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Name of the scholar: Moazzam Hussain Khan

Name of the supervisor: Dr. Saurabh Sharma

Name of the centre: Centre for Physiotherapy and Rehabilitation Sciences,

Topic of research: Timing of interval training and its association with Oxygen uptake, cardiac autonomic function and physical performance in healthy human subjects: Role of circadian variation.

FINDINGS

The study was conducted on the university students to find the effects of high intensity interval training on physical and physiological performance after 12 weeks of exercise training on the basis of their chronotypes and time of the day exercise. There was significant improvement in Physical and physiological performance after 12 weeks of HIIT in university students except PSQI, RMSD for MTMEx group, LF/HF for MTMEx, MTEEx and HF for ETEEx groups.

Effects of same chronotype at two different time of the day: Result of this study showed a significant improvement in physical and physiological performance for MTMEx group in the morning time of the day except agility, and LF/HF, significantly better in the evening time of the day and there were no significant changes in PSQI, SDNN, RMSD, and LF parameter two different time of the day. Result of this study also showed a significant improvement in physical and physiological performance for ETEEx group in the evening time of the day except LF/HF which showed better in the morning time of the day and no significant changes were observed in RMSD and HF value.

Effects of two different chronotype at same time of the day:

There were synchronized effects of morning chronotype on vertical jump, sprint, VO₂max, and PSQI, in the morning time of the day and evening chronotype in the evening time of the day on physical and physiological performance except PSQI, and there were no significant effects of chronotype on RMSD, LF, HF values.