Kinematical Differences of the Male Professional Golfers' 30 Yard Chip Shot and Pitch Shot Motion

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Abstract

Even though there were no clear definitions of the short game and short game distance, short game capability is crucial for a good golf score. Generally, chip shot and pitch shot are regarded as two principal components of the short game. Chip shot is a short, low trajectory shot played to the green or from trouble back into play. Pitch shot is a high trajectory shot of short length. Biomechanical studies were conducted usually to analyze full swing and putting motions. The purpose of the study was to reveal the kinematical differences between professional golfers’ 30 yard 53° wedge chip shot and 56° wedge pitch shot motions. Fifteen male professional golfers were recruited for the study. Kinematical data were collected by the 60 Hz three-dimensional motion analysis system. Statistical comparisons were made by paired t-test, ANOVA, and Duncan of the SPSS 12.0K with the value of .05. Results show that both the left hand and the ball were placed left of the center of the left and right foot at address. The left hand position of the chip shot was significantly left side of that of the pitch shot. But the ball position of the pitch shot was significantly right side of that of the chip shot. All body segments aligned to the left of the target line, open, at address. Except shoulder, there were no significant pelvis, knee, and feet alignment differences between chip shot and pitch shot. These differences at address seem for the ball height control. Pitch shot swing motions (the shoulder and pelvis rotation and the club head travel distance) were significantly bigger than those of the chip shot. Club head velocity of the pitch shot was significantly faster than that of the chip shot at the moment of impact. This was for the same shot length control with different lofted clubs. Swing motion differences seem mainly caused by the same shot length control with different ball height control.

Keywords

GOLF; CHIP SHOT; PITCH SHOT; SHORT GAME; KINEMATIC ANALYSIS; MOTION ANALYSIS
References

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Kinematical Differences of the Male Professional Golfers’ 30 Yard Chip Shot and Pitch Shot Motion. Generally, chip shot and pitch shot are regarded as two principal components of the short game. Chip shot is a short, low trajectory shot played to the green or from trouble back into play. Pitch shot is a high trajectory shot of short length. Biomechanical studies were conducted usually to analyze full swing and putting motions. The purpose of the study more. Chip shots and pitch shots use slightly different techniques, meaning you don't want to get caught 'in-between' by blending the two techniques together. Decide to hit either a chip or a pitch when you are near the green and then focus completely on executing the right technique to leave the ball close to the hole. In this article, we are going to look at what it is that separates a chip from a pitch, and how you can improve on your technique with regard to both of these shots. Moving on, let's take a look now at some of the characteristics that are going to define a standard pitch shot. Longer flight time. It only stands to reason that if a chip shot stays in the air for a very short period of time, a pitch shot will fly for a bit longer. Kinematical Differences of the Male Professional Golfers’ 30 Yard Chip Shot and Pitch Shot Motion. Article. Full-text available. Thirty five skilled male golfers performed maximal velocity swings using each of the three clubs. Full body 3D kinematics were obtained using an eight camera motion capture system operating at 500 Hz. Differences between clubs were examined using repeated measures ANOVA's and the similarity of the 3D kinematic waveforms were inspected using intraclass correlations.