

Investigating Psychological Well-being and Emotional Regulation in Indian Youth with Hearing Impairments

Gayatri Srivastava

Dhirubhai Ambani International School, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra, 4000982, India; gayatri.srivastava008@gmail.com

ABSTRACT: Hearing-impaired individuals experience significant psychological challenges that often go unrecognized due to the lack of awareness surrounding their experiences. Individuals struggle with communication, education, and employment barriers, yet their difficulties are not adequately addressed. Limited literature exists on the psychological well-being and emotional regulation of hearing-impaired youth in India. Thus, this study aims to fill this gap and shed light on the psychological obstacles experienced. Using a mixed-methods approach, quantitative data were obtained using 2 scales, the BERQ (Behavior Emotion Regulation Questionnaire) and SBW (Subjective Well-being Scale), with the hearing-impaired youth. Qualitative data was obtained by conducting interviews with the school's faculty for the hearing-impaired. Analysis revealed that positive relationships with others were moderately correlated with self-acceptance and purpose in life, while seeking social support was also linked to a clearer sense of purpose. Additionally, distraction as a coping strategy showed a moderate positive relationship with both personal growth and social support-seeking behaviors. The qualitative findings highlighted psychological challenges faced by hearing-impaired students, including social stigma, feelings of isolation, low self-esteem, and difficulty expressing emotions. Findings indicate the need for increased family support, better communication training, and structured initiatives to improve emotional well-being.

KEYWORDS: Behavioural and Social Sciences, Clinical Psychology, Hearing Impaired, Emotional Regulation, Psychological Well-being, India.

■ Introduction

According to the WHO, individuals between the ages of 15 and 24 years are classified as "youth."¹ As of 2018, 20,00,000 Indians between 15-24 years of age are estimated to have reported being hearing impaired.² Given the significant number of individuals impacted by hearing impairment, studying their psychological well-being is of utmost importance.³ Psychological well-being is defined as the presence of positive emotions (e.g., high self-esteem) and the absence of negative emotions (e.g., symptoms of depression).⁴ Subjective well-being refers to an individual's overall cognitive and emotional assessment of their personal life; it encompasses cognitive evaluations of life satisfaction and both positive and negative emotional responses to specific life events.⁵ The mental well-being of people with hearing impairments specifically is significantly threatened, which may lead to a decline in their quality of life as well. In a study investigating the impact of hearing loss on cognitive and emotional aspects, most participants indicated that hearing impairment carries a negative connotation and results in poor well-being.⁷

Apart from psychological well-being, to get a balanced perspective of the emotional health of those with hearing impairment, it is important to study their patterns of emotion regulation. According to APA, emotional regulation is defined as "the ability of an individual to modulate an emotion or set of emotions."⁸

In a study, participants with hearing impairments, aged 16-25, reported that the emotional regulation strategies employed by the majority of the sample included positive coping strategies such as refocusing on planning and positive reappraisal. Notable correlations between emotion regulation strategies and psychological issues were identified, suggesting that negative emotion regulation strategies are linked with psychological conditions.⁹

The study above used the Behavioral Emotion Regulation Questionnaire (BERQ), which investigates the behavioral aspects of emotional regulation. It has also been reported that adults with hearing loss are more likely to experience increased symptoms of depression, anxiety, psychological distress, and emotional sensitivity as compared to those with normal hearing.¹⁰

The most notable contribution to the theory of emotional regulation was made by James Gross, who claims that "much of what we feel is a consequence of our reactions to the world."¹¹ Emotion regulation constitutes any effort to modify any emotional experience (positive and negative emotions)¹² and categorizes five strategies for managing emotions: situation selection (e.g., approach/avoidance of situations), situation modification (e.g., altering emotion-eliciting aspects), attentional deployment (e.g., shifting focus within the situation), cognitive change (e.g., rethinking a situation), and response

which occur before or during the emotion experience, and response-focused strategies, which occur after the emotion is fully developed.¹⁴ The process model suggests that individuals can employ strategies to regulate their emotional intensity at various stages.¹⁵

Like Iwagami's paper listed above, similar results were found in a study carried out by Carolien Rieffe for hearing-impaired children.¹⁶ This study compared the level of emotional understanding between hearing-impaired children and their hearing peers. A total of 26 hearing-impaired children (mean age: 11 years) and 26 hearing children of the same age and gender participated in tasks to evaluate their comprehension of emotions and their ability to manage them across the four fundamental emotions: happiness, anger, sadness, and fear. The findings revealed that hearing-impaired children are equally adept at recognizing their own emotions as well as identifying the triggers of these emotions. They can also understand the co-existence of opposite-valence emotions, such as feeling happy and sad simultaneously. However, the study found that these individuals struggled to distinguish between different negative emotions. Their emotional regulation strategies tended to focus on actively addressing the situation. However, the use of any avoidance tactics to lessen the negative impact of the situation was barely reported by the children. These strategies appeared less effective than those of their hearing peers.

To counter that, it is necessary to focus on the nature of interventions. Based on the works of Iwagami, Rieffe, Gross, and other researchers, a study conducted by Danadel and Ashori²¹ noted that being able to emotionally self-regulate has a significant implication on the problem-solving abilities for those with hearing impairment. This has the potential to create directed interventions and opportunities to increase both emotion regulation and problem-solving skills to improve overall well-being as well. For individuals with hearing impairment, families play a significant role in regulating their emotional security. Here again, work by Iwagami as well as Brown and Cornes²² highlights the varying degrees of struggles and mental health concerns for those with hearing impairment vs. their hearing peers. This emphasises the need to understand the role of families in emotional regulation and well-being for the hearing impaired and to curate remedies accordingly.

Significant gaps exist in the area of emotional health of the hearing-impaired. To begin, there is limited research that explores how Indian youth with hearing impairments define their own well-being as well as the nature of emotional regulation strategies that they use to cope with everyday struggles in their daily lives. Additionally, to provide the study with a more holistic perspective, it is essential to interview informants who can help give a deeper understanding of the stigma experienced by these youth. Due to India being a large geographical landscape, this study will be limited specifically to the city of Mumbai, as it hosts a multitude of different cultures and lifestyles. Mumbai is also reported to have one of the largest populations of people with hearing impairments, making it an ideal city for this research. The key takeaway and contribution of this work is to offer new literature in a niche research area of psychological health in youth with hearing impairment.

To summarize, the primary aim of this study is to evaluate the psychological well-being of individuals with hearing impairments by examining factors such as their psychological and subjective well-being and emotional regulation. A key focus of this study is to understand how the experience of social stigma associated with hearing impairment affects their mental and emotional state, including their self-esteem, relationships, and sense of belonging. Additionally, the study aims to explore the emotional regulation strategies they employ by investigating how they cope with emotions in situations that involve stigma or other stressors and how these strategies contribute to their overall psychological well-being.

The study examined the psychological well-being and emotional regulation of hearing-impaired youth in India by sending questionnaires to these youth for quantitative data and conducting interviews with teachers for qualitative data.

■ Methods

Participants:

An exploratory study was conducted to investigate the relationship between psychological well-being and emotional regulation. A convenience sample of youth between 18 and 23 years of age who all attended TeachEDU, a higher education institute for the hearing impaired, was selected. They were sent a Google form with the consent form, BERQ (Behavior Emotion Regulation Questionnaire), and SBW (Subjective Well-being Scale). The inclusion criteria for the participants were as follows: they must reside in Mumbai, be between 18 and 23 years of age, and have experienced hearing impairment for a minimum of 5 years. The exclusion criteria for this study were that participants should not have received any alternate treatments for either their hearing impairment or any sort of medication for their psychological health. The questionnaire was then filled out by 30 participants, with a mean age of 21.5 years, all of whom were from Mumbai, India.

Procedure:

Prior permission was first obtained from the management and faculty at TeachEDU. No incentives were provided to the school or the participants participating in the questionnaires. After students consented, an online Google form asking for demographic information and the 2 questionnaires, BERQ & SWB, was sent to 30 participants via the school counselors. Google Forms were selected to overcome communication barriers with the hearing-impaired participants and to garner personalized and realistic data.

Measures:

The SWB questionnaire, created in 1989, evaluated the participants' overall mental health by examining key aspects such as emotional stability, life satisfaction, coping strategies, and relationship management. For this questionnaire, the Cronbach's alpha ranged between 0.62 and 0.91 across the six subscales. It included questions such as "to what extent do you agree to the following questions", "When I look at the story of my life, I am pleased with how things have turned out so far", "In many ways I feel disappointed about my achievements in life" and, I

live life one day at a time and don't really think about the future. The BERQ, created in 2019 by Kraaij and Garnefski had Cronbach's Alpha ranging in value from 0.86 to 0.93. BERQ assessed how individuals regulate their emotions through specific behavior in challenging situations. Sample questions from this questionnaire included: "I often think about how sad I feel about what happened.", "I worry that this will have terrible consequences for the future," and "I accept that this has happened and cannot be changed". After collecting the quantitative responses, interviews were scheduled with 5 faculty members working at TeachEDU. These interviews were scheduled over 2 weeks on the online platform, Google Meet. In these structured interviews, the faculty members were asked 10 questions, including the common psychological challenges faced by the hearing-impaired students, the intensity of their emotional issues, the impacts of social stigma, and how the school supports and promotes mental well-being.

■ Results

The study incorporated a mixed-methods design. This data was collected from the questionnaire responses and interviews with the school faculty. A correlational research design was also employed to investigate relationships between subjective well-being and emotional regulation. Furthermore, JASP (Jeffrey's Amazing Statistics Program) was a tool chosen for data analysis for this research paper due to its ability to handle various statistical tests and visualizations. Lastly, the author carried out content analysis, a research method used to identify and analyze the occurrence of specific words, themes, or concepts within qualitative data to derive themes from our interview transcripts.¹⁷

Quantitative:

— Descriptive Statistics:

Table 1: Descriptive statistics for each subscale of the well-being scale (SWB) and the emotional regulation scale (BERQ), providing insights into trends and variability within the data. 30 participants with a mean age of 21.5 years filled the SWB with skewness and kurtosis analyses indicating a normal distribution of data.

	WB-PIL	WB-EM	WB-PG	WB-SA	WB-PRO	WB-A	B-SD	B-W	B-SSS
Mean	10.567	14.4	14.600	16.867	12.467	13.267	10.5	11.533	11.862
SD	2.648	2.401	2.486	1.907	3.421	2.050	3.127	3.776	3.944
Skewness	0.994	-0.669	0.089	0.076	0.241	-0.463	0.783	0.554	0.163
Kurtosis	2.743	-0.086	0.713	-0.161	-0.046	-0.841	-0.133	-0.809	0.049
	WB-PIL	WB-EM	WB-PG	WB-SA	WB-PRO	WB-A	B-SD	B-W	B-SSS
Mean	10.567	14.400	14.600	16.867	12.467	13.267	10.500	11.533	11.862
Std. Deviation	2.648	2.401	2.486	1.907	3.421	2.050	3.127	3.776	3.944
Skewness	0.994	-0.669	0.089	0.076	0.241	-0.463	0.783	0.554	0.163
Std. Error of Skewness	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.434
Kurtosis	2.743	-0.086	0.713	-0.161	-0.046	-0.841	-0.133	-0.809	0.049
Std. Error of Kurtosis	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.833	0.845
Minimum	5.000	9.000	9.000	13.000	6.000	9.000	6.000	6.000	4.000
Maximum	19.000	18.000	20.000	21.000	21.000	16.000	17.000	19.000	20.000

The questionnaire was filled out by 30 participants, with a mean age of 21.5 years, all of whom were from Mumbai, India. Table 1 summarises the descriptive statistics across the subscales of subjective well-being and emotional regulation, providing insights into participants' psychological well-being and their emotion regulation strategies: WB-PIL (Well-being Purpose In Life), WB-EM (Environmental Mastery),

WB-PG (Personal Growth), WB-SA (Self-Acceptance), WB-PRO, WB-A (Autonomy). WB-SA (Self-Acceptance) has the highest mean score, 16.867, and WB-PIL (Purpose In Life) has the lowest mean score, 10.567. Among the Behavioral Emotion Regulation Questionnaire (BERQ) subscales (B-SD, B-W, B-SSS), B-SSS (Seeking Social Support) has the highest mean, 11.862, and B-SD (Self-Distract) has the lowest mean, 10.500. This indicates that the higher the scores, the higher the level of psychological well-being.

Based on the skewness and kurtosis scores, the population was found to be normally distributed (the skewness value lies between -2 and +2; the range of kurtosis is -7 and +7). Therefore, the Pearson correlation was used to find the relationship between well-being and emotional regulation.

Table 2: Pearson correlation between the subscales of SWB (subjective psychological well-being scale)¹⁸ and BERQ (behavioral, emotional regulation questionnaire).¹⁹

Pearson's Correlations										
Variable		WB-SA	WB-EM	WB-PIL	WB-PG	WB-PRO	WB-A	B-SSS	B-W	B-SD
WB-SA	Pearson's r	--								
	p-value	--								
WB-EM	Pearson's r	0.110	--							
	p-value	0.563	--							
WB-PIL	Pearson's r	-0.217	-0.151	--						
	p-value	0.250	0.426	--						
WB-PG	Pearson's r	-0.128	0.126	0.376*	--					
	p-value	0.500	0.507	0.041	--					
WB-PRO	Pearson's r	-0.603***	-0.124	0.438*	0.384*	--				
	p-value	<.001	0.513	0.016	0.036	--				
WB-A	Pearson's r	0.133	0.104	0.060	0.171	0.134	--			
	p-value	0.484	0.586	0.752	0.368	0.480	--			
B-SSS	Pearson's r	0.198	0.161	0.446*	0.284	-0.064	0.265	--		
	p-value	0.303	0.403	0.015	0.135	0.740	0.164	--		
B-W	Pearson's r	-0.042	0.116	-0.242	-0.072	0.060	0.262	-0.236	--	
	p-value	0.824	0.540	0.198	0.705	0.752	0.163	0.219	--	
B-SD	Pearson's r	-0.064	0.161	0.239	0.470***	0.158	0.113	0.410*	0.061	--
	p-value	0.738	0.396	0.202	0.009	0.404	0.552	0.027	0.747	--

*p<.05, **p<.01, ***p<.001

Table 2 summarises the correlation between the two standardised psychological assessments used in the study, specifically related to mental well-being and emotional regulation among youth with hearing impairment. The analysis indicates that PRO (Positive Relationship to Others) was significantly correlated with SA (Self-Acceptance), PIL (Purpose in Life) and PG (Personal Growth); PG was significantly correlated with PIL and SD (Seeking Distraction); SSS (Seeking Social Support) was significantly correlated with PIL and SD. PRO (Positive relationship with others) was positively moderately related to SA (Self-acceptance), $r = .060$, $p < 0.001$. PRO (Positive relationship with others) was also moderately related to PIL (Purpose in life), $r = 0.43$, $p < 0.05$, highlighting the moderate positive relationship between hearing-impaired individuals self-reporting having found their purpose in life and maintaining a good relationship with other people experiencing hearing impairments.

Lastly, PRO (Positive relationship with others) had a low correlation with PG (Personal growth), $r (28) = 0.38$, $p < 0.05$, establishing that there is no direct link between the personal growth of hearing-impaired individuals and the relationships they have with others.

PG (Personal growth) had a low correlation with PIL (Purpose in life), $r(28) = 0.37$, $p < 0.05$. This indicates a low positive relationship between the hearing-impaired experiencing personal growth and finding their purpose in life.

SSS (Seeking social support) was moderately related to PIL (Purpose in life). This relationship indicates a moderate positive relationship between hearing-impaired individuals seeking external social support and having a clear idea of their purpose in life.

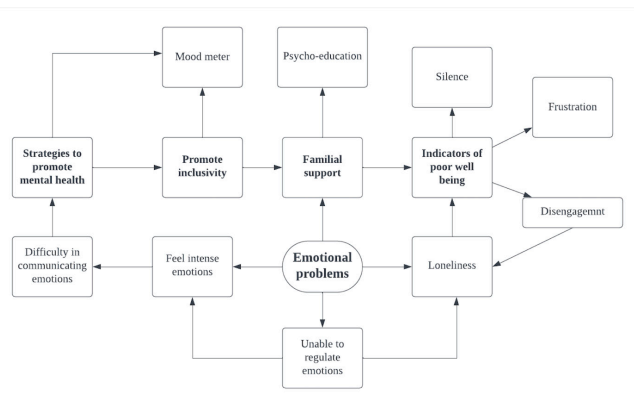
SD (Seeking distraction) was moderately related to PG (Personal growth), $r(28) = 0.47$, $p < 0.01$. This indicates that there is a moderate positive relationship between the hearing-impaired seeking distraction to occupy themselves and experiencing personal growth. SD (Seeking distraction) was also moderately related to SSS (Seeking social support), $r(28) = 0.41$, $p < 0.05$, highlighting the moderately positive relationship between the hearing-impaired community seeking distractions and seeking social support.

Qualitative:

The researcher used semi-structured interviews to explore pertinent areas of concern in this given population, which were analyzed using content analysis. The duration of the interviews was 45 minutes, and they were recorded with the consent of the participants. Sample questions presented to the participants included: "can you describe the common emotional and psychological challenges that hearing-impaired youth face in their daily lives", "In what ways have you observed/ seen them deal with their own emotional issues and are they usually of mild, moderate or severe intensity", "If you could implement one program or initiative to enhance the emotional wellbeing of hearing-impaired students, what would it be and why?" and "If a student is feeling restless or anxious, have you noticed any particular coping strategy that they employ to help calm themselves down." Table 3 gives a brief overview of the common concerns.

Discussion

Table 3: Themes and subthemes were generated from content analysis of interviews conducted with faculty at the TeachEDU school (school for the hearing impaired). Through qualitative analysis, the following key themes emerged: 1) strategies to promote mental health, 2) promote inclusivity, 3) familial support, and 4) indicators of poor well-being.



The study evaluated the psychological well-being and emotional regulation of hearing-impaired youth in India. The demographic for this study was hearing-impaired youth,

ranging from ages 18 to 23. A mixed-method design was incorporated to obtain a holistic perspective that integrates diverse viewpoints and captures the full complexity of the research problem. Quantitative and qualitative data were obtained for this study through questionnaires and interviews.

Quantitative section:

Data from the 'BERQ' and 'SWB' scales provided insights into participants' psychological well-being and their emotion regulation strategies.

Among the Subjective Well-being subscales, WB-SA (Self-Acceptance) has the highest mean score (16.867), indicating that participants possibly scored this aspect of well-being the highest. For the Behavioral Emotion Regulation Questionnaire (BERQ) subscales, B-SSS (Seeking Social Support) has the highest mean (11.862), indicating its significance and importance in emotional regulation for hearing-impaired youth.

PRO subscales had no relationship with BERQ subscales, indicating that positive relationships with others had limited implications on emotional regulation. It was noted that within positive relationships with others, there is a moderate positive relationship between positive relationships with others (PRO) and self-acceptance (SA) and purpose in life, indicating that positive relationships help them direct their life. However, a low correlation with personal growth indicates that relationships with others are not necessary for mapping their inner growth; they are more individualistic journeys. PRO (Positive relationship with others) was also moderately related to PIL (Purpose in life). Positive relationships often provide emotional support and encouragement, inspiring individuals to pursue their goals and discover meaning in their lives. Similarly, having a clear purpose or direction can enhance the quality of relationships, as individuals with a strong sense of purpose are more likely to approach their social interactions with optimism.

PG (Personal growth) had a low but significant correlation with PIL (Purpose in life). This indicates that the connection between personal growth and purpose in life is not particularly strong. This could be because personal growth and a sense of purpose usually occur at different times; for instance, personal growth might arise from overcoming challenges or self-reflection, whereas purpose in life is more tied to long-term goals, relationships, or alignment with values.

SSS (Seeking social support) was moderately related to PIL (Purpose in life). This relationship suggests that individuals seeking support from others are more likely to experience a stronger sense of purpose. This connection may stem from the role of social interactions in shaping a person's goals and values. Seeking social support often involves building and maintaining meaningful relationships, which can provide encouragement and a sense of belonging, all contributing to a clearer sense of purpose. This relationship is moderate rather than strong, which is likely because PIL is also influenced by various other factors, such as personal achievements and experiences, beyond just social support.

SD (Seeking distraction) was moderately related to PG (Personal growth). This suggests that individuals who engage in distraction as a coping mechanism may experience growth opportunities. Seeking distraction often involves engaging in activities that shift focus away from stress or challenges, such as hobbies or creative pursuits. A possible explanation is that these activities can foster skill development, self-discovery, or a renewed perspective, all contributing to personal growth.

SD (Seeking distraction) was moderately related to SSS (Seeking social support). This relationship indicates that individuals who seek distraction to cope with challenges may also turn to social connections as part of their strategy. This could include wanting to spend time with friends or family, or participating in group activities, hence displaying the connection between seeking distraction and wanting to interact with others.

Qualitative section:

Through interviews with faculty members, several recurring themes emerged that shed light on the challenges associated with supporting hearing-impaired students' emotional and psychological needs. Similar results were found in a study (Qi Dong *et al.*, 2024),²⁰ which explored the emotional regulation of college students. The study showed that hearing-impaired students showed higher emotional intensity and weaker emotion regulation abilities than hearing students when using cognitive reappraisal and expression suppression strategies.

A prominent recurring theme identified among the students was a lack of familial initiative to engage meaningfully with their needs. This gap in understanding often results in significant barriers to effective communication, especially regarding the expression of complex or intense emotions that the students face. Hence, as a result, many students reported experiencing profound feelings of loneliness and isolation. As seen in Table 3, the perception of being viewed as "burdens" by their families emerged as a significant stressor, contributing to heightened vulnerability to suffer from emotional distress, including stress and symptoms of depression. Typically, when students struggle emotionally, they tend to withdraw from social interactions and become noticeably quieter and more reserved in class. They may avoid interacting with teachers and peers and choose to isolate themselves instead. Sometimes, they distract themselves by doing other activities or appearing "lost in thought" in the middle of the class. Additionally, as seen in Table 3, the psychological aspect of the hearing-impaired community is severely negatively impacted due to the social stigma faced by these individuals through both social discrimination and marginalization. Many individuals hesitate and display reluctance to engage with other people, which leads to feelings of isolation and, at times, a sense of being "unwanted." Such social exclusion is aggravated by offensive labels such as "deaf and dumb," which lowers their self-image and, in turn, their self-esteem. A pervasive societal bias against the hearing-impaired community creates substantial mental barriers, hence eroding the students' self-worth and resulting in heightened mental health concerns.

For hearing-impaired students, those from stable family backgrounds, i.e., with financial and familial security, general-

ly experience fewer high-intensity challenges. However, when they do encounter difficulties, their emotional responses can be sudden and intense, often manifesting as anger. According to Table 3, hearing impairment also has a large impact on the student's sense of self-worth, which has a substantial effect on their self-image. Students with hearing loss often internalize a lack of status, feeling inferior or "less than" relative to other people without hearing impairments. This is further enhanced by the significant social stigma associated with hearing loss. This internalized stigma may result in increased feelings of rage and resentment. These students tend to show reluctance to seek psychological support, which can be attributed to a lack of familiarity or comfort with such services. They often conversely withdraw and become quiet and disengaged from school activities. This pattern underscores the demand for individualized practices that meet individual needs and promote a supportive and inclusive environment.

To address these challenges, it is extremely necessary to establish an environment in which students are both adequately supported and encouraged. Significant efforts will be required to establish trust and motivate students to contact faculty members with problems. Thus, by creating an inclusive and accepting environment for its students, pedagogy can be implemented to mitigate these negative emotions and promote a healthier sense of self-esteem among hearing-impaired students.

The faculty at TeachEDU, as reported in Table 3, noticed that if a student was feeling restless or anxious, they employed coping strategies to manage their emotions and calm themselves down. One notable pattern was their tendency to immediately divert their attention by participating in another activity or even something simple, such as using their mobile phones more often, as it serves as a "distraction from their distress." Since these students rely heavily on their friends for comfort, they prefer communicating with them via text messages rather than confronting their challenges directly. This indirect approach allows students to process their feelings in a "less overwhelming" way. Most often, their immediate reaction is to display sudden, intense emotions of anger, often stemming from weeks of pent-up frustration. Following this emotional release, they tend to reflect and rationalize their feelings, which helps them calm down. Many students even prefer keeping to themselves and isolating themselves from their peers to regain their composure. Through interviews with teachers, it became evident that many faculty members believed hearing-impaired students often used distraction as a primary method for emotional regulation. Teachers observed that these students frequently appeared to avoid confronting distressing emotions by engaging in other activities or shifting their focus. However, quantitative data from the questionnaire contradicted this perception. The BERQ scores indicated that self-distraction was the least utilized strategy among hearing-impaired students.

Strengths of the study:

A significant strength of the study is that the topic of psychological well-being amongst hearing-impaired youth in India is an under-researched area, making the study unique due to the lack of prior research regarding this subject area. Despite the growing recognition of the importance of mental health, this specific subgroup has not been extensively explored within the Indian context. Thus, the study provides valuable insights that have yet to be made available to the public, hence contributing to a knowledge gap and offering fresh perspectives on the emotional and psychological challenges faced by this community.

Through this study, specifically tailored interventions can be implemented to directly address the needs of hearing-impaired youth. Understanding their unique psychological challenges facing such marginalisation would help in the creation of appropriate support systems and the provision of resources in mental health tailored toward their specific needs. Such interventions could empower the community to develop the tools to successfully navigate their psychological well-being and the social and emotional challenges they face.

The mixed-methods approach of this study also significantly strengthened its findings. By combining qualitative and quantitative data, a wide range of experiences and perspectives were captured, allowing for a more in-depth understanding of the psychological issues experienced by hearing-impaired youth.

Limitations of the study:

One notable limitation of this study is the relatively small sample size of hearing-impaired youth. While the insights gathered are valuable, the limited number of participants restricts the generalizability of the findings to a specific geographical landscape. A larger sample size would have allowed for more statistically significant conclusions and a better representation of the diverse experiences within this community.

The limited availability of existing studies on the emotional well-being of hearing-impaired youth in the Indian context presented a challenge. Without a body of prior research to draw upon, it was difficult to establish a theoretical framework that is specifically tailored to the unique cultural, social, and educational realities of hearing-impaired youth in India.

To overcome the limitations, the next step for this project would involve expanding it to a pan-India level, aiming to examine regional variations and broader trends across the country. By including participants from diverse states and socio-economic contexts, we could identify how factors such as language, accessibility to resources, and societal attitudes toward hearing impairment influence the emotional well-being of youth. This nationwide approach would allow us to explore whether specific regions or communities experience unique challenges or demonstrate distinct coping mechanisms compared to others. Including families during interviews might give more balanced insights regarding the struggles of those with hearing impairments.

Conclusion

The study used quantitative and qualitative methods to examine the relationship between subjective well-being and emotional regulation among hearing-impaired individuals.

Findings showed that positive relationships with others were linked to higher self-acceptance and a stronger sense of purpose in life. Seeking social support was also associated with a clearer purpose, while using distraction as a coping mechanism was connected to both personal growth and seeking social support. The qualitative analysis revealed key emotional challenges, including social isolation, difficulty expressing emotions, and a lack of family support. Many students struggle with self-esteem, stress, and feelings of being perceived as inferior due to societal stigma. The faculty interviews emphasized the importance of parental involvement, structured support programs, and daily emotional check-ins. This study sheds light on the unique psychological and emotional challenges faced by the hearing-impaired, such as difficulties in social interaction, communication barriers, and coping with social stigma or isolation. It contributes to the limited scientific literature in the niche area of the emotional struggles of the hearing-impaired. The findings of this study can guide the development of tailored interventions and therapies that address the distinct needs of the hearing-impaired, such as specialized cognitive-behavioral approaches or community-based support systems that can be used by schools and organizations that include the hearing-impaired as well.

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References

1. World Health Organization: WHO. *Adolescent health - SEARO*. <https://www.who.int/southeastasia/health-topics/adolescent-health>.
2. Chakrabarty, R. This organization is trying to build India's first sign language college for deaf children. *India Today*. August 26, 2018. <https://www.indiatoday.in/education-today/featurephilip/story/deaf-children-hearing-impaired-dont-have-college-options-teach-organisation-solving-problem-html-1313347-2018-08-24>.
3. Ratna, D.; Singh, K. Personal well-being among adolescents and youth in India. *Frontiers in Psychology* **2022**, *13*. <https://doi.org/10.3389/fpsyg.2022.914152>.
4. Reaney, M.; Litcher-Kelly, L. *Psychological Well-being*. ScienceDirect. <https://www.sciencedirect.com/topics/medicine-and-dentistry/psychological-well-being#:~:text=Psychological%20well%2Dbeing%20can%20be,symptoms%20of%20depression%20or%20anxiety>.
5. Diener, E. *Subjective well-being: The science of happiness and a proposal for a national index*. APA PsycNet.
6. Dean, G.; Orford, A.; Staines, R.; McGee, A.; Smith, K. J. *Psychosocial well-being and health-related quality of life in a UK population with Usher syndrome*. *BMJ Journals*.

7. Heffernan, E.; Coulson, N. S.; Henshaw, H.; Barry, J. G.; Ferguson, M. A. Understanding the psychosocial experiences of adults with mild-moderate hearing loss: An application of Leventhal's self-regulatory model. *International Journal of Audiology* **2016**, 55 (sup3), S3–S12.
<https://doi.org/10.3109/14992027.2015.1117663>.
8. *APA Dictionary of Psychology*.
<https://dictionary.apa.org/emotion-regulation>.
9. Lavanya, T.; Manjula, M. Emotion regulation and psychological problems among Indian college youth. *Indian Journal of Social Psychiatry* **2017**, 33 (4), 312.
<https://doi.org/10.4103/0971-9962.218601>.
10. Iwagami, M.; Kobayashi, Y.; Tsukazaki, E.; Watanabe, T.; Sugiyama, T.; Wada, T.; Hara, A.; Tamiya, N. Associations between self-reported hearing loss and outdoor activity limitations, psychological distress and self-reported memory loss among older people: Analysis of the 2016 Comprehensive Survey of Living Conditions in Japan. *Geriatrics and Gerontology International/Geriatrics & Gerontology International* **2019**, 19 (8), 747–754.
<https://doi.org/10.1111/ggi.13708>.
11. Sabater, V. Gross's Process Model of Emotion Regulation. *Exploring Your Mind*. April 24, 2024.
<https://exploringyourmind.com/process-model-of-emotion-regulation/>.
12. Pzuritaona, James Gross, Ph.D., a-n-d Emotion Regulation - <https://eastbaybehaviortherapycenter.com>. East Bay Behavior Therapy Center.
<https://eastbaybehaviortherapycenter.com/james-gross-ph-d-a-n-d-emotion-regulation/#:~:text=According%20to%20Gross%2C%20emotion%20regulation,of%20thoughts%20regarding%20the%20situation%2C>.
13. Rodriguez, M.; Kross, E. *Process Model of Emotion Regulation*. ScienceDirect. <https://www.sciencedirect.com/topics/psychology/process-model-of-emotion-regulation>.
14. Yarwood, M. *Process model of emotion regulation*. Pressbooks.
<https://psu.pb.unizin.org/psych425/chapter/process-model-of-emotion-regulation/>.
15. Rieffe, C. *Awareness and regulation of emotions in deaf children*. National Library of Medicine.
<https://pubmed.ncbi.nlm.nih.gov/23039328/>.
16. Pontier, M. *Process Model of Emotion Regulation by Gross (2001)*. ResearchGate.
https://www.researchgate.net/figure/Process-Model-of-Emotion-Regulation-by-Gross-2001_fig1_251893346.
17. Kyne, D. What is Mixed Methods Research? A Definition and Why It's Becoming So Popular. | by OpinionX CEO Daniel Kyne | Jan 2021 | The Full-Stack Researcher. *Medium*. December 26, 2021.
<https://medium.com/the-full-stack-researcher/what-is-mixed-methods-research-a-definition-and-why-its-becoming-so-popular-b435629e1acd#:~:text=Mixed%20Methods%20Research%20is%20defined,statistics%20for%20deeper%20user%20insights>.
18. Ryff; Keyes, C. D.M.C. Lee. *The structure of psychological well-being revisited*. APA PsycNet.
<https://psycnet.apa.org/buy/1996-08070-001>.
19. Kraaij, V.; Garnefski, N. The Behavioral Emotion Regulation Questionnaire: Development, Psychometric Properties and Relationships with Emotional Problems and the Cognitive Emotion Regulation Questionnaire. *Personality and Individual Differences* **2019**, 137, 56–61. <https://doi.org/10.1016/j.paid.2018.07.036>.
20. Dong, Q.; Sun, L.; Du, X. *The ineffective emotion regulation of deaf college students: an ERP study*. National Library of Medicine.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC11422138/>.
21. Danadel, Mehrshid, and Mohammad Ashori. "Effects of emotion regulation training on social problem-solving in hard-of-hearing adolescents." *Current Psychology* 43.17 (2024): 15366-15375.
22. Margaret Brown, P., and Andrew Cornes. "Mental health of deaf and hard-of-hearing adolescents: What the students say." *Journal of deaf studies and deaf education* 20.1 (2015): 75-81.

■ Authors

Gayatri Srivastava is a sophomore at Dhirubhai Ambani International School in Mumbai, India. She is passionate about writing and keenly interested in cognitive and behavioral sciences. Curious and research-oriented, she is actively learning sign language to work with the hearing-impaired community. Through her efforts, she aims to foster inclusivity and raise awareness about accessibility for individuals with hearing impairments.