but the result was inconsistent. This study was to investigate the analysis of HRV in PTSD patients according to postural change with head-up tilt testing.

**Methods:** Seventy-one PTSD patients and seventy normal controls participated. The diagnosis of PTSD was established by the structured clinical interview for diagnostic and statistical manual of mental disorders (SCID)-IV. The postrauumatic stress disorder checklist 5 (PCL5), Beck depression inventory (BDI), Beck anxiety inventory (BAI), psychosocial well-being index short form (PWI-SF) and Pittsburgh sleep quality index (PSQI) were applied to all study subjects. The HR measurement, including heart rate (HR), standard deviation of the NN interval (SDNN), the square root of the mean squared differences of successive NN intervals (RMSSD), physical stress index (PSI), log total power (LNTP), log low frequency (LNLF), log high frequency (LNHF) and low-frequency/high-frequency ratio (LF/HF ratio), were performed at supine position for the first five minutes, then underwent head-up tilt testing for the last five minutes at an erect position.

**Results:** The PTSD group showed a significantly higher score than the nonPTSD group in PCL5 (t=-11.625, p=0.001), BDI (t=5.543, p=0.020) and BAI (t=-9.500, p=0.002). In the PTSD group, SDNN (t=3.563, p=0.039), RMSSD (t=3.514, p=0.011) and LNLF (t=9.092, p<0.001) were significantly lower, but PSI (t=-3.818, p<0.001) and LF/HF ratio (t=-1.730, p=0.041) were significantly higher than in the nonPTSD group. After tilting, higher PSI (t=-2.570, p<0.001), lower LNLF (t=1.927, p=0.011) and lower LHNF (t=2.403, p=0.025) were found in the PTSD group, compared to the nonPTSD group. SDNN (t=-3.209, p=0.013), RMSSD (t=-0.211, p=0.012) and LNHF (t=-0.168, p=0.046) were correlated with PCL5 in only supine position.

**Conclusion:** PTSD patients showed reduced heart rate variability compared to nonPTSD patients, associating PTSD with involvement of autonomic nerve system activity. Although head-up tilt testing might be not more available than supine position testing for measurement of HRV with PTSD patients in this study, HRV might be a usable physiological parameter of assessing and monitoring of autonomic function in PTSD patients.

**PS263**

Association between Heart Rate Variability (HRV) and posttraumatic stress symptoms in female victims of sexual violence

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**Abstract**

Decreased HRV can occur with a variety of physical and psychological disorders including posttraumatic stress disorder (PTSD). However, little is known about the associations between the sexual trauma and HRV measures. The purpose of this present study was to investigate the HRV characteristics associated with PTSD symptoms in victims of sexual trauma.

Data were collected from female victims who had been sexually assaulted (n = 23, mean age = 28.2 years). Heart rate variability was measured in resting state. Victims also completed self-report questionnaires including the Korean version of the Impact of Event Scale-Revised (IES-R-K). Chi-square was used for frequency of subject characteristics; independent t-test compared means of HRV measures between victims group and control group (n = 27, mean age = 32.6 years); Pearson correlation was used for association between HRV measures and self-report scores.

The results were as follows. First, significantly higher log-transformed very low frequency (VLF) (p < .0001), log-transformed low frequency (LF) (p < .0001), and log-transformed high frequency (HF) (p < .0001) were found in victims group compared to control group. Second, hyperarousal symptom of PTSD symptoms was negatively associated with log-transformed square root of the mean squared differences of successive normal-to-normal intervals (RMSSD) (r = -0.461, p = .003) and log-transformed standard deviation of normal-to-normal intervals (SDNN) (r = -0.453, p = .003).

This cross-sectional analysis supports associations between PTSD symptoms, especially hyperarousal, in female victims of sexual violence and reduced HRV measures.

**PS264**

Children and Adolescent Exposed to Disaster: Delphi Technique Study for the Development of Post-traumatic Assessment and Intervention

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Abstract

Objective: This study tried to evaluate the usefulness and direction of the development of post-traumatic assessment and intervention based on the opinions from pediatrics and disaster and trauma-related experts using the Delphi survey technique.

Methods: In-depth individual interview was used as a pre-survey; followed by Delphi primary and secondary survey. Specialists in child and adolescent mental health, disaster psychological support professionals, and related practitioners with the experience in the area of the disaster that has occurred in Korea participated and completed a set of questionnaires and participated in focus group interview and in-depth individual interview on post-traumatic assessment and intervention.

Results: We found that the following issues have a great impact on the interventions after disasters: proper time of the initial interview in an event of a disaster, assessment notices, aged assessment services, mandatory enforcement measures, scale screening and treatment intervention elements, symptoms degree classification, intervention standardization, levelled program, care unit environments, and operation plans.

Conclusion: This study proposed effective mental health intervention measures and provided the implications on developing the evaluation treatment protocol after disasters.

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PS265

Augmenting Pharmacotherapy-resistant Post-traumatic Stress Disorder with Eye Movement Desensitization and Reprocessing (EMDR) Therapy

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Abstract

Background: Both trauma-focused cognitive behavior therapy and antidepressant medication are regarded as the first line treatments for post-traumatic stress disorder (PTSD). However, little is known about sequential or combined efficacy of these two different treatment options. This prospective study examined the add-on efficacy of eye movement desensitization and reprocessing (EMDR) therapy among adult civilians with PTSD who continued to be symptomatic after antidepressant treatment.

Methods: Adult patients with PTSD at a specialized trauma clinic who received treatment doses of antidepressants for more than 12 weeks were recruited; definition of symptomatic PTSD was a total score > 40 on the Clinician-administered PTSD Scale (CAPS). The CAPS and the global improvement from Clinical Global Impression (CGI) were rated prior to EMDR, after termination and six months follow-up.

Results: A total of 15 patients underwent an average of six sessions of EMDR and 7 (47%) of 15 no longer met the criteria for PTSD and 10 (67%) were given status of very much or much improved. The CAPS scores and significantly decreased after EMDR therapy (paired t = 7.38, df = 14, p < .0001).

Conclusion: These results indicate that EMDR or trauma-focused CBT can be successfully added to those who failed to improve after initial pharmacotherapy for PTSD. Further studies are needed to explore the best sequence or components of therapies in the treatment of PTSD.

Keywords: post-traumatic stress disorder, pharmacotherapy, CBT, EMDR

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PS266

North Korean female refugees’ quality of life: Influence of Physical Health, PTSD, and Social Support

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Abstract

The purpose of this study was to investigate the hypothesized mediation model describing the pathways of how female North Korean refugees’ perceived physical and mental health condition (PTSD symptoms) would be associated with their quality of life and if social support would mediate the association between North Korean refugees’ physical and mental health and quality of life. There have been many studies addressing North Korean refugees’ trauma, but there is a sparse collection of research examining North Korean refugees’ quality of life.

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PS265

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