

following keywords: Late-Onset Post Traumatic Stress Disorder, triggers, prevention, intervention

**Results:** At first, there was hypothesized that aging-related challenges (role transition and loss, death of family members and friends, physical and cognitive decline) might lead to increased reminiscence, and possibly distress, among Veterans who had previously dealt successfully with earlier traumatic events. However, recent studies have proposed that in later life many combat Veterans confront and rework their wartime memories in an effort to find meaning and build coherence. Through reminiscence, life review, and wrestling with issues such as integrity versus despair, they intentionally reengage with experiences they avoided or managed successfully earlier in life, perhaps without resolution or integration. This process can lead positively to personal growth or negatively to increased symptomatology.

**Conclusions:** Therefore the role of preventive intervention in enhancing positive outcomes for Veterans who reengage with their wartime memories in later life should be reconsidered.

**Disclosure:** No significant relationships.

**Keywords:** Late Onset Post Traumatic Stress Disorder; triggers; prevention; Trauma

## EPV1026

### Gender Differences after Digital Interventions in the Golden Hours after Traumatic Events

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**Introduction:** Digital technologies are used in the prevention of post-traumatic stress disorder (PTSD). There is no clear evidence for effective gender-sensitive preventive measures for PTSD. Using Tetris during the golden hour after trauma can reduce intrusive memories and thus reduce the likelihood of PTSD in the future.

**Objectives:** Understand the features of gender differences after psychological interventions in patients in the acute period after a traumatic event. Video games that use visual-spatial efforts over a fixed time and frequency (Tetris) may reduce the likelihood of developing PTSD.

**Methods:** Main inclusion criteria was an exposure to traumatic event (time from traumatic event - 0-24 hours). Respondents were assessed by PTSD symptom scale (PCL-5), peritraumatic distress scale (PDS), peritraumatic dissociative experience scale (PDES) and global functioning scale (GFS), intrusion diary (intervals: week 0, week 4, week 8, week 12).

**Results:** PTSD symptoms were more severe in female participants ( $p \leq 0,05$ ). Participants in the Tetris game group recorded significantly fewer intrusive memories during the first week after the traumatic event than participants in two other groups, with a mean effect size of 57 ( $M = 8.73$  vs.  $M = 23.26$ ,  $t(69) = 2.80$ ,  $P = 0.005$ ,  $d = 0.67$ , 95% CI: 0.18, 1, 14). After the first month of follow-up, members of the Tetris game group reported less stress from intrusive symptoms.

**Conclusions:** Tetris intervention may reduce intrusive memories of real trauma. Women had more severe PTSD symptoms. Due to the small number of samples, the study should be repeated.

**Disclosure:** No significant relationships.

**Keywords:** Stress; Gender differences; traumatic event; digital technology

## Precision Psychiatry

### EPV1028

#### Predictors of rehospitalization in Psychotic Patients after their first hospitalization

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**Introduction:** It is important to determine those clinical factors that imply a greater risk of rehospitalization in psychotic patients

**Objectives:** To determine the rate and predictors of rehospitalization in psychotic patients after their first hospitalization

**Methods:** We include all Psychotic patients admitted for first time in their life in our Psychiatric Unit between 2009 and 2019 (N=359), including all diagnosed according DSM-IV of Schizophrenia or other Psychotic disorders -Multiple clinical, sociodemographic and biological variables of the basal hospitalization were recorded With the SPSS program we compared the variables between patients who needed any hospitalization in the follow-up until 31th December 2019 and those who do not. We use the Chi square ( qualitative variables) and the Student T ( quantitative variables)

**Results:** 109 psychotic inpatients had at least one rehospitalizations (30,4%). The qualitative variables significantly associated with rehospitalization were : cannabis in urine at admission ( $P < 0.03$ ), and treatment with risperidone ( $P < 0.014$ ). Instead treatment with long acting paliperidone was associated with absence of rehospitalization ( $P < 0.005$ ). The quantitative variables related significantly with multiple rehospitalization were : lower age ( $P < 0,015$ ) lower HDL cholesterol levels ( $P < 0.02$ ) and higher years of follow-up after discharge ( $P < 0.000$ )

**Conclusions:** 1-More of 30% of psychotic patients need rehospitalization after their first hospitalization in a mean of follow up of 5,8 years 2-Lower age, longer follow-up period and treatment with risperidone are significantly associated with rehospitalization, instead treatment with long acting paliperidone are significantly associated with absence of rehospitalization

**Disclosure:** No significant relationships.

**Keywords:** hospitalization; paliperidone; psychotics; predictors

### EPV1029

#### An International External Validation and Revision of the PsyMetRiC Cardiometabolic Risk Prediction Algorithm for Young People with Psychosis

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**Introduction:** The comorbidity between cardiometabolic and psychotic disorders develops early. This is a crucial window of opportunity to reduce excess morbidity and mortality. Recently, a cardiometabolic risk prediction algorithm for young people with psychosis, the psychosis metabolic risk calculator (PsyMetRiC) was developed and externally validated in the UK. However, its international transportability is unknown.

**Objectives:** We performed the first international validation study of PsyMetRiC in Lausanne, Switzerland, and examined whether additional variables (clinical and/or genetic) may improve the predictive performance of the algorithm

**Methods:** We included people aged 16-35y with psychosis from the PsyMetab cohort, who did not have MetS at baseline, and who had 1-6y follow-up data. The PsyMetRiC partial (age, sex, ethnicity, body mass index, smoking status, and prescription of a metabolically-active antipsychotic) and full (also including high-density lipoprotein and triglycerides) algorithms were applied. Predictive performance was assessed using measures of discrimination (C-statistic) and calibration (calibration plots). Recalibration steps included refitting the intercept and/or slope if necessary. Additional variables (e.g. speed of weight gain, polygenic risk scores) were added to the model and predictive performance was reassessed.

**Results:** We included 545 participants. The discrimination performance of both PsyMetRiC algorithms was good (C>0.75), and calibration plots showed good agreement between observed and predicted risk. Additional analyses to be conducted.

**Conclusions:** PsyMetRiC is likely to be generalizable for use in Switzerland, suggesting that PsyMetRiC may also be suitable for use in other European populations. While additional international validations are required, these findings are an encouraging step toward an international cardiometabolic risk prediction algorithm for young people with psychosis.

**Disclosure:** No significant relationships.

**Keywords:** Psychosis; risk prediction; young adults; cardiometabolic

## EPV1031

### Personalization of virtual reality for treatment of mental disorders by using a unified morphometric indicator

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**Introduction:** The search for approaches to creating a precision personalized virtual reality for the treatment of mental disorders is urgent. (Belkasim, 2005; Park M.J. et al., 2019).

**Objectives:** To develop a new approach to personalize the form of virtual reality content to the neurophysiological and anatomical parameters of the patient's brain, to improve the quality of precision VR therapy for mental disorders.

**Methods:** The MRI study was carried out on a GE Optima 450w apparatus with a magnetic field induction of 1.5 Tesla. We used a radio frequency coil for the head. T1-weighted images were obtained with a field of view (FOV) of 24.4 x 14.8 cm and a slice

thickness of 0.5 mm. Later, the images were built in three standard mutually perpendicular planes. Measurements were carried out using standard tools on an eFilm 4.0 WorkStation. FreeSurfer 4.5.0 was used to calculate the surface area of the cerebral hemispheres. To estimate the surface area of the room and the design of the shape in VR closed environment Autodesk AutoCAD 2018.

**Results:** A new approach to personalization of the form of virtual reality content has been developed (Patent No. RU (11) 2 668 697 (13) C1, 2018; Patent No. RU (11) 2 753 234 (13) C1, 2020). It is based on the use a single morphometric indicator for a closed VR space and brain.

**Conclusions:** Research and applied analysis of the developed approach is required. The development of this area will make it possible to create precision products for the therapy and rehabilitation of mental disorders.

**Disclosure:** No significant relationships.

**Keywords:** treatment of mental disorders; precision virtual reality; personalized virtual reality; a unified morphometric indicator

## EPV1032

### Genetic and epigenetic variations in BDNF gene involved in Anorexia Nervosa

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**Introduction:** Anorexia nervosa (AN) is a chronic psychiatric disorder resulting from abnormal eating habits with a high prevalence (0.5%). AN involves genetic and epigenetic factors supporting that AN is a metabo-psychiatric disorder. One candidate gene for AN, validated by meta-analyses, is *BDNF* which encodes the brain-derived neurotrophic factor. *BDNF* negatively modulates the central control of food intake and its injection in rodents induces weight loss and anorexia. In humans, we observed an association of its functional variant Val66Met/rs6265 and electrodermal response to images of thinness suggesting an association between rs6265 and a reward effect of weight loss in AN.

**Objectives:** This work study the impact of the functional polymorphism at risk rs6265, epigenetic variations in DNA methylation of *BDNF* gene and consequences on the concentrations of *BDNF* in AN patients.

**Methods:** DNA was isolated from 24 AN patients and 48 controls. DNA methylation was measured for sites spanning the *BDNF* gene using Infinium HumanMethylation450 BeadChip technology. The genotyping of rs6265 was performed by Taqman-SNP assay. The *BDNF* was dosaged by ELISA from plasmas.

**Results:** We observe that several sites are significantly hypermethylated in AN patients compared to controls. AN patients show significantly higher *BDNF* levels than controls. Finally, this *BDNF* concentration is significantly higher in AN carrying the risk Met66 allele.

**Conclusions:** This work demonstrates the effects of genetic and epigenetic variations of *BDNF*, which could constitute relevant diagnostic biomarkers of AN, and their likely consequences in the pathophysiology of AN. *This work was supported by the Nestlé Foundation.*