



# Motor skill balance as a predictor of successful performance of specific motor tasks on the floor

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This research aimed to determine the predictor validity of motor skill balance on the successful performance of specific motor tasks on the floor.

Participants	Predictor variables	Criteria variables	Analysis
42 male subjects	battery of 4 motor tests	specific motor tasks on the floor	the regression analysis
Age 7-8	<p>standing on one leg with eyes open transversely on a balance bench – MBAP,</p> <p>standing on two legs longitudinally on a balance bench with eyes closed – MBAUZ,</p> <p>standing on two legs longitudinally on a balance bench with eyes open– MBAU</p> <p>flamingo test – FLAM.</p>	<p>shoulder blade stand</p> <p>headstand</p> <p>handstand</p>	<p><math>R^2 = .345</math></p> <p><math>R^2 = .126</math></p> <p><math>R^2 = .128</math></p>

### Model Summary shoulder blade stand

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sum of Squares	df	Mean Square	F	Sig. F Change
1	.587 <sup>a</sup>	.345	.274	3.165	195.299	4	48.825	4.873	<b>.003<sup>b</sup></b>

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.744	5.736		2.745	.012
	mbap	.258	.331	.113	.779	.441
	mbau	.582	.291	.284	2.002	.053
	mbauz	.043	.710	.009	.060	.952
	flam	1.273	.416	<b>.455</b>	3.061	<b>.004</b>

### Model Summary headstand

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sum of Squares	df	Mean Square	F	Sig. F Change
1	.355 <sup>a</sup>	.126	.031	2.705	38.996	4	9.749	1.332	.276 <sup>b</sup>

### Coefficients<sup>a</sup>


Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1						
	mbap	-.035	.283	-.021	-.125	.902
	mbau	.200	.248	.132	.804	.427
	mbauz	-.173	.607	-.048	-.284	.778
	flam	.732	.356	<b>.354</b>	2.060	<b>.046</b>

### Model Summary handstand

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sum of Squares	df	Mean Square	F	Sig. F Change
1	.357 <sup>a</sup>	.128	.033	2.61316	36.943	4	9.236	1.352	.269 <sup>b</sup>

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.744	5.736		2.745	.012
	mbap	.115	.274	.071	.422	.676
	mbau	.431	.240	.295	1.797	.080
	mbauz	-.341	.587	-.098	-.581	.565
	flam	.346	.343	.173	1.007	.321



**Contrary to initial expectations, tests for motor ability - balance has not shown a high predictive value for performing all three gymnastic elements, when they are used as a stand-alone predictor set. The exception is the prediction of the success of performing the sholder blades stand, ie the flam test, which showed a statistically significant predictive value in performing the sholder blades stand as well with the headstand. It can be said that the results obtained are unusual because the gymnastic elements used are a classic example of balance positions for a gymnastic beginner. The reason for not achieving statistically significant predictive values could be found in the low scores achieved for the remaining two technical elements and it is very possible that performance in this sample was influenced by levels of some other motor abilities that were not the subject of this study. Looking through the prism of slightly lower scores achieved by respondents, it is assumed that most of them were in the first phase of acquiring motor skills in gymnastics (with a relatively small number of repetitions of elements during training that did not allow better stabilization of knowledge), and further research should direct in the form of an extension of the sample that would have more scores of grades achieved. In this way, potentially better preconditions for determining the predictor value of motor ability of balance would be achieved in order to be able to propose an increasingly comprehensive conclusion.**

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