

Correlation of Language Competency and Personality Traits in Stutters and Non Stutters

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Abstract

The present research was conducted to study the correlation between language competency, speech disability and personality characteristics that affect personal and social adjustment. It was hypothesized that less language competency will be found in the speech disabled group and they were likely to score high on clinical scales of MMPI as compared to the normal group. For this purpose in the first phase, a pilot study was conducted in which Urdu version of Test of Language Competence (TLC) and Minnesota Multiple Personality Inventory (MMPI) Urdu translation were administered to speech disabled and normal group. In the second phase, both the groups (N = 24, age range 18 - 28 years, males, education: O level grade to Masters Level) were given Urdu version of TLC and MMPI. Results showed that speech disabled group performed significantly poor on TLC as compared to normal group. On MMPI significantly high scores were found among stutterers on the clinical scales of Social Introversion (Si) and Depression (D). MMPI and TLC scores were found to be negatively correlated within the speech disabled group, as well as normal.

Key words: Stutters, TLC, MMPI, Speech disabled, Personality traits.

1. Introduction

Knowledge of language is language “competence” and this competence or knowledge guides the behaviors of saying and understanding. Researches reveal that language use consists of the socially and cognitively determined selection of the behaviors according to the goals of the speaker and the context of the situation. There are many psycholinguistic researches which have examined the correlation between linguistic variables and various speech non-fluencies. Gertner et.al (1994) found that limited language ability is associated with speech impairments in 31 speech disabled as compared to normal on a word category sentencing test. Language is directly related to communication and responsible for creating and sustaining social interaction and meaning. Law et.al (2008) investigated Receptive language impairment (RLI) in children with speech and language disorders based on reports of language therapy practitioners. Practitioners (56) focusing on receptive language impairment for the 5-11 ages, report all children experienced marked receptive language impairments, mainly those associated with expressive language difficulties or social communication problems. Therefore, children with Specific language impairment are likely at disadvantage in classrooms (Dodwell and Bavin 2008).

The distinction between the meaning in the message and the meaning of the message is of considerable importance in understanding all aspects of communication. Fujiki, Spackman, Brinton and Illig (2008) reported that Children with language impairment experience difficulty with understanding emotions expressed in language and that their social difficulties could be due to this difficulty.

2. Purpose and Rationale of Study

The present research was conducted to study the correlation between language competency, speech disability (Stuttering) and personality characteristics between stuttered group and non stutters. It was also to be found out whether personality traits are correlated with language competency within the stuttered group and normal group.

3. Hypothesis

- 1.) Less language competency will be found in stuttered group as compared to the non stutter group having no speech problem.
- 2.) Stuttered individuals will score high on clinical scales of MMPI as compared to the non stutters group having no speech problem.
- 3.) Higher the scores on MMPI (reflecting personal and social maladjustment) lower will the scores obtained on TLC (reflecting language incompetence)

4. Method and Procedure

4.1 Sample

The sample consisted of 2 groups, consisting of 24 males. 12 were diagnosed as stutters according to DSM IV. Second group is of 12 normal without any speech problem (Age range 18-28). The characteristics of subjects (N= 24, Males, Speech disabled / Normal) are summarized in Table 1.

Insert Table (1)

4.2 Instrument

Test of Language Competence (expanded Edition-Wiig and Secord, 1988) and Minnesota Multiple Personality Inventory (Urdu translation-Laeq Mirza, 1968) were used to measure language capacities and objective assessment of major personality characteristics that affect personal and social adjustment.

4.2.1: TLC: It comprises of 4 subtests which are as follows:

Subtest No. 1: Ambiguous Sentences

It comprises of 13 sentences which evaluate the subject's ability to identify and correctly assign meaning to a sentence.

Subtest No. 2: Listening Comprehension

It comprises of 12 statements which assess comprehension and the ability to draw inferences.

Subtest no. 3: Oral Expression

It measures the oral expressions and ability to express sentences after perceiving and expressing in a flow.

Subtest No 4: Figurative language

It consists of 12 statements which evaluate the subjects capacity to comprehend the metaphoric or interpretive language.

4.2.2 Minnesota Multiphasic Personality Inventory

This test is designed to provide an objective assessment of some of the major personality characteristics that affect personal and social adjustment. In this study Urdu version was used which consists of 399 items covering a wide range of subject matter - from the physical condition to the morale and the social attitudes of the individual being tested. Test comprises of 10 clinical scales and 3 validating scales: L (Lie), F (Validity), K (correction) the cut-off score of this test is T - 70. The 10 clinical scales are commonly referred to by their abbreviations.

Hs (Hypochondrias), D (Depression), Hy (Hysteria), Pd (Psychopathic deviate), Mf (Masculinity – femininity), Pa (Paranoia), Pt (Psychasthenia), Sc (Schizophrenia), Ma (Hypomania), Si (Social introversion).

4.3: Procedure

The Test of Language Competence (Expanded Edition) was translated Into Urdu and a pilot study was done on 6 subjects. 3 were from the sample of Stutter individuals, while the other 3 were normal with no speech Problem. Urdu version of MMPI was also administered to the subject of both the groups in the pilot study.

Data was then collected which comprised of 12 Stutters males being treated for their speech problem and 12 normal without any speech problem. Respondents were asked to give their age, education and profession. The behavioral observation of each respondent was noted down during the administration of both the tests.

5. Scoring

The scoring of Test of Language Competence and Minnesota Multiphasic Personality Inventory was done by using the scoring guidelines. Hand scoring keys were used for the scoring of MMPI. CUT off point for each scale was a t - Score of 70. Raw scores were converted into T – scores with the help of tables, given in the Urdu manual. Scoring of Test of Language Competence was different for different Subtests.

6. Statistical Analysis & Results

The main aim of this study was to measure if language competency is related to speech disability. It had also to be assessed if personality traits of speech disabled individuals have maladjustments as compared to normal without having any speech problems. It was hypothesized that language competency will be less in stutterers as compared to normal which were to be assessed through Test of Language Competence (Urdu Version). The mean scores obtained on TLC individual subtests as well as overall were compared between the groups using t-test. Further MMPI scores were also compared in the same manner.

7. Discussion

This study examined the correlation between speech disability and language competency. It was also extended to assess the personality characteristics of speech disabled group as compared to normal. The results of the present study confirm the previous researches which show the presence of language deficits in people who have speech problems. Gertner et. al. (1994) demonstrated that limited language ability was associated with speech impairments. The predicted and confirmed relationship found in the study between speech disability and language competency shows that competence is related to comprehension Sadaf (2009). According to Pollio et. al. (1990) people add new information to their competence mainly by comprehending speech. It appears that semantic – syntactic knowledge of verbs influences comprehension and production.

By evaluating the scores of the speech disabled group on all the subtests of Test of Language Competence, it is seen that lower scores are obtained on all the subtests. Research by Johnson et.al. (1973) has demonstrated that associative, linguistic and cognitive process are used in comprehension. They recognized that comprehension operates at different levels, from a relatively superficial grasp of the meaning of a message to a deep and detailed understanding.

The behavioral observation during the testing process showed that the Speech disabled group took more time to complete the test as compared to the normal group. This observation is consistent with the previous research conducted by Harbison., Porter and Tobey (1989) of Department of Psychology, Louisiana State University. Research was conducted on shadowed and simple reaction time in stutterers and non-stutterers. Study investigated the possibility that stutterers may be experience difficulties in preparing and executing responses. Result of the study indicated that stutterers were slower than non-stutterers regardless of the task or fore period. Difficulties in stutterers thus appear to lie after response initiation suggesting that they have problems in coordination of gestures during execution of fluent responses.

In the subtest of Oral Expression significantly poor result were found in the speech disabled group. The oral expression in language is mainly associated with powerful effects on such task as memory and production research conducted by Lee et.al. (1980) suggested that speech disabled are less intact semantically and syntactically and unable to make an accurate meaningful and complete sentence as compared to the person having no speech problem. Studies by Paivio (1991) suggest that speech hesitation is related to syntactic, semantic and pragmatic factors.

The decreased score achieved by the speech disabled group may represent a loss of efficiency in perceptual skills, or possibly an artifact of their environment which creates anxiety thus affecting their perceptual performance. According to Douglass (1954) person with speech disability is hypersensitive to social attitude and their state of anxiety may be an integral element in the fear of verbal difficulty, thus effecting their perception and inability to express oral information in sentence accurately.

In the present study, personality characteristic of stutterers was also examined. Result obtained according to MMPI showed that stutterers obtained high scores on the clinical scales of social Introversion & Depression as compared to the normal groups. The results of the present study are consistent with the previous research conducted by Goodstein et.al. (1989). He conclude that although only a few studies present strong evidence that stutterers are, themselves severely maladjusted, a majority of the studies analyzed support the claim that stutterers are at least some what less well adjusted than non-stutterers. Although except for social introversion and depression, stutterers have obtained scores with in the normal range. This shows that the stuttering may also be thought of a complex of reaction to normal non-fluency triggered by environmental pressures. This was proved by Johnson et.al. (1973). Differences are also found in the personality characteristic of stutterers. According to Riper (1982) no two stutterers are alike each one has a different type of stuttering.

Diamond (1953) relates stutterers to personality differences. Stutterers are tended to be more withdrawing and sensitive. This is also proved by the result of the present study which shows that on the scale of Social Introversion stutterers have achieved high scores as compared to the normal group. Butcher (1989) has suggested that MMPI is intended to be an inexpensive means of detecting psychopathology and is called multiphasic because it was designed to detect a number of psychiatric problems. According to Dahlstorm et.al. (1952) differential study of groups of person by a scale for Depression derived from multiphase personality schedule reveals that, significant separation of clinically depressed patient from normal can be demonstrated for a large percentage of cases.

Additionally, to identify the relationship between personality characteristics and language competency, MMPI subtest scores were correlated with TLC scores. Results in Table No. 2 showed significant differences in means between the speech disabled group and the normal group on Test of Language Competence (N = 12, \bar{X} of speech disabled group = 81.3, Sd = 8.47, \bar{X} of normals = 128.6, Sd = 12.61, (t = 10.78, P < .000) which shows that language competency is less in speech disabled group.

In the present study it was also hypothesized that speech disabled. Individuals will score high on scales of MMPI as compared to the normal group. Comparison of means between the two groups on MMPI indicated significant differences, as seen in Table No.3 (t = 3.33, P < .003) which supports the above mentioned hypothesis. The results on MMPI of speech disabled group showed scores above the cut-off score of T - 70 on the scales of Depression and Social Introversion. When these two clinical scales were compared with the scores of the normals (on 'D' \bar{X} of speech disabled group = 59.66, Sd = 10.89 & \bar{X} of normals = 36.33, Sd = 11.14, t = 5.18, P < .000, on 'Si' \bar{X} of speech disabled group = 65, Sd = 4.66 & \bar{X} of normals = 39.83, Sd = 185, t = 4.46, P < .000) significant results were obtained, as seen in table no. 6. This shows that on the scale of Social Introversion and Depression speech disabled group has obtained significantly high T-scores than the normal group.

When the scores of TLC and MMPI of speech disabled group were correlated with each other, significant negative correlation (r = -.411) was found (P < .185). This supports the hypothesis that higher the scores of MMPI lower will be the language competency. Same results were obtained when the scores of TLC and MMPI of normals were correlated with each other. A negative correlation (r = -.601) was found (P < .039) indicating lower the scores on MMPI higher will be scores on TLC. Patients having moderate degree of depressive trend without specific abnormality can also be differentiated. The Social Introversion scale according to Dahlstorm et. al. (1952) is a derived key which appears to have equally good validity for both males and females population.

Thus previous researches prove that the scale of “D” and “Si” are good detectors of psychopathology among stutterers. It is concluded that language and personality characteristics differ in stutterers as compared to normal group. Language competency is found to be lower in stutterers as compared to non-stutterers. Further these individuals also exhibit traits of social introversion and depression.

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Table 1: The characteristics of subjects (N= 24, Males, Speech disabled / Normal)

SPEECH DISABLED GROUP			NORMAL GROUP		
	Frequency (f)	Percentage (%)		Frequency (f)	Percentage (%)
N	12		N	12	
AGE			AGE		
18 years	1	8.3%	19 years	4	33.3%
19 years	5	41.6%	20 years	1	8.3%
20 years	1	8.3%	23 years	1	8.3%
24 years	2	16.6%	24 years	1	8.3%
25 years	1	8.3%	25 years	3	25%
28 years	2	16.3%	27 years	2	16.6%
EDUCATIO N			EDUCATION		
O levels	2	16.6%	O levels	2	16.6%
Bachelors	6	50%	Bachelors	6	50%
Masters	2	16.6%	Masters	2	16.6%
M.B.B.S.	2	16.6%	M.B.B.S.	2	16.6%

TABLE NO: 2 MEANS OF TOTAL SCORES OF SPEECH DISABLED / NORMAL GROUP ON TESTS OF LANGUAGE COMPETENCE

	Subjects	N	MEAN X	Sd	S.Ex	t	P
<i>TOTAL TLC</i>	Speech Disabled Group	12	81.33	8.47	2.44	10.78	.000
	Normals	12	128.6	12.61	3.64	10.78	.000

Figure 1

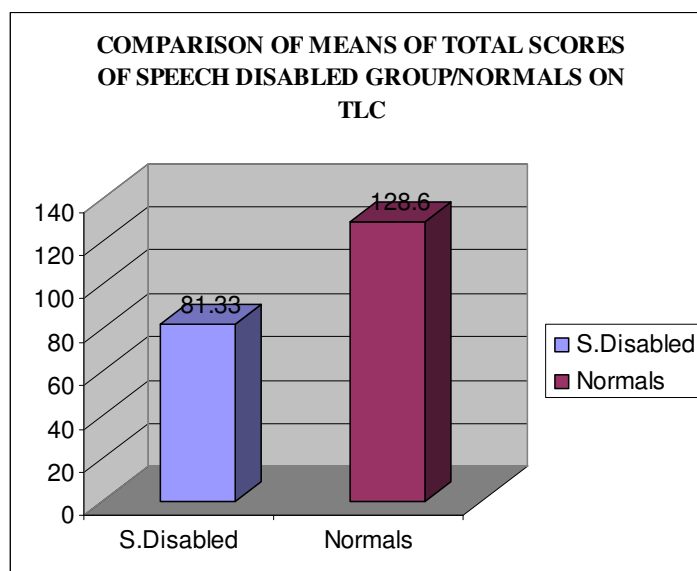


TABLE NO: 3 MEANS OF TOTAL SCORES OF SPEECH DISABLED / NORMAL GROU ON MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

	Subjects	N	MEAN X	Sd	S.E	t	P
<i>TOTAL MMPI</i>	Speech Disabled Group	12	677.3	58.16	16.79	3.33	.003
	Normals	12	584	77.71	22.43	3.33	.003

TABLE NO: 4 CORRELATIONS OF THE MMPI & TLC SCORES OF SPEECH DISABLED GROUP

TOTAL TLC & MMPI SCORES	Mean	N	S.D	Corr.	P
	677.3	12	58.16	-.411	.185
	81.33	12	8.47		

TABLE NO: 5 CORRELATIONS OF THE MMPI & TLC SCORES OF NORMALS

<i>OVERALL TLC & MMPI SCORES</i>	Means	N	S.D	Corr.	P
	584	12	77.7	-601	.039
	128.6	12	12.6		

TABLE NO: 6 COMPARISONS OF SCORES OF SPEECH DISABLED GROUP & NORMALS ON “D” & “Si” OF MMPI

	Subjects	N	Means	Sd	T	P
D	Speech Disabled Group	12	59.66	10.89	5.185	.000
	Normals	12	36.33	11.14		
Si	Speech Disabled Group	12	65	17.68	4.46	.000
	Normals	12	39.83	12.85		

