Gender differences in Psychological attributes and their relationship with Hockey performance as perceived by Coaches

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ABSTRACT

In past, various assessments have been done to ascertain the effects of psychological variables of players performance. However, the most important indicator, the coaches perception has not been taken into account. Hence, a comprehensive study taking all the above said variables into account was taken up to ascertain the relationship between psychological variables and coaches perception of performance for boys and girls of STC, Hockey at SAI NSNIS, Patiala.

The findings of the present study reveal that anxiety and preserved stress are the most detrimental traits for performance and having psychological maladjustment in one sphere makes the person more vulnerable for having problems with others. Another finding relevant from the coaching point of view was that psychological maladjustment makes learning the game skills and coaching the most difficult.

INTRODUCTION

Athletes, regardless of level of competition, sport, or gender, must train in intensely physical, psychological, and emotionally stressful environments (Hardy, Jones, & Gould, 1996). As such, they must develop skills to overcome various life stressors (e.g., Gould, Guinan, Greenleaf, Medberry, & Peterson, 1999; Nicholls, Holt, & Polman, 2005). Research has recently taken different approaches in the examination of stressors by using either quantitative or qualitative methods to evaluate different components of stress. A large body of quantitative research has examined competition-induced stressors before, during, and after competition (e.g., Halvari & Gjesme, 1995; Hanton & Jones, 1997). Other areas of research have examined qualitatively stressful elements (Rudolph, 2002) within and out of sport, including athletes' personal, professional, and academic lives (e.g., Gould, Jackson, & Finch, 1993; Holt & Dunn, 2004; Miller & Kerr, 2002; Noblet & Gifford, 2002). The results of this research have provided an understanding of stress in sport with respect to level of competition and gender as well as a foundation for the further study of the experiences of high level athletes. However, research has yet to explore stressors unique to the population of young athletes, particularly with young women athletes. Moreover, the majority of stress research has been carried out with mixed gender or only with male athletes, in spite of reported gender differences of the experiences and emotional reactions to stress.

As women's roles in society change, so do they in sport. Research relating to the social context of women's sport has

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included issues of sexuality, body image, and eating disorders (Cahn, 1994). In addition, the structural and philosophic changes within women's sport revealed that women experienced value alienation, role strain, role conflict, and exploitation (Blinde, Taub, & Han, 1993). Given the fact that participation in women's sport is increasing, it is surprising that research in such areas remains underdeveloped. More precisely, the literature regarding women athletes has yielded scant literature, even though participation levels have doubled from 1981 to 2000. There has been even less consideration of women's Hockey even though enrollment in North America has increased over 600% in Canada and the U.S. between 1990 and 2000 (Canadian Hockey, 2002; USA Hockey, 2002). The only examination of women's Hockey in the United States has focused on collective identity formation (Pelak, 2002). In Canada, research has examined other psychosocial aspects of women's Hockey, such as aggression (Vanier, Bloom, & Loughead, in press), perceptions of instruction, participation, and withdrawal motives (Boyd, Trudel, & Donohue, 1997) and physicality and gender issues (Theberge, 1997).

In sum, despite a plea from Gould, Horn, and Spreeman (1983) over 20 years ago to focus more on women, a paucity of research still exists on elements of stress on women in team sport. In past, various assessments have been done to ascertain the effects of psychological variables on players' performance. However, the most important indicator, the coaches' perception has not been taken into account. Hence, a comprehensive study taking all the above said variables into account was taken up to ascertain the relationship between psychological variables and coaches' perception of performance for boys and girls of STC, Hockey, at SAI NSNIS, Patiala.

METHODOLOGY

Hypotheses

- There will be a significant correlation between the psychological variables and coaches' perception of performance for the mixed and individual groups.
- There will be a significant difference between male and female players on psychological variables and coaches' perception of performance

Sample

22 male and 22 female players of the STC, Hockey, at NSNIS Campus were taken for the study. Most of the players were of the age range 13-18 years, studying in 10+2 and of middle socio-economic status from semi urban areas of various parts of the country.

Tools

- Sports Competition Anxiety Test (SCAT)
- Negative Psychic Energy Scale (NPE)
- Positive Psychic Energy Scale (PPE)
- Perceived Stress Scale (PSS)
- Players' Rating Form for Coaches

Procedure

Initially all the players were asked to give their responses on the tests related to psychological variables. After this the coaches were given the player rating forms and asked to rate the players on the given dimensions. All the tests were collected and scored as per the scoring procedures.

Data analysis

The analysis was done using the SPSS 16.0 Version. The following tests were used to analyze the data.

- Pearson's Correlation Coefficient
- Chi Square Test
- Mann Whitney U Test

RESULTS & DISCUSSION

Table -1 : Correlation among Psychological Variables and Coaches' Ratings for the total sample

		SCAT	PPE	NPE	PSC	PA	GS	CA	TR
SCAT	Correlation	1	.288	.373*	.337*	-.226	-.278	-.040	-.261
	Sig.		.058	.013	.025	.140	.067	.798	.087
PPE	Correlation	-.288	1	-.382*	-.537**	.062	.137	.033	.112
	Sig.	.058		.010	.000	.688	.376	.830	.467
NPE	Correlation	.373*	.382*	1	.800**	-.134	-.166	-.280	-.199
	Sig.	.013	.010		.000	.385	.282	.065	.194
PSS	Correlation	.337*	.537**	.800**	1	-.224	-.243	-.334*	-.285
	Sig.	.025	.000	.000		.144	.112	.027	.061
PA	Correlation	-.226	.062	-.134	-.224	1	.863**	.541**	.969**
	Sig.	.140	688	.385	.144		.000	.000	.000
GS	Correlation	-.278	.137	-.166	-.243	.863**	1	.587**	.927**
	Sig.	.067	.376	.282	.112	.000		.000	.000
CA	Correlation	-.040	.033	-.280	-.334*	.541**	.587**	1	.678**
	Sig.	.798	.830	.065	.027	.000	.000		.000
TR	Correlation	-.261	.112	-.199	-.285	.969**	.927**	.678**	1
	Sig.	.087	.467	.194	.061	.000	.000	.000	

Table -2 : Correlation among Psychological Variables and Coaches' Ratings for Boys

		SCAT	PPE	NPE	PSC	PA	GS	CA	TR
SCAT	Correlation	1	-.378	.368	.398	-.185	-.210	-.081	-.231
	Sig.		.083	.092	.066	.409	.347	.720	.300
PPE	Correlation	-.378	1	.083	-.229	-.222	-.169	-.145	-.195
	Sig.	.083		.713	.304	.320	.451	.520	.385
NPE	Correlation	.368	.083	1	.412	.239	.180	-.154	.183
	Sig.	.092	.713		.057	.285	.422	.492	.416
PSS	Correlation	.398	-.229	.412	1	.128	.117	-.038	.101
	Sig.	.066	.304	.057		.569	.603	.866	.654
PA	Correlation	-.185	-.222	.239	.128	1	.831**	.235	.976**
	Sig.	.409	.320	.285	.569		.000	.293	.000
GS	Correlation	-.210	-.169	.180	.117	.831**	1	.282	.885**
	Sig.	.347	.451	.422	.603	.000		.203	.000
CA	Correlation	-.081	-.145	-.154	-.038	.235	.282	1	.374
	Sig.	.720	.520	.492	.866	.293	.203		.086
TR	Correlation	-.231	-.195	.183	.101	.976**	.885**	.374	1
	Sig.	.300	.385	.416	.654	.000	.000	.086	

Table -3 : Correlation among Psychological Variables and Coaches' Ratings for Girls

		SCAT	PPE	NPE	PSC	PA	GS	CA	TR
SCAT	Correlation	1	-.180	.084	.095	-.115	-.185	.180	-.105
	Sig.		.423	.711	.674	.611	.409	.423	.641
PPE	Correlation	-.180	1	-.532*	-.629**	.247	.303	.067	.254
	Sig.	.423		.011	.002	.267	.170	.768	.253
NPE	Correlation	.084	-.532*	1	.834**	-.226	-.199	-.208	-.224
	Sig.	.711	.011		.000	.311	.374	.353	.317
PSS	Correlation	.095	-.629**	.834**	1	-.325	-.304	-.341	-.334
	Sig.	.674	.002	.000		.141	.170	.121	.129
PA	Correlation	-.115	.247	-.226	-.325	1	.896**	.803**	.979**
	Sig.	.611	.267	.311	.141		.000	.000	.000
GS	Correlation	-.185	.303	-.199	-.304	.896**	1	.787**	.961**
	Sig.	.409	.170	.374	.170	.000		.000	.000
CA	Correlation	.180	.067	-.208	-.341	.803**	.787**	1	.861**
	Sig.	.423	.768	.353	.121	.000	.000		.000
TR	Correlation	-.105	.254	-.224	-.334	.979**	.961**	.861**	1
	Sig.	.641	.253	.317	.129	.000	.000	.000	

Table -4 : Differences among Boys and Girls on Psychological Variables and Coaches' Rating

	Group	Mean Rank	Sum of Ranks	Z Value	Sig
SCAT	Male	16.48	362.50	3.130	.002**
	Female	28.52	627.50		
PPE	Male	24.39	536.50	.976	.329
	Female	20.61	453.50		
NPE	Male	15.95	351.00	3.393	.001**
	Female	29.05	639.00		
PSC	Male	17.75	390.50	2.461	.014*
	Female	27.25	599.50		
PA	Male	23.57	518.50	.576	.564
	Female	21.43	471.50		
GS	Male	25.36	558.00	1.503	.133
	Female	19.64	432.00		
CA	Male	25.43	559.50	1.729	.084
	Female	19.57	430.50		
TR	Male	24.32	535.00	.942	.346
	Female	20.68	455.00		

** Significant at .01 level *Significant at .05 level
PA: Personal Attributes GS: Game Skills CA: Coachability
TR: Total Rating

Findings from the Table nos. 1, 2, 3, & 4 can be summarized as follows:

- There was significant difference among boys and girls on SCAT, NPE and PSS scores.
- SCAT and PSS scores were significantly negatively correlated with players' rating by coaches for the total sample.
- Game skills and coachability were significantly negatively correlated with scores on psychological variables for the total sample.
- All the psychological variables were accordingly significantly correlated for the total as well as individual samples.
- Contrary to the common belief PSS scores for the girls sample were significantly correlated with other psychological variables and players' ratings by coaches
- Overall psycho-social stress not only anxiety should be the focus of intervention for further improvement in girls' performance.

In sum, many of the issues regarding the evolving roles and accompanying stressors of women, participating in high level sport, appear to be well suited to analyses of a qualitative nature. However, research on the multifaceted nature of these challenges of the perceptions of stress with women, in high level sport, using such methodologies, is still relatively scarce (Holt & Dunn, 2004; Holt & Hogg, 2002; Miller & Kerr, 2002; Miller et al, 2002). However, in light of the present study, these young women experienced, and apparently balanced, normal stressors associated with most fields of accomplishment, and that, on the whole, the environment within this context was more kind and caring than previously reported for women's sport (Pelak, 2002; Theberge, 1997).

CONCLUSION

- Anxiety and perceived stress are the most detrimental traits for performance.
- Psychological maladjustment makes learning the game skills and coaching the most difficult.
- Having psychological maladjustment in one sphere makes the person more vulnerable for having problems with others.

SUGGESTIONS

- Advanced analyses like backward regression will help in pinpointing the one major psychological variable which is the most responsible for predicting performance.
- Factor analysis of the data will help in finding out the fittest combination of the variables for elite performance.

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