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THE EFFECT OF DURATION VARIABILITY ON THE REACTION TIME OF BASKETBALL PLAYERS

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ABSTRACT

The purpose of this study was to determine how length variation affects basketball players in the Gwalior district's response time. Thirty male basketball players aged 17 to 20 from the Gwalior region were recruited to take part in the study. An electronic reaction timer was used to calculate normal fluctuations in reaction time. The analysis of variance (ANOVA) was performed to determine the major changes in diurnal fluctuations in basketball players' response times in the Gwalior zone, and it was obvious that the mean reaction time of the right and left hands did not differ substantially.

KEYWORDS : Duration Variation, Reaction Time.

INTRODUCTION:

Climate, seasons, and weather have such an impact on physical activities and sports that a sub-discipline of sport medicine known as bioclimatic sports appears to be justified. Man's physical, physiological, and psychological reactions are influenced by environmental circumstances. Temperature, seasonal variations, sunlight, and other environmental factors can all have a positive or negative impact on the human body. With severe changes in climatic conditions, the efficiency and capacity of physical performance, as well as the sensitivity to fatigue, will change, as will the overall state of health. Seasons are defined by unique meteorological and climatological events that are intimately linked to physical performance, training, and sport. The biological clock, an endogenous process, is in charge of the other component of performance efficiency variation. According to the qualitative research of these biological phenomena, biological clocks comprise divisions of hours, minutes, and seconds, as well as division measurement of days, weeks, months, and years, much like a standard clock. It also demonstrates biological periodicity, which is a "strategy" by which a live creature attempts to maintain a constant and stable life process.

Biological clocks, on the other hand, regulate physiological functions, which in turn influence day-to-day abilities, and show periodic assibilation ranging from milliseconds to hours, days, years, or longer in response to periodic changes in the environment (Faria et al 1980).

In each of these cases, the organism must adapt to a collection of circumstances that alter normal physiology in ways that are severe enough to impair his performance. The body has a remarkable capacity to adapt to external circumstances, either entirely or partially, if given the opportunity. While it may be argued scientifically that a little handicap has no bearing on an athlete's performance in competition, it could be the difference between winning and losing a war. Furthermore, there may be an additive effect when a performer engages in longer activities such as running, swimming, cycling, or the like, as opposed to shorter events. As a result, when evaluating the effects of poor environmental conditions, the period of probable exposure is crucial (Clarke, 1975).

Depending on the season or environment, an athlete's performance will be influenced significantly if he is exposed to a variety of climatic conditions during his participation. The study's purpose was to determine how regular variation affected the response times of basketball players. In order to ensure that the literature is the scholar's own expertise, it was hypothesized that there might be a considerable fluctuation in the mean output of the reaction time on specific subjects.

METHODOLOGY

Thirty male basketball players from the Gwalior region, ranging in age from 17 to 20, were chosen as subjects. They were given a full explanation of the testing approach before conducting the chosen exam. At various intervals during the day, the required data on the stated variables of right and left hand movement was gathered. Data was acquired using an Electronic Reaction Time Chronometer to calculate the response time. The protocol was described and shown to all of the subjects before to the reaction time test. There was no motivating method used, and each subject was given three trials, with the average response time score being used. One way variance analysis was used to explore the impact of diurnal variation on leg movement reaction time (F test). A significance level of.05 was used to test the hypothesis.

FINDINGS

TABLE 1

ANALYSIS OF VARIANCE OFREACTION TIME (RIGHT HAND)

Source of Variance	df	SS	M.S.S.	F-ratio
Between the Group	2	0.0048	0.00145	
Within the Group	87	0.0578	0.00069	2.69

* Significant at 0.05 level of confidence, Tab $F_{.05}(2,87)= 3.10$

Table 1 shows that there was a substantial variation in response time for the right hand, with the obtained value of 2.69 being smaller than the calculated value.

TABLE 2
ANALYSIS OF VARIANCE OF REACTION TIME (LEFT HAND)

Source of Variance	df	SS	M.S.S.	F-ratio
Between the Group	2	0.0014	0.000686	
Within the Group	87	0.0583	0.000669	1.063

* Significant at 0.05 level of confidence, $F_{.05}(2,27)= 3.10$

Table 2 also showed that there was no significant difference in response time of the left hand, with the actual value of 1.063 being smaller than the calculated value.

CONCLUSION

The data analysis shows that there is no significant variation in reaction time between the right and left hands. It's possible that the small difference is related to the type of test used. Basketball players usually use a variety of movements throughout a game, whereas the test used a variety of movements. On a visual stimulus, there was no discernible variation in reaction time between the right and left hands. One aspect that might account for such results is the small number of samples. The hypothesis about the reaction time of the right and left hands is rejected based on the outcomes of the investigation.

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