RELATIONS BETWEEN BASIC MOTORIC ABILITIES WITH YOUNG HANDBALL PLAYERS TESTED THROUGH BALL HANDLING TEST

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Abstract
The research was conducted on 54 male handball players aged 16 years. The aim of the research is to establish the dependence of the applied motoric variables and the specific motoric test – Dribbling with handball ball (as a criterion variable) with handball players. Using the regressive analysis, there is determined statistically significant prediction of the motoric variables on the criteria variable.

Key words: *motoric, specific motoric, tests, athletes, regressive analysis.*

Introduction

Contemporary study records reveal that researches in the field of handball are of increasingly frequent occurrence. That conclusion is suggested by a number of sources. We often come across works of study that treat the anthropological characteristics of handball players. Also, there are studies related to motoric abilities with handball players. Such kinds of researches have been completed by the following authors: Metikoš, et all. (1989), Đukić, J. Kovač, and M. Kovač (1997), Čavala, and Rogulj (2004), Chelly, et all. (2011). In regard to the problems of handball as sports discipline, the researches that are considered to be of major interest are those treating the specific motorics (the specific motoric abilities), which are related to the basic motoric abilities of handball players. Among the authors examining that field, it is worth mentioning the following: Đukić, J. Kovač, and M. Kovač (1997), Prahović, and Protić (2007), Bjelica, Georgiev, & Muratović (2012). In a different point of view, motorical abilities inevitably are affecting the results that are part of sports achievements. According to the individual contribution of different motorical abilities, we can conclude that they have different levels of affect. The force as a motorical ability, is the most dominant and highly used component in development of the sports performance. According to Njaradi (2008), it's the most expressed characteristic of the sports training process. The effectiveness of the movements especially depends of the explosive force, that is shown in a different situations to develop maximal force in a shorter period of time. Thus we have decided on conducting the following research, aiming to establish the relation between the basic motoric abilities with the specific motoric test of ball handling with young handball players.

Methods

The sample of respondents in this study is composed of 54 male handball players of age 16 years who regularly train.

When selecting a sample of participants (players) was taken take into account to have at least two years of handball experience for facilitated learning of the specific motor test. The sample of variables covered a total number of 4 variables, of which 3 basic motoric and a specific motor variable.

Basic motoric variables (predictors)
1. Throwing medicine ball (TMB),
2. Standing long jump (SLJ) and
3. 20 meters run (R20).

Specific motor variable (criterion variable)
Dribbling with handball ball (DHB) - as a criterion variable. In the statistical processing of the results were calculated the basic statistical parameters: the arithmetic means, standard deviation, minimum and maximum result, and the asymmetry of the results' distribution - skewness and roundness of the results' distribution - kurtosis. As an assessment of the impact of the motoric characteristics on the specific motor ability was applied regression analysis, where as predictor variables were treated the variables of the motoric space, while as a criteria variable was treated the specific motor test - Dribbling with handball ball (DHB).

Results

The gained results of the basic statistics are shown in Table 1, refer to the applied variables, and are in expected and real limits regarding the respondents' sample.

Table 1. Basic statistical parameters of the applied variables

	Mean	SD	Min	Max	Skew	Kurt
TMB	8.65	.32	8.10	9.60	1.04	.77
SLJ	188.81	6.30	167	229	-.84	1.33
R20	3.59	1.82	2.85	3.91	-1.56	6.21
DHB	21.84	1.46	17.60	29.20	2.48	7.43

In relation of the distribution's asymmetry of the applied variables, we can observe that the variables: 20 meters run (R20) and dribbling with handball ball (DHB), have expressed asymmetric distribution. The other two applied variables are in the limits of normal asymmetry. According to the values of kurtosis, were noted expressed deviation only at the variables: 20 meters run (R20) and dribbling with handball ball (DHB). From the analysis of Table 2 and the obtained results from the regression analysis, we can conclude that the motoric variables as a predictor system make statistically significant influence (Sig.=.00) on the outcome of the criteria variable the dribbling with handball ball (DHB). The multiple correlation coefficient (R) was .60, i.e. the correlation between the motoric variables and specific motor variable shows a significant association. The coefficient of determination (R square) which is .36 shows that the described variability between the system of predictors and the criteria variable is 36% of the total variability, and the remaining 64%, probably belong to other factors.

Particular (individual) impact on the speed test performance of dribbling with handball ball (DHB) have only motoric variable Throwing medicine ball (TMB), Sig.=.00.

Table 2. Regression analysis of the criteria variable Dribbling with handball ball (DHB) with the system of motoric variables

	B	Std. Err	Beta	t	Sig.
TMB	16.67	3.57	.65	4.56	.00
SLJ	1.30	.75	.21	1.33	.08
R20	1.34	.95	.20	1.24	.15

R=.60 R square=.36 df(3, 50)
F=2.96 Sig=.00

Conclusion

Based on the obtained results from this study, can be concluded that the applied system of 3 motoric variables (as predictors) has a statistically significant impact on the criteria variable Dribbling with handball ball (DHB).

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ODNOSI IZMEĐU OSNOVNIH MOTORIČKIH SPOSOBNOSTI S MLADIM RUKOMETAŠIMA TESTIRANIM KROZ TEST RUKOVANJA LOPTOM

Sažetak

Istraživanje je provedeno na 54 muškaraca rukometaša od 16 godina. Cilj istraživanja je utvrditi ovisnost primijenjenih motoričkih varijabli i specifičnog motoričke testa rukovanja loptom sa rukometnom loptom (kao kriterijskom varijablom) s rukometašima. Pomoću regresijske analize, postoje određena statistički značajna predviđanja o motoričkim varijablama vezano za varijable kriterija.

Ključne riječi: *motorički, specifični motorički, testovi, sportaši, regresijske analize.*

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