

ABSTRACT

The Relationship Between Visual Skills and Performance of Professional Baseball Players

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PURPOSE: The purpose of this study was to investigate the relationship between visual skills and batting performance of professional baseball players.

METHODS: Three hundred and fifty two (352) professional baseball players were evaluated for visual skills and batting performance during the 2013 minor league baseball season. Visual skills were assessed using the Vizual Edge Performance Trainer® (VEPT), a commercial software program designed to assess eye alignment, depth perception, convergence, divergence, visual recognition, and visual tracking.

Individual subtest scores were used to generate a composite EDGE score. All visual skills testing was conducted by professional baseball scouts as part of pre-draft player evaluations. Batting performance was determined by 2013 season statistics, which included batting average (BA), bases on balls percentage (BB%), strikeout percentage (SO%), on base percentage (OBP), slugging percentage (SLG), and on base plus slugging (OPS).

RESULTS: Descriptive statistics were used to analyze player performance based on visual skills. Players were divided into quartiles based on their comprehensive EDGE score. Batting performance was then compared for the upper and lower EDGE quartiles. Statistical analysis indicated significant differences for BA (.268 to .253), SO% (.216 to .248), OBP (.334 to .283), and OPS (.713 to .667).

When comparing the upper and lower 10% of EDGE scores, even greater disparities were found for BA (.272 to .250), SO% (.226 to .260), and SLG (.398 to .381). In addition, the upper quartile in BA had significantly better visual recognition response time (.97s to 1.08s) when compared to the lower quartile.

PRACTICAL APPLICATION: The results of this study provides evidence that superior visual skills are indicative of superior batting performance in several statistical categories including BA, SO%, OBP, and OPS. Since visual skills appear to play a significant role in batting performance, coaches, trainers, and administrators should consider using programs such as VEPT to assess baseball players.

		Top 25%	Bottom 25%
AVERAGES	EDGE	86.6	69.72
	Batting Avg	0.268	0.253
	Base + Slugging	0.713	0.667
	Strikeout %	0.216	0.248
	On Base%	0.334	0.283
		Top 10%	Bottom 10%
AVERAGES	Batting Avg	0.272	0.250
	Slugging %	0.398	0.381
	Strikeout %	0.226	0.260