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UNIVERSITY OF BELGRADE
FACULTY OF SPECIAL EDUCATION
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11.

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UNIVERSITY OF BELGRADE – FACULTY OF
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ACADEMIC RESILIENCE IN DEAF AND HARD OF HEARING STUDENTS

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Introduction: *Achieving academic success depends on various external and internal factors. External factors include family, school and social environment, while internal factors include various individual factors, health status, student motivation and the like. One of the important individual factors is “academic resilience”, a term that is more recent but is still increasingly present in foreign studies which analyze the factors that affect school success. Academic resilience is defined as the ability of an individual to face and successfully cope with stress, setbacks in school success or pressure in the school environment. In general, resilience is defined as the ability of an individual to adapt to stressful situations despite difficult or negative circumstances.*

Aim: *The aim of the research was to determine the contribution of individual factors (age, gender, degree of hearing impairment, type of amplification, way of communication and school success) of deaf and hard of hearing students to the level of academic resilience of deaf and hard of hearing high school students.*

Method: *The Academic Resilience Scale ARS-30 was used in this research. The research included 45 deaf and hard of hearing students of both genders, with preserved intellectual abilities, aged 15 to 19. The students were examined individually in the classroom. Each student was given precise instructions, depending on the dominant model of communication, orally or in sign language. It was explained to them that they were expected to read each of the statements on their own and to circle the answer with which they most agreed, and the examiner was there to give additional explanations, if necessary.*

Results: *The results showed that age ($F=3.24$; $df=4$; $p=.022$; $\eta^2=.24$), gender ($t=-2.22$; $df=43$; $p=.032$) and the degree of hearing impairment ($F=3.91$; $df=4$; $p=.018$; $\eta^2=.25$) significantly contributed to the achieved level of academic resilience of deaf and hard of hearing students, in contrast to the type of amplification.*

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Conclusion: *Based on the obtained results, we can conclude that differences in the level of academic resilience of deaf and hard of hearing students exist in relation to age, gender and the degree of hearing impairment.*

Key words: *academic resilience, deaf and hard of hearing students, education*

INTRODUCTION

Students with high self-confidence, control, perseverance, and composure are more persistent in performing academic tasks and obligations (Martin & Marsh, 2006). Identifying specific aspects of academic resilience allows for targeted intervention and support (Weisz et al., 1995). Consequently, there are specific strategies that teachers can use to improve precisely these factors such as self-confidence, control, perseverance, and persistence of students. In addition to the family, the school has a significant role in the development of academic resilience, because teachers together with pedagogues and psychologists strive to develop students' ability to cope with various difficulties they face (Ungar et al., 2014). Parental involvement in a child's education, as well as the quality of interactions between peers, have an extremely positive impact on academic achievement (Cahill et al., 2015). Previous research found protective (positive school climate as well as student-student, teacher-student interactions, student progress, as well as clear school rules) and risk factors within the school (peer violence and rejection, aggressive behavior, negative school climate, dropping out or changing school). Deafness will not directly affect individuals becoming more vulnerable but will affect growing up in an environment where care and upbringing are often hampered by communication problems as well as the inability to achieve effective communication (Kennedy, 1989; Sullivan et al., 1987). Due to less developed communication skills, deaf and hard of hearing children communicate less with their hearing peers, parents, and teachers, which results in low self-esteem, lower academic achievement, and even lower levels of resilience (Listman et al., 2011). Deaf people have to overcome great obstacles, often unfavorable life circumstances that they face to adapt to their hearing peers and the environment. Adaptation will depend not only on the deaf person but also on the whole community that will provide a suitable environment in which to grow up (Rogers et al., 2003). By examining the links between resilience and academic achievement in the deaf community, Charlson et al. (1999) concluded that deaf high school students showed a high level of resilience and adaptability despite being exposed to great stress during adolescence. They had great support from their family, peers, and teachers, which resulted in such a positive development. Meadow (1968) and Vernon and Koh (1970) found that deaf and hard of hearing people from deaf parents, where sign language was used, had better academic achievement, reading skills, and a higher level of resilience than those who grew up with hearing parents.

Research conducted by Radovanović et al. (2020) indicates that the level of resilience in deaf students and students of the typical population is approximately the same. As the number of deaf students in inclusive schools gradually increases, social integration becomes a significant factor in the development of resilience. However, before interacting with peers of typical development, the deaf carry the first stress or “developmental trauma” from their family due to communication difficulties, so early intervention is of great importance for both the child and the family. Through early intervention programs, deaf children and their parents get to know together with the nature of the problems that hearing impairment brings, so they will be educated and develop communication skills to help each other and facilitate mutual understanding, which will have a positive effect on emotional and social development, as well as the development of the deaf child’s self-esteem, as a basis for the development of resilience.

AIM

The goal of the research is to determine the contribution of individual factors (age, gender, degree of hearing impairment, type of amplification, way of communication, and school success) of deaf and hard of hearing students to the level of academic resilience of deaf and hard of hearing high school students.

METHOD

Sample

The study included 45 deaf and hearing-impaired students between the ages of 15 and 19 with normal intelligence.

Instrument and procedure

The Academic Resilience Scale ARS-30 (Cassidy, 2016) is a multidimensional scale designed to assess resilience in an educational context. The scale is composed of 30 statements that assess resilience from the cognitive, affective, and behavioral aspects. The agreement with each statement is expressed on a Likert scale from (1) I completely agree, to (5) I completely disagree. The evaluation of certain statements is calculated in reverse. The summative score ranges from 30 to 150, and the higher score represents a higher level of resilience.

The research was conducted in the period October-December 2020. Research of teenagers was done individually in the classroom. Each child was given precise instructions, depending on the dominant model of communication, orally or in sign language. It was explained to them that they were expected to read each of the statements on their own and to choose the answer with which they mostly agreed, and the examiner was there to give additional explanations, if necessary.

Data analysis

Data analysis is done through SPSS (version 21.0). Univariate analysis of variance and a t-test were used for data analyses.

RESULTS

The results of the research obtained on the academic scale of resilience to the individual characteristics of students (age, sex, degree of hearing impairment, type of amplification, and method of communication) are shown in the following tables.

Table 1

Level of academic resilience in relation to age

Age	N	M	SD	Min	Max	F (df)
15 years	13	110.31	10.84	94	125	
16 years	11	116.91	12.79	93	140	
17 years	8	117.50	15.13	90	142	3.24 (4)
18 years	7	102.14	13.32	89	125	
19 years	6	123.50	5.05	116	130	

Table 1 shows the achievements of students obtained on the Academic Resilience Scale, as well as differences in achievements. The result of one-factor analysis of variance shows that there is a significant difference in the level of resilience in relation to age ($F=3.24$, $df=4$, $p=.022$, $\eta^2=.24$). Subsequent analysis found that students aged 19 ($M=123.50$, $SD=5.05$) showed a significantly higher level of resilience compared to students aged 15 ($M=110.31$, $SD=10.84$), as well as compared to students aged 18 ($M=102.14$, $SD=13.32$). Students aged 16 ($M=116.91$, $SD=12.79$) show a significantly higher level of resilience compared to students aged 18 ($M=102.14$, $SD=13.32$), as well as students aged 17 ($M=117.50$, $SD=15.13$) compared to 18-year-old students ($M=102.14$, $SD= 3.32$).

The results obtained by a group of researchers (Radovanović et al., 2020) show that there is no connection between the level of resilience and age. At the age of 18, they achieved the lowest results (Table 2).

Table 2

Level of academic resilience in relation to gender

Gender	N	M	SD	Min	Max	t (df)
Male	27	110.26	13.15	89	130	
Female	18	118.83	11.97	98	142	-2.22 (43)

Table 2 shows the results of the test, based on which it was determined that the level of resilience is higher in female students ($M=118.83$, $SD=11.97$) compared to male students ($M=110.26$, $SD=13.15$).

According to the t-test, a statistically significant difference ($t=-2.22$; $df=43$; $p=.032$) was found between male and female students. Despite various life

situations, female students sought and received more support than influenced their development of resilience to male students (Hampel & Petermann, 2005). In addition, a higher level of empathy, good communication, and cooperation with parents, teachers, and peers also affect the development of resilience, where differences are more pronounced as students age, and male students need additional levels of support to further help them develop academic resilience (Cecilia & Anthony, 2017; Sun & Stewart, 2007).

Table 3

Level of academic resilience in relation to the degree of hearing impairment

Degree of hearing impairment	N	M	SD	Min	Max	F (df)
Moderate	5	107.20	14.69	90	123	
Moderately difficult	8	120.50	9.01	102	130	
Hard	12	110.67	11.65	89	125	3.91 (4)
Very hard	16	110.44	12.61	89	127	
Total deafness	4	130.25	12.45	119	142	

Table 3 shows the results related to the level of academic resilience of deaf and hard-of-hearing students with the degree of hearing impairment. The results of one-factor analysis of variance showed statistically significant differences in the level of resilience of students to the degree of hearing impairment ($F=3.91$, $df=4$, $p=.018$, $\eta^2=.25$).

Table 4

Level of academic resilience in relation to the dominant mode of communication

Dominant mode of communication	N	M	SD	Min	Max	t (df)
Oral	15	116.47	15.23	89	142	
Character	30	112.30	12.19	89	140	.99 (43)

Table 4 presents the results on the Academic Resilience Scale to the communication model. Testing of the t-test showed that there are no differences in the level of resilience of students ($t=.644$; $df=30$; $p=.524$) who use oral speech as the dominant mode of communication ($M=116.46$, $SD=15.23$) compared to students whose dominant mode of communication is sign language ($M=112.30$, $SD=12.19$).

Although the results of some studies (Luthar, 2003) showed that deaf and hard of hearing people who use sign language as the dominant mode of communication are more exposed to greater stress, unlike peers whose dominant mode of communication is oral speech, this study did not confirm this.

Recent literature considers a new type of trauma – Information Deprivation Trauma (IDT), which refers to the population with hearing impairment, which indicates that the lack of knowledge and information is a traumatic experience (Schild & Dalenberg, 2012, 2016).

Table 5*Level of academic resilience in relation to the type of amplification*

Type of amplification	N	M	SD	Min	Max	F (df)
Hearing aid	22	114.68	11.59	94	142	
Cochlear implant	17	112.24	15.47	89	140	.16(2)
Doesn't wear appliances	6	114.17	14.30	89	130	

Table 5 shows the results of the level of academic resilience achieved by deaf and hard-of-hearing students to the type of amplification. The highest level of resilience was achieved by students using hearing aids ($M=114.68$, $SD=11.59$), followed by students without a hearing aid or cochlear implant ($M=114.17$, $SD=14.30$), while the lowest level of resilience was achieved by students using a cochlear implant ($M=112.24$, $SD=15.47$).

The results of one-factor analysis of variance do not show the existence of a statistically significant difference in the level of resilience to the type of amplification ($F=.16$, $df=2$, $p=.85$, $\eta^2=.01$).

The lower level of resilience of students with cochlear implants can be related to the research findings of a group of authors (Fitzpatrick et al., 2012) related to the language skills of deaf and hard of hearing students to the type of amplification. Namely, the researchers found that deaf and hard-of-hearing school-age students with moderate and severe hearing impairments who wear hearing aids achieve several domains (receptive speech, language, speech, phonological memory) in contrast to their peers with very severe hearing impairment who have cochlear implant between the second and fifth year.

Table 6*The level of academic resilience in relation to school success*

School success	N	M	SD	Min	Max	t (df)
Excellent	34	113.50	13.07	89	140	
Very good	11	114.27	14.46	94	142	-.17 (43)

Table 6 shows the results of testing the differences in the level of resilience to the school success of deaf and hard of hearing students are shown in Table 6. It was found that the level of resilience in students with very good results ($M=114.27$, $SD=4.46$) is higher than in students with excellent results ($M=113.50$, $SD=13.07$).

Testing by t-test, it was found that there is no statistically significant difference ($t=-.17$; $df=43$; $p=.87$) in the level of resilience of students according to school success.

CONCLUSION

Based on the obtained results, we can conclude that differences in the level of academic resilience of deaf and hard of hearing students exist in relation to age, gender, and the degree of hearing impairment. The relationship between resilience and school success (Prince-Embury, 2011) has not been confirmed in this study.

For future research, our suggestion is to expand the sample size and compare the academic resilience of hearing-impaired students in ordinary schools and special schools.

Adolescence is a sensitive period during which there is a conscious confrontation with various problems that this period brings, and it is very important to work on the development of resilience that will significantly affect mental development and quality of life of children with hearing impairment and children of typical development.

REFERENCES

- Cahill, H., Beadle, S., Farrelly, A., Foster, R., & Smith, K. (2015). *Building resilience in children and young people A Literature review for the Department of Education and Early Childhood Development (DEECD)*. University of Melbourne.
- Cassidy, S. (2016). The Academic Resilience Scale (ARS-30): A new multidimensional construct measure. *Frontiers in Psychology, 7*, 1787. <https://doi.org/10.3389/fpsyg.2016.01787>
- Charlson, E. S., Bird, R. L., & Strong, M. (1999). Resilience and success among deaf high school students: Three case studies. *American Annals of the Deaf, 144*(3), 226-235. <https://doi.org/10.1353/aad.2012.0186>
- Fitzpatrick, E. M., Olds, J., Gaboury, I., McCrae, R., Schramm, D., & Durieux-Smith, A. (2012). Comparison of outcomes in children with hearing aids and cochlear implants. *Cochlear Implants International, 13*(1), 5-15. <https://doi.org/10.1179/146701011X12950038111611>
- Hampel, P., & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence, 34*(2), 73-83. <https://doi.org/10.1007/s10964-005-3207-9>
- Kennedy, M. (1989). The abuse of deaf children. *Child Abuse Review, 3*(1), 3-7.
- Listman, J., Rogers, K. D., & Hauser, P. C. (2011). Community cultural wealth and deaf adolescents' resilience. In D. H. Zand & K. J. Pierce (Eds.), *Resilience in deaf children: Adaptation through emerging adulthood* (pp. 279-297). Springer. https://doi.org/10.1007/978-1-4419-7796-0_11
- Luthar, S. S. (Ed.) (2003). *Resilience and Vulnerability: Adaption in the Context of Childhood Adversities*. Cambridge University Press.
- Martin, A. J., & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools, 43*(3), 267-281. <https://doi.org/10.1002/pits.20149>
- Meadow, K. (1968). Early manual communication in relation to the deaf child's intellectual, social, and communicative functioning. *American Annals of the Deaf, 113*, 29-41.
- Mwangi, C. N., & Anthony, M. I. (2017). Gender differences in academic resilience and academic achievement among secondary school students in Kiambu County, Kenya. *Psychological and Behavioural Science International Journal, 5*(5), 555673. <https://juniperpublishers.com/pbsij/pdf/PBSIJ.MS.ID.555673.pdf>

- Prince-Embury, S. (2011). Assessing personal resiliency in the context of school settings: Using the resiliency scales for children and adolescents. *Psychology in the Schools, 48*(7), 672-685. <https://doi.org/10.1002/pits.20581>
- Radovanović, V., Radić-Šestić, M., Drobac, A., & Mijatović, S. (2020). The comparison of resiliency levels of deaf and hard of hearing adolescents and their typically developing peers. In G. Nedović, F. Eminović, (Eds.), *Approaches and models in special education and rehabilitation thematic collection of international importance*. University of Belgrade – Faculty of Special Education and Rehabilitation.
- Rogers, S., Muir, K., & Evenson, C. R. (2003). Signs of resilience: Assets that support deaf adults' success in bridging the deaf and hearing worlds. *American Annals of the Deaf, 148*(3), 222-232. <https://doi.org/10.1353/aad.2003.0023>
- Schild, S., & Dalenberg, C. J. (2012). Trauma exposure and traumatic symptoms in deaf adults. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*(1), 117-127. <https://doi.org/10.1037/a0021578>
- Schild, S., & Dalenberg, C. J. (2016). Information deprivation trauma: Definition, assessment, and interventions. *Journal of Aggression, Maltreatment & Trauma, 25*(8), 873-889. <https://doi.org/10.1080/10926771.2016.1145162>
- Sullivan, P. M., Vernon, M., & Scanlan, J. M. (1987). Sexual abuse of deaf youth. *American Annals of the Deaf, 132*(4), 256-262. <https://doi.org/10.1353/aad.2012.0614>
- Sun, J., & Stewart, D. (2007). Age and gender effects on resilience in children and adolescents. *International Journal of Mental Health Promotion, 9*(4), 16-25. <https://doi.org/10.1080/14623730.2007.9721845>
- Ungar, M., Russell, P., & Connelly, G. (2014). School-based interventions to enhance the resilience of students. *Journal of Educational and Developmental Psychology, 4*(1), 66-83. <http://dx.doi.org/10.5539/jedp.v4n1p66>
- Vernon, M., & Koh, S. D. (1970). Effects of early manual communication on achievement of deaf children. *American Annals of the Deaf, 115*, 527-536. <https://www.jstor.org/stable/44392246>
- Weisz, J. R., Weiss, B., Han, S. S., Granger, D. A., & Morton, T. (1995). Effects of psychotherapy with children and adolescents revisited: A meta-analysis of treatment outcome studies. *Psychological Bulletin, 117*(3), 450-468. <https://doi.org/10.1037/0033-2909.117.3.450>

AKADEMSKA REZILIJENTNOST KOD GLUVIH I NAGLUVIH UČENIKA

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Uvod: Postizanje akademskog uspeha zavisi od raznih spoljašnjih i unutrašnjih faktora. U spoljašnje faktore ubrajamo porodicu, školu i društvenu sredinu, dok u unutrašnje ubrajamo različite individualne faktore, zdravstveno stanje, motivaciju učenika i slično. Jedan od značajnih individualnih faktora je i „akademska rezilijentnost“, termin koji je novijeg datuma, ali je ipak sve prisutniji u inostranim studijama u kojima se analiziraju faktori koji utiču na školski uspeh. Akademska rezilijentnost se definiše kao sposobnost pojedinca da se suoči i uspešno izbori sa akademskim stresom, kao što su nazadovanje u školskom uspehu ili pritisak

u školskom okruženju. Uopšteno, rezilijentnost je definisana kao sposobnost adaptacije pojedinca na stresne situacije uprkos otežanim ili negativnim okolnostima.

Cilj: Cilj istraživanja je bio da se utvrdi doprinos individualnih faktora (uzrast, pol, stepen oštećenja sluha, tip amplifikacije, način komunikacije i školski uspeh) gluvih i nagluvih učenika nivou akademske rezilijentnosti gluvih i nagluvih učenika srednje škole.

Metod: U istraživanju je korišćena akademska skala rezilijentnosti (The Academic Resilience Scale ARS-30). Istraživanjem je obuhvaćeno 45 gluvih i nagluvih učenika oba pola, očuvanih intelektualnih sposobnosti, uzrasta od 15 do 19 godina. Ispitivanje učenika je obavljeno individualno u učionici. Svakom učeniku su data precizna uputstva, u zavisnosti od dominantnog modela komunikacije, usmeno ili na znakovnom jeziku. Objasnjeno im je da se od njih očekuje da samostalno pročitaju svaku od tvrdnji i da zaokruže odgovor sa kojim se u najvećoj meri slažu, a ispitivač je bio tu da daje dodatna objašnjenja, ukoliko bude potrebno.

Rezultati: Rezultati istraživanja su pokazali da uzrast ($F=3,24$; $df=4$; $p=0,022$; $\eta^2=0,24$), pol ($t=-2,22$; $df=43$; $p=0,032$) i stepen oštećenja sluha ($F=3,91$; $df=4$; $p=0,018$; $\eta^2=0,25$) u značajnoj meri doprinose ostvarenom nivou akademske rezilijentnosti gluvih i nagluvih učenika, za razliku od tipa amplifikacije.

Zaključak: Na osnovu dobijenih rezultata možemo zaključiti da razlike u nivou akademske rezilijentnosti gluvih i nagluvih učenika postoje u odnosu na uzrast, pol i stepen oštećenja sluha.

Ključne reči: akademska rezilijentnost, gluvi i nagluvi učenici, obrazovanje