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ROLE OF SAFETY HEALTH MEASURES IN PHYSICAL DEVELOPMENT OF HEARING-IMPAIRED STUDENTS

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Abstract

Safety health measures positioning for the physical growth of students with hearing impairment are first and most essential as this condition may cause deafness. Citing what follows, they have to cope with different obstacles that to a large degree affect the way they learn and grow. Having deafness can prevent the child to speak, be in social groups, and get involved into a physical activity. This is causing severe damage to the development of the child. Thus providing effective safety health measures is less about preparing a plan to avert damages it is about providing a setting that realizes employees' wholesome well-being. To assess the safety health measures which schools used to help the students in fulfilling their safety needs at elementary level. To identify factors which are contributing in improving student academic and physical improvement at the elementary level. What is the role of safety health measures in the schools that effects the achievement goals and academic emotions of children at elementary level? What is the main factors that effects the health measures and what difficulties are faced by students at elementary level in division Multan and D.G Khan. The researcher collected the data personally by visiting to every single respondent. Questionnaire were distributed to 138 respondents in which 108 are male and 30 are females from division Multan & D.G Khan. Respondent responds to the questionnaires which represent (100%) return rate. Significant objective of the study was to examine "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". The respondents of the present study were both male and female students with hearing impairment. The data were collected through questionnaires. A questionnaire was contained 138 items for students with hearing impairment at elementary level schools. Quantitative methods were utilized in the research. In this investigation, we employed a quantitative strategy. Data were assessed in relation to the study's aims and questions since the research deals with the topic of safety health measures and their impact on the physical development of students who are hard of hearing. Methods such as frequency, t-test, mean & standard deviation were employed to examine the records.

Keyword: *Safety, Safety Health Measures, Physical Development, Hearing Impairment, Hearing Impaired students.*

1.1 Introduction

Safety health measures positioning for the physical growth of students with hearing impairment are first and most essential as this condition may cause deafness. Citing what follows they have to cope with different obstacles that to a large degree affect the way they learn and grow. Having deafness can prevent the child to speak be in social groups and get involved into a physical activity. This is causing severe damage to the development of the child. Thus providing effective safety health measures is less about preparing a plan to avert damages it is about providing a setting that realizes employees' wholesome well-being. The

bespoke health and safety standards designed for hearing-impaired students that may occur in the daily school activities can help address the challenges that appear. These policies guarantee that the students who are economically marginalized get an equal chance of their participation in all the activities in school life including in social interactions and academics (Byrne 2012).

A safe and supportive environment can significantly enhance their physical well-being, allowing them to develop motor skills, coordination and overall physical health, which are vital components of their growth. Fires and injuries caused by fires are more common among the deaf and hard of hearing. Our society's physical and social structures are heavily influenced by the hearing world. Free and open exchange of ideas reception of such ideas and mutual understanding of these ideas are the three main components of communication. When people use diverse forms of communication, this becomes impossible. One must be able to hear and talk in order to communicate by telephone. An unfamiliar, obstructive and possibly deadly outside world awaits the deaf and hard of hearing. Audible alerts are a prime example of this (Cole etal., 2019).

Sound has traditionally been the focus of both public and private warning signs for generations. Paul Revere warned of the approaching British invasion by raising his voice. When the Cold War was at its height Americans practiced air raids with warning sirens to avert a nuclear attack (McCamley, 2013). The most efficient means of reaching the largest possible audience were these forms of communication. Smoke and fire detectors are the same. Those who are deaf or hard of hearing however will not benefit much from these potentially lifesaving tools. Although smoke alarms with built-in lights are now on the market, they are still somewhat pricey and not easily accessible. Fire safety education and the development of alarm systems have both achieved great strides in recent years. There is still a long way to go before these innovations can help the deaf and hard of hearing. There is a lot of fire safety instruction for deaf students (Calgaro et al., 2021).

1.2 Review of Related Literature

While the term "persons with disabilities" lacks a consensus among experts. Disabilities are characterized as follows in National Education Policy 2002:

- A "disability" exists when a person cannot carry out a task in the same way that a typically developing individual could.
- People who are visually or hearing impaired, as well as physically and psychologically disabled, are considered to be people with disabilities since they are unable to engage in any lucrative occupation or work due to an injury, illness, or congenital deformity.

The majority of the data is not categorized by gender, and the nationwide surveys only include a small subset of disabilities (physical impairments including amputations, foot and limb deformities, visual and hearing impairments, etc.). In order to make complete policy decisions and evaluate progress, we need quantitative data that is dis-aggregated by gender and age and is available nationwide. It is important to gather information on persons with disabilities that the National Census, regional governments, and international organizations have already begun to work on, and to examine any gaps in knowledge or data that may exist.

Additionally, for these surveys to be useful for policy making and international cooperation, it is crucial that they be published and distributed to people with disabilities, as well as to those who develop policies, carry out projects, and provide help. Leading organizations in Pakistan who fight for the rights of individuals with disabilities have stated that the expense of assisting disabled people is enormous and puts a significant strain on economic resources. The annual cost to Pakistan of supporting disabled persons can be calculated using conservative estimates of 16 million people with disabilities and a minimum cost of living of Rs1,000 per person. Wealth generation in Pakistan may see a big boost if disabled individuals were be empowered to live independently.

In Pakistan, people with disabilities are disproportionately silent, unrecognized, and underrepresented. As a group, they are on the very edge of society. Education, skill development, and everyday life are all extremely challenging for those with impairments. Adults with disabilities have limited access to the majority of available services, which mostly target children. There are a lot of physical, social, economic, and political barriers that people with disabilities must overcome before they can fully participate in society. Stigmatization and an ignorance of people with disabilities' talents and goals are two of these obstacles. Statistics, legislation, rehabilitation facilities, mainstreaming efforts, and specialized services for people with disabilities are all severely lacking.

There is no federal department or ministry in Pakistan that handles disability problems. The sole government agency that deals with matters pertaining to people with disabilities is the ministry in charge of social welfare and special education. On the other hand, there aren't any designated divisions within local government that handle programme for people with disabilities. In addition, many uneducated Pakistanis have the view that people with disabilities bring shame and hardship to their families. Misunderstandings surrounding disability stem from these misconceptions. They stand in the way of people being educated and given the right information. Because of the scarcity of employment prospects, people with disabilities place a financial strain on their family.

The terms "deafness" and "hearing impairment" are defined differently under the IDEA.

- A child's educational performance is negatively impacted by a hearing impairment if it is permanent or fluctuating.”
- The medical term for a child's inability to interpret auditory information for language is "deafness," and this can happen with or without the use of hearing aids.

This report uses the word "deaf" to describe children and youths whose hearing loss is either permanent or temporary and ranges from mild to profound, affecting one or both ears.When the outer and middle ear aren't working properly, it can lead to conductive hearing loss and other hearing issues. Sensor neural hearing loss is caused by issues with the cochlea, which is located in the inner ear. Surgery has the ability to address conductive hearing loss. Sensor neural hearing loss is currently only effectively treated with amplification using hearing aids and/or cochlear implants (HSE, 2011).

Using the audiogram's detection levels across several frequencies, one can determine the severity of a child's hearing loss. A graphic representation of a normal hearing test is called

an audiogram. The four levels of hearing loss—mild, moderate, severe, and profound—can be represented by an average of these. You can find these levels listed in the table below.

Table 1: Classification of hearing loss

Description of hearing loss	Hearing level in better ear
Mild	<40 db HL
Moderate	41 to 70 db HL
Severe	71 to 95 db HL
Profound	>95 db HL

A child's learning needs are not always reflected by the severity of their hearing loss, however this does impact their access to noises. But even a little hearing loss can cause difficulties with focus, language, and speaking. Particularly during the formative years of a child's language development, even mild hearing loss might affect how they communicate. Even mildly impaired children have trouble understanding everyday speech. As a result of their feelings of isolation, these children may exhibit symptoms such as inattention, speech problems, learning disabilities, language delay, and social and emotional challenges. An amplified version of spoken words and educational activities usually elicit a positive response from them. The inability to speak or understand spoken language is a symptom of severe hearing loss.

1.3 Significance of the Study

This study holds paramount importance in the educational domain particularly focusing on the elementary level within Multan and D.G Khan Divisions and extends its relevance to the broader context of Pakistan's educational policy development. It scrutinizes the interplay between achievement goals, academic emotions, and their consequential impacts on educational health measures, providing invaluable insights for policymakers to identify and address the core issues affecting educational health in division D.G Khan and Multan. Additionally, the implications for educators are profound, offering a road map to refine teaching methodologies tailored to the needs of hearing-impaired students. By promoting more vivid visual materials, ensuring that lip-reading can be done, providing tactile experiences, it lays a foundation for what may be an ever more inclusive as well as supportive educational environment. Academic engagement not only promotes these and other outcomes among hearing-impaired students but also helps their social and emotional growth. The said measures emphasize the importance of well-considered safety and health regulations in nurturing an educational context where all students feel safe, included as an individual too, and well prepared to succeed in the future.

In addition, these findings can be a catalyst for meaningful policy changes that urge schools to adopt comprehensive policies of their own and for the government batch manufacture guidelines advocating inclusion and security for hearing-impaired children. At various levels of government, the study pushes for legislative backing behind necessary resources and changes in facilities which the needs for a hearing-impaired students specific to hearing-impaired students can be met. Such improvements are vital in promoting equity, so that the child's voice and life can carry. The recommendations of the study board also extend to propose professional development programs that help teachers and other staff who are

engaged with these students make good diversions in practice adapt material for their unified teaching. The study's aim is one of ensuring that learning conditions are not only provided physically and emotionally but also suitable for hearing-impaired students to develop in their entirety. This in the end contributes gradually towards more inclusive and compassionate educational environments overall.

1.4 Objectives of the Study

The objectives of the study are followings:

1. To assess the safety health measures which schools used to help the students in fulfilling their safety needs at elementary level.
2. To identify factors which are contributing in improving student academic and physical improvement at the elementary level.
3. To elaborate the policy measures should higher authorities take to control the factors that effects hearing impaired students' performance in physical development.

1.5 Research Questions

The research questions are:

1. What is the role of safety health measures in the schools that effects the achievement goals and academic emotions of children at elementary level?
2. How the main factors effects the health measures and what difficulties are faced by students at elementary level?
3. Which policy measures should higher authorities take to control the factors that effects hearing impaired students' performance in physical development?

1.6 Research Design, Population & Sample Technique

The study entitled "The role of safety health measures in the physical development of hearing impaired students" Survey or mix method is used for the Research. Total Population was 138. A questionnaire of 36 statements were given to Respondents. The research strategy and methodology used in this study were both quantitative.

1.7 Research Instrument

The research instrument is the set of tools that the researcher uses to collect data. The research procedure for this study involved creating a questionnaire on one's own with the assistance of specialists or under the supervision of a supervisor in order to gather data. The survey itself integrated all recommendations made by the experts or supervisors whose opinions were sought. The validity of the tool was established by using content validity index (CVI). Survey method was used to get the opinion of experts (5) from division i.e. Multan and D.G Khan. The result of the CVI was presented in the table.

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Table 2 Content validity index of the tool

Sr.#	Areas	Yes f(%)	No f(%)	TSE f(%)	Mean
1	Relevancy	5 100%	0	0	3
2	Clarity	5 100%	0	0	3
3	Simplicity	4 100%	0	1 20%	2.6
4	No Ambiguity	4 100%	0	1 20%	2.6
5	Total mean				2.8

**Scale with 3 options (Yes=3, No=1 and to some extent=2).*

1. Table shows that (100%) experts chose the yes about the relevancy of the questionnaire with the research topic and the mean 3 also support the claim.
2. Table shows that the (100%) experts in the favor about the clarity of the statements in the questionnaire and mean value 3 also support the claim.
3. Table elaborate that the statements of the questionnaire were very simple and understandable in the view of experts. (80%) experts were chose yes about simplicity of the questionnaire and mean value 2.6 also support the claim.
4. Table depict that (80%) experts believe that there were no any ambiguity in any statement of the questionnaire and mean value 2.6 also support the claim.

1.7.4 Piloting the Tool

A pilot test based on the developed questionnaire was organized before the start of the start of formal fieldwork. The instruments (questionnaire) were preliminary tested.

Table 3: Pilot Testing

Name of Division	No. of Participants	Total
Multan	3	
D.G Khan	2	5

The validity of the tool pilot study was carried in out in 2 different Division. A total 5 copies of the questionnaire were filled by students with hearing impairment. The filled tests were collected and subjected to statistical analysis in order to determine the reliability coefficient of the tool as well as to how the usability time and cost advocacy of the instruments.

1.8 Collection of Data

The researcher collected the data personally by visiting to every single respondent. Questionnaires were distributed to 138 respondents in which 108 are male and 30 are females from Division Multan & D.G Khan. Respondent responds to the Questionnaires which represent (100%) return rate.

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1.9 Analysis

Analysis on the basis of demographic by using t- test

This section describes the analysis of data to find the study about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students" based on their gender, sector, and residence. Researcher applied both the descriptive and inferential statistical techniques (i.e. mean, SD and independent samples t- test) to analyze.

Table 4: Difference on basis of Gender

Variable	Category	N	Mean	SD	F	Sig.
Gender	Male	108	3.8781	.54729	11.140	.001
	Female	30	4.0704	.29629		

Table 4 indicates the difference between participants by gender about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". The mean score of the male is (3.8781) is less than the mean score of female mean score (4.0704). The significance value (.001) is less than (.05) which shows that there is statistically significant difference between male and female.

Table 5: Difference on basis of Residence

Variable	Category	N	Mean	SD	F	Sig.
Sector	Urban	108	3.9174	.55325	11.862	.001
	Rural	30	3.9287	.30566		

Table 5 indicates the difference between participants by residence about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". The mean score of the Urban Sector is (3.35) is less than the mean score of rural residence mean score (3.43). The significance value (.001) is less than (.05), which shows that there is statistically significant difference between urban and rural residence.

Table 6: Difference on the basis of Sector

Variable	Category	N	Mean	SD	F	Sig.
Sector	Public	107	3.8126	.52772	25.391	.000
	Private	31	4.2903	.12336		

Table 6 indicates the difference between participants by Sector about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". The mean score of the public is (3.8126) is less than the mean score of private mean score (4.2903). The

significance value (0.000) is less than (.05), which shows that there is statistically significant difference between public and private sector.

Table 7: Difference on the basis of Division

Variable	Category	N	Mean	SD	F	Sig.
Division	Multan	69	3.9549	.53510	2.363	.127
	D.G Khan	69	3.8849	.48238		

Table 7 indicates the difference between participants by Division about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". The mean score of the Multan is (3.9549) is greater than the mean score of D.G Khan mean score (3.8849). The significance value (0.127) is less than (.05), which shows that there is statistically significant difference between Multan and D.G Khan.

Table 8: Analysis on the basis of demographic by using one way ANOVA for differences based on Disability Level

	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	.675	3	.225	.867	.460
Within Groups	34.788	134	.260		
Total	35.463	137			

Table 8 indicates that the difference between the disability level of hearing impaired students about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". Calculated significance value (.460) which is greater than value (.05) and F value .867 also support the claim that there is statistically significant difference between disability level of hearing impaired students.

Table 9: One way ANOVA for differences based on Age

	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	5.492	2	2.746	12.368	000
Within Groups	29.971	135	.222		
Total	35.463	137			

Table 9 indicates that the difference between the Age about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". Calculated significance value (.000) which is less than value (.05) and F value (12.368) also support the claim that there is statistically significant difference between the age of hearing impaired students.

Table 10: One way ANOVA for differences based on Schools

	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	6.736	5	1.347	6.190	.000
Within Groups	28.727	132	.218		
Total	35.463	137			

Table 10 indicates that the difference between the Schools about "The Role of Safety Health Measures in the Physical Development of Hearing Impaired Students". Calculated significance value (.000) which is less than value (.05) and F value (6.190) also support the claim that there is statistically significant difference between schools of hearing impaired students.

1.10 Discussion

The part that safety and health measures assume in the fundamental of literal physical advancement of students with hearing impairment is major. Thus, hearing impairment can influence not only the sphere of communication, language, but physical activity as well, as physical education and recreation can be a problem for Hard of hearing students. Measures of safety and health can therefore assist in guaranteeing that children in this category have equal chances in improving their physical skills. It is the professional pedagogical knowledge of the physical education teachers, who are able to adapt the activity for the inclusion of HI students, and include sign language and touch cues where necessary to enhance the meaningfulness of the task and safety of the child.

Employing devices such as higher quality instruments like an FM system, which amplifies the sound that the hearing-impaired students are receiving and provided wearable technologies that offer the hearing-impaired students a feel of the event and the activities going on in their environment increase their chances of participating physically. That is why it is suggested to use such visual warning signals as preliminary light or hand signals – so hearing-impaired students will be aware of how to avoid possible dangers or notice other changes in the environment. On the same note, getting sign language interpreters or having note-takers can be helpful when the instructor is talking to the hearing-impaired student so that the student will feel welcome and safe.

Teachers and staff need to know any medical aspects regarding the impairment; for example, if the child has balance problems or should avoid loud noises. Promoting other extra activities such as sports that makes use of little or no signal other than touch for example swimming, other forms of art such as visual arts can also enhance the physical development and enable the child to get interacted with others. By informing hearing students on hearing impairment;

prejudice and optimistically embracing play with impaired children; prejudice can be d-emphasized and children with impairments can be easily accepted. When these safety and health measures are put in place educators will enhance development and safety of hearing impaired students which in turn will enable them to thrive to the best of their potential.

1.11 Conclusion

From the findings of the study: Researcher concluded that in Government sector of schools with hearing impairment the facilities are limited. Staff is limited in Government sector schools. Less resource are provide in the Government sector schools. Safety alarm are not installed in Government sector schools. Proper emergency exits are not there in Government sector schools. There are no extra co-curricular activities are not performed. Students with hearing impairment does not recognize safety symbols written on boards because proper guidance is not given to them in Government sector schools. In government sector proper hygiene routines are not followed by everyone. Govt. sector institutes lack weather alert system which indicate the students in bad weather either they stay in the buildings or not.

Researcher concluded that in private sector child with hearing impairment have a good chance to get proper physical development. Private sector maintain good hygiene system for everyone in their institution. Private sector staff is very cooperative in the comparison of the Govt. once. In Govt. sector hearing impaired schools there is lack of assistive devices for hearing impairment rather than private institutes provides assistive devices to students. Faculty does not work on physical development of a hearing-impaired student in Govt. school but on other side the private schools like AL Noor, Beacon House, Bloom Field Hall & Lahore Grammar school do work on students development.

1.12 Recommendations

The study on the basis of findings recommends that for addressing, the government should keep the needs of Special Education on top of the agenda. Government should allocate more resources in the budget, especially for hearing impaired education, health and physical Development of those who are living in rural areas. The Government should hire professional physical therapist, occupational therapist and audiologists for the treatment and the physical development of hearing impaired students. Professional higher authorities can also play a pivotal role in helping them solve their problems on a sustainable basis. As these professional are trained in the art of provision of assistance to all safety health measures. Therefore, they should be involved in the identification of their problems. In addition, Government should help the private and government sector departments as well as NGOs in the solution of their problems. The government should establish a section in the institutes of HI where they should be taught skills regarding safety health measures for their physical development. The emergency kits should be installed in every section of the Institutions. The smart TVs should be installed that indicate safety health precautions. The researcher recommend that Pakistan Government should follow and implement foreign policies like European committee of ministers held 2002 in the all public or private institutions of Pakistan for the development of all kinds of safety health measures for weaker section of the society for example, hearing impaired students. The Government should install the emergency blinking lights that give the signals in every institution for hearing impaired with sign language interpretation. The

emergency button should be installed in every institution. When the button is pressed in case of emergency it directly alert and send location to Police, Fire department and rescue 1122.

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