Variorum Multi-Disciplinary e-Research Journal
Vol.,-05, Issue-III February 2015

Effectiveness Ran 110 M Hurdle Race and the Relationship of Responses to Extend the Knee Angle on Starting Blocks Time

Hamid Abdul Sada Kadhim: (Iraq) University College of Physical Education, Osmania University**,** Hyderabad, India

Abstract:
This Study aim to indentify the interpretation and analysis of these aspects in order to place or the in ability of mathematical sciences of interpretation or analysis, and within these sciences biomechanics in sport aware that contributes effectively through the design of specialized devices, for example, to find a response time or reaction or movement time in some events do not can be identified, or the existence of devices, including devices cinematography high speeds or power platforms that start-up phase after launch hand sensitive part complex where you play a lot of variables role in the launch of hostility toward winning were selected sample of the study consisted of (6) runners representing participants in the competitions ran 110 meters steeplechase for the advanced level sports in the Republic of Iraq, were chosen the way intentional and representing (80%), the average height of the original community (1.70-1.79cm) and average weight (50-75kg) and the results of this study showed that the effectiveness of speed wares in the back corner of the installer foot differs from the effective speed wares corner in front of the foot and the installer in favor of the goal of efficiency. In the light of the results the study recommended further studies in the body weight of the high-speed center wares corner in front of the foot must be installed to increase compared to the installer in the back of the foot.

Introduction and the Importance of the Study
Multiple manifestations of sporting events require the participation of other sciences in the interpretation and analysis of these aspects in order to Palace or the inability of the mathematical sciences from the interpretation of analysis, and within these sciences biomechanics aware that contributes effectively through the design of specialized devices, for example, to find a response time or reaction or time movement in some events cannot be inferred, or the existence of equipment and devices, including cinematography high speeds or power platforms. The start-up phase after the launch of a sensitive hand and part of a complex where many variables play a role in the launch of hostility toward winning the problem of the study.

The researcher found few studies that look at the threads start and that the lack of services, and that the Iraqis runners did not look forward repeatedly to cause low realizations compared to global figures, they are characterized by fast, but we do not understand. Are their debut motion is correct or is there possible be raised to reduce the time variables achievement.

The Objective of the Study
See some of the variables that contribute to the evaluation of response time
Hypotheses
1. Speed wares corner to extend the values of the knees in the back of the value of the largest installer of feet in front of the foot installed.
2. Response time in stabilizers in the foot wares in the front corner of the installer feet (negatively)

Variorum Multi-Disciplinary e-Research Journal
Vol.,-05, Issue-III February 2015

Area of Study

The human sphere a sample of participants in the events ran 110 meters steeplechase advanced levels, Temporal sphere: 08/10/2012 spatial domain: the University of Qadisiyah - Tennis local administration in Diwaniya

Methodology:

The researcher used the descriptive manner Survey

The Study Sample

Consisted of (6) runners representing participants in the competitions ran 110 meters steeplechase for the Advanced level sports in the Republic of Iraq, were chosen the way intentional and representing (80%), the average height of the original community (1.70-1.79 cm) and average weight (50-75 kg)

Tools and Equipment Used

-Equipment Cinematography, Camera type (Pollux 16 mm) 64 image / sec quickly after 15 meters and height of 1 m and focal length of 25 cm.

-Equipment Power platform is installed on the feet of the stabilizers Sense cells during start-up, and elongation to respond in a certain form, and linked to a computer and found that the transmission of information from the platform to the computer takes clocked (0.0013 seconds) was measured using the device.

-Sensing device in the sound of the gun firing: a box containing Pick with some electronic parts and the purpose of this device is absolutely sound receiver for the purpose of allowing the information in the transition to the computer.

Field of Experiment:

Held on 10.08.2012 and included testing each runner alone as stems after hearing the sound of firing the gun and ends the test after leaving stabilizers foot

The subject of the study variables

- Response time calculated by the number of readings (information) from the moment you start fumbling your voice Launching gun (first reading) until the advent of the digital value (zero), a condition to leave the front installer of the foot, and notes from Figure (1) that the response time is the total time of reaction and movement

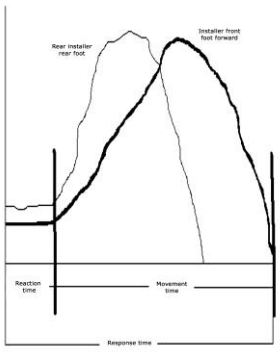

Figure 1: Shows the measurement of reaction time and movement time and response time

Variorum Multi-Disciplinary e-Research Journal
Vol,-05, Issue-III February 2015

-Movement angle which is the angle between the thigh and leg.

-Speed Wares corner: the value of the corner after leaving football Sticky minus the value of the corner after leaving the installer for each leg divided by the time of a single image (0.0156 seconds

.(- The extent of angular velocity: the value of the corner before leaving a foot Sticky minus the value of the angle in the development of preparedness for each leg and divide the result by the response time to the same leg.

Statistical Methods

- Simple correlation coefficient

Discussion of Results

The times shown in Table (1) are the times of the forces on the stabilizers foot at the start (vertical force) where it was found that through (0.1875 to 0.2323 seconds) was the vertical force has reached a maximum in the back of the installer of the foot and within (0.1563 to 0.2500 seconds) the same force has reached a maximum in the front of the foot installed.

The response time (from the sound of rounds pistol even left anterior installer foot) has reached (0.4940 - 0.034 seconds) is greater than any time mentioned in the sources briefed by the researcher mentions James Hary 1978 that the time of hearing the voice of rounds the gun to leave the front installer foot has reached (0.426 to 0.345 seconds) as it was rear leg inaverage response time of the (0.3198 - 0.035 seconds) is greater than the time that he referred to a James Hary (0.268 seconds.

The reason for the different times on stabilizers foot back to technically to leave the fixings for the feet where the left hind leg foot installed before the front leg, as shown in Table (1) that the value of the knee angle when the last contact is greater than the value when developing preparedness in tenured of the foot, where extend the player this corner to raise the center of gravity from the earth for the purpose of the body for accelerating the start-up and when comparing the percentage increase in knee angle in front installer foot was larger than the extended rear installer of the foot, and is attributed to the fact that the weight of the body is located on the front leg after leaving the back of the installer of the foot, thus it requires the player to continue to raise the body's center of gravity from the earth, and that extended legknee angular headlights largest what can the province to accelerate the start.

Table (1)

Knee angles values and response time

The values of the corners of the knee and the response time

T	Response time	Angle of the knee in a position to start	Angle of the knee when the last contact	Angle of the knee for the installer to leave the leg	Response time	Angle of the knee in a position to start	Angle of the knee when the last contact	Angle of the knee for the installer to leave the leg
1	0.3048	98	123	115	0.4956	85	168	175
2	0.3708	96	125	122	0.5580	75	167	168

3	0.3552	114	1270	120	0.5267	91	167	173
4	0.3552	103	130	127	0.5112	93	153	155
5	0.2772	102	125	118	0.4644	93	164	173
6	0.3240	121	145	142	0.4800	94	165	173
Q.	0.3318	15.6	129.16	124	0.5006	88	164	169.52
P +	0.0400	9.77	8.00	9.69	0.0340	7.01	5.59	7.47

Table (2)
Wares corner speed and average values Table (2(
Values of angular velocity current and average

T	The installer back foot back		The installer front foot forward	
	Rate of angular velocity	Angular velocity Tableware	Rate of angular velocity	Angular velocity Tableware
1	81	512	167	448
2	87	192	165	64
3	37	448	144	384
4	76	192	117	12
5	83	512	153	57
6	745	192	154	51
Q.	71.5	341.33	150	352
P +	17.21	165.24	18.24	209.34

As it turns out that the knee rear leg angle at the moment of leaving the foot Sticky transfer simple parts for their value when the last contact that unlike the case of knee leg forehand corner where increasingly simple parts, and the researcher believes that the reason for this is due to the player after the left rear installer of the foot is in Minimize angle knee to the body parts closer to its center of gravity to overcome inertia, and that reducing this angle shorten the radius of rotation of the leg, which helps to ease the transfer of the leg from under its center of gravity.
That the percentage increase in the value of the angle of the moment to leave the front foot by the installer (6 degrees) compared to a decrease in the value of the knee leg in the back of the foot by the installer (5 degrees) are almost similar.
Shown in Table (2) that the rate of angular velocity of the knee in the back leg installer is less than the rate of speed corner of the knee in the front leg and the installer because of the continuity of the front leg knee extension angle.
Suppose a researcher to be angular velocity values in the rear installer is greater than the value of the foot in front installer, so that the speed Wares corner to extend the knee of the rear leg indicate the direction of the knee and this gives the player the continuity of the linear motion (the goal is to move the horizontal greater than the vertical transmission) where he got it in all cases with the exception of two cases where speed surpassed Wares corner of the front leg knee values for a reason outside the goals of research and despite the exception above assumption researcher has achieved in the proportion (4 of 6 players ie 67%.)

Variorum Multi-Disciplinary e-Research Journal
Vol.,-05, Issue-III February 2015

The former assumption is supported by the presence of a random relationship strength (0.64) shown in Table No. (3) means the weakness of the relationship such that the effective speed Wares corner in the back installer foot differs from the effective speed Wares corner in front installer foot and in favor of The objective of efficiency.

As shown in Table (3) that the response time of the feet stabilizers may negatively correlated with the speed and D. Wares in the front corner of the installer of the foot. This illustrates the previous reference to events bend the knees and extending already referred to, and derived from the axis of movement to start operations in the front depends on the installer larger.

Table (3)

Variables		Response time datum		Rate of angular velocity		Angular velocity immediate datum	
		Rear	Front	Rear	Front	Rear	Front
Response time in the installer	Rear	1	0.90*	-0.43	-0.29	0.65	-0.85 *
	Front		1	-0.34	0.03	0.41	-0.85 *
Rate of angular velocity in the installer	Rear			1	0.23	0.15	0.005
	Front				1	0.32	0.30
Angular velocity in the immediate installer	Rear					1	0.64
	Front						1

Conclusions

1 .rear leg knee angle at the moment of leaving the installer less simple parts worth about when the last contact.

2 .angular velocity rate of knee leg in the back of the foot Almc less than the rate of angular velocity of the knee leg in front of the foot installed

3 .Speed Wares in the back corner of the values of the largest installer of feet.

4 .Increase speed corner in front of the foot installer reduces response time

.Installed feet

Recommendations

1 .Other studies have high weight in the center of the body.

2. Speed Wares corner in front of the foot installer must increase compared to back in the installer

Sources:

1- Loretta M. Sallings : Motor Learning from Theory to Practices . 1982. p.160 .

2- James G. Hay: The Biomechanics of sports teaching , 2nd edition , New Jerzay, 1978. p.31

3 .Zia glorious student: the entrance to the decimal Games Seven men and women, Dar books for printing and publishing, the University of Mosul 0.1988.

4.Qassim Hassan Hussein: theoretical and practical fundamentals of events Games track and field for the first stages of the faculties of Physical Education, Higher Education Press, Baghdad 0.1987.

5. Mohamed Osman, Encyclopedia athletics, House Science, Kuwait .1990.