Chung – M8 FMS

The Functional Movement Screen (FMS) may be used in clinical and non-clinical domains as a valid pre-participation tool for establishing a baseline of movement quality and to establish a "standard operating procedure" (SOP or system) for professional documentation and dialogue regarding movement quality and patterns (Cook, 2011; Cook, 2010; USDHHS, 2009).

The foundation of the FMS may be traced back to the biotensegrity model, developmental kinesiology, and Janda's neuromuscular approach (especially regional interdependence) in the assessment and development of movement patterns (MP) (Draper, 2011; Page, Frank, & Lardner, 2010). The FMS (a more dynamic version of Janda's MP evaluations) is representative of common, basic MPs requiring working-proficiency in mobility, stability, neuromuscular control, coordination, symmetry, kinesthetic awareness, proprioception, and proximal-distal sequence (Cook, Burton, Hoogenboom, & Voight, 2014). Cook (2010) advocated screening before training MPs compounded by existing dysfunctions/compensations; any subsequent MPs would have a flawed foundation possibly placing the client at greater predisposition for injury.

Based on Smart's (2006) multidimensional clinical utility model (appropriate, accessible, practicable, and acceptable) and driven by both evidence- and real-world-based research/practice, inter- and intra-rater reliability are important considerations before implementing FMS to ensure validity, reliability, and consistency of results (Smith, Chimera, Wright, & Warren, 2013). The FMS was shown to good inter- and intra-rater reliability amongst test-administrators with varying experience levels and backgrounds (Gulgin & Hoogenboom, 2014; Shultz, Anderson, Matheson, Marcello, & Besier, 2013; Smith et al., 2013; Stobierski, Fayson, Minthorn, Valovich McLeod, & Welch, 2015).

While the foundational logic and clinical utility of the FMS seem sound, the greatest deficiency in the FMS is the misunderstanding of its designed intent and usage. The FMS is a screening/categorization tool, not an assessment, diagnostic, intervention, or treatment plan (Cook, 2010; Cook, 2011; USDHHS, 2009). The FMS does not "predict" injury or athletic potential, but it does indicate whether an individual is pre-disposed to an increased risk for injury based on that individual's performance/demonstration of basic MPs (Cook, 2010; Cook, 2011). Another erroneous assumption is that the cumulative FMS score (i.e. the sum of the individual FMS test-item scores) is more significant than the individual test-item scores; the individual test-item scores are actually more significant in the information they convey (Bennett, 2014; Cook, 2010; Cook, 2011). Test-administrators tend to be erroneously fixated on the cumulative FMS score as demonstrated in the review by Beardsley & Contreras (2014); a score of 14 as a "cut-off" does not provide significant information (2014). Frost, Beach, Callaghan, and McGill (2015) noted that knowledge of the scoring criteria improved participants' test scores--one would certainly hope so if knowledge of results and knowledge of performance feedback were provided. However, that "improved" score post-feedback did not represent the individual's natural motor program tendencies. While a "dysfunction" may not be from muscular imbalance, the "dysfunction" may exist in motor programming (e.g. poor habits, poor practice reinforcing poor form, etc.).

The FMS screen can be a valuable tool if understood and used correctly. I would use it if I were a practicing professional.

References

Beardsley, C., & Contreras, B. (2014). The Functional Movement Screen: A review. *Strength and Conditioning Journal, 36*(5), 72-80.

Bennett, B. (2014, May 29). Can one FMS test predict the final score? Retrieved from http://functionalmovement.com/articles/Research/2014-05-29_can_one_fms_test_predict_the_final_score

Cook, G. (2010). *Movement: Functional movement systems : screening, assessment, and corrective strategies*. Aptos, CA: On Target Publications.

Cook, G. (2011). Gray Cook Movement. Retrieved from http://graycookmovement.com/

Cook, G., Burton, L., Hoogenboom, B. J., & Voight, M. (2014). Functional movement screening: The use of fundamental movements as an assessment of function – Part 1. *The International Journal of Sports Physical Therapy, 9*(3), 396-409.

Draper, L. (2011, November 30). *Gray Cook: Mobility first, then stability* [Video file]. Retrieved from https://youtu.be/RVzsqbV4H5o

Frost, D. M., Beach, T. C., Callaghan, J. P., & McGill, S. M. (2015). FMS scores change with performers' knowledge of the grading criteria--are general whoe-body movement screens capturing "dysfunction"? *Journal Of Strength & Conditioning Research, 29*(11), 3037-3044.

Gulgin, H., & Hoogenboom, B. (2014). The Functional Movement Screening (FMS)™: An inter-rater reliability study between raters of varied experience. *International Journal Of Sports Physical Therapy, 9*(1), 14-20.

Page, P., Frank, C. C., & Lardner, R. (2010). *Assessment and treatment of muscle imbalance: The Janda approach*. Champaign, IL: Human Kinetics.

Shultz, R., Anderson, S. C., Matheson, G. O., Marcello, B., & Besier, T. (2013). Test-retest and interrater reliability of the Functional Movement Screen. *Journal Of Athletic Training, 48*(3), 331-336.

Smart, A. (2006). A multi-dimensional model of clinical utility. *International Journal For Quality In Health Care: Journal Of The International Society For Quality In Health Care / Isqua, 18*(5), 377-382.

Smith, C. A., Chimera, N. J., Wright, N. J., & Warren, M. (2013). Interrater and intrarater reliability of the Functional Movement Screen. *Journal Of Strength & Conditioning Research, 27*(4), 982-987.

Stobierski, L. M., Fayson, S. D., Minthorn, L. M., Valovich McLeod, T. C., & Welch, C. E. (2015). Reliability of clinician scoring of the Functional Movement Screen to assess movement patterns. *Journal Of Sport Rehabilitation, 24*(2), 219-222.

U.S. Department of Health and Human Services (USDHHS). (2009). *Substance abuse treatment: Addressing the specific needs of women* (Treatment Improvement Protocol (TIP) Series, No. 51). Retrieved from Substance Abuse and Mental Health Services Administration website: http://www.ncbi.nlm.nih.gov/books/NBK83252/