and end of the ASCL1 gene. The sgRNA construct was transduced into the SH-SY5Y-Cas9 cell line in parallel with a nontemplate control (NTC gRNA) as a negative control. Cas9 expression was induced with oxytetracycline for 2 days. Individual clones were obtained by serial dilutions. *ASCL1* partial deletion in the clones was confirmed by PCR followed by Sanger sequencing. Disruption of ASCL1 protein synthesis was confirmed by western blot analysis. SH-SY5Y differentiation was induced by retinoic acid (RA). The transcriptomes of mutant clones and NTC controls before and after RA-induced differentiation were sequenced using Illumina technology.
Results: RNAseq data show that a wide range of genes are differentially expressed between control NTC gRNA and wild-type SH-SY5Y. This can be explained by insertional mutagenesis of lentiviral vectors and/or cellular response to the presence of lentiviral constructs. Therefore, we compared the transcriptomes of the ASCL1-del line with NTC control. Differentially expressed genes (DEGs) are predominantly associated with the pathogenesis of SZ, bipolar and depressive disorders. DEGs in ASCL1-del are involved in cell mitosis, neuronal projection, neuropeptide signaling, and formation of intercellular contacts including the synapse. During RA-induced differentiation, ASCL1 activity is restricted to the regulation of a small subset of genes involved in neuroplasticity.
Conclusions: We have established a valid cellular model to study ASCL1-mediated mechanisms associated with SZ. ASCL1 dysfunction promotes SZ development predominantly before neuronal differentiation begins, slowing cell proliferation and preventing the formation of neuronal signatures.

Disclosure of Interest: None Declared

Mental Health Care

EPP0589

A Randomized Clinical Trial Comparing the Effects of Mindfulness-Based and Cognitive Behavioral Therapy-Based Stress Reduction in Medical Students

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Introduction: Medical students face an enormous amount of stress (Dyrbye LN *et al. Ann Intern Med* 2008; **149:** 334-41). They suffer from higher rates of depression, anxiety, and suicide compared to the general population. Despite experiencing more mental health problems, there is a lack of research exploring ways to improve their mental health. Although there are a few small sample studies investigating the effectiveness of Mindfulness-Based Stress Reduction (MBSR) on medical students, there is no study comparing its effectiveness against an active intervention group in the literature (van Dijk I *et al. Acad Med* 2017; **92:** 1012-1021)
Objectives: We aimed to compare the effects of the Mindfulness-Based Stress Reduction (MBSR) and the Cognitive Behavioural Based Stress Reduction (CBSR) group interventions on depressive and anxious symptoms and perceived stress of medical students.
Methods: 323 medical students applied to participate in one of the group interventions and were assessed with the Mini International Neuropsychiatric Interview. Of these, 253 (77% female, mean age=21.9 ± 2.9 years) were allocated into online MBSR (n=127) and online CBSR (n=126) groups after randomization. Their anxiety and depressive symptoms and perceived stress levels were assessed at baseline and after 8 weeks of interventions. 33,2% of participants (MBSR: n=39; CBSR: n=45) completed the protocol by attending five or more sessions. Both intention-to-treat (ITT) analysis and per-protocol (PP) analysis were used to assess outcomes. In the ITT analysis, we used multiple imputation to address missing values. All assessments and group interventions were done online.
Results: In the ITT analysis, both MBSR and CBSR were found to be slight to moderately effective in reducing symptoms of depression (MBSR: d=.50; CBSR: d=.40), anxiety (MBSR:d=.73; CBSR: d=.52), and perceived stress (MBSR: d=.48; CBSR: d=.42), but they were no superior to each other. In the PP analysis, both interventions moderately to strongly improved the symptoms of depression (MBSR: d=1.03; CBSR: d=.74), anxiety (MBSR: r=-.74; CBSR: r=-.72), and perceived stress (MBSR: r=-.80; CBSR: r=-.68). While there was no statistically significant difference between them in reducing depressive symptoms and perceived stress, MBSR was found to be significantly more effective than CBSR in reducing anxiety symptoms (u=469, z=-2.756, p=0.006).
Conclusions: Both MBSR and CBSR improve symptoms of depression and anxiety in medical students after 8 weeks of interventions. Completing the protocol or attending more sessions may increase the effectiveness of the interventions. While the interventions did not show superiority to each other in terms of effectiveness in reducing depressive symptoms and perceived stress, MBSR appears to be more effective in reducing anxiety symptoms compared to CBSR in the group that completed the protocol.

Disclosure of Interest: None Declared

EPP0590

Validating and Adapting the Brief Resilient Coping Scale for Greek Humanitarian Workers

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Introduction: Humanitarian workers (HWs) face significant challenges while providing aid to those in need, often leading to psychological exhaustion and the risk of primary or secondary trauma.
Objectives: Our study aimed to validate and adapt the Greek version of the Brief Resilient Coping Scale (BRCS) for HWs in Greece.

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