Burnout among Athletes : Role of Mental Toughness

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ABSTRACT

Present paper intends to examine the relationship between mental toughness and burnout among athletes, especially from Weightlifting, Hockey, Wushu and Cycling. Athletes are well aware of the importance of proper training if they want to make progress. Sometimes, this training becomes stressful due to its high intensity and monotony. As a result, athletes' mental toughness (their mental strengths and weaknesses) help them a lot to keep up their hard-work. The paper presents a description of the factors that facilitates or impedes athletes' mental toughness and its relationship with athletes' current stress level. Total 50 participants (24 males and 26 females), of age range 16-24 years, were randomly selected for this study and Athlete Burnout Questionnaire (ABQ) and Psychological Performance Inventory scales were administered to assess their burnout and mental toughness. Findings suggest that male and female athletes significantly differ in burnout, and there is a significant relationship between their mental toughness and burnout level. Findings are discussed in detail in the paper.

KEYWORDS *: Athlete, Mental toughness, Stress, Psychological Performance, Burnout.*

INTRODUCTION

Sports is forms of competitive physical activity which, through casual or organized participation, aim to use, maintain or improve physical ability and skills, while providing entertainment to participants and in some instances, spectators. Sports are usually governed by a set of rules or customs, which serve to ensure fair competition, and allow consistent adjudication of the winner. Sport comes from the old French, desport meaning leisure, with the oldest definition in English, from around 1300 A.D., being "anything humans find amusing or entertaining" (Harper, Douglas, 2008). Sport is not only physically challenging but it can also be mentally challenging. Criticism from coaches and other teammates as well as pressure to win can create an excessive amount of anxiety or stress for young athletes.

Stress can be physical, mental or emotional and may leads to burnout which refers to dropping/ quitting of an activity that was at one time enjoyable.

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Burn out is the physical or emotional exhaustion that results from long term stress and frustration. Chronic fatigue is a major symptom of burn out. In 1997, Raedeke defined burnout as, "a syndrome of physical/ emotional exhaustion, sports devaluation, and reduced athletic accomplishment." Raedeke & Smith (2001) also found that for athletes, depersonalization takes the form of devaluation of the activity, where they stop caring about their sport and what is important to them within it. Dale & Weinberg (1989) identified five common features of burnout like, exhaustion, negative change in response to others, attitudes towards performance accomplishment, results of chronic stress and occurs at the individual level. After developing burnout symptoms, the activity athletes once loved has become something they now dislike and from which they wish to be distanced. Distancing behavior include absence from training or competition, lateness to or early departure from sessions, as well as a distancing and social disengagement from others in the sport environment such as peers and teammates etc. In sport,burnout differs from simply dropping out because it involves psychological and emotional exhaustion, negative responses to others, low self-esteem and depression.

According to Weinberg & Gould (2003), there are many reasons why athletes drop out of sport participation and burnout is just one of them, because sometimes, despite feeling burnout, athletes often remain in their sport for such reasons as financial rewards and parental or coach pressure and expectations. Flippin (1981), says that burnout applies generally to an athlete who quits, breaks down or loses competitive drive before he/she has reached full athletic development. Causes of athletes' burnout may be to serve practice conditions, extreme physical fatigue, insufficient time to recover from competitive stress, inability to cope and frustration with trying to satisfy everyone. Athletes more susceptible to burnout are empathetic, sensitive, humane, dedicated, idealistic, anxious and over enthusiastic. They are people oriented and tend to lease their own self-esteem too exclusively on attainment of their career goals, which may be unrealistic.

The psychological symptoms of burnout include a loss of interest, lack of desire to play, lack of caring, depression, increased mood disturbances, increased perception of physical, mental and emotional exhaustion, decreased self-esteem, increased anxiety and negative evaluation and reaction to chronic everyday stress. In 2004, Black & Smith investigated athletic identity, perceived control and burnout in adolescent swimmers, and they reported that perceived stress was the dominating predictor of athletes' burnout. Gould et al (1996-97) revealed that an interaction of personal and situational factors causes burnout. A review of literature reveals that many studies have been conducted examining burnout among athletes. Burnout has been positively associated with variables like, amotivation, anxiety, training stress, under recovery and failure

adaptation, mood disturbance and staleness (e.g., Gould et al, 1996, 1997; Vealey et al, 1998; Harlick & McKenzie, 2000; Raglin et al, 2000; Kenttaet al, 2001; Tenebaum et al, 2003). Motivation, enjoyment, coping and social support are all negatively associated with burnout (e.g. Gould et al, 1996, 1997; Raedeke, 1997; Udry et al, 1997; Harlick & McKenzie, 2000, Raedeke & Smith, 2001). Physical strength is one thing, but the majority of athletes are limited by their minds.

Mental toughness is having the natural or psychological edge that enables athletes to cope with the many demands that they face during sport, training, work or regular family life. Fourie & Potgieter (2001) defined mental toughness as evidence of an athlete's strength of personality, showing emotional and psychological well-being, assumption of responsibility and autonomy, while Clough, Earle, and Sewell (2002) stated mentally tough performers remain relatively unaffected by competition or adversity given their high self-belief and unshakeable faith that they control their own destiny. Gould et al (2002) described mental toughness in terms of resilience, perseverance, and dealing successfully with adversity. Thelwell, Weston, and Greenlees (2005) described mental toughness in terms of having a presence that affects opponents, reacting to situations positively, and being calm under, and even enjoying, pressure.

Research has identified 'mental toughness' as a crucial attribute to success in competitive sport and the development of champion sport performers (e.g., Durand-Bush & Salmela, 2002; Gould, Dieffenbach & Moffett, 2002). It is a synonym for determination or resilience (Moran, 2004). Although, the Psychological Performance Inventory is a promising tool for use in the assessment and potential development of mental toughness and continues to be used in research (e.g., Golby, Sheard, & Lavallee, 2003; Golby & Sheard, 2004, 2006; Sheard & Golby, 2006). There is still ambiguity in how mental toughness can be measured. In trying to define mental toughness and to link it to high performance, Loehr (1986) interviewed hundreds of athletes who gave surprisingly similar accounts of their experiences that led to peak performance. The inventory was developed to assess athletes' mental strengths and weaknesses and to improve their awareness and understanding of mental skills. Personality characteristics, such as a high resolution, refusal to be intimidated, staying focused, retaining optimum arousal, eagerness to compete, unyielding attitude when being beaten, and inflexible insistence on finishing a contest rather than conceding defeat, emerged from the interviews.

Seven subscales of mental toughness were identified: self-confidence, negative energy control, attention control, visualization and imagery control, motivation, positive energy, and attitude control. Sports (Individual/ team) requires the availability and integration of various components of the athletic achievement (physical, technical, tactical and psychological, etc.). Without this integration, the athlete cannot reach the top achievement. However, many

trainers, focus almost exclusively on the first two components of the athletic achievement mentioned above. Consequently, the athletes still lack in psychological preparation. Hegazie (1993), Rushdi (1999) have attributed the low-level of Egyptian weightlifters in recent decades to focus on developing the physical components and a lack of enough knowledge about the psychological factors and its importance. So, it had been found that there is a need to highlight the importance of mental toughness to athletes. The present study is trying to examine the relationship among the dimensions of mental toughness and athletes' burnout level. In this study, athletes were selected from four different sports (individual and team sports) and were playing on different level (junior or youth level).

Keeping in view of the above brief conceptualization and review of literature, the following objectives of the study are proposed:

1. To examine the relationship between athletes' mental toughness and burnout symptoms.
2. To examine the gender differences in athletes' mental toughness.

Hypotheses

The reviewed literature suggests the following hypotheses for our study:

(H1). Different domains of mental toughness would be significantly correlated with burnout.

(H2). There would be significant gender differences in athletes' burnout level.

(H3). There would be significant gender differences in athletes' mental toughness.

(H4). There would be significant differences in mental toughness across different sports.

METHODOLOGY

Participants

The participants were 50 athletes, 24 male and 26 female, ranging in age from 16 to 24 years. Participants were randomly selected from National Institute of Sports, Patiala, which represents a wide variety of sports. Sports represented were junior/youth level athletes of Weightlifting (n=6), Cycling (n=6), Wushu (n=26) and Hockey (n=12). These performers were competing in international, national, school/ colleges and regional events, at the time of this study.

Measures

1. Psychological Performance Inventory

The 42-item inventory (Loehr, 1986) yields an overall mental toughness score, as well as scores for the seven 6-item subscales of self-confidence, negative energy control, attention control, visualization and imagery control, motivation, positive energy, and attitude control. Possible subscale scores range from a low score of 6 to desirable high of 30 and total scores from 42 to 210. Scores were recorded on a 5-point Likert scale anchored by 'almost always' and 'almost never' (scored either 1 or 5, dependent on whether the item was positively or negatively worded).

2. Athlete Burnout Questionnaire (ABQ)

Raedeke and Smith (2001) have revised Maslach and Jackson's (1984) scale and developed a specific tool for assessing athletes' burnout. The ABQ consist of 15 items, assesses athletes' burnout symptoms; like, emotional

exhaustion, performance accomplishment and sport devaluation. It's a 5 point Likert scale, ranging from 0 to 4 where, 0= "Not at all" and 4= "Very often". Participants' score will explain their current burnout level.

Procedure

Informed consent and ethical procedures were discussed with athletes and their coaches. After establishing rapport and providing proper instructions, above mentioned scales were administered. Participants' were allowed to take sufficient time to complete the questionnaires. After data collection, relevant analysis was performed to test the proposed hypotheses. The analysis includes the use of descriptive, correlation co-efficient, t- test and ANOVA with the help of SPSS (V. 20) software.

RESULT & DISCUSSION

In order to determine the relationship among level of burnout and different dimensions of mental toughness, coefficient of correlation computed and shown in following Tables:

Table -1: Descriptive Statistics

Variables	N	Mean	Standard deviation
1. Burnout	50	19.22	12.35
2. Self-confidence*	50	18.98	5.207
3. Negative energy*	50	21.44	8.661
4. Attention control*	50	18.48	3.699
5. Visual and imagery control*	50	11.62	4.814
6. Motivational level*	50	12.96	3.708
7. Positive energy*	50	11.88	4.043
8. Attitude control*	50	13.48	4.576

* Domains of Mental Toughness

Table -2: Correlation-coefficient of Mental Toughness & Burnout

	Domains of Mental toughness						
Burnout	Self-confidence	Negative energy	Attention control	Visual and imagery control	Motivational level	Positive energy	Attitude control
Pearson Correlation	-.264	-.615**	-.314*	.404**	.303*	.398**	.558**
Sig. (2-tailed)	.064	.000	.026	.004	.032	.004	.000
N	50	50	50	50	50	50	50

* Correlation is significant at .05 level

** Correlation is significant at .01 level

Table 2 shows correlation between different domains of mental toughness and burnout. Result of correlational analysis in Table 2 support the hypothesis 1, as it indicated that different domains of mental toughness are significantly correlated with burnout. Self-confidence is negatively correlated with burnout with (r = -.264) though it is not significant; but, it shows trend of population. There is significant negative correlation between negative energy, attentional control and burnout (r = -.615 and -.314 respectively). Visual and imagery control, motivational level, positive energy and attitude control are significantly and positively correlated with burnout (r = .404, .303, .398 and .558, respectively).

Table -3: Descriptive & T-test Statistics of Different Variables

Variables	Gender	N	Mean	Std. Deviation	t- Value
Burnout	Male	24	12.79	10.32	4.05**
	Female	26	25.15	11.17	
Self-confidence	Male	24	21.20	5.34	3.16**
	Female	26	16.92	4.21	
Negative energy	Male	24	27.04	8.95	5.58**
	Female	26	16.26	3.91	
Attentional control	Male	24	19.62	3.76	2.182*
	Female	26	17.42	3.37	
Visual and imagery control	Male	24	10.00	2.84	2.394*
	Female	26	13.11	5.75	
Motivational control	Male	24	11.50	2.02	2.864*
	Female	26	14.30	4.38	
Positive energy	Male	24	10.58	2.18	2.269*
	Female	26	13.07	4.95	
Attitude control	Male	24	11.50	2.50	3.205**
	Female	26	15.30	5.29	

*Correlation is significant at .05 level ** Correlation is significant at .01 level

Table 3 shows result of independent t-test which carried out to find out gender differences among burnout and different domains of psychological performance. It shows that male and female athletes differ significantly from each other on burnout and all dimensions of psychological performance. Female athletes are experiencing more burnout symptoms as compared to male athletes. Male athletes are showing better self-confidence and attentional control than female athletes as well as high level of negative energy as compared to female athletes. Female athletes are performing better than male athletes on visual and imagery control, motivational control, positive energy and attitude control.

Table -4: Descriptive Statistics (game-wise)

Domains of Mental Toughness	Sports	N	Mean	SD
Self Confidence	Weightlifting	6	22.50	4.97
Cycling	6	14.67	2.42	
Wushu	26	20.88	5.22	
Hockey	12	15.25	2.05	
Negative energy	Weightlifting	6	15.33	3.61
Cycling	6	16.00	4.47	
Wushu	26	26.61	8.51	
Hockey	12	16.00	4.73	
Attentional Control	Weightlifting	6	16.50	3.45
Cycling	6	17.17	5.38	
Wushu	26	19.31	3.69	
Hockey	12	18.33	2.60	
Visual and Imagery Control	Weightlifting	6	22.17	2.71
Cycling	6	12.00	3.09	
Wushu	26	9.61	2.61	
Hockey	12	10.50	2.91	
Motivational Control	Weightlifting	6	21.50	2.17
Cycling	6	9.83	2.32	
Wushu	26	12.00	1.79	
Hockey	12	12.33	1.30	
Positive Energy	Weightlifting	6	21.33	1.86
Cycling	6	10.00	.89	
Wushu	26	10.96	2.34	
Hockey	12	10.08	1.50	
Attitude Control	Weightlifting	6	23.00	3.34
Cycling	6	11.67	2.33	
Wushu	26	11.27	2.53	
Hockey	12	14.42	2.71	

Table -5: Result of One way ANOVA

Variable	Source of Variance	Sum of Squares	df	Mean square	F	Sig.
Self confidence	Between group	447.243	3	149.081	7.778	.000
	Within group	881.737	46	19.168		
Negative energy	Between group	1452.833	3	484.278	10.019	.000
	Within group	2223.487	46	48.337		
Attention	Between group	51.942	3	17.314	1.288	.290
	Within group	618.538	46	13.446		
Visual Imagery	Between group	787.793	3	262.598	34.712	.000
	Within group	347.987	46	7.565		
Motivation	Between group	524.920	3	174.973	54.019	.000
	Within group	149.000	46	3.239		
Positive energy	Between group	618.068	3	206.023	51.727	.000
	Within group	183.21_	46	3.983		
Attitude	Between group	701.115	3	233.705	33.041	.000
	Within group	325.365	46	7.073		

Result of uni-variate ANOVA shows that athletes of different sports differ significantly on various dimensions of mental toughness except for attentional control dimension.

Present study was aimed to find out the relationship between mental toughness and burnout among athletes. Thus, we examined the different domains of mental toughness and burnout level of 50 athletes, especially from team of Weightlifting, Hockey, Wushu and Cycling. Connaughton et al (2008) indicated that the development and maintenance of mental toughness associated with many factors (e.g., competitiveness, successes, international competitive experience). Consequently, self-confidence, competitive desire, resiliency and focus are psychological aspects that can be gained through the repeated and continued involvement in competitions (e.g., local / country, Regional, African, Arab, Mediterranean Sea, and World) which are held annually or periodically. According to the result, different domains of mental toughness are significant negative correlation between negative energy, attentional control and burnout (r = -.615 and -.314, respectively).

Visual and imagery control, motivational level, positive energy and attitude control are significantly and positively correlated with burnout (r = .404, .303, .398 and .558, respectively). While investigating the relationship between mental toughness and coping, Nicholls et al (2008) found significant correlations between self-reported mental toughness (using the MTQ48) and the use of strategies which included thought control, relaxation and mental imagery. With regard to perceived stress,

Kaiseler et al (2009) found that mental toughness was negatively correlated with the intensity of a self-selected (sport-specific) stressor.

Moreover, several authors reported that the MTQ was positively associated with problem-oriented coping, while negative relationships existed with avoidance coping strategies (Crust & Azadi, 2010; Kaiseler et al, 2009; Nicholls et al, 2008). In 1991, Weiss, barber, Sisley and Ebbeck have reported that pressure to have a successful programme and win may cause coaches to perceive the situation as stressful and thus influence the development of burnout. According to Sheard (2010), "A hardened, disciplined mindset differentiates between the good and the great, especially at the highest level of competition. Gould et al (2002) found that various performance enhancement skills and characteristics (e.g., mental toughness, confidence and ability to focus)associated with Olympic champions.

These results suggest that more support and appropriate development of mental toughness could enhance the athletes' ability to have made the shift to great. This study indicates that male and female athletes are showing differences in theirmental toughness domains and burnout level, female athletes are reporting more burnout symptoms than male athletes, whereas male athletes are reporting themselves more confident and attentive, in comparison to female athletes. Female athletes are more motivated, having good attitude and visual-imagery control, and with full of positive energy than male athletes, this shows hypothesis no. 2 and 3 are also accepted. The present results support the findings of Lee and Cremades (2004), Cremades and Wiggins (2008), and Harris and Smith (2009) in terms of higher levels of burnout in female athletes. Our findings were parallel to the survey of the Finnish Institute of Occupational Health (1997) among working-age population on the incidence of and seriousness of burnout cases. In this survey, 5000 Respondents aged between 24 and 65 and working in different jobs and industries. The survey discovered that the totals number of burnout cases among women was slightly higher than among men on the sum of the three symptoms of burnout with special emphasis on exhaustion. Any difference between men and women was connected with work-related exhaustion; 21% of the women and 17% of the men said they were suffering from it. Kalimo and Hakanen (1998) discovered that both sexes differ significantly in the ways they cope with stress. According to them, women do take sick leave more often than men and were clearly more active in seeking outside help for their problems, while men thought more and more of retiring as their burnout gets worse. All in all, women have a wider range of relationships than men and they also use these networks to build up their strength. Research has also shown that family life with all its duties and responsibilities is not only a burden but are warding resource that strengthens one's emotional

well-being, human contacts and inter personal skills.

According to the result, there are differences in mental toughness across different sports. F ratio shows, except domain attention control (0.290), there are significant differences in the domains of mental toughness, across all four sports (Weightlifting, Hockey, Wushu and Cycling).Multiple comparisons were carried out for observation of group differences (sport wise) with the help of post hoc analysis. Result shows, for domain of self-confidence, there are significantdifferences across different sports, like Weightlifting & Cycling (.003), Weightlifting & Hockey(.002), Wushu & Cycling (.003) and Wushu & Hockey (.001). For domain two (negative energy), there are significant differences between groups, Weightlifting & Wushu (.001), Cycling & Wushu (.002) and Wushu & Hockey (.000). For domain 4, 5 & 6 (visual and imagery control and motivation level, positive energy), differences were found between Weightlifting & Cycling(.000), Weightlifting & Wushu (.000) and Weightlifting & Hockey (.000). For domain 7 (attitude control), differences were found between Weightlifting & Cycling (.000),Weightlifting & Wushu (.000) and Weightlifting & Hockey (.000), Cycling & Hockey (.004),Wushu & Hockey (.001). According to Clough et al. (2002), mentally tough individuals tend to be sociable and outgoing; as they are able to remain calm and relaxed, they are competitive in many situations and have lower anxiety levels than others. With a high sense of self-belief and an unshakeable faith that they can control their own destiny, these individuals can remain relatively unaffected by competition or adversity.

Implications and future research

Further verification of the causes of burnout and appropriate mental skills for coping with stress are required. Moreover, longitudinal research is needed in working towards the proof of causal evidence. In addition, more studies on sport perspective are needed, in which mental toughness is considered as a health resource, like a bio-psychological approach seems helpful to find out whether mental toughness affects the physiological reactivity during laboratory or real life stressor tasks or is it helpful in recovery or post- competition phase or not. Appropriate sample size is also required so that we can generalize the findings.

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