

Assessing The Effect Of Verbal Encouragement On Performance Output

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PURPOSE

Verbal encouragement (VE) is an intervention often used to inspire individuals or help them overcome challenges (Wong, 2015). VE is one of the six modes in the intentional relationship an occupational therapist uses to motivate clients to participate in the rehab process by instilling hope (Taylor, 2008). Though (VE) is a technique utilized by coaches and therapists to motivate their clients, research on the effectiveness of VE is limited (Bullinger et al., 2012). Does this technique translate to an objective change in performance? There is conflicting evidence regarding the effectiveness of VE on muscle performance (Bickers, 1993; McNair, Depledge, Brett Kelly, & Stanley, 1996; Marinho et al., 2014; Neto et al., 2015; Karaba-Jakovljevic et al., 2007).

The aim of this study:

- Measure the effect of verbal encouragement on work output using The Baltimore Therapeutic Equipment PrimusRS.
- Assist in the determination of feasible population, impact, and time required for future research.
- Inform protocol models for future research.

METHODS

Participants:

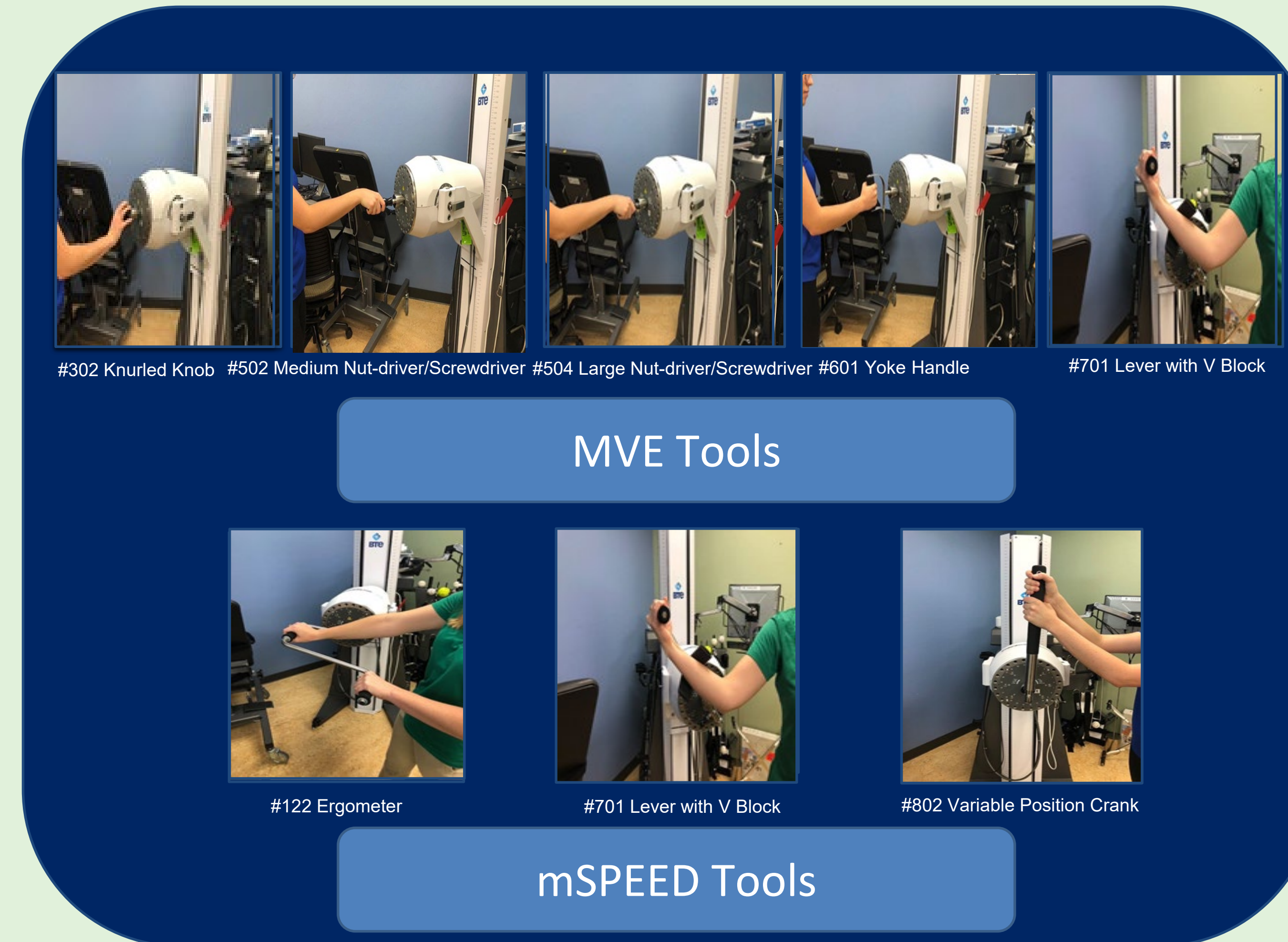
Convenience sample of 18 participants, randomly assigned
Inclusion criteria: 20-50 years of age, able to attend four sessions, no history of cardiovascular, respiratory, or upper extremity orthopedic health issues.

Design:

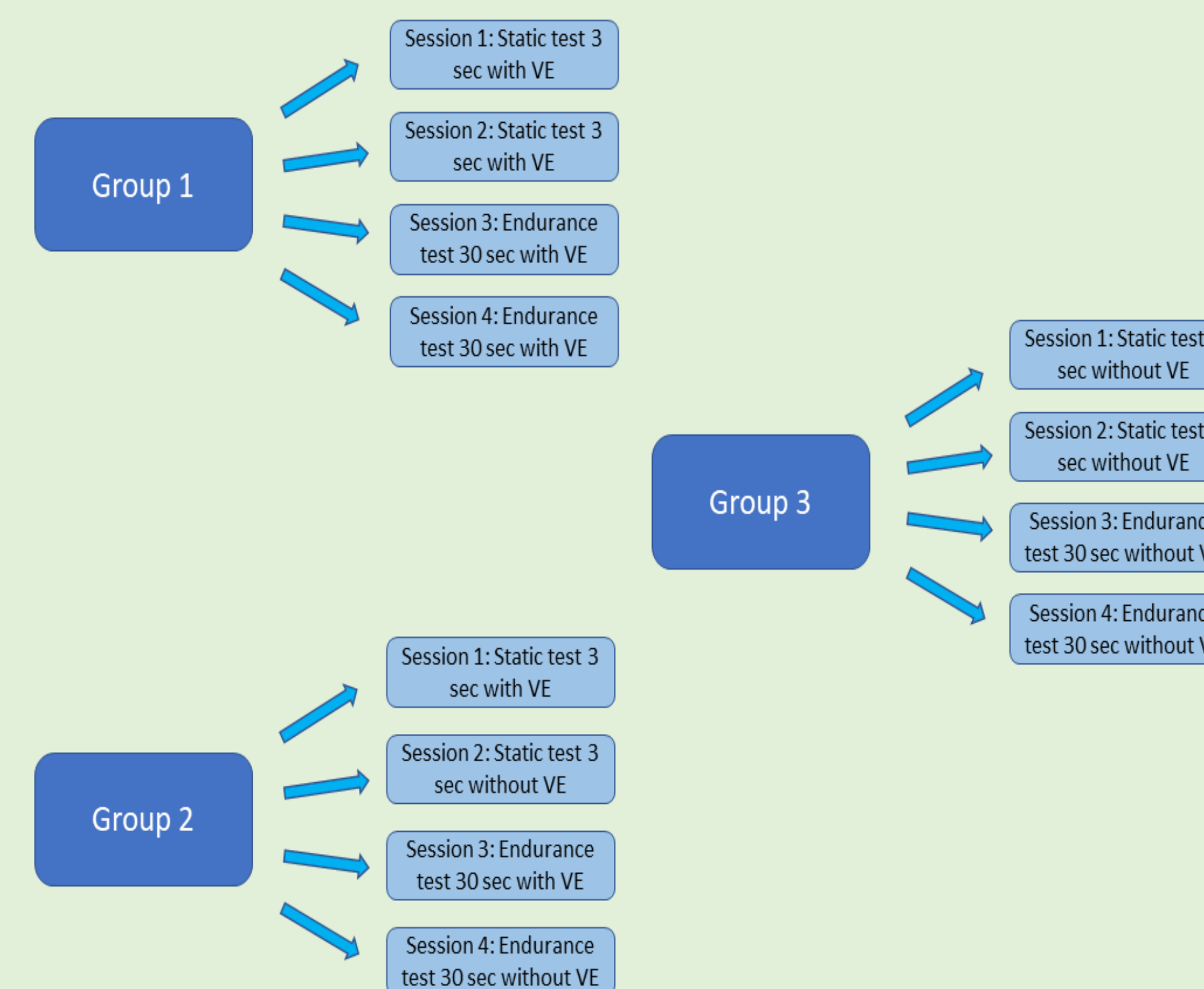
Comparison between two experimental groups and a control.
All participants complete four trials.
The first two trials are 3 second static tests, where work output is measured by the BTE.
The third and fourth trials are 30 second endurance tasks, where work output is measured by the BTE.
Percent change in is calculated between the work output of these two trials. Average percent change is calculated for each group in the study.
One experimental group receives VE at all trials, a second experimental group receives VE on every other trial, the control group does not receive VE.
Percent change is compared between the study groups.



The Baltimore Therapeutic Equipment PrimusRS is commonly used in rehabilitation settings to enhance physical human performance. The device is equipped with a potentiometer and load cells that create an electrical signal, measuring the force and motion of the participant (Boulay, 2009). The BTE is standardized and has proven to be effective in assessing UE functioning, the tool was utilized to determine if VE will influence performance during an endurance test.



PROCEDURE



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RESULTS / DISCUSSION

MVE P-Values for VE vs. No VE

Tool 302	0.25
Tool 502	0.05
Tool 504	0.19
Tool 601	0.05
Tool 701	0.03

mSPEED P-Values for VE vs. No VE

Tool 122	0.43
Tool 701	0.007
Tool 806	0.10

The p-values for each tool indicate variability of statistical significance within the alternating sample group across both protocols. We cannot conclude to what extent that VE has on performance in this test setting due to the current small participant size, only that a change of performance was noted.

The use of convenience sampling, the homogeneity of the sample population, and a limited sample size may have impacted the ability to determine the effect of VE on work output.

Results will allow for consolidation of protocol and selection of tools more optimized (i.e., tools where the calculated CV was lowest, which includes tool 701, 601, 504, and 122) for determining the effect of VE on work output. A streamlined protocol consisting of static and dynamic elements pulled from the MVE and mSpeed protocols focusing on four trials, the inclusion of four procedure groups, as well as standardization of the administration of VE across all groups, will be fundamental to the ongoing study.

Noted survey responses by study participants regarding question of influences on performance include:

- “Researchers encouraging me”
- “Encouragement from researchers”
- “Researchers were very motivating during my session, which was helpful”
- “Motivation”

RECOMMENDATIONS

- Larger, heterogeneous sample size may increase the likelihood of attaining statistical significance.
- Re-evaluate the creation of a VE script and codifying the intensity of the VE to reduce irregularity of administration.
- Standardize the administration of VE and use the same administrator for each trial, as vocal variations exist between administrators
- Implementation of a single protocol with more consecutive trials may increase the likelihood of attaining statistical significance.
- Expansion of procedure groups to include fourth group with alternating administration of VE were VE is provided on trial three and four versus one and three.