

Comparison of Body Image Satisfaction between Iranian Adolescents with and without Stuttering

Maryam Ardani¹, Mohsen Saeidmanesh^{2*}, Mohammad Hossein Zebhi³

Sepideh Semsar Yazdi³, Alireza Ravanshad³, Zohre Alipoor Esmaeili Anari³

1. Master's Degree in general Psychology, Department of Psychology, Islamic Azad University, Meybod, Iran

Email: m.s.ardani62@gmail.com

2. Associate Professor, Department of Psychology, Science and Arts University, Yazd, Iran (Corresponding author)

Email: M.saeidmanesh@yahoo.com

3. Department of Psychology, Science and Arts University, Yazd, Iran

Abstract

Introduction: Stuttering is a speech production disorder. This disorder can greatly affect a person's ability to communicate with others. The aim of this study was to Comparison of body image satisfaction between Iranian adolescents with and without stuttering.

Materials and Methods: The present study is of cause-comparison type and a cross-sectional study. A total of 60 adolescents with stuttering and 60 adolescents without stuttering randomly were selected. We have used body self-description questionnaire (Marsh, 1996) to measure body self-concept. Data analysis was performed using independent group's t-test.

Results: Data analysis showed that it can be seen that in each of the eleven body image description subscales, the scores of adolescents without stuttering are more than adolescents with stuttering. In fact, body image satisfaction in adolescents without stuttering were better. ($P < 0.05$).

Conclusion: According to the results of this research, Adolescents with stuttering have lower body image satisfaction than adolescents without stuttering.

Key words; Body image satisfaction, Adolescents, Stuttering

Introduction

Stuttering is a speech production disorder. This disorder can greatly affect a person's ability to communicate with others. In many people with stuttering, verbal output and language complexity is limited. This leads to the anticipation and fear of stuttering, prompting sufferers to avoid using specific words and language intricacies associated with interaction [1, 2]. Stuttering affects a person's quality of life. [3, 4]. For many, educational and career potential is limited [5]. Many people who stutter will also experience various mental health conditions [6, 7].

Stuttering is a neurodevelopmental disorder that affects 5% to 11% of children. Stuttering in children appears on average around 33 months. The prognosis for recovery is ideal with 75% to 80% of children recovering from stuttering at 15 months after onset of the disorder. Parents may be advised to delay treatment to allow time for natural healing. But when the child reaches the age of 5, the recovery rate drops to 50-60% [8]. The persistence of stuttering in children and its lack of treatment increases the risk of developing negative communication attitudes and mental distress in children and adolescents and can lead to more nervous involvement such as secondary physical movements in adolescence [9].

Man is a beautiful creature and the desire for beauty has existed in human nature since long ago.

[10] A desirable face improves a person's self-image and gives him self-confidence, as a result of which social activities are formed at a more acceptable level. [11] Appearance is an important part of a person's identity, and in social situations, it is immediately apparent when dealing with others, so the importance of this personality structure is very obvious. [11] Physical appearance is an important part of body image because it is the first source of information that others use for social interactions with a person. [12] A person's concept of his body is an important part of his self-concept. [13] The body is the most visible part of the self and self-awareness of the person. Body image is the internal embodiment of a person's external appearance, which includes physical, cognitive and attitudinal dimensions. [14] The main dimensions of this attitude include evaluation components, individual investment in dealing with appearance schemas and emotions, which highlights the importance of internalized appearance [15 , 16].

Body image, a multidimensional construct central to emotional well-being of which the attitudinal component is satisfaction with body size [17], is a strong determinant of nutritional habits and weight management practices among adolescents [18]. Assessment of body image perception provides the possibility of quantifying significant dimensions of body image, i.e. satisfaction or dissatisfaction with the body [18]. Dissatisfaction (dissatisfaction) with body image is usually measured as the difference between perceived and ideal body shape. Dissatisfaction with body image is a common concern among both sexes, peaking in early adolescence [19]. In general, several factors may contribute to body image dissatisfaction in people of different age groups, such as biological, psychological, and socio-cultural factors [20].

Currently, information on the relationship between body image satisfactions in stuttering adolescents is lacking and unclear. In order to provide effective treatment interventions for adolescents with stuttering, it is necessary to investigate body image dissatisfaction in them. Also, considering the vital role of body image satisfaction in shaping adolescent behaviors, it is very important to investigate and fully understand its role in this group. Therefore, the present study was conducted with the aim of a comparative study of body image satisfaction between adolescents with and without stuttering.

Materials and Methods

Study design and participants

The present study is of cause–comparison type and a cross-sectional study. The statistical population included Iranian adolescents with stuttering who referred to speech therapy clinics in Yazd city, which were about 350 people. A total of 60 adolescents with stuttering ($n=60$, mean age= 14.82 ± 3.38 years) and 60 adolescents without stuttering ($n=60$, mean age= 15.23 ± 3.56 years) randomly were selected using.

The inclusion criteria were having stuttering based on clinical tests and confirmation of speech therapist, age range of 12 to 18 years, not using other treatment methods such as psychotherapy and psychiatric drugs. Exclusion criteria were the presence of a disorder other than stuttering, bilingualism and lack of motivation to participate in the research. In addition, based on the report of the person accompanying the patient and the patient himself and his medical records, it was ensured that he did not suffer from psychiatric diseases. Adolescents without stuttering had all the conditions of entering and exiting the research like adolescents with stuttering. Each person completed the consent form to participate in the research.

Measure

Physical self-description questionnaire (PSDQ)

The body self-description questionnaire was created by Marsh (1996) to measure body self-concept, which measures body self-concept by means of 9 specific subscales and 2 general subscales. The short and new form of this questionnaire contains 47 statements and has reliability. It is good and repeatability is desirable. Body self-description includes 9 specific factors for body self-concept (activity, appearance, body fat, fit, resistance, flexibility, health, exercise and strength) and two general subscales including general body self-concept and self-Describing, self-esteem, which includes physical ability, physical appearance, self-respect, and the concepts of physical fitness are known. Each subscale contains 6 or 8 statements, and each statement is presented in a way that the subject can answer on a 6-point scale from true to false. Answers. Therefore, the minimum score is 47 and the maximum score is 282. In 1996, Marsh and colleagues investigated the validity and reliability of the physical self-description questionnaire with two samples of 315 and 395 Australian high school students and observed that this test has the required validity for It has the ability to identify self-concept factors, and with the Cornbrash's alpha method, it has a reliability of 0.80 It worked [21]. In Iran, this questionnaire was evaluated by Bahram and Shafizadeh in 2013 in a sample of 351 high school students. The results regarding temporal reliability with the test-retest method were equal to 0.78 and internal consistency with Cronbach's alpha method was equal to 0.88.[22] The validity and reliability of this questionnaire was re-examined by Abdul Maliki et al. in 2013, and the reliability of the whole questionnaire was obtained using the Cronbach's alpha method of 0.87, and the reliability range of each of its subscales was also variable between 0.50 and 0.88.[23]

Data analysis

The collected data were analyzed in SPSS 22 software. Mean and standard deviation to describe the data and in the inferential statistics section of the research, Kolmogorov-Smirnov test was first used to determine the normality of data distribution in each group, and then independent groups t-test was used to compare the collected body image. Statistical tests were performed at the error level of 0.05.

Results

In Table 1, the results of the t-test regarding the comparison of subscales 11 types of body image among adolescents with or without stuttering.

Table 1. Results of the t-test regarding the comparison of subscales 11 types of body image among adolescents with or without stuttering

Groups Subscales	adolescents with stuttering	adolescents without stuttering	T	P
Body strength	16.27	27.41	3.74	0.001
Physical endurance	11.62	24.73	4.45	0.02
Coordination	15.68	29.23	3.74	0.03
General health	18.33	33.78	4.94	0.001
Flexibility	17.45	27.89	3.78	0.02

Self-esteem	11.29	20.67	4.51	0.001
Body appearance	12.84	27.45	3.97	0.001
Physical activity	11.89	23.87	4.48	0.001
Body fat	12.46	22.69	3.82	0.001
Sports ability	14.15	22.75	4.11	0.001
Total body	13.35	26.34	3.48	0.04

According to the above table, which is related to the scores obtained from the 11 subscales of the PSDQ, using the t-test of independent groups, it can be seen that in each of the eleven body image description subscales, the scores of adolescents without stuttering are more than adolescents with stuttering. In fact, body image satisfaction in adolescents without stuttering were better.

Discussion

Regarding the comparison of body image in teenagers with and without stuttering, the results obtained from this research showed that the body image of teenagers without stuttering is significantly better than the body image of teenagers with stuttering. In other words, the average body image description scores in 11 subtests related to the PSDQ test in adolescents without stuttering were higher than those with stuttering. It seems that stuttering reduces self-esteem, self-concept and mental health in adolescents with stuttering, which is shown in the studies of Tichenor et al. (2022) and Junuzovic-Zunic et al. (2021). [24, 25]

Given that the category of body image and Subscales are multi-dimensional issues that are affected by various factors, so these results can be analyzed using various influencing factors. Social issues related to stuttering such as self-esteem, self-confidence, interpersonal relationships, anxiety and depression need to be carefully evaluated. Studies have shown that the self-esteem and self-confidence of people who stutter is much lower than people without stuttering, and this can have a negative impact on all aspects of self-concept, including body image.

Children who have better social and emotional competencies, more adjustment and better temperament are more satisfied with their body image, so this hypothesis can be confirmed. That is, children who are satisfied with their body image, have more skill in understanding and appreciating the feelings of others, more flexibility and effectiveness in solving conflicts, and a more positive attitude towards life, and therefore they can control their emotions better. It has been shown that emotions, perceptions and thoughts are related, so if we learn to control our emotions and thoughts, we can also increase the satisfaction with our body image. [26] Because teenagers who stutter due to their speech problem, have many negative feelings and emotions and usually endure a lot of anxiety, it can lead to role-cognitive dissatisfaction, including dissatisfaction with their body image.

The mental image of the body is a person's attitude about his physical states, characteristics, appearance and performance. Any change in the function and structure of the body, especially the changes caused by the process of growth and development, can affect the mental image of a person's body. Adolescence is a good example of the interaction between physical changes and the development of the mental image of the body. For most teenagers, self-image is what others think of them and whether they are physically ideal or not.

Self-concept and body image may be influenced by many factors: physical, psychological, emotional, cultural and socio-economic. Teenagers who stutter become depressed and this leads to isolation and a lot of negative feelings towards themselves. Adolescence is accompanied by changes in sex hormones and puberty, and the adolescent gradually attains independence and pride according to

his age, and the presence of a problem such as stuttering disrupts all stages of natural psychological development in the adolescent and reduces the adolescent's self-confidence and self-esteem. It causes a lot of damage. This high volume of negative emotions along with muscle spasms that are seen with people who stutter can make the teenager pessimistic about his body image and lead to dissatisfaction with his body image.

Conclusion

According to the results of this research, Adolescents with stuttering have lower body image satisfaction than adolescents without stuttering.

Ethical Considerations

Compliance with ethical guidelines

It should be noted that this article has a code of Ethics
From Academic Center for Education of Mashhad (IR.
ACECR.JDM.REC.1401.057)

Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

Authors' contributions

MS: Study design, acquisition of data, interpretation of the results, statistical analysis and drafting the manuscript;
MA: Study design, interpretation of the results, And drafting the manuscript; HZ: Interpretation of the results.

Conflict of interest

The authors declare that they have no conflict of interest.

Acknowledgements

We are grateful to all those who helped us in this research.

References

- [1] Lee A, Van Dulm O, Robb MP, Ormond T. Communication restriction in adults who stutter. Clin Linguist Phon. 2015 Jul;29(7):536-56. doi: 10.3109/02699206.2015.1030039. Epub 2015 Apr 20. PMID: 25894831.
- [2] Spencer E, Packman A, Onslow M, Ferguson A. A preliminary investigation of the impact of stuttering on language use. Clin Linguist Phon. 2005 Apr-May;19(3):191-201. doi: 10.1080/02699200410001698625. PMID: 15823955.
- [3] Craig A. The association between quality of life and stuttering. J Fluency Disord. 2010 Sep;35(3):159-60. doi: 10.1016/j.jfludis.2010.08.002. PMID: 20831964.
- [4] Koedoot C, Bouwmans C, Franken MC, Stolk E. Quality of life in adults who stutter. J Commun Disord. 2011 Jul-Aug;44(4):429-43. doi: 10.1016/j.jcomdis.2011.02.002. Epub 2011 Mar 27. PMID: 21536306.
- [5] Gerlach H, Totty E, Subramanian A, Zebrowski P. Stuttering and Labor Market Outcomes in the

- United States. *J Speech Lang Hear Res.* 2018 Jul 13;61(7):1649-1663. doi: 10.1044/2018_JSLHR-S-17-0353. PMID: 29933430; PMCID: PMC6195060.
- [6] Craig A, Blumgart E, Tran Y. A model clarifying the role of mediators in the variability of mood states over time in people who stutter. *J Fluency Disord.* 2015 Jun;44:63-73. doi: 10.1016/j.jfludis.2015.03.001. Epub 2015 Mar 20. PMID: 25825349.
 - [7] Lowe R, Menzies R, Onslow M, Packman A, O'Brian S. Speech and Anxiety Management With Persistent Stuttering: Current Status and Essential Research. *J Speech Lang Hear Res.* 2021 Jan 14;64(1):59-74. doi: 10.1044/2020_JSLHR-20-00144. Epub 2021 Jan 5. PMID: 33400555; PMCID: PMC8608149.
 - [8] Walsh B, Usler E, Bostian A, Mohan R, Gerwin KL, Brown B, Weber C, Smith A. What Are Predictors for Persistence in Childhood Stuttering? *Semin Speech Lang.* 2018 Sep;39(4):299-312. doi: 10.1055/s-0038-1667159. Epub 2018 Aug 24. PMID: 30142641; PMCID: PMC6154780.
 - [9] Walsh B, Christ S, Weber C. Exploring Relationships Among Risk Factors for Persistence in Early Childhood Stuttering. *J Speech Lang Hear Res.* 2021 Aug 9;64(8):2909-2927. doi: 10.1044/2021_JSLHR-21-00034. Epub 2021 Jul 14. PMID: 34260279; PMCID: PMC8740747.
 - [10] Wolpe PR. Treatment, enhancement and the ethics of neurotherapeutics. *Brain Cogn* 2002; 50: 382-95.
 - [11] Jourabchi K. Rhinoplast. Yes or No?. 1th ed. Tehran: Pour Sina; 1999: 11-84.[Persian]
 - [12] Patton GC, Selzer R, Coffey C, Carlin JB, Wolfe R. Onset of adolescent eating disorder: population based cohort study over 3 years. *BMJ* 1999; 318(7186): 767-68.
 - [13] Sarwer DB, Creand CE, Didie E. Body dysmorphic disorder in cosmetic patient. *Facial Plast Surg* 2003; 19(2): 7-18.
 - [14] Cash TF, Phillips KA, Santos MT, Hrabosky JI. Measuring" negative body image": validation of the body image disturbance questionnaire in a nonclinical population. *Body Image* 2004; 1(4): 363-72.
 - [15] Brozekoeski DL, Bayer AM. Body image and media use among adolescents. *Adolscent Med Clinics* 2005;16 (2): 230-89 .
 - [16] Brederbecke J, Heise A, Zimmermann T. Body image in patients with different types of cancer. *PLoS One.* 2021 Nov 29;16(11):e0260602. doi: 10.1371/journal.pone.0260602. PMID: 34843586; PMCID: PMC8629249.
 - [17] Carraça EV, Silva MN, Markland D, Vieira PN, Minderico CS, Sardinha LB, Teixeira PJ. Body image change and improved eating self-regulation in a weight management intervention in women. *Int J Behav Nutr Phys Act.* 2011 Jul 18;8:75. doi: 10.1186/1479-5868-8-75. PMID: 21767360; PMCID: PMC3150233.
 - [18] Brener ND, Eaton DK, Lowry R, McManus T. The association between weight perception and BMI among high school students. *Obes Res.* 2004 Nov;12(11):1866-74. doi: 10.1038/oby.2004.232. PMID: 15601984.
 - [19] Littleton HL, Ollendick T. Negative body image and disordered eating behavior in children and adolescents: what places youth at risk and how can these problems be prevented? *Clin Child Fam Psychol Rev.* 2003 Mar;6(1):51-66. doi: 10.1023/a:1022266017046. PMID: 12659451.
 - [20] Gonzaga I, Claumann GS, Scarabelot KS, Silva DAS, Pelegrini A. Body image dissatisfaction in adolescents: Comparison with physical activity, teasing and social support. *J Health Psychol.* 2021 Sep;26(10):1651-1660. doi: 10.1177/1359105319887796. Epub 2019 Nov 11. PMID: 31707850.
 - [21] Marsh HW. Physical self-description questionnaire:stability and discriminate validity. *Res Exerc*

Sport 1996; 67(3): 249-64.

- [22] Bahram A, Shafigzadeh M. Validity and reliability of body image among adolescents and adults in Tehran. Institute for Physical Science Department; 2004. [Persian]
- [23] Abdolmaleki Z, Salehsedghpour B, Bahram A, Abdolmaleki F. Vlidity and reliability of the physical selfdescription questionnaire among adolescent girls. J Applied Psychol 2011; 4(16): 42-55.
- [24] Tichenor SE, Walsh BM, Gerwin KL, Yaruss JS. Emotional Regulation and Its Influence on the Experience of Stuttering Across the Life Span. J Speech Lang Hear Res. 2022 Jul 18;65(7):2412-2430. doi: 10.1044/2022_JSLHR-21-00467. Epub 2022 Jun 23. PMID: 35738025; PMCID: PMC9584136.
- [25] Junuzovic-Zunic L, Sinanovic O, Majic B. Neurogenic Stuttering: Etiology, Symptomatology, and Treatment. Med Arch. 2021 Dec;75(6):456-461. doi: 10.5455/medarh.2021.75.456-461. PMID: 35169374; PMCID: PMC8802677.
- [26] Amado Alonso D, León-Del-Barco B, Mendo-Lázaro S, Iglesias Gallego D. Examining Body Satisfaction and Emotional-Social Intelligence among School Children: Educational Implications. Int J Environ Res Public Health. 2020 Mar 23;17(6):2120. doi: 10.3390/ijerph17062120. PMID: 32209992; PMCID: PMC7143393.