



Investigating Grit and the Big Five Personality Factors among Sportspersons with Disabilities and Vocationally Engaged People with Disabilities

Navneet Nancy^a, Dr. Rohini Thapar^b

^a *Research Scholar, Department of Psychology, Panjab University, Chandigarh, India (Corresponding Author)*

^b *Assistant Professor, Department of Psychology, D.A.V. College, Sector 10, Chandigarh, India*

Email: n09.nancy@gmail.com

ABSTRACT

Grit is essentially a personality disposition, which entails the willingness to continue marching forward despite the challenges. Duckworth et al. (2007), defined grit as perseverance and passion for long-term goals and considering the numerous hardships that people with disabilities have to face, while navigating the through the unique journey of their lives, it would not be incorrect to assume that grit would tend to play an especially crucial role in their context. In fact, the role of grit in addition to their personality profile, becomes all the more pertinent when people with disabilities decide to venture into the competitive world of sports due to the stigmas associated with this group. However, sports can provide them with a pathway that might help even the severely disabled people lead contented lives. Therefore, the present study was conducted with the purpose of examining the differences between national level sportspersons with disabilities and vocationally engaged people with disabilities, in order to find out whether there existed any differences between these groups of disabled individuals. For this purpose, a sample of 100 male athletes with disabilities, who were competing at the national level and 50 males with disabilities, in the age range of 18-30 years, were selected and the differences between the two groups were analysed using Welch's t-test. The findings and implications of the study would be discussed.

Keywords: Grit, Big Five Personality Factors, Sportspersons with Disabilities, People with Disabilities

1. Introduction

Losing one's physical capabilities can prove to be a traumatic experience for most people and may lead to various physical, emotional, and psychosocial problems, such as anxiety, depression and feelings of alienation. However, the experience of disability is not the same everybody because history is replete with stories of extraordinary individuals who were able to courageously surpass all the hardships that life had to throw their way and emerged as winners; for instance, Bethany Hamilton, who, despite losing her arm in a shark attack, managed to return to surfing and lead a fulfilling life. Such stories of resilience are bound to make one curious to delve deeper into the personalities of such tenacious individuals, so that the others who are struggling to deal with their disabilities, could also be assisted in successful adaptation with their condition. This tenacity and zeal to thrive is also evident among those individuals, who, despite their disability, decide to follow the uncharted path into the world of sports, which predominantly worships physical perfection. Individuals belonging to this extraordinary group are often referred as para sportspersons and they have managed to successfully challenge all the preconceived notions and stigmas that have been prevalent in the society regarding people with disabilities. However, despite the fact that sportspersons with disabilities have been winning accolades at the national as well as the international level, the achievements of this group go largely unnoticed; therefore, efforts are needed to bring their extraordinary abilities into the attention of mainstream media as well as most of the society. Furthermore, considering the rewarding experiences provided by sports, it might help people with disabilities lead a better life by enhancing the quality of their experiences. Sports has, in fact, been proven to enhance the self-worth of people with disabilities (Gold & Gold, 2007). Therefore, it would be interesting to explore the psychological aspects among sportspersons with disabilities.

In this regard, grit could prove to be a crucial psychological factor that needs to be examined as it is associated with conferring willpower to stay persistent despite the challenges. Grit is a relatively recent construct from positive psychology and it is defined as passion and perseverance and the zeal to continue moving forward in the direction of one's goals despite the adversities (Duckworth et al., 2007). Another important factor that could differentiate between those who manage to overcome the challenges associated with their disabilities from those who fail to emerge out of their misery, is personality. With respect to personality, the Big Five Factor framework has been considered to be the most influential. This framework essentially defines personality based on five factors, namely, openness towards experiences, which refers to the extent to which one individual possesses an affinity towards adaptability, experimentation and novelty. The next facet is referred as conscientiousness, which is characterised by reliability, diligence and self-discipline and is the most closely associated with the perseverance facet of grit. Extraversion is another factor of personality, which is representative of sociability,

gregariousness and activity. The next is agreeableness, which refers to qualities, such as being cooperative, modest and altruistic. Neuroticism is the last dimension of personality which characterises nervousness and heightened psychological reactivity on one end and calmness on the other.

Disability sports is an arena where both grit and personality could, perhaps, play a pertinent role because it is characterised by a host of challenges, such as cut-throat competition, injuries and burnout; and, only those who are able to stay persistent despite the setbacks manage to eventually emerge as winners, reaching the echelons of success. Additionally, the Big Five factors of personality have also been shown to substantially contribute towards success in sports (Piepiora & Witkowski, 2020). The present study, therefore, is an attempt to explore grit and personality of people with disabilities who are engaged in sports and those who are not engaged in sports but are instead vocationally engaged, in order to find if there exists any substantial differences between the two groups and whether participation in sports indeed has the capacity to confer people with disabilities with benefits that are often associated with it.

2. Objectives of the Study

- To assess the levels of grit and personality among sportspersons with disabilities and vocationally engaged people with disabilities.
- To assess the differences between sportspersons with disabilities and vocationally engaged people with disabilities on grit and personality.

3. Hypotheses

- It is expected that sportspersons with disabilities will be higher on grit as compared to vocationally engaged people with disabilities.
- It is expected that sportspersons with disabilities will be higher on openness towards experiences as compared to vocationally engaged people with disabilities.
- It is expected that sportspersons with disabilities will be higher on conscientiousness as compared to vocationally engaged people with disabilities.
- It is expected that sportspersons with disabilities will be higher on extraversion as compared to vocationally engaged people with disabilities.
- It is expected that sportspersons with disabilities will be higher on agreeableness as compared to vocationally engaged people with disabilities.
- It is expected that sportspersons with disabilities will be lower on neuroticism as compared to vocationally engaged people with disabilities.

4. Methodology

4.1 Sample

For the present study, a total of 100 male sportspersons with disabilities, 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 centers in India and during the 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 in the study. Additionally, a matching group of people with disabilities who were not engaged in sports but were instead engaged in a vocation, were also selected. It was ensured that only individuals be selected who reported at least 40% disability because this is the minimum criterion prescribed by the Government of India, in order for people with disabilities to be able to utilise the benefits conferred by various schemes initiated by the Government for the betterment of people with disabilities.

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

The Big Five Inventory (John & Srivastava, 1999): The Big Five Inventory is a 44-item inventory which was designed, with the aim of measuring the personality of an individual in the context of the Big Five Factors of personality of openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Goldberg, 1993).

5. Results

The purpose of the present study was to assess the levels of grit and the Big Five factors of personality factors among sportspersons with disabilities and vocationally engaged people with disabilities. In order to meet the objectives of the study, descriptive statistics were used to calculate the mean and

standard deviation of the two groups under study. In addition to this, Welch's t test method was employed to find out the differences between the two groups on grit and the Big Five personality factors. The following tables show the results in detail:

Table 1: Showing group means and standard deviation for sportspersons with disabilities

S. NO.	VARIABLE	MEAN	STANDARD DEVIATION	INTERPRETATION
1.	Grit	4.08	0.55	High
2.	Openness	37.53	4.31	High
3.	Conscientiousness	35.81	6.11	High
4.	Extraversion	28.65	6.21	Moderate
5.	Agreeableness	35.52	4.9	High
6.	Neuroticism	21.12	6.65	Moderate

Table 2: Showing group means and standard deviation for vocationally engaged people with disabilities

S. NO.	VARIABLE	MEAN	STANDARD DEVIATION	INTERPRETATION
1.	Grit	3.53	0.63	Moderate
2.	Openness	35.40	5.21	Moderate
3.	Conscientiousness	29.10	6.05	Moderate
4.	Extraversion	25.72	6.36	Moderate
5.	Agreeableness	33.20	5.76	High
6.	Neuroticism	22.56	7.05	Moderate

Descriptive analysis shows that sportspersons with disabilities reported high levels of grit, openness towards experienced, conscientiousness and agreeableness; whereas, moderate levels of extraversion and neuroticism. Descriptive analysis further revealed that vocationally engaged people with disabilities possessed moderate levels of grit, openness, conscientiousness, extraversion and neuroticism; whereas, high levels of agreeableness.

Table 3: Showing significant differences between sportspersons with disabilities and vocationally engaged people with disabilities

S.NO.	VARIABLE	GROUP	MEAN	STANDARD DEVIATION	t-ratio
1.	Grit	Sportspersons with disabilities	4.08	0.55	5.21***
		Vocationally engaged people with disabilities	3.53	0.63	
2.	Openness	Sportspersons with disabilities	37.53	4.31	2.50*
		Vocationally engaged people with disabilities	35.40	5.21	
3.	Conscientiousness	Sportspersons with disabilities	35.81	6.11	6.39***
		Vocationally engaged people with disabilities	29.10	6.05	
4.	Extraversion	Sportspersons with disabilities	28.65	6.21	2.68**
		Vocationally engaged people with disabilities	25.72	6.26	
5.	Agreeableness	Sportspersons with disabilities	35.52	4.9	2.44*
		Vocationally engaged people with disabilities	33.20	5.76	

Note: * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

The comparative analysis of both the groups under study using Welch's test revealed that sportspersons with disabilities were higher on grit as compared to their vocationally engaged counterparts. Results further revealed that sportspersons with disabilities also tended to be higher on openness towards experiences, conscientiousness, extraversion and agreeableness facets of personality as compared to people with disabilities who were vocationally engaged.

6. Discussion

A careful evaluation of results shown in Table No. 1 revealed that sportspersons with disabilities studied in the present investigation possessed high levels of grit, which essentially highlighted that this group had the ability to stay passionate and perseverant towards their long-term goals. Similar results were obtained by Martin et al. (2015) as they found wheelchair basketball players to be high on grit and these gritty players with disabilities, in their study also exhibited significantly greater involvement in sports, which, perhaps, was also evident among the sample of para sportspersons investigated in the present study as these athletes and swimmers were playing at the national level and being able to efficiently perform at that elite level is bound to require dedicated engagement and passion, which was also characteristic of grit. With respect to their personality, this group exhibited high levels of openness towards experiences, which indicated that these national level sportspersons with disabilities preferred novelty in addition to being highly adaptable and adventurous, which also explained their interest in sports, considering that this was an entirely new arena for them and participation of people with disabilities has in sports has been found to be lower than non-disabled individuals (Martin Ginis et al., 2010).

These national level Indian sportspersons emerged to be highly conscientious, which implied that they were highly diligent, organised, reliable and goal-oriented. Conscientiousness has often been associated with being achievement-oriented (Costa & McCrae, 1988) and this zeal to accomplish challenging

goals was also evident among para sportspersons assessed in the present study; it was, perhaps, their hard-work and self-discipline that helped them stay consistent despite the adversities that they had to face in order to reach the competitive national level in athletics and swimming. These disabled sportspersons, however, emerged to be moderate on extraversion, which reflected that their temperate tendencies towards social interaction and stimulation, which again was not very surprising as most people tend to fall in the category of ambiverts. This group was further found to be high on agreeableness, which was a desirable quality for athletes and swimmers to possess because successful sports performance is considered to be the result of a team-effort, which is why they sportspersons are expected to be modest and cooperative, especially with their coaches and managers because it is only when they work in tandem with each other that desired results could be achieved. The descriptive analysis further revealed that national level Indian sportspersons exhibited temperate levels of neuroticism, which was indicative of the fact that there were times when they were able to calmly and efficiently deal with stressful situations and there were times when they found it difficult to cope with stressors.

A relatively different descriptive profile emerged in case of vocationally engaged people with disabilities as they were found to possess moderate levels of grit, which meant that they did, perhaps, manage to somehow stay focused towards their long-term goals but they did encounter some issues along the way, which made their journey feel a bit tiresome. This group further reported moderate levels of openness towards experiences as they appeared to be exhibiting only an average interest in exploring new interests and hobbies. Vocationally engaged people with disabilities also scored average on the Big Five Factor of conscientiousness, which reflected towards their temperate ability to regulate their behaviour and act diligently and responsibly. Furthermore, similar to their sporting counterparts, professionally engaged individuals with disabilities also reported average levels of extraversion; these results with respect to people with disabilities were found to be in line with those reported by Allaire et al. (2022). These disabled individuals further reported high levels of agreeableness, which tended to characterise them as good-natured and altruistic. Again, similar to para sportspersons, vocationally engaged people with disabilities also exhibited a moderate propensity towards experiencing feelings of insecurity, stress and anxiety.

An overview of the aforementioned observations suggested that people with disabilities who were engaged in sports displayed a more positive psychological profile as compared to their vocationally involved counterparts. Interestingly, this contention was also supported by the results obtained upon the application of Welch's *t* test, which was employed in order to compare the means of these two unequal samples. Findings from the comparative analysis elucidated that sportspersons with disabilities were substantially high on grit as compared to those individuals with disabilities who were not engaged in sports, thereby, proving our further hypothesis. These results implied that para sportspersons tended to be more tenacious and committed towards their long-term pursuits in addition to possessing a greater ability to bounce back from hardships and overcome challenges. These differences might be due to the fact that challenges are an inevitable aspect of sports and those who play at the competitive level are expected to march towards their goals despite the adversities in order to accomplish goals that are valuable to them and this process is most likely to facilitate grit.

Significant differences also emerged between these two groups under study on openness towards experiences as para sportspersons again emerged to be more open-minded and adventurous, which presumably also explained their decision to venture into the new arena of sports that was probably completely out of their comfort zone, especially, physically. Sportspersons with disabilities were further found to be more conscientious as opposed to their professionally engaged counterparts and this again was not surprising because sportspersons have been shown to exhibit higher levels of diligence and self-discipline and they are expected to be highly goal-oriented as compared to the general population because only then can they manage to survive in the extremely competitive world of athletics and swimming (Barrick et al., 2001; Ozer & Benet-Martinez, 2006). Furthermore, even though both the groups reported moderate levels of extraversion but sportspersons with disabilities still exhibited higher levels of confidence, enthusiasm and sociability; perhaps, due to being exposed to a greater number of people, especially during trainings and competitions, which required for them to be gregarious and interactive. Interestingly, Giola et al. (2006) also reported similar findings with regard to wheelchair athletes; hence, furthering support for our third hypothesis. Furthermore, even though both the groups reported high levels of agreeableness, para sportspersons again emerged to be more agreeable than vocationally engaged people with disabilities. These results could be justified based on the assumption that successful sports performance is believed to be dependent upon the cooperation of several individuals, ranging from family members providing motivational and material support and coaches providing informational and technical support. Therefore, it is no wonder that agreeable people due to their modest and altruistic disposition were more likely to receive support than their less agreeable counterparts. Previous research has also suggested that elite-level sportspersons tend to be more agreeable as compared to those performing at the sub-elite level (Allen et al., 2011). However, the only personality factor which did not emerge to be significantly differentiate between these two groups of disabled individuals was that of neuroticism, which led to us rejecting our last hypothesis, which also meant that five out of the six hypotheses formulated by us were eventually accepted.

7. Conclusion

The results of the present study indicated that people with disabilities who were engaged in sports tended to possess greater levels of grit, which pointed towards their superior ability to overcome adversities and stay persistent towards their long-term goals. This group was also found to exhibit an overall positive personality profile, with greater levels of openness, conscientiousness and agreeableness; whereas, moderate levels of extraversion as opposed to those people with disabilities who were not engaged in sports but were instead professionally engaged. It may, therefore, be implied based on these findings that sports might have been an important factor facilitating grit and positive personality traits among those disabled individuals who participated in sports. Sports also tends to have rehabilitative value as involvement in sports could help people with disabilities adapt better with their condition and foster a sense of self-efficacy among them since it allows them to explore their hidden potentialities in addition to helping them challenge the stereotypes that are often associated with the disabled. In fact, sports participation could prove to be especially beneficial for those with acquired disabilities who find it more difficult to accept their new-found condition; it may, therefore, be suggested that sports be made a part of the rehabilitation process for people with disabilities.

References:

- Allaire, T., Perera, M., Drossel, C., Sol, K., Theisen-Goodvich, M., & Meade, M. A. (2022). Flourishing after traumatic spinal cord injury: Results from a multimethod study. *Rehabilitation Psychology, 67*(1), 53.
- Allen, M. S., Greenlees, I., & Jones, M. (2011). An investigation of the five-factor model of personality and coping behaviour in sport. *Journal of sports sciences, 29*(8), 841-850.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?. *International Journal of Selection and assessment, 9*(1-2), 9-30.
- Costa Jr, P. T., & McCrae, R. R. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of personality and social psychology, 55*(2), 258.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of personality and social psychology, 92*(6), 1087.
- Gioia, M. C., Cerasa, A., Di Lucente, L., Brunelli, S., Castellano, V., & Trallesi, M. (2006). Psychological impact of sports activity in spinal cord injury patients. *Scandinavian journal of medicine & science in sports, 16*(6), 412-416.
- Gold, J. R., & Gold, M. M. (2007). Access for all: the rise of the Paralympic Games. *Journal of the Royal Society for the Promotion of Health, 127*(3), 133-141.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research, 2*, 102-138.
- Martin Ginis, K. A., Jetha, A., Mack, D. E., & Hetz, S. (2010). Physical activity and subjective well-being among people with spinal cord injury: a meta-analysis. *Spinal Cord, 48*(1), 65-72.
- Martin, J. J., Byrd, B., Watts, M. L., & Dent, M. (2015). Gritty, hardy, and resilient: Predictors of sport engagement and life satisfaction in wheelchair basketball players. *Journal of clinical sport psychology, 9*(4), 345-359.
- Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annu. Rev. Psychol., 57*, 401-421.
- Piepiora, P., & Witkowski, K. (2020). Self-defence as a utilitarian factor in combat sports, modifying the personality of athletes at a champion level. *Arch. Budo Sci. Martial Arts Extrem. Sports, 16*, 63-69.