

EPP0413

Latent classes based on clinical symptoms of military recruits with mental health issues and their clinical responses to treatment over 12 months

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Introduction: In South Korea, all men at the age of 18 or older are required to serve at military for a certain period as an obligation. These recruits should be able to withstand psychological stress and pressures of rapid adaptation of the unique and new environment in military. The number of military recruits facing adaptation issues has been on the rise, necessitating an evaluation for active service. In our previous study (Park et al., in press 2023), we classified the military recruits with mental issues according to latent profile analysis (LPA) and examined the treatment response during six months.

Objectives: In this study, we further examined clinical characteristics over the next six months.

Methods: Ninety-two participants were analyzed with LPA using MMPI-2 clinical profiles in the previous study. The three classes were identified: mild maladjustment (Class 1, n=14), neurotic depression and anxiety (Class 2, n=36), high vulnerability and hypervigilance (Class 3, n=42). At 12 months, Clinical Global Impression-Severity and Global Assessment of Functioning were assessed to test their long-term changes.

Results: While Class 1 and 2 significantly improved over 6 months, Class 3 showed little or no improvement even with more medications in our previous study. During the 6-month follow-up period, 50% of Class 1, 38.9% of Class 2, and 41.5% of Class 3 were dropped. It was during this period that their level of military service was decided. Class 1 and 2 which showed marked improvement up to initial 6 months, did not demonstrate substantial further improvement during follow-up period with a considerable portion stopped visiting hospital. Subjects in Class 3, who showed little or no improvement during initial 6 months, demonstrated continued improvement in this study, although their symptoms still appeared relatively severe.

Conclusions: This study suggests clinical implications for treatment plan and intervention of each subgroup classified based on MMPI-2 clinical profiles of military recruits who might show maladjustment to serve. The long-term continuous treatment for Class 3 patients will be needed, even after exemption from active duty.

Disclosure of Interest: None Declared

EPP0414

Older Adults' Knowledge of Geriatric Depression and Its Related Factors

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Introduction: Even though depression is a severe health issue among older adults, few studies have explored their knowledge of geriatric depression.

Objectives: This study aimed to explore older adults' knowledge of geriatric depression and its related factors.

Methods: A cross-sectional survey was conducted. Older adults were recruited by convenience from outpatient clinics of three hospitals in Taiwan.

Results: A total of 327 older adults participated in this study. Their mean score of knowledge was 7.73 (SD=2.12, Range=2-12) on an 18-item knowledge scale, indicating poor knowledge of geriatric depression. Females had significantly higher geriatric depression knowledge scores than males ($t=2.50$, $p=0.01$). Junior and senior high school graduates had significantly higher geriatric depression knowledge scores than illiterate and primary school graduates ($F=10.23$, $p<0.01$). In addition, their geriatric depression knowledge scores also differed by religious belief ($F=4.91$, $p<0.01$), living status ($F=8.64$, $p<0.01$), and perceived health condition ($F=8.81$, $p<0.01$). Buddhists had significantly higher geriatric depression knowledge scores than Taoists. Living with partners and perceiving their health status as fair and good tended to have higher geriatric depression knowledge scores than their counterparts. However, their geriatric depression knowledge scores did not significantly correlate with their mean scores of social distance toward older adults with depression.

Conclusions: Older adults tended to have poor geriatric depression knowledge. Improving their knowledge shall be an urgent task. Our results may serve as references for developing further depression prevention.

Disclosure of Interest: None Declared

Research Methodology

EPP0420

The biology of mental pain: a systematic review to map the different expressions, definitions, hypotheses, experimental paradigms, investigation methods and candidate biomarkers of mental pain in human subjects

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Introduction: Mental pain is a transdiagnostic symptom, predictive of suicide and reported as a critical outcome by patients. A previous systematic review of epidemiological and clinical research has shown a lack of consensual definition of mental pain in clinical research and high heterogeneity across the different measurement instruments of mental pain. Up today there is no systematic review synthesizing all published biological investigations on mental pain. **Objectives:** This study aims to map the field of biological investigations of mental pain in human to identify what and how

biomarkers are investigated with a meta-research approach, by providing a critical appraisal of the terms and definitions of mental pain, the studies' hypotheses, the experimental paradigms used to induce or mimic mental pain and the measurement instruments used to measure mental pain.

Methods: We conducted a systematic review (compliant with PRISMA guidelines) of all primary research reporting to investigate candidate biomarkers of mental pain in human subjects as stated by the authors. We searched from inception to June 23rd, 2022, the 3 databases MEDLINE, Web of Science and EMBASE. We extracted the study characteristics (e.g., year of publication, population, etc.), the terms used for meaning mental pain, the definition of mental pain, the method to induce mental pain and its rationale, the hypotheses and aims, the measurement instruments of mental pain, the candidate biomarkers, and their method of investigation. We performed descriptive statistics of the sample's characteristics and the extracted data, a qualitative analysis of the definitions, hypothesis, aims and experimental paradigms, and a data visualization linking candidate biomarkers, experimental paradigms, and their investigation methods.

Results: The search retrieved 5685 papers of which we included 72 primary research publications constituting 78 distinct research studies. Only 37.5% of studies reported a definition of mental pain. 11.5% of studies did not show a measurement instrument of mental pain. The Cyberball (a social exclusion paradigm) was the most frequently used paradigm in experimental studies (62.7%). The cingulate cortex was the most frequently investigated biomarker category (15.3% of all candidate biomarkers), with fMRI as the most frequent investigation method (53.7% of all investigation methods).

Conclusions: The field of biological investigations on mental pain shows a marked heterogeneity of definitions, terms, hypotheses, experimental paradigms, and measurement instruments, with an over-representation of the construct of social pain and the Cyberball. These could compromise the comparison and combination of studies results in evidence synthesis and their translation into clinical practice.

Disclosure of Interest: None Declared

Neuroimaging

EPP0421

Exploring Associations between Grey Matter Volume and Clinical High-Risk for Psychosis: A Transdiagnostic Study Utilizing the NAPLS-2 Risk Calculator in the PRONIA Cohort

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Introduction: The clinical high-risk state for psychosis (CHR) is associated with alterations in grey matter volume (GMV) in various regions such as the hippocampus (Vissink *et al.* BP:GOS 2022; 2(2) 147-152). Within the scope of the North American Prodrome Longitudinal Study (NAPLS-2; Cannon *et al.* AM J Psychiatry 2016; 173(10), 980-988), a publicly available risk calculator based on clinical variables was developed to assess the likelihood of individuals to transition to psychosis within a 2-year period.

Objectives: In the current study, we aim to examine the association between GMV and NAPLS-2 risk scores calculated for individuals with CHR and recent-onset depression (ROD), taking a transdiagnostic approach on the transition to psychosis.

Methods: The sample consisted of 315 CHR ($M = 23.85$, $SD = \pm 5.64$; female: 164) and 295 ROD ($M = 25.11$, $SD = \pm 6.21$; female: 144) patients from the multi-site Personalised Prognostic Tools for Early Psychosis Management (PRONIA) Study (Koutsouleris *et al.* JAMA Psychiatry 2018; 57(11), 1156-1172). Risk scores were calculated using the six clinical and neurocognitive variables included in the NAPLS-2 risk calculator that were significant for predicting psychosis. Further, we derived smoothed GMV maps from T1-weighted structural magnetic resonance imaging using a full width at half maximum kernel size of 8 mm. We employed a multiple regression design in SPM12 to examine associations between risk scores and GMV. On the whole-brain level, we calculated permutation-based threshold-free cluster enhancement (TFCE) contrasts using the TFCE toolbox. Additionally, we calculated t-contrasts within a region-of-interest (ROI) analysis encompassing the hippocampus. All results were thresholded at $p < 0.05$ with family wise error correction to address multiple comparisons.

Results: Our analysis revealed that linear GMV increases in the right middle and superior frontal gyrus ($k_E = 2726$ voxels) were significantly associated with higher risk for psychosis transition within two years (see figure 1, highlighted in blue). In the ROI analysis, we found a significant negative linear association between GMV decreases in the left hippocampus ($k_E = 353$ voxels) and higher risk for psychosis transition (see figure 1, highlighted in red).