



INVESTIGATING GRIT AMONG PARA SPORTSPERSONS IN RELATION TO SELF- REGULATION AND MOTIVATION FACTORS

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ABSTRACT

Grit in psychology is referred to as a positive, non-cognitive trait based on an individual's passion for a particular long-term goal or end state, coupled with a powerful motivation to achieve their respective objective. Duckworth et al. (2007), define grit as perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress. Based on the evidence supporting grit, it would not be incorrect to assume that not only is grit required to succeed in fields like academics but it is a trait that would be equally relevant in the lives of those who have not given up even in the face of disability. The contribution of grit becomes all the more evident when people with physical disabilities defying their relative incapacities, decide to enter the competitive world of sports. Hence, the field of sports that caters to people with physical disabilities is known as "para sports". However, in order to maintain zeal towards a long-term goal, consistent self-regulation and motivation are perhaps some of the key elements. Self-regulation is the ability to organise and monitor one's own behaviour. Motivation can be defined as the driving force that causes people to take-action, think and behave in accordance with their goals (Hidi&Harackiewicz, 2000). Therefore, the present study is an attempt to explore the interplay among grit, self-regulation and motivation among para sportspersons. For this purpose, a sample of 50 male para sportspersons in the age range of 18-30 years, who have participated in the sport of athletics or swimming at national level, was selected. The findings and implications of the study will be discussed.

Keywords: Grit, motivation, para sportspersons, self-regulation

1. INTRODUCTION:

The trauma of losing one's limbs or having been born with absent limbs, is bound to put anybody in a state of despair. However, a few courageous ones, despite their circumstances, are willing to accept the challenge of leading an exceptional life even along with their disability. These are the rare individuals who are able to challenge their disability and draw motivation from such desperate times to explore their unlimited potential. Individuals with disabilities have been proving their might across all fields but their participation in the realm of



sports appears most distinct as it lets them not only break the stereotypes and standards set by the society but also transcend their relative physical incapacities. Sports have always been used as a means to show physical strength, agility and endurance and as a means of showing bodily perfection; physical disability, on the other hand, is usually believed to emerge from bodily imperfection. However, para sportspersons choose to challenge these limited beliefs that are routinely associated with sports and sportspersons. The participation of people with disabilities in sports reaffirms faith in human potentialities and also helps others cope with their disability as well.

The field of competitive sports that is meant for people with disabilities is known as para sports. Para sports often run parallel to typical sport activities. However, they allow modifications necessary for people with disabilities to participate and many sports use a classification system that puts athletes with physical challenges on an even playing field with each other. For instance, athletes with hemiplegia competing in track events are usually classified in T37 category. The T is for track (F is for field events), the 3 represents a cerebral palsy classification and the 7 specifies an athlete with weakness/spasticity on one side of the body. The use of a detailed classification system based on type of disability allows for a fairer competition. The International Paralympic Committee (IPC) was established in 1989. Its vision was to enable Paralympic athletes to achieve sporting excellence and inspire and excite the world. Since 1992, it has become the sole coordinating body for Paralympic sport, recognised by the International Olympic Committee. Today, the Paralympics are elite sporting events for athletes with disabilities that emphasise the participants' athletic achievements rather than their disability [1]. Notable Indian Paralympians include Deepa Malik, Devendra Jhanjaria and Mariyappan Thangavelu, to name a few. The field of para sports acts as a great platform for people with disabilities to showcase their talent and agility.

Not only do the physically disabled have to face insurmountable challenges and overcome them in their daily lives but their desire to prove themselves is expected to intensify when they choose to pursue the challenging area of sports. Considering the challenges that para athletes have to face on the playing field as well as in their daily lives, the contribution of certain psychological variables cannot be ignored. Therefore, the present study, on the basis of existing research and observation in this area, assumes that the probable variables that could be behind the determined effort of para sportspersons are grit, self-regulation and motivation. Grit in psychology is referred to as a positive, non-cognitive trait based on an individual's passion for a particular long-term goal or end state, coupled with a powerful motivation to achieve their respective objectives. Duckworth et al. (2007), defined grit as perseverance and passion for long-term goals [2]. According to them, grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress. The gritty individual approaches achievement as a marathon; his or her advantage is stamina. While disappointment or boredom signals to others that it is time to change trajectory and cut losses, the gritty individual stays the course. Grit consists of two connected constructs: perseverance in the face of difficulty and a passionate, enduring commitment to particular goals [3]. There are hardly any studies available that have examined the role of grit in the lives of para sportspersons. However, it has been demonstrated that resilience



has a significant positive correlation with sport achievement and psychological well-being [4]. Various authors have commented on the positive effects of participating in competitive sports on people with physical disabilities, because enhancing athletic identity is a manner to improve self-esteem and quality of life [5,6]. Since grit is termed as the tenacious pursuit of a dominant superordinate goal despite setbacks, it is expected to show a great impact on the lives of people with disabilities, who have chosen to pursue sports.

As is evident from the discussion above, grit is essential in sustaining interest in efforts toward long-term goals but in order to maintain one's zeal, a consistent self-discipline is necessary and this consistent self-discipline is often conferred by self-regulation. Self-regulation has been considered to be one of the six core strengths that are essential for healthy emotional development. Effective self-regulators proactively direct their strategies to achieve self-set goals [7]. Self-regulation reflects one's capacity to plan, control, evaluate, and adapt internal states in order to attain desired goals in changing and demanding environments [8]. A variable that is closely related to self-regulation is self-control and studies have suggested that people who are able to exert self-control over a particular behaviour or action are more likely to be successful in executing that action [9]. Therefore, it would be interesting to find out the role that self-regulation plays in the lives of para sportspersons, since indulging in a physically demanding activity in the context of sports while possessing physical disabilities does require one to act in a regulated manner.

Besides a self-regulated effort, motivation has also been termed as the key to success. Perhaps, it is the motivation that comes from within para sportspersons that makes this extraordinary group of individuals overcome their trials and tribulations and excel at sports. Without motivation, the passion to persist through the struggles of long-term goals probably would not exist. In the context of para sportspersons, the struggles are not merely confined to the playing field but are also equally prevalent in their routine lives. "Motivation" is a driving force that causes people to take action, think and behave [10]. Several conceptual perspectives have been proposed to better understand athletes' motivation [11]. One perspective that has been found to be useful in this area posits that behaviour can be intrinsically motivated, extrinsically motivated, or amotivated [12-14]. Although most researchers posit the presence of a global intrinsic motivation (IM) construct, certain theorists have proposed that IM could be differentiated into more specific motives [15,12]. According to this viewpoint, intrinsic motivation has further been divided on the basis of three more specific motives. These three types of IM have been identified as IM to Know, IM to Accomplish Things, and IM to Experience Stimulation. IM to Know can be defined as performing an activity for the pleasure and the satisfaction that one experiences while learning, exploring, or trying to understand something new. IM to Accomplish can be defined as engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something. Trying to master certain difficult training techniques in order to experience personal satisfaction represents an example of intrinsic motivation to accomplish things in the sport domain. IM to Experience Stimulation occurs when someone engages in an activity in order to experience stimulating sensations (e.g., sensory pleasure, aesthetic experiences, as well as fun and excitement) derived from one's engagement in the activity [16]. External motivation has also been divided into three categories based on the extent of self-



determination. From lower to higher levels of self-determination, they are: external regulation, introjection and identification. External regulation refers to behaviour that is controlled by external sources, such as material rewards or constraints imposed by others [13]. In case of introjection, the formerly external source of motivation has been internalized such that its actual presence is no longer needed to initiate behaviour. Instead, these behaviours are reinforced through internal pressures such as guilt or anxiety, for example, for athletes participating in sports, it perhaps is this motivation that helps them stay physically fit. The last type of extrinsic motivation, that is, identification, is in operation when the individual comes to value and judge the behaviour as important and, therefore, performs it out of choice. The activity is still performed for extrinsic reasons (e.g., to achieve personal goals); however, it is internally regulated and self-determined. Athletes who participate in sport because they feel their involvement contributes to a part of their growth and development as a person, represents an example of identified motivation.

Researchers for a long time have been interested in exploring the driving forces behind sportspersons' behaviours but studies have yet not been conducted to unearth the role of motivation in the lives of para sportspersons. Achieving challenging goals- be it acing academics or excelling in sports, requires willingness to control impulses, motivation and not losing focus of the goals, as well as the ability to manage emotions associated with goal pursuit. Therefore, keeping the aforementioned points in mind, it can be assumed that grit, self-regulation and motivation are expected to play a crucial role in keeping people with disabilities on the course towards success and also, encourage them to thrive in the challenging world of sports. Moreover, hardly any such studies, examining the role of these variables in the lives of para sportspersons have been conducted so far. The present study, therefore, is a step in the direction of contributing towards literature on para sportspersons.

2. OBJECTIVES OF THE STUDY

To assess the levels of grit, self-regulation and motivation among para sportspersons

To determine the relationship among grit, self-regulation and motivation among para sportspersons

3. HYPOTHESES

It is expected that para sportspersons will be high on grit

It is expected that para sportspersons will be high on self-regulation

It is expected that para sportspersons will be high on subscales of both intrinsic and extrinsic motivation but low on amotivation

It is expected that there will be positive correlation among grit, self-regulation and subscales of intrinsic and extrinsic motivation

It is expected that amotivation will be negatively correlated with grit and self-regulation



4. METHODOLOGY:

4.1. Sample

For the present study, a total of 50 male para sportspersons, in the age range of 18-30 years were selected through purposive sampling technique. As a control, players participating only in individual sports were taken. Players participating in athletics and swimming who have played at least at national level were deliberately chosen. The data was collected from different training centres in India and national level sports events meant for para sportspersons, held across the country. Furthermore, the study was only confined to male para sportspersons, due to the limited participation of females in the field of para sports. Individuals belonging only to middle socio-economic status were considered for the study. Only those para sportspersons who reported no significant psychopathological history were included.

4.2. Tools

- 12-Item Grit Scale(Duckworth et al., 2007): The Grit Scale is a set of measures designed to measure trait-level perseverance and passion for long-term goals. It consists of 12 items that are scored on a 5-point Likert scale [2].
- The Self-Regulation Questionnaire(Brown, Miller, &Lawendowski, 1999): The SRQ is a 63-item instrument that assesses the seven dimensions of self-regulation as articulated by [18] Miller and Brown (1991). Items are scored on a 1–5 scale (strongly disagree–strongly agree), and can be summed to create a total score. Each sub scale has been rationally derived and contains 9 items; the authors recommend using the total sum score as a measure of self-regulatory skills [17].
- The Sport Motivation Scale (SMS-28)(Pelletier, et al., 1995): The SMS intends to identify the perceived reasons for participating in sport. It consists of 28 items that measure seven forms of motivation: amotivation, external regulation, introjected regulation, identified regulation and intrinsic motivation to know, to accomplish and to experience stimulation. Participants respond using a seven-point Likert type scale ranging from 1-7 [16].

5. RESULTS

The purpose of the present study was to assess the levels of grit, self-regulation and sport motivation among para sportspersons and to determine whether there exists any correlation among the three variables under study, that is, grit, self-regulation and various sub scales of sport motivation. In order to meet the objectives of the study, descriptive statistics were used to calculate the mean and standard deviation of the entire group under study. In addition to this, Pearson's Product Moment method was employed to find out the inter correlations between all the variables. The following tables show the results in detail.



Table 1: Showing group means of all the variables under study

VARIABLES	MEAN VALUES	INTERPRETATION
Grit	4	High
Self-Regulation	234.74	Intermediate
IM towards Knowledge	26.08	High
IM towards Accomplishment	26.28	High
IM towards Stimulation	25.52	High
External Regulation	24.28	High
Introjected Motivation	23.06	High
Identified Regulation	18.66	Average
Amotivation	11.98	Low

Descriptive analysis shows that the sample employed in the present study possesses high levels of grit, intermediate levels of self-regulation, high intrinsic motivation towards knowledge, accomplishment and stimulation; the group under study is high on external regulation and introjected extrinsic motivation, average on identified regulation and low on amotivation.

Table 2: Showing Pearson's Product Moment Correlation among all the variables under study:

Scale	1	2	3	4	5	6	7	8	9
1. Grit	1	0.69**	0.34*	0.32*	0.30*	0.07	0.221	-0.39**	-0.39**
2. Self-Regulation		1	0.44**	0.56**	0.37**	0.33*	0.44**	-0.08	-0.40**
3. IM to Know			1	0.76**	0.34**	0.11	0.36**	-0.13	-0.28
4. IM to Accomplish				1	0.53**	0.19	0.45**	-0.002	-0.37**
5. IM to Stimulation					1	0.21	0.25	-0.04	-0.23
6. External Regulation						1	0.44**	0.27	-0.11
7. Introjected Motivation							1	.07	-0.15
8. Identified Regulation								1	0.25
9. Amotivation									1

*Correlation is significant at 0.05 level

**Correlation is significant at 0.01 level

Pearson's Product Moment Correlation shows that grit correlates highly positively with self-regulation, intrinsic motivation towards knowledge, accomplishment and stimulation. However, it negatively correlates with identified regulation and amotivation. Self-regulation correlates strongly positively with intrinsic motivation towards knowledge, accomplishment and stimulation. Results also suggest a positive correlation of self-regulation with external regulation and introjected motivation but it correlates highly negatively with amotivation. Intrinsic motivation towards knowledge has correlated positively with intrinsic motivation towards



accomplishment and stimulation; it has also correlated positively with introjected motivation as well but has correlated negatively with amotivation. Intrinsic motivation to accomplish has correlated positively with intrinsic motivation towards stimulation and introjected motivation but has correlated negatively with amotivation. External regulation has correlated positively with introjected motivation for this group of para sportspersons.

6. DISCUSSION OF RESULTS:

The results of the present study indicate that this group of para sportspersons is indeed high on grit. A plausible reason behind this finding could perhaps be the inherent relevance of overcoming adversity and setbacks in the concept of grit. Grit does, after all, consist of two connected constructs: perseverance in the face of difficulty and a passionate, enduring commitment to particular goals [3]. Even though research on para sportspersons is still in its nascent stage, a study conducted by Kang and colleagues' (2007) on people with disabilities found that older individuals (aged 18 or older) with disabilities have high levels of perseverance [19]. This research supports the results of our study as perseverance is an essential aspect of grit.

The group under study has shown intermediate levels of self-regulation. We had initially hypothesised that para sportspersons will be high on self-regulation but this hypothesis has been rejected considering para sportspersons are average on self-regulation. The intermediate levels of self-regulation in the present study, however, could be explained with the help of Baumeister et al.'s Strength Model, which suggests that self-regulation deteriorates over time from repeated exertions which indicates that athletes striving to control their thoughts and emotions in competition may be more prone to suffer disruptions in endurance performance [20]. The present study was conducted while the para sportspersons were competing in national championships so, they were either in the middle of the competition or had just finished participating in the competition. Perhaps, at the time when the group under study was responding to the self-regulation questionnaire, their self-regulation had deteriorated and this also reflected in their results.

The group has scored extremely high on all the aspects of intrinsic motivation, that is, IM towards knowledge, accomplishment and stimulation. Intrinsic motivation (IM) refers to engaging in an activity purely for the pleasure and satisfaction derived from doing the activity [12]. When a person is intrinsically motivated, he or she will perform the behaviour voluntarily, in the absence of material rewards or external constraints [13]. Athletes who go to practice because they find it interesting and satisfying to learn more about their sport, or athletes who practice their sport for the pleasure of constantly trying to surpass themselves are considered intrinsically motivated toward their sport. Therefore, it can be implied that para sportspersons who play at the national level are intrinsically motivated and this could also be the probable reason behind this group reaching the national level, despite their compromised circumstances. It is highly unlikely to reach that far ahead in the competition without possessing an internal drive to succeed. The group has scored high on two aspects of extrinsic motivation as well, that is, on external regulation and introjected motivation. In order to justify these results, it could be stated in the context of para sportspersons that sports could perhaps also be a way



of achieving appreciation from the society and of breaking the stereotypes and misconceptions that the society has regarding physically challenged sportspersons. Moreover, every sportsperson aims to attain success, fame and material rewards that come as a result of excelling in their game. As hypothesised, the sample under study has scored extremely low on amotivation. To summarise, the results show that not only do para sportspersons want to perform because they want to achieve mastery in their field but receiving material rewards and remaining physically active is equally motivating for them. As a matter of fact, a lot of these para sportspersons reported that initially, they had set out to explore sports as a means of staying physically fit and it was only at a later stage that they chose to compete.

Furthermore, results from Pearson's Product Moment Correlation show that grit has a strong positive correlation with self-regulation, intrinsic motivation towards knowledge, accomplishment and stimulation but a strong negative correlation with identified regulation and amotivation. This shows that higher levels of grit also reflect higher levels of self-regulation and intrinsic motivation. Even though there is a paucity of research correlating grit and self-regulation but a construct closely related to self-regulation, that is, self-control is a more researched concept and a positive correlation has already been established between grit and self-control [21]. The results of the present study can also be substantiated by the fact that people high on grit are indeed more passionate about their goals and more dedicated to accomplishing them [2]. Therefore, it seems reasonable that the importance of success and hence, the level of potential effort as well as the level of motivation should be higher for gritty people.

Results have also revealed that self-regulation, besides being positively correlated with grit has also significantly positively correlated with all the aspects of intrinsic motivation but has negatively correlated with amotivation. Previous research has suggested that when a goal is more valuable, meaningful, or relevant to the self-concept, people are willing to expend more effort when necessary [22]. Research on self-regulation often emphasizes the role played by goal attainment, and the variables that support the attainment of goals, such as persistence, self-efficacy, or optimism [23-25]. If one is high on grit, it is likely that one would also be highly self-regulated and vice-versa. Research correlating grit and self-regulation in the context of sports is limited, however, research in academics has provided evidence that when students self-regulate their learning, they perform better, maintain their interest in what they are doing, and have positive affect about what they are doing [26,27]; grit and self-regulation, therefore, appear to go hand in hand. The concept of grit is rooted in the ideas of self-control and even more broadly, conscientiousness. Conscientiousness, one of the Big 5 personality traits, describes a person's aptitude for being organized, following through, and being self-reflective [28]. Furthermore, some authors note a connection between higher levels of conscientiousness and higher measures of self-control [29]. Thus, it appears there may be a link between the broad category of conscientiousness and self-control. Also, beyond self-control is the idea of persistence; persistence describes the ability to continually overcome obstacles within one's life path-this is clearly evident in the struggles and achievements of this group of para sportspersons.



A few studies have found that grit is related to aspects of self-regulation or self-regulated learning [30-32]. Hence, it can be stated that when a behaviour is self-determined, the regulatory process is a choice, hence, highly motivated individuals would choose to regulate their behaviour in order to accomplish their goals. Baumeister & Vohs (2007), have in fact, called motivation as a major ingredient of self-regulation; they feel that motivation is highly effective in substituting will-power especially when willpower gets depleted [33]. The fact that para sportspersons reach the national level after defeating all odds, makes it evident that they have goals that are relevant to them and that they are indeed passionate about achieving these goals. Results of the present study also show strong evidence in terms of correlations between various aspects of intrinsic motivation, that is, knowledge seeking, accomplishment and stimulation. The group has also scored extremely high on all of these components-it goes on to reflect that they have the desire to know more about their sport which proves that staying interested is an essential aspect of being gritty. Their accomplishment in turn, provides them with stimulation, which helps them stay focused and motivated irrespective of how arduous or time-consuming their journey towards their goals might be. An interesting study conducted by Pelletier et al., (2001) found that motivation determines the level of persistence among athletes and amotivation and intrinsic motivation had the most negative and positive effects on persistence respectively [34]. A similar observation has been made in the present study as grit which is a combination of persistence and passion has shown a strong positive correlation with intrinsic motivation and a strong negative correlation with amotivation.

It can, therefore, be stated that grit associates positively with self-regulation and motivation but negatively with amotivation. Motivation keeps this group self-regulated which in turn enhances their levels of persistence and helps them succeed in the world of sports irrespective of their disabilities.

7. CONCLUSION

As per various researchers, grit is a pre-requisite for success [2]. This is often associated with the idea of being able to pursue a goal and achieve it. A combination of grit with variables of self-regulation and motivation appears to be a recipe for success and all these are clearly reflected among the group under study. In conclusion, this study goes to show how intricate the relationship between all of these variables is and how essential the existence of each one of these is, if one desires to accomplish one's goals.

After careful contemplation, it may also be suggested that para sportspersons are especially gritty and highly motivated towards the sport that they play. Grit, perhaps, becomes a part of their personality due to their zeal to thrive in a world that looks at them differently. Their urge to challenge their abilities, to show others what they are capable of and to provide hope to the ones who have given up in the face of disability, presumably, serve as motivating factors on the playing field. Also, motivation seems to be an important ingredient to enhance the levels of self-regulation in an individual; this enhanced self-regulation would in turn make sure that the individual stays on the journey towards accomplishing his goals and making him grittier.

Considering the role that grit, self-regulation and motivation play in helping one achieve one's goals, efforts should be made towards helping individuals enhance these traits. Grit, self-regulation and motivation perhaps,



become inculcated in the lives of para sportspersons due to facing numerous challenges that are unique only to them but these traits can easily be adopted by anyone. Research on grit suggests that grit is a trait that can be enhanced and in order to be more motivated and to be able to put in more self-regulated effort, individuals perhaps need to choose their goals with special care and must look for the ones that they are genuinely passionate about as it is passion and interest alone that make the journey towards success a less arduous one.

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International Conference on Multidisciplinary approaches in Social Sciences, Humanities and Sciences

Sri S.Ramasamy Naidu Memorial College, Sattur, Tamil Nadu, India

(MASHS-18)



14th December 2018

www.conferenceworld.in

ISBN:978-93-87793-61-3

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