



ISSN: 2456-0057

IJPNPE 2018; 3(2): 2199-2206

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www.journalofsports.com

Received: 27-05-2018

Accepted: 28-06-2018

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Comparison of personality traits between speech and hearing impaired sportsman and impaired non-sportsman

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Abstract

Background: Speech and hearing impairment are commonly happening among the normal people. Speech and Hearing are essential sensory systems of an individual for verbal communication and personality development. Games and sports may distinguish their personality traits among them and can achieve the quality of life.

Objective: To compare the personality traits between (i) speech-impaired sportsman and speech-impaired non-sportsman, and (ii) hearing-impaired sportsman and hearing-impaired non-sportsman among the physically challenged people.

Hypotheses: There might not be significant differences on personality traits between (i) speech-impaired sportsman and speech-impaired non-sportsman, and (ii) hearing-impaired sportsman and hearing-impaired non-sportsman.

Methods: Twenty (20) each speech-impaired and hearing-impaired persons among the physically challenged population, consisting of 10 each sportsman and non-sportsman on both speech and hearing-impaired groups, were purposively selected as subjects from different district rehabilitation centres of Manipur. R.B. Cattell's 16 PF Questionnaire was administered to determine the personality traits among the speech-impaired and hearing-impaired sportsman and non-sportsman. The 't' test was employed to find out the significant differences among between the groups.

Results: In case of the speech impairment, only the personality factor F and O were found significant differences between speech-impaired sportsman and non-sportsman, however only factor O was found significant difference in the scale of Standard ten scores. In case of hearing impairment, the personality factors B, O, Q1 & Q3 were found significant differences between the hearing-impaired sportsman and non-sportsman. However, no significant differences were found between the hearing-impaired sportsman and non-sportsman in the scale of Standard ten scores. The alternative hypothesis was accepted for personality factors F and O only in case of speech impairment and the personality factors B, O, Q1 and Q3 in case of hearing impairment.

Conclusion: Games and sports give positive impact for the improvement of personality characteristics among the speech-impaired and hearing-impaired population. Therefore, regular participation of games and sports activities are mandatory for the physically challenged population in the society.

Keywords: Personality traits, speech impairment, hearing impairment, 16 PF.

Introduction

Personality is an individual enduring persistent response pattern across the verities of situation it is compared relatively stable patterns of action often referenced to as traits dispositional tendencies motivations, attitudes and belief, which are combined into a more or less integrated self-structure. Personality includes the characteristics and attributes that distinguish the individual from others although different theoretical prospective on personality assign difference degrees of importance to genetic, social learning or broader socio-cultural elements more views consider each of these as important casual factors in the development of personality attributes. In general, most contemporary theories of personality consider both games and environment as important formative personality (Harre & Roger, 1983) [9]. Personality involved from a number of influence. They may be divided into three broad categories as personal influence, social and cultural, and physical influence are the inherited biological characteristics that cause people to differ from each other (Dorcan, 1976) [5]

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Sport engrains in inner discipline, competitive spirit, and friendship, and there is no doubt that physical strength, endurance, social integration and psychological well-being increase with sports. Understanding the benefits of sports for disables children cannot be difficult accordingly (Kizar, *et al.*) [8].

Physically challenged sportsman whom plays sports get more chance of meeting and interacting with people of similar interests and make new friends, this boosts their confidence. Physically challenged sportsman playing together as a team, share and celebrate together. This has a positive effect on their psychology and behaviour. Then, they are less likely to become selfish when they grow up; they are caring and readily to work as a team and get along better with others. This will overcome social stigma and challenges faced by physically challenged persons.

Speech and language disorders, commonly happens among the physically challenged people. This refers to the communication problem that related to the oral motor dysfunction. This is the difficulties of producing speech sounds or problems with voice quality and known as speech impairment. This is a condition in which the ability to produce speech sounds that are necessary to communicate with others is impaired. Speech impairments may be mild to severe. Hearing impairment as a disability category is similar to the category of deafness. It is impairment in hearing, whether permanent or fluctuating, that adversely affects the educational performance but not a particular deafness. 'Hearing is an essential sensory sense of an individual for development of speech which is crucial for verbal communication and personality development. It is the second most common form of disability after loco motor disability in India' (Taneja, 2014) [13]. Speech and hearing impaired people always experience different personality disorders and obstacles to face various situations more than normal people faced because of the inefficiency of oral and listening communication skill. They have high personal inferiority complex comparatively to normal persons. Speech-impaired people cannot express well their feelings that counter the situations happened. Hearing-impaired people too cannot listen to the other and respond properly. They always feel hesitation to give any response in different situation regarding. However, participation of games and sports can support and establish themselves to overcome the problems and minimize the loneliness, mingle with other peers, can develop the personality with activities, maintain the meaningful life style. Games and sports can help disables speech and hearing impaired persons to get rid of inferiority thought, narrow worlds, emotions, fears etc. Therefore, speech and hearing-impaired people can improve beliefs, confidence, friendships, cohesion, encouragement, intellectual integrity, quality life, etc. through regular participation of games and sports activities. They can take part in most sports and enhance their personality traits.

In our society, number of physically challenged people like speech and hearing impairment groups is among the normal population. In order to improve their living standards and achieve the goal of life, different kinds of social activities should be organized regularly. Games and sports are also very important part that influence the wholesome development of human personality and give the essence of quality life.

Objectives

The main objective of the study was to compare the personality traits between the i. Speech-impaired sportsman

and speech-impaired non-sportsman among the physically challenged people, and ii. Hearing-impaired sportsman and hearing-impaired non-sportsman among the physically challenged people.

Hypotheses

It was hypothesized that there might not be significant differences on personality traits between the i. Speech-impaired sportsman and speech-impaired non-sportsman and ii. Hearing-impaired sportsman and hearing-impaired non-sportsman.

Material and Methods

It was found to be hard for the selection of subject particularly on speech and hearing-impaired sportsman and non-sportsman among the physically challenged people. Twenty (20) each speech-impaired and hearing-impaired persons among the physically challenged population, consisting of 10 each sportsman and non-sportsman on both speech and hearing-impaired groups, were purposively selected as subjects of this study. R.B. Cattell's 16 PF Questionnaire was administered to determine the personality traits among the speech-impaired and hearing-impaired sportsman and non-sportsman. All the subjects were belonging to different district's rehabilitation centres for physically challenged people of Manipur state. To find out the significant differences among the groups, 't' test statistical technique was employed and followed by Standard Ten (Sten) scores scale to determine the approximate position of the personality factors with respect to the population values.

Result

To determine the significance differences in 16 PF between the speech-impaired sportsman and non-sportsman, the t-test was employed. The data analyses and means comparisons are presented in table 1.

Table 1: Means Comparisons of 16 PF scores between Speech-impaired Sportsman and Non-sportsman

Factors	Sportsman	Non-Sportsman	t-test
	Mean±SD	Mean±SD	
A	6.50±1.354	6.50±1.900	0.000
B	3.40±1.350	4.10±0.994	1.320
C	8.50±1.179	8.50±1.434	0.000
E	9.20±1.932	8.80±2.044	0.450
F	8.80±1.317	10.30±1.252	2.611*
G	6.60±1.647	6.90±1.729	0.397
H	9.20±1.932	9.30±1.636	0.125
I	7.70±1.059	7.10±1.101	1.242
L	6.60±1.955	7.00±1.563	0.505
M	9.00±1.826	8.20±1.619	1.037
N	6.70±1.418	6.20±1.476	0.773
O	19.70±3.640	9.10±2.132	3.939*
Q1	7.20±1.687	6.20±1.033	1.599
Q2	7.20±1.476	6.80±1.135	0.679
Q3	7.50±1.080	7.40±1.350	0.183
Q4	9.50±1.509	9.80±1.033	0.519

*Significant at 0.05 level of confidence, $t_{0.05(18)} = 2.101$

Table 1 shows that there were significant differences of the mean scores for factor F and O between speech-impaired sportsman and non-sportsman since obtained 't' = 2.611 & 3.939 for factor F & O respectively) are greater than table value of 't' = 2.101 (5%) ($p < 0.05$). Thus, the mean score of sportsman in factor F (8.80±1.317) is significantly lesser than non-sportsman (10.30±1.252), but in factor O, mean score of

sportsman (19.70±3.640) is significantly greater than non-sportsman (9.10±2.132). Therefore, non-sportsman is more enthusiastic, cheerful, active talkative, frank, expressive, effervescent and carefree than the sportsman. On the other hand, sportsman is stronger sense of obligation and high expectation than the non-sportsman is. However, no

significant differences between speech-impaired sportsman and non-sportsman are found in personality factors A, B, C, E, G, H, I, L, M, N, Q1, Q2, Q3 and Q4 since p-values of all these factors are greater than 0.05 ($p > 0.05$). The graphical representation of means differences is shown in figure 1.

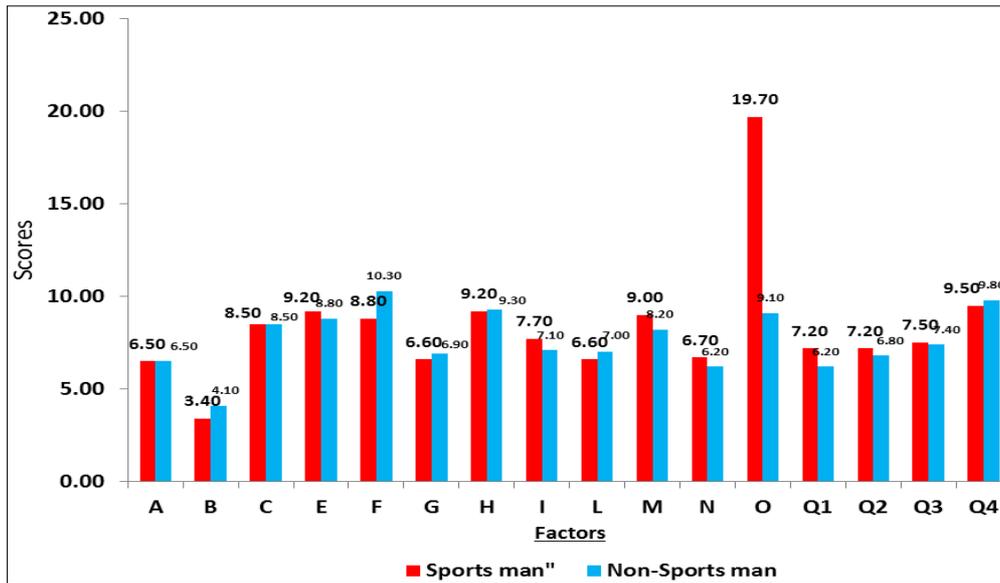


Fig 1: Means Comparisons of 16 PF between Speech-impaired Sportsman and Non-sportsman

To determine the significance differences in 16 PF between the hearing-impaired sportsman and non-sportsman, the data were analyzed and means comparisons are presented in table 2.

Table 2: Means Comparisons of 16 PF scores between Hearing-impaired Sportsman and Non-sportsman

Factor	Sportsman	Non-Sportsman	t-test
	Mean±SD	Mean±SD	
A	7.60±1.265	6.90±1.101	1.320
B	5.90±2.378	4.00±1.491	2.141*
C	10.10±2.234	8.80±1.229	1.612
E	9.30±2.003	9.30±1.337	0.000
F	10.90±2.601	9.10±1.449	1.912
G	7.60±2.875	6.90±1.197	0.711
H	10.30±2.908	8.70±.949	1.642
I	8.90±3.281	8.10±1.449	0.705
L	7.80±2.700	6.60±.843	1.342
M	10.60±2.547	8.60±1.647	2.085
N	7.20±2.098	5.70±1.494	1.842
O	10.70±2.058	8.70±1.889	2.265*
Q1	7.70±1.889	6.10±1.101	2.315*
Q2	8.00±2.789	5.90±1.663	2.045
Q3	8.70±1.418	6.90±1.595	2.667*
Q4	10.00±2.449	8.00±2.404	1.843

*Significant at 0.05 level of confidence, $t_{0.05(18)} = 2.101$

Table 2 shows that there were significant differences of the mean scores for the factors B, O, Q1 and Q3 between hearing-impaired sportsman and non-sportsman since obtained 't' = 2.141, 2.265, 2.315 & 2.667 (for factors B, O, Q1 & Q3 respectively) are greater than table of 't' = 2.101 (5%) ($p < 0.05$). The mean scores of sportsman in factors B (5.90±2.378), O (10.70±2.058), Q1 (7.70±1.889) and Q3 (8.70±1.418) are significantly greater than the mean scores

of non-sportsman in factor B (4.00±1.491), O (8.70±1.889), Q1 (6.10±1.101) and Q3 (6.90±1.595) respectively. Thus, the sportsman have more abstract-thinking, intelligent, bright, fast learner, stronger sense of obligation, higher expectations, tends to worry, guilt stricken, more interested in intellectual matters, more skeptical and inquiring regarding ideas than non-sportsman. Usually sportsman are more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change than non-sportsman. The hearing impaired sportsman tends to have more imaginary, reasoning, stronger control of their emotions and general behaviour are more inclined to be socially aware and careful, and evidence what is commonly termed "self-respect" and higher regard for social reputation than the non-sports man. However, no significant differences are found between hearing-impaired sportsman and non-sportsman in personality factors A, C, E, F, G, H, I, L, M, N, Q2 and Q4 since p-values of all these factors are greater than 0.05 ($p > 0.05$). The graphical representation of means differences is shown in figure 2.

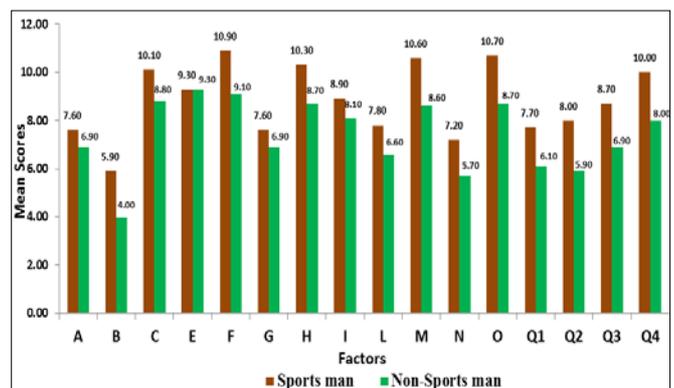


Fig 2: Means Comparisons of 16 PF between Hearing-impaired Sportsman and Non-sportsman

Sten Scores of 16 Personality Factors

The Sten scores (standard ten) are distributed over 10 equal-interval standard score points from 1 to 10 by taking population mean is fixed at 5.5 and standard deviation is 2.0 Sten scores. The Sten scores from 1 to 3 are considered as low, Sten scores from 4 to 7 are considered as average and the

Sten scores from 8 to 10 are considered as high. The Sten scores of speech-impaired and hearing-impaired sportsman and non-sportsman are shown in table 3 & 4, and their diagrammatic presentations are shown in figure 3 & 4 respectively.

Table 3: Mean Sten Scores of Speech-impairment: Sportsman vs Non-sportsman

Factor	Low Score Description	Standard Ten Scores										High score description
		Low			Average				High			
		1	2	3	4	5	6	7	8	9	10	
A	<i>Cool, reserved, impersonal, formal, aloof, detached, (Sizothymial)</i>	.	.	.	.	.	.	.	.	.	.	<i>Warm, outgoing, kindly, easy-going, participating, likes people (Affectothymia)</i>
B	<i>Concrete-thinking, less intelligent (Lower scholastic mental capacity)</i>	.	.	.	.	.	.	.	.	.	.	<i>Abstract-thinking, more intelligent, bright (Higher scholastic mental capacity)</i>
C	<i>Affected by Feelings, emotionally less stable, easily annoyed (Lower ego strength)</i>	.	.	.	.	.	.	.	.	.	.	<i>Emotionally stable, mature, faces reality, calm (Higher ego strength)</i>
E	<i>Submissive, humble, mild, easily led, accommodating (Submissiveness)</i>	.	.	.	.	.	.	.	.	.	.	<i>Dominant, assertive, aggressive, stubborn competitive, bossy (Dominance)</i>
F	<i>Sober, restrained, prudent, taciturn,, serious (Desurgency)</i>	.	.	.	.	.	.	.	.	.	.	<i>Enthusiastic, spontaneous, heedless, expressive, cheerful (Surgency)</i>
G	<i>Expedient, disregards rules, self-indulgent (Weaker-superego strength)</i>	.	.	.	.	.	.	.	.	.	.	<i>Conscientious, conforming, moralistic, staid, rule-bound (Stronger superego strength)</i>
H	<i>Shy, threat-sensitive, timid, hesitant, intimidated (Threctia)</i>	.	.	.	.	.	.	.	.	.	.	<i>Bold, venturesome, uninhibited, can take stress (Parmia)</i>
I	<i>Tough-minded, self-reliant, no-nonsense, rough, realistic (Harria)</i>	.	.	.	.	.	.	.	.	.	.	<i>Tender-minded, sensitive, overprotected, intuitive, refined (Premsia)</i>
L	<i>Trusting, accepting conditions, easy to get on with (Alaxia)</i>	.	.	.	.	.	.	.	.	.	.	<i>Suspicious, hard to fool, distrustful, skeptical (Protension)</i>
M	<i>Practical, concerned with down-to-earth, issues, steady (Praxernia)</i>	.	.	.	.	.	.	.	.	.	.	<i>Imaginative, absent-minded, absorbed in thought, impractical (Autia)</i>
N	<i>Fortnight, unpretentious, open, genuine, artless (Artless)</i>	.	.	.	.	.	.	.	.	.	.	<i>Shrewd, polished, socially aware, diplomatic, calculating (Shrewdness)</i>
O*	<i>Self-assured, secure, feels free of guilt, untroubled, self-satisfied (Untroubled adequacy)</i>	.	.	.	.	.	.	.	.	.	.	<i>Apprehensive, self-blaming, guilt-prone, insecure, worrying (Guilt Proneness)</i>
Q1	<i>Conservative, respecting traditional ideas (Conservation of temperament)</i>	.	.	.	.	.	.	.	.	.	.	<i>Experimenting, liberal, critical, open to change (Radicalism)</i>
Q2	<i>Group-oriented, a joiner and sound follower, listens to others (Group Adherence)</i>	.	.	.	.	.	.	.	.	.	.	<i>Self-sufficient, resourceful, prefers, own decisions (Self-sufficiency)</i>
Q3	<i>Undisciplined self-conflict, lax, careless of social rules (Low integration)</i>	.	.	.	.	.	.	.	.	.	.	<i>Following self-image, socially precise, compulsive (High self-concept control)</i>
Q4	<i>Relaxed, tranquil, composed, has low drive, un-frustrated (Low ergic tension)</i>	.	.	.	.	.	.	.	.	.	.	<i>Tense, frustrated, overwrought, has high drive (High ergic tension)</i>

*Significant at 5% level of significance Fig. 2. Sportsman Non-sportsman

Table 4: Mean Standard Ten Scores of Hearing Impairment: Sportsman vs Non-sportsman

Factor	Low Score Description	Standard Ten Scores										High score description	
		Low			Average				High				
		1	2	3	4	5	6	7	8	9	10		
A	<i>Cool, reserved, impersonal, formal, aloof, detached</i> , (Sizothymial)	.	.	.	.	.	.	.	.	.	.	.	<i>Warm, outgoing, kindly, easy-going, participating, likes people</i> (Affectothymia)
B	<i>Concrete-thinking, less intelligent</i> (Lower scholastic mental capacity)	.	.	.	.	.	.	.	.	.	.	.	<i>Abstract-thinking, more intelligent, bright</i> (Higher scholastic mental capacity)
C	<i>Affected by Feelings, emotionally less stable, easily annoyed</i> (Lower ego strength)	.	.	.	.	.	.	.	.	.	.	.	<i>Emotionally stable, mature, faces reality, calm</i> (Higher ego strength)
E	<i>Submissive, humble, mild, easily led, accommodating</i> (Submissiveness)	.	.	.	.	.	.	.	.	.	.	.	<i>Dominant, assertive, aggressive, stubborn competitive, bossy</i> (Dominance)
F	<i>Sober, restrained, prudent, taciturn,, serious</i> (Desurgency)	.	.	.	.	.	.	.	.	.	.	.	<i>Enthusiastic, spontaneous, heedless, expressive, cheerful</i> (Surgency)
G	<i>Expedient, disregards rules, self-indulgent</i> (Weaker-superego strength)	.	.	.	.	.	.	.	.	.	.	.	<i>Conscientious, conforming, moralistic, staid, rule-bound</i> (Stronger superego strength)
H	<i>Shy, threat-sensitive, timid, hesitant, intimidated</i> (Threctia)	.	.	.	.	.	.	.	.	.	.	.	<i>Bold, venturesome, uninhibited, can take stress</i> (Parmia)
I	<i>Tough-minded, self-reliant, no-nonsense, rough, realistic</i> (Harria)	.	.	.	.	.	.	.	.	.	.	.	<i>Tender-minded, sensitive, overprotected, intuitive, refined</i> (Premsia)
L	<i>Trusting, accepting conditions, easy to get on with</i> (Alaxia)	.	.	.	.	.	.	.	.	.	.	.	<i>Suspicious, hard to fool, distrustful, skeptical</i> (Protension)
M	<i>Practical, concerned with down-to-earth, issues, steady</i> (Praxernia)	.	.	.	.	.	.	.	.	.	.	.	<i>Imaginative, absent-minded, absorbed in thought, impractical</i> (Autia)
N	<i>Fortnight, unpretentious, open, genuine, artless</i> (Artless)	.	.	.	.	.	.	.	.	.	.	.	<i>Shrewd, polished, socially aware, diplomatic, calculating</i> (Shrewdness)
O	<i>Self-assured, secure, feels free of guilt, untroubled, self-satisfied</i> (Untroubled adequacy)	.	.	.	.	.	.	.	.	.	.	.	<i>Apprehensive, self-blaming, guilt-prone, insecure, worrying</i> (Guilt Proneness)
Q1	<i>Conservative, respecting traditional ideas</i> (Conservation of temperament)	.	.	.	.	.	.	.	.	.	.	.	<i>Experimenting, liberal, critical, open to change</i> (Radicalism)
Q2	<i>Group-oriented, a joiner and sound follower, listens to others</i> (Group Adherence)	.	.	.	.	.	.	.	.	.	.	.	<i>Self-sufficient, resourceful, prefers, own decisions</i> (Self-sufficiency)
Q3	<i>Undisciplined self-conflict, lax, careless of social rules</i> (Low integration)	.	.	.	.	.	.	.	.	.	.	.	<i>Following self-image, socially precise, compulsive</i> (High self-concept control)
Q4	<i>Relaxed, tranquil, composed, has low drive, un-frustrated</i> (Low ergic tension)	.	.	.	.	.	.	.	.	.	.	.	<i>Tense, frustrated, overwrought, has high drive</i> (High ergic tension)

Fig. 4. Sportsman ■ Non-Sportsman ■

The table 3 and its diagrammatic presentation (Fig.3) clearly show the comparison of Sten scores for personality factors between the speech-impaired sportsman and non-sportsman. The norms based interpretation of different factors and mean characteristics have been revealed. There was significant differences between the speech-impaired sportsman and non-sportsman in case of Factor O only as the personality

characteristics were falling at the Sten scores of 6 (average) and 3 (low) respectively in the scale of Sten scores. It was clearly interpreted that the speech-impaired sportsman was neither Untroubled Adequacy nor Guilt Proneness of personality characters as the Sten score of 6 is falling at the average score in the scale of Sten scores. However, speech-impaired non-sportsman was at low score of 3 at sten scale

that express the personality characteristics of Untroubled Adequacy. However, there were insignificant differences of personality factor A, B, C, E, F, G, H, I, L, M, N, Q1, Q2, Q3 and Q4 between the speech-impaired sportsman and non-sportsman as the Sten scores 5 & 6, 5 & 6, 6 & 6, 6 & 6, 6 & 6, 5 & 6, 5 & 6, 6 & 5, 4 & 6, 6 & 6, 6 & 5, 6 & 5, 6 & 5, 5 & 6 and 6 & 6 respectively were found at average in the scale of Sten scores. Therefore, their average Sten scores were deviated from both low and high scores in the scale of Sten scores and clearly interpreted that no differences of personality characteristics between speech-impaired sportsman and non-sportsman except factor O.

The table 4 and its diagrammatic presentation (Fig.4) clearly show the comparison of Sten scores for personality factors between the hearing-impaired sportsman and non-sportsman. There were insignificant differences of personality factor A, B, C, E, F, G, H, I, L, M, N, O, Q1, Q2, Q3 and Q4 between the hearing-impaired sportsman and non-sportsman as the Sten scores 6 & 6, 7 & 5, 6 & 5, 6 & 6, 6 & 6, 6 & 5, 6 & 5, 6 & 6, 6 & 5, 6 & 5, 6 & 5, 6 & 6, 6 & 5, 6 & 5, 6 & 6 and 6 & 5 respectively were found at average in the scale of Sten scores. All the Sten scores of personality characters of 16 PF were falling at average scores, i.e. within 5 & 7 on the scale of Sten scores. It is clearly interpreted that all the Sten scores of 16 PF were neither low nor high scores in the scale of Sten scores and no significant differences of personality characteristics between hearing-impaired sportsman and non-sportsman were shown at all.

Discussion

Sports are very important medium to keep our body fit and healthy as well as an important factor in the education. As the education, aims in the all-round development of mental, moral, social and physical development sports are indispensable in our life. 'Use of sportive activities for rehabilitation and recreation of disabled children is now possible. Sport is becoming more common as a treatment complementary to conventional physical treatment methods. Work-out methods programmed in accordance with disability and age of disabled children can contribute to their social adaptation and psychological well-being' (Kizar, *et al.*)^[8]. The present study stressed to find out the significant differences of personality traits between the speech and hearing-impaired sportsman and non-sportsman. In case of the speech impairment, only the personality factor F and O were found significant differences between speech-impaired sportsman and non-sportsman by employing the 't' test. Further, only factor O was suggested to be found significant difference between the speech-impaired sportsman and non-sportsman as the personality characteristics of this factor were falling at the Sten scores of average and low in the scale of Sten scores. However, in case of hearing impairment, the personality factors B, O, Q1 & Q3 were found significant differences between the hearing-impaired sportsman and non-sportsman by using the 't' test method; whereas, no significant differences were found between the hearing-impaired sportsman and non-sportsman as the personality characteristics of all 16 PF were falling at the Sten scores of average (5-7) in the scale of Sten scores. In case of speech impairment, the alternative hypothesis was accepted for personality factors F and O only. On the other hand, in case of hearing impairment, only for the personality factors B, O, Q1 and Q3 the alternative hypothesis was accepted.

Conclusion

The present study suggest that there is the positive impact of sports participation among the speech-impaired and hearing-impaired population and they could develop the different personality traits to expose themselves among the normal people. Regular practice and organization of games and sports activities for the physically challenged population are mandatory to achieve the quality of life and standard of living among the normal people in the society.

Acknowledgement

An acknowledgement was drawn to all the subjects of physically challenged people, the state organizations or institutions for physically challenged people, scholars and experts, who helped for the administration of test, data collection and analyses for the completion of this research work.

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