How Regular OMT and Academic Breaks Affect Levels of Subclinical Depression, Stress, and Fatigue

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Introduction

While the current medical education system produces qualified physicians to meet the medical demands of a growing patient population, it also coincidently induces significant psychological distress among its students. Distress can take the form of increased burnout, depression, stress, decreased quality of life, and fatigue.1 Dyrbye and colleagues found that 82% of medical students, from seven different medical schools, reported at least one form of distress, with 58% having 3 or more forms of distress.2 Of greatest concern is the higher risk of suicidal ideation resulting from these forms of distress. A recent study by Rotenstein and colleagues estimated the prevalence of suicidal ideation among medical students to be 11.1%.3 Due to the negative effects of distress and its prevalence within the medical community, it is vital to identify potential treatments that could be implemented early on in medical training to help decrease the manifestations of distress. Our pilot study assessed the effect of OMT and scheduled academic breaks, specifically winter and spring breaks, on self-reported levels of subclinical depression, stress, and fatigue among first-year osteopathic medical students.

Methods

Participants

Participants were recruited through a general interest survey from the first-year osteopathic medical students at Kansas City University of Medicine and Biosciences (KCU). Inclusion criteria included enrollment as a first-year osteopathic medical student at KCU. Exclusion criteria included students with a current or past diagnosis of a psychiatric illness, a score ≥15 on the PHQ-9, contraindication to receiving OMT, currently being treated with OMT outside of required course requirements, or currently pregnant/planning to become pregnant during the study period. Block randomization was used to assign eligible participants to either the treatment or control group.

Protocol

Participants in both study groups met bimonthly (twice a month) for 30 minutes for a total of 11 weeks. The treatment group received a 20 minute OMT protocol after which participants rested for 10 minutes. The OMT protocol consisted of: 4 minutes of rib raising, 3 minutes of anterior cervical fascial release, 7 minutes of sternocleidomastoid inhibition, 3 minutes of levator scapulae inhibition, and 3 minutes of occipitoatlantal release. Control group participants were instructed to lie on an OMT table and rest quietly for 30 minutes.

Assessments and Outcomes

Self-reported levels of depression, stress, and fatigue were measured using: the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire 9 (PHQ-9) Depression Scale, the Self-Percieved Stress Scale (SPSS), and the Epworth Sleepiness Scale (ESS). Scores were obtained after each study visit and two weeks after the final study visit. Participants also filled out these surveys before and after their scheduled 2-week winter break and 1-week spring break.

Results

OMT & Academic Breaks on Subclinical Depression

Among the treatment group, there was a statistically significant reduction of 33.3% in mean PHQ-9 scores from the beginning ($t = 6.3$) to the end of the study ($t = 2.3$) Figure 1. The reduction in PHQ-9 stores became statistically significant in the treatment group after 3 treatment sessions. There was a greater reduction in PHQ-9 scores over winter break than spring break for both groups. The reduction in scores over winter break was statistically significant for the control group ($t = 2.5$) but not the treatment group ($t = 3.4$). There was no significant reduction in PHQ-9 scores over spring break for the treatment ($t = 1.0$) or control ($t = 1.2$) groups.

OMT & Academic Breaks on Stress

Analysis showed that the treatment group’s SPSS levels decreased significantly from the beginning ($t = 20.3$) to the end ($t = 9.7$) of the study Figure 2. The reduction in stress levels became significant after receiving 4 treatments and remained significant up to the final treatment session. The treatment group had a reduction of 9.6 points during winter break and 7.7 points during spring break. The control group had a reduction of 1.8 points during winter break and 1.4 points during spring break. The reduction in both the group’s SPSS scores were statistically significant after winter break but were not statistically significant after spring break.

OMT & Academic Breaks on Fatigue

OMT was not found to have a significant effect on fatigue levels among first-year osteopathic medical students in our study. Academic breaks also did not have a significant effect on fatigue levels.

Conclusion

This pilot study highlights that regular OMT and scheduled academic breaks >2 weeks in length have the potential to decrease levels of subclinical depression and stress among first-year osteopathic medical students. Osteopathic medical schools could consider implementing the treatment protocol used in this study into their curricula to help decrease the manifestations of distress among medical students. Because osteopathic medical students are trained in OMT, the treatment protocol is one that medical students could use to treat each other. Osteopathic medical schools could also consider scheduling more frequent and longer academic breaks in order to improve student wellness.

References


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