



SCOTTISH RITE CHARITABLE FOUNDATION
VALLEY LIAISON COMMITTEE



This message is the second of two-parts regarding the research being conducted by Dr. Karen Milligan, Assistant Professor of Psychology at Ryerson University in Toronto. The title of her research is “Using Mindfulness-Based Martial Arts to Improve Attention and Executive Functions in Youth with Learning Disabilities and Mental Health Issues.” This summary is based on a video recording of her presentation to Toronto Scottish Rite and it is available at the SCRF website (www.srcf.ca) under the heading Videos. Part one focused on specific information about Learning Disabilities and how the use of martial arts assists youth to better attend to, and focus on, school work in particular.

This second part details the research that is the subject of funding from the SRCF. In the first part of Dr. Milligan’s intervention through the Integra Mindfulness Martial Arts program, the findings showed that the youth were less aggressive with less acting out, there was an overall improvement in behaviour, and a decrease in social problems and issues such as anxiety. One of the youths reported that, “the Mindfulness Martial Arts calms you down so it’s easier to sit down and do your homework... I’ll be more focused on my work and that makes it easier to do the work.”

Dr. Milligan and her colleagues wondered whether this particular intervention was, in fact, causing a change in the brain in terms of “attentional functioning”. This portion of the study involves a comparison of a treatment group of 19 youths against a control group of 16 youths. The average age in both groups is just over 13 years and includes both boys and girls. The actual study required these young people to don a “cap” with numerous electrodes that monitored brain wave activity while they were engaged in what the researchers described as “video games”, although most of the youth would not call them such. In fact, one youth proclaimed that they would “put a kid on a sugar high to sleep!”

The activity in the auditory portion required the youths to listen for a tone and press, or not, a button depending on whether the tone was high or low or was heard in their left or right ear. The visual portion required them to observe a line of five characters and indicate if the centre one was similar to, or different from, the other four.

The results showed that the young people in the treatment group were able to pay more attention to the task at the end of their treatment than were the control group. Additionally, those in the treatment group were getting faster at processing the information. They were able to stay on task and got faster at making sense of the information they had to deal with. Changes were taking place in brain attentional functioning.

The next phase of this research is to continue with a much larger sample size in order to look at other variables such as type of learning disability the youngster has, the presence of anxiety, intellectual level, gender, the regularity of their attendance at treatment sessions, and how much practice they do at home. The hope is that the outcomes will lead to suggested interventions to help kids with learning disabilities and mental health stressors deal more effectively with their disabilities. Perhaps another piece of the puzzle of the mind to be put in place.

Be sure to check out the video on the website at www.srcf.ca to hear Dr. Milligan present an overview of this research. And remember to use the blue envelope to make your donation to the Scottish Rite Charitable Foundation!

Ron Findlater 33°
Valley Liaison Committee Chairman