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# Exploring the Challenges Faced by Adolescents in Schools of hearing and speech impairment: A Psychological Analysis of Problem-Solving Ability and Educational Attitude.

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***Abstract:***
*This study delves into the unique challenges encountered by adolescents enrolled in Schools of hearing and speech impairment , focusing particularly on their psychological aspects concerning problem-solving capabilities and educational attitudes. Schools of hearing and speech impairment serve as vital educational institutions for individuals with hearing and speech impairments, yet there is a dearth of research addressing the nuanced psychological dimensions of the educational experiences within these settings. Through a combination of qualitative and quantitative methodologies, this research aims to uncover the underlying factors influencing the problem-solving skills and educational attitudes of adolescents in such environments. By employing standardized psychological assessments, interviews, and surveys, this study seeks to provide valuable insights into the psychological dynamics shaping the educational journey of adolescents in Schools of hearing and speech impairment . The findings of this research endeavor to inform educational policymakers, teachers, and practitioners about the specific needs and challenges of this demographic, ultimately contributing to the development of more inclusive and effective educational strategies. According to the research, there was a difference in the problem solving ability of male and female adolescent boys studying in Schools of hearing and speech impairment , but no difference was found in the educational attitude. A high positive correlation was found between the academic attitude and problem solving ability of adolescent students.*

***Keywords:*** *Adolescents, Schools of hearing and speech impairment , Psychological Analysis, Problem-Solving Ability, Educational Attitude, Hearing Impairments, Speech Impairments, Inclusive Education*

## I. Introduction -

The advancement of any nation hinges on both its natural and human resources, with education serving as a pivotal factor in nurturing human potential. Hence, to foster national progress, accessible education must be readily available to all members of the public, including those who are deaf and mute. Deaf and mute individuals possess the same cognitive abilities as their hearing and speaking counterparts, albeit with different modes of communication. However, it remains pertinent to inquire whether their physical disabilities impede their comprehension of problems and their ability to devise solutions. Does their impairment hinder their academic prowess, thereby limiting their capacity to contribute actively to national development? Only by addressing these queries can tailored training or intervention programs be appropriately designed for them.

While education is a fundamental human right, individuals with hearing and speech impairments often face barriers in accessing quality education. Mainstream schools may lack appropriate accommodations, leading many to turn to deaf and dumb schools. However, these schools encounter their own set of challenges. This article delves into the hurdles and advantages of education in deaf and dumb schools and proposes strategies for success.

**Challenges:**

A primary challenge confronting deaf and dumb schools is the scarcity of qualified teachers proficient in sign language and knowledgeable about deaf culture. The shortage hampers the delivery of effective education, potentially hindering student success. Another obstacle is the limited access to technology, which serves as a crucial resource for facilitating communication and information access among deaf students. Insufficient resources leave students at a disadvantage in navigating a technologically driven world.

**Opportunities:**

Despite challenges, deaf and dumb schools offer unique opportunities. They foster a sense of community and belonging, providing an inclusive environment for students who may feel marginalized in mainstream settings. Additionally, specialized programs addressing deaf students' needs, such as sign language

instruction and speech therapy, enhance their educational experience. Moreover, these schools facilitate the development of a strong sense of identity and pride in deaf culture. By immersing themselves in a rich cultural milieu, students forge connections and deepen their understanding of their heritage.

**Strategies for Success:**

To ensure quality education, schools must prioritize teacher training, investing in programs that equip educators with sign language proficiency and cultural competence. This enhances teaching effectiveness and student learning outcomes. Furthermore, schools should prioritize access to technology, investing in assistive devices and software to facilitate communication and information retrieval for students. Creating a supportive and inclusive culture is also vital. Schools should promote deaf culture and history, foster welcoming environments, and provide comprehensive support services to meet students' diverse needs.

It is imperative to tailor educational guidance to suit the abilities and aptitudes of all children, including those with disabilities. This guidance, facilitated by teachers, parents, and social workers, empowers children to contribute meaningfully to the advancement of their schools, communities, and nation. The term "children" encompasses every individual, regardless of their physical or cognitive differences. In the case of deaf and mute children, this research endeavors to shed light on their problem-solving abilities and educational attitudes, thus informing strategies to support their holistic development.

In order to make a psychological analysis of the problems of adolescents studying in Schools of hearing and speech impairment , we have to keep various aspects in mind. This type of analysis will give us an understanding of the problems that these adolescents face when studying, and help them towards the most appropriate path to solution.

1. Emotional Problems: There are some teenagers who have difficulty sharing their feelings. This may affect their natural development process. In such cases, schools should provide a more supportive environment so that teens feel comfortable accepting their feelings.
2. Student Hunger Problem: Teenagers may face hunger problem during study time, due to which they may get distracted. In such cases, schools should arrange nutritious food and motivate them from time to time to eat right.
3. Lack of attention: Teenagers often have the problem of lack of attention, due to which they feel difficulty in studies. To address this problem, schools should incorporate exercises and psychological techniques to increase students' attention.
4. Lack of school organization and human resources: Many times, due to lack of organization and human resources in deaf schools, adolescents may face problems in studies. In solution, the government and local organizations need to be able to provide support to these schools.
5. Lack of sensitivity and social support: Some adolescents do not receive adequate support for their special needs, such as special educational support, emotional support, and lack of social relationships. For the solution, schools should provide social support to the students as per their needs.

To solve these problems, there is a need to create education and a socially suitable environment in the society, so that the youth can become socially and educationally empowered. At the same time, schools must also be able to understand and address the special needs of students. It is very important that education policies and curricula are designed to take into account the abilities and aptitudes of all students. Creating such courses for deaf students is really important in their development. According to their characteristics, abilities, and needs, they should be educated in a supportive and stimulating environment. To understand how the educational attitude of deaf students can be improved and why there are differences in their educational attitude, we need to take into account several aspects:

1. Recognizing the characteristics: It is important to understand and recognize the characteristics of deaf students. Their abilities and commitments must be recognized, understood, and supported.
2. Individualized Education: Every student should be provided individualized education based on their educational needs. This can improve their educational attitude.
3. Sensitivity and Support: Through the support of teachers, parents, and social workers, deaf students are helped to get help from time to time. This support plays an important role in improving their academic attitude.
4. Encouragement and Motivation: Deaf students should be encouraged to recognize their outstanding abilities and support them. They should be inspired to believe in themselves.
5. Curriculum design from the point of view of educational and social utility: Educational courses should be designed from the point of view of educational and social utility of deaf students. They should be linked to their individual applications and life contexts.

Through such measures, the academic aptitude of deaf students can improve and they can become active participants in the society. Furthermore, such efforts also increase the society's understanding, respect, and acceptance of religious and human values.

**Study Objectives:**

1. To assess the problem-solving abilities of adolescent students enrolled in Schools of hearing and speech impairment .
2. To examine the educational attitudes of adolescent students attending Schools of hearing and speech impairment .
3. To investigate the relationship between problem-solving abilities and educational attitudes among adolescent students in deaf schools.

**Hypotheses:**

The study posits the following hypotheses:

1. There will be no significant difference in the problem-solving abilities between male and female adolescents studying in Schools of hearing and speech impairment .
2. There will be no significant difference in the educational attitudes between male and female adolescents attending Schools of hearing and speech impairment .
3. A strong positive correlation will exist between academic attitudes and problem-solving abilities among male and female adolescent students in Schools of hearing and speech impairment .
4. A strong positive correlation will exist between academic attitudes and problem-solving abilities among adolescent girls in Schools of hearing and speech impairment .

**Study Delimitations:**

The research is delimited as follows:

1. The study will include participants from four deaf schools, encompassing both boys and girls.
2. The age range of participants will be restricted to 14–17 years.
3. The study will involve a total of 90 participants, comprising 45 deaf and dumb boys and 45 deaf and dumb girls.

**Research Methodology - Survey Approach**

**Sample Selection:**

In this study, purposive sampling was employed to select the sample. The research focused on investigating the problem-solving abilities and educational attitudes of adolescents enrolled in Schools of hearing and speech impairment . The sample comprised 90 teenagers with hearing and speech impairments, aged between 14 and 17 years.

**Data Collection Tools:**

The following scales and questionnaires were utilized to gather data:

**1. Problem Solving Ability Assessment:**

The Problem Solving Ability Test developed by Dr. L.N. Dubey was utilized to assess problem-solving abilities. This test is designed for students aged 12 to 17 years and has a reliability coefficient of 0.78.

**2. Educational Attitude Evaluation:**

The Attitude Scale Towards Education (ASTE) developed by Shri S.L. Chopra was employed to measure the educational aptitude level of teenagers. This scale has a reliability coefficient of 0.89.

**Statistical Analysis:**

To test the hypotheses presented in this study, statistical operations including mean (M), standard deviation (S.D.), critical ratio (C.R.), and correlation coefficient (r) were calculated. These analyses were conducted to explore the relationships between problem-solving abilities, educational attitudes, and other variables under investigation.

**Hypothesis number – 01:**"No difference will be found in the problem solving ability of male and female boys studying in Schools of hearing and speech impairment ."

**Table Number – 01:** Tabulation and analysis of scores of problem solving ability test of deaf and dumb teenage boys and girls.

| S no. | group | parameters | mean | St dev | Critical ratio |
|---|---|---|---|---|---|
| 1 | boys | 45 | 13.08 | 2.1 | |
| 2 | Girls | 45 | 11.6 | 2.2 | 4.13 |

Explanation:
Degrees of Freedom (df) calculation is based on the formula: df = (N1 + N2 - 2), where N1 and N2 represent the sample sizes of the two groups being compared. In this study, with 45 participants in each group, the degrees of freedom are calculated as follows: df = (45 + 45 - 2) = 88.
Critical Ratio (C.R.) values are referenced from statistical tables. For this study, the critical ratios are 1.99 at a 5% confidence level and 2.63 at a 1% confidence level.

**Result:**

A significant difference was detected in the problem-solving abilities of deaf and dumb adolescent boys and girls. The calculation of the difference in problem-solving abilities between male and female adolescent boys enrolled in deaf schools was conducted using the Critical Ratio (C.R.). With a sample size of 88, the C.R. values from the table are 1.99 at a 5% confidence level and 2.63 at a 1% confidence level.

The calculated C.R. value for the study is 4.13, which exceeds the critical values for both confidence levels. Therefore, a significant difference in problem-solving abilities between the two groups is confirmed. Consequently, the hypothesis is rejected at the 1% confidence level. Hence, a significant difference in problem-solving abilities was observed among male and female adolescent boys attending Schools of hearing and speech impairment at a 1% confidence level.

**Hypothesis No. 02:** "There will be no difference in the educational attitude of male and female boys studying in Schools of hearing and speech impairment .

**Table Number – 02:** Tabulation and analysis of educational aptitude test scores of deaf and dumb boys and girls.

| S no. | group | parameters | mean | St dev | Critical ratio |
|---|---|---|---|---|---|
| 1 | boys | 45 | 83.8 | 13.8 | |
| 2 | Girls | 45 | 84.6 | 17.8 | 0.35 |

**Explanation:**
The degrees of freedom (df) were calculated using the formula: df = (N1 + N2 - 2), where N1 and N2 represent the sample sizes of the two groups being compared. For this study, with 45 participants in each group, the degrees of freedom were determined as follows: df = (45 + 45 - 2) = 88.
Critical Ratio (C.R.) values were referenced from statistical tables, with values of 1.99 at a 5% confidence level and 2.63 at a 1% confidence level.

**Result:**
No significant difference was observed in the educational attitudes between deaf and dumb adolescent boys and girls. The calculation of the difference in problem-solving abilities between adolescent boys and girls attending Schools of hearing and speech impairment was conducted using the Critical Ratio (C.R.). The obtained C.R. value was 0.35, which is less than the critical value of 1.99 at the 5% confidence level. Therefore, no difference was detected in the educational attitudes of male and female students. This outcome supports the notion that there is no disparity in educational attitudes among deaf and dumb students. Thus, hypothesis number 2 is confirmed.

**Hypothesis No. 03**
"A high positive correlation will be found between the academic attitude and problem solving ability of adolescent students studying in Schools of hearing and speech impairment ."

**Table number – 03**

| S no | Group | Sampling number | Correlation coefficient (r) |
|---|---|---|---|
| 1 | boys | 45 | |
| 2 | Girls | 45 | +0.73 |

Result:
A strong positive correlation was discovered between the academic attitude and problem-solving ability of deaf adolescent students.
Explanation:
The correlation coefficient (r) was calculated to be +0.73, indicating a high positive correlation between the educational attitude and problem-solving ability of adolescent students enrolled in Schools of hearing and speech impairment . This finding supports hypothesis number 03. Thus, the study confirms a robust positive

correlation between academic attitude and problem-solving ability among adolescent students. Hence, hypothesis number 03 is validated.

Hypothesis No. 04

"A high positive correlation will be found between the academic attitude and problem solving ability of adolescent girls studying in deaf schools."

**Table Number – 04**

| S no | Group | Sampling number | Correlation coefficient (r) |
|---|---|---|---|
| 1 | boys | 45 | +0.72 |
| 2 | Girls | 45 | |

**Result:**

A high positive correlation was found between the educational attitude and problem solving ability of deaf adolescent girls.

**Explanation:**

The correlation coefficient between the educational attitude and problem-solving ability of adolescent girls enrolled in deaf schools was determined to be +0.72, indicating a strong positive correlation. As a result, hypothesis 04 is accepted, affirming that an increase in educational attitude among adolescent girls corresponds to an increase in problem-solving ability. Thus, hypothesis number 04 is confirmed.

## II. Conclusions:

Deaf and dumb schools play a crucial role in providing equitable education to students with hearing and speech impairments. By addressing challenges and leveraging opportunities, these schools can create enriching educational experiences that empower students to thrive. Embracing strategies for success ensures that all students receive the quality education they deserve. Upon analyzing and interpreting the management data, the following conclusions were drawn in this research:

1. There exists a difference in the problem-solving ability between male and female adolescent students attending Schools of hearing and speech impairment .
2. No disparity was observed in the educational attitudes between male and female adolescent students attending Schools of hearing and speech impairment .
3. A significant positive correlation was identified between academic attitude and problem-solving ability among adolescent students enrolled in Schools of hearing and speech impairment.
4. A substantial positive correlation was noted between academic attitude and problem-solving ability among adolescent girls enrolled in Schools of hearing and speech impairment .

## III. Suggestions:

Based on the conclusions drawn, the following suggestions are proposed:

1. Deaf students should seek solutions to their problems from their parents and teachers.
2. Deaf students should maintain their self-confidence and not perceive themselves as inferior to other students.
3. Parents of deaf or disabled children should avoid discriminating between their disabled child and other children.
4. Parents should familiarize themselves with the teaching methods suitable for deaf and dumb children to help resolve their educational issues effectively.
5. Parents should actively engage with the school of deaf and dumb children to assess their educational aptitude and problem-solving abilities, providing support and cooperation in addressing their challenges.

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