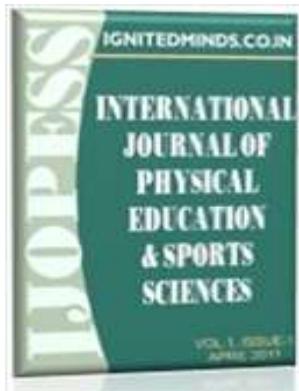


Psychological and Physiological Profile of an Elite Woman Weightlifter-Geeta Rani



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ABSTRACT

Today's fiercely competitive and highly commercialized sporting arena, physical powers is no more the only deciding factor to influence sports outcome. Those who reach the top have some unique physical abilities, psychological and physiological parameters. This study was undertaken to explore the psychological and physiological profile of an elite woman weightlifter- Geeta Rani. Data/Information for the present investigation was derived from the investigator herself. To investigate her psychological profile, participation inventory, Athletic coping style inventory (ACSI), Task and ego orientation in sport questionnaire (TEOSQ) and mental toughness questionnaire (E.LOEHR) were administered. To investigate her physiological profiles Vital capacity, Resting heart rate, Positive breath holding capacity, Negative breath holding capacity, Body composition and Peak flow rate were measured. It has emerged that she is not only a fitness freak, but also possess unique qualities. It has come out that she is a mentally tough. The findings of this investigation will be helpful in developing a broad framework of the appropriate psychological and physiological characteristics and the specific attributes so as to identify and groom talented and skilled weightlifters.

Keywords: Psychological and Physiological Profile, Mental Toughness, Coping Skill Participation Motivation, Goal Orientation, Body Composition, Vital Capacity.

INTRODUCTION

Due to the intense development of medicine and technology, the athletes have become capable of reaching higher levels of performance. Athletes having the same performance on training are decided to win the competitions based on who is capable of mobilizing more psychic energy during the performance. While previously it was the physical condition that had the primary importance, today – and in the future – psychic preparations will have the leading role. Many times it is hundredth of a second or tenth points depend on how the athletes are prepared mentally, and how they can cover the obstacles of the competition. A new field of studies thus has emerged, to provide the athletes with proper mental training. Sport psychology studies the effect Nagykáldi, 1998 Nagykáldi, 1998 of the psychic functions constituting the whole personality and its effect on the performance. Its basic aim is thus to increase performance with the instruments of psychology (Nagykáldi, 1998). The study of functional state of human organism is also important to optimizing human performance. This argument can be supported by the fact that the efficiency of activity of performance is closely related to the psychological and physiological functional state. Geeta Rani (born 16 September 1981) is an Indian Weightlifter. She won the gold medal in the Women's +75 kg category at the 2006 Commonwealth Games. She won three silver medals in the Asian Championship in 2004 and a bronze medal in the 2003 Afro-Asian Games held in Hyderabad. In 2010 Commonwealth Games, she ranked 4th in the Women's +75 kg categories. In 2006, she received the Arjunas

Award. So the objective of undertaking this research is that the athlete of various levels starting from the grass root (district, state, national etc) can compare their psychological and physiological abilities and capacities with that of the elite and international athlete who have already set their standards. During the last few decades weightlifting, as an object of scientific research, has attracted more scholars from various fields of knowledge than ever before. Weight lifting as sports which is highly demanding and toiling. Psychological and physiological functional state is developed to provide criteria which can be judged by the leading goal and hierarchy motives. For this study Geeta Rani (arjun awardy) elite women weight lifter was selected who was in the Indian camp at Bangalore and Shimla preparing for common wealth games 2010 to be held at Delhi. This study will render a remarkable contribution in the field of weightlifting by finding out the physiological and psychological variables of elite female Indian weightlifters. Furthermore it will be a matter of curiosity to find the physiological and psychological traits determining successful weightlifter. Since there is still a controversy exists among the coaches and physical educators regarding the selection and training of weightlifter in India. The effect of physiological and psychological variables is known but clear cut information is still not available which has motivated the investigator to undertake the present study.

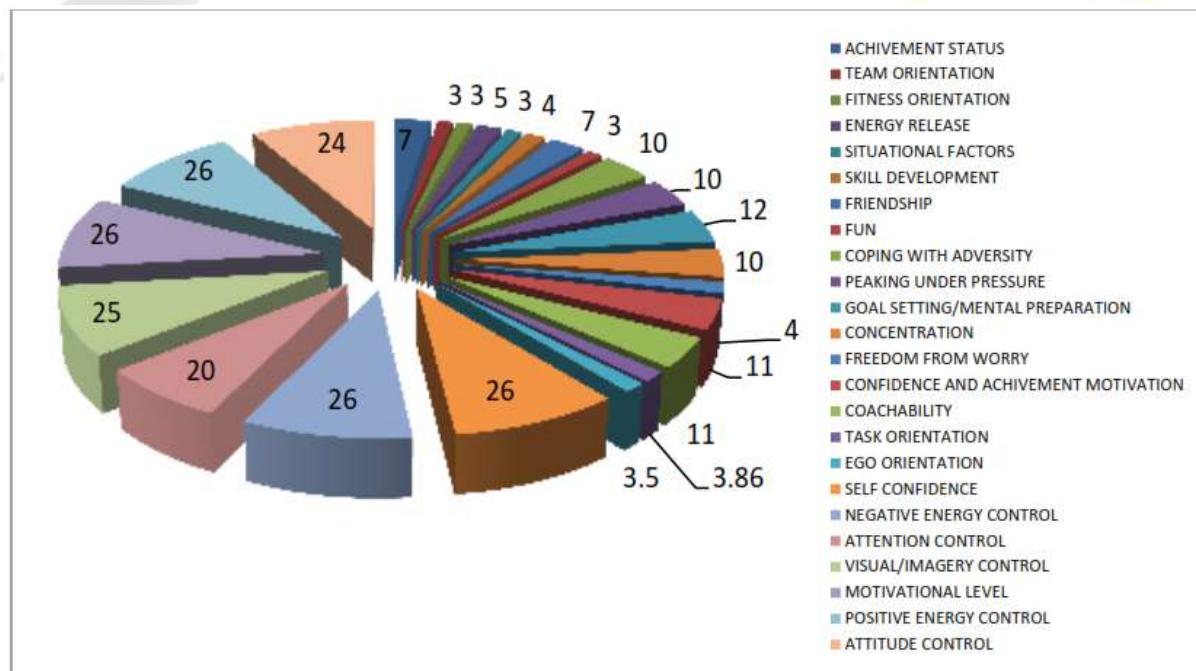
MATERIAL AND METHODS

For this study an elite women weight lifter Geeta Rani selected who was in the Indian camp at Bangalore and Shimla in 2010. The collection of relevant data was based on administering four test batteries in psychology and six test batteries in physiology i.e. Participation motivation inventory (PMQ) by gill, d.l., gross, j.b., and huddleston, s. (1983), 2. Athletic coping style inventory (ACSI) by smith, schutz, smoll, & ptacek, (1995), 3. Task and ego orientation in sport questionnaire (TEOSQ) by duda, j.l., chi, l., newton, m.l., walling m.d. & catley, d (1995).4. Mental toughness questionnaire (E.LOEHR, 1982): Vital capacity measured with the help of dry spirometer and recorded in liters, Positive breath holding capacity measured with the help of stop watch and recorded in seconds, Negative breath holding capacity measured with the help of stop watch and recorded in seconds, Resting heart rate measured with the help of stop watch and recorded as beats per minute, Body composition measured with the help of skin fold caliper and recorded in millimetres and Peak flow rate was measured with the help of peak flow meter and recorded in litres/min. in order to study the psychological and physiological profile of elite women weightlifters.

RESULTS AND DISCUSSION

The data collected by above procedure were statistically analysed.

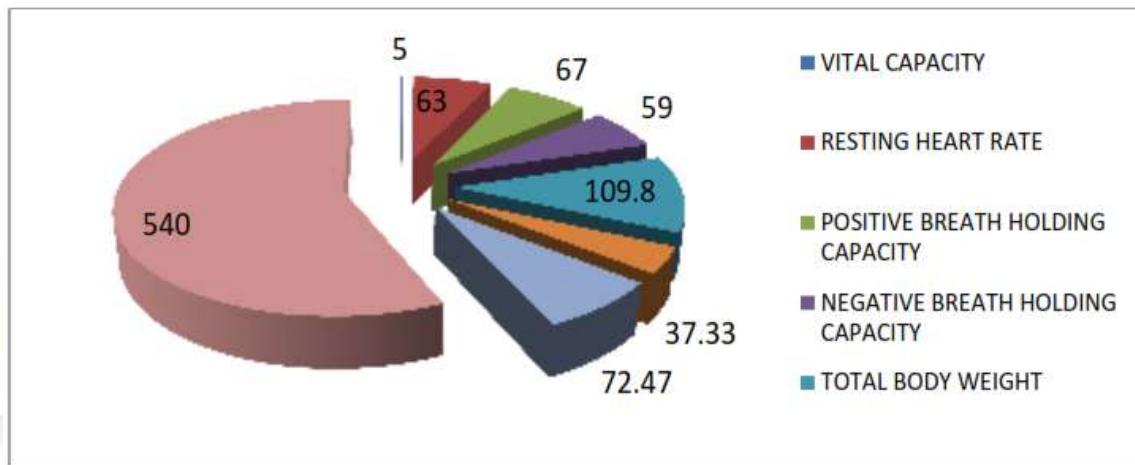
PSYCHOLOGICAL PROFILES



Graphical representation-1

Graphical representation of psychological parameters of Geeta Rani of +75 kg weight category shows that the obtained scores in participation motive, of achievement status is 7, team orientation 3, fitness orientation 3, energy release 5, situational factors is 3, skill development 4, friendship is 7, fun is 3, respectively. The obtained scores in coping skills of coping with adversity is 10, peaking under pressure 10, goal setting/mental preparation 12, concentration 10, freedom from worry 4, confidence and achievement motivation 11, and coach ability 11 respectively. The obtained scores in goal orientation of task orientation are 3.86 and ego orientation is 3.5. The obtained scores in mental toughness of self-confidence is 26, negative energy control is 26, attention control is 20, visual imagery control 25, motivational level is 26, positive energy control is 26, attitude control is 24.

PHYSIOLOGICAL PROFILES



Graphical representation-2

Graphical representation of physiological parameter of Geeta Rani of +75 kg weight category shows that she is having vital capacity of 5 litres, resting heart rate of 61 beats per minute, positive breath holding capacity is 67 sec negative breath holding capacity is 59, total body weight is 109.8, fat weight is 37.33, lean body mass is 72.47, and peak flow rate is 540 ml.

DISCUSSION

There are numerous factors, which are responsible for the performance of weightlifter. In light of the conclusions drawn, the following recommendations have been drawn here with; In Participation motivation Geeta Rani was fairly high in systems of excellence, power, and independence and average in sensation, prestige, aggression and affiliation she was slightly higher on athletic coping skill. She was fairly high in goal orientation in parameters of Mental toughness she would have high on self-confidence, attention control, visual imagery control, motivational level, positive energy control and attitude control and would be fairly low in negative energy control, She would have high level of vital capacity, She would score low in resting heart rate, The elite women weightlifter would have high level of positive breath holding capacity. She would have high level of negative breath holding capacity, low level of lean body mass and score little high in fat weight. She would have average level of peak flow rate.

RECOMMENDATIONS

The present study was a study of its own kind because such an attempt of profiling of the elite women weightlifter, psychologically and physiologically had hardly been made in India. Therefore, the findings of the study will certainly help the weightlifting coaches, trainers, and even selectors to acquire an insight into the psychological and physiological make up and functioning of weightlifting player.

On the basis of investigators self-experience and finding of the study, some recommendations were made as follows:

1. Such type of survey should be conducted throughout the country by psychologists and they should assist the players in improvement of internal motivation factors

2. Similar study can be conducted on more number of athletes for both individual and team sports
3. The same study can be conducted on athletes of various levels of performance and competitions.
4. The selected psychological and physiological profile may be used as predictors for better performance for weightlifters.
5. A more comprehensive study may be conducted by taking a large sample.

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