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The Relationship between Competitive Anxiety and Goal Orientation among Junior Hockey Athletes

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Abstract : The objective of this study was to examine the relationship between competitive anxiety and goal orientation among junior hockey athletes in Malaysia. A survey through questionnaires was conducted among 144 athletes. The instrument consisted of Revised Competitive Sport Anxiety Inventory and Task and Ego Orientation in Sport. The results yielded that male hockey players had lower cognitive anxiety, task orientation and higher ego orientation than female players. The results also revealed that there were significant relationships between cognitive anxiety and task orientation and between somatic anxiety and task orientation. This study will provide guidelines for coaches in training and instructing players. Future studies should conduct qualitative approaches in order to get insights of the factors which may contribute to competitive anxiety and goal orientation among junior hockey athletes.

Keywords: *cognitive anxiety, ego orientation, somatic anxiety, task orientation*

I. Introduction

A psychological factor that severely affects athletes' performance, particularly in critical situations, is anxiety [1, 2]. Anxiety is a concept of unsafe or a threat of which the person clearly does not understand the resource [3, 4]. Competitive anxiety in sport is defined as an immediate emotional state characterised by feelings of apprehension and tension associated with the body's reactions in competitive situations [5]. In an effort to comprehend this anxious state, the multidimensional theory [6] posits that subjective manifestations of anxiety involve cognitive and somatic components, as well as self-confidence. The somatic elements include the physiological and emotional components of anxiety and stem directly from organismic activation [6]. The cognitive anxiety state, however, refers to the mental component of anxiety and is caused by negative expectations or low level of confidence in oneself and in one's abilities [6]. When discussing competitive anxiety, even professional players who have high anxiety show an increase in physiological arousal when placed in a state of anxiety. Hence, they are more prone to drop on the run [7].

Some researchers believe that some psychological aspects (e.g. competitive anxiety, self-esteem, sense of competitiveness) can have a great impact on motivation [8]. Motivation refers to how personal, social and environmental variables interact and determine the final choice between one or another sporting activity and the intensity, persistence and performance devoted to that task [9]. Goal orientation is multidimensional, and it is associated with dimensions of activity, competitiveness and dominance and they point out that some people show their tendency to progress in making attempt to be superior over others [10]. The two more widely used motivational theories for this context are: Achievement Goal Theory [11] and Self-Determination Theory [12, 13]. Achievement goal theory typically differentiates between two types of goal orientations: task and ego. Task orientation is related to developing competence by improving upon one's skills, personal competence and task mastery. It is assumed that task orientation will lead to positive and adaptive achievement behaviors [14]. Athletes with a task goal orientation tend to select and persist at challenging tasks because they value effort as a way to attain new skills. In contrast, ego orientation is based on one's subjective evaluation of performance compared with that of others [11].

Generally, ego orientation is associated with maladaptive motivational patterns that are dependent on an individual's perceived ability [15]. Athletes who endorse an ego orientation tend to select tasks that are easier and tasks at which they perceive their chances of success will be high [16]. Research has shown a link between these two theories that are concerned with the underlying motivations for an individual's behavior through focusing on different dimensions of motivation. An ego orientation represents an internally controlling state that can undermine intrinsic motivation, whereas a task goal orientation represents a state in which individuals derive pleasure from any participation that facilitates intrinsic motivation [12]. Athletes with ego orientations are susceptible to anxiety (cognitive and somatic) before and during performance if they compare their ability with their components. By setting high or low standards, athletes essentially avoid or escape comparing their performance to others.

Task orientation predicts intrinsic motivation, but does not predict amotivation [17]. Conversely, ego orientation is associated with extrinsic motivation. Task goal orientation fosters intrinsic motivation whereas

ego orientation promotes extrinsic motivation. The purpose of the present study was to examine the relationship of both cognitive and somatic anxiety with task orientation and ego orientation. Two hypotheses were devised as follows: there is a relationship between cognitive and task orientation. There is a relationship between anxiety subscales and ego orientation subscales. This study will provide guidelines for hockey coaches in training and instructing players.

II. Methodology

Material & methods

This study adopted a quantitative research approach through survey.This section presents the sampling, measures, instruments, data collection and data analysis of this study.

Sampling

Data for the study were collected from 144 junior hockey athletes (72 males & 72 females), who ranged in age from 15 to 18 years (Mean = 16.38, SD = 0.92). An informed consent was obtained from each participants prior to the completion of the questionnaires.

Measures

Participants completed two questionnaires. Competitive anxiety was measured using a Malay version of the Revised Competitive State Anxiety Inventory: CSAI -2R [18]. Goal orientation was also measured using a Malay version of Task and Ego Orientation in Sport Questionnaire [19].

Instruments

Modified version of the Competitive State Anxiety Inventory-2 (CSAI-2R)

The CSAI-2R, developed by Cox et al. [18], is a 17-item inventory, with seven items measuring somatic anxiety and five items measuring cognitive anxiety and five items measuring self-confidence. The CSAI-2R was widely used by sport psychologists for measuring state anxiety associated with competition in sport. The psychometric validity of the CSAI-2R has been demonstrated by Cox et al. [18]. Examples of cognitive anxiety items include “I am concerned about losing” and “I am concerned about reaching my goal”, while somatic anxiety items include “My heart is racing” and “My body feels tight”. The intensity response scales ask each participant to rate the intensity with which they experience each anxiety symptom prior to a competition on a Likert scale ranging from 1 ("not at all") to 4 ("very much so"). In the present study, the internal reliability coefficients were satisfactory, with α =.77 for the cognitive subscale, α =.65 for the somatic subscale and α =.76 for the self-confidence.

Task and Ego Orientation in Sport Questionnaire (TEOSQ)

The TEOSQ [19] is a thirteen item questionnaire with seven items measuring task orientation and six items measuring ego orientation. When completing the TEOSQ, participants are requested to think of when they felt most successful in their sport and then indicated their agreement with items reflecting task and ego oriented criteria. Examples of task orientation items included "I work really hard" and "I do my very best", whereas on the ego orientation subscale there were items such as "The others can't do as well as me" and "I'm the best". The response scale was a Likert format ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The psychometric validity of the TEOSQ has been demonstrated by Duda [19]. In the present study, the internal reliability coefficients were satisfactory, with α =.84 for the task subscale and α=.85 for the ego subscale.

Data collection

Field method is used for a data collection in this research. After arranging an appropriate time and with the agreement of authorities and team leaders, the researcher met up with the participants. After the researcher expounding on the purpose and significance of the research to the runners, the participants started filling the questionnaires.

Data Analysis

Descriptive statistics was used in the present study. Statistical analysis was carried out using Pearson correlation test to examine a relationship between anxiety subscales and goal orientation subscales.

III. Results

The findings of the study were categorised into two which are the relationship between cognitive and task orientation and relationship between anxiety subscales and ego orientation subscales. Table 1 presents the means and standard deviations all the variables in the study. Female hockey players demonstrated more task orientation (Mean=4.09; SD=.45) than male hockey players (Mean =3.79; SD=.67). Male hockey players

demonstrated more ego orientation (Mean=3.27; SD=.77) than female hockey players (Mean =2.90; SD=.88). The results also showed that male hockey players had lower mean scores in cognitive anxiety (Mean =2.30; SD=.58) and somatic anxiety (Mean =1.95; SD=.49). While female players scored higher cognitive anxiety (Mean= 2.69; SD=.59) and somatic anxiety (Mean =1.99, SD=.52), that is, an indicator for higher cognitive and somatic anxiety levels compared to male hockey players.

Table 1: Mean and Standard Deviation of CSAI-2R and TEOSQ subscales

Sub-scales	Male		Female	
	Mean	Std. Deviation	Mean	Std. Deviation
Cognitive Anxiety	2.30	.58	2.69	.59
Somatic Anxiety	1.95	.49	1.99	.52
Task Orientation	3.79	.67	4.09	.45
Ego orientation	3.27	.77	2.90	.88

Table 2 shows the relationship between CSAI-2R subscales and TEOSQ subscales of junior hockey athletes. The results revealed that there were significant relationships between cognitive anxiety and somatic anxiety ($r = .410$, $p < .01$) and there were also significant relationships between cognitive anxiety and task orientation ($r = .290$, $p < .01$)

Table 2: Relationship between CSAI-2R subscales and TEOSQ sub-scales

Sub-scales	**1**	**2**	**3**	**4**
1. Cognitive Anxiety	-	.410**	.290**	-.066
2. Somatic Anxiety		-	-.022	-.140
3. Task Orientation			-	.149
4. Ego Orientation				-

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

IV. Discussion

The study shows that female athletes tend to be more task-oriented. The result is consistent with previous studies indicating that women are more task oriented and men are more ego oriented [20, 21, 22, 23, 24, 25]. Moreover, task-oriented athletes tend to believe that sports would enhance cooperative skills, personal mastery, togetherness, and higher level of enjoyment [26]. This study also finds that males are more ego-involved than females. The results of this study are similar to those found by Vosloo, Ostrow, and Watson [27] in their study of high school swimmers' goal orientations. Vosloo et al. [27] hypothesize that males would be more likely to have highly ego-involved goal orientations while females would be more likely to have highly task-involved goal orientations. Ego orientation is positively linked with the belief that sports would increase career mobility, enhance one's popularity and, social status, and build a competitive spirit that tend to be associated with a lower level of motivation [20]. Other studies have found that ego oriented athletes adopt a normative conception of ability leading them to conclude that winning and beating others are their main priorities [28]. However, Omar-Fauzee et al. [29] find no differences between male and female athletes in goal orientations as athletes have both high task and ego orientations. The study also shows that female players exhibit higher cognitive and somatic anxiety compared to male players. The result is similar to Martens et al.'s [6] study which report that women exhibit higher cognitive anxiety and somatic anxiety and lower self-confidence than men. The findings of Vosloo et al. [28] support this claim as well. In a study of 151 young swimmers, they report that the women exhibit higher levels of somatic anxiety and lower levels of self-confidence than the men. Krane and Williams [36] find similar results, and they ascribe this finding to their participants' low level of exposure or competition and experience.

The relationship between ego orientation and anxiety is congruent with the findings of several other studies conducted in competitive sport settings [14, 31]. These findings are consistent with results ascertained by Kang, [32], Flood and Hellstedt [33] and Hall and Kerr [34]. Hall and Ker [34] find that competitiveness has an inverse relationship with competitive anxiety [35]. Furthermore, it seems that these individuals use their pre-competitive cognitive and somatic anxiety feelings as stimulants for a more effective performance.

In fact, with increasing goal orientation and competitiveness variables, competitive anxiety is reduced. Athletes who have a high level of achievement motivation do more efforts than athletes who have low levels of achievement motivation [36]. Furthermore, several previous studies have shown, when goal orientation of athletes is higher, athletes have more confidence and are well-prepared, causing them experience less competitive anxiety in racing [37]. Overall, the study shows that there is a linear relationship between goal orientation and competitive anxiety and changes in competitive anxiety are forecast by the sport orientation and its components

V. Conclusion

In conclusion, the results yield that male hockey players have lower cognitive anxiety, task orientation and higher ego orientation compared to female players. The results also reveal that there are significant relationship between cognitive anxiety and task orientation and between somatic anxiety and task orientation. This study will provide guidelines for coaches in training and instructing players. Future studies should conduct qualitative approaches in order to get insights of the factors which may contribute to the present findings.

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