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Self-Efficacy and Hardiness in National and State Level Sports Players

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Abstract:

Pursuing a sport as a career is a growing trend among the youth of today. An increasing number of adolescents are dedicating themselves to a sport that they have been passionate about since childhood. The purpose of this research was to determine if there is a significant relationship between self-efficacy and hardiness and to determine if there are any significant effects of level (national level and state level) and gender of the sports players on self-efficacy, hardiness and the three dimensions of hardiness (viz., dimension of commitment, dimension of control and dimension of challenge). A purposive sampling method was employed to select the sports players, aged between 17-22 years, and involved in a number of sports that require vigorous physical exercise. The General Self-Efficacy Scale (Jerusalem & Schwarzer, 1992) and the Hardiness Questionnaire (Maddi, 2004) were administered to the participants. The results revealed that there is a significant negative relationship between self-efficacy and hardiness in the state level female sports players. The study also reported that the national level sports players were significantly higher than the state level sports players with respect to self-efficacy. However, no significant effect of gender of the sports players on self-efficacy was observed. Moreover, the findings revealed no significant effects of level and gender of the sports players on hardiness, dimension of commitment, dimension of control and dimension of challenge. Such a study highlights the need to encourage and channelize the competitive spirit of sports players so that they are able to bring more laurels to the nation.

Keywords: *Self-Efficacy, hardiness, sports players*

1. Introduction

A sports player is defined as 'an individual who is proficient in sports and physical exercise' (Collins English Dictionary). Sports Players could be students or individuals who engage themselves into a sport in which their interest lies. According to Bandura (1994), self-efficacy is defined as "the amount of belief or faith an individual has in their capability to complete tasks and accomplish goals that they set for themselves." An individual's self-efficacy can play a major role in how a person approaches their goals, tasks and challenges. People with a high level of self-efficacy, meaning, the ones who think they can perform well are the ones who consider hard tasks as something to be skilled at rather than something to be scared of (Bandura, 1994). Self-Efficacy is a form of self-confidence that involves the evaluation of what a sports player can do with his existing skills in a specific situation at a given point of time (Rushall & Psy, 2007). A Study showed that school national level athletes were significantly better on self-efficacy than school district level athletes (Singh, Bhardwaj & Bhardwaj, 2009). In another study on self-efficacy, the results indicated that self-efficacy and sports performance disclosed high positive correlation (Moritz et al., 2000). Further, another study by Shelangoski et al. (2014) suggested that student-athletes had high levels of self-efficacy. Likewise, Auley (1993) found that self-efficacy significantly anticipated exercise behaviour at follow up when monitoring for behavioural and biological impacts. Also, a study has found that subjects with high self-efficacy persist significantly longer in tasks as compared to those with low self-efficacy (Weinberg, Yulelson & Jackson, 1980).

Hardiness is a psychological term usually known as psychological hardiness, personality hardiness or cognitive hardiness. The term 'hardiness' was first introduced by Kobasa (1979) who defined *hardiness* as "a pattern of personality characteristics and the ability for enduring hardships." Lately, Maddi (2004) has categorized hardiness as a combination of three personality traits an individual possesses, (commitment, control and challenge). The combination of these three variables allows together motivation and courage that an individual needs to turn stressful situations into opportunities of personal growth. Hardy individuals might understand their moral values and purpose of life better than less hardy individuals. Also, hardy individuals are perceived to have good control over their life,

they do not get carried away by influences easily and they are very head strong (Kobasa, 1979). A comparative study on psychological hardiness in athletes and non-athletes showed that swimmers have high levels of hardiness when compared to the mountaineers and non-athletes (Mehrparvar & Mazaheri, 2012). Moreover, research conducted by Ramzi & Besharat (2010) has highlighted a significant positive relationship between hardiness (control, challenge and commitment) and sports achievement of athletes. Another study disclosed that there is a negative relationship between psychological hardiness and anger rumination. In this sample, psychological hardiness proved to be a source of inner resistance that reduced the negative effects of anger (Aghdasiet al., 2014). Similarly, research by Skirka (2010) has indicated a significant positive correlation between personality scales of hardiness and sense of coherence for both college athletes and non-athletes. The researcher had gone on to report a significant negative correlation between personality hardiness and perceived stress. A study on mental toughness at different levels of rugby league, the players scored considerably higher in all three subscales of hardiness, namely commitment, control and challenge (Golby & Sheard, 2004). In another study, it was found that athletes have proved to be hardier (i.e., they have higher levels of control, and commitment and they take up challenges more seriously) when compared to non-athletes (Mehrparvar & Mazaheri, 2012).

Thus, self-efficacy and hardiness have been studied with a number of other variables, such as family functioning, family hardiness (Lian & Lin, 2007), self-efficacy beliefs (Shekarey, Amiri, Moghadam & Rostami, 2010), and social support that mediated the link between the pile-up of stressors and family hardiness (Weiss, 2013). However, to the best of the researchers' knowledge, self-efficacy and hardiness have not been studied together in college sports players so far. In this context, the current research endeavour purports to answer the following questions: Is there is a relationship between *self-efficacy* and *hardiness* in sports players at the national and state level? Are there any significant effects of *level* and *gender* of the sports players on *self-efficacy*, *hardiness* and the three dimensions of hardiness (viz., *dimension of commitment*, *dimension of control* and *dimension of challenge*)?

1.1. Objectives

1. To determine the relationship between self-efficacy and hardiness in national level and state level sports players.
2. To determine the effects of level (viz., national level and state level) of the sports players on self-efficacy, hardiness, dimension of commitment, dimension of control and dimension of challenge.
3. To determine the effects of gender (viz., male and female) of the sports players on self-efficacy, hardiness, dimension of commitment, dimension of control and dimension of challenge.
4. To determine the interaction effects of level and gender of the sports players on self-efficacy, hardiness, dimension of commitment, dimension of control and dimension of challenge.

1.2. Hypotheses

- H1. There is a significant correlation between self-efficacy and hardiness in the total sample.
- H2. There is a significant correlation between self-efficacy and hardiness in national level sports players.
- H3. There is a significant correlation between self-efficacy and hardiness in state level sports players.
- H4. There is a significant correlation between self-efficacy and hardiness in male sports players.
- H5. There is a significant correlation between self-efficacy and hardiness in female sports players.
- H6. There is a significant correlation between self-efficacy and hardiness in national level male sports players.
- H7. There is a significant correlation between self-efficacy and hardiness in national level female sports players.
- H8. There is a significant correlation between self-efficacy and hardiness in state level male sports players.
- H9. There is a significant correlation between self-efficacy and hardiness in state level female sports players.
- H10a. There is a significant effect of the level (viz., national level and state level) of the sports players on self-efficacy.
- H10b. There is a significant effect of the gender (viz., male and female) of the sports players on self-efficacy.
- H11a. There is a significant effect of the level (viz., national level and state level) of the sports players on hardiness.
- H11b. There is a significant effect of the gender (viz., male and female) of the sports players on hardiness.
- H12a. There is a significant effect of the level (viz., national level and state level) of the sports players on dimension of commitment.
- H12b. There is a significant effect of the gender (viz., male and female) of the sports players on dimension of commitment.
- H13a. There is a significant effect of the level (viz., national level and state level) of the sports players on dimension of control.
- H13b. There is a significant effect of the gender (viz., male and female) of the sports players on dimension of control.
- H14a. There is a significant effect of the level (viz., national level and state level) of the sports players on dimension of challenge.
- H14b. There is a significant effect of the gender (viz., male and female) of the sports players on dimension of challenge.
- H15. There is a significant interaction effect of level and gender of the sports players on (a) self-efficacy; (b) hardiness; (c) dimension of commitment; (d) dimension of control; and (e) dimension of challenge.

3. Method

3.1. Research Design

The current study is of the quantitative type and uses a correlational design to determine if there is a relationship between *self-efficacy* and *hardiness* in national level and state level sports players. The study also adopted a between-group design to assess the differences (if any) in the levels of *self-efficacy* and *hardiness* between national level and state level sports players as well as between male and female sports players.

3.2. Participants

This study collected data from 120 participants divided into 2 groups [60 national level (30 male and 30 female) and 60 state level (30 male and 30 female)]. Participants were selected from the Metropolitan city of Hyderabad. The disciplines included were Athletics, Basketball, Boxing, Hockey, Football, Swimming, Volleyball, Badminton, Lawn Tennis, Handball and Cricket and Throw ball on the basis of prior knowledge using a Non-Probability Purposive Sampling Method.

3.2.1. Inclusion Criteria

- Sports players within the age group of 17-22 years were included in this sample.
- Sports players with more than 1 year of training were included in this sample.

3.2.2. Exclusion Criteria

- Sports players from the rural areas were not included in this sample.
- Sports players who had less than 1 year of training were not included in this sample.

3.3. Instruments

The Self-Efficacy Questionnaire was designed by Schwarzer and Jerusalem (1995). It is a 10 item scale with 1-4 rating, where 1 is not true, 2 is hardly true, 3 is somewhat true and 4 is exactly true. The scores range from 10-40. This scale was designed to assess a universal sense of perceived *self-efficacy*. Its Reliability is 0.80. The higher the score, higher the Self-Efficacy and lesser the score, lesser is the self-efficacy in the individual.

The PVSIIIR (Hardiness Questionnaire) was designed by Maddi (2004). It is an 18 item questionnaire with a 0-3 rating Likert scale. 0 is 'not at all true', 1 is 'somewhat true', 2 is 'true', and 3 is 'very true'. It measures three attitudes of an individual, namely, *commitment*, *control* and *challenge*. The scores range from 0-54. Its internal consistency is 0.80. Cronbach's alpha is 0.73. The higher the score, higher is hardiness and lesser the score, lesser is the hardiness in the individual.

3.4. Procedure

The participants were made comfortable and rapport was established. Then the researcher read out to the participants the purpose of the study and their informed consent was taken. Written and verbal instructions were given to answer both the questionnaires and the participants were encouraged to seek clarification in case they had any doubts.

3.5. Statistics Used

The statistics used in the present study to analyse the collected data were mean, standard deviation, correlation and t-tests.

4. Results

SL. NO.	CHARACTERISTICS	N
1	Sports Players	
	• Swimming	19
	• Football	13
	• Hockey	03
	• Badminton	07
	• Boxing	12
	• Volleyball	07
	• Basketball	28
	• Cricket	07
	• Handball	09
	• Athletics	05
	• Throw ball	05
	• Lawn Tennis	

2	Age <ul style="list-style-type: none"> • 17 years • 18 years • 19 years • 20 years • 21 years • 22 years 	08 19 24 35 28 06
3	Gender <ul style="list-style-type: none"> • Boys • Girls 	60 60
4	Educational Qualifications <ul style="list-style-type: none"> • Inter • Pursuing Graduation • Graduates • Post-Graduates 	11 84 24 01
5	Annual Family Income <ul style="list-style-type: none"> • Below 1 lac • 1-2 lacs • 2-5 lacs • 5-10 lacs • Above 10 lacs 	19 14 23 38 26
6	Type of School <ul style="list-style-type: none"> • Government • Convent • Private 	21 14 85
7	Syllabus Studied <ul style="list-style-type: none"> • CBSE • ICSE • SSC 	43 50 27

Table 1: Demographic details of national level and state level sports players

Sample	VARIABLES									
	Self-Efficacy		Hardiness		Dimension of Commitment		Dimension of Control		Dimension of Challenge	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total Sample (N=120)	30.4417	6.0554	34.2250	6.9602	11.3167	3.2436	12.3333	3.1632	10.5750	2.3503
National level Sports Players (N=60)	34.6500	3.5882	35.1000	7.1726	11.7000	3.1639	12.5333	3.4022	10.8667	2.5343
State level Sports Players (N=60)	26.2333	5.0063	33.3500	6.6862	10.9333	3.3031	12.1333	2.9196	10.2833	2.1320
Male Sports Players (N=60)	30.3833	6.6181	34.3167	6.7985	11.4333	3.1374	12.4000	3.4504	10.4833	2.0126
Female Sports Players (N=60)	30.5000	5.4911	34.1333	7.1745	11.2000	3.3689	12.2667	2.8752	10.6667	2.6596

Table 2: Showing the mean and standard deviation of self-efficacy, hardiness and the three dimensions of hardiness (viz., dimension of commitment, dimension of control and dimension of challenge).

Sample	r	p
Total Sample (N=120)	0.044	0.630
National level Sports Players (N=60)	0.155	0.236
State level Sports Players (N=60)	-0.230	0.077
Male Sports Players (N=60)	0.137	0.298
Female Sports Players (N=60)	-0.060	0.650
National level Male Sports Players (N=30)	0.231	0.219
National level Female Sports Players (N=30)	0.083	0.663
State level Male Sports Players (N=30)	-0.040	0.835
State level Female Sports Players (N=30)	-0.453*	0.012

Table 3: Correlation (r) between self-efficacy and hardiness in national level and state level sports players
* $p < 0.05$

Table 3 shows that there is a significant negative correlation between *self-efficacy* and *hardiness* in female state level players ($p < 0.05$). The results also indicate that although there is some correlation between *self-efficacy* and *hardiness* in the other groups, none of them are significant ($p > 0.05$). Thus, hypothesis H9 is accepted and hypotheses H1-H8 are rejected.

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	p
Self-Efficacy	Level	2125.2083	1	2125.2083	111.703**	0.0000
	Gender	0.4083	1	0.4083	0.0215	0.8838
	Level x Gender	31.0083	1	31.0083	1.6298	0.2043
Hardiness	Level	91.8750	1	91.8750	1.8791	0.1731
	Gender	1.0083	1	1.0083	0.0206	0.8861
	Level x Gender	0.4083	1	0.4083	0.0084	0.9273
Commitment	Level	17.6333	1	17.6333	1.6594	0.2003
	Gender	1.6333	1	1.6333	0.1537	0.6957
	Level x Gender	0.0333	1	0.0333	0.0031	0.9554
Control	Level	4.8000	1	4.8000	0.4700	0.4944
	Gender	0.5333	1	0.5333	0.0522	0.8197
	Level x Gender	0.5333	1	0.5333	0.0522	0.8197
Challenge	Level	10.2083	1	10.2083	1.8396	0.1776
	Gender	1.0083	1	1.0083	0.1817	0.6707
	Level x Gender	2.4083	1	2.4083	0.4340	0.5113

Table 4: Results of Two-Way ANOVA with level and gender as the IVs and self-efficacy, hardiness, and the three dimensions of hardiness as the DVs
** $p < 0.01$

Table 4 reveals that there is a significant effect of *level* (viz., *national* and *state*) of the sports players on their *self-efficacy* ($p < 0.01$). As is evident from the mean scores in Table 2, the national level sports players ($M = 34.65$) were significantly higher than the state level sports players ($M = 26.2333$) with respect to *self-efficacy*. However, the present study reported no significant effect of *gender* of the sports players on *self-efficacy* ($p > 0.05$). Moreover, as is evident from Table 4, there were no significant effects of *level* and *gender* of the sports players on *hardiness*, *dimension of commitment*, *dimension of control* and *dimension of challenge*. Similarly, the findings revealed no significant interaction effects of *level* and *gender* of the sports players on *self-efficacy*, *hardiness*, *dimension of commitment*, *dimension of control* and *dimension of challenge*. Thus, hypothesis H10a is accepted and hypotheses H10b – H15e are rejected.

5. Discussion

The present study reported that there is a significant negative relationship between *self-efficacy* and *hardiness* in state level female sports players. Although there was some extent of correlation between *self-efficacy* and *hardiness* in the other groups, none of them were found to be significant. This may be because the sports players chosen for this study were not from a particular sport but spread over a number of different sports. This statement could be supported by a study done by Behzadi et al. (2012) wherein significant differences were found in the personality traits of athletes from individual sports and team sports.

The results of this study indicated that there is a significant effect of *level* (viz., *national* and *state*) of the sports players on their *self-efficacy*. In other words, the national level sports players had higher *self-efficacy* than the state level sports players. This is supported by previous research (Singh, Bharadwaj & Bharadwaj, 2009) which suggested that the national-level athletes were comparatively better than district-level athletes in sports. In addition, the findings of the present study revealed that the male and female sports players did not differ significantly with respect to *self-efficacy*. This is also supported by Singh et al.'s (2009) study which reported no gender differences in the levels of self-efficacy in national-level and district-level athletes.

Furthermore, the results indicated that irrespective of whether the sports players belonged to the national or state level, there was no significant difference in their levels of *hardiness* or in the three dimensions of *hardiness* (viz., *dimension of commitment*, *dimension of control* and *dimension of challenge*). This reiterates the findings of a study by Golby & Sheard (2004), and may be because the training that the players receive at both the levels (viz., *national* and *state*) and their performance makes them hardy individuals.

Additionally, this study reported that the male and female sports players did not differ significantly with respect to *hardiness* and the three dimensions of *hardiness* (viz., *dimension of commitment*, *dimension of control* and *dimension of challenge*). This is partly supported by Skirka's (2000) research on athletes and non-athletes which indicated no gender differences in hardiness, sense of coherence and sports participation.

Over the past few years, there has been an increasing focus on the positive experiences of sports players. This Study has focused on two positive aspects of pursuing sports, i.e., self-efficacy and hardiness. This study has shown that both male and female sports players experience above average levels of self-efficacy and hardiness. As self-efficacy is one's belief in one's ability to succeed in specific situations (Bandura, 1994), studies as the present one can help colleges and schools to encourage students to actively participate in sports since their level of self-efficacy can play a dominant role in how an adolescent can approach goals, tasks and challenges. It is also said that self-efficacy is developed from external experiences and self-perception, definitely participation in sports will be influential in determining the life-changing decisions made in adolescence. This is further reaffirmed in a study conducted by Weinber et al. (1980) that students with a high level of self-efficacy persevere for a longer period of time in tasks compared to those having low levels of self-efficacy.

Future studies can be conducted on a wider sample that encompasses all the different sports. A comparative study could also be considered between single and team sports and urban and rural. Overall the results suggest that self-efficacy and hardiness are important factors for sports players to reach higher goals. In addition, if competitive spirit is properly encouraged and channelled our sports players could bring some more laurels to the nation.

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