

EXPERIENCE AND DECISION- MAKING QUALITY IN FIELD HOCKEY PLAYERS

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ABSTRACT

This study focused on relationship between each phases of decision-making process and playing experience to find out thathow playing experience is involved in the quality of decision-making inmale field hockey players. Sixty (60) male field hockey players from different competitive levels were selected randomlyin India.General information questionnaire and decision-making quality questionnaire have been used for the purpose of gathering related information. The present study indicated that, playing experience may be related with decision-making process except response selection.

Keywords: Visual search strategies, anticipation, expertise levels, field hockey.

1. INTRODUCTION

A key characteristic underlying expert performance in team ball sports is decision-making. This is the ability to perceive essential information from the playing environment, correctly interpret this information, and then select the appropriate response (Joseph & Jean, 2003).

Decision-making play a very important role in field hockey though to be successful in team sports such as field hockey, where players have to deal with a complex and rapidly changing environment, not only the ability to execute the complex sport skill is important, but also it is crucial to perform the right action at the right moment (Elferink-Gemseret, Vischer, Richard &Limmink, 2004).

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The measurement of quality of entire decision-making process has also been done through the isolation of different phases, visual perception, action anticipation and response selection as main phases of decision-making process. Visual perception is an active process of locating and extracting visual information from the environment and it integrating them with other sensory inputs. In addition, various cognitive factors including past experience, motivation and development are involved in incorporating all the integrated information in visual perception (Claasent, 2008).

The most direct approach to examine differences in the skill level of individuals is to compare the competence of beginners, average performers and experts on various characteristics of perceptual-motor performance (Wrisberg, 2001). The performance advantage enjoyed by experts is due to domain-specific cognitive, perceptual and motor capabilities developed over many years of sporting experience (Abernethy, 1999) and considering that, this approach was developed with the sporting context firmly in mind (Chase & Simon, 1979), some very interesting findings have been made. Studies of this nature have typically involved the isolation and comparison of specific perceptual processing capabilities, sport specific knowledge, or the mechanical efficiency of expert athletes and non-expert athletes (Wrisberg, 2001).

It has been found from previous studies that more skilled athletes encode/retrieve game structure information differently and/or more quickly (Christensen &Glencross, 1993, Abernethy, Farrow & Berry, 2003), use more efficient visual search strategies (Abernethy, 1991) and also selectively attend to different kinds of information in the sports environment (Tenenbaum, Levi-Kolker, Sade, Lieberman, &Lidor, 1996). Furthermore, experts are characterized by superior pattern recognition and anticipation skills (Abernethy, et al., 2003), superior decision-making skills especially in terms of declarative and procedural knowledge (McPherson &Kernodle, 2003), as well as superior movement execution skills (Janelle & Hillman, 2003).

This study focused on relationship between each phases of decision-making processand playing experience to find out thathow playing experience is involved in the quality of decision-making inmale field hockey players.

2. METHODS AND MATERIALS

2.1 Subjects

Data were collected from 60 male field hockey players (Age = 19.65 years (mean); SD =2.14). Participants were playing in competitive levels of India. Their playing experience was (Mean=7.63 years; SD=2.55 years).

2.2 Tools

According to the research objectives, general information questionnaire (individual) required by the study included demographic information and also decision-making quality questionnaire have been used. Each item has been assigned a score ranging from 1=very poor to 5=excellent based on self-rated on-field performance of the players. This questionnaire was loosely based on an inventory used by Elferink-Gemser *et al.* (2004). Internal consistency and test-retest measure have been used to found out the reliability of the questionnaire that each one was at acceptable level. Validity of this questionnaire was determined by helping some of expert coaches of field hockey of India.

2.3 Procedure

Two questionnaires including general information questionnaire and decision-making quality questionnaire as evaluation tools, distributed between field hockey players (male). Investigator asked the participants to answer the questions as they are, not as they think or desire to be. All completed questionnaires were collected after a few days. Informed consent form was read and signed prior to participation.

2.7 Statistical Analysis

Statistical analysis was carried out by using SPSS v.16 software. The acquired data on the selected variables were sequentially arranged in a tabular format and subjected to Person's Product Movement Coefficient. The alpha level of significance was set at $p < 0.01$.

3. RESULTS

The result of the study is presented in the following Tables.

Table 1: Descriptive statistics of playing experience of participants

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Playing Experience (yrs.)	60	3.00	14.00	7.60	2.60

Table 2: Relationship between playing experience and different decision-making process

Variables	N	Pearson Correlation (r)	Sig(2-tailed)
Visual Search Strategies	60	0.34	0.008*
Anticipation	60	0.45	0.000*
Response Selection	60	0.11	0.411
Decision-Making Quality	60	0.33	0.010*

*Correlation is significant at the 0.01 level (2-tailed)

A correlation coefficient was calculated for relationship between players' experience and decision- making phases and it is presented in Table 2. The results indicated that there was a moderate, positive and significant relationship between playing experience and visual search strategies score $r(60) = 0.34$, $p < .01$, also a strong, positive and significant relationship found between playing experience and anticipation score $r(60) = 0.45$, $p < .01$.

No relationship was found between playing experience and response selection $r(60) = 0.11$, $p = 0.41$. Interestingly Correlation coefficient showed moderate, positive and significant result between playing experience and decision-making quality scores $r(60) = 0.33$, $p < .01$.

4. DISCUSSION

This study sought to investigate the relationship between playing experience and decision-making quality with emphasized on each phases of decision-making process in order to demonstrate role of experience on quality of decision-making in open-skill such as field hockey. Our results elucidated that playing experience may relate with decision-making process except response selection. These findings were consistent with previous studies (Abernethy, 1990, 1991; Williams & Davids, 1998; Abernethy, Zawi, & Jackson, 2005; Urgesi, Savanitto, Fabbro, & Aglioti, 2012) and suggested that expert athletes have higher abilities in visual search strategies, anticipation; and therefore it can be stated that along with the increase playing experience, quality of decision-making will improve.

5. CONCLUSIONS

From the results it seems that participation in more competitions may result in developing quality of decision-making as more competitions will provide more experience for players.

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