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Comparison from Dynavision Training on Concussion Vital Signs Performance

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CONTEXT

This study was done because there is an absence of data and research related to the Dynavision. The Dynavision is a light board that trains and records reaction time and trains central and peripheral vision. Concussion Vital Signs is an online neurocognitive test that measures Visual Memory, Visual Memory, Psychomotor Speed, and Reaction time.

OBJECTIVE

The purpose of this study was to determine if training on the Dynavision three days a week for six weeks has an effect on Concussion Vital Signs performance.

DESIGN

Randomized Control Trial (RTC)

SETTING

Athletic Training Laboratory

PARTICIPANTS

College-aged students picked from a convenience sample of athletic training students $n = 22$ (males: 10 females: 12) (Age: mean = 22.45 sd: ± 3.33).

INTERVENTION

Six weeks of training sessions on the Dynavision.

MAIN OUTCOME MEASURES

Change in Concussion Vital Signs scores

RESULTS

Dynavision training had a positive correlation on CVS reaction time scores. Paired t -test results CVS Reaction time (.001), CVS Shifting attention Correct reaction time (.090). Pearson r for all four reaction time tests were positive and showed an increase.

CONCLUSIONS

Dynavision training did improve reaction time scores on Concussion Vital Signs. The training did not affect any other test batteries on CVS. Some more research needs to be put into CVS.

REFERENCES

1. Experience the proven power of Dynavision! Available at: <http://www.dynavisioninternational.com/>. Accessed April 7, 2016.
2. Wells AJ, Hoffman JR, Beyer KS, et al. Reliability of the Dynavision™ D2 for assessing reaction time performance. *J Sport Sci Med*. 2014; 13:145 - 150.
3. Gualtieri CT, Johnson LG. Reliability and validity of a computerized neurocognitive test battery, CNS vital signs. *Arch Clin Neuropsychol*. 2006; 21:623-643. doi: 10.1016/j.acn.2006.05.007.
4. Clark J, Graman P, Myer G, et al. An exploratory study of the potential effects of vision training on concussion incidence in football. *Optometry Visual Perform*. 2015; 3(2):116-125 10p. Available from: CINAHL Plus with Full Text, Ipswich, MA.
5. Clark JF, Graman P, Ellis JK. Depth perception improvement in collegiate baseball players with vision training. *Optometry Visual Perform*. 2015; 3(2):106-115.
6. Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 1977; 33(1):159-174.

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