

Original Research Article

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Differential Effects of Hearing Status on Self-Esteem among School Children

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ABSTRACT

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To examine the individual factors impacting the self-esteem of hearing impaired (HI) children and normal hearing (NH), a sample of 142 school children of which 77 hearing impaired and 65 normal hearing children (class 8th, 9th, and 10th) in the age range of 13-18 years were selected purposively from residential deaf and dumb and regular high schools of Dharwad and Belagavi district during 2018-19. State self-esteem scale by Heatherton and Polivy (1991) was used to assess self-esteem, socio-economic scale by Aggarwal *et al.*, (2005) and general information schedule was used to collect the personal information. The results revealed, majority of both HI (51.90%) and NH (67.70%) group had moderate level of self-esteem and there was significant difference found between hearing impaired and normal hearing children on their self-esteem where normal hearing children had significantly higher self-esteem than the hearing impaired. Hearing impaired children were significantly low on performance (49.40%), social (61%) and appearance (71.40%) dimensions of self-esteem than normal hearing children. Self-esteem of both the group did not differ on age, gender, ordinal position whereas academic achievement had significant influence on self-esteem of hearing impaired children and normal hearing children. Early detection and interventions are crucial to minimizing the impact of hearing loss on child development of self-esteem.

Introduction

The communication of one person to another person depends on sound. What would it be like to survive in a world that is silent? People keep goes on talking but you don't have an ability to hear. The sense of hearing provides a platform and gives feeling of security and

participation in life. A child born with hearing loss, significantly face challenges in areas of communication and social adaptation. Hearing is one of the most important sensory ability that increases the adaptation of human with their environment. According to Soliman (2007) hearing impairment means a deviation in hearing that reduces the ability of oral and

verbal communication. The effects of hearing loss are not easy to identify it may vary from generalize to specific difficulties like language development, social, emotional and educational development.

Disabling hearing loss refers to hearing loss greater than 40 dB in the better hearing ear in adults (15 years or older) and greater than 30 dB in the better hearing ear in children (0 to 14 years). According to WHO (2018) report 466 million people worldwide have disabling hearing loss. Out of which 432 million of them are adults and 34 million are children. It has projected that by 2050, the number could rise to over 900 million. In India, 63 million people (6.30 %) suffer from significant auditory loss. The National Sample Survey 58th round (2002) reported that hearing disability was the second most common cause of disability and top most cause of sensory deficit in Indian households.

In general terms, self-esteem refers to the positive or negative attitude an individual holds toward himself. Self-esteem refers to ones general evaluation or appraisal of the self including feelings of self-worth. Moreover individual with high level of self-esteem are better able to cope with stressful life event where as hearing impaired children because of their unstable emotions, difficulty in building social relationships and handling their own emotions, exhibit low level of self-esteem They are at a greater risk of exclusion and rejection from others due to their limitations in communication which affects their understanding of themselves negatively.

Children with deafness have lower level of self-esteem, particularly in their social lives compared to their peers. Positive self-regard is important for successful functioning in everyday life. Therefore, developing high self-esteem is essential for hearing impaired children to excel their academic life as well as

in their future life. There is limited research that has investigated the influence of hearing status on self-esteem of children. Hence, the present study has been taken up with the following objectives:

To assess the self-esteem of hearing impaired (HI) and normal hearing (NH) children

To analyse the individual factors influencing self-esteem of hearing impaired and normal hearing children.

Materials and Methods

The population for the study consists of hearing impaired and normal hearing high school children from Dharwad and Balagavi cities of Karnataka, India. Study involved differential research design. Totally 80 hearing impaired and 80 normal hearing children were selected purposively, because of attrition final sample comprised of 77 hearing impaired high school children and 65 normal hearing children in the age range of 13 to 18 years studying in 8th, 9th and 10th standard from Dharwad and Balagavi district. Block education officer and principal of respective schools were contacted and permission was taken to carry out the research work. A class wise list of hearing impaired children studying in 8th, 9th and 10th was made and respondents were explained all questions in sign language with the help of class teachers and data was gathered.

Self-esteem scale by Heatherton and Polivy (1991) was used to measure the self-esteem across social, performance and appearance domain. It consist of 20 items, with five alternative response options i.e. not at all, a little bit, somewhat, very much, and extremely with scoring of 1, 2, 3, 4, and 5 respectively. The socio-economic status of the family was assessed by using scale developed by Aggarwal *et al.*, (2005). It consists of 22

statements which assesses parents education, occupation and income from all sources, type of house and location, family possessions and number of earning members in family, number of children, possessions of agriculture and non-agricultural land, possessions of domestic animals and social status of the family. The structured interview schedule was used to collect information such as name, age, gender, education, ordinal position, degree of loss, onset of impairment, mode of communication and academic achievement of the child. Descriptive and inferential statistics such as chi-square, t-test and one-way ANOVA analysis were employed to know the differences between self-esteem of hearing impaired and normal hearing children and associated factors.

Results and Discussion

The results of table 1 a. showed that the higher percentage of hearing impaired children had moderate (51.90 %) level of self-esteem followed by low (45.50 %), high (2.60 %). Whereas among normal hearing children more than half of children fell under moderate (67.70 %) level, 32.2 per cent fell under high level and none of them were in low level of self-esteem. Hence, the chi-square analysis showed a significant association ($\chi^2 = 50.33$) at 0.01 per cent level and there was significant difference found between hearing impaired and normal hearing children (Table 1b), where normal hearing children had higher mean score (71.40 ± 6.85) than hearing impaired (55.54 ± 7.49).

An examination of Table 2 reported distribution and comparison of dimensions of self-esteem of HI and NH children. With respect to performance dimension of self-esteem, hearing impaired children had low (49.40 %) level followed by average (48.10 %) whereas, in normal hearing group more than half of them had average (60.0 %) level

and 40 per cent fell under high level category. The t-test revealed significant difference ($t = 14.67$) between hearing impaired and normal hearing children. With regard to social dimension of self-esteem, majority of hearing impaired children fell under low (61.0 %) level and least were in high (2.60 %) level, while normal hearing children fell under high level (47.70 %) and least were in low (9.20 %) level. There was significant difference found between ($t = 8.67$) groups on social self-esteem dimension at 0.01 level of significance. Regarding appearance dimension of self-esteem both hearing impaired and normal hearing groups had average level (HI, 71.40 % and NH, 52.34 %) and none of hearing impaired fell under low level whereas only one sample from normal hearing group had low level. The t- test analysis found a significant difference ($t = 1.84^*$) between hearing impaired and normal hearing children at 0.05 per cent level of significance.

In present study hearing impaired children expressed that they had difficulty in understanding, expressing thoughts/feelings as well as had low confidence than normal hearing children. The results of present findings are in parallel with study conducted by Damjana (2015) found that, deaf and hard of hearing adolescents had lower self-esteem than hearing adolescents. The findings of Lesar and Vitulić (2014) reported that *DHH* students from special schools had lower self-esteem in emotional and physical self and confidence than those from regular school.

This supports the opinion of Theunissen *et al.*, (2014) who also stated that, perceived physical appearance domain of hearing impaired children was moderate did not differ significantly which suggest hearing impaired children do not feel insecure about their looks than other teenagers where as hearing impaired children reported low self-esteem on social acceptance domain indicated hearing

impaired children might have felt less liked and appreciation by peers and parents.

Woolf and Smith (2001) in his qualitative study reported that deaf children with deaf parents had high self-esteem than the hearing parents. In the context of 'hearing parents and deaf siblings' children quoted that *'My brother is the favourite of my parents, he ignores me, and my parents ignore me too. My brother has better speech than me and hears more than me. My parents talk a lot, I don't understand, and they tell me to mind my own business. They talk to my brother more'*. The issue of friends was also raised like: *'My hearing friends don't sign, they are siblings of my Deaf friends. I prefer to be with Deaf friends, there is more sign language and empathy. Hearing people can't understand why we use BSL (Basic Sign Language). If all are Deaf, means we can understand and have good times'*. Children self-esteem was strongly influenced by parental hearing status and lack of availability of access to conversation can be seen to hinder a good sense of self and leads to lower self-esteem.

A perusal of Table 3 shows the comparison of self-esteem with age among hearing impaired and normal hearing children. Among HI group, majority of both 13-15 years and 16-18 years children had average (52.80 % and 51.20 % respectively) level followed by low (44.40 % and 46.30 % respectively) and high (2.80 % and 2.40 % respectively) level of self-esteem. There was no significant ($\chi^2 = 0.03$) association and differences observed between hearing impaired children level of self-esteem between both age groups. In NH group 72.50 per cent of 13-15 years children fell under the category of average and 27.50 per cent fell under high level of self-esteem. The similar trend was observed among 16-18 years children. There was no significant association and difference found between groups.

Table 4 reflects the comparison of self-esteem of hearing impaired and NH children by gender. Among HI group majority of boys belong to low level (52.40 %) followed by average (42.90 %) and only 4.80 per cent being in high level of self-esteem. Whereas more than half of girls had average (61.80 %) and 39.20 per cent were in low level of self-esteem. With respect to normal hearing group, majority of both boy and girl children fell under average (72.0 % and 65.10 % respectively) level of self-esteem and 27.30 per cent of boys and 34.90 per cent of girl had high level of self-esteem. However, there was no significant association and difference observed. Age and gender had no significant influence on self-esteem of hearing impaired and normal hearing children. The results are in parallel with the study conducted by Crowe (2003) showed no relationship between age, gender and self-esteem. Similarly Lesar and Vitulić (2014) found that self esteem and dimensions including social, physical self and confidence did not differed by age and gender.

An examination of Table 5 revealed influence of ordinal position on self-esteem of hearing impaired and normal hearing children. With regard to HI children, majority of first born and later born belonged to average (55.0 % and 53.60 %) whereas second born equally fell under average (48.30 %) and low (48.30 %) level of self-esteem, only 5 per cent of first born and 3.4 per cent of second born had high level of self-esteem. However, no significant association ($\chi^2 = 1.56$) and difference observed ($t = 1.10$). Among NH group, majority of first born were in average level (58.30 %) and 67 per cent of them were in high level of self-esteem. The similar trend was observed among both second and later born. Chi-square and F-test revealed there was no significant association ($\chi^2 = 3.14$) and difference ($F = 1.45$) between groups respectively.

Table.1a Distribution of hearing impaired and normal hearing children by levels of self-esteem

N=142

Level of self-esteem	Hearing impaired Frequency (%)	Normal hearing Frequency (%)	Total Frequency (%)	Modified χ^2
High	2 (2.60)	21 (32.20)	23 (16.19)	50.23**
Moderate	40 (51.90)	44 (67.70)	84 (59.15)	
Low	35 (45.5)	-	35 (24.64)	
Total	77 (100)	65 (100)	142 (100)	

Figure in the parenthesis indicates percentage, NS- indicates Non significance

Table.1b Comparison of self-esteem level between hearing impaired and normal hearing children.

N=142

Children	Mean \pm SD	t-value
Hearing impaired	55.54 \pm 7.49	13.05**
Normal Hearing	71.40 \pm 6.85	

**Significant at 0.01 levels

Table.2 Distribution of hearing impaired and normal hearing children by dimensions of self-esteem.

N=142

Sl. No	Dimensions of self-esteem	Levels			Levels		
		High	Average	Low	High	Average	Low
1.		Hearing impaired(N=77)			Normal hearing (N=65)		
	Performance	2 (2.60)	37 (48.10)	38 (49.40)	26 (40.00)	39 (60.00)	-
	Mean \pm SD	17.05 \pm 3.47			25.20 \pm 3.07		
	t-value	14.67 **					
2.	Social	2 (2.60)	28 (36.4)	47 (61.00)	31 (47.70)	28 (43.10)	6 (9.20)
	Mean \pm SD	16.14 \pm 4.92			23.20 \pm 4.71		
	t-value	8.67**					
3.	Appearance	22 (28.60)	55 (71.40)	-	30 (46.20)	34 (52.30)	1 (1.5)
	Mean \pm SD	22.35 \pm 1.72			24.00 \pm 2.45		
	t-value	1.84*					

Figure in the parenthesis indicates percentage, **Significant at 0.01 level, *Significant at 0.05 level.

Table.3 Influence of age on self-esteem of hearing impaired and normal hearing children.

N=142

Children	Age	Levels of self-esteem				Modified χ^2	Mean \pm SD	t-value
		High	Average	Low	Total			
Hearing impaired	13-15	1 (2.80)	19 (52.80)	16 (44.40)	36 (100)	0.03 ^{NS}	54.30 \pm 8.62	0.26 ^{NS}
	16-18	1 (2.40)	21 (51.20)	19 (46.30)	41 (100)		55.75 \pm 7.46	
Normal hearing	13-15	11 (27.50)	29 (72.50)	-	40 (100)	1.09 ^{NS}	70.45 \pm 6.80	1.09 ^{NS}
	16-18	10 (40.00)	15 (60.00)	-	25 (100)		72.92 \pm 6.81	

Figure in the parenthesis indicates percentage, NS- indicates Non significance

Table.4 Influence of gender on self-esteem of hearing impaired and normal hearing children.

N=142

Children	Gender	Levels of self-esteem				Modified χ^2	Mean \pm SD	t-value
		High	Average	Low	Total			
Hearing impaired	Boys	2 (4.80)	18 (42.90)	22 (52.40)	42 (100)	3.75 ^{NS}	65.26 \pm 8.90	0.38 ^{NS}
	Girls	-	21 (61.80)	14 (39.2)	34 (100)		62.85 \pm 5.52	
Normal hearing	Boys	6 (27.30)	16 (72.0)	-	22 (100)	0.45 ^{NS}	71.86 \pm 6.35	0.47 ^{NS}
	Girls	15 (34.90)	28 (65.10)	-	43 (100)		71.16 \pm 7.16	

Figure in the parenthesis indicates percentage, NS- indicates Non significance

Table.5 Influence of ordinal position on self-esteem of hearing impaired and normal hearing children.

N=142

Children	Ordinal position	Levels of self-esteem				Modified χ^2	Mean \pm SD	F-value
		High	Average	Low	Total			
Hearing impaired	First	1 (5.00)	11 (55.00)	8 (40.00)	20 (100)	1.56 ^{NS}	57.60 \pm 8.37	1.10 ^{NS}
	Second	1 (3.40)	14 (48.30)	14 (48.30)	29 (100)		55.24 \pm 8.32	
	Later	-	15 (53.60)	13 (46.40)	28 (100)		54.38 \pm 5.58	
Normal hearing	First	10 (41.70)	14 (58.30)	-	24 (100)	3.14 ^{NS}	73.25 \pm 5.84	1.45 ^{NS}
	Second	4 (18.20)	(81.80)	-	22 (100)		70.00 \pm 6.76	
	Later	7 (36.80)	12 (63.20)	-	19 (100)		70.68 \pm 7.92	

Figure in the parenthesis indicates percentage, NS- indicates Non significance

Table.6 Influence of academic achievement on self-esteem of hearing impaired and normal hearing children.

N=142

Children	Academic achievement	Levels of self-esteem				Modified χ^2	Mean \pm SD	F-value
		High	Average	Low	Total			
Hearing impaired	Excellent	-	9 (52.90)	8 (47.10)	17 (100)	2.96 ^{NS}	64.17 \pm 5.411	5.98*
	Average	-	11 (57.90)	8 (42.10)	19 (100)		57.68 \pm 7.42	
	Low	2 (4.90)	17 (41.50)	22 (53.70)	41 (100)		56.12 \pm 9.24	
Normal hearing	Excellent	12 (32.40)	25 (67.70)	-	37 (100)	2.18 ^{NS}	79.40 \pm 8.02	2.03 *
	Average	8 (29.60)	19 (70.40)	-	27 (100)		72.37 \pm 4.70	
	Low	1 (100)	-	-	1 (100)		70.48	

Figure in the parenthesis indicates percentage. *Significant at 0.05 level, NS indicates Non significance

The findings of the study are in line with Sahils and Belgin (2006) who reported that birth order did not had any effect on child's self-esteem level.

academic achievement of hearing impaired and NH children on their self-esteem. As depicted in table among hearing impaired children, highest per cent of children from excellent and average academic achievement category had average (52.90 % and 57.90 %)

A glance of Table 6 shows the influence of

level of self-esteem. While highest per cent of low academic category children had low (53.70 %) level, only 4.9 per cent of them had high level of self-esteem.

However, there was no significant association found but, there was significant difference ($F = 5.98$) observed between there group at 5 per cent of significant. With regard to normal hearing group, 67.70 per cent of children from excellent category had average level and 32.4 per cent had high level of self-esteem, similar trend was seen among average academic achievement category, while one child with low academic achievement exhibited high level of self-esteem, which was not taken in account for mean comparison. There was significant difference observed ($F = 2.03$, $P = 0.05$), indicating excellent category had higher self-esteem than the average category.

Hearing impaired children expressed they have less scholastic ability than other, have trouble in understanding the content they read and they expressed less confident about their abilities than the normal hearing children.

Study findings are in agreement with study by Ekek and Oladya (2015) who reported that optimism and self-esteem positively predicted academic achievement of special need learners. Alokani *et al.*, (2014) found significant difference in the academic performance both high and low self-esteem group. Students with high self-esteem performed better than the students with low self-esteem.

The study highlighted that children with hearing impairment had significantly low self-esteem than the normal hearing children and significantly differed on social, performance and appearance domain of self-esteem. Self-esteem did not differed by age, gender and ordinal position but academic achievement had significant influence on self-esteem. This

call for early detection and intervention programme to minimizing the impact of hearing loss on child's development and focus on their strengths, build confidence, emphasize on their positivity to maximize the self-esteem.

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