





Fig. 2: Short dribbling test

## RESULTS

Eleven soccer players (age= 24.27±6.2 years, height=177±5.4cm, weight=68.36±10.64 kg) participated in the present study. The researcher found that rested heart rate average (HR rest=64.09±3.91bpm) and maximal heart rate was (HR max=193.27±4.73bpm). Heart rate before co-ordination tests was (HR pre= 124 ±7 bpm) and heart rate average at fatigue level after the fifth circuit was (HR post=173.64±11.36 bpm). table 1.

Table 1: Descriptive statistics for soccer players

| Variables      | Mean   | Standard deviation | Skewness |
|----------------|--------|--------------------|----------|
| Age (Year)     | 24.27  | 3.66               | 0.27     |
| Height (Meter) | 177.55 | 3.47               | 0.40-    |
| Body mass (Kg) | 68.36  | 4.71               | 0.43     |
| HR Rest        | 64.09  | 2.62               | 0.24     |
| HR Max         | 193.27 | 3.46               | 0.07     |
| HR Pre         | 124    | 5.32               | 0.25-    |
| HR Post        | 173.64 | 5.95               | 0.56     |

The co-ordination abilities test average value at rested condition were: rhythm (41.09), differentiation (14.73), and orientation (10.45), while an average of (37.55) rhythm, (12.09) differentiation, and (11.54) orientation, were measured at fatigue level. The test score showed significant difference between pre- and post-test co-ordination abilities average (t (df=10); p<0.01) (table 2.)

Table 2: Paired samples t test to determine the differences between pre and posttests of some coordination variables (n=11)

| Variables       | Tests                            | Pre-test |      | Post-test |      | T-value | P-value* |
|-----------------|----------------------------------|----------|------|-----------|------|---------|----------|
| Rhythm          | Dribbling                        | 41.09    | 2.66 | 37.55     | 1.57 | 8.593   | 0.00*    |
| Differentiation | Weight pass correctly(15.25.35m) | 14.73    | 1.27 | 12.09     | 1.04 | 12.969  | 0.00*    |
| Orientation     | Short dribbling test             | 10.45    | 1.12 | 11.54     | 1.12 | 6.70-   | 0.00*    |

The Average HR at pre-test was 75% to 95% percent of the (HR max =193.27 ±4.73beat/min). Accordingly, the participant's co-ordination abilities were examined at sub-maximal fatigue level.

## DISCUSSION

The purpose of this study was to determine the effect of fatigue on some co-ordination abilities (rhythm, differentiation, and orientation). the main finding was that rhythm, orientation, and differentiation were affected at sub-maximal of the fatigue level.

Fatigue may be correlated to muscle activity, decrease EMG amplitude, decreases force production, proprioception by affecting the joint position sense, cognitive function which interfere with executive function of motor performance [5].

The effect of fatigue on co-ordination abilities can be attributed to changing in The ability of a player to position himself correctly in terms of both space and time. Changing and readjusting the position of the body on the basis of the perception of a given situation, affecting the ability that allows the player to deal in different ways with the information that he perceives with his sensory organs, and decrease The ability that allows the player to execute movement rhythmically.

blood lactate level and decreased muscle glycogen. These factors resulted in impaired neuromuscular performance which affected coordination and subsequently the participant performance skills.

## CONCLUSION

The participants' co-ordination abilities decreased when they were at fatigue level; accordingly, it is very important for soccer coaches to recognize the level of fatigue influence on player's performance, therefore they should train the players under exertion condition to decrease the effects of fatigue on co-ordination level. If the coaches are able to identify the level at which each player is affected by fatigue, this can help them build better match strategies.

**Conflicts of interest:** No potential conflict of interest relevant to this article was reported.

**Acknowledgments:** The researcher thanks the administration of Palestine Technical University "Kadoorie" for their contribution in the funding of scientific research.

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