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FRIENDS OF NVT

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INTRODUCTION

Welcome back to Issue 7 Volume 6 of the Friends of NVT Newsletter! In the main portion of today's newsletter, our author/team member Esha Reddy reviews a video from Mind Body 1 discussing "sledging" and how it can be utilized in conjunction with training modalities, such as numerical Stroop, to help athletes perform better.

In our "How To" this week, Dr. Joseph Clark provides methods for using numerical Stroop – a simple and useful tool that can be used as a part of NVT training programs to address memory, impulse control, and mental imagery.

We encourage you all to leave questions and/or comments below. Thank you for the continued interest and enjoy!

If you missed an issue, please visit https://inneuractive.com where all issues are available for free. Please tweet and share with your friends as we plan to release more great content. @FriendsofNVT.

WHAT'S IN OUR LATEST ISSUE:

@FriendsofNVT

Video Summary: “Which Comes First in Sports Vision Training: The Software or the Hardware Update?”

When athletes step onto the playing field, the game is not the only thing that they can anticipate. A quick google search for “athletes trash talking” will yield a plethora of examples of trash talk in sports. Trash talk–also known as sledging– originated in the sport of cricket but is now present in virtually every sport. Sledging intends to get inside the opponent's head, causing them to lose focus. The insults slung at the athletes may cause them to act on instinct, impulse, or emotion. However, through NeuroVisual training, athletes can improve their impulse control and emotional regulation skills, enabling them to process trash talk in real time while controlling their fight or flight response to avoid quick irrational behaviors. Highly experienced competitive athletes who perform on a big stage will use terms like, “being locked in”, “in the zone”, and “dialed in” to express their ability to filter out the negative noise and focus on the task(s) at hand. This can come from a high level of maturity on the field of competition.

In Mind.Body.1’s example, athletes are tasked with completing a numerical Stroop and simultaneously reacting to four peripheral Fit Lights while their coach “sledges” them through headphones. The goal of this exercise is to improve emotional regulation and focus on a technique known as thought stopping and reframing.

The numerical Stroop, featured in our “how to” article below, allows athletes to address impulse control, memory, and mental imagery. Similar to a traditional color Stroop, numerical Stroop also assesses the athlete’s capacity to inhibit cognitive interference.

As Nicholas Davenport, a cognitive agility coach at Mind.Body.1, mentions, a common error he often encounters is athletes trying to fully ignore and erase the sledging. Unfortunately, in their attempt to shift their attention from the anticipated trash talk, athletes misplace their cognitive load, sacrificing focus on the main task at hand. A risk for an athlete in such a case could be they lose awareness of relevant sensory queues by tuning out too much information. In the case of the training exercise this would be attention away from the numerical Stroop and Fit Lights. However, on the field of competition it could lead to a fumble or a missed pitch. Preparing athletes for more variables can initially seem overwhelming. With targeted practice such as presented here the athlete will be calmer and refocused on the main task at hand.

It is also interesting to note that those with higher executive function and extraversion scores tend to manage better with sledging – likely due to their greater working memory capacity and ability to process incoming information and what action it warrants, as opposed to behaving impulsively. The aforementioned training exercise improves executive function with the numerical Stroop by exercising the prefrontal lobe, while working on the mental skills of thought stopping and reframing with the sledging. These benefits are being trained while performing a visual-motor task with the Fit Lights.

In training athletes to become more acclimated to conditions closely resembling their craft, they will be more effective and confident when managing sledging.

For Friends of NeuroVisual Training (@FriendsOfNVT), this video reinforces techniques to improve neurovisual training methods and aligns with our mission to not only provide a cutting-edge NVT newsletter, but to constantly learn and improve the efficacy of all our training regimens

References:

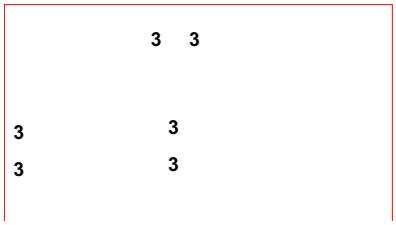
TheMindBody1. (2022). *What is Sledging and How It Can Make You A Better Performer*. *YouTube*. YouTube. Retrieved July 21, 2022, from https://www.youtube.com/watch?v=qBxc7MnMGBg.

“How To” – Numerical Stroop

In V2I8 and V3I3 of Friends of NVT newsletter we discussed Stroop as a testing and training modality. Stroop is a method where a person is shown a word that is in color. The person is told to call out the color of the word and not to read the word. This is especially difficult when the written word is a color too. Therefore, if a person is shown the word GREEN but the word green is written in red, the person calls “red.” This is a testing and training modality addressing impulse control. Colored Stroop, however, cannot be adequately performed on people with colorblindness.

This colored Stroop task can be extended to numerical Stroop. Numerical Stroop can be used on people who are colorblind as well as for people who wish to train impulse control in a way different than the colored Stroop.

Numerical Stroop is available for sale on http://www.inneruactive.com/products but you can make it yourself using PowerPoint or flash cards. To perform numerical Stroop, using flash cards or PowerPoint, flash a numerical set such as:

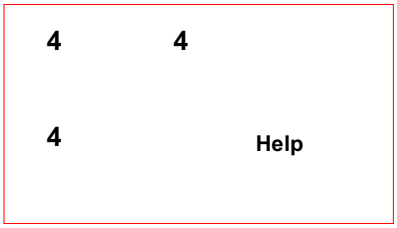


In the example above the person would call “six.” They resist calling three and quickly give the correct response of six.

As part of a progression or alternative method one could flash:

In this case the person would call out “three.” The client is to resist reading the word six and should give the correct response of three.

To progress the difficulty and complexity of the numerical Stroop task a person could have the following flashed:



The instructions to the person would be to call “three” as this addresses the numerical Stroop, but the secondary task would be to recall the word help.
Note for the 3 images presented the location and orientation of the numbers and words are randomized on the flashed image. All numerical Stroop sets should have the location of the words and numbers randomized on the flashed image.

In the foregoing text we presented examples of what might be included in numerical Stroop. To follow we present a template method for use with a client.

When beginning to work with a client we generally default to a 1 second flash and 2 seconds to give the answer.

We record misses or skips for 20 flashes. If this is too fast, we slow the sequence to 2 second flash and 3 seconds for the answer. When a person is consistently above 85% correct (17 flash cards correct) we progress to a more complicated method. The more complicated could be distractions such as animations or numerical Stroop with words. We use the 1 second flash and 2 second for the response, as a default, and do 20 flashes per set. Again, with consistent 85% correct we’ll progress. We can progress to faster flashes, word flash with recall or combinations of numbers and words that are numbers. If we progress to words and numbers, we use the default of 1 second flash and 2 seconds for the response. There are typically 20 flashes with 10 of them including words along with the numbers. We want the person to get 85% correct for the flashes and 60% for the memory.

Once a client becomes proficient with the modalities for the numerical Stroop, you can progress the program by mixing the numbers with words, with distractions, with recall, and / or with animation. If appropriate you can intercalate some traditional colored Stroops into the mix as well. Using flashed images or cards the client’s training can progress to the numerical Stroop being a secondary method. Consider flashing numerical Stroop cards while a client is on an exercise bike, or pitch and catch et cetera. Thus, numerical Stroop can be part of a multi-tasking exercise.

In conclusion numerical Stroop is an adjunction and complement to traditional Stroop. It can be used as part of a NVT program addressing memory, mental imagery, and impulse control.

Announcements

To all the NVT specialists out there who will be working football and fall sports athletes, good luck from Friends of NVT. If you are doing NVT with your teams, please let us know what you are doing. Also, feel free to contact us if you have any NVT questions.

Please take a look at the 2022 NORA conference https://noravisionrehab.org/about-nora/annual-conferences/2022-annual-conference it is in Columbus Ohio September 8 to 11. Several of us will be there.

As always, if you’re interested in learning more about Inneuractive, our mission, our products and service offerings, or just Neuro-Visual Training in general, please click the following link: www.inneuractive.com.

Have suggestions for a future issue? Please reach out to clarkjf@gmail.com or info@inneuractive.com and we will do our best to include your request in the future.

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