MOBILITY CAPABILITY CHANGES IN COLLEGIATE BASKETBALL PLAYERS FOLLOWING A CORRECTIVE EXERCISE PROGRAM

INTRODUCTION

Profound movement is essential in all aspects of life, including daily activities, workplace duties, and athletic participation (Bonazza, Smuin, Onks, Silvis & Dhawan, 2016). With athlete participation in sport increasing each year, exposure to injury is more likely to occur (Yang, Tibbetts, Covassin, Cheng, Mayer, & Heiden, 2012). Limitations in movement quality, which varies across different sports (Malinzak, Kirkendall, & Garrett, 2001) may hinder the ability to perform tasks or participate in athletic activities (Hatchett, Allen, Hilaire, & LaRochelle, 2017), which may lead to increased incidence of injury (Kerr, Marshall, Dopmier, Corlette, Kloosner, & Gilchrist, 2015). A mechanism for injury may be due to poor quality movement patterns, which suggests the importance of pre-screening movement exams (Zalai, Bonazza, & Nayar, 2015). Factors such as age, body mass index, and gender (Hatchett, Allen, Hilaire, & LaRochelle, 2017) may contribute to an increased risk of injury. It is therefore imperative that effective, evidence-based exercise programs are developed to improve movement quality and reduce the risk of injury in athletes. The purpose of this study was to examine the effects of a corrective exercise program on improving individual FMS scores for a men’s collegiate basketball team.

METHODS

The purpose of this study was to examine the effects of a corrective exercise program on improving individual FMS scores for a men’s collegiate basketball team. The Functional Movement Screen (FMS) is a tool used to gauge fundamental movement patterns including range of motion, stability, and balance (Kiesel, Plisky, & Voight, 2007). The study used a randomized, controlled, single blind, statistical protocol to randomly assign participants to either a treatment (T) or control (C) group. The T group performed a specific warm-up geared towards improving FMS for 4 days per week for 4 weeks. The athletes performed the complete FMS following the completion of the training program. RESULTS: ANOVA analyses revealed no significant changes in FMS scores following their respective interventions between both within and between T and C groups. CONCLUSIONS: The specific corrective exercise training program did not significantly change FMS movements.

RESULTS

Figure 1: Open Book
Figure 2: Dead Bugs
Figure 3: Bicycle Crunches
Figure 4: Knee Hug into Inverted Hamstring Stretch
Figure 5: Overhead Squat
Figure 6: Hurdle Step
Figure 7: In Line Lunge
Figure 8: Shoulder Mobility
Figure 9: Active Straight Leg Raise
Figure 10: Trunk Stability Push-Up
Figure 11: Rotary Stability
Figure 12: Composite Score

CONCLUSIONS/PRACTICAL APPLICATIONS

The data from the corrective exercise program can provide coaches with standards to maximize training and potentially reduce the risk of injury development in their athletes. The creation of individualized exercise programs provides general knowledge regarding movement patterns within sports teams. Individualized FMS scores can be used and evaluated to implement detailed training programs for individuals and teams tailored to specific movement patterns, which is beneficial when specific movement patterns are desired to be improved during in-season training. Further application involves engineering an exercise program for student athletes to follow in the offseason to improve deficient movement patterns.

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