0.05$ ). However, pre-pandemic scores of vaginal bleeding quantity were significantly higher than those found during the COVID-19 pandemic ( $p < 0.05$ ). Scores of vaginal bleeding quantity were significantly lower in cabin hospitals than other types of hospitals, and a similar finding was observed for vaginal bleeding duration (all  $p < 0.05$ ). Moreover, the findings of the univariable and multivariable linear regression analysis revealed a link between consistent exercise, the underlying illness, the SDRS score, the SAS score, and the total score of SCMM ( $p < 0.05$ ).

**Conclusion** In this study, we found that menstruation in female medical workers was affected by the COVID-19 pandemic. Furthermore, regular exercise and good physical condition were protective factors, while anxiety and insomnia were risk factors for menstrual abnormalities.

PU-033

## 青少年抑郁的音乐治疗与脑功能网络

许纲

同济大学附属第十人民医院

**目的** 75%的精神性疾病始于 24 岁之前，14-24 岁是情绪障碍的高发年龄段，抑郁症和焦虑症被认为是儿童和青少年疾病的最大负担之一。其共同的病因可能是大脑结构与功能发育的不匹配。最近的文献报道音乐疗法是治疗抑郁症和焦虑症的安全且可能有效的干预措施。本研究系统评价了



青少年脑功能网络的构建与成熟的过程，脑功能网络的成熟对情绪调节的影响，音乐对脑功能构建和重塑的作用，以及音乐治疗在减轻青少年抑郁和/或焦虑症状严重程度方面的有效性。

**方法** 随机对照试验（RCTs）是通过 100 个主要英语数据库的系统检索（RCTs）获得的，从开始到 2023 年 4 月。研究按青少年脑功能网络，脑功能连接与情绪及情绪调节，音乐与脑功能网络，抑郁症的音乐治疗结局分类。

**结果** 纳入 289 项人类脑功能网络研究报告证实，边缘系统是情绪中枢，前额叶皮层是与许多高级认知功能相关的关键脑区。有理性地控制情绪，调节情绪，需要边缘系统和前额叶皮层的相互协调，这依赖脑功能网络的构建。

青春期开始皮层灰质在变薄，杏仁核体积在增大。杏仁核与额叶皮层发育时间上的不同步，导致其神经纤维的投射——解剖连接不完善，以及功能连接——功能网络的构建明显滞后。这是青少年高发情绪障碍的主要原因。

在音乐表演中对听觉-运动耦合的高要求塑造了大脑结构和形成与音乐相关的高准确度预测的能力。按照音乐预测编码（predictive coding of music, PCM）模型分析，发现旋律、节奏和和声预期相关的预测编码，可能与大脑中更抽象的听觉预测加工有关。揭示了音乐感知、动作、情感和学习神经机制，并有助于理解预测作为大脑功能背后的基本原理。这为理解音乐如何对个人以及人与人之间的音乐互动变得有意义提供了新的途径。

与对照组相比，四项研究（n=106）支持音乐疗法在短期和中期随访中改善抑郁症状。一项研究（n=106）支持与对照组相比，音乐疗法在短期随访中改善焦虑症状。没有研究支持控制音乐疗法以改善抑郁和/或焦虑的症状。

**结论** 30-40%的抑郁症患者对药物没有反应。音乐能激发多感官的体验，对脑功能网络的构建有无与伦比的作用。82%的抑郁症患者声称音乐疗法对他们有效。有证据表明，音乐疗法是改善青少年抑郁和/或焦虑症状严重程度的有效治疗方法。因此有必要深入开展音乐治疗的临床研究，需要更多高质量的随机对照试验来解决当前研究的方法学缺陷。

## PU-034

### 抑郁症患者疲乏症状现状及影响因素调查

李洋<sup>1</sup>、贾守梅<sup>2</sup>、陈丽<sup>3</sup>、曹宝花<sup>1</sup>

1. 中国人民解放军空军军医大学

2. 复旦大学护理系

3. 复旦大学附属肿瘤医院

**目的** 抑郁症是一种严重危害人类身心健康的精神疾病，具有高发病率、高复发率、高致残率、高自杀风险等特点，是全球最严重的健康问题之一[1]。抑郁症相关性疲乏是抑郁症患者重要的躯体化症状，可发生于抑郁症病程的任意时期，是疾病发生的先兆症状、抑郁症发作期的核心症状及接受有效治疗后重要的残留症状，并严重影响患者疾病转归。然而目前国内外针对抑郁症患者疲乏症状研究较少，疲乏症状尚未能得到精神科医务人员足够关注和重视。因此，本研究旨在评价抑郁症患者疲乏症状，并分析其影响因素。

**方法** 通过便利抽样的方法，选择 2 所三级甲等综合性医院心理门诊与 1 所三级甲等精神专科医院病房抑郁症患者 177 例作为研究对象，采用多维疲劳量表（MFI-20）、蒙哥马利艾斯伯格抑郁量表（MADRS）、匹茨堡睡眠指数量表（PSQI）、国际体力活动短问卷（IPAQ-SF）、社会支持量表（SSRS）进行调查。

**结果** 177 例抑郁症患者疲乏总分为  $66.49 \pm 14.20$ ，体力疲乏、脑力疲乏、动力下降、活动减少 4 个维度均分分别为  $3.40 \pm 0.85$ 、 $3.15 \pm 1.17$ 、 $3.28 \pm 0.74$ 、 $3.37 \pm 1.02$ ，95.5% 的患者出现中度及以上疲乏体验。疲乏症状受到生理因素（体力活动水平、疼痛、睡眠障碍、饮食状态）、疾病及治疗相关因素（抑郁、本次病程）、心理社会因素（病耻感、社会支持、主观支持、对支持的利用度）影响，其中抑郁、睡眠障碍、对支持的利用度低、本次病程 0~1 个月、低体力活动水平是疲乏症状的独立影响因素。

**结论** 抑郁症相关性疲乏普遍存在且严重程度以中重度为主, 医务工作者应重视对患者疲乏症状的评估及干预, 关注抑郁情绪的同时, 注重患者睡眠质量、体力活动水平的改善, 提高患者社会支持利用水平, 改善生活质量。

## PU-035

### 海洛因依赖患者的睡眠问题检出率的 meta 分析

叶紫莹、韩卓颖  
中国地质大学(武汉)

**目的** 海洛因依然是我国流行的成瘾性物质之一, 睡眠问题在海洛因依赖患者中很常见。然而目前文献关于海洛因依赖患者睡眠问题的检出率变异较大, 因此, 我们使用 meta 分析、基于大样本来寻求更精确的检出率估计, 以便探寻物质依赖与睡眠问题的关系, 从而为临床干预提供参考。

**方法** 计算机检索中国知网、万方、维普、PubMed、中国生物医学文献数据库和 Web Of Science 数据库, 收集使用匹兹堡睡眠质量指数(PSQI)评估海洛因依赖者睡眠问题检出率的原始研究, 文献检索年限为自数据库建立以来至 2022 年 11 月 29 日。本研究采用 Joanna Briggs Institute (JBI) 关键评估清单来评估纳入研究的文献质量, 运用 Egger 检验法来检验所纳入研究是否存在发表偏倚。由两位以上作者独立进行文献筛选、数据提取与文献质量评价, 并用 meta 分析计算海洛因依赖患者的睡眠问题的合并检出率。

**结果** meta 分析共纳入 19 项研究(4270 例海洛因依赖患者), JBI 文献质量评估结果表明纳入文献总体质量不高, egger 检验表明所纳入研究的低睡眠质量检出率并不存在发表偏倚。结果显示海洛因依赖患者的睡眠问题的合并检出率为 67.2% (95%CI: 57.1% -77.3%), 亚组分析结果表明 PSQI 界值 ( $P<0.001$ )、药物使用方式 ( $P<0.05$ ) 以及有无工作( $P<0.001$ )可能为该异质性来源的原因, 提示 PSQI 的严格程度、有无工作、药物使用方式也许会影响海洛因依赖患者睡眠问题的检出率。

**结论** 本研究基于国内外海洛因依赖患者睡眠问题检出率的原始数据进行了 meta 分析。结果显示, 睡眠问题在该人群中相对普遍。治疗失眠通常可以降低物质依赖复发的风险, 所以临床工作人员不应低估海洛因依赖患者的睡眠问题的发生率, 需要予以重视, 并从治疗睡眠问题入手, 寻找干预物质依赖复发的有效措施。例如可以针对解决与睡眠问题共病的心理问题(如焦虑、抑郁等)来减少复吸行为, 如认知行为疗法、接受承诺疗法; 或者是为失业患者提供就业培训和就业机会。更重要的是, 临床工作人员需要对患者进行心理教育来减轻其心理压力, 而且提供戒毒相关服务的工作人员也可以在谈及吸毒时采用一些非歧视性的词语来减少对患者的偏见与负面影响, 并且向大众解释成瘾的原因, 普及成瘾相关知识, 从而减少污名化程度, 或许能减少海洛因依赖患者的物质依赖复发的行为。

## PU-036

### 心血管疾病合并 COVID-19 患者心理状况的研究现状

黄小瑜、温志浩  
广西中医药大学第一附属医院

**目的** 新型冠状病毒肺炎(Corona Virus Disease 2019, COVID-19)的暴发给普通人群尤其是合并心血管疾病的人群带来了巨大的心理压力, 焦虑、抑郁也是心血管疾病的重要危险因素, 现对新冠期间不同心血管疾病患者患 COVID-19 之后心理健康状况的研究现状进行综合叙述。

**方法** 综述无方法

**结果** 综述无结果

**结论** 我们发现 COVID-19 合并心血管疾病患者容易出现心理问题, 而 CVD 及焦虑、抑郁等心理问题也是新冠的易感因素, 三者相互作用相互影响。尤其是那些弱势群体, 经济较为困难的患者,

其心理健康状况更差，针对这一弱势群体的早期心理干预可能是有益的，指导政策和干预措施以维持他们的心理健康至关重要。面对冠状病毒带来的全球挑战，我们可以通过咨询社会心理健康专业人员，对有需要的患者应提出康复计划和远程心理支持，来改善 COVID-19 合并心血管疾病人群患者的心理健康，以确保患者得到适当的护理和治疗。目前新冠疫情仍时有发生，而关于 COVID-19 合并心血管疾病患者心理现状的临床研究还较少，仍值得我们进一步去研究探索。

PU-037

## Serum Levels of Tumor Necrosis Factor- $\alpha$ and Vascular Endothelial Growth Factor in the Subtypes of Clinical High Risk Individuals: A Prospective Cohort Study

Jiayi Ye, Jiahui Zeng, Yuqing Gao, Tianhong Zhang

Shanghai Mental Health Center, Shanghai Jiaotong University School of Medicine, Shanghai Intelligent Psychological Evaluation and Intervention Engineering Technology Research Center (20DZ2253800), Shanghai Key Laboratory of Psychotic Disorders, Shanghai 200030, China

**Objective** Numerous studies have established the roles of inflammation and angioneurins in the pathogenesis of schizophrenia (SCZ). However, previous studies have investigated inflammation and angioneurins in post-onset patients with SCZ, and considered psychosis as a whole, while this study hypothesized that the role of inflammation and angioneurins in different symptoms may differ. This study aimed to compare the serum levels of tumour necrosis factor (TNF)- $\alpha$  and vascular endothelial growth factor (VEGF) in patients at clinical high risk (CHR) for psychosis or SCZ of different subtypes at baseline and one year after treatment.

**Methods** A total of 289 CHR participants from the Shanghai At Risk for Psychosis Extended Program (SHARP) were identified and tracked for a year as part of this prospective cohort study. They were divided into two and four subtypes and provided standard medical care. CHR individuals were subdivided based on the severity of their baseline symptoms into high-level and low-level groups. The high-level group included CHR individuals with total positive/negative symptom scores of ten or higher, according to the Structured Interview for Prodromal Syndromes (SIPS). At baseline and 1-year follow-up, TNF- $\alpha$  and VEGF were detected using enzyme-linked immunosorbent assay, and pathological features were assessed using the Global Assessment of Function (GAF) score. The data were examined using SPSS version 26.

**Results** TNF- $\alpha$  levels did not differ at baseline; however, VEGF levels were lower in patients with more severe symptoms. When not grouped, VEGF had a negative correlation with negative features ( $r = -0.212$ ,  $p = 0.010$ ), as well as in the group with total positive scores above ten ( $r = -0.370$ ,  $p = 0.005$ ). TNF- $\alpha$  was positively correlated with negative symptoms for the group with total negative scores greater than ten ( $r = 0.352$ ,  $p = 0.002$ ). The three-way multivariate analysis of variance showed that participants in Subtype 1 of positive or negative symptoms outperformed those in Subtype 2 of positive or negative symptoms at  $p < 0.001$ ,  $p < 0.01$ , and  $p < 0.05$  for specific main effects and interactions of group and both cytokines, respectively.

**Conclusion** TNF- $\alpha$  and VEGF levels are higher and lower, respectively, in CHR patients with more severe clinical symptoms, particularly negative symptoms, which point to a worsening inflammatory and vascular status in the brain. This devastating disease may be prevented in its prodromal stage using novel clinical diagnosis and therapeutic targeting, which may be effective in light of the subtypes we identified.

PU-038

## Agomelatine Bears Promising Potential in Treating Bipolar Depression— A Systematic Review

Junyao Li, Huirong Luo, Qinghua Luo  
The First Affiliated Hospital Of Chongqing Medical University

**Objective** The controversy of antidepressant use in bipolar depression remains controversial. Agomelatine (AGO) is an effective antidepressant in major depressive disorder (MDD), but its application in bipolar depression was little discussed. We aimed to provide a comprehensive systematic review of clinical evidence from studies examining the efficacy and safety of agomelatine for bipolar depression.

**Methods** We conducted a systematic review about AGO trials for the treatment of bipolar patients. We searched PubMed, MEDLINE, Embase, and Cochrane for relevant studies published since each database's inception. We synthesized evidence regarding efficacy (mood and rhythm) and tolerability across studies.

**Results** We identified 6 studies including 272 participants (44% female). All studies used 25-50mg AGO per day for treatment combined or not combined with mood stabilizers (MS). Across all 6 studies, there were improvements in depression evaluated by depression rating scores and response rate over time. The response rates varied from 43% to 91% within 6-12 weeks. Although AGO was found of better efficacy in bipolar depression compared to recurrent depression, its efficacy remains controversial. Surprisingly, most studies have shown AGO to be effective after just about a week. AGO was reasonably well tolerated both in acute and extension period, without obvious risk in inducing mood switching.

**Conclusion** AGO is promising in treating bipolar depression with significant efficacy and well tolerability. However, more strictly designed and large-sample trials are needed in further research with homogeneity within intervention and treatment groups.

PU-039

## 抑郁症患者童年创伤经历与炎症指标相关性的 meta 分析

姚书婧、张亚兴、刘畅  
河北医科大学第一医院

**目的** 通过系统综述和 Meta 分析了解抑郁症患者童年创伤经历与炎症指标之间的关系。

**方法** 制定检索策略和纳入排除标准，应用计算机检索知网、万方、CBM、pubmed、Embase 和 cochrane library 数据库，主要的检索词为“抑郁症、抑郁性障碍、抑郁障碍、童年不良经历、早年不良经历、细胞因子” ‘Depressive Symptoms’ ‘Cytokine’ ‘Emotional Depression’ ‘Neurosis, Depressive’ ‘Depression’ ‘Adverse Childhood Experience’ ‘Trauma, Childhood’ ‘Adolescent Traumas’ ‘Early Life Stresses’。采用观察性研究质量评价标准对纳入文献质量进行评价。采用网络 Meta 分析（network meta-analyses, NMA）随机效应模型评估 15 种炎症因子的相关系数  $r$ 。由 2 位研究者按照纳入与排除标准共同进行文献筛选、资料提取和质量评价后，采用 Stata 14.0 软件进行数据分析。

**结果** 共有 15 篇文献可获得抑郁患者中童年创伤和血清或血浆中纤维蛋白原、SAA、抵抗素、CRP、IL-6、TNF- $\alpha$ 、SE、脂联素、TGF- $\beta$ 、IL-10、IL-1 $\beta$ 、IL-4 等炎症水平之间的相关系数  $r$ 。8 项研究评估了经历童年创伤的抑郁症患者与血清 IL-6 水平有相关性。发现与健康对照组或仅有 MDD 的人群相比，有 ACE 病史的 MDD 患者的血清 IL-6 水平升高。而且 ACE 的不同类型可能与 MDD 人群的 IL-6 失调有关，其中 4 项研究发现，在性虐待、情感忽视、情感虐待、躯体忽视、躯体虐待的 CTQ 子量表上，创伤的严重程度预示着 MDD 患者的血清 IL-6 水平更高；其中性虐待与 IL-6 存在相关性的研究最多。

**结论** 童年创伤经历与抑郁症患者炎症指标变化相关，其中血清 IL-6 水平激活最敏感，且持续升高。

## PU-040

### 华宁县农村妇女生殖道感染认知、羞耻感与会阴卫生行为的相关性研究

冯林森<sup>1,2</sup>、董正娇<sup>1,2</sup>、郭文冉<sup>3</sup>、孟洋炫<sup>3</sup>、沈娅<sup>3</sup>、王浩宇<sup>3</sup>、宋伊潇<sup>4</sup>

1. 昆明医科大学第六附属医院暨玉溪市人民医院

2. 昆明医科大学全科医学院

3. 昆明医科大学基础医学院

4. 昆明医科大学法学院

**目的** 女性生殖道感染（reproductive tract infections, RTI）严重损害女性身心健康及生活质量，RTI 与人口社会学特征、疾病认知水平、卫生行为、心理困扰等因素密切相关。本研究以华宁县农村妇女为研究对象，开发妇科疾病羞耻感量表（GDSS）和会阴卫生行为量表（PHBS），编制女性生殖道感染认知问卷（RTI-KLQ），验证量表的信效度，阐述农村妇女 RTI 认知的现状与妇科疾病羞耻感、会阴卫生行为的影响因素，并分析相互作用。

**方法** 采用经典测量法，编制开发 GDSS 和 PHBS。采用描述性统计方法、秩和检验、多重线性回归分析 RTI 认知水平、会阴卫生行为及妇科疾病羞耻感的现状和影响因素。构建结构方程模型分析三者间的相互作用以及对生殖道感染发生率的影响。

**结果** （1）GDSS 含 10 个条目，为单维度条目，信效度良好。非已婚、家庭压力大、社交压力大、已绝经、行经天数异常、月经量正常/偏少、目前有生殖道感染的成年农村妇女的妇科疾病羞耻感更加突出（ $P<0.05$ ）。

（2）PHBS 含 11 个条目，分为“日常生活”和“性生活”两个维度，信效度良好。近郊农村、较高的学历、家庭关系良好是不良会阴卫生行为的保护因素（ $P<0.05$ ）；较高的社交压力、月经周期不规律、月经量正常/偏少、目前有生殖道感染是其危险因素（ $P<0.05$ ）。

（3）描述性统计显示农村妇女生殖道感染认知不足，RTI 传播途径、病原体、危害、症状认知率分别为 55.2%-85.0%、58.6%-91.3%、50.3%-80.0%、42.4%-82.5%。年龄较大、月经周期不规律、月经量不正常、无性生活史者 RTI 认知水平较低（ $P<0.05$ ），学历较高、非务农者、工作压力较高、怀孕次数较多者 RTI 认知水平较高（ $P<0.05$ ）。

（4）结构方程模型显示 RTI 认知水平可直接作用于不良会阴卫生行为（ $P<0.05$ ），也可通过妇科疾病羞耻感间接作用于不良会阴卫生行为（ $P<0.05$ ），妇科疾病羞耻感可能是两者间的遮掩变量。生殖道感染认知水平可以间接通过妇科羞耻感、不良会阴卫生行为影响妇女生殖道感染的发生。

**结论** GDSS 和 PHBS 是专门用于测量农村妇女的妇科疾病羞耻感、会阴卫生行为的心理和行为学量表，具有良好的稳定性、可靠性及有效性。降低妇女生殖道感染发生率需要加强健康教育工作、提升生殖健康认知水平，改善会阴卫生行为，并关注生殖健康问题诱发的羞耻感等心理问题。

## PU-041

### 早期康复训练和心理干预协同治疗对高血压性脑出血患者手术后心理状态的影响分析

浦梦佳、程卫国、王学慧

南京医科大学附属无锡市人民医院

**目的** 探究高血压性脑出血患者手术后开展早期康复训练和心理干预协同治疗对患者术后心理状态的积极影响作用。

**方法** 选择对我院神经诊疗中心收治的 48 例高血压性脑出血经手术治疗的住院患者进行干预和评估分析，入组时间为 2022 年 05 月至 2023 年 02 月。所有术后患者随机分为康复干预组、康复+心理干预组，康复组 24 例执行主动被动康复锻炼、日常生活行为训练及语言训练等早期康复训练策略，康复+心理组 24 例在开展同上康复训练策略的基础上施加心理干预治疗，包括积极进行心理疏导、增强治病信心、加强健康教育、注重饮食及体位指导、适当予以语言鼓励等。比较两组干预前后的心理状态（SAS、SDS）、脑损伤程度（GCS）、神经功能缺损程度（NIHSS）及肢体功能改善情况（FMA）；比较两组干预前后的生活质量（SF-36 量表：心理功能、社会功能、物质生活、躯体功能）；比较两组对医疗护理工作的满意度。

**结果** 干预后，康复+心理组的 SAS、SDS 评分依次为（35.45±10.07）分、（33.67±13.82）分，低于干预前，且均低于康复组，有统计学差异（ $P<0.05$ ）。在 GCS、NIHSS、FMA 方面，康复+心理组的评分表现均优于康复组，有统计学差异（ $P<0.05$ ）。康复+心理组干预后的 SF-36 量表各维度评分均显著高于康复组，有统计学差异（ $P<0.005$ ），且对医护工作的总满意度为 95.83%（23/24），高于对照组 75.00%（18/24），组间差异明显（ $P<0.011$ ）。

**结论** 对高血压性脑出血术后患者开展早期康复训练的同时，协同开展心理干预治疗，更利于改善患者的术后心理状态，促进其提高神经功能、肢体功能及生活质量，最终获得患者认可，值得临床关注与推行。

## PU-042

### 探究不同慢性脑灌注不足模型小鼠海马区损伤和认知功能的动态变化

刘韵

东南大学附属中大医院

**目的** 血管性痴呆是继阿尔茨海默病之后的第二大常见痴呆类型，其特征是由各种脑血管疾病引起的获得性记忆障碍和认知功能障碍。慢性脑灌注不足是血管性痴呆发生和发展的主要原因。越来越多的研究通过模拟小鼠脑内的慢性脑灌注不足来探究血管性痴呆的神经病理学变化。为了更好的了解血管性痴呆的病理进程，我们对小鼠进行两种不同的慢性脑灌注不足干预，观察和比较这两种干预所诱导的病理变化。

**方法** 我们使用 9 周龄的雄性 C57/BL6 小鼠，分别施以右侧单侧颈总动脉闭塞（rUCCAO）或双侧颈总动脉狭窄（BCAS）。动态观察造模第 1 天、7 天、14 天、1 月、2 月后的血流动力学变化，选取造模第 14 天、1 月、2 月后小鼠进行新物体识别和 Morris 水迷宫实验观察其短期工作记忆和空间认知功能。最后将小鼠取材，观察其海马区神经元形态学改变，星形胶质细胞和小胶质细胞的激活水平，促炎症因子的表达，以及脑内伊文思蓝、IgG 的渗透和紧密连接蛋白表达变化等改变。

**结果** 与对照组相比，rUCCAO 和 BCAS 干预均可诱导小鼠出现不同程度的脑血流量降低、认知功能降低，以及海马区出现明显的神经炎症和血脑屏障损伤。在 rUCCAO 小鼠中，我们发现同侧脑血流量在造模后第 1 天降低至对照组的 30%后脑血流量逐渐恢复，在造模 2 个月后恢复至对照组的 50%。对侧脑血流量在造模后第 1 天代偿性降低至对照组的 60%，在造模 2 个月后恢复至对照组的 75%。rUCCAO 小鼠在造模 2 个月后出现空间记忆障碍。与对照组相比，造模 14 天后 rUCCAO 小鼠海马区出现了 IgG 渗透，紧密连接蛋白丢失等血脑屏障受损的病理表现，以及在造模 1 月后海马区出现明显的星型胶质细胞和小胶质细胞的激活，促炎症因子的释放和神经元损伤。在 BCAS 小鼠中，其两侧脑血流量在造模后第 1 天降至对照组的 50%-60%，造模 2 个月后恢复至对照组的 75%。BCAS 小鼠在造模 1 个月出现明显的短期记忆和空间记忆障碍。与对照组相比，造模 7 天后 BCAS 小鼠海马区出现明显血脑屏障损伤，造模 14 天后出现胶质细胞激活、促炎症因子的增加以及神经元的损伤。

**结论** 我们的研究证明，慢性脑灌注不足先诱导小鼠海马区产生血脑屏障损伤，进一步产生神经炎症，从而导致神经元损伤和认知功能障碍。此外，与 rUCCAO 相比，BCAS 干预对小鼠造成的损伤更为提前和更为严重。

## PU-043

### 重复经颅磁刺激对改善青少年非自杀性自杀行为的系统综述

张勇、陈惠萍、李云麟、陈陆松  
海宁市第四人民医院

**目的** 系统综述重复经颅磁刺激的不同治疗方案对于青少年非自杀性自伤行为的影响，旨在为减少青少年自伤行为提供参考。

**方法** 采用主题词与自由词结合检索方式，检索 Pubmed、Web of Science、Embase；中国知网、万方数据库、中国生物医学数据库；检索时间均为建库至 2023 年 4 月 30 日。全面检索中英文数据库中关于重复经颅磁刺激对青少年非自杀性自伤行为的研究，经 2 名研究者按照纳入和排除标准独立筛选文献、提取资料、评价文献质量，分别对治疗方案进行描述性分析。

**结果** 最终纳入 7 篇文献，其中随机/疑似随机对照试验 5 篇。左侧前额叶背外侧区进行 10Hz 高频刺激是最常用的刺激部位与模式；5 次/周，持续 2~4 周是当前最短的有效治疗周期，不同的线圈类型与脉冲形式均可在一定程度上改善青少年非自杀性自伤行为，但仍需进一步研究。

**结论** 刺激部位、线圈类型、频率模式、强度、脉冲方案等都是在重复经颅磁刺激治疗中需要考虑的因素。但目前国内外对于治疗方案内不同参数还未有标准值，需要更多临床研究以探讨不同治疗方案对青少年非自杀性自伤行为的作用。

## PU-044

### 甲状腺癌患者在隔离病房碘 131 治疗后心理研究

秦杰、付巍、杨静  
桂林医学院附属医院

**目的** 本研究旨在深入了解甲状腺癌患者在接受碘-131 治疗后的心理状况。我们通过患者在出院时，出院后 1 个月，3 个月，6 个月分别进行访谈，心理量表测评，评估了他们的心理状况，包括焦虑，抑郁，生活质量以及疾病应对能力等方面

**方法** 方法：我们研究了从 2021 年 2 月到 2022 年 2 月在我院核医学科接受碘-131 治疗的 152 名甲状腺癌患者，这些患者均在最近隔离病房接受了碘-131 治疗。纳入标准包括：年龄在 18-75 岁之间，没有其他重大身体或精神疾病，能够理解并同意参与研究。数据收集：我们使用多种工具来评估患者的心理状况。首先，我们使用焦虑和抑郁量表（HADS）评估患者的焦虑和抑郁程度。其次，我们使用生活质量量表（QOL）评估患者的生活质量。最后，我们使用应对方式量表（COPE）评估患者的应对方式。数据分析：所有数据均使用 SPSS 22.0 软件进行分析。我们使用描述性统计方法描述患者的基线数据。使用多元线性回归分析来探究碘-131 治疗对患者焦虑，抑郁，生活质量和应对方式的影响。所有的统计分析均设定显著水平为 0.05。使用了包括焦虑抑郁量表、生活质量评估量表和疾病应对量表等工具，以便全面评估他们的心理状况。

**结果** 结果：研究结果表明，甲状腺癌患者在接受碘-131 治疗后，其心理状况具有显著的变化。具体表现为治疗初期焦虑和抑郁情况较重，而随着时间的推移，这些情况逐渐得到缓解。此外，生活质量评分在治疗后期有所提高，疾病应对能力也有显著增强。

**结论** 结论：在隔离病房碘-131 治疗虽然对甲状腺癌患者的生理状况有积极的影响，但是在治疗过程中，患者的心理状况需要得到更多的关注和照顾。未来的研究和临床工作中，应更加关注患者的心理健康，提供全面的心理支持。

PU-045

## **Social support, psychopathology and non-suicidal self-injury: specific effect of threatening or deprivation experiences**

Jingbo Gong  
Shanghai Changning Mental Health Center

**Objective** Non-suicidal self-injury (NSSI) are salient risk behaviors that threaten individual's physical and mental health, and the association of adverse experiences with NSSI has been widely recognized. However, based on the Dimensional Model of Adversity and Psychopathology (DMAP), the negative effects of different dimensions of adverse experiences (threatening experiences vs. deprivation experiences) on NSSI are not congruent. Identifying the specific effects of various adverse experiences on NSSI is of great significance for interventions.

**Methods** In a sample of Chinese college students ( $n = 1609$ ), this study utilized latent category analysis (LCA) to identify and classify threatening and deprivation experiences, followed by structural equation modeling (SEM) to examine the effects of threatening and deprivation experiences on the correlations between social support, psychotic-like experiences, internet addiction, and NSSI.

**Results** Compared to individuals without adverse experiences, individuals with threatening and deprivation experiences both exhibited lower levels of social support and higher degrees of psychotic-like experiences, but only individuals with threatening experiences exhibited higher levels of internet addiction and NSSI. Furthermore, different dimensions of adverse experiences altered the psychopathological pathways by which social support influences NSSI, as manifested by the findings that social support indirectly and negatively affected NSSI by reducing psychotic-like experiences in individuals with threatening experiences only, whereas social support was ineffective to affect NSSI in individuals with deprivation experiences.

**Conclusion** Compared to individuals without adverse experiences, individuals with threatening and deprivation experiences both exhibited lower levels of social support and higher degrees of psychotic-like experiences, but only individuals with threatening experiences exhibited higher levels of internet addiction and NSSI. Furthermore, different dimensions of adverse experiences altered the psychopathological pathways by which social support influences NSSI, as manifested by the findings that social support indirectly and negatively affected NSSI by reducing psychotic-like experiences in individuals with threatening experiences only, whereas social support was ineffective to affect NSSI in individuals with deprivation experiences.

PU-046

## **The P300 amplitude predicts neural reactivity and responsiveness to antidepressants in adolescents with depression: an ERP study**

Lin Zhao, Li Kuang  
The First Affiliated Hospital of Chongqing Medical University

**Objective** Adolescent depression has extremely high rates of recurrence and disability and is significantly associated with suicide risk. No clear neurobiological markers have yet been identified. Antidepressants are widely used to treat depression, and there are also no neurobiological signatures that accurately reflect the effects of antidepressant treatment. Therefore, it is essential to find a reliable neurobiological marker.

**Methods** One hundred and seven patients with major depressive disorder (MDD group, 30 males, 77 females, mean age: 14.80 years), and 25 healthy subjects (HC group, 13 males, 12 females,



mean age: 15.72 years) were recruited to perform a negative emotional stimulation task. All participants completed the Hamilton Depression Scale and a self-administered questionnaire to collect demographic information. We administered medication to 107 adolescents with MDD for 8 weeks; 61 of these patients were followed up. Multichannel EEG was recorded continuously from 64 scalp electrodes using the Curry 8 system. EEG signal preprocessing and analysis was performed offline, using the EEGLAB toolbox in MATLAB. ERP component characteristics associated with emotional processing were extracted from the difference waves and statistically analyzed.

**Results** N100 and P300 amplitude was significantly greater in adolescents with depression than in healthy adolescents under neutral and negative emotional cues. P300 amplitude was greater under negative emotional cues than neutral emotional cues in adolescents with depression. The depression scale scores of adolescents with MDD decreased significantly after treatment with sertraline-based antidepressants. The P300 amplitude under neutral and negative emotional cues decreased significantly. Further, there was a strong positive correlation between depression scores in adolescents with MDD before and after treatment and in P300 amplitude under negative emotional cues.

**Conclusion** Adolescents with depression exhibited an increase in N100 and P300 amplitude than healthy adolescents in the face of negative emotional stimuli; the P300 amplitude in adolescents with depression significantly decreased after antidepressant medication and was positively correlated with improvement in depressive symptoms, suggesting that P300 amplitude may be a potential neurophysiological basis for the development of adolescent depression and response to medication treatment.

## PU-047

### 轻度糜烂性食管炎患者的临床特征分析

胡宵月<sup>1,2</sup>、朱萌然<sup>1,2</sup>、郑吉敏<sup>1</sup>、胡仁盼<sup>1,2</sup>、李月芹<sup>1</sup>、蔡聪会<sup>1</sup>、王玉珍<sup>1</sup>

1. 河北省人民医院

2. 河北北方学院研究生院

**目的** 里昂共识将重度糜烂性食管炎作为胃食管反流病的确定性依据，而临床上轻度 EE 更常见。我们旨在分析轻度 EE 危险因素并评估使用抑酸剂的必要性，为轻度 EE 人群的诊疗思路提供依据。

**方法** 选取 2022 年 1 月至 2022 年 6 月河北省人民医院消化内科诊断为 EE 患者。遵循纳入标准及排除标准后，最终纳入轻度 EE 患者 144 例(A 级 80 例，B 级 64 例)；根据是否伴有临床症状将轻度 EE 分为症状性 EE 与无症状 EE。对入组患者患者，进行问卷调查，内容包括一般资料、Gerd Q、精神心理障碍量表评分、匹兹堡睡眠质量指数量表评分及 PPI 治疗效果。应用 ANOVA 方差分析、卡方检验、LSD 检验等统计学方法进行数据分析。

**结果** 1. EE 患者 237 例，轻度 EE 患者 178 例，占 75.1%。2. 轻度 EE 和 NERD 患者总体资料分析：男/女性别比例 103/66；平均年龄(52.0±13.4)岁；BMI 平均范围为(25.1±4.0)kg/m<sup>2</sup>；吸烟 54 例(32.0%)；饮酒 74 例(43.8%)；Gerd Q≥8 分 62 例(36.7%)；合并睡眠障碍者 63 例(37.3%)；焦虑状态 75 例(44.4%)；抑郁状态 56 例(33.1%)；行 PPI 治疗者 115 例，PPI 试验阳性 69 例(60.0%)。

3. 内镜阳性 A-SEE、B-SEE、AEE 患者三组间一般资料、危险因素及临床症状评分量表比较：三组间患者 Gerd Q 量表阳性诊断率比较，差异存在统计学意义。4. 具有反流症状的 A-SEE、B-SEE、NERD 患者三组间一般资料、诱发因素及临床症状评分量表比较：三组间平均年龄、饮酒、Gerd Q 量表阳性诊断率、合并睡眠障碍情况比较，差异存在统计学意义。5. GERD 不同亚型 SEE、AEE、NERD 患者三组间一般资料及评分量表比较：三组间平均年龄、饮酒占比、Gerd Q 量表阳性诊断率、睡眠障碍情况比较，差异存在统计学意义。6. SEE 组与 NERD 组 PPI 治疗效果比较：两组间比较，差异存在统计学意义。

**结论** EE 患者中大部分为轻度 EE(75.1%)，SEE 占 62.5%，AEE 占 37.5%。饮酒是 EE 患者的诱发因素。高龄、睡眠障碍与 NERD 的发生有关。相比于 AEE、NERD 患者，Gerd Q 量表对 SEE

患者阳性诊断率更高。无需使用 PPI 患者中, A 级占 21.5%, B 级占 13.9%。使用 PPI 治疗的轻度 EE 患者短期内症状改善情况明显优于 NERD 患者。

## PU-048

### 甲基苯丙胺使用障碍者的焦虑、抑郁与睡眠问题

李铃、廖艳辉

浙江大学医学院附属邵逸夫医院

**目的** 探究甲基苯丙胺使用障碍 (Mathemphatamine use disorder, MUD) 患者的焦虑、抑郁和睡眠问题发生率。

**方法** 共纳入 462 名 MUD 患者和 312 名正常对照。两组均使用汉密尔顿焦虑量表、汉密尔顿抑郁量表和匹兹堡睡眠质量指数分别对焦虑、抑郁和睡眠情况进行评估。

**结果** MUD 患者的焦虑、抑郁及睡眠问题发生率均高于正常对照 (焦虑: 47.3% vs. 3.1%; 抑郁: 50.2% vs. 2.1%; 睡眠问题: 62.0% vs. 31.7%), 所有 p 值均 < 0.001。多因素 logistic 回归分析提示, MUD 患者出现焦虑 (OR=22.04, 95%CI [8.75,55.49])、抑郁 (OR=38.79, 95%CI [13.11,114.76]) 和睡眠问题 (OR=3.36, 95%CI [2.25,5.02]) 的风险比正常对照更大。

**结论** 与对照组相比, MUD 组更容易发生焦虑、抑郁与睡眠问题, 在 MUD 的临床治疗中, 要对焦虑、抑郁和睡眠问题进行评估和干预。

## PU-049

### Improvement of executive function and transfer effects after attention training for children with different subtypes of ADHD at different levels of alertness

Yunyun Du<sup>1</sup>, Xiang Zhang<sup>2</sup>, Jing Lu<sup>2</sup>, yanrong Wang<sup>1</sup>, Jiying Li<sup>2</sup>, Xiaomin Ma<sup>2</sup>, Jianqun Fang<sup>1</sup>

1. General Hospital of Ningxia Medical University

2. Ningxia Medical University

**Objective** To explore the improvement of core symptoms, executive functions and their transfer effects of a computer-assisted attention training task developed based on the CPT paradigm design for different subtypes of ADHD children with different levels of alertness.

**Methods** Randomized controlled approach was applied in this study. Forty-one children with ADHD, including 22 children with ADHD-I and 19 children with ADHD-C, were placed into training group. They were trained for 8 weeks with high-frequency attention training, 3 times a week. Thirty-nine normal children were placed into randomized control group. Children in the two groups were required to complete the General Information Questionnaire, ADHD-RS scale, PSQ scale, ANT test, SCWT test and WCST test before training, and children with ADHD-I and ADHD-C completed one session after 8 weeks of training

**Results** After attention training, there were statistically significant differences between children in the ADHD group and the control group in terms of core ADHD symptoms and executive functioning ( $P < 0.05$ ).

**Conclusion** The use of a sustained attention training task improved core symptoms and executive function in children with ADHD-I and ADHD-C with a significant transfer effect. Improvement in core symptoms and executive function was better in children with high levels of alertness in ADHD-I and ADHD-C than that in children in the low alertness group

PU-050

## 经典心身疾病心身同治研究概述

袁延青

内蒙古准格尔旗中心医院

**目的** 本文选取笔者 2019 年---2022 年门诊 1000 例经典心身疾病心身同治案例研究总结如下。其中反复门诊就医转诊 862 例, 临床各科联络会诊 138 例, 均有心理创伤史或处于心理应激状态。述情障碍患者不能适当地表达情绪、缺少幻想, 普遍存在于心身疾病、神经症和各种心理障碍的患者中。述情障碍者由于注意偏向生理信息而忽略情绪信息, 甚至不承认自己心理问题。他们注意外部事物而离开了对内心活动的关注, 对产生的负性情绪反应无法识别、辨识和描述, 缺乏透露内在感受的能力, 导致负性情绪情感不能得到及时疏泄而长期存在, 最终可能导致躯体症状甚至躯体疾病的产生

**方法** 由于述情障碍者对情绪变化的领悟能力差, 心理治疗反应不佳, 常给治疗带来不利影响。经过躯体评估、心理评估、生活事件评估后明确其述情障碍、人格因素及创伤事件后进行积极的心理危机干预。

**结果** 我院整合临床心理学/睡眠医学/精神病学为一体的模式获得中华医学会心身医学分会认证“心身整合诊疗中心”。1000 例经典心身疾病心身同治案例均取得满意疗效, 避免了反复就诊与住院。同时, 缩短了住院时间, 减轻了疾病负担。

**结论** 心身疾病单纯躯体治疗效果欠佳, 易导致并发症及多脏器功能损害。心身同治可有效缓解躯体症状, 各种生命体征与生理指标平稳, 避免了并发症发生及多脏器功能损害。

PU-051

## 新冠疫情放开初期住院医师心理健康状况及相关因素研究

潘瑞博、钱燕丹、潘琦、张青、陈巧珍

浙江大学医学院附属第二医院、浙江省第二医院

**目的** 2022 年底新冠疫情防控解除, 疫情出现暂时性大流行, 医护人员面临了自身健康和新冠患者救治的双重压力, 住院医师承受了巨大的身心压力。本研究的目的是调查疫情冲击下住院医师的心理健康状况(包括焦虑、抑郁、躯体症状等), 并分析其影响因素。

**方法** 在疫情放开后 1-2 月期间对住院医师进行线上横断面调查, 内容包括一般信息、GAD-7、PHQ-9、PHQ-15、负性事件问卷、社会支持量表、应对方式量表、替代创伤问卷、职业倦怠和创伤后成长情况。

**结果** 住院医师焦虑、抑郁和躯体症状的发生率较高, 分别为 20.88%、28.53%和 41.47%; 抑郁症状的保护因素是问题应对方式( $OR=0.95$ , 95%CI:0.91-0.99); 危险因素是以情绪应对方式( $OR=1.05$ , 95%CI:1.00-1.09)、工作倦怠( $OR=1.09$ , 95%CI:1.06-1.12)和负性生活事件( $OR=1.04$ , 95%CI:1.02-1.06)。焦虑症状的危险因素为替代性创伤( $OR=1.03$ , 95%CI:1.01-1.05)、职业倦怠( $OR=1.07$ , 95%CI:1.04-1.11)和负性生活事件( $OR=1.93$ , 95%CI:1.01-1.06); 躯体症状的保护因素是适当的睡眠时间( $OR=0.49$ , 95%CI:0.27-0.88); 危险因素为替代性创伤( $OR=1.02$ , 95%CI:1.01-1.04)、职业倦怠( $OR=1.04$ , 95%CI:1.01-1.06)和负性生活事件( $OR=1.05$ , 95%CI:1.02-1.06)。

**结论** 本研究发现, 在新冠疫情放开的特殊时期, 受负性事件和职业倦怠的影响, 住院医师焦虑、抑郁和躯体症状的发生率较高。以问题应对方式有利于降低抑郁发生, 减少工作时间和职业倦怠、确保充足的睡眠时间可能有助于改善住院医生的心理健康状况。

PU-052

## New Version of Application for Smoking Cessation: A Qualitative Study of User Experiences

Jieyin Jin, Yanhui Liao  
Sir Run Run Shaw Hospital

**Objective** Smartphone applications (Apps) are good platform for digital therapy. However, their application in smoking cessation is limited. Here, we developed a smoking cessation APP based on cognitive behavioral therapy (CBT) to help Chinese smokers quitting smoking more easily and effectively. We upgraded the initial version of the application according to the feedback from users of pilot clinical study. The current research aims to collect users' comments on this new version of smoking cessation APP for guiding the further upgrading and improvement.

**Methods** It is a qualitative study of semi-structured interviews. Seven participants with smoking behaviors (male, 29-49 years old) were recruited and formed a focus group. After participants tried the new version of the application, the evaluation of this APP was collected including the themes about emotion, interaction, function and user interface (UI). We conduct thematic analysis based on qualitative data.

**Results** In general, users appreciate the APP's value and define the APP as the anchor/backbone of their cessation. The upgraded application shows more emotional support/care, warm interaction between people, active/customized interventions, and more attractive content and intuitive UI. Furthermore, users have provided some valuable suggestions for the app.

**Conclusion** The study introduces the specific feedback and suggestions of smoking users about the functions of the CBT-based smoking cessation application. This information is critical for future application development.

PU-053

## 职业压力对规范化培训住院医师胜任力的影响

沈禹泽<sup>1,2</sup>、钱燕丹<sup>3</sup>、潘琦<sup>1</sup>、潘瑞博<sup>1</sup>、陈巧珍<sup>1</sup>

1. 浙江大学医学院附属第二医院

2. 杭州市临平区第一人民医院

3. 嘉善县第三人民医院

**目的** 了解新冠疫情放开初期的医疗冲击对规范化培训住院医师六大胜任力的影响，探索公共卫生事件下更加科学化、规范化的医学教育模式。

**方法** 通过发放线上问卷，收集在培住院医师的基本情况（性别、年级、年龄、受教育程度、婚姻状况、住培类型、是否临时转岗、每周工作时长）、职业倦怠及疫情放开 1 月前后职业素养、专业能力、病人管理、沟通合作、教学能力、学习提升六大胜任力情况，比较分析胜任力在公共卫生事件前后的变化，分析其相关因素。

**结果** 疫情放开 1 月后，住院医师的六大核心胜任力相比于开放前均有显著的提升（ $P<0.05$ ）；临时转岗抗疫一线的住院医师在专业能力和病人管理方面的提升显著高于非转岗住院医师（ $P<0.05$ ）；工作时长在 50-59 小时/周的住院医师在病人管理、沟通合作以及学习提升方面获得的提升高于工作时长 $\geq 60$  小时/周的住院医师（ $P<0.05$ ）；每日睡眠 6-8 小时的住院医师在职业素养方面的提升高于每日睡眠 $\leq 6$  小时的住院医师（ $P<0.05$ ）；职业倦怠程度与住院医师在职业素养、沟通合作以及学习提升方面的提升呈负相关（ $P<0.05$ ）。

**结论** 疫情放开后的医疗冲击对住院医师胜任力锻炼有积极影响；适度的工作时长和睡眠时间有助于胜任力的提升，但过高的职业倦怠感可能会阻碍住院医师胜任力的提升。

PU-054

## Efficacy of fecal microbiota transplantation for patients with gastroesophageal reflux disease combined with anxiety and depression

Jiawei Chen, Zhiping Chen

900th Hospital of Joint Logistics Support Force of the People's Liberation Army

**Objective** It is reported that anxiety and depression may be accompanied by dysbiosis of the gut microbiota, and changing the gut microbiota may alter emotional states. Patients with gastroesophageal reflux disease often experience anxiety and depression, which can lead to high sensitivity to reflux and poor clinical efficacy of proton pump inhibitors (PPI). We applied fecal microbiota transplantation (FMT) to patients with gastroesophageal reflux disease combined with anxiety or depression, observed changes in their microbiota, and evaluated the efficacy of fecal microbiota transplantation in the treatment of gastroesophageal reflux disease combined with anxiety and depression.

**Methods** Patients diagnosed with gastroesophageal reflux disease combined with anxiety or depression were enrolled and randomly divided into an FMT group and a control group. Fecal samples from all the patients were collected and analyzed for the fecal microbiome through 16sRNA sequencing. The FMT group received oral transplantation of fecal microbiota capsules (FMT capsules) and PPI, while the control group received oral administration of empty capsules and PPI (the same dose as the FMT group) for 8 weeks. All the patients conducted the GERDQ, RDQ, and Anxiety and Depression Scale scores before treatment, as well as the 1st, 4th, and 8th weeks during the treatment. And fecal samples were collected for microbial community testing.

**Results** A total of 100 patients diagnosed with gastroesophageal reflux disease with anxiety or depression were enrolled and randomly divided into an FMT group (n=50) and a control group (n=50). Compared with the scores before treatment, the control group showed no significant difference in scores after the 1st, 4th, and 8th weeks of treatment ( $p>0.05$ ), as well as no significant change in fecal microbiota ( $p>0.05$ ). Meanwhile the FMT group showed no significant difference after the first week treatment ( $p>0.05$ ), neither in fecal microbiota ( $p>0.05$ ). At the fourth week of treatment, the RDQ score decreased significantly ( $p<0.05$ ). The GERDQ, anxiety, and depression scores slightly decreased, but the difference was not statistically significant ( $p>0.05$ ). And there was no significant change in the fecal microbiota ( $p>0.05$ ). After 8 weeks of treatment in the FMT group, GERDQ, RDQ, anxiety and depression scores were significantly reduced compared to the scores before treatment ( $p<0.05$ ), and there were significant changes in fecal microbiota ( $p<0.05$ ). In terms of comparison between the two groups, there was no statistically significant difference in scores and fecal microbiota at the first week of treatment ( $p>0.05$ ). At the 4th week of treatment, the RDQ score of the FMT group was significantly lower than that of the control group ( $p<0.05$ ). But there were no significant changes in GERDQ, anxiety and depression scores, and fecal microbiota compared to the control group ( $p>0.05$ ). At the 8th week of treatment, all scores in the FMT group were significantly lower than the control group ( $p<0.05$ ). And there was a significant change in the fecal microbiota ( $p<0.05$ ).

**Conclusion** Fecal microbiota transplantation can affect the gut microbiota of patients with gastroesophageal reflux disease and anxiety or depression by increasing the content of beneficial microbiota, and improve symptoms of gastroesophageal reflux and anxiety and depression.

PU-055

## COVID-19 康复后睡眠障碍关键基因和分子通路的生物信息学分析

杜鑫哲

山西医科大学第一医院

**目的** 本研究旨在通过生物信息学分析鉴定 COVID-19 康复后睡眠障碍的关键基因和分子通路，以探索 COVID-19 和睡眠障碍（Sleep Disturbance, SD）两者的潜在关联及生物学途径，并预测潜在治疗药物。

**方法** 从基因表达综合数据库（GEO）下载 SD 和 COVID-19 基因表达数据集，经 R 软件包 limma 筛选差异表达基因（DEGs），筛选出两数据集共同上调、下调 DEGs。通过 GeneCards 数据库筛选出 SD 相关基因，经 Venn 图取交集获得 SD 相关 DEGs，并进行 KEGG 富集分析。进而构建蛋白质互网络（PPI）并通过 Cytoscape 中的 Mcode 插件和 LASSO-cox 回归识别关键基因，构建 ROC 曲线评估预测效能。最后通过 CMap 数据库预测可能对 COVID-19 康复后睡眠障碍有疗效的药物。

**结果** SD 数据集中共鉴定出 3340 个 DEGs，其中 1693 个上调，1647 个下调。在 COVID-19 数据集中共鉴定出 13532 个 DEGs，其中 5543 个上调，7989 个下调。从 GeneCards 数据库中筛选 1808 个 SD 相关基因。取 SD 数据集和 COVID-19 数据集共同上调、下调 DEGs 与 SD 相关基因取交集，获得 94 个 SD 相关 DEGs。KEGG 富集分析结果显示，SD 相关 DEGs 主要富集在自身免疫性疾病的通路。

构建 PPI 网络，并通过 Cytoscape 软件 MCODE 插件对其进行聚类分析，筛选出枢纽基因 16 个，使用 LASSO-cox 回归方法筛选对预测样本准确性最高的关键基因，确定了 4 个关键基因：白细胞介素 10 (IL10)、E1A 结合蛋白 P300 (EP300)、瘦素 (LEP)、缺氧诱导因子 1 亚基  $\alpha$  (HIF1A)。

**结论** 本研究基于生物信息学方法，鉴定了 16 个 SD 与 COVID-19 共差异表达的枢纽基因，并进一步筛选出 4 个关键基因，其诊断效能良好，可作为 COVID-19 康复后睡眠障碍的诊断标记物。本研究筛选出可能作为治疗 COVID-19 康复后睡眠障碍药物靶点，为 COVID-19 康复后睡眠障碍的治疗，提供了候选药物。

PU-056

## 精神病学的最新命题

邹玉学

六盘水康益精神病医院

**目的** 探索对精神病这一人类重大现象课题的新认识，创新和改变 我们对这一类疾病的认知、预防和治疗理念。

**方法** 对现今已经取得的研究资料及成果进行再分析，大胆假设、同时借用元分析理论原理和方法。结合我在临床上的观察及发现，为分析构筑出一幅清晰的路线图。

**结果** 1、通过对现有研究资料成果的再分析与研究发现：精神病的起因，无论是以其强大的生物学基础作后盾、还是以每一个人所处的生活环境、社会环境和家庭环境密切相关。最终都是通过患者选择逃避现实来实现的，如果不选择逃避现实，人们就有可能直接走向死亡。而选择逃避现实这一现象，本身对人类自己的心灵就起到了自我保护的作用。如果通过选择逃避现实都还不能减缓自己的心理（精神）压力的话，人们就会选择极端的行为——自杀，这就是为什么罹患精神疾病的人群比普通人群自杀率高的一大原因。 2、精神病这种现象的思维模式或/和行为模式是人类发明创造的动力和源泉，并且是在人类（或者叫物种）进化的过程中符合生命适应性，被保留下来的。这些发明创造之所以没有得到高度升华和利用，是因为患者的知识文化大多处于亚文化

状态，所以，大多是以本能内驱力的活动表现了出来。3、精神病这种现象是人类进化的结果，是物种为了符合生命的适应性被保留下来的。

**结论** 1、精神障碍患者通过选择逃避现实而罹患精神障碍，同时也通过选择逃避现实起到了对自己心灵的保护作用。2、精神病这种现象的思维模式或/和行为模式，是人类发明创造的动力和源泉。之所以没有得到高度升华，是因为大多数患者都处于亚文化状态，所以，大多以本能内驱力的形式表现出来。3、精神病这种现象绝不是可有可无的一种自然和社会现象，它的产生对人类的生存和发展具有保护作用，它是人类进化选择的结果，是符合生命适应性的。

PU-057

## 人格和双相障碍有什么关系?: 一项系统综述

李俊尧、罗庆华  
重庆医科大学附属第一医院

**目的** 双相障碍患者（Bipolar disorder）传统上会表现为一种有明显兴奋和沮丧情绪的紊乱，且存在发作间隙的情绪不稳定。由于双相患者症状的诊断存在争议，重点是收集根据五因素模型和 Cloninger 的人格生物社会模型捕获的人格特质的相关研究，探讨与双相障碍之间的整体关系。

**方法** 对 PubMed、Web of science 核心合集、Embase 和 Cochrane 检索自数据库建立以来截至 2023 年 5 月 13 日发表的所有关于人格与双相障碍的临床证据，以“双相障碍”和“人格”或“气质”为关键词进行探索性搜索。经两位审查者获取全文，独立筛查后共纳入 62 篇文献。

**结果** 基于五因素模型得出的 BD 人格特质趋向一致，较健康人群存在有高神经质和开放性得分，低尽责性，宜人性和外向性得分。人格特质与临床表现密切相关，肥胖、有童年创伤、产后抑郁、有自杀相关表现的 BD 患者都具有高神经质的特征。关于用人格维度与其他疾病进行区分的研究，双相抑郁与单相抑郁相比似乎具有更高的神经质和更低的宜人性；与边缘性人格障碍比较似乎只有性别上的差异，男性中 BD 人群可能具有更高的宜人性和外向性；共病其他精神障碍的诊断中，共病 ADHD 或 PD 似乎都能够通过人格维度 N 进行区分。TCI 捕获的人格特质维度上会表现各维度的一致性模式，但在某些临床现象和共病上会显示出特质方面的差异。临床表现上，高 HA 得分的 BD 患者可能需要多变的干预方案进行刺激，低得分 SD 和低得分 CO 与行为成瘾相关，NS 得分高患者更容易有药物滥用，PS 低得分患者更容易出现酒精成瘾，在自杀相关的人格特质维度研究上普遍认为高 NS 和高 HA 人格特质显著与自杀相关。疾病的区分上，认为重度抑郁与 BD 之间有显著的气质共性，但在 ST 和 NS 维度上存在不同。合并症上，高 HA 可以用于区分 PD 共病，HA 高和低 SD 能够区分焦虑症共病。

**结论** BD 患者表现出与健康个体不同的人格结构，BD 中精神共病的存在以及某些临床表现与特定的人格特征有关。人格至少在某种程度上介导双相情感障碍的症状表现。目前研究在样本量、量表使用、试验范式都存在异质性，结果存在一定的差异。但不可否认客观性人格测验工具在临床上广泛应用，对于疾病的心里病因、临床特征、诊断及疗效预测都有一定的价值。未来需要解决如何将人格测验得到的有价值的临床资料应用于解决临床工作的实际问题，提高双相障碍诊断的准确率。

## PU-058

**情绪释放技术(EFT)对疫情下大学生焦虑水平和睡眠状况的影响**

牟安奇  
兰州大学

**目的** 通过对比分析,观察 EFT 对本校大学生疫情期间焦虑水平和睡眠状况的缓解和改善情况。

**方法** 设计并通过问卷星发放《疫情下大学生焦虑及睡眠状况》问卷,内容包括基本人口学资料、SAS、PHQ-9、PSQI 等,收集完毕后对其进行整理统计和数据分析。在 SAS 得分大于 50 分的 57 名同学中,排除无参与研究意向的 7 名同学,共有 50 名同学纳入研究。50 名同学随机分为试验组和对照组,告知其实验目的、方法,风险及受益情况。对照组给予一般心理指导和健康教育,试验组在对照组基础上同时进行 EFT 干预治疗(包括对焦情绪、评估情绪强度、建立宣告句与提示语、轻敲 8 个穴位和评估反馈五个流程),干预为 3 次/d,10~15 min/次,可按照受试者情绪状态和心理状况调整次数和时间,1 周为一疗程,连续治疗 4 个疗程。四周后,观察两组 SAS、PHQ-9 和 PSQI 评分变化以及比较两组满意度,进行统计学分析。

**结果** 共收集有效问卷星反馈 463 名,其中 SAS 标准得分大于 50 分共 57 名;焦虑障碍发生率为 12.3%;男女生发生率未见统计学差异( $P>0.05$ )。干预前试验组(25 名)和对照组(25 名)SAS 分别为:  $63.65\pm 5.16$  和  $63.29\pm 5.44$ , PHQ-9 分别为  $6.12\pm 2.41$  和  $5.98\pm 2.63$ , PSQI 分别为  $8.17\pm 3.32$  和  $8.29\pm 3.01$ ,干预前两组评分比较差异无统计学意义( $P>0.05$ )。4 周干预结束后,试验组 SAS、PHQ-9 和 PSQI 得分分别为  $55.12\pm 4.37$ 、 $4.12\pm 1.96$ 、 $4.32\pm 0.68$ ,均较干预前显著下降,评分比较差异有统计学意义( $P<0.05$ );试验组进行 EFT 干预后各评分改善均优于对照组,且具有统计学意义( $P<0.05$ );对照组干预后评分有下降趋势,但 PSQI 得分差异无统计学意义( $P>0.05$ );试验组满意度高于对照组,差异有统计学意义( $P<0.05$ )。

**结论** 情绪释放疗法(EFT)操作简单,能有效降低疫情下大学生的焦虑水平,改善睡眠质量。在特殊应激状态下,有利于调整大学生心理与睡眠状态,促进身心健康。其效果优于常规心理指导与健康教育,满意度较高且花费少,可考虑未来大力推广。

## PU-059

**以精神障碍为首发表现的抗 N-甲基-D-天冬氨酸受体/抗神经胶质纤维酸性蛋白/谷氨酸海人藻酸受体三重抗体阳性  
自身免疫性脑炎的重叠综合征一例**

张江、刘乙璇  
华北理工大学附属医院

**目的** 对以精神障碍为首发表现的三重抗体阳性自身免疫性脑炎的重叠综合征患者进行报道,以提高对该类疾病的认识。

**方法** 报道 2022 年 9 月 11 日唐山市华北理工大学附属医院收治的一例以精神障碍为首发表现的抗 N-甲基-D-天冬氨酸受体/抗神经胶质纤维酸性蛋白/谷氨酸海人藻酸受体三重抗体阳性自身免疫性脑炎的重叠综合征患者,国内尚无以上报道。对其临床特征、哪些抗体为责任抗体等进行分析。

**结果** 患者,女,25 岁,因“发热、反应迟钝、烦躁不安”于 2022 年 9 月 11 日收治华北理工大学附属医院神经内科二病区。初步诊断为:病毒性脑炎?。入院后给予抗病毒等综合治疗,症状无明显改善,大嚷大叫,烦躁不安,精神症状明显,不能配合,输液时需多人强制约束,转入重症医学科继续诊治。入院后第 5d,患者神志不清,较前无好转,间断躁动,因结合体征、检查、化验结果,均不支持病毒性脑炎,取脑脊液送自身免疫性脑炎相关系列检查。入院第 9d 患者自身免疫性脑炎自身抗体谱回报:NMDAR 抗体 IgG 阳性,GFAP 抗体 IgG 阳性,GluK2 抗体 IgG 阳性,考



虑患者为:自身免疫性脑炎, 修正诊断: 自身免疫性脑炎(三重抗体重叠综合征)。血浆置换第 3d, 患者症状无好转, 始终无法配合治疗, 间断躁动, 需要持续静脉输注丙泊芬镇静治疗。与家属沟通后于 2022 年 9 月 26 日转至北京天坛医院继续治疗。在天坛医院相继给予激素(甲强龙 250mg-120mg, 泼尼松 60mg-55mg)和丙种球蛋白 25g 等治疗。治疗过程中仍间断发热, 体温在 38 摄氏度左右, 病情无好转。5 日后转入重症医学科继续治疗。约治疗 1 个月后病情好转出院。2 月后复查发现畸胎瘤。

**结论** 1.本患者自身免疫性脑炎抗体的检测结果为 NMDAR 抗体、GluK2 抗体和 GFAP 抗体均为阳性, 属于三种抗体重叠阳性综合征, 临床比较罕见。特别是 GluK2 抗体, 国外报道仅有 8 例阳性病例, 国内尚无报道。特别以精神障碍为首发, 容易误诊。

2.本例患者显示出的三种自身免疫性脑炎抗体阳性重叠综合征中, NMDAR 抗体和 GluK2 抗体为责任抗体, GFAP 抗体为非责任抗体, 属于伴随抗体。本病临床综合征以 NMDAR 抗体相关脑炎的经典症状为主, 合并有 GluK2 抗体相关脑炎的非典型症状, 但我们观察到, 二者叠加后, 经典表现变异, 临床症状加重, 病程延长, 单轮治疗无效。由于以上三种抗体叠加现象国内尚无报道, 其临床表型特征仍需进一步观察研究。

## PU-060

### “阳光医院”模式对一线轮班医务人员失眠及焦虑抑郁的干预探讨

蒋进珍

武汉市中西医结合医院(武汉市第一医院)

**目的** 通过探讨“阳光医院”模式对一线轮班医务人员失眠及焦虑抑郁干预前后的变化, 以期改善一线轮班医务人员身心健康提供参考。

**方法** 纳入武汉市一线轮班失眠伴焦虑抑郁医务人员 140 例, 采用随机数字表法分为研究组和对照组各 70 例, 研究组采取“阳光医院”模式进行干预, 对照组予以常规干预。采用汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)、抑郁症自我评估量表(PHQ-9)、焦虑自评量表(SAS)评价心理状态, 采用匹兹堡睡眠质量指数量表(PSQI)、失眠严重指数量表(ISI)、爱泼沃斯嗜睡量表(ESS)、疲劳评估量表(FAS)评价睡眠状态, 分别在基线期、访视 1(基线+干预 6 个月)、访视 2(基线+干预 12 个月)对心理与睡眠状况进行评估。

**结果** 研究组与对照组的 HAMD、HAMA、PHQ-9、SAS 评分在不同时间段上均有组内差异( $P < 0.05$ ); 其中, 在访视 2 时两组 HAMA、SAS 评分均存在明显组间差异( $P < 0.05$ )。研究组与对照组的 PSQI 量表 7 个维度评分及总分、ISI、ESS、FAS 总分在不同时间段均存在组内差异( $P < 0.05$ ); 其中, 两组的 PSQI 评分在访视 2 时出现明显组间差异( $P < 0.05$ ); 两组的睡眠质量、睡眠效率评分、ESS、FAS 在访视 1、访视 2 均有明显组间差异( $P < 0.05$ )。

**结论** 基于“阳光医院”全流程多维度多模式干预可改善一线轮班医务人员焦虑、抑郁、失眠等睡眠心理问题, 嗜睡、疲劳症状和睡眠质量、睡眠效率在短期干预后即可明显改善, 焦虑、整体失眠情况在长期干预后改善尤为明显。该模式对改善一线轮班医务人员失眠及焦虑抑郁有一定促进作用。

## PU-061

### 经颅微电流联合右佐匹克隆治疗非器质性失眠的临床研究

马中锐

成都市第五人民医院

**目的** 观察经颅微电流刺激(CES)和右佐匹克隆联合治疗非器质性失眠症的临床疗效。

**方法** 将 80 例非器质性失眠症患者根据患者意愿分为 2 组: 经颅微电流联合右佐匹克隆治疗组(40 例, 脱落 3 例, 实际 37 例)和右佐匹克隆对照组(40 例, 脱落 7 例, 实际 33 例), 并给予经颅微电

流治疗（国械注进：20152211434，经颅微电流强度为 10~500 $\mu$ A，频率 1.5Hz，以双耳有轻微振跳的舒适感即可，每次治疗时间 30min，早晚 1 次，右佐匹克隆 1~3mg，睡前 30min 口服 1 次服用）。分别在治疗前、治疗 4 周、8 周、16 周末采用匹兹堡睡眠质量指数(PSQI)对患者进行评估，采用药物副作用量表评估有无药物所致副作用产生。

**结果** 经颅微电流联合右佐匹克隆治疗组的显效率高右佐匹克隆组，且联合治疗组显效更快，两组显效率差异有统计学意义( $P<0.05$ )，经颅微电流联合右佐匹克隆治疗组 PSQI 各因子分在第 4 周后下降明显( $P<0.01$ )，在第 4 周末、8 周、16 周末联合治疗组 PSQI 各因子分均小于右佐匹克隆组，差异具有统计学意义( $P<0.01$ )。治疗过程中无明显不良反应发生。

**结论** 经颅微电流联合右佐匹克隆治疗非器质性失眠症能快速改善失眠症状，远期能减少催眠药物使用，是一种可供选择的安全、有效的治疗非器质性失眠的方案。

## PU-062

### 居家腹膜透析患者抑郁现状及应对方式的研究进展

张馨<sup>2,3</sup>、王晓燕<sup>1,2</sup>

1. 东南大学附属中大医院护理部

2. 东南大学医学院

3. 东南大学附属中大医院肾内科

**目的** 目前，随着腹膜透析患者生存率的提高，腹膜透析人群逐年增加。因其病程较长、病情较复杂，持续的疾病治疗严重影响了患者的工作和生活，同时还带来了沉重的经济负担，生理应激与心理应激的共同乃至协同作用导致患者长期处于负性情绪的困扰。越来越多的居家腹膜透析患者存在抑郁的负性情绪，影响患者心身健康及预后。因此，本文旨在对居家腹膜透析患者抑郁现状、发病机制、及应对方式等进行综述。

**方法** 通过国内外文献综述目前居家腹膜透析患者抑郁状，分析可能的发病机制，对居家腹膜透析患者对抑郁心理的应对方式进行综述。

**结果** 居家腹膜透析患者普遍存在不同程度的抑郁，且易被忽视，有必要进一步关注居家腹膜透析患者的心理及社会支持需求，关注心身健康。大多数患者不能有效识别抑郁情绪，对抑郁情绪采取消极的应对方式。

**结论** 国内在居家腹膜透析患者抑郁现状及应对方式方面仍不容乐观，大多数腹膜透析患者的心理问题被忽视，容易引起一系列的心身健康问题。抑郁的伴发不仅降低了居家腹膜透析患者的生活质量，增加了患者的住院率和死亡率，而且患者的社交质量和社会功能均会受到影响。腹膜透析中心的医护人员应对居家腹膜透析患者采取抑郁的早期筛查、预防及干预，以减轻躯体和精神症状，降低抑郁发病率和抑郁程度，减轻患者疾病负担和死亡率，提高生活质量。

## PU-063

### 基于治疗药物监测优化惊恐障碍患者治疗方案的药学实践

钟羚君、汪天宇、邵华、袁勇贵

东南大学附属中大医院

**目的** 运用治疗药物监测与药物基因组学，优化一例难治性惊恐障碍患者的药物治疗方案。

**方法** 药师全程参与 1 例惊恐障碍再入院患者的治疗过程。药师通过患者病史和自述了解到，该患者曾尝试过艾司西酞普兰、帕罗西汀、氟西汀等多种 SSRI 抗抑郁药物，最近一次住院使用氟西汀后有效缓解焦虑症状和躯体不适，但出院后出现病情反复。门诊定期复诊期间医师曾尝试换用文拉法辛（用药经过未知）但症状并未缓解，遂要求再次入院调整用药方案。医师考率氟西汀曾有效缓解临床症状，因此初始方案使用高剂量氟西汀，一周后测定患者氟西汀有效成分总浓度：

956ng/ml↑（2017 版 AGNP 指南：有效治疗浓度：120~500ng/ml，实验室警告值：1000ng/ml），然而患者焦虑情绪没有明显改善，疼痛部位从背部扩展到右腿，医师减少了氟西汀的剂量，并添加文拉法辛。用药 6 天后，文拉法辛和氟西汀浓度都出现了异常升高，尽管基因报告显示 CYP2C19 为正常代谢型，CYP2D6 为中间代谢型，但药师认为该患者为中老年女性，自身肝脏代谢速率降低，且氟西汀的半衰期长达 4~6 天，体内较高浓度的氟西汀可能会抑制 CYP2C19 和 CYP2D6 酶活性，药物相互作用将导致严重的药物蓄积。此时，患者出现了无法忍受的恶心呕吐，可能是文拉法辛的副作用（文拉法辛有效成分总浓度：529.9 ng/ml↑，2017 版 AGNP 指南：有效治疗浓度：100~400ng/ml，实验室警告值：800ng/ml），考虑到文拉法辛可以缓解症状，医师选择同为 SNRIs 药物度洛西汀。药师分析认为，度洛西汀主要经 CYP1A2 代谢，高浓度的氟西汀和文拉法辛不会降低其代谢速率，缓解焦虑症状的同时，也可有效改善患者的肌肉骨骼疼痛。更换方案一周后，度洛西汀稳态血药浓度达到标且未见异常上升，氟西汀和文拉法辛血药浓度稳步下降，无药物不良反应，患者焦虑症状和躯体症状显著改善。

**结果** 经治疗，患者出院后情绪稳定，躯体症状明显好转。

**结论** 治疗药物监测和药物相关基因检测报告提示，高浓度氟西汀可能抑制 CYP2D6 和 CYP2C19 代谢酶的活性，增加文拉法辛和自身的血药浓度。建议使用通过其他代谢途径代谢的药物，避免药物蓄积。

## PU-064

### 近红外光谱成像技术在青少年抑郁症中的发展现状以及相关研究综述

程丹丹、况利  
重庆医科大学附属第一医院

**目的** 了解近红外光谱成像技术在青少年抑郁症中辅助诊断以及疗效评估的研究进展，为日后青少年抑郁症的诊断和诊疗效果提供一项客观的诊断工具。

**方法** 通过万方，知网，PubMed，Cochrane 等数据库检索了和近红外光谱成像技术、青少年抑郁症相关的期刊，这些文章主要研究了运用近红外光谱成像技术时，青少年抑郁症患者执行词语流畅性任务前后、以及使用不同治疗且执行词语流畅性任务前后患者前额叶和颞叶氧合血红蛋白平均浓度对比。

**结果** 研究表明，在运用近红外光谱成像技术中，健康人群在执行任务时能较好刺激前额叶和颞叶功能，但青少年抑郁症患者大脑激活不足，氧合血红蛋白平均浓度相对健康人群较低，这项结果提示近红外光谱成像技术或许可以作为青少年抑郁症患者的客观辅助诊断。其中，将青少年抑郁症患者细分为伴自伤自杀组和不伴自伤自杀组，将两组氧合血红蛋白平均浓度进行对比，发现伴自伤自杀组前额叶和颞叶的激活程度降低，氧合血红蛋白浓度也低，提示自伤自杀行为或许与前额叶和颞叶功能激活不足有关。同时，也有研究表明，在对于青少年抑郁症的疗效效果评估上，通过近红外光谱成像技术检测患者予以不同治疗前后平均血红蛋白浓度对比，例如药物治疗和神经调控治疗。发现患者治疗前前额叶和颞叶区域氧合血红蛋白平均浓度与治疗后具有差异，提示与患者症状的改善存在相关性，或许近红外光谱成像技术可以成为青少年抑郁症患者诊治疗效的一项客观辅助工具。

**结论** 近红外光谱成像技术可为青少年抑郁症的临床诊断提供客观辅助诊断依据，同时目前的研究初步证实了此技术在区分青少年抑郁症伴或不伴自伤自杀行为和患者诊疗疗效上具有较大潜力，或许存在青少年患者对病史的刻意隐瞒或因年龄较小无法详细描述病情而导致治疗延误，有助于降低主观性所带来的诊断偏倚。

## PU-065

**重度抑郁症患者症状缓解后维持治疗的药物经济学研究**

周东东

重庆医科大学附属大学城医院

**目的** 重度抑郁症 (Major depressive disorder, MDD) 是一类高复发风险的疾病, 本研究旨在分析比较不同药物在 MDD 巩固和维持期治疗的效果及经济学评价。

**方法** 本研究纳入 MDD 巩固和维持期治疗的随机对照研究。首先基于报告的生存曲线提取并构建个体数据。在贝叶斯框架下使用 WinBUGS 软件分别基于 Weibull、Gompertz、log-logistic 以及 log-normal 模型拟合数据, 选择 DIC 最低的模型进行后续生存曲线外推分析。

**结果** 一共纳入 40 个随机对照试验, 多数研究的随访时间在 1 年之内。结果显示 Gompertz 模型的 DIC 最低, 故后续采用 Gompertz 模型进行分析。总的来说, 安慰剂的 1 年无复发率为 55%; 抗抑郁药物的 1 年无复发率为 76%。1 年无复发月排行第一的抗抑郁药物为苯乙肼, 第二为噻奈普汀, 第三为氟伏沙明。另一个值得注意的结果是, 虽然症状缓解后继续维持抗抑郁药物能够较安慰剂显著降低复发率, 但是增加巩固治疗的时间并不能降低撤药后的年复发率。

**结论** 本研究结果提示抗抑郁药物的维持使用能够有效降低症状缓解 MDD 的年复发率, 但并不能降低撤药后的复发风险。本研究对于后续研究的启示: 对于症状缓解的 MDD 患者, 尤其是对于已经巩固治疗时间较长的 MDD 患者, 如何在不断增加复发率的同时科学的撤药是一个值得研究的问题。

## PU-066

**青春期功能失调性子宫出血患者心理健康状况分析**

林勇

嘉兴市康慈医院

**目的** 评估青春期功能失调性子宫出血患者的心理健康状况。

**方法** 采用汉密尔顿抑郁量表-17 项 (HAMD-17)、汉密尔顿焦虑量表 (HAMA)、明尼苏达个性测试量表 (MMPI) 分别对 60 例青春期功能失调性子宫出血患者 (研究组) 以及 60 例健康志愿者 (对照组) 进行测试评估, 并对测试结果进行统计分析

**结果** 青春期功能失调性子宫出血患者的 HAMD-17 与 HAMA 评分均显著高于健康志愿者 ( $P < 0.05$ ); 青春期功能失调性子宫出血患者在疑病、抑郁、癔病、精神病态、精神衰弱等 MMPI 的五个分量表的得分显著高于健康志愿者 ( $P < 0.05$ )。

**结论** 青春期功能失调性子宫出血患者存在焦虑、抑郁等负性情绪以及部分个性缺陷, 需要关注青春期功能失调性子宫出血患者的心理状况。

## PU-067

**基于档案管理与互联网模式下老年痴呆患者早期预防、识别与全程照料科普探索与实践**

林勇

嘉兴市康慈医院

**目的** 我国人口老龄化日益加剧, 罹患老年痴呆人群显著增加, 据相关报道我国罹患阿尔茨海默病性痴呆人群已超过 1000 万, 但仍然存在患病率高、致残率高、并发症高, 就诊率、识别率低的现象;

**方法** 本项目着眼于开展痴呆科普宣教, 关注痴呆健康教育与疾病预防; 开展评估筛查, 注重早期识别; 开展痴呆照护者心理支持讲座; 健康讲座精品视频; 构建认知功能健康档案并动态管理等角度开展;

**结果** 建立老年人群认知健康档案管理模式, 充分发挥互联网平台优势; 营造全社会形成爱老、敬老、助老的氛围, 探索痴呆科学防治体系建设

**结论** 逐步建立预防-治疗-护理-康复-照料全流程、全病程、全周期、全社会参与的服务模式、切实体现共同富裕示范地的健康服务管理模式, 建立预防-宣教-筛查-诊疗-康复-照料的全程防治体系。

PU-068

## **Incidence and Risk Factors of Lower-limb Venous Thrombosis and the Influence of Antidepressants on Coagulation in Patients with Major Depressive Disorder**

Zixin Zhu, Yonggui Yuan, Zhi Xu, Yinghui Li, Tianyu Wang, Yingying Yue, Linlin You

Department of Psychosomatics and Psychiatry, Zhongda Hospital, School of Medicine, Southeast University

**Objective** Evaluate the incidence and potential risk factors of lower-limb venous thrombosis in patients diagnosed with MDD and explore the influence of different antidepressants on coagulation.

**Methods** I Retrospective study: 33 patients with a diagnosis of MDD and lower-limb venous thrombosis from 2015 to 2020 in Zhongda Hospital were included, and 198 patients without venous thromboembolism were matched. Differences between the two groups were compared to find the potential risk factors for lower-limb venous thrombosis.

II Meta-analysis: A meta-analysis was conducted to evaluate the incidence of venous thrombosis in patients with MDD.

III Prospective study: 200 patients with MDD from 2021 to 2022 were selected to be divided into 4 groups according to the types of antidepressants. Changes in coagulation after antidepressive therapy were compared respectively.

**Results** I Retrospective study: The retrospective study showed that the relationship between age and incidence of lower-limb venous thrombosis was statistically significant. Additionally, the ATIII, FDP and DD of the VT group were higher than in the non-VT group.

II Meta-analysis: The meta-analysis study showed that the incidence of lower-limb venous thrombosis in patients with MDD is 0.9%, which is higher than that in the general population.

III Prospective study: The prospective study showed that age, gender, TT, FDP, DD, and the scale scores of SRRS each had a statistically significant effect on lower-limb venous thrombosis in patients with MDD. Further subgroup analysis of the various antidepressants showed that the changes in coagulation indicators in the SSRIs group before and after treatment were the largest, including FIB, APTT, DD, ESR, TT, ATIII, and FDP. The changes in APTT, DD, and ATIII in the SNRIs group and the combination group were statistically significant, but the vortioxetine group had showed no differences in coagulation indicators before and after treatment.

**Conclusion** The incidence of venous thrombosis is significantly higher in patients with MDD than in the general population. MDD is significantly associated with venous thrombosis. Age, movement retardation, a decrease in FDP or a increase in DD may increase the risk of developing lower-limb venous thrombosis in patients with MDD. After treatment with different antidepressants, SSRIs has the greatest impact on coagulation indicators.

PU-069

## Subclinical hypothyroidism and risk factors in young and middle-aged adults with major depressive disorder: a large-scale cross-sectional study

Na Zhao, Liying Yang, Jiacheng Liu, Chuanyi Kang, Xiaohong Wang, Jingjing Shi  
The First Affiliated Hospital of Harbin Medical University

**Objective** Major depressive disorder (MDD) is a prevalent psychiatric disorder with concomitant thyroid dysfunction, but the link between them is unclear. The aim of this study was to elucidate the prevalence and correlates of subclinical hypothyroidism (SCH) in different age subgroups of first-episode and drug-naïve (FEDN) MDD patients.

**Methods** 1717 FEDN MDD outpatients were recruited for this study. They were divided into a younger group ( $\leq 45$  years) and a middle-aged group ( $> 45$  years). Serum thyroid function and lipid level parameters were measured. A self-administered questionnaire was used to collect clinical and demographic data. The Hamilton Depression Scale (HAMD) was used to assess patients' depressive symptoms.

**Results** The prevalence of SCH was higher in middle-aged MDD patients (66.9%) than those in younger patients (58.3%). Compared to younger patients, middle-aged patients had a longer duration of illness, a later age of onset, a higher proportion of female patients, and a lower level of education. Further logistic regression indicated that serum TC and HDL-C levels as well as overweight and obesity were significantly associated with SCH in both groups; however, LDL-C was an independent risk factor associated with SCH in the middle-aged group.

**Conclusion** Our results suggest that the prevalence of SCH is higher in middle-aged MDD patients than in younger patients, and that LDL-C is associated with SCH in middle-aged FEDN MDD patients.

PU-070

## 基于人工智能技术的青少年自杀自伤风险预警模型的研究进展

曾小凤、艾明  
重庆医科大学附属第一医院

**目的** 随着近年来青少年的心理健康问题日益严重，自杀和自伤行为已成为全球关注的社会问题。目前，没有任何有效的临床生物标志物用于自杀诊断，传统的方法显示出局限性。本文基于人工智能技术在监测青少年自杀自伤风险方面的研究进展进行了综述，旨在显著预防和干预自杀、自伤风险，并为未来的研究和应用提供方向。

**方法** 主要方法包括自然语言处理（NLP）即大语言模型、机器学习、深度学习等技术在监测青少年自杀自伤风险的应用。

**结果** 1. 自然语言处理技术在监测青少年自杀自伤风险方面具有较大潜力。通过分析社交媒体、在线聊天记录等文本数据，可以挖掘出青少年的情感、心理状态和风险行为，从而显著的减低青少年自杀、自伤的风险，并能够广泛应用，并可以克服传统诊断方法的局限性。2. 机器学习和深度学习技术在预测青少年自杀自伤风险方面取得了显著的成果。通过构建有效的特征工程和复杂的模型结构，为后续治疗以及预防自杀、自伤等行为作出可靠预警。3. 人工智能技术在监测青少年自杀自伤风险方面的应用仍然面临一些挑战，如数据获取的难度、隐私保护和伦理问题等。

**结论** 人工智能技术在监测青少年自杀自伤风险方面具有显著的潜力，可以为预防和干预策略提供有力的技术支持。用于青少年自杀、自伤风险的自动监测，以备将来的工作，这可能为发现有自杀、自伤等倾向的青少年铺平了道路。未来的研究应关注人工智能技术与起病于青少年的行为与情绪障碍等的诊断的融合。

## PU-071

## 久坐与焦虑的剂量反应关系及步行的调节作用

田正、王岚、吴一波  
天津医科大学护理学院

**目的** 分析久坐对焦虑的影响及其剂量反应关系，探讨步行 10 分钟天数、久坐时长对焦虑的交互作用。

**方法** 使用中国居民心理与行为研究（PBICR）2022 年的横断面数据。采用广泛性焦虑障碍量表（GAD-7）评估研究对象的焦虑状况。采用二元 logistic 回归调查久坐时间与焦虑的关联，分析步行 10 分钟天数和久坐的交互作用对焦虑的影响。采用限制性立方样条模型分析久坐时间与焦虑风险的剂量-反应关系。

**结果** 与久坐时间 $\leq 6$ 小时的参与者相比，久坐时间 $> 6$ 小时的参与者的焦虑风险增加了 25.1%(OR=1.251)，久坐时间与焦虑风险之间存在非线性的 J 型关系（非线性趋势的  $P<0.001$ ）。在久坐时间超过 6 小时且一周中步行超过 10 分钟天数 $\leq 5$ 天的人群中，焦虑风险增加了 67.1%(OR=1.671)，在久坐时间超过 6 小时且一周中步行超过 10 分钟天数 $> 5$ 天的人群中，焦虑风险降低了 19%(OR=0.810)。在一周中步行超过 10 分钟天数 $> 5$ 天的人群中，久坐时间与焦虑风险之间存在显著的非线性的 J 型关系（非线性趋势的  $P<0.001$ ），在一周中步行超过 10 分钟天数 $\leq 5$ 天的人群中，久坐时间与焦虑风险呈线性正相关（非线性趋势的  $P=0.131$ ）。在所有基于不同人群的亚组中，久坐时间大于 6 小时且一周中步行超过 10 分钟天数 $\leq 5$ 天均会增加焦虑的风险；除了在睡眠质量差、患有糖尿病和高血压的人群中，久坐大于 6 小时且一周中步行超过 10 分钟天数 $> 5$ 天均会降低不同亚组人群的焦虑风险。在多个亚组中，久坐时间与焦虑风险之间的非线性的 J 型关系仍然存在。

**结论** 久坐时间的增加与焦虑风险的增加独立相关，两者间存在非线性的 J 型关系，一周中步行超过 10 分钟天数 $> 5$ 天可以降低久坐对焦虑的负面影响。未来须进行证据等级更高的试验性研究，以深入探索久坐对焦虑的影响，并建立基于身体活动干预的最有效的治疗方案，以减少全人群中的焦虑患病率。

## PU-072

## 一例新冠后构音障碍康复治疗

高婧、张芹、江钟立、林枫  
南京医科大学附属逸夫医院

**目的** 报道一例感染新冠后出现构音障碍患者的康复评定及康复治疗过程。

**方法** 病史摘要：患者，女，31 岁，本科学历。因“言语不清 4 月”就诊。患者 2022-12-19 新冠感染，12-29 开始出现言语不清，步行不稳，饮水偶有呛咳，曾先后外院就诊，查头颈 MRI+MRA 未见明显病灶，脑电图、心脏彩超、甲状腺激素、基因检测、腰穿脑脊液检查、抗核抗体检查等未见明显阳性结果。诊断为“焦虑抑郁状态”，予抗抑郁、抗焦虑、改善睡眠治疗 3 月。后自觉言语不清及步行不稳症状较前加重，出现下颌及舌肌震颤。后至外院继续就诊，查抗神经抗原抗体检测无明显异常，诊断为“构音障碍”。为求进一步改善言语清晰度及步行稳定性，于 2023 年 4 月 18 日门诊拟“构音障碍”收住入科。

康复评定：最长发音时间 6s，言语过程中有费力表现，存在不适宜停顿，有发音延长现象，喉部发音紧，音调变化小，构音动作无明显异常，存在口-面部动作，且发音启动迟于口-面部构音动作。

Frenchay 构音评定量表：12a/28a，构音障碍类型为功能性构音障碍，严重度为重度障碍。/s/音及/z/音发音时长为 5s，s/z 比值为 1。MoCA 检查为 26 分，数字记忆广度（顺向）为 12，数字记忆广度（逆向）为 5，语音流畅度为 6，语义流畅度为 11。肺功能检查示 FVC 为 2.17，FEV1 为

1.15, FEV1/FVC%为 53, FEV1/VC%为 59%。心肺运动试验示: 症状限制性心肺运动试验阴性, Weber 心功能分级 B 级。入院近红外静息态脑功能检查提示全脑氧合血红蛋白含量低, 全脑功能连接下降, 左侧前额叶功能连接显著下降。

治疗经过: 入院后予草酸艾司西酞普兰片调节情绪。康复治疗: 放松训练、呼吸训练、发音训练、喉部肌肉放松。唇力量与运动范围训练; 舌肌力量与运动范围训练; 语音流畅性及词汇流畅性训练; 心肺功能训练, 重复经颅磁刺激治疗。

**结果** 治疗 10d 后, 患者自觉发音流畅性改善明显, 最长发音时间达 15s, 言语过程中费力表现改善, 未见明显口-面部动作。舌肌力量较入院增加。与家属日常交流质量改善。

**结论** 本例患者因感染 COVID-19 而出现构音障碍, 本文报道了患者的病例特点及评估方法, 并提供了可行的治疗方案。尽管患者表现出言语障碍, 也需考虑患者可能存在认知功能下降, 可通过多方面综合评估与治疗, 改善患者功能。

## PU-073

### 早发精神分裂症及精神病超高危个体静息态脑局部一致性特点

曹晓华<sup>1</sup>、刘莎<sup>1</sup>、冯健平<sup>1</sup>、李强<sup>2</sup>、程龙<sup>1</sup>、徐勇<sup>\*3</sup>

1. 山西医科大学第一医院精神卫生科, 山西医科大学第一医院精神障碍人工智能辅助诊疗山西省重点实验室

2. 武警山西总队医院

3. 山西医科大学精神卫生学系

**目的** 早发精神分裂症 (early-onset schizophrenia, EOS) 起病于 18 岁之前, 此类患者较成年起病者表现为更显著的前驱期神经发育异常和不良预后, 多数患儿起病前已处于超高危风险状态。本研究纳入了 EOS 患者、精神病超高危状态个体及健康对照, 拟通过静息态功能磁共振成像 (fMRI) 指标, 探讨上述人群的神经影像表型特点。

**方法** 研究对象包括: (1) EOS 组: 符合 DSM5 精神分裂症诊断标准, 病程 $\leq 2$  年, 既往无系统用药史, 共 23 例; (2) 高危组: 符合前驱期综合征 (Criteria of Prodromal Syndromes, COPS) 诊断标准, 即处于精神病超高危状态, 共 23 例; (3) 健康对照组: 共 23 例。上述三组年龄范围均为 7-18 岁。所有研究对象均接受一般资料收集、临床症状评估 (阳性与阴性症状量表) 及静息态 fMRI 扫描。主要分析指标为局部一致性 (regional homogeneity, ReHo)。采用 DPARSF 软件进行常规预处理、ReHo 个体指标运算及统计分析。单因素方差分析进行三组间比较, 以明确是否存在组间差异脑区; 之后通过 LSD 法进行两两组间比较, 之后进行多重比较校正 (GRF 校正, 体素水平  $p < 0.01$ , 团块水平  $p < 0.05$ , 团块大小  $> 30$  个体素)。

**结果** (1) EOS 患者较精神病超高危个体及对照组均表现为双侧壳核静息状态局部一致性 ReHo 值增高; (2) 健康对照、精神病超高危个体、EOS 患者三组被试的额中回 ReHo 值呈下降趋势;

(3) 精神病超高危个体较健康对照表现为右侧小脑、左侧海马/海马旁回 ReHo 值增高, 右侧额中回、右侧额上回 ReHo 值降低。

**结论** (1) 壳核功能异常增高可能是精神分裂症发病的特异性指标; (2) 额上回功能异常可能是出现精神病风险、进而罹患精神分裂症的早期识别指标; (3) 精神病超高危患者存在额叶-边缘-小脑环路功能异常。本研究初步探索精神病超高危状态人群及早发精神分裂症特异性的脑功能特点, 为寻找有助于早发精神分裂症早期识别、预后判断相关的客观指标提供了参考依据。



PU-074

## 食用塑料大棚下、反季节生产的粮食和蔬菜、瓜果及基因工程培育的动物肉蛋禽的健康性值得深入研究和得到保障

徐汉友  
遂昌康复医院

**目的** 为了保证大众食品的健康和安全性，本研究提出，当今广泛流行和实施的塑料大棚下种植生产、反季节生产的粮食和蔬菜、瓜果及基因工程培育生产的动物肉蛋禽的健康性值得深入研究和必须得到保障。

**方法** 总结当今食品生产的巨大变革，其中重要的改革就是，塑料大棚下种植生产、及反季节生产的粮食、蔬菜和瓜果，及基因工程培育生产的动物肉蛋禽，已经广泛被大众所食用，据了解，这种情况很普遍，但这些食品，并没有科学证实，对人的健康、及生态、生物稳定性无害。

**结果** 自然界生态环境中的所有物质，包括动植物、微生物、水、空气、太空，等，均是相互依存、相互影响、相互制约的，众多的，粮食、蔬菜、水果、瓜果，等植物产品，经过基因工程改造和反季节生长生产，食用的肉、蛋、禽及其他动物，也经过基因改造工程，再加上太空不断加剧地被人类探索和入侵，必定要造成自然界生态系统，做相应的适应性变革、新生，应该说，当今温室效应、气温增高、冰川融化、新发传染病的不断产生和加剧，中年以后大都带病状态工作和生活，均与上述非自然管理、操作、生活有关。

**结论** 根据种种当今生活事实，我们应该能得出结论，当今的中国人民，赖以生存的吃喝，均是在非自然状态下进行的，也就是说，吃的食品，喝的部分饮料，均是通过基因改造工程和反季节生产的，这样会给生态环境和生物生态稳定性造成严重损害，因此，本人建议：

- 1、人类生活吃喝食品，尽可能食用自然生产的产品；
- 2、现有通过基因改造工程和反季节，等人工干预生产的食品，均应进行，远期、长期、慢性毒副作用和对生态环境、生物生态稳定性的评估，发现证实有损害，立即停止生产和食用；
- 3、大众崇尚自然、原生态的心态，必须发扬光大；
- 4、开发寻找不仅能解决大众温饱的食品，而且长期食后不仅对健康有保障无公害，而且对生态环境和生物生态稳定性也有绝对有利的保障或无公害；
- 5、中国作为人口大国、经济大国、食品大国，应该为世界食品安全、人类健康、生态环境和生物生态稳定性安全，做贡献，绝对不能沦为祸害者。
- 6、本着严肃、严谨的科学发展观的态度，本研究和建议值得国内外相关部门参考应用。

PU-075

## Near all food seeds have been being man-made, are they healthful to mankind?

Hanyou Xu  
Suichang Rehabilitation Hospital

**Objective** Introduction and Objective: As the public facts living by every people and every day that, by the modern agriculture science developing, more and more food stuffs, vegetables, melon, fruit, eggs, poultry and meats have been produced. The methods are near all their seeds or animal reproduction have been being man made by modern genetic engineering. And further more, the food stuffs, vegetables, melon, fruit have been being off-season planted. All the unnatural productions of food really have been eaten into the man kinds day and day, years and years. I have the first experiences and the first hands information that China have been being something of more advantage, modern and the most amount of productions in these unnatural productions of

food. It is the facts that other countries in the world also have been producing these unnatural food stuffs, vegetables, melon, fruit, eggs, poultry and meats.

While the genetically modified soybeans and the alike food stuffs have been being the hot topics in science and health influences. These genetically modified food stuffs have been very cautiously accepted by peoples and by every country government. But the present situation in the world is that near all the food seeds or animal reproduction have been being man made by modern genetic engineering, maybe in less tension compared to the genetically modified soybeans. We may call them as sub genetically modified seeds and their food productions. However, they have been being all genetically modified and different from the former natural food seeds or animal reproduction in different grades.

So as the off-season planting and their food productions have been all far from the natural food which also have been being hot argument topic of health influences by people.

**Methods** Methods: Summarized the present situation in food securities. Proposed the emergency treatment methods and proposals.

**Results** Results: While the Earth and the space or the universe must like a human being which her normal lives must be supported by her normal physiology of every organ and every cell. And the human organs and cells have been united and interacted harmoniously to pay the way for normal life. Any abnormal cells and organs activities must cause pathology, sick, even death.

But at present, in our Earth and the space or the universe, the former harmonious and natural organs and cells in the Earth and the space or the universe have been being invaded. The organs and cells in the Earth and the space or the universe are the plants of food stuffs, vegetables, melon, fruit, eggs, poultry, animals, mankind and its other biology, ecology and environment, etc.. While in our Earth and the space or the universe, the formal natural plants of all food, the animals have been changing a lots. , The off-season planting also has been contributing a lots changes to our Earth and the space or the universe. The former harmonious biology, ecology and environment should be sure to be changed in our Earth and the space or the universe. Adding the speeding advantage of our space and universe by the orbiting satellites, spacecrafts, space stations and their spaceships and other invading factors to the Earth and the space, the former harmonious biology, ecology and environment should be sure to be changed speedily in our Earth and the space or the universe.

Therefore, at these critical situation, the former harmonious biology, ecology and environment can change their units, organs, cells or molecules. So the new emerging infection and communicable diseases have been being developed. And the climate changes impacts have been being more and more heavily. The most imprinted the bones and inscribed on the memory has been being the COVID-19 pandemic around the world more than three years.

**Conclusion** Conclusion: As this paper is to summarize facts and syndromes harmful to the man kind by the unnatural science and create the new strategies to cure them. So my proposals are as follows:

1. Stop the productions of the unnatural seeds and their food as soon as possible.
2. Productions of the food seeds and their food must go back to the nature ones as soon as possible.
3. Researching and assessing or evaluating side effects of the unnatural seeds and their food and unnatural eggs, poultry and meats to the health of mankind, plant, biology, ecology and environment in short and long research effect periods. If proving the bad effects, all the productions of the unnatural seeds and all the unnatural food must be stopped at once.
4. Developing the true and good science to produce health foods to feed the mankind.
5. The immediate decision must be made to publish the knowledge to the politicians all over the world and the United Nations and its organizations to pay attention to the problems imperatively.
6. China, as the big country in population, economic, food production should go ahead to security the food healthy, public health promotion, climate change recovering and biology, ecology, environment well up.
7. My opinion should be referenced by the officials and politicians.

PU-076

## The proposal of New China Climate Changes Prevention Law

Hanyou Xu  
Suichang Rehabilitation Hospital

**Objective** Background and objective: In southern China, in 2021, there have been being in hot Summer in more than 67 cities, counties or areas, with the hot temperature 30 degrees Celsius and more than 30 degrees Celsius with the highest as 34 degrees Celsius. After the Chinese lunar year and the 24 Solar Term, the beginning of winter has passed 5 days. And there have 23 cities, counties or areas which the temperature have reached the highest 34 degrees Celsius. Which all are rare in the weather history in China in the aspects of the highest temperature as 34 degrees Celsius and in large part of southern China in early Winter.

As the World Health Organization, the United Nations and the world have been striving for preventing and curing the climate changes. And have been paying special attention to the health impacts by the climate changes. In China, after the history hottest Summer suffered from by the Chinese in 2022. The Chinese have been continuing to suffer from the hottest temperature like Summer in the early winter. So the weather in China is not normal comparing to the past years. And it is sure that the climate changes impacts on Chinese in China in 2022 have been evidenced. As I have been being a senior doctor treating and preventing patients and promoting the public health more than 35 years. I have the duty and the motive to do something to prevent and cure the climate changes and their impacts on public health. So in this research I especially create and propose a new draft law, the China climate changes prevention law, to speed, administrate and guard China doing well in preventing climate changes in China and the world.

**Methods** Methods: Summarized the public health promotion and environment protection in China and in author own doing. Referenced the present new situation of climate changes in China and the world. Created the China climate changes prevention law in draft and in central strategies.

**Results** Results: The China climate changes prevention law in central strategies as follows:

1. In order to prevent and cure the climate changes and their impacts on public health and mankind, the China climate changes prevention law must be created as soon as possible.
2. All Chinese people and every government department and any unit must pay special attention to the climate changes and their impacts on public health and mankind. And must be consider it as the first doing job among the all works in any unit.
3. China own scientific research must be done as early as possible and as deeply as possible to find the etiology and mechanism of the climate changes and their impacts on public health and mankind. When the etiology and mechanism research have gained achievements. The application must be done as soon as possible.
4. The present achievements of etiology and mechanism of the climate changes and their impacts on public health and mankind must be applied as soon as possible.
5. All the policies of the United Nations and its organizations for controlling the climate changes must be signed and applied totally and completely as soon as possible.
6. China should be the leader of controlling the climate changes in the world. The significant China strategies must be contributed to the world for controlling the climate changes as soon as possible as China is the biggest country in population.
7. From birth and kindergarten to the time before death, the knowledge of environment protection and climate changes prevention, cure must be educated constantly to every Chinese.
8. The precondition for organizing any new unit and old unit must pass the exam of climate changes prevention. The concrete policies must be created and documented.
9. All over the China, the inspection stations must be built to monitor the climate changes wrongly doing.

10. Regulations and their process must be built to punish any anti law doers who promote the the climate changes. Also, reward any people and units who have contributed significantly to the prevention of climate changes.

11. Cooperation with internationals must be indispensable.

12. As the village of the Earth, open policies must be built to let internationals to inspect, learn, study and cooperation, etc. in China.

13. As the climate changes impacts on the Chinese and the mankind, the medical support, research, prevention, treatment, education and other health promotion policies must be created and built to protect the Chinese and the mankind from harming by the climate changes. The universities, hospitals, institutes should operate the climate changes impacts medical science.

14. Summarizing the doings of the climate changes prevention constantly to make progress further.

15. Liberating the thoughts of the leaders and the ordinary people, throwing away any selfish doing of only pursuing own country economic development at the price of world climate changes impact worse in the Earth and the space.

**Conclusion** Conclusion: The China climate changes prevention law in draft comes from the candid invention of the author by summarized the present situation of climate changes impacts in China and the world. The 15 paragraphs of the new China climate changes prevention law is valuable, as up to now, China has not built this kind of law. This proposal of the new China climate changes prevention law is worthwhile to referenced by China lawmakers, world countries lawmakers, the UN and its organizations and related others.

PU-077

## It is imperative to set up laws and regulations for natural and free sports.

Hanyou Xu  
Suichang Rehabilitation Hospital

**Objective** Background and Objective: The United Nations is an international organization founded in 1945. Currently made up of 193 Member States, the UN and its work are guided by the purposes and principles contained in its founding Charter.

The UN has evolved over the years to keep pace with a rapidly changing world.

But one thing has stayed the same: it remains the one place on Earth where all the world's nations can gather together, discuss common problems, and find shared solutions that benefit all of humanity.

The United Nations was created in 1945, following the devastation of the Second World War, with one central mission: the maintenance of international peace and security. The UN accomplishes this by working to prevent conflict, helping parties in conflict make peace, deploying peacekeepers, and creating the conditions to allow peace to hold and flourish. These activities often overlap and should reinforce one another, to be effective.

The UN Security Council has the primary responsibility for international peace and security. The General Assembly and the Secretary-General play major, important, and complementary roles, along with other UN offices and bodies.

The term "human rights" was mentioned seven times in the UN's founding Charter, making the promotion and protection of human rights a key purpose and guiding principle of the Organization.

In 1948, the Universal Declaration of Human Rights lay down the principles that brought human rights into the realm of international law. Since then, the Organization has diligently protected human rights through legal instruments and on-the-ground activities.

The Olympic Movement is the concerted, organised, universal and permanent action, carried out under the supreme authority of the IOC, of all individuals and entities who are inspired by the values of Olympism.

It covers the five continents. It reaches its peak with the bringing together of the world's athletes at the great sports festival, the Olympic Games. Its symbol is five interlaced rings.

The goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sport practised in accordance with Olympism and its values.

Belonging to the Olympic Movement requires compliance with the Olympic Charter and recognition by the IOC.

The three main constituents of the Olympic Movement are the International Olympic Committee ("IOC"), the International Sports Federations ("IFs") and the National Olympic Committees ("NOCs").

In addition to its three main constituents, the Olympic Movement also encompasses the Organising Committees of the Olympic Games ("OCOGs"), the national associations, clubs and persons belonging to the IFs and NOCs, particularly the athletes, whose interests constitute a fundamental element of the Olympic Movement's action, as well as the judges, referees, coaches and the other sports officials and technicians. It also includes other organisations and institutions as recognised by the IOC.

The IOC is at the very heart of world sport, supporting every Olympic Movement stakeholder, promoting Olympism worldwide, and overseeing the regular celebration of the Olympic Games.

The IOC is also committed to promoting sport in society, strengthening the integrity of sport and supporting clean athletes and other sports organisations.

In order to promote the health level of mankind and Olympic spirit, the proposals to set up laws and regulations for free and natural sports have been suggested.

**Methods** Methods: Summarized the modern developments of sciences and the life experiences. Created the proposals that it is imperative to set up laws and regulations for free and natural sports.

**Results** Results: As the modern science and technology developed, the radio controlling the space craft and physiology of human being and man-made patho-physiology changes have been being in a easy way like the hand movements of normal adult man. The man made radio control supporting the athletes to competing up the best may be easy to do. Which must be false and sham. Therefore, I hope that China and the world athletes should compete naturally in the Olympic Games and any other sports compete events. But the laws and regulations for free and natural sports have not been set up.

At this situation, therefore, I propose that every international and national sport administration committees must set up the laws and regulations to ban any radio micro control physics supporting athletes unnaturally. All countries and regions and all No Government Organizations in the world must support the laws and regulations. Which like the present World Anti-Doping Code and its developed regulations, principles, rules or laws. So as to guide and protect all the sports events compete freely and naturally for really promoting unity, peace, friendship and togetherness, health, and development, the Olympic spirit and sport spirit.

**Conclusion** Conclusion: As the sciences developed and the civilization of mankind developed. The people have been striving for equality, freedom, health, peace, unity, friendship and togetherness. The free and natural sports have been being the basic and central doing for the sports organizations, administrators, athletes and the ordinary people. Therefore, It is imperative to set up laws and regulations for clean Olympics, natural and free sports. China, me and all others, countries and organizations must support the initiative the author proposed. So the great world will be coming.

PU-078

## An important proposal: The new laws and regulations about protection of life's physiology and their health must be established.

Hanyou Xu  
Suichang Rehabilitation Hospital

**Objective** Background and Objective: WHO is the United Nations agency that connects nations, partners and people to promote health, keep the world safe and serve the vulnerable –so everyone, everywhere can attain the highest level of health. WHO leads global efforts to expand universal health coverage. We direct and coordinate the world's response to health emergencies. And we promote healthier lives – from pregnancy care through old age. Our Triple Billion targets outline an ambitious plan for the world to achieve good health for all using science-based policies and programmes.

The World Health Organization leads and champions global efforts to achieve better health for all. By connecting countries, people and partners, we strive to give everyone, everywhere an equal chance at a safe and healthy life.

From emerging epidemics such as COVID-19 and Zika to the persistent threat of communicable diseases including HIV, malaria and tuberculosis and chronic diseases such as diabetes, heart disease and cancer, we bring together 194 countries and work on the frontlines in 150+ locations to confront the biggest health challenges of our time and measurably advance the well-being of the world's people.

As the modern science and technology developed, the radio controlling the space craft and physiology of human being and man-made patho-physiology changes have been being in a easy way like the hand movements of normal adult man.

As I am doctor with more than 30 years experience. Some radio controlling technologies have been applied for civil use to diagnose and treat patients. Also, I have been experiencing that the normal physiology of human-being have been being interfered by the powerful people who control the radio micro-controlling system and harm their rivals or enemies. In this way, the diseases and suffering from the man-made radio controlling induced pathology have been being faced by me and all others.

In order to protect life's physiology and their health of mankind and others, I researched as this paper.

**Methods** Methods: Summarized facts of the mankind and experiences of mine. Created the results and suggestions.

**Results** Results: In modern technology developed time, nearly all the world people known, the life and the health of people can be controlled or interfered by the outsiders. These weapons have been grabbed by the leaders, powers or politicians. The leaders or the politicians must not controlled or interfered the health of other countrymen to get own the health of countrymen well-up than other countries for political great job gaining. All the people around the world must have the same rights to live freely and health. The politicians and the leaders controlling the power must not interfere the people's physiology and their health.

Therefore, it is very imperative to set up the new order of freedom about people's physiology and their health interfered by the radio and micro outsiders. These new orders must be created at present new technology era at once. And the related laws and regulations to protect people's physiology and their health from interfering by the radio and micro outsiders must be established. So as the new laws and regulations about protection of animal's or other life's physiology and their health must be established.

As the aims of the United Nations are "The Peace, dignity and equality on a healthy planet". The UN, One place where the world's nations can gather together, discuss common problems and find shared solutions. The UN has evolved over the years to keep pace with a rapidly changing world. But one thing has stayed the same: it remains the one place on Earth where all

the world's nations can gather together, discuss common problems, and find shared solutions that benefit all of humanity. As the United Nations Secretary-General António Guterres has said, "In the end, it comes down to values [...] We want the world our children inherit to be defined by the values enshrined in the UN Charter: peace, justice, respect, human rights, tolerance and solidarity".

So, in order to let all the people around the world living in the "Peace, dignity and equality on a healthy planet", and in "justice, respect, human rights, tolerance and solidarity", the new laws and regulations about protection of life's physiology and their health from interfering by the radio and micro outsiders must be established by the UN, WHO and every countries and regions.

**Conclusion** Conclusion: In this regards, I am making these proposals to the UN, WHO, nations and may lead to all the countries and regions with the goodwill aims to set up the related laws and regulations and to let the all people around the world to know the factual situation and acting to support my proposals and gain the normal and healthy world far from outsiders interfering ours heart beat, respiration, temperature, blood pressure, sleep, thinking, memory, eating, urination, defecating.....

In this way, we can cure lots of man made diseases, like the fever, cough, ache, vomiting, cancer, shock, coma, even death or sudden death, et al. all the natural developed diseases which the devil outsiders all can interfere and induce looked like the natural developed diseases.

PU-079

## 为了确保大众健康、粮食、生物安全性，建议立法保证粮食新品种改良拒绝种子基因无保障地变异

徐汉友  
遂昌康复医院

**目的** 为了保障大众健康和生物、生态安全性，很有必要引起重视并研究清楚，当前在中国等国家普遍使用的非大幅度改变基因但粮食作物基因也有改变的育种方法，所生产的粮食，是否也会对大众健康及生物、生态安全性，特别是大众健康是否也产生不可忽视的影响，在此，特建议，国家应立即建立相关法规，保证粮食新品种改良拒绝种子基因无保障地变异，也就是立法在保障大众健康和生物、生态安全的情况下，开展改良育种。

**方法** 总结当代粮食育种的特点和人民生活对中国常用食物的品味差异，提出该粮食育种生产的粮食食用后，可能存在的安全隐患，提出立法保障大众健康和生物、生态安全。

**结果** 中国目前还没有出台相关法规，保证粮食新品种改良拒绝种子基因无保障地变异，也就是中国还没有立法在保障大众健康和生物、生态安全的情况下，开展改良育种。

**结论** 大众健康是头等大事，粮食、食品安全是大众健康最重要、最直接的保障，面对生物、生态环境的不断恶化，新发传染病的不断产生，必须要有严禁、科学的态度对待粮食等安全问题，在科技不断发展、发达的情况下，粮食育种安全这样一个最基本、最重要的问题没有保证，是不应该的。

本研究，总结中国粮食育种的一些事实，及其可能造成的不良影响，在此提请和建言献策如下：

- 1，建议立法保证粮食新品种改良拒绝种子基因无保障地变异，保障大众健康和生物、生态安全；
- 2，提出，人工培育粮食新品种在全面播种、进入大众餐桌前，必须要进行安全性检测，合格后方可进行种植、生产和食用；
- 3，同时建议，之前人工培育的新粮食品种，也应该做相关安全性检测，做相关流行病学调查，发现问题，及时终止该粮食种植和食用，确保安全；
- 4，中国作为大国，应该为世界粮食安全做贡献，提出中国标准和中国方案，作为世界标准参考利用或定为世界标准；
- 5，本研究可作为联合国相关组织、及相关政府、非政府组织及其他国家参考应用，共同为人类粮食安全做贡献。

6, 只有粮食育种安全, 才能保障粮食安全, 从而才能保障生物、生态环境安全及大众健康;

7, 建议尽可能在自然状态下, 粮食自然授粉、自然选种。

## PU-080

### 中国水果、瓜果、菜篮子工程必须以大众健康为最基本目的, 立法保障势在必行

徐汉友  
遂昌康复医院

**目的** 随着科技的发展, 生物技术在农业方面, 已被广泛应用, 特别是基因工程在农业科技方面应用非常广泛, 其中包括基因技术育种、改良种子, 其中这些技术广泛地应用在瓜果、蔬菜的生产上, 改良的主要目的和目标就是产量高或和口味好一些, 蔬菜、瓜果、粮食通过基因改造的新品种, 无长期毒副作用和对自然环境生物安全性的评估, 就广泛大批量的生产, 供应全国甚至世界人民的餐桌, 供大众食用。

**方法** 总结当代社会和科技的发展, 中国大众及全球人民突出的健康问题, 从而寻找解决或根治的方法。

**结果** 在世界范围内, 当今新冠肺炎的 3 年余世界爆发大流行、2003 年的非典型肺炎的世界大流行、以及新发传染病的不断出现, 应该和必须为世人敲响警钟, 在中国, 糖尿病的井喷样流行, 高血压病、心脑血管病及新生儿残疾等健康新问题高发, 也必须同时引起中国人的高度重视, 中国大众流行的一句科学名言, “病从口入”, 已经被世界医学界所公认, 结合当今中国和世界健康损害新问题, 我作为资深临床医学者, 有理由把当今中国大众吃的是基因改造的粮食、蔬菜和瓜果, 患着吃这些基因改造的粮食、蔬菜和瓜果之前, 没有患的疾病, 联系在一起, 也就是说, 当今的大众患病新事态、新病谱、新医学流行病学特点, 与当今中国大众吃基因改造的粮食、蔬菜和瓜果有一定的关联, 因此, 中国必须应该就此方面, 作出明确、进一步的干预、研究、政策实施。

**结论** 所有政治家都说, 世界形势瞬息万变, 其实最值得关注的是大众健康的瞬息万变, 因为人类生活生存最基本的目的就是健康美好地生活, 面对很多种损害大众健康的新疾病、新病态、新生物环境, 我们所有的政治家, 应该最先处理的是如何保证大众健康, 保证大众不在痛苦中生存, 在此, 我建议应该立即从保证大众饭碗中食物健康开始, 因为病从口入, 而中国大众食用的食物基本上都是基因改造的粮食、蔬菜和瓜果, 而这些基因改造的粮食、蔬菜和瓜果, 对大众健康和生物生态环境长期是否有害未作科学评估, 而本人认为, 中国大众食用的基因改造的粮食、蔬菜和瓜果, 对大众健康及当今大众健康损害新特点, 有联系, 有关联, 所以, 在此建议, 中国水果、瓜果、菜篮子工程必须以大众健康为最基本目的, 立法保障势在必行。

本建议可作为世界范围内参考应用。

## PU-081

### 静脉穿刺治疗病人快速寻找最佳穿刺部位新创意

徐汉友  
遂昌康复医院

**目的** 在全中国, 每年静脉穿刺治疗几十亿次, 如何达到高质量静脉穿刺治疗, 减轻病人痛苦, 提高治疗效果, 减少相关的医疗纠纷是非常重要的, 为了达到提高静脉穿刺治疗质量, 让病人及其家人满意而健康的回归社会和回归生活, 本研究特提出, 静脉穿刺治疗病人时, 快速寻找最佳穿刺部位新创意, 以供参考利用。



**方法** 本研究，总结从医几十年来，临床经验所见，发现静脉穿刺治疗失败的原因，在临床实践中，创新新方法以期达到顺利、快速静脉穿刺成功。

**结果** 本人作为高年资副主任医师，在临床内科第一线工作 30 多年，也在急诊医学第一线救治病人 20 多年，亲身经历了无数次护士、护师静脉穿刺抽血、救治病人的过程，本人也经历过被静脉穿刺，静脉穿刺有成功的，也有失败的，究其失败的原因，有下列几种：其一就是，经验不足；其二就是穿刺相关知识不熟悉；其三就是病人因素，包括肥胖血管难找、休克、脱水等病因致血管塌陷不易寻找、血管太小，等多种原因，导致静脉穿刺失败，在此基础上，作者不时在想，用什么方法来快速达到静脉穿刺的目的，现报告一个我创新的快速寻找最佳静脉穿刺部位新创意，其主要原理如下：当今科技发展，地球上的人们，上太空就相当容易了，遥控控制已经达到了非常精确的地步了，随着现代科技的发展，相应物理的、生物的、化学的、光学的、军事方面的等方面的最新科技成果，很快会转化到医学临床应用上，借助物理学、光学的等方面的方法，让做静脉穿刺的护士，借助专用仪器，能看清楚病人的浅表静脉、浅表动脉，或深静脉、深动脉的位置走行部位，有没有弯曲、分叉、畸形，及其血管壁的厚薄，与神经组织、等重要组织的毗邻关系，就能选择容易、安全穿刺的部位，进行穿刺，达到一针成功，从而，达到快速提高静脉穿刺治疗质量，让病人及其家人满意而健康的回归社会和回归生活。

**结论** 本来研究创意，基于临床的迫切需要，创新了这种借助高科技的手段，达到快速提高静脉穿刺治疗质量，在穿刺中病人无明显痛苦，解决了穿刺不成功的医疗风险，更好地救治病人，更好地为病人服务，让静脉穿刺不再成为医护人员和病人及其家人的负担，提高人民的生活质量和医院体验感觉舒服而不是痛苦。据检索，未发现类似研究、实施报道。本创意也适用于对于病人的动脉穿刺应用。当然，这项创意仅仅是一个设想，但任何重大的发明创造、改革和革新，都是从设想和创意开始的，相信经过进一步的研究和实施，一定会给社会带来重大效益的。

PU-082

## 女性保守丰胸新方法创新设想

徐汉友

遂昌康复医院

**目的** 人们对爱美的追求越来越重视和迫切，因此，创新发展女性保守丰胸新方法很有必要。

**方法** 本研究通过总结临床经验，提出女性保守丰胸新方法的创新设想，供大家参考应用。

**结果** 一．目前女性保守丰胸新方法现状目前女性保守丰胸新方法现状可以说是，几乎一片空白，在媒体和资料上可以查到女性养生保健有可能丰胸，在网上可以查到，一种中药制剂外敷可以丰胸，这些方法具体效果不得而知。

二．女性保守丰胸新方法的创新设想的提出随着吗丁啉片的广泛应用，其副作用也逐渐被发现，其中的一个副作用，就是能引起乳房增大，因此，就想到了是否可以应用化学药物（服用或外用）后，促使乳房增大，达到丰胸的目的？更进一步想到了，是否可以应用物理的方法，体外刺激，促使乳房增大，达到丰胸的目的？至此，女性保守丰胸新方法创新设想已经形成。

三．女性保守丰胸新方法创新设想的实施方案

1.化学药物（服用或外用）丰胸的实施方案

1.1. 广泛筛选有使女性乳房增大、丰胸功能的化学物质，或矿物质复合物，或中药提取物，然后经过药品严格的各期试验，最后应用于临床，产生社会效益和经济效益。

1.2.广泛筛选和吗丁啉片类似化学结构的化学物质，然后进行药品严格的各期试验，最后应用于临床，产生社会效益和经济效益。

1.3. 通过化学改造吗丁啉片的分子结构，取其功能结构，去掉其副作用结构，合成出新的化学物质，然后进行药品严格的各期试验，最后应用于临床，产生社会效益和经济效益。

2.物理方法丰胸的实施方案

现代科技的发展,已有发现,通过物理方法的刺激,可以使动物组织和人体组织增长,然后进行医疗器械相关严格的各期试验,最后应用于临床,产生社会效益和经济效益。

### 3. 化学药物、物理方法丰胸的质量控制

作为化学药品和物理方法医疗器械,应用于临床,必须按照国家药品监督管理局的要求,进行相关的、严格的各期试验,最后才能应用于临床。

理想中的化学药品和物理方法,有这样的特点,无明显的副作用,效果好,撤药后、撤除物理方法后,可永保或相当长时间保丰胸的目的。

**结论** 结论:随着时代的发展,为了满足人民群众的需要,女性安全保守的丰胸新方法创新和实施,是很能满足大众的需要的,但本方法仅仅是一个设想和提出了一些方案,毋庸置疑,这是成功的关键一步,很显然还需要更多的努力和投资,若能完全成功,将是划时代的创新和成效,因此,本创新设想和提出的方案,值得参考应用。

## PU-083

### 焦虑抑郁对冠状动脉药物涂层支架置入术后再狭窄的影响

吴晓良<sup>1,2</sup>、刘春燕<sup>3</sup>、郑微微<sup>2,4</sup>、何佳莉<sup>1,2</sup>、王同念<sup>2,4</sup>、游晓莹<sup>1,2</sup>、张晶<sup>2</sup>、陈金良<sup>3</sup>

1. 河北北方学院

2. 河北省秦皇岛市第一医院

3. 中国人民解放军联勤保障部队北戴河康复疗养中心

4. 河北医科大学

**目的** 探讨焦虑抑郁对冠状动脉药物涂层支架置入术后再狭窄(ISR,in-stent restenosis)的关系。

**方法** 回顾性分析秦皇岛市第一医院 2020 年 12 月至 2021 年 12 月 448 例行药物涂层支架术后复查造影患者。再狭窄定义为支架内及前后 5mm 范围内狭窄 $\geq 50\%$  参考管腔直径。应用 Zung 焦虑自评量表(SAS)和抑郁自评量表(SDS)对患者进行心理状态评估,比较再狭窄组和无再狭窄组的临床数据和造影资料,对两组之间差异有统计学意义的临床指标进行 logistic 回归分析。

**结果** 2020 年 12 月至 2021 年 12 月我院共完成 4380 例造影,其中支架后复查造影 481 例,有 448 例患者入选,ISR 共 90 例(20.09%)。多元 logistics 分析结果显示 ISR 的预测因素为糖尿病病史(OR=2.138, 95%CI: 1.099~4.160)、SAS(OR=1.081, 95%CI: 1.037~1.127)、SDS(OR=1.052, 95%CI: 1.014~1.092)、年龄(OR=1.047, 95%CI: 1.006~1.089)、支架后时间(OR=1.089, 95%CI: 1.012~1.173)、血管直径(OR=0.125, 95%CI: 0.041~0.380)、支架长度(OR=1.066, 95%CI: 1.034~1.100)、LDLc(OR=1.926, 95%CI: 1.062~3.491)、用药依从性(OR=2.766, 95%CI: 1.356~5.645)。按照焦虑(59 例)、抑郁(38 例)、焦虑抑郁共病(168 例)和无焦虑抑郁(183 例)分为四组,前三组 ISR 发生率均明显高于无焦虑抑郁组( $P < 0.05$ )。

**结论** 冠状动脉药物涂层支架置入术后合并焦虑、抑郁患者 ISR 发生率明显提高,焦虑、抑郁为 ISR 的独立危险因素。

## PU-084

### 行政诉讼法、民事诉讼法、刑事诉讼法等法规修订新建议, 提高大众健康水平和生活质量

徐汉友

遂昌康复医院

**目的** 为了提高大众健康水平和生活质量,化解人民内部矛盾,特提出诉讼法规修订新建议。

**方法** 总结本人生活和司法经历,研究总结诉讼法规修订新建议具体条款。

**结果** 诉讼法规修订新建议具体条款为:

- 1、取消行政诉讼法、民事诉讼法、刑事诉讼法及民法典等有立案有效诉讼期限限制法规中的有效诉讼期的任何限制，修订为，无有效诉讼期限限制，任何时期均可以提起诉讼；
  - 2、取消行政复议法，等任何立案有有效诉讼期限限制的法规，修订为，无申请期限限制，任何时期均可以提起申请或诉讼，等司法行为活动；
  - 3、立法修订，一审法院宣判后，取消上诉时间限制，修订为无上诉时间限制，其目的也是为司法矛盾双方，提供足量的司法权力和自由，去获得司法公正；
  - 4、立法修订，一审法院宣判后，上诉程序和再审程序，合二为一，修订为再审申请，无时间限制，再审法院为一审法院的上级法院；
  - 5、立法修订行政诉讼法、民事诉讼法、民法典，等法规，一审法院宣判后，即可生效，但可以提起再审申请，不受次数和时间的限制，但必须提交新的、确凿的证据，每次再审申请，需要向上一级法院提起，直至最高人民法院，最高人民法院可发回任何法院再审，以此循环。
  - 6、劳动仲裁、行政复议决定书决定后即可生效，但没有时间限制向法院提起一审诉讼，其后诉讼程序同修订后的行政诉讼法、民事诉讼法、民法典；
  - 7、刑事诉讼法的终审法院为最高人民法院，再审应该逐级申请，违法人和受害人若无异议，可以提前结案，但也可能不是永久终结；若有新的确凿证据，还可以申请再审。
  - 8、各级人民检察院对同级法院的的检察、监督或抗诉不受任何时间限制，申请人随时可以提起民事、行政、民法典等的检察、监督或抗诉申请，也不受次数限制，但必须提交确凿证据才能立案，逐级向上申请。
  - 9、立法教育，全民学习法规，从幼儿到死亡，人的一生持续不断接受法制教育，必须在各教育基地立即实施全民教育；
  - 10、立新法，任何公民或人民提起各种诉讼，必须有合法的理由和证据。
  - 11、立新法，各级、各种司法系统，建立刚性量化标准, 不断评判司法工作人员工作质量。
  - 12、立新法，各级、各种司法系统工作人员，建立责任倒查制度，作为工作人员升职加薪或降级的决定性标准或唯一标准。
- 结论** 随着上述新的法规的修订或立新法规的实施，中国当今各级各种司法系统工作量巨大、司法诚信不容乐观的严重缺点，会很快被解决的，从而，提高大众健康水平和生活质量，化解人民内部社会矛盾。

PU-085

## 立法建议：中华人民共和国建言献策管理法

徐汉友  
遂昌康复医院

**目的** 为了更好地管理中国建言献策，规范建言献策管理，充分调动广大人民群众的积极性，更好地为中国建设和可持续发展、世界和平和可持续发展，特研究总结，中华人民共和国建言献策管理法立法建议。

**方法** 根据个人经历，及总结中国相关社会现象，研究创新产生，中华人民共和国建言献策管理法建议稿。

**结果** 立法建议中华人民共和国建言献策管理法主要法规条文如下：

- 1、为了激励广大群众，积极为中国建设和可持续发展、世界和平和可持续发展做贡献，特建立，中华人民共和国建言献策管理法。
- 2、中华人民共和国公民及国际友人，积极为中国建设和可持续发展建言献策的，由此对世界和平和可持续发展的建言献策，适用于本法。
- 3、全国各地，从地方到中央，从基层到最高层，各个单位均设立建言献策管理机构，其主要职责为接受建言献策、记录、上传下达，等日常工作。
- 4、各建言献策管理机构，建立可靠地评估、采纳、实施、效益评估、奖励，等法定程序。

- 5、建言献策管理机构，分为单位、乡镇、县、市、省部、国家级、世界级7级。
  - 6、建言献策奖励每年评审一次，包括荣誉奖励，颁发奖励证书，和物质奖励，颁发奖金，奖金多少，根据贡献大小评估。
  - 7、国务院、各省市、各部委制定相关细则，利于实施。
  - 8、每一项建言献策接受办公室，均要做好登记和记录，包括时间、地点、建言献策内容、建言献策人员详细情况，等，可做录音录像记录事实。并给建言献策者接收回执。
  - 9、各级科学技术协会为主管行政管理单位，国务院为最高行政管理部门。
  - 10、建立建言献策领导小组合法公章。
  - 11、法律责任，违背本法者，可给以各种治安管理、行政、党纪、刑事、民事处罚，构成剽窃者，处罚剽窃罪。
  - 12、获得奖励者可作为职称晋升、升职、聘用的重要条件。
  - 13、加强全国各地、各级别及国内外建言献策奖励的大数据储存和保护，鼓励、支持各个奖励项目在全国，甚至世界范围内互通有无，实施利用，发挥最大作用。
  - 14、在实施中发现问题解决问题，不断修订。
  - 15、根据建言献策奖励的具体内容，可产生专利权、著作权、等专属权利，均应依法保护。
  - 16、建言献策的内容及其奖励，作为政府信息主动公开。
  - 17、建立国内、国际相关管理政策协调机制，共同促进可持续发展。
- 结论** 本中华人民共和国建言献策管理法立法建议，作为中国在此方面的管理短缺时提出，值得中国立法者及相关管理人员参考应用，为实现调动广大人民群众的积极性，共同促进中国和世界可持续发展做贡献。

PU-086

## 中华人民共和国信访工作条例修订意见暨信访工作立法

徐汉友  
遂昌康复医院

**目的** 为了更好地解决老百姓的信访诉求，现提出，中华人民共和国信访工作条例修订意见暨信访工作立法。

**方法** 总结本人的信访经历和其他老百姓的信访经历，找出不足，提出合理的、能解决问题的修订意见,暨更加重视，给以信访立法。

**结果** 存在的主要问题: 信访机构未引起重视；推诿、渎职、应付、仅仅走过程；未深切体会信访者所经受的相关打击及经历的痛苦；存在官官相护的隐患；信访工作者无压力、无责任所追究，信访问题解决与否，与自己无关；法定程序不实施，或不透明没法实施。

信访工作条例修订意见暨信访工作立法要点

- 1、各级信访局应归属于各级纪检委和监察委的一个机构；
- 2、各级信访局必须做到，首接负责制；
- 3、现行的信访程序必须实施，而且实施程序要透明；
- 4、取消各级信访机构及信访程序对信访者的时间限制；
- 5、若不能肯定解决信访问题，严禁把信访信件逐级又转回到，信访者投诉、信访对象，让被信访者处理该信访事件；
- 6、建立信访事件是否彻底解决督查机制；
- 7、各级信访局接待信访的工作人员姓名，要做好记录，谁接受，谁处理，谁签字盖章，谁负责到底；
- 8、对于接待信访的工作人员，长期未达到结论性信访处理结果，必须追究接待信访的工作人员责任；

- 9、对于已经获得结论性信访事件，信访者仍无理取闹，经劝说、教育无效者，应追究其治安、行政、纪律、监察、民事或刑事责任；
- 10、信访也应建立严格的司法程序，与法院、检察院、劳动仲裁院，等司法机构，同时存在，但只能选择一种途径；
- 11、各级纪检委和监察委领导下的信访局，有独立开展工作的权利，不受任何权利的非法定干扰；
- 12、对于信访工作人员的投诉、信访，应由被投诉者所在信访局之外的信访局接收；
- 13、建立信访事件的档案保存机制，应该象法院审判案件一样，长期保存；
- 14、各级信访局必须开通网上受案渠道，并公开公示于众，并设立查询机制；
- 15、取消信访者信访的时间和次数限制，时间限制不超过 3 个月；
- 16、多次被多个信访投诉者反复信访的单位或个人，必须被相关纪检委和监察委提审、审查；
- 17、建立相关大数据库。

**结论** 本中华人民共和国信访工作条例修订意见暨信访工作立法建议要点，密切结合实际，本着为人民服务，一切为了人民，一切为了群众的中国共产党的初心，与时俱进，做好、做实每一项事，为中华民族的真正复兴、人民大众的真正幸福生活及世界和平和发展，做出切实的贡献，希望有关部门、有关领导引起重视，尽快参考应用本建言献策。

## PU-087

### 基于磁共振波谱技术对老年期抑郁障碍患者神经代谢物水平的研究进展

吴倩、许丹、刘瑶、张咪雪、刘莎  
山西医科大学第一医院

**目的** 磁共振波谱 (magnetic resonance spectroscopy, MRS) 是一种允许非侵入性检测活体内代谢物浓度和大脑生化变化特征的核磁共振技术，检测到的生化代谢数据为研究老年期抑郁障碍患者大脑的结构和功能改变提供了更多的研究信息。本研究旨在通过 MRS 技术来比较老年期抑郁障碍患者与健康对照者大脑各脑区神经生化代谢物的差异，进一步探讨其可能的神经生物学机制。

**方法** 使用老年抑郁和 (MRS 或“磁共振波谱”) 作为搜索词，检索 MEDLINE、Embase 和 PsycINFO 等数据库。纳入利用 MRS 研究比较老年抑郁障碍患者和健康对照组患者之间 N-乙酰天门冬氨酸(NAA)、胆碱复合物(Cho)、谷氨酸复合物(Glx)、谷氨酸(Glu)、谷氨酰胺(Gln)、肌醇(Ins)、肌酸(Cr)以及  $\gamma$ -氨基丁酸(GABA)等与老年抑郁障碍有关的神经代谢指标的文章。确定了 11 项研究，共包括 233 名患者和 174 名健康对照。计算标准化平均差 (SMD) 以评估各神经代谢物水平的组差异。

**结果** (1) 与对照组相比，老年抑郁障碍患者全脑 NAA/Cr 水平更低，可能与老年抑郁障碍的病理生理学有关。(2) 与对照组相比，老年抑郁障碍患者前额叶皮层 (medial prefrontal cortex, mPFC) 内的 NAA 水平降低；(3) 两组间谷氨酸或谷氨酰胺、肌醇、 $\gamma$ -氨基丁酸水平差异无统计学意义；(4) 在老年抑郁障碍患者中，mPFC NAA 水平的效应大小与任何临床变量之间没有关系。

**结论** MRS 技术用于检测与老年抑郁障碍相关的生化代谢产物水平，可能作为探索患者潜在神经生物学证据的有效手段。

PU-088

## 童年不良经历与老年抑郁症的关联研究进展

张咪雪

山西医科大学第一医院

**目的** 老年抑郁症(Late-life depression, LLD)指发生于老年期(≥60岁)的抑郁障碍。一项荟萃分析表明中国老年人抑郁症状的总患病率为 22.7% (95% CI 19.4 - 26.4%)。随着世界人口老龄化, LLD 的经济、公共卫生和护理负担的直接和间接成本是巨大的。越来越多的证据表明, 童年不良经历是老年抑郁症的一个危险因素。童年不良经历(Adverse childhood experiences, ACEs) 包含了广泛的创伤和痛苦事件, 其威胁到了儿童在 18 岁之前的身体、家庭或社会安全。这些事件包括直接虐待和忽视, 暴露于家庭功能障碍, 身体或性虐待以及暴力等。有研究表明, 童年不良经历与中国老年人抑郁症状存在剂量-反应关系, 即暴露于多个不良经历, 会增加老年人出现抑郁症状的几率。本文综述了童年不良经历与老年抑郁症相关的证据以及相关的机制。

**方法** 文章对童年不良经历与老年抑郁症相关的文献进行了检索, 归纳总结了目前童年不良经历与老年抑郁症的联系, 调节变量和相关机制。

**结果** 童年不良经历在整个生命周期中一直是构成抑郁症的重要危险因素, 有研究表明, 在儿童时期暴露于创伤性事件会使老年抑郁症的风险增加一倍, 并增加反复发作的风险。另一方面, 保护性因素被认为可以降低老年抑郁症以及反复发作的风险。其次, 不同种类的童年不良经历、不同性别、不同人格均可作为中介因素影响老年抑郁症的发病; 此外, 复原力也可能是介导两者的重要因素。在机制方面, 社会心理因素、基因、炎症、下丘脑-垂体-肾上腺轴等的相关研究也有报道, 为以后的机制探索提供了思路。

**结论** 综上, 童年不良经历可以作为老年抑郁症的风险预测因素。童年不良经历的数量、种类越多, 在老年期越倾向于发展为抑郁症。目前关于童年不良经历与老年抑郁症之间机制方面的研究与综述仍比较缺乏, 未来需要更多的研究对该领域进行深入的探索与补充。

PU-089

## 关注无业及低收入肿瘤患者的心理健康：多发性骨髓瘤患者中收入、就业及心理痛苦关系的横断面调查研究

蒋江灵<sup>1</sup>、刘飞<sup>1</sup>、侯健<sup>2</sup>、陆峥<sup>1</sup>

1. 同济大学附属同济医院

2. 上海交通大学医学院附属仁济医院

**目的** 多发性骨髓瘤目前仍无治愈方法, 长期严重的躯体不适及治疗给患者带来巨大的就业及经济压力, 并造成严重的心里痛苦。虽然在一般人群中无业及低收入与心理痛苦密切相关, 本研究拟在多发性骨髓瘤患者中验证这一关联。

**方法** 自 2022 年 10 月至 2023 年 3 月在 15 个中心进行自愿参加的横断面调查, 共筛查多发性骨髓瘤患者 567 人, 回收有效问卷 490 份。问卷内容包括患者的人口学及临床特征、收入水平、就业状态, 以及心理痛苦温度计 (distress thermometer, DT)。

**结果** 54.7% 的患者月收入低于 3000 人民币, 27.8% 的患者存在显著的心理痛苦。收入水平与 DT 得分存在弱的负相关 ( $\rho = -0.090$ ,  $p = 0.047$ )。与在婚患者相比, 此种相关在单身患者中更为显著 ( $\rho = -0.071$  vs.  $-0.099$ ,  $F(1) = 6.66$ ,  $p = 0.010$ )。在心理痛苦的来源中, 现实问题与低收入水平关系密切 ( $Z = -3.07$ ,  $p = 0.002$ )。亚组分析显示, 处于工作年龄的患者中存在收入水平与心理痛苦的负相关趋势 ( $\rho = -0.099$ ,  $p = 0.075$ ), 而在处于退休年龄的患者中则不显著。对于处于工作年龄的患者, 此种相关在女性患者中较男性更为明显 ( $\rho = -0.290$  vs.  $-0.101$ ,  $F(1) = 5.85$ ,

$p = 0.017$ )。此外,对于处在工作年龄的无业患者,其情绪问题比例高于同年龄段的就业患者(59.3% vs. 81.3%,  $OR = 2.99$ ,  $X^2 = 9.34$ ,  $p = 0.002$ )。

**结论** 在多发性骨髓瘤患者中,低收入水平与心理痛苦程度及现实问题存在一定的相关性,且在单身及处于工作年龄的女性中更为显著;而失业则与情绪问题密切相关。因此,医务人员、社会工作者、及政策制定者需要关注相关人群的心理健康问题,实施有效的预防及干预措施。本调查的结果需要更多研究进一步验证,尤其需要队列研究探索就业及收入水平对患者心理健康影响的动态变化。

## PU-090

### Comparison of Older vs. Younger Age on Metabolic Variables and Potential Biomarker of Depression

Yao Gao<sup>1,2</sup>, Dan Wang<sup>1,2</sup>, Xinze Du<sup>1,2</sup>, Yong Xu<sup>3</sup>, Sha Liu<sup>1,2</sup>

1. First Hospital of Shanxi Medical University

2. Shanxi Key Laboratory of Artificial Intelligence Assisted Diagnosis and Treatment for Mental Disorder, First Hospital of Shanxi Medical University

3. Department of Psychiatry, Taiyuan Central Hospital of Shanxi Medical University

**Objective** Depression is a common disease in people of all ages, with a lifetime prevalence of up to 20%. It currently affects more than 350 million people worldwide, with the COVID-19 pandemic leading to a significant 28% increase in incidence. Depressive patients of different ages have significant differences in physical basis, inducing factors, clinical symptoms and disease outcomes, so it is necessary to carry out differential diagnosis and precise treatment for patients of different ages. There is no comparison of metabolic changes in patients with depression at different ages. The aim of this study was to observe metabolic changes in young and old patients with depression, and to find that it can be used as a characteristic biomarker for diagnosis of patients at different ages.

**Methods** A total of 96 participants were recruited for the study, including young and elderly patients with depression, as well as age-matched healthy controls. The metabolite concentration in subjects' plasma was measured by NMR metabolomics. Pathway analysis is used to observe metabolic pathways involved in differential metabolites. After stepwise regression analysis, the metabolites with the most significant differences were found for subsequent analysis. Receiver operating characteristic curve (ROC) analysis was used to quantify the diagnostic performance of individual metabolites in young and elderly patients with depression and screen potential diagnostic biomarkers.

**Results** Firstly, metabolic profiling showed that 10 metabolites changed significantly in the plasma of young patients with depression, and 8 metabolites changed significantly in elderly patients. Secondly, pathway analysis showed that metabolite abnormalities of depressed patients at different ages involved in amino acid metabolism and carbohydrate metabolism. Then, regression analysis found that the most important differential metabolites in the diagnosis between depressed patients and HCs included choline, isoleucine, citrulline and scyllo-inositol, lactate in younger and elderly, respectively. Finally, the receiver operating characteristic curve (ROC) analysis showed that isoleucine and scyllo-inositol had a high diagnostic ability ( $AUC > 0.7$ ).

**Conclusion** There are different metabolic changes in patients with depression at different ages. Isoleucine and scyllo-inositol were recognized as the main potential independent biomarkers for the diagnosis of younger and elderly depression. This study provides a new idea for the differential diagnosis and precise treatment of depression.

PU-091

## DBT 辩证行为疗法的发展现状及治疗效果相关研究综述

黄众<sup>1</sup>、况利<sup>2</sup>

1. 重庆医科大学附属大学城医院

2. 重庆医科大学附属第一医院

**目的** 了解辩证行为疗法的发展现状及治疗效果，为日后在国内精神科开展 DBT 治疗提供启发并予以建议。

**方法** 通过 PubMed, Web of Science, PsycINFO, PsycARTICLES 检索文献，采用年份过滤范围，2020~2023 年。另设置过滤词“随机对照试验”，这样可以提高证据的可信度。使用的关键词是“辩证行为疗法”、“抑郁”、“焦虑”和“自杀”。这些文章研究了 DBT 治疗前后，患者行为和各量表得分的变化、DBT 与其他心理疗法的效果对比、DBT 中的模块如团体技能训练在临床的实际效用等。

**结果** 研究显示，DBT 可以显著减轻女性青少年抑郁症患者的症状，改善其生活质量。对一般边缘型人格障碍(BPD)患者而言，DBT 可以减轻抑郁，提高困难应对能力，提高生活质量和幸福感，DBT 技能训练可显著改善症状，减少急诊就诊次数和精神科住院天数；在自杀倾向 BPD 患者中，DBT 可减少自杀行为、自杀意念、抑郁情绪；DBT 对合并物质使用障碍的 BPD 患者有良好疗效。对饮食障碍患者，DBT 长期改善情绪性进食、抑郁症状、冲动和韧性。研究显示，DBT 技能使用与压力、焦虑和抑郁的缓解密切相关，技能使用可预测后续一天压力和焦虑的减轻；DBT 技能训练可显著改善住院青少年和儿童的抑郁症状和其他心理问题；DBT 技能培训还可改善性少数群体青少年的心理状况。简短的 DBT 技能小组同样对参与患者产生了积极效果。此外，DBT 和认知行为治疗(CBT)对广泛性焦虑障碍患者的心理问题均有改善，而 DBT 在情绪调节和正念方面比 CBT 更有效。DBT 具有跨文化属性，在亚洲的文化环境下也表现出显著的效果。综上，DBT 是一种有效的心理干预方法，并且在多种群体中都表现出适用性，它可以改善多种心理问题，提高生活质量。尤其是 DBT 技能训练团体这种形式，能在中短期内对较多患者进行有效干预，适合在医疗机构中使用，具备规模效应，值得向更大范围推广。

**结论** DBT 为精神科患者提供了在药物治疗、物理治疗以外的另一种有效的治疗手段，该疗法可以帮助患者改善症状、情绪，提高心理社会功能、提升幸福感，帮助患者更好地适应社会生活。同时，DBT 中团体技能训练模块具有干预效果快、覆盖面广、效率高、收集数据样本易等优点，可顺应患者的治疗需求和医院的实际情况。但目前 DBT 的大多数研究均在西方社会背景下展开，在中国医疗体制下的研究还不够丰富，需要进行更深入和更大样本量的研究。

PU-092

## The association of SOD and HsCRP with the efficacy of sulforaphane in schizophrenia patients with residual negative symptoms

Jianfei Zeng<sup>1</sup>, Weizhi Zhang<sup>2</sup>, Xiaobing Lu<sup>2</sup>, Zezhi Li<sup>2</sup>

1. 深圳市康宁医院

2. 广州医科大学附属脑科医院

**Objective** A growing body of evidence suggests that oxidative stress and immune-inflammatory processes are linked to the negative symptoms of schizophrenia. Apart from strong antioxidant and anti-inflammatory activities, Sulforaphane (SFN) can improve cognitive function in patients with schizophrenia. The purpose of this study is to investigate the efficacy of treatment combined with SFN in schizophrenia patients with negative symptoms and the subsequent effect on the levels of superoxide dismutase (SOD) and the inflammatory marker, high-sensitivity C-reactive protein (HsCRP).



**Methods** A total of 45 patients with schizophrenia were recruited, who had mainly negative symptoms but in a stable period. On the basis of the original treatments, the enrolled patients were additionally given tablets composed of SFN at a dose of 90mg /day for a total of 24 weeks. At baseline, 12 weeks, and 24 weeks, the participants were interviewed and evaluated for medical status. Each participant was assessed by the reduction rate of the Positive and Negative Syndrome Scale (PANSS), the adverse reactions were assessed using the side effects scale of Treatment Emergent Symptom Scale (TESS), and the levels of the SOD, HsCRP, and other indicators were examined.

**Results** The PANSS negative subscale scores were significantly decreased ( $P < 0.001$ ), the SOD activity was significantly increased ( $P < 0.001$ ), and the HsCRP was significantly increased ( $P < 0.05$ ). The improvement of HsCRP in the PANSS negative subscale reduction rate effective group was significant ( $P < 0.05$ ).

**Conclusion** SFN may serve as a potential adjunctive intervention to safely improve the negative symptoms of schizophrenia. And the anti-inflammatory effect of lowering HsCRP levels is a possible mechanism for SFN to improve negative symptoms in schizophrenia patients.

PU-093

## Associations between Catechol-O-methyltransferase (COMT) polymorphisms and cognitive impairments and clinical symptoms of schizophrenia with tardive dyskinesia in Chinese.

Jinghui Chi  
Tianjin Anding Hospital

**Objective** Catechol-O-methyltransferase (COMT) is an enzyme involved in dopamine metabolism and is associated with the etiology of tardive dyskinesia (TD). However, the association between COMT gene polymorphisms and schizophrenia with TD has not been studied in a Chinese population. We investigate for the first time the relationship between COMT gene polymorphisms and the occurrence and severity of TD in a Chinese population, and whether it has an impact on the cognitive impairments and clinical symptoms of TD patients.

**Methods** We recruited 216 patients with chronic schizophrenia, including 59 patients with TD and 157 patients without TD. In this study, three SNPs rs4680, rs165599 and rs4818 of the COMT gene were selected and genotyped by matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF-MS) technology. TD severity was assessed using the abnormal involuntary movement scale (AIMS), and patients' psychopathology and cognitive function were assessed using the Positive and Negative Syndrome Scale (PANSS) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), respectively. Statistical methods were performed using multivariate analysis of covariance (MANCOVA).

**Results** COMT gene polymorphisms were not associated with the occurrence of TD, but were strongly associated with the severity of TD patients. In TD patients, total AIMS scores were significantly higher in rs4680 AA genotype than in AG and GG genotypes, rs4818 GC and CC genotypes were higher in orofacial scores than in GG genotypes. In male patients with tardive dyskinesia, rs165599 genotype GA genotype scored significantly lower than AA genotype on the extremities and trunk. In addition, in male TD patients the alleles of rs4818 were differential in immediate memory and verbal function scores, with the C allele significantly higher than the G allele. Moreover, rs165599 genotype interacted with TD on depressed factors.

**Conclusion** In the Chinese population, COMT gene polymorphisms are strongly associated with the severity of TD and play an important role in the clinical symptoms and cognitive function of TD patients, and may be used as a biomarker to predict the symptoms and prognosis of TD patients.

PU-094

## “调督解郁法”电针治疗轻中度抑郁症的随机对照研究

殷萱、胥琨、徐世芬  
上海市中医医院

**目的** 评价“调督解郁法”电针治疗轻中度抑郁症的有效性及安全性。

**方法** 采用随机、单盲、平行对照的设计原则，纳入抑郁症患者 64 人，按 1:1 比例将患者分配到电针组和对照组。电针组选取百会、神庭、印堂、内关、三阴交、合谷和太冲，电极连接百会、印堂，参数设置连续波、频率 2Hz，每次治疗 30 分钟，每周 3 次，持续 8 周。对照组采用 Streitberger 安慰假针，取穴及治疗时间、频次等与电针组相同。主要指标为汉密尔顿抑郁量表-17 项（HAMD-17）；次要指标包括抑郁症自评量表（PHQ-9）和健康调查简表（SF-36）；并记录患者用药情况和相关不良事件。在治疗前、治疗后第 4 周、第 8 周，以及第 12 周随访时对患者进行相应指标评估。

**结果** 电针组完成病例 31 例，对照组完成 30 例，总脱落率 4.7%。采用意向性治疗分析原则，在治疗第 4、第 8 周及第 12 周随访时，电针组患者的 HAMD-17 评分均低于对照组（ $P<0.01$ ）。两组患者 HAMD-17 评分均随时间变化而降低，且与对照组相比，电针组下降趋势更明显（ $P<0.01$ ）。治疗第 4 周、第 8 周时，电针组 PHQ-9 评分均小于对照组（ $P<0.01$ ）。治疗第 8 周时，电针组在 SF-36 精力、社会功能和精神健康 3 个维度的评分均高于对照组（ $P<0.01$ ）。

**结论** 与假针刺相比，“调督解郁法”电针治疗方案能够更安全、有效地改善轻中度抑郁症患者的抑郁情绪，并提高患者的精力、精神健康和社会功能，提升其生活质量。

PU-095

## Different effects of prenatal valproate exposure on parvalbumin- and somatostatin-positive interneurons in the medial prefrontal cortex

Liangliang Wang<sup>1</sup>, Lang Wang<sup>2</sup>, Jinsong Tang<sup>1</sup>

1. Sir Run Run Shaw Hospital, Zhejiang University School of Medicine

2. Department of Neurology of the First Affiliated Hospital, Interdisciplinary Institute of Neuroscience and Technology, Zhejiang University School of Medicine

**Objective** Autism spectrum disorders (ASD) are a group of neurodevelopment disorders characterized by highly heterogeneous behavioral phenotypes such as social cognition deficits, communication difficulties, and repetitive patterns of behavior. It has been reported that the medial prefrontal cortex (mPFC) plays a key role in cognitive and executive processes, e.g. working memory, attention, and decision making. Post-mortem examination of ASD patients has shown significant changes in the number of parvalbumin-positive (PV<sup>+</sup>) interneurons and expression of PV protein in the mPFC, which was proposed to lead to an excitation/inhibition (E/I) imbalance of mPFC circuits. However, it still remains unclear that how the dysfunction of inhibitory circuits is involved in E/I imbalance in the mPFC, especially during early postnatal development which is susceptible to early life experience. Here, using a well-established ASD model induced by prenatal valproic acid (VPA) exposure in mice, we investigated the roles for PV<sup>+</sup> and somatostatin-positive (SOM<sup>+</sup>) interneurons in maintaining E/I balance in the mPFC.

**Methods** 1. Animal. C57BL/6 male mice were divided into different groups according to the age. To make prenatal VPA-exposure model, 500 mg/kg valproic acid sodium salt (VPA, Sigma-Aldrich) diluted in 0.9% NaCl was administered at gestational day 12.5 (GD 12.5) by intraperitoneal injection.

2. Tissue preparation. The mice were deeply anesthetized and perfused transcardially with PBS followed by 4% paraformaldehyde. Brains were dissected, post-fixed for 1 days and then transferred to a 30% sucrose solution for complete dehydration. Coronal slices (60 $\mu$ m) containing the mPFC area were prepared on a freezed microtome for further experiments.

3. Immunohistochemistry. Slices were washed, permeabilized and incubated in a primary antibody cocktail in PBS: rabbit anti-PV (1:2000, Abcam), rat anti-SOM (1:200, Abcam) and 0.1% TritonX-100 for at least 12h at 4 $^{\circ}$ C. After washing, the sections were incubated in a secondary antibody PBS solution: Alexa Fluor 594-conjugated donkey anti-rabbit (1:500, Abcam) and Alexa Fluor 488-conjugated donkey anti-rat (1:500, Abcam) for 3h at room temperature. Stained sections were mounted with Vectashield (Abcam).

4. Image acquisition and quantification. After immunohistochemical procedures, sections were imaged with an Olympus Fluoview FV-1000 microscope. 10X and 40X objectives were used for identifying layers with lower magnification and assessing markers with higher magnification respectively. Image analysis was performed by ImageJ and limited to the regions of interest (ROI). The distribution of PV $^{+}$  and SOM $^{+}$  cells were analyzed after counting two markers-expressing cells.

5. Data analysis. All data are expressed as mean  $\pm$  SEM. To compare the data across different conditions, the statistical significance is determined with one-way ANOVA.  $P < 0.05$  is considered as significant.

**Results** 1. It was found PV $^{+}$  and SOM $^{+}$  interneurons exhibit both layer- and region-specific distribution pattern in the mPFC during development.

2. The density of PV $^{+}$  -low neurons decreased while that of PV $^{+}$  -high neurons increased during early postnatal days. Both of them reached stable by postnatal 3weeks.

3. Prenatal VPA exposure differentially changed the developmental trajectories of PV $^{+}$  and SOM $^{+}$  interneurons in the mPFC.

**Conclusion** Our results suggest that PV $^{+}$  and SOM $^{+}$  interneurons may play distinct roles to maintain E/I balance in normal development and to induce E/I imbalance in ASD.

## PU-096

### 痛性不安腿综合征的鉴别诊断与治疗

黄朝阳、李宁、詹淑琴、王玉平  
首都医科大学宣武医院

**目的** 不安腿综合征（RLS）是临床上一种常见的睡眠障碍疾病，其主要临床表现为卧床或安静休息后腿部的不适感，这种不适感带来腿部活动的冲动，活动腿部后这种不适感明显缓解。夜间或长时间休息后症状加重。RLS 患者对这种不适感有很多不同的描述，包括麻木、蚁爬感、酸胀感、空感、痒感等。其中，20-60%患者会主诉疼痛。

**方法** 研究表明，痛性 RLS 患者的临床症状较非痛性 RLS 患者严重，夜间睡眠质量更差。阿片受体激动剂能够缓解 RLS 的症状，并改善 RLS 患者的睡眠质量。阿片类药物在 RLS 中的作用机制仍然不是很清楚。

**结果** 研究表明，内源性阿片系统的功能减退可能与 RLS 的发病机制有关。阿片类药物可能通过激活中脑多巴胺神经元以及增加伏隔核中多巴胺的释放起到治疗 RLS 的作用。自 1993 年轻考酮在 RLS 患者中进行第一次小的对照研究，阿片类药物已被认为是一种有效的治疗重度 RLS 患者的药物。最近的一项研究证实了轻考酮/纳洛酮缓释剂治疗 RLS 的疗效。轻考酮/纳洛酮缓释剂现已批准为欧洲第一个治疗 RLS 的阿片类药物。目前，阿片类药物治疗 RLS 的短期和长期研究结果表明，阿片类药物能够缓解重度 RLS（包括痛性 RLS）以及出现“症状恶化”的 RLS 患者的症状。

**结论** 总之，临床上我们应重视痛性 RLS，对于痛性 RLS 和难治性 RLS，我们可以应用阿片类药物进行治疗。

PU-097

## Symptom network and Bayesian network analyses of psychotic-like experiences in adolescents and young adults

Jiaxin Wu<sup>1</sup>, Fei Liu<sup>1</sup>, Maorong Hu<sup>3</sup>, Shiping Xie<sup>2</sup>, Hui Zheng<sup>4</sup>, Zheng Lu<sup>1,4</sup>

1. Tongji Hospital of Tongji University

2. Nanjing Brain Hospital

3. The First Affiliated Hospital of Nanchang University

4. Shanghai Mental Health Center

**Objective** To analyze the network structure of psychotic-like experiences (PLEs) in a large non-clinical sample of adolescents and young adults, and to compare the symptom networks between the two populations.

**Methods** 45420 college students from four cities in China enrolled in the study, but we excluded 4282 participants who did not fill in their age or were outside the age range of 12 to 35 years old. We also excluded 3695 participants who filled in the questionnaire carelessly, based on the reaction time (RT) incorporated into the careless package. Finally, we included 37443 internet users in the main analysis. We conducted network analysis and Bayesian network analysis on nine dimensions of three questionnaires measuring positive symptoms, negative symptoms, general symptoms, disorganization symptoms and schizotypal personality disorder (SPD) symptoms in this sample. We also compared symptom networks for two age groups: adolescents (12-18 years) and adults (19-35 years).

**Results** Our results show that there is a significant symptom network across all symptoms, with positive and negative symptoms being spatially separated and each being closely linked internally. We also found some differences in symptom networks between adolescents and adults. Bayesian network analysis revealed that SPD emerged as the most prominent node in the network, triggered directly or indirectly by both positive and negative symptoms, while in turn directly or indirectly predicting other symptoms.

**Conclusion** These findings indicate that great attention should be paid to schizotypal traits in detecting and intervening psychosis risk in non-clinical adolescents and young adults, which provide new insights for early detection and intervention in ultra-high risk for psychosis.

PU-098

## 单次中等强度有氧运动改善睡眠质量低下者日间疲劳感、警觉性及认知表现的效果

杜婧

上海市同济医院

**目的** 探讨分析单次中等强度有氧运动对睡眠质量低下者日间疲劳、警觉性及计划能力的恢复效果。

**方法** 以匹兹堡睡眠质量指数 (Pittsburgh Sleep Quality Index, PSQI) 作为睡眠质量评估工具, 以 PSQI 总分 > 7 分为标准共纳入 72 例睡眠质量低下者随机分为对照组和干预组, 各 36 例。干预组采用单次中等强度 (个体最大心率的 60%-69%) 有氧运动作为干预方式, 对照组静坐休息并阅读中性材料。在干预前后分别采用视觉模拟量表 (Visual Analogue Scale, VAS)、卡罗琳斯卡嗜睡量表 (Karolinska Sleepiness Scale, KSS)、精神运动警觉性测试 (Psychomotor Vigilance Task, PVT)、五盘伦敦塔任务 (Tower of London, TOL) 评估日间疲劳程度、主观警觉性、客观警觉性及计划能力。

**结果** 干预组与对照组基线资料差异均无统计学意义。组别×时间重复测量方差分析结果显示日间疲劳程度 (KSS)、主观警觉性 (VAS) 均存在显著交互效应 ( $P < 0.05$ ); 客观警觉性 (PVT) 中

最快 10%反应时存在显著组别主效应 ( $P<0.05$ )，平均反应时、最慢 10%反应时均不存在显著交互效应及主效应 ( $P>0.05$ )；五盘伦敦塔任务 (TOL) 中反应时、准确率均存在显著交互效应 ( $P<0.05$ )。

**结论** 相较于静坐休息，日间单次 15 分钟中等强度有氧运动能有效改善睡眠质量低下者的日间疲劳程度、主观警觉性、计划能力。

## PU-099

### 综合医院心理科门诊男性、女性强迫症患者的心理状况及心理特征比较

周鸿影、李蹕然、金英、王兰兰、程文红  
上海市第一人民医院

**目的** 本研究旨在探究综合医院心理科门诊首次就诊的男性、女性强迫症患者的就诊年龄、婚姻以及教育程度等一般人口学特征以及人格特征和基本心理状况的差异。

**方法** 本研究纳入了某三级甲等综合医院心理科 2009 年 2 月至 2023 年 3 月期间符合 ICD-10 强迫症诊断标准的 568 例首诊未用药的强迫症患者，其中男性 315 例，女性 253 例。收集了患者性别、年龄及教育程度等的一般信息，并分别采用艾森克人格问卷 (Eysenck Personality Questionnaire, EPQ)、症状自评量表 (the Symptom Checklist 90, SCL-90) 评估强迫症患者人格特征和基本心理状况等。

**结果** 男性患者的就诊年龄小于女性患者 ( $P<0.01$ )，未婚率显著高于女性 ( $P<0.01$ )，教育程度无明显差异 ( $P>0.05$ )。EPQ 问卷中神经质和掩饰性 2 个维度的得分高于女性患者 ( $P<0.05$ )。SCL-90 中阳性项均分、躯体化、抑郁、其他 4 个因子得分均显著高于女性患者 ( $P<0.05$ )。

**结论** 该综合医院心理科门诊男性强迫症患者就诊年龄更小，未婚率更高，相较于女性患者存在更明显的精神质人格。女性强迫症患者有更高的掩饰性，且其更容易出现躯体化症状和抑郁症状。

## PU-100

### 抑郁症与双相情感障碍患者昼夜节律通路差异基因研究

陈磊<sup>1,2</sup>、沈甜<sup>1</sup>、陈子木<sup>1</sup>、袁勇贵<sup>1</sup>、徐治<sup>1</sup>  
1. 东南大学附属中大医院  
2. 东部战区总医院

**目的** 本研究旨在发现昼夜节律通路基因的多态性在 MDD 和 BD 之间的差异，为两者的鉴别提供遗传学依据。

**方法** 本研究纳入 70 名 5 年随访间一直诊断为 MDD 的患者 (简称 MDD 组) 和 68 名诊断为 BD 的患者 (简称 BD 组)，选取昼夜节律通路基因单核苷酸多态性 (single nucleotide polymorphisms, SNPs) 进行基因检测，采用 UNPHASED 3.1.7 软件包分析每个 SNP 的基因型频率、等位基因频率和单倍型在 MDD 和 BD 间的差异。

**结果** 本研究基因型频率分析发现两组患者中的 PER1rs2253820 ( $OR=2.386$ ,  $P=0.022$ )、PER1rs2735611 ( $OR=2.357$ ,  $P=0.020$ )、PER3rs12566042 ( $OR=0.351$ ,  $P=0.004$ )、PER3rs17031614 ( $OR=0.389$ ,  $P=0.010$ )、PER3rs79372391 ( $OR=0.389$ ,  $P=0.010$ ) 基因型频率的差异有统计学意义，单倍型分析发现 CLOCK 位点 rs12505266、rs2272073、rs3817444、rs11133389 和 rs12505265 构成的单倍型中，T-C-C-T-G 单倍型在两组患者中的差异有统计学意义 ( $OR=0.108$ ,  $P=0.027$ )。

**结论** 通过本文的研究,发现了昼夜节律基因多态性在 MDD 和 BD 间的差异,对临床诊断具有一定的指导意义。

## PU-101

### CACNA1C 基因多态性与重度抑郁障碍转躁的关联研究

沈甜<sup>1,2</sup>、陈子木<sup>1</sup>、陈磊<sup>1</sup>、袁勇贵<sup>1</sup>、徐治<sup>1</sup>

1. 东南大学附属中大医院

2. 北京大学第六医院

**目的** 重度抑郁障碍(MDD)和双相情感障碍(BD)是两种与严重社会功能损伤有关的常见情感障碍。BD 由于早期被误诊为 MDD 而导致接受不适当的药物治疗,增加社会负担,因此研究影响 MDD 向 BD 的转化的潜在生物标志物十分重要。钙离子通道相关的 CACNA1C 的多个基因多态性位点与 BD 密切相关,本研究旨在探究 CACNA1C 的基因多态性与重度抑郁障碍转躁的关联性。

**方法** 本研究共纳入 500 名诊断为 MDD 的患者,随访 5 年,并用自制问卷进行半结构化访谈并根据随访结果将受试者分为 MDD 组和 BD 组,在入组时使用 HAMD-17 评估抑郁症状严重程度以及收集外周血,使用 SPSS 对两组患者的临床特征进行分析,对基因 CACNA1C 的单核苷酸多态性进行检测,采用 Unphased 3.1.7 软件包分析单个 SNP 位点的基因型频率、等位基因频率及单倍型与转躁的关联性,采用 Mplus 8.0 软件包分析基因 CACNA1C 的多态性在 HAMD 量表中睡眠分项三项总得分与转躁之间是否存在中介效应。

**结果** 共随访成功 299 名 MDD 患者,其中有 38 人修改诊断为 BD,转躁率为 12.7%。研究发现性别、年龄、首次发病年龄、家族史、精神病性症状在 MDD 组和 BD 组之间存在显著差异。同时研究还发现基因 CACNA1C 的位点 rs2239128 的 TT 基因型频率( $X^2=5.667$ ,  $P=0.048$ )在两组间存在明显差异;通过单倍型的关联分析发现,基因 CACNA1C 的 rs215976-rs215992 位点构成的 C-C 单倍型 ( $X^2=6.726$ ,  $P=0.032$ )在两组之间存在显著差异,中介分析未发现基因 CACNA1C 的多态性在 HAMD 量表中睡眠分项三项总得分与转躁之间存在中介效应。

**结论** 本研究表明,基因 CACNA1C 单个位点的多态性以及单倍型可能与 MDD 转躁相关,同时发现了首次发病年龄、家族史、精神病性症状等影响转躁的临床危险因素,对临床诊断抑郁症转躁具有一定的指导意义。

## PU-102

### 社会支持对急性心肌梗死患者院前延误时间的影响

李宇航、马文林

同济大学附属同济医院

**目的** 急性心肌梗死(AMI)患者的院前延误时间(PHDT),是影响救治效果的重要因素。社会支持是一种可改变因素,对 PHDT 存在影响,但目前国际范围内缺少社会支持对 PHDT 影响的系统性研究,国内尚未见有关社会支持与 PHDT 的报道。本研究拟探索社会支持与 AMI 患者 PHDT 的关系,分析社会支持对 PHDT 的影响。

**方法** 通过病例采集、床边访谈、自评问卷调查的方式收集资料,计算患者 PHDT、决定时间、转运时间,其中 PHDT 指 AMI 症状发生至到达医院的时间,采用社会支持评定量表(Social Support Rating Scale, SSRS)评估社会支持水平,SSRS 包括客观社会支持、主观社会支持、社会支持利用度三个维度,量表应用广泛信效度良好。使用 SPSS 23 分别分析总体人群和亚组人群。

**结果** 最终纳入 AMI 患者 267 例,平均年龄  $62.7 \pm 13.2$  岁,男性 219(82%)例,初次心梗 272(91.8%)例,独自就诊 43(16.1%)例。SSRS 平均  $37.3 \pm 7.45$  分,PHDT 中位时间 150 分钟,175(65.4%)例患者的 PHDT 大于 2 小时。

总体上高社会支持组高血脂、抽烟、高心理弹性水平的比例高；D 型人格、抑郁的比例低。高社会支持组因“疼痛”就诊的比例高。高社会支持利用度（OR:0.474,  $p=0.022$ ）和经常锻炼（OR:0.435,  $p=0.025$ ）是院前延误的保护因素。

老年亚组中，高社会支持组院前延误中位时间延长 93 分钟(114 vs. 207 分钟,  $p=0.048$ )。校正混杂因素后，高客观社会支持(OR:19.17,  $p=0.001$ )、受教育程度高（OR:9.984,  $p=0.006$ ）和女性（OR:5.332,  $p=0.046$ ）是老年 AMI 患者院前延误的独立危险因素；高社会支持利用度（OR:0.086,  $p=0.004$ ）和经常锻炼（OR:0.055,  $p=0.001$ ）是保护因素。

**结论** 老年人群中高社会支持者决定时间延长，院前延误时间延长。高客观社会支持是老年 AMI 患者院前延误的独立危险因素，高社会支持利用度是老年 AMI 患者院前延误的保护因素。

## PU-103

### 灵景方治疗冠心病 PCI 术后焦虑状态（心神失养证）的临床疗效观察

李欣、崔松、贾美君、季晶俊、陶丽宇  
上海中医药大学附属曙光医院

**目的** 研究中药“灵景方”对冠心病 PCI 术后焦虑状态（心神失养证）患者的疗效。

**方法** 选取 2022 年 4 月至 2023 年 3 月期间，上海中医药大学附属曙光医院心血管科的患者共 64 例，随机分为中药治疗组及对照组各 32 例。对照组予常规西药治疗，中药治疗组在对照组基础上加用中药“灵景方”治疗，疗程 2 个月，运用汉密尔顿焦虑量表（HAMA）、躯体化症状自评量表（SSS）、中医证候积分等评估治疗前后两组患者的焦虑程度、躯体化症状程度以及中医临床证候的缓解程度，并分析患者治疗前后血清 hs-CRP 水平，以评估炎症反应程度，进而评价患者远期预后。

**结果** 治疗前，两组患者在一般资料、HAMA 评分、SSS 评分、中医证候积分、血清 hs-CRP 等方面均无明显统计学差异，具有可比性。治疗后 HAMA 评分的下降在中药治疗组内具有统计学意义（ $P<0.05$ ），而对照组组内无统计学意义（ $P>0.05$ ），治疗后中药治疗组评分低于对照组（ $P<0.05$ ）。治疗后两组中医证候积分均有下降（ $P<0.05$ ），中药治疗组评分较对照组降低更多（ $P<0.01$ ）。中药治疗组的总有效率为 72.41%，对照组的总有效率为 56.67%，中药治疗组的有效率高于对照组（ $P<0.05$ ）。两组患者 SSS 评分在治疗后均有下降（ $P<0.05$ ），且中药治疗组评分下降更多（ $P<0.01$ ）。两组患者血清 hs-CRP 水平在治疗后也有下降（ $P<0.05$ ），中药治疗组降幅大于对照组（ $P<0.05$ ）。

**结论** 灵景方可明显减轻冠心病 PCI 术后（心神失养型）患者的焦虑情绪、中医临床临床证候及患者的躯体化症状，提高其生活质量。并可以降低患者的炎症反应，对冠心病的远期预后可起到积极作用。

## PU-104

### 合并睡眠障碍及癫痫表现的抗 VGKC 抗体相关脑炎 2 例

穆夏黎  
阜阳市人民医院

**目的** 郭某，主诉“多关节疼痛 10 余天”于 2020.5.4 入住风湿科。患者入院前无明显诱因下出现多关节疼痛，无明显关节肿胀，无晨僵，无口眼干燥，无发热、脱发、口腔溃疡等表现，院外予止痛药物（具体不详）治疗，疼痛无缓解。病程中有睡眠障碍、多汗等，近期体重无变化。治风湿科就诊，次日午突然出现全身抽搐，伴意识丧失，牙关紧闭，无口吐白沫，持续约 1min 抽搐停止，

神志嗜睡，伴面色苍白及口唇青紫。心电图：室上速，心率 160 次/分，BP：163/109mmhg，转至 ICU 进一步诊疗。后病情稳定后转回我科治疗。住院过程中出现肌束颤动（肉跳），血压升高、心律失常、多汗，多关节、肌肉疼痛，失眠等莫旺综合征的表现。

**方法** 辅助检查：血清 TORCH 中 I、II 型单纯疱疹病毒抗体 IgM 阳性，尿免疫球蛋白 G 17.4 mg/L (0-8.5)，尿微量白蛋白 200mg/L (0-30)，补体 C3 0.58g/L (0.9-1.8)、C4 0.07g/L (0.1-0.4)。

**结果** 血常规、肾功能、血脂、血糖，凝血、HCY、甲状腺功能、尿常规、免疫八项、结核抗体、免疫球蛋白 IgG、A、M、抗 O+类风湿因子、抗核抗体、Anca 基本正常。脑脊液：蛋白定量：1109.0mg/l，葡萄糖 4.04mmol/l,120.7mmol/l,脑脊液 TORCH 系列正常，毒物检测未见异常。脑电图：弥漫性慢波改变。肌电图：神经源性损害，运动神经轴索轻度改变。头颅 MRI：DWI 额顶枕叶高信号，ADC 额顶枕叶高信号，Flair 高信号。头颅 MRA+MRV 未见明显异常。脑脊液+血清抗 CASPR2 抗体阳性。

**结论** 明确诊断：抗 CASPR2 抗体阳性自身免疫性脑炎。给予激素、丙球治疗后癫痫、睡眠障碍表现改善。

## PU-105

### 中国神经性贪食诊疗专家共识

陈妍<sup>1</sup>、孔庆梅<sup>2</sup>、乔慧芬<sup>3</sup>、张岚<sup>4</sup>、李雪霓<sup>2</sup>、匡桂芳<sup>5</sup>、陈涵<sup>1</sup>、陈珏<sup>1</sup>

1. 上海市精神卫生中心
2. 北京大学第六人民医院
3. 南京医科大学附属南京脑科医院
4. 华西医院心理卫生中心
5. 青岛和睦家心理健康中心

**目的** 神经性贪食是以反复发作的暴食和防止体重增加的补偿行为，以及对体形和体重过度关注为特征的一类进食障碍。神经性贪食患者存在紊乱的进食行为，导致电解质异常，胃肠道疾病、代谢和内分泌紊乱等躯体问题；其次也常共病双相情感障碍、抑郁症、物质使用障碍等多种精神障碍。近年来，我国神经性贪食的患病率呈逐年升高趋势，严重影响年轻女性的身心健康甚至生命。然而，目前在中国对于神经性贪食，乃至进食障碍不能早期识别和诊治，导致患者社会功能严重受损，病程迁延。因此，为解决这一困境，制定本共识。

**方法** 专家组通过讨论、收集、汇总一线存在的相关医学问题（共计 7 项问题），并以“eating disorders”“bulimia nervosa”“psychotherapy”“pharmacological treatment”“depression”“bipolar disorder”“anxiety”“fluoxetine”为关键词，进行系统检索，召开第一轮会议对收集的 7 项热点问题进行分析，进一步筛选文献，剔除重复、动物实验、无法获取原文、与 7 项问题不相关的文献。第二轮会议对相关问题的研究数据及推荐建议。

**结果** 在神经性贪食干预前，建议进行系统综合的评估（推荐强度 A），包括躯体症状评估、一般精神病理症状，进食障碍的精神病理症状评估。认知行为治疗作为神经性贪食的一线治疗选择（推荐强度 A）。药物选择方面，氟西汀作为强烈推荐的选择药物。此外，基于循证医学证据、国内外指南与专家共识、专家经验等，针对上述提出的 7 项临床所面临的问题，提出推荐意见。

**结论** 本共识在总结归纳目前相关证据基础上，提出评估方法和诊疗意见，通过制定本共识，为临床诊疗提供依据。



## PU-106

## 甲基苯丙胺虚拟现实线索渴求评估系统的开发

黄秋平<sup>1,2</sup>、谌红献<sup>1</sup>

1. 中南大学湘雅二医院

2. 湖南中医药大学

**目的** 基于虚拟现实线索暴露范式，开发甲基苯丙胺线索渴求评估系统，探索适用于甲基苯丙胺使用障碍者的心理渴求评估工具。

**方法** 通过前期查阅大量文献、与甲基苯丙胺使用障碍（methamphetamine use disorder, MUD）者的访谈，结合专家意见，拟定虚拟现实场景。在湖南省某强制隔离戒毒所招募 150 名男性 MUD 者。采用问卷评估被试的一般情况、物质成瘾状况。采用视觉模拟渴求量表评估被试在戒断期对甲基苯丙胺（methamphetamine, MA）的戒断渴求水平；采用线索暴露范式，通过虚拟现实（virtual reality, VR）技术呈现中性场景、MA 相关物品场景、吸毒场景，通过系统内置的视觉模拟渴求量表评估被试在不同场景下的线索渴求水平。

**结果** 基于虚拟现实的线索渴求评估系统包括 4 个场景，即静息场景、中性场景（与 MA 无关的线索）、MA 物品场景（呈现 MA 及吸食工具等物品的静态线索）、吸毒场景（呈现演员正在使用 MA 的社会情境的动态线索）。VR 线索环境下，MUD 者吸毒场景线索渴求值显著高于中性场景和 MA 物品场景线索渴求值（ $p<0.001$ ），也显著高于暴露前的戒断渴求值（ $p<0.05$ ）。戒断渴求值与 3 个 VR 场景线索渴求值均呈正相关（ $p<0.01$ ）；戒断渴求值、线索渴求值均与 MUD 严重程度量表总分呈正相关（ $p<0.05$ ）；戒断渴求值与 MA 使用剂量、戒断时长呈正相关（ $p<0.05$ ）。

**结论** 戒断渴求越高的 MUD 者表现出对线索更强烈的渴求反应。基于虚拟现实线索暴露范式开发的 VR-MA 线索渴求评估系统可作为 MA 相关线索渴求评估的有效工具。

## PU-107

## 精神分裂症大鼠心功能与血管内皮生长因子表达的研究

张瑞哲、任明芬、王冕、聂肖坡

新乡医学院第二附属医院

**目的** 探讨精神分裂症大鼠心功能变化、血管内皮生长因子（Vascular Endothelial Growth Factor, VEGF）在心肌组织中表达情况，旨在为 VEGF 作为评估精神分裂症患者的心脏功能的生物标志物之一提供理论基础。

**方法** SD 大鼠在怀孕 9 天时，接受尾静脉注射聚肌胞苷酸（模型组）或等体积生理盐水（对照组），然后检测孕鼠血浆中的炎症因子表达，制备母体免疫激活模型。在子鼠进入成年期后，利用前脉冲抑制对感觉门控功能进行评估；分别对模型组和正常对照组大鼠进行超声心动图检查评估心功能；取大鼠心脏并固定、脱水、包埋、切片；通过 HE 染色观察两组大鼠的心脏形态学变化，免疫组织化学方法检测心肌 VEGF 的表达。

**结果** 1 孕鼠血浆中肿瘤坏死因子- $\alpha$ 、白介素-6（Interleukin-6, IL-6）水平升高；与对照组比较差异具有统计学意义（ $P<0.05$ ），表明母体免疫系统被激活，孕期感染模型制备成功。

2 前脉冲抑制试验显示模型组抑制率降低，两组比较差异具有统计学的意义（ $P<0.05$ ），提示精神分裂症模型造模成功。

3 心脏超声显示模型组大鼠的左心室射血分数及左心室短轴缩短率均小于对照组大鼠（ $P<0.05$ ），且模型组大鼠的左心室收缩末期径、左心室舒张末期径及每搏量均大于对照组（ $P<0.05$ ），表明精神分裂症大鼠的心功能存在一定程度上的减弱。

4 对照组大鼠心肌排列整齐,胞质分泌均匀,胞核清晰可见,心肌细胞未见明显损伤的表现。模型组为心肌排列紊乱,可见部分心肌受损。免疫组化显示 VEGF 在正常的大鼠左室心肌细胞表达较少,而在精神分裂症的大鼠左室心肌细胞中表达较多。

**结论** 精神分裂症大鼠的心功能减弱,心肌受到损伤,血管内皮生长因子的表达量较对照组大鼠多;提示,血管内皮生长因子有望可能作为监测精神分裂症心肌受损的指标之一。

## PU-108

### 帕金森病超重/肥胖患者外周氧化应激水平及其临床相关性

杨鹤超<sup>1</sup>、李研哲<sup>2</sup>、李申<sup>2</sup>、李洁<sup>2</sup>

1. 天津市环湖医院

2. 天津市安定医院

**目的** 氧化应激(OS)通常与帕金森病(PD)、肥胖和认知障碍的发病有关。然而,这些机制及其之间的关系尚未得到充分研究。因此,我们旨在探讨帕金森病患者的氧化应激、肥胖和认知功能之间的关系。

**方法** 本研究招募了186名特发性帕金森病门诊患者。我们采用汉密尔顿抑郁量表-17(HAMD-17)、蒙特利尔认知评估(MoCA)和运动障碍协会统一帕金森病评定量表第三部分(UPDRS-III)收集患者临床症状(包括抑郁症状、认知功能和运动症状)。我们还收集了氧化应激指标,包括血浆丙二醛(MDA)、超氧化物歧化酶(SOD)、谷胱甘肽(GSH);以及脂质代谢指标,包括高密度脂蛋白(HDL)、低密度脂蛋白(LDL)、甘油三酯(TG)、胆固醇(CHOL)的血清水平。

**结果** 肥胖组脂质过氧化物MDA水平( $F=7.127$ ,  $P=0.001$ )显著升高。相关分析显示,BMI分别与CHOL( $r=-0.237$ ,  $P=0.001$ )和HDL( $r=-0.417$ ,  $P<0.001$ )呈负相关。然而GSH水平( $r=0.154$ ,  $P=0.035$ )和MDA水平( $r=0.250$ ,  $P=0.001$ )与BMI呈正相关。超重组患者GSH水平与认知功能中命名评分呈正相关( $r=0.274$ ,  $P=0.024$ );TG水平与命名评分呈负相关( $r=-0.305$ ,  $P=0.013$ )。在肥胖组中,我们发现CHOL水平与定向评分呈负相关性( $r=-0.474$ ,  $P=0.022$ )。进一步的回归显示,在超重的PD患者中,GSH( $\text{Beta}=0.039$ ,  $t=2.279$ ,  $P=0.033$ )和TG水平( $\text{Beta}=-0.211$ ,  $t=-2.178$ ,  $P=0.003$ )是命名评分的独立危险因素;在肥胖组中,患者CHOL水平是认知功能中定向力评分的独立危险因素( $\beta=-0.437$ ,  $t=-2.464$ ,  $P=0.022$ )。

**结论** 这些结果表明氧化应激过程可能在超重/肥胖PD患者中发挥重要作用。需要对帕金森病患者进行进一步的纵向设计研究,以探索抗氧化剂对肥胖帕金森病患者异常脂质代谢和认知功能障碍的影响。

## PU-109

### Gender-related alterations of serum minerals and neuro metabolism in the anterior cingulate cortex of patients with major depressive disorder

Qilin Zhong

First Affiliated Hospital of Jinan University

**Objective** Sex differences have been widely recognized in patients with major depressive disorder (MDD). Women are more likely to suffer from MDD. Understanding gender differences is of great clinical significance because it can affect treatment methods and responses. The present study aims to evaluate the gender-related interaction between serum minerals and neurometabolic alterations in the anterior cingulate cortex of patients with MDD.

**Methods** Serum minerals and neurometabolic alterations were measured in patients with unmedicated MDD and healthy controls. 108 patients with unmedicated MDD (47 males and 61 females) and 44 healthy controls (22 males and 22 females) provided blood for minerals detection. 109 patients with unmedicated MDD (48 males and 61 females) and 59 healthy controls (24 males and 35 females) underwent magnetic resonance imaging (MRI) scanning. Proton magnetic resonance spectroscopy ( $^1\text{H}$ -MRS) was conducted under resting conditions. The NAA/Cr and Cho/Cr ratios were calculated to analyze biochemical neurometabolic changes. Of those, 93 unmedicated MDD patients (40 males and 53 females) underwent both minerals detection and  $^1\text{H}$ -MRS. Finally, association and interaction analysis were conducted to investigate their inter-relationships.

**Results** Most serum minerals of MDD patients showed highly significant differences compared with the controls that did not consider gender. The copper/zinc ratios were significantly increased when compared with healthy controls ( $F = 7.961$ ,  $p = 0.005$ ). The calcium ( $F = 4.438$ ,  $p = 0.037$ ), magnesium ( $F = 202.787$ ,  $p < 0.001$ ), ceruloplasmin ( $F = 488.279$ ,  $p < 0.001$ ), zinc ( $F = 31.909$ ,  $p < 0.001$ ), and iron ( $F = 15.051$ ,  $p < 0.001$ ) significantly decreased in MDD patients. The serum copper ( $F = 10.489$ ,  $p = 0.001$ ), ceruloplasmin ( $F = 5.752$ ,  $p = 0.018$ ), and iron ( $F = 5.781$ ,  $p = 0.017$ ) of males significantly differed from those of females regardless of the presence or absence of MDD. A significant interaction of Diagnosis and Gender was found in magnesium ( $F = 4.085$ ,  $p = 0.045$ ), copper ( $F = 7.027$ ,  $p = 0.009$ ), ceruloplasmin ( $F = 11.432$ ,  $p = 0.001$ ), and copper/zinc ratios ( $F = 5.977$ ,  $p = 0.016$ ). Since the interaction between Diagnosis and Gender was significant in magnesium, copper, ceruloplasmin, and copper/zinc ratios, we used the simple effect to analyze the change of serum minerals between MDD patients and healthy controls in different gender. Both male and female patients with MDD showed lower magnesium ( $P < 0.001$ ;  $P < 0.001$ ) and ceruloplasmin ( $P < 0.001$ ;  $P < 0.001$ ) levels than controls. Male patients also showed lower serum copper levels than male controls ( $P = 0.035$ ) and female patients showed higher copper/zinc ratios than female controls ( $P < 0.001$ ). Significant differences in the minerals were not observed between male and female controls. Nevertheless, significant differences in copper ( $P < 0.001$ ), ceruloplasmin ( $P < 0.001$ ), and copper/zinc ratios ( $P < 0.001$ ) were found between male and female MDD patients. The neurometabolic alterations in ACC of MDD patients also showed significant sex differences. The NAA/Cr ratios in bilateral ACC ( $F = 4.490$ ,  $p = 0.036$ ;  $F = 9.323$ ,  $p = 0.003$ ) were significantly lower in MDD patients. The CHO/Cr ratios in the left ACC of males were significantly higher than those of females regardless of the presence or absence of MDD ( $F = 9.767$ ,  $p = 0.002$ ). A significant interaction of Diagnosis and Gender was found in the NAA/Cr ratios in bilateral ACC and in the CHO/Cr ratios in left ACC ( $F = 7.575$ ,  $p = 0.007$ ;  $F = 5.292$ ,  $p = 0.023$ ;  $F = 4.200$ ,  $p = 0.042$ ). Since the interaction between Diagnosis and Gender was significant in bilateral ACC and in the CHO/Cr ratios in left ACC, we used the simple effect to analyze the change of the neuro metabolites in ACC between MDD patients and healthy controls in different gender. Male MDD patients have lower NAA/Cr ratios in bilateral ACC ( $P = 0.002$ ;  $P = 0.001$ ) than controls. Female MDD patients showed no significant differences in NAA/Cr and CHO/Cr in bilateral ACC between MDD patients and healthy controls. Significant differences in NAA/Cr ratios in bilateral ACC were found between male and female MDD patients ( $P = 0.007$ ;  $P = 0.001$ ). Female controls showed lower CHO/Cr ratios in left ACC than male controls ( $P = 0.001$ ), while there were no differences in patients with MDD between males and females ( $P = 0.484$ ). Thus, though there were no significant differences between male patients and healthy controls, it seems likely that the CHO/Cr ratios in the left ACC of male MDD patients were decreased ( $P = 0.063$ ). And the correlation coefficients between abnormal minerals and neuro metabolism were computed by partial correlation analyses. The Cu/Zn ratios negatively correlated to the NAA/Cr ratios of left ACC in male patients with MDD ( $r = -0.356$ ,  $p = 0.024$ ). And the iron levels negatively correlated to the CHO/Cr ratios of left ACC in male patients with MDD ( $r = -0.331$ ,  $p = 0.037$ ). However, we found no correlation between abnormal minerals and neuro metabolites in female patients with MDD.

**Conclusion** In summary, we conducted a correlation analysis on the gender-related relationship between serum minerals and neuro metabolites in the ACC in unmedicated patients with MDD. Our results indicate that patients with MDD show deficits in calcium, magnesium, zinc, and iron. Additionally, we found that female patients with MDD had higher ceruloplasmin levels and male

patients with MDD had lower copper levels compared to healthy controls. Male patients with MDD also showed significantly lower NAA/Cr ratios in bilateral ACC. Further, our results indicated that the gender-related interaction of abnormal serum minerals and neurometabolic of ACC may be implicated in MDD, which may indicate the gender difference in the pathogenesis of MDD.

## PU-110

### 抑郁症状或焦虑症状结合超敏 C 反应蛋白对冠心病患者预后的影响

白冰清<sup>1</sup>、尹晗<sup>2</sup>、郭兰<sup>1</sup>、马欢<sup>1</sup>、耿庆山<sup>2</sup>

1. 广东省人民医院

2. 深圳市人民医院

**目的** 探究冠心病患者抑郁症状、焦虑症状和超敏 C 反应蛋白(hs-CRP)的升高对随访 2 年后再住院和主要不良心血管事件(MACEs)的影响。

**方法** 纳入了 414 名入院诊断为冠心病的患者, 采用了 9 条目患者健康问卷量表(PHQ-9)、7 条目广泛性焦虑量表(GAD-7)分别评估患者抑郁和焦虑症状并检测其血浆 hs-CRP。对患者进行了两年的随访, 预后观察包括再入院、MACEs 和复合事件。分析了抑郁症状、焦虑症状与 hs-CRP 的关系, 采用 COX 回归模型分析了抑郁症状、焦虑症状结合 hs-CRP 升高对于再住院和主要心血管不良事件(MACE)等不良预后的影响。

**结果** 基线分析, 高 hs-CRP 与抑郁症状具有相关性( $P=0.012$ ), 但是与焦虑症状没有明显关系( $P=0.743$ )。在 COX 回归中, 调整混杂因素后, 单独有抑郁症状( $[HR]=2.75, 95\%[CI]=1.01-7.47, P=0.048$ )和抑郁症状合并高 hs-CRP( $HR=3.20, 95\%CI=1.47-6.95, P=0.003$ )的患者均有明显的非心源性再住院发生率。有抑郁症状而非高 hs-CRP 预测了 MACE 的发生风险( $HR=2.03, 95\%CI=1.03-4.02, P=0.041$ )。而以无焦虑症状低 hs-CRP 为对照, 我们发现高 hs-CRP 也是非心源性再住院的不良预测因子( $HR=2.80, 95\%CI=1.33-5.89, P=0.007$ )。

**结论** 在冠心病人群中, 抑郁症状与 hs-CRP 升高有关。抑郁症状和 hs-CRP 的升高可以预测非心源性再住院及 MACEs。未来在冠心病群体中需要进一步研究精神症状、病理生理改变以及躯体疾病之间的关联机制。

## PU-111

### 健康体检人群心理亚健康状况的全闭环式管理模式探索

张帅<sup>1</sup>、菅向东<sup>2</sup>、曹红梅<sup>1</sup>、王静<sup>1</sup>

1. 济南市章丘区人民医院

2. 山东大学齐鲁医院

**目的** 探索在心理亚健康人群中采用全闭环式心理干预模式的应用价值。

**方法** 选取 2019 年 2 月至 2020 年 2 月间, 对我院健康体检中心 2400 例健康体检者, 采用 PHM 心理健康评估系统进行评估, 主要采用心理健康系统中的躯体化症状自评量表(SSS-CN)、焦虑自评量表(GAD-7)及抑郁自评量表(PHQ-9), 整个过程由体检者独立完成量表评估, 筛选出存在心理亚健康状况者 200 例, 随机分为调查组和对照组, 每组各 100 例, 其中对照组 100 例, 根据体检报告提出的预警信息, 给予相应的健康指导并通过心理健康系统 APP 给予相关心理健康教育和指导。调查组 100 例, 通过心理干预小组分析心理评估情况, 进行“一对一”的面谈, 采用 ABC 法干预体系, 结合健康宣教、认知行为及正念疗法、相应的运动指导等干预手段。半年后对比两组受试者心理亚健康状态变化情况。

**结果** 调查组 100 例心理亚健康体检者采用全闭环式的心理干预模式，分别从生理、心理和社会三个维度评分均低于对照组， $P<0.05$ ，差异具有统计学意义。

**结论** 对心理亚健康人群采用全闭环式心理干预模式，能有效改善心理亚健康人群生活及工作质量，提高人文关怀力度，构建更加和谐医患关系，帮助体检者尽早恢复日常生活。

## PU-112

### 基于 rs-fMRI 和 P11 基因 DNA 甲基化的多维特征预测抑郁症抗抑郁药早期疗效

汪天宇<sup>1,2</sup>、高晨洁<sup>1,2</sup>、李嘉兴<sup>3</sup>、李磊<sup>4</sup>、岳莹莹<sup>1,2</sup>、刘晓云<sup>1,2</sup>、陈素珍<sup>1,2</sup>、侯正华<sup>1,2</sup>、尹莹莹<sup>1,2</sup>、姜文颢<sup>1,2</sup>、徐治<sup>1,2</sup>、孔佑勇<sup>3</sup>、袁勇贵<sup>1,2</sup>

1. 东南大学附属中大医院

2. 东南大学医学院

3. 东南大学计算机学院

4. 连云港市第四人民医院

**目的** 本研究结合机器学习的分析方法，建立基于静息态脑功能影像学 and P11 基因 DNA 甲基化的多维数据的特征模型，以预测抑郁症患者抗抑郁药治疗的早期疗效。

**方法** 纳入符合《精神障碍诊断与统计手册》第 4 版（DSM-IV）修订版诊断标准的抑郁症患者 98 例。根据抗抑郁药治疗 2 周后 HAMD-17 量表评分的减分率是否  $\geq 50\%$ ，将患者分为有效组 51 例，无效组 47 例。在基线期，利用 Illumina HiSeq 平台检测外周血标本中 P11 基因 74 个 CpG 位点的甲基化水平；通过静息态功能磁共振（rs-fMRI）技术检测 116 个脑区的低频振幅（ALFF）、局部一致性（ReHo）和各脑区间静息态功能连接（FC）特征，利用最小绝对收缩和选择算子（LASSO）分析方法，对数据进行特征降维和特征选择。以筛选后的 P11 基因 DNA 甲基化指标、脑功能指标、临床特征的不同组合为特征，采用 4 种典型的机器学习方法建立径向核支持向量机（SVM）、随机森林（RF）、朴素贝叶斯（NB）和 logistic 回归（LR）的疗效预测模型。采用了留一交叉验证法，应用受试者工作特征曲线下面积（AUC）来评估预测模型的性能。

**结果** 基于 ALFF、ReHo、FC、P11 基因 DNA 甲基化和临床特征的多维特征组成的 SVM 模型表现最优，其预测准确率为 95.92%，AUC 为 0.9967，优于 RF、NB 和 LR 模型。基于 rs-fMRI、DNA 甲基化和临床特征的多维数据集的预测准确性，高于仅基于 rs-fMRI 和临床特征，或仅基于 DNA 甲基化和临床特征的预测准确性。

**结论** 结合脑功能影像、DNA 甲基化和临床特征的多维特征可以预测抑郁症抗抑郁药治疗的早期疗效。

## PU-113

### 青少年使用布南色林引起一过性血清丙氨酸转氨酶升高一例

龙易成<sup>1</sup>、王晓蔓<sup>2</sup>、吴国伟<sup>1</sup>

1. 中南大学湘雅二医院

2. 中南大学湘雅医学院

**目的** 布南色林是一种新型第二代抗精神病药物，但目前其肝毒性尚不明确，国内外相关文献资料均很少提及布南色林对肝脏的影响，本病例报告拟填补这方面的空白。

**方法** 我们分析了 1 例青少年精神分裂症患者使用布南色林导致一过性血清丙氨酸转氨酶（alanine aminotransferase, ALT）升高的临床资料，以期布南色林的合理用药提供参考。

**结果** 患者女，16 岁，高一学生，因“缓起凭空闻声、被监视感 1 年余”于 2021 年 7 月 29 日收入 XX 医院。入院考虑诊断为：精神分裂症。7 月 30 日复查血常规无明显异常。与患者家属签署超适应

症用药知情同意后，7月30日予以布南色林 4mg 一天 2 次起始治疗，配合支持性的心理治疗。后在 17 天内（至 8 月 15 日）布南色林逐渐加量至 8mg 中午 1 次，12mg 晚 1 次，8 月 17 日患者总是想走动，坐立不安，考虑抗精神病药物引起锥体外系副反应可能性大，加用苯海索 2mg 早 1 次抗药物副反应。患者的幻觉、妄想症状明显减轻，意志行为活动有所恢复，参加病房的活动。8 月 10 日布南色林剂量滴定至 8mg 一天 2 次，复查血常规、肝功能（ALT 14.0 u/l）、肾功能、血脂未见明显异常。出院前一天 8 月 23 日复查肝功能示 ALT 48.1 u/l↑，肾功能无异常，体重不变，患者肝功能轻度异常，继续观察。患者病情较前改善，一般情况稳定，于 8 月 24 日办理出院。出院后患者仍按原剂量服药，9 月 23 日在门诊复查肝功能已恢复正常水平，ALT 23.9 u/l。后门诊随访 4 个月，患者坚持服药，病情平稳，基本可正常做家务。

**结论** 可引起转氨酶升高最常见的原因包括感染性营养性和药物性因素等。该病例在入院时已完善肝炎相关检查未见明显异常，整个住院期间无明显感染征象，营养状态良好、体重无明显变化，感染性、营养性因素可初步排除。药物性因素方面，患者住院期间仅服用布南色林及苯海索两种药物，而查阅既往国内外文献发现，苯海索这一药物已在临床应用数十年，期间几乎没有报道苯海索引起转氨酶升高的病例，加之本例患者服用苯海索的剂量较小，其引起转氨酶升高的可能性很低；因此，最可能的推测是布南色林引起了本例患者的 ALT 升高。这则案例提醒我们，以后在为青少年精神分裂症患者处方布南色林时，应多方面考虑风险和获益，精准滴定药物剂量，注重评估药物的疗效和副反应，争取获益最大化。

## PU-114

### 对抗精神病药物耐受性差的患者换用鲁拉西酮一例

龙易成<sup>1</sup>、王晓蔓<sup>2</sup>、吴国伟<sup>1</sup>

1. 中南大学湘雅二医院

2. 中南大学湘雅医学院

**目的** 目前常用的第二代抗精神病药物虽然总体副反应减轻，但是仍可能出现常见的药物副作用及影响代谢指标。鲁拉西酮作为第二代抗精神病药，其疗效和安全性经过了临床检验，但相关病例报告还较少，本病例报告拟填补其空白。

**方法** 我们报道 1 例 18 岁精神分裂症患者因先后服用两种常用的第二代抗精神病药物，导致发胖、嗜睡、头痛、心慌、排尿困难等而换用鲁拉西酮的临床案例，以期对这类人群的用药提供参考。

**结果** 患者男，18 岁，职业高中学生，因“缓起凭空闻人语、脾气大 5 年，加重 4 个月”于 2020 年 11 月 16 日入住 XX 医院精神科治疗，诊断：精神分裂症。患者既往先后服用“奥氮平、利培酮、丙戊酸镁缓释片、坦度螺酮”等，病情未明显缓解，出现排尿困难、心慌、头痛、睡眠昼夜颠倒等，患者因此自行减药，不规律服药。患者入院第 1 天（11 月 16 日）予以鲁拉西酮 20mg Qn 起始治疗，劳拉西泮 0.5mg Bid 配合支持性的心理治疗。11 月 18 日与患者及家属沟通后决定口服药物合并 MECT 治疗。将鲁拉西酮加量至 40mg Qn 抗精神病，短期应用劳拉西泮 1mg Bid 抗焦虑治疗，同时行 MECT 治疗。11 月 20 日患者仍感紧张焦虑，合并使用米那普伦 12.5mg Bid 抗焦虑治疗，行第 2 次 MECT 治疗。之后患者幻听频率减少，情绪较前稳定，未再次发作激越行为。至 11 月 23 日将劳拉西泮减量至 0.5mg Bid，米那普伦加量至 25mg Bid 抗焦虑治疗，同时进行第 3 次 MECT 治疗，鲁拉西酮维持 40mg Qn。住院 8 天后，患者比较平静，无兴奋激越行为，幻听基本消失，头痛减轻，睡眠规律，大小便正常，主动参加病房的活动，因患者假期已到，要求出院，出院后嘱患者仍按原剂量服药，规律作息和复诊。在第一个月时停用劳拉西泮，第 4 个月时停用米那普伦，单用鲁拉西酮 40mg Qn 治疗，目前门诊随访 12 个月，患者坚持服药，病情平稳，体重下降 5 斤，正常参加学习活动。

**结论** 本例患者初始换用鲁拉西酮治疗后，没有出现明显的药物副反应，耐受性较好。服药一周内便有明显的效果，尤其是阳性症状和激越症状明显缓解。住院 8 天后，患者症状明显缓解，幻听消失，头痛和焦虑基本消失，小便正常，睡眠规律，副反应不明显，患者好转出院。这则案例提醒

我们，以后在为青年精神分裂症患者处方鲁拉西酮时，在单一使用抗精神病药原则的基础上，治疗个体化，定期评价疗效和监测药物副反应，多方面权衡风险和获益，争取获益最大化。

## PU-115

### 伴与不伴躯体症状抑郁症患者的甲状腺激素水平及病情转归情况的比较

李婷婷、穆朝娟、刘炳伦  
山东省精神卫生中心

**目的** 探讨伴与不伴躯体症状的抑郁症患者的甲状腺激素水平以及病情转归情况的比较。

**方法** 选取 2022 年 1 月至 2023 年 1 月于我院住院的 156 例抑郁症患者，采用孙学礼教授提出的《WCPA 躯体症状分类量表》将其分为伴躯体症状的抑郁症患者（躯体症状组）74 例和不伴躯体症状的抑郁症患者（无躯体症状组）82 例。

采用放射免疫分析法检测躯体症状组与无躯体症状组的总三碘甲状腺原氨酸(TT3)、总甲状腺素(TT4)、游离三碘甲状腺原氨酸(FT3)、游离甲状腺素(FT4)、促甲状腺激素(TSH)水平。

两组患者均于治疗第 2、4、8 周末测评 HAMD 量表，以 HAMD 减分率进行评价观察其临床疗效。减分率=(治疗前后 HAMD 评分差/治疗前 HAMD 评分)×100%。减分率>75%为痊愈, 50%~75%为显效, 25%~49%为好转, <25%为无效。总有效率=(痊愈+显效+好转)/总例数×100%。

**结果** 躯体症状组与无躯体症状组相比，前者的 TSH 水平显著高于后者( $P<0.05$ )，而两组在 TT3、TT4、FT3、FT4 水平无明显差异( $P>0.05$ )；两组的治疗有效率在第 2 周、第 4 周无明显差异，而在治疗第 8 周躯体症状组的治疗有效率低于无躯体症状组。

**结论** 抑郁症伴躯体症状患者的 TSH 水平显著高于不伴躯体症状的抑郁症患者，而且伴躯体症状的抑郁症患者治疗难度要更大，总体治疗有效率要更低。血清高 TSH 水平是这类患者生物学的状态标志，也可能是抑郁症伴躯体症状患者预后差的原因。

## PU-116

### 脑网络在惊恐障碍诊断和早期疗效预测中的价值研究

游林林  
东南大学附属中大医院

**目的** 探索惊恐障碍（Panic disorder, PD）脑网络的异常，分析其在 PD 诊断和早期疗效预测中的潜在价值

**方法** 采集 82 例 PD 和 97 例健康对照（Healthy controls, HCs）的静息态 MRI（resting state MRI, rs-MRI）数据和临床特征。比较两组间脑网络的差异，采用偏相关分析评估差异指标与临床量表的相关关系；采用 ROC 曲线评估脑网络指标对 PD 诊断和早期疗效预测的效能。

**结果** 两组间 6 个大尺度网络内/间功能连接（functional connectivity, FC）存在差异，PD 患者默认模式网络（Default mode network, DMN）-DMN ( $t=2.450$ ,  $p<0.05$ )、额顶网络(Fronto-parietal network, FPN)-扣带盖网络（Cingulo-opercula network, CON）( $t=2.158$ ,  $p<0.05$ )、CON-默认网络（sensorimotor network, SMN）( $t=2.226$ ,  $p<0.05$ )FC 增加，SMN-SMN ( $t=-2.047$ ,  $p<0.05$ )、SMN-OCN ( $t=-2.076$ ,  $p<0.05$ )、枕叶网络（occipital network, OCN）-小脑网络( $t=-2.170$ ,  $p<0.05$ )FC 降低。PD 缓解组与未缓解组大尺度网络内/间 5 个 FC 存在差异，缓解组 OCN-OCN ( $t=2.419$ ,  $p<0.05$ )、FPN-CON ( $t=2.031$ ,  $p<0.05$ )FC 增加，DMN-SMN ( $t=-2.254$ ,  $p<0.05$ )、CON-SMN ( $t=-1.996$ ,  $p<0.05$ )、SMN-小脑网络( $t=-2.301$ ,  $p<0.05$ )FC 降低。偏相关分析发现 CON-SMN 之间的 FC 与汉密尔顿焦虑量表(Hamilton Anxiety Rating Scale, HAMA)减分率呈负相关。脑网络指标的联合对

PD 诊断的 AUC 为 0.710, 敏感性 72.0%, 特异性 64.9%; 同时对 PD 早期疗效预测的 AUC 为 0.899, 敏感性 75.7%, 特异性 100%。

**结论** 脑网络指标的联合对 PD 诊断和早期疗效预测的效能显著提升, 明显优于单个脑网络的预测效能。

## PU-117

### DRS-R-98 量表简体中文版在常见精神障碍患者中的内部一致性研究

杨宇<sup>1</sup>、陈隽羚<sup>1</sup>、龙易成<sup>2</sup>、欧阳萱<sup>2</sup>

1. 中南大学湘雅医学院

2. 中南大学湘雅二医院

**目的** 谵妄评定量表-98 修订版(Delirium Rating Scale, DRS-R-98) 是国际上通用的用于评定意识障碍严重程度的量表, 可广泛应用于包括精神障碍在内的多种疾病人群。然而, DRS-R-98 量表简体中文版在精神分裂症、双相情感障碍和抑郁症等常见精神障碍患者中的信效度目前尚不明确。本研究通过在共 19 名包括精神分裂症、双相情感障碍和抑郁症三种疾病的患者中, 对 DRS-R-98 量表简体中文版进行临床现场测试, 再使用 SPSS 软件进行统计分析, 从而对 DRS-R-98 量表简体中文版的内部一致性进行检验。

**方法** 本项目于 2021 年 6 月至 2022 年 3 月在湘雅二医院精神科招募并筛选入试 19 名患者, 分别为精神分裂 (n=7), 双相情感障碍 (n=10), 重度抑郁症 (n=2)。利用 SPSS 软件 26 计算 Cronbach's  $\alpha$  系数评估 DRS-R-98 量表的内部一致性。

**结果** 通过统计分析得到 DRS-R-98 量表中文译本严重程度和总量表的 Cronbach's  $\alpha$  系数分别为 0.83 和 0.91, 表明其内部一致性较好。

**结论** 由于谵妄症状具有一过性、普遍性和波动性大的特征, 给谵妄的评估和诊断造成困难。本研究结果初步表明 DRS-R-98 量表中文译本在常见精神疾病患者中具有较好的内部一致性, 但本研究样本量较小, 如需进一步优化 DRS-R-98, 可以从扩大样本量从而获得更加精确、有效的分界点。

## PU-118

### 社区支持与新冠肺炎疫情突发公共卫生事件下个体心理健康的关系：以社交关系网络为视角

李书鹏

北京大学公共卫生学院

**目的** 本文旨在探讨在新冠肺炎疫情突发公共卫生事件下, 社区支持对个体心理健康的影响, 并以社交关系网络的视角进行观察和分析。通过分析社交关系网络在社区支持中的作用和渠道, 提供对个体心理健康的干预和支持策略。

**方法** 本研究采用定性研究方法, 主要依托于文献综述和系统综述的分析, 并结合社会学、传播学和心身医学等多学科的理论框架进行综合分析。通过梳理相关文献, 探究社区支持的概念、特点以及其与个体心理健康的关系。进一步, 运用社交关系网络理论, 观察社交关系网络与社区支持之间的联系, 并分析其对个体心理健康的影响。

**结果** 研究发现, 社区支持在新冠肺炎疫情期间对个体心理健康具有重要影响。通过社交关系网络, 社区成员能够获得来自亲友、邻居和专业人士的支持和帮助, 增强心理应对能力, 减轻情绪困扰和心理压力, 促进心理健康的恢复和维持。社交关系网络的密度、多样性和质量等因素, 对社区支持的效果具有一定的调节作用。



**结论** 社区支持在新冠肺炎疫情突发公共卫生事件下对个体心理健康的重要性不容忽视。通过加强社交关系网络的建设和维护,可以提供更有效的社区支持,有助于缓解个体的心理困扰和压力,促进心理健康的恢复和提升。因此,在社会干预和政策制定中,应重视社区支持的角色,并采取措施加强社交关系网络的功能,为个体提供更好的心理健康支持。

通过本研究的定性分析和综述方法,可以为未来的社区心身医学研究提供新的视角和思路,为公共卫生事件下个体心理健康的保护和干预提供科学依据。

PU-119

## **Stress Responses and Psychosocial Health Management of Immigrant and Refugee Populations in Public Health Emergencies: A Case Study of the COVID-19 Pandemic**

Shupeng Li  
Peiking University

**Objective** The COVID-19 pandemic has had a significant impact on global public health, including the well-being of immigrant and refugee populations. This study aims to explore the stress responses and psychosocial health management strategies employed by immigrant and refugee communities during public health emergencies, focusing on the experience of COVID-19.

**Methods** This research utilizes qualitative analysis, including systematic reviews and synthesis of existing literature, to gain insights into the stress responses and psychosocial health management strategies adopted by immigrant and refugee populations during the COVID-19 pandemic. Through a comprehensive search, relevant studies, reports, and articles were identified, analyzed, and summarized to provide a comprehensive overview.

**Results** The findings of this study suggest that immigrant and refugee populations face unique challenges in public health emergencies such as the COVID-19 pandemic. These challenges include language barriers, cultural differences, limited access to healthcare, and increased social isolation. Immigrants and refugees may experience heightened stress levels, anxiety, depression, and post-traumatic stress disorder (PTSD) symptoms due to these challenges. However, the results also indicate that several psychosocial health management strategies have been implemented to support the well-being of these populations. These strategies include community-based support networks, cultural adaptation programs, and mental health interventions tailored to meet the specific needs of immigrant and refugee communities.

**Conclusion** This study highlights the importance of addressing the stress responses and psychosocial health management of immigrant and refugee populations during public health emergencies such as the COVID-19 pandemic. By understanding the unique challenges faced by these populations and identifying effective strategies, policymakers and healthcare providers can develop targeted interventions to mitigate the negative impact on their well-being. It is crucial to foster inclusivity, cultural sensitivity, and community engagement to ensure the equitable provision of public health services for immigrant and refugee populations, ultimately promoting their psychosocial health and resilience in times of crisis.

This research underscores the need for further studies and innovative approaches to address the mental health and well-being of immigrant and refugee populations in public health emergencies, taking into account their unique circumstances and sociocultural contexts.

PU-120

## Psychosomatic Disorders among Children and Adolescents in the Context of the COVID-19 Pandemic: Risk Factors, Interventions, and Prevention

Shupeng Li  
Peking University School of Public Health

**Objective** The COVID-19 pandemic has brought about significant challenges to the mental and physical health of children and adolescents. This study aims to explore the psychosomatic disorders experienced by this population during the public health crisis caused by COVID-19, focusing on the identification of risk factors, interventions, and prevention strategies.

**Methods** This research utilizes qualitative analysis, including systematic reviews and synthesis of existing literature, to gain insights into the psychosomatic disorders among children and adolescents in the context of the COVID-19 pandemic. Through a comprehensive search of relevant studies, reports, and articles, this study identifies and analyzes the risk factors associated with psychosomatic disorders in this population. It also reviews and summarizes the available interventions and prevention strategies for effective management.

**Results** The findings of this study reveal several risk factors contributing to the development of psychosomatic disorders among children and adolescents during the COVID-19 pandemic. These factors include social isolation, disruption of routines, increased screen time, academic stress, and limited access to support systems. Furthermore, the study identifies various interventions and prevention strategies that can mitigate the negative impact of these risk factors. These strategies encompass mental health support services, psychoeducation programs, resilience-building activities, and family engagement.

**Conclusion** This study underlines the importance of addressing psychosomatic disorders among children and adolescents in the context of the COVID-19 pandemic. It emphasizes the need for comprehensive risk assessment, tailored interventions, and prevention strategies to protect the mental and physical well-being of this population. By implementing innovative approaches that address the unique challenges presented by the pandemic, stakeholders can enhance the resilience and long-term outcomes for children and adolescents.

The findings of this study prompt further research to explore the long-term consequences of the COVID-19 pandemic on the mental and physical health of children and adolescents. This will contribute to the development of evidence-based interventions and preventive strategies for future public health emergencies.

PU-121

## Impact of the COVID-19 Pandemic on the Psychosomatic Health of Different Population Groups: A Comparative Study of Gender, Age, and Regional Differences

Shupeng Li  
Peking University School of Public Health

**Objective** The outbreak of the COVID-19 pandemic has had far-reaching effects on the psychosomatic health of individuals across various population groups. This study aims to investigate the impact of the pandemic on psychosomatic health, focusing on the comparative analysis of gender, age, and regional differences.

**Methods** This research utilizes qualitative analysis, including systematic review and synthesis of existing literature, to examine the impact of the COVID-19 pandemic on psychosomatic health. By analyzing relevant studies, reports, and articles, this study explores the specific effects of the

pandemic on different population groups, taking into account the variables of gender, age, and regional disparities.

**Results** The findings of this study indicate that the COVID-19 pandemic has had varied effects on the psychosomatic health of different population groups. Gender differences emerge in terms of coping mechanisms, symptom presentation, and mental health outcomes. Age-related disparities are observed in the manifestation and resilience of psychosomatic symptoms. Furthermore, regional differences play a role in the availability of healthcare resources, access to support systems, and cultural influences on psychosomatic well-being.

**Conclusion** This study highlights the importance of understanding the impact of the COVID-19 pandemic on psychosomatic health through a comparative lens of gender, age, and regional differences. It emphasizes the need for tailored interventions and support strategies that consider the specific vulnerabilities and challenges faced by different population groups. By adopting innovative approaches and addressing the unique contexts that influence psychosomatic health, stakeholders can develop more effective strategies for mitigating the negative consequences of the pandemic.

This research prompts further exploration into the long-term effects of the COVID-19 pandemic on psychosomatic health, with considerations for socio-cultural contexts, healthcare policies, and intervention strategies. The findings contribute to the development of targeted interventions that promote psychosomatic well-being and resilience in diverse population groups.

## PU-122

### **Risk Communication, Information Credibility, and Public Psychological Response: Enhancing Social Support and Psychosomatic Resilience in Public Health Emergencies**

Shupeng Li

Peking University School of Public Health

**Objective** Effective risk communication and credible information play crucial roles in shaping public psychological responses during public health emergencies. This study aims to explore innovative approaches to enhance social support and psychosomatic resilience among the public by examining the interplay between risk communication, information credibility, and psychological response in the context of public health emergencies.

**Methods** This research utilizes qualitative analysis, including a systematic review of existing literature and a synthesis of key findings, to examine the relationship between risk communication, information credibility, and public psychological response. By analyzing relevant studies, reports, and articles, this study explores the pathways through which improved risk communication and information credibility can enhance social support and psychosomatic resilience in public health emergencies.

**Results** The findings of this study demonstrate the critical role of effective risk communication and information credibility in shaping public psychological responses during public health emergencies. Clear and timely communication, transparent information sources, and credible messaging foster trust and reduce anxiety among the public. Social support networks and community engagement contribute to enhancing psychosomatic resilience, promoting coping strategies, and facilitating adaptive behaviors among individuals and communities.

**Conclusion** This study highlights the importance of risk communication and information credibility in promoting social support and psychosomatic resilience during public health emergencies. It emphasizes the need for collaborative efforts among healthcare providers, policymakers, and communication experts to ensure accurate and transparent information dissemination. By enhancing communication strategies, integrating social support networks, and promoting health literacy, stakeholders can effectively address public psychological responses and foster psychosomatic resilience during public health emergencies.

The findings of this research contribute to the development of evidence-based approaches for risk communication and information dissemination in public health emergencies. By adopting proactive measures to enhance social support and psychosomatic resilience, policymakers and healthcare professionals can effectively mitigate the negative psychological consequences of public health emergencies and foster community well-being.

PU-123

## The Role of Genetic Polymorphisms in the Pathogenic Mechanisms of Psychosomatic Disorders: An Exploration

Shupeng Li

Peking University School of Public Health

**Objective** This paper aims to explore the role of genetic polymorphisms in the pathogenic mechanisms of psychosomatic disorders. By utilizing qualitative analysis methods and conducting a systematic review, we aim to present a comprehensive understanding of the relationship between genetic polymorphisms and the development of psychosomatic disorders.

**Methods** This study employs qualitative analysis methods, specifically a systematic review approach. A thorough search of relevant literature will be conducted in multiple databases. Inclusion and exclusion criteria will be applied to select eligible articles. The selected studies will be critically appraised, and relevant data will be extracted for analysis. Through qualitative synthesis, the findings will be synthesized to provide insights into the role of genetic polymorphisms in psychosomatic disorders.

**Results** The systematic review revealed a significant body of literature focused on the association between genetic polymorphisms and psychosomatic disorders. The findings suggest that specific genetic polymorphisms may contribute to the susceptibility, development, and severity of psychosomatic disorders. These polymorphisms may affect various pathways, such as neurotransmitter regulation, immune response, and stress reactivity. Furthermore, interactions between genetic variants and environmental factors seem to play a crucial role in the pathogenesis of psychosomatic disorders.

**Conclusion** Based on the qualitative analysis and systematic review, it can be concluded that genetic polymorphisms are involved in the pathogenic mechanisms of psychosomatic disorders. The identified polymorphisms influence various biological processes and interact with environmental factors to contribute to the development of psychosomatic disorders. This study highlights the importance of considering genetic factors in the etiology and understanding of psychosomatic disorders, opening up opportunities for targeted interventions and personalized approaches in the field of psychosomatic medicine.

This research offers a unique perspective and insights into the role of genetic polymorphisms in psychosomatic disorders. By adopting qualitative analysis and conducting a systematic review, this study provides valuable evidence and contributes to the growing knowledge in the field. The findings underscore the necessity of considering genetic factors in the diagnosis, treatment, and prevention of psychosomatic disorders.

## PU-124

**皮肤科常见标志性皮肤疾病与心身相关障碍的关联研究**

李书鹏

北京大学公共卫生学院

**目的** 本文旨在研究皮肤科常见标志性皮肤疾病与心身相关障碍之间的关系，探讨其病因、影响因素以及治疗和干预的新观点和视角。通过深入分析相关研究，揭示皮肤疾病与心身相关障碍之间的相互作用，为临床实践和治疗提供有价值的参考。

**方法** 本研究采用系统综述和文献分析的方法。通过收集相关研究文献，综合分析皮肤科常见标志性皮肤疾病与心身相关障碍的关系，总结出其病因、影响因素以及治疗和干预策略，以期为临床实践和研究提供新的观点和视角。

**结果** 皮肤科常见标志性皮肤疾病与心身相关障碍存在密切的关系。心身相关障碍如焦虑、抑郁等与皮肤疾病之间相互影响、相互促进。病因方面，心理、生理和环境因素的综合作用是导致此关系的重要因素。治疗和干预方面，综合考虑心身因素和皮肤因素的综合治疗策略，如心理治疗与药物治疗相结合的综合干预，能够取得更好的效果。

**结论** 皮肤科常见标志性皮肤疾病与心身相关障碍存在显著的关联，需要综合考虑身心因素。在临床实践中，应加强对皮肤疾病和心身相关障碍之间关系的认识，采取综合治疗和干预策略。未来的研究应进一步探索其关系的机制，并提出更有效的治疗和预防策略。

## PU-125

**精神心理专科医院门诊患者就医行为特点调查分析**

汪宏、胡书佳、费锦锋、冯敏

湖州市第三人民医院

**目的** 调查我院精神心理专科医院门诊患者的就医行为特点,为改善医院服务质量,提升医院竞争力提供科学依据。

**方法** 通过随机抽样抽取我院普通精神科、心身科、老年精神科、儿少心理科门诊就诊患者各 100 例,采用问卷方式对患者一般情况、来我院就诊的原因、是否自愿就诊,是否存在病耻感,是否首次就诊及院外就诊情况、了解就诊科室的途径,以及最希望医院改善的方面进行调查。

**结果** 患者来自本市其他县区的患者最多,占 52.89%;儿少心理科及老年精神科家属陪同就诊率最高,占 89.32%;普通精神科首诊患者非自愿就诊率最高,占 48.62%,部分由家属在社区民警协助下就诊;心身科自愿就诊率最高,自我病耻感偏低,主诉多为“压力大”、“睡眠不好”。患者主要通过朋友介绍、精防工作者建议、新闻广播、微信、抖音公众号和其他科医生介绍了解所就诊科室;27.31%的患者已在其他医院就诊过;患者希望医院改善的方面前 3 位依次是减少就诊等待时间、增加复诊配药量减少配药次数、多一些心理卫生指导与宣教。

**结论** 患者的就医行为是影响医疗质量改进的重要因素,医院应以多种方式进行宣传,并采取有效措施满足患者的就诊需要,以提高患者满意度,做到心理健康促进。

PU-126

## 心身相关障碍与心理创伤后应激障碍的共病性研究

李书鹏

北京大学公共卫生学院

**目的** 本文旨在探讨心身相关障碍与心理创伤后应激障碍之间的共病性，并探索其病因、影响因素以及治疗和干预的新观点和视角。通过分析相关研究，揭示心身相关障碍和心理创伤后应激障碍之间的关系，为临床实践提供有价值的依据和指导。

**方法** 本研究采用文献综述和分析的方法。通过收集相关研究文献，综合分析心身相关障碍和心理创伤后应激障碍的共病性研究，总结出其病因、影响因素以及治疗和干预策略，以期为临床实践和研究提供新的视角和思路。

**结果** 心身相关障碍与心理创伤后应激障碍存在显著的共病性。心身相关障碍如慢性疼痛、功能性神经症等与心理创伤后应激障碍之间相互影响、相互促进。共同的病因包括既往心理创伤经历、应激反应加重等。治疗和干预方面，综合考虑心身因素和心理因素，如心理治疗与物理治疗相结合的综合干预，能够取得更好的效果。

**结论** 心身相关障碍与心理创伤后应激障碍存在明显的共病性，需要综合考虑身体和心理因素。在临床实践中，应该加强对心身相关障碍和心理创伤后应激障碍之间关系的认识，采取综合治疗和干预策略。未来的研究应进一步探索其共病性的机制，以及更有效的治疗和预防策略。

PU-127

## Epidemiological Investigation and Risk Factor Analysis of Psychosomatic Disorders During Public Health Emergencies

Shupeng Li

Peking University School of Public Health

**Objective** This study aims to conduct an epidemiological investigation and risk factor analysis of psychosomatic disorders during public health emergencies. By examining the unique context of such events, this paper seeks to provide novel insights into the prevalence and risk factors associated with psychosomatic disorders, ultimately contributing to improved understanding and interventions.

**Methods** A comprehensive epidemiological investigation was conducted to examine the occurrence and distribution of psychosomatic disorders during public health emergencies. Data were collected from affected populations using surveys and medical records. Statistical analyses were performed to identify risk factors associated with the development and exacerbation of psychosomatic disorders.

**Results** The findings indicate a high prevalence of psychosomatic disorders among individuals affected by public health emergencies. Risk factors such as prolonged stress, uncertainty, social isolation, and limited access to healthcare services were identified as significant contributors to the development of these disorders. Additionally, subgroups such as healthcare workers, patients with pre-existing mental health conditions, and individuals with lower socioeconomic status were found to be at increased risk.

**Conclusion** Public health emergencies pose unique challenges to mental and physical well-being, with psychosomatic disorders being a common manifestation. Understanding the prevalence and risk factors associated with these disorders is crucial for targeted interventions and resource allocation during such events. Efforts should focus on providing psychosocial and mental health support, promoting resilience, and addressing the specific needs of high-risk populations.

PU-128

## The Role of Social Media in Shaping Physician-Patient Communication: Opportunities, Challenges, and Best Practices

Shupeng Li

Peking University School of Public Health

**Objective** Social media has revolutionized communication and has become an integral part of people's lives worldwide. In the healthcare context, social media platforms offer unique opportunities for improving physician-patient communication. This paper aims to explore the role of social media in shaping physician-patient communication, highlighting the opportunities, challenges, and best practices associated with its use.

**Methods** This study utilizes a comprehensive literature review approach to examine the existing research on the role of social media in physician-patient communication. Key databases such as PubMed, Scopus, and Web of Science were searched using relevant keywords. Peer-reviewed studies from various disciplines, including healthcare, communication, and social sciences, were analyzed. The review focuses on the opportunities provided by social media platforms, challenges associated with their use, and best practices for effective and ethical communication.

**Results** The analysis reveals several key findings. Firstly, social media platforms offer opportunities for physicians and patients to connect and engage beyond the confines of traditional healthcare settings. It enables the dissemination of health information, facilitates patient education, and provides a platform for support communities and patient empowerment. Secondly, challenges exist in terms of privacy issues, misinformation, and maintaining professionalism in online interactions. Healthcare professionals need to navigate these challenges responsibly to leverage the benefits of social media. Lastly, best practices for using social media include establishing professional boundaries, maintaining patient confidentiality, engaging in evidence-based communication, and leveraging social media for health promotion and education.

**Conclusion** Social media presents both opportunities and challenges in shaping physician-patient communication. By understanding and navigating the unique dynamics of social media platforms, healthcare professionals can harness the potential of these platforms to enhance patient education, support, and engagement. Best practices, such as maintaining professionalism and adhering to ethical guidelines, are essential to ensure the responsible use of social media in healthcare. Future research and ongoing education are necessary to keep pace with the evolving digital landscape and maximize the benefits of social media in improving patient care.

PU-129

## Challenging Traditional Power Dynamics: Towards a Patient-Centered Approach in Physician-Patient Communication

Shupeng Li

Peking University School of Public Health

**Objective** Physician-patient communication plays a vital role in healthcare, influencing patient outcomes, satisfaction, and overall healthcare experience. However, traditional power dynamics often exist within these interactions, with physicians taking a dominant role and patients feeling disempowered. This paper aims to explore the need to challenge these traditional power dynamics and adopt a patient-centered approach in physician-patient communication.

**Methods** A comprehensive literature review was conducted to examine studies focused on physician-patient communication and power dynamics. Relevant databases, including PubMed,

Scopus, and Web of Science, were searched using specific keywords. Peer-reviewed articles from various healthcare and communication disciplines were selected for analysis. The review focused on identifying the existing power dynamics, exploring new approaches to shift the balance towards patient empowerment, and evaluating the impact of patient-centered communication on patient outcomes and experiences.

**Results** The analysis reveals several key findings. Firstly, traditional power dynamics often result in limited patient participation and engagement in healthcare decision-making. Secondly, adopting a patient-centered approach involves recognizing the patient as an active partner in their care, promoting shared decision-making, and fostering open and transparent communication. Studies suggest that patient-centered communication leads to improved patient satisfaction, adherence to treatment plans, and overall health outcomes. Thirdly, integrating patient preferences, values, and goals into the communication process enhances patient autonomy and promotes a collaborative relationship between physicians and patients.

**Conclusion** Challenging traditional power dynamics in physician-patient communication is crucial for achieving patient-centered care. By adopting a patient-centered approach, physicians can empower patients, promote shared decision-making, and improve overall patient outcomes and satisfaction. This shift requires a cultural transformation within healthcare systems and a recognition of the importance of patient autonomy and engagement. Future research and education should focus on developing communication skills that support patient-centered care to maximize the benefits of this approach.

## PU-130

### 基于脑电数据原创 MSC1.0 版医学音乐与情绪的相关性研究

白吉可、孔祥  
深圳市龙岗区第三人民医院

**目的** 为了进一步探索医学音乐与专注力和情绪之间关系，了解医学音乐在中国人群中的适用性，由课题组基于脑电波数据原创设计了 MSC1.0 版医学音乐，本研究着眼于测试该 MSC1.0 版医学音乐是否可以提升个体的专注力和积极情绪，降低个体的消极情绪。

**方法** 本研究由两个部分组成，分别探讨医学音乐对专注力和情绪的影响。研究一：随机选取 10 名被试，分别采用脑电仪测量和问卷调查法测量被试的专注力。问卷测量：分别在被试聆听专注力音乐前（T1）和聆听专注力音乐后（T2），使用数字广度测验（DST）问卷，测量被试的专注力。仪器测量：在聆听专注力音乐前为被试佩戴脑电波头环，测量被试聆听专注力音乐过程中脑电波的波幅和潜伏期的变化；研究二：实验中的被试者均为随机选取，在被试聆听医疗音乐前（T1 时间点）和聆听医疗音乐后（T2 时间点）分别对被试的积极情绪、消极情绪以及当下的情绪感受采用情绪量表进行测量。

**结果** 经由重复测量方差分析研究结果显示，被试在聆听医疗音乐后的数字广度逆序得分和总体得分明显优于聆听音乐前，并可以达到统计学意义上的显著（ $P < 0.05$ ），被试在聆听治疗音乐后的数字广度顺序得分优于聆听医疗音乐前，但无法达到统计学意义上的显著（ $P > 0.05$ ）。被试在聆听医疗音乐后积极情绪的得分明显高于聆听音乐前，并可以达到统计学意义上的显著（ $P < 0.05$ ），被试在聆听医疗音乐后消极情绪得分低于聆听音乐前，但无法达到统计学意义上的显著（ $P > 0.05$ ）。

**结论** 本研究以音乐疗法基本理念为基础设计具有相关功能性的医疗音乐，并在中国群体内对专注力和情绪进行相关探索。结果发现，以音乐疗法基本理念为基础开发的功能性医疗音乐可以提高个体的专注力和积极情绪。



PU-131

## 中国神经性厌食诊疗的专家共识

陈涵<sup>1</sup>、李雪霓<sup>2</sup>、张岚<sup>3</sup>、孔庆梅<sup>2</sup>、乔慧芬<sup>4</sup>、匡桂芳<sup>5</sup>、孙建琴<sup>6</sup>、虞阳<sup>6</sup>、金富锐<sup>7</sup>、蒋晶晶<sup>8</sup>、陈珏<sup>1</sup>

1. 上海市精神卫生中心
2. 北京大学第六医院
3. 四川大学华西医院
4. 南京脑科医院
5. 青岛和睦家医院有限公司
6. 复旦大学附属华东医院
7. 中国福利会国际和平妇幼保健院
8. 复旦大学附属中山医院

**目的** 神经性厌食是一种以自我饥饿、体重显著减轻和营养不良为特征的进食障碍。在所有精神疾病中死亡率最高，它会导致严重的精神病理症状和危及生命的医疗并发症。然而目前在中国，对于神经性厌食不能早期识别和诊治，导致病程迁延。为提高国内专业人员对神经性厌食的识别和诊治水平，制定本共识。

**方法** 在中华医学会心身医学分会进食障碍协作组的组织下，11 名医学专家组成员通过讨论、收集、汇总一线存在的相关临床问题，以“eating disorders”“anorexia nervosa”“nutrition therapy”“psychotherapy”“pharmacological treatment”“refeeding syndrome”为关键词进行系统检索和精筛，基于循证医学证据、国内外指南与专家共识、结合专家经验和相关文献总结，提出本共识。

**结果** 在神经性厌食干预前，建议进行系统综合的评估（推荐强度 A），包括躯体症状评估、一般精神病理评估和进食障碍精神病理评估。营养治疗是神经性厌食最重要的一线治疗方法（推荐强度 A）。心理治疗方面，家庭治疗是儿童和青少年神经性厌食的一线治疗方法（推荐强度 A），认知行为治疗作为成人神经性厌食的一线治疗方法（推荐强度 A）。药物治疗不建议作为治疗神经性厌食的单独或主要方法。

**结论** 本共识在总结归纳目前相关证据基础上，提出评估方法和诊疗意见，通过制定本共识，对临床诊疗提供依据。

PU-132

## 外泌体 microRNA 在抑郁症中的研究进展及展望相关综述

姜汝红、况利

重庆医科大学附属大学城医院

**目的** 抑郁症的主要表现为情绪低落，兴趣减退或愉快感缺乏，精力减退，严重影响患者的郁生活质量，也是全世界普遍面临的公共卫生问题，还增加了家庭照护和社会经济负担。外泌体是释放到细胞外基质的膜性囊泡，内含有 miRNA，了解外泌体 miRNA 与抑郁症的关系，研究其发病机制之间的关系，可以为抑郁症早期诊断、靶向治疗奠定基础。

**方法** 本文通过万方，知网，PubMed，Cochrane 等数据库检索了外泌体 microRNA 与抑郁症的相关研究及的文章期刊，从外泌体 miRNA 在抑郁症中的作用及分子机制和外泌体 miRNA 作为抑郁症生物标志物的前景展望等方面进行综述。

**结果** 多项研究结果表明，外泌体 miRNA 从调控神经炎症、介导突触可塑性等各个方面参与抑郁症的发生发展过程，并且在诊断抑郁症以及指导临床治疗表现出巨大的潜能。外泌体可以穿过血脑屏障，被星形胶质细胞和小胶质细胞摄取后外泌体 miRNAs 下调或上调 TLR 途径蛋白或是影响信号传导，从而起到调控神经炎症的作用参与抑郁症的发生；miRNA 还能通过影响 BDNF 的形成和影响调控神经元突触形成以及重塑的 Wnt 信号通路来影响突触可塑性；有研究发现抑郁症患者血

浆 miR-144-5p、miR-135a 和 miR-1202 水平显著低于健康对照组, 血清中表达的 miR-139-5p 在抑郁患者和对照组中表现出明显差异性, 以及抑郁症患者的外周血中, miR-425-3p 表达水平增加, 并且通过调节 MAPK 信号通路抑制免疫功能, 提示 miRNA 可作为抑郁症诊断的潜在生物标志物; 大鼠海马中敲低 miR-26a-3p 显著增加 p38 MAPK 的蛋白表达水平, 表明 miR-26a-3p 可能通过靶向调节 P38 表达而发挥神经保护作用, 并可能作为抑郁症的一个潜在的治疗靶点

**结论** 综上所述, 外泌体 miRNA 作为基因表达的关键调控因子, 通过调控神经炎症、突触可塑性和介导细胞反应等多种生物学过程, 参与了抑郁症的病理生理过程。外泌体 miRNA 在抑郁症患者血液和脑脊液中的表达变化及调节作用使其成为抑郁症诊断治疗的新兴生物标志物。此外, 外泌体 miRNA 在人体血液中稳定富集且不易被血液中的 RNA 酶降解, 将其作为抑郁症诊断、疗效评估的新型生物学标志物也十分具有潜力; miRNA 还可作为靶向抑制神经炎症和随后的神经可塑性失调的潜在的治疗靶点, 用于治疗抑郁症等精神疾病

## PU-133

### 房树人绘画测验对海军基层官兵心理健康的预测效果分析

温天杨<sup>1</sup>、李文博<sup>2</sup>、夏冰<sup>3</sup>、李翠鸾<sup>1</sup>

1. 山东省精神卫生中心

2. 中国人民解放军 91208 部队保障部卫生处

3. 中国人民解放军 91827 部队保障部卫生队

**目的** 探索房树人绘画测验在海军基层官兵心理健康调查中的应用情况, 为评估海军基层官兵心理状况提供新思路。

**方法** 对海军某部 314 名基层官兵进行问卷调查、SCL-90 评定和房树人绘画测验。根据 SCL-90 结果分为阳性组 (SCL-90 总分 > 160 分或阳性项目数 > 43 或因因子分 ≥ 2 分) 和阴性组。将 SCL-90 结果与中国军人男性常模和全国成年男性常模进行比较。选定 73 项房树人绘画特征进行统计, 并进行组间比较及回归分析。

**结果** SCL-90 结果阳性率为 9.9%, 结果总体优于军人男性常模及全国成年男性常模。SCL-90 各因子中, 强迫因子、人际关系因子、饮食及睡眠情况阳性率较高, 且存在正相关。Logistic 回归分析结果表明, SCL-90 结果阳性的房树人绘画中更容易出现详细描绘细节、人物手臂或腿细长、人物肩窄小、人物无脚、人物无口或一字口, 人物露牙齿和人物躯干留白 (OR=9.773、5.451、2.758、2.827、3.838、5.712、3.209) 7 项绘画特征, 强迫因子、人际关系因子、饮食及睡眠情况阳性的房树人绘画中出现的绘画特征, 与 SCL-90 结果阳性者有较高的重叠性。

**结论** 海军某部基层官兵总体心理健康水平较高, 房树人绘画测验的部分绘画特征对其心理健康评估有一定的参考价值, 大部分可能存在心理问题的海军基层官兵往往多个症状并存, 且通常有一定相关性。

## PU-134

## Internet-based self-help interventions can be beneficial to patients with PTSD: a Meta-analysis

GM He<sup>1</sup>, XT He<sup>1</sup>, YN Wang<sup>1,2</sup>, HX Wang<sup>1</sup>, XH Zheng<sup>1</sup>, B Yan<sup>1</sup>

1. Guangzhou Xinhua University

2. School of Public Health, Guangdong Medical University, 523000, Dongguan, China

**Objective Objective:** To evaluate the effect of Internet-based self-help interventions on PTSD patients, aiming to provide a reference and basis for clinical practice.

**Methods Methods:** Randomized controlled trials (RCTs) were retrieved from several databases including Sinomed, CNKI, Weipu, Wanfang Database, Ovid, Cochrane, Embase, EBSCO, PsychInfo, Scopus, ProQuest, Clinical trials.gov and other relevant databases, with a search time frame from the date of database creation to May 6th, 2023. Two trained researchers independently screened the original literature and extracted information according to the pre-defined inclusion and exclusion criteria. Cross-checked of the literature was performed by Noteexpress 3.2 software, and duplicates were removed. The two researchers independently evaluated the quality of the included references using the Jadad score. A meta-analysis was performed using CMA 3.0 to obtain the standardized mean difference (SMD) and its 95% CI. Subgroup analyses were conducted to find out possible factors that may influence the effect of the intervention. Egger's test was used to detect publication bias ( $\alpha=0.05$ ).

**Results Results:** A total of 16 references involving 1901 patients with PTSD were included. This Meta-analysis showed that Internet-based self-help interventions were effective in relieving symptoms in patients with PTSD compared with the control group [SMD = -0.460; 95% CI: (-0.649, -0.270)]. The subgroup analysis showed that the effect of the computer-based intervention was statistically significant [SMD=-0.509; 95% CI: (-0.737, -0.281);  $P<0.01$ ] rather than the mobile phone-based intervention [SMD=-0.330, 95% CI: (-0.717, 0.058);  $P=0.095$ ]; Compared with the long-term intervention [long-term follow-up  $\geq 6$  months, SMD=-0.165; 95% CI: (-0.354, 0.024);  $P=0.088$ ], the short-term efficacy of web-based self-management was statistically significant [short-term follow-up  $< 6$  months, SMD=-0.288; 95% CI: (-0.467, -0.110),  $P=0.002$ ]. The Egger's test ( $P=0.007$ ) suggested that there was a publication bias in this study, and after correction by the "cut-and-patch" method [SMD=-0.243; 95% CI: (-0.456, -0.030)]. Sensitivity analysis showed that the SMD and overall heterogeneity did not change before and after excluding each study individually, indicating that the results of the Meta-analysis were robust.

**Conclusion Conclusion:** Internet-based self-help interventions may be helpful to patients with PTSD, but given the quantitative and qualitative limitations of the literature, more high-quality randomized controlled trials are still needed future.

## PU-135

## 济南市历下区社区卫生服务中心医务人员 焦虑抑郁情绪调查

张丹宁

山东省精神卫生中心

**目的** 济南市历下区社区卫生服务中心医务人员 焦虑抑郁情绪调查

调查社区卫生服务中心医务人员焦虑、抑郁情绪现状及其影响因素，为预防其发生提供科学依据。

**方法** 对济南市历下区 12 家社区卫生服务中心医务人员整群抽样，使用焦虑自评量表（SAS）、抑郁自评量表（SDS）调查焦虑、抑郁症状检出率，并分析相关的人口社会学因素。

**结果** 发放问卷 942 份, 收回有效问卷 902 份。在接受调查的医务人员中, 焦虑症状检出率为 24.6% (222/902), 抑郁症状检出率为 30.9%(279/902)。多因素 Logistic 回归分析显示, 焦虑、抑郁症状与日均睡眠时间、躯体亚健康状态、职业紧张显著相关。

**结论** 济南市历下区社区卫生服务中心医务人员焦虑、抑郁情绪常见, 需要采取针对性措施预防与干预。

## PU-136

### Suicidal ideation in Chinese patients with chronic schizophrenia: prevalence, clinical correlates, and relationship with alexithymia

Yanan Zhou<sup>1</sup>, Pu Peng<sup>2</sup>

1. Department of Psychiatry, Hunan Brain Hospital (Hunan Second People's Hospital), Changsha, China.

2. Department of Psychiatry, and National Clinical Research Center for Mental Disorders, The Second Xiangya Hospital of Central South University, Changsha, Hunan, China

**Objective** Suicidal ideation (SI) is common among people with schizophrenia. However, it has received less attention than suicide attempts (SA), especially in the Chinese population. Alexithymia is a well-established risk factor for SI across different populations. Nevertheless, very few studies evaluated their relationship in schizophrenia patients.

**Methods** We aimed to determine the prevalence and clinical correlates of SI and its relationship with alexithymia in 812 Chinese chronic schizophrenia inpatients. We assessed SI, clinical symptoms, and alexithymia by the Beck Scale for Suicidal Ideation, the Positive and Negative Syndrome Scale (PANSS), and the Toronto Alexithymia Scale, respectively. A multiple logistic regression model was conducted to identify independent correlates of SI. Receiver operating characteristic (ROC) curves and area under the curve (AUC) were performed to determine the ability of our model to distinguish between patients with and without SI.

**Results** 10% (n = 84) reported current SI. Lifetime SA (OR, 4.68; 95% CI 2.76-7.94,  $p < 0.001$ ), PANSS depressive factor (OR, 1.24; 95% CI 1.12-1.38,  $p < 0.001$ ), PANSS positive subscale (OR, 1.055; 95% CI 1.004-1.108,  $p = 0.035$ ), and difficulty identifying emotions (OR, 1.07; 95% CI 1.03-1.12,  $p = 0.002$ ) were associated with SI. The AUC value was 0.80, indicating excellent distinguishing capabilities.

**Conclusion** Timely assessments of these factors may help identify schizophrenia patients who are at risk for SI.

## PU-137

### 后疫情时代青少年抑郁情绪和校园欺凌：心理弹性的调节效应

邢昕、周波、张旭、杨程惠、王璐瑶

四川省医学科学院·四川省人民医院

**目的** 为了解四川省成都市某区中小学生在后疫情时代的心理健康现状、抑郁情绪与校园欺凌经历的检出率以及心理弹性对存在校园欺凌经历的青少年抑郁情绪是否存在调节效应。

**方法** 在 2021 年 10 月-2022 年 3 月期间采用整群抽样法, 在成都某地分别抽取 56 所学校的小学、初中、高中学生, 通过问卷星收集问卷资料, 共发放问卷 65512 份, 收得有效问卷 60013 份, 问卷有效率为 91.6%。其中男生 30715 名 (51.18%), 女生 29298 名 (49.82%), 被试平均年龄 12.6 岁。

**结果** 在 60013 位被试者中查得存在存在抑郁情绪的青少年百分比为 36.16%，其中男性 47.62%，女性 52.38%。被试者中遭受过校园欺凌经历的百分比为 22.46%，其中经常受欺负的百分比为 8.13%，其中男性 51.73%，女性 48.23%。而实施欺凌行为的百分比为 6.23%，其中男性 52.29%，女性 47.71%。同时受欺凌和实施欺凌的群体百分比为 1.78%。此外，在本研究的样本中，青少年的抑郁情绪具有性别差异性，女性青少年抑郁情绪的检出率大于男性青少年。在青少年群体中，存在校园欺凌行为的青少年，其心理弹性与抑郁程度呈负相关。

**结论** 在成都市青少年中，抑郁情绪及校园欺凌行为普遍存在，需引起校方、家庭及社会的关注。在本研究样本中，心理弹性能负向预测经受校园欺凌青少年群体的抑郁严重程度，故塑造良好的心理弹性成为目前减轻青少年抑郁情绪的重要方法之一。

## PU-138

### Prevalence and clinical correlates of suicide attempts in first episode, never treated major depressive disorder patients with comorbid autoimmune thyroiditis

Yinli Luo, Yanan Zhou

Department of Psychiatry, Hunan Brain Hospital (Hunan Second People's Hospital), Changsha, China.

**Objective** Autoimmune thyroiditis (AIT) is closely associated with major depressive disorder (MDD). However, its association with suicide attempts (SA) in this population remains unexplored. The study aimed to assess the prevalence and correlates of SA in first-episode drug-naïve (FEDN) MDD patients with AIT.

**Methods** We recruited 1718 FEDN MDD outpatients and assessed depressive, anxiety, and psychotic symptoms by the Hamilton Rating Scale for Depression (HAM-D), the Hamilton Rating Scale for Anxiety, and the Positive and Negative Syndrome Subscale positive subscale, respectively. The serum levels of free triiodothyronine, free thyroxine, thyroid stimulating hormone (TSH), anti-thyroglobulin, thyroid peroxidases antibody (TPOAb), and several other metabolic parameters were assessed. Multiple logistic regression model was applied to identify the correlates of SA in AIT MDD patients. The Area Under the Curve (AUC) was used to test the performance of this model.

**Results** The prevalence of SA was higher in AIT patients than in non-AIT patients (34% vs 14%,  $p < 0.001$ ). The presence of AIT independently doubled the risk of SA (OR, 1.88, 95%CI, 1.42-2.50,  $p < 0.001$ ). Anxiety (OR, 3.09, 95%CI, 1.76-5.42,  $p < 0.001$ ), HAM-D score (OR, 1.19, 95%CI, 1.09-1.31,  $p < 0.001$ ), TPOAb (OR, 1.002, 95%CI, 1.001-1.002,  $p < 0.001$ ), and TSH (OR, 1.20, 95%CI, 1.10-1.32,  $p < 0.001$ ) were independently associated with SA in MDD patients with AIT.

**Conclusion** The combination of the four variables well distinguished SA patients from non-SA patients (AUC value:0.80). Taken together, AIT was closely associated with SA. Regular thyroid examination may help detect SA in MDD patients.

PU-139

## Gender difference in the prevalence and clinical correlates of alexithymia among Chinese schizophrenia patients: a large cross-sectional study

Yanan Zhou, Ning Yuan

Department of Psychiatry, Hunan Brain Hospital (Hunan Second People's Hospital), Changsha, China.

**Objective** Although both alexithymia and schizophrenia are closely related to gender, few studies shed light on the gender difference in alexithymia among schizophrenia patients. The present study aimed to determine the gender difference in the prevalence and clinical correlates of alexithymia among a large sample of chronic schizophrenia patients in China.

**Methods** 810 Chinese chronic schizophrenia patients were recruited. We applied the Toronto Alexithymia Scale (TAS-20), Positive and Negative Syndrome Scale, Mini-mental State Examination, and Interpersonal Reactivity Index to detect alexithymia, clinical symptoms, neurocognition performances, and empathy, respectively. Multiple linear regression model for TAS-20 total scores was performed separately in male and female patients.

**Results** (1) The prevalence of alexithymia was higher in male patients (36%) than that in female patients (27%); (2) In both male and female patients, lower neurocognition performance and higher personal distress were strongly related to alexithymia; and (3) In male patients, alexithymia was additionally associated with negative symptoms and lower perspective taking, while in female patients, alexithymia was associated with depressive symptom and lower emotional concern.

**Conclusion** There was significant gender difference in the prevalence and clinical correlates of alexithymia. Our findings were helpful in early detecting alexithymia and called for gender-specific interventions for alexithymia in chronic schizophrenia patients.





**主办单位：中华医学会心身医学分会**

**承办单位：中南大学湘雅二院**