An analysis of player position group, height, weight, and relative body weight and their relationship to scores on the Functional Movement Screen™

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(ABSTRACT)

Sports medicine professionals are continuously attempting to keep the incidence of injuries down. One way to accomplish this is to employ preventive methods that identify athletes who are at a greater risk of becoming injured prior to the start of the athletic season. The Functional Movement Screen™ (FMS) is a screening method that attempts to identify those individuals at risk of sustaining injuries by determining deficits in athletes' mobility and stability. This is an area of great conflict because athletic injuries result from many factors, not only in mobility and stability weaknesses. Therefore, it must first be determined whether deficient scores on the FMS are the result of the proposed weakness, or rather other potential risk factors.

Functional Movement Screen™ scores were collected from 136 collegiate Division 1-A football players from three athletic programs. The scores were separated into one of three groups based upon the position played by each subject: (1) skill group, (2) combo group, and (3) line-of-scrimmage group. Data were also collected on each subject's height, weight, and relative body weight (BMI).

The results of the ANOVA and Tukey HSD showed that there was a significant difference $p \leq 0.05$ between the line-of-scrimmage group and the skill group, as well as between the line-of-scrimmage group and the combo group. No significant difference was demonstrated between the combo group and the skill group.

The results of the Pearson Correlation demonstrated a significant negative relationship $p \leq 0.05$ between the height of an athlete and the score received on the FMS. Significant negative relationships $p \leq 0.01$ were shown between the weight of an athlete and the score received on the FMS, as well as the relative body weight (BMI) and the athletes' score on the FMS.

The results suggest that the score an athlete receives on the FMS may not reflect mobility and stability deficiencies because other factors affect the outcome of the scores. Therefore, at the present time, the FMS may not be a reliable tool by itself for identifying athletes who are at a greater risk of sustaining non-contact types of injuries.

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TABLE OF CONTENTS

Page

ABSTRACT ii

ACKNOWLEDGEMENTS iii

LIST OF TABLES vi

LIST OF GRAPHS vii

CHAPTER I: INTRODUCTION 1
- Statement of the Problem 5
- Research Hypotheses 6
- Significance to the Field 6
- Basic Assumptions 7
- Variables 8
- Limitations 8
- Operational Definitions 8

CHAPTER II: REVIEW OF LITERTURE 11
- Extrinsic/External Risk Factors 11
  - Nature of the Sport and Exposure 12
  - Training Errors 12
  - Level of Competition 12
  - Artificial Turf 13
  - Spring Football Practice 13
  - Injury Rate: Games versus Practices 13
  - Player Position 14
- Intrinsic/Internal Risk Factors 15
  - History of Previous Injury 15
  - Aerobic Fitness 15
  - Gender 15
  - Joint Instability and Ligamentous Laxity 16
  - Psychological Variables 16
  - Height and Body Weight 17
  - Relative Body Weight 17
  - Local Anatomy and Biomechanics 18
  - Flexibility/Mobility 19
  - Muscle Strength Imbalances 21
  - Muscular Strength 22
- Injury Recording 24
- Pre-participation Physicals and Performance Testing 25
- The Functional Movement Screen™ 28

CHAPTER III: METHODOLOGY 30
Subjects 31
Instrumentation 31
Deep Squat© 31
Hurdle Step© 31
In-line Lunge© 32
Shoulder Mobility© 32
Active Straight Leg Raise© 33
Trunk Stability Push-up© 33
Rotational Stability© 33
Functional Movement Screen™ Scoring 33
Position Played 34
Height, and Weight 34
Relative Body Weight (BMI) 34
Pilot Study 45
Analysis 46

CHAPTER IV: RESULTS 48
Description of the Subjects 48
Summary 55

CHAPTER V: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 56
Introduction 56
Interpretation of Results 56
Conclusions 58
Recommendations 59
Implications for the Athletic Trainer 60

References 61

Appendices
Appendix A 68
Appendix B 73
Appendix C 77
Appendix D 78
Appendix E 79
Appendix F 85

Curriculum Vitae 99

LIST OF TABLES

Table		Page
1	ANOVA: Player Groups	50
2	Dependent Variable: Player Groups	50
3	ANOVA: Squared Results Player Groups	51
4	Dependent Variable: Squared Results Player Groups	51
5	Correlation: FMS Scores and Height	52
6	Correlation: FMS Scores and Weight	53
7	Correlation: FMS Scores and BMI	54

LIST OF GRAPHS

Graph		Page
1	Scatter Plot: FMS Scores and Height	52
2	Scatter Plot: FMS Scores and Weight	53
3	Scatter Plot: FMS Scores and BMI	54