

## Appraisal of Sensory Awareness Training on the Daily Living Skills of Persons with Deaf-Blindness in Some Communities in the North West Region of Cameroon

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**Abstract:** Orientation and Mobility Training and daily living skills are essential skills in the education, rehabilitation and daily living skills of persons with deaf-blindness. So, there is a strong feeling that there is an impact between sensory awareness training as an indicator of Orientation and Mobility on the daily living skills of persons with deaf-blindness. It was discovered that persons with deaf-blindness have problems with participation in daily living skills. They have difficulties doing toileting independently. Eating and dressing skills are equally a problem to them. The use of sensory awareness skills is a problem to both the persons with deaf-blindness and the community at large as they are under trained in educating persons with deaf-blindness in the mastery of sensory awareness skills. There is also the lack of skills in interacting with others in the community and participating in daily living chores using the senses of vision and hearing. This results in the exemption of persons with deaf-blindness from formal education that is free for everybody, thus remain wanting in the community and depend on others in the achievements of their endeavors. The research design used is the pre – test post – test experimental research design. Ten samples were randomly selected. Purposive, snow ball, accidental and stratified sampling technique was used based on the bases of age of onset of the impairment (congenital and adventitious). The instruments use was interviews and observational checklist. Data was presented using descriptive statistics, frequency tables and charts. Quantitative data was entered using Epidata version 3.1 (2008) and the statistical package of social sciences (SPSS) version 21.0 (2012). Analysis was done using the systematic process of thematic analysis. Cronbach Alpha Reliability coefficient was used to determine if the internal consistency of the responses was satisfactory to an acceptable level. Based on this assumption, Alpha should not be less than 0.5 (Cronbach 1951). The chi-square of equality and proportion was used to compare between parents responds and observation. Hypothesis was tested using the logistic regression model (LRM) Nana (2018) and the independent t-test to obtain the correlation between Orientation and Mobility skills and daily living skills of persons with deaf-blindness. The results reveals that, before intervention and training, the impact between sensory awareness as an indicator of O&M and the daily living skills of persons with deaf-blindness was not very significant (11) [ $t = -4.098$ , d.f. = 8, p-value = 0.003]. After intervention, there was a significant impact between sensory awareness as an indicator of O&M and the daily living skills of persons with deaf-blindness (11) [ $t = -4.098$ , d.f. = 8, p-value = 0.003] and vice versa for spatial concept, sighted guide and the white cane. It was recommended that, the Government should put inclusive special education laws in to practice and meet the needs of persons with deaf-blindness so as to enhance their daily living skills.

**Key points:** Sensory awareness, daily living skills, deaf-blindness.

### Introduction

Cameroon and particularly the North West Region, has poor Orientation and Mobility Programs that lead to poor mastery of daily living skills. The uses of remaining senses are not well developed to

enhance the mastery of visual and hearing clues. The researcher discovered that the informal and non-formal sectors of education in the community were neglected which would have help persons with deaf-blindness to acquire sensory awareness skills to use in daily living. The researcher was out to know how this poor mastery of sensory awareness skills as an indicator of Orientation and Mobility will impact on the daily living skills of persons with deaf-blindness. Wardell (1976) noted that, the lack of skills in Orientation and Mobility weakens the fabric of independent travel. Even the most willing and enthusiastic deaf-blind traveller will experience undue frustrations (Langbein *et al*, 1981) leading to poor mastery of daily living skills.

### **Opinions and Researches on Sensory Awareness and Daily Living Skills**

According to deaf-blind information Australia (2020) our vision is used more than any of our other senses to get ourselves from A to B. We use our vision to find toilet in public places, same as we use our hearing to follow sounds. An example is a young child who cries at home because he/she need help. Our sense of smell alerts us and gives environmental cues such as the baker's or a dust bin. For people with low vision, they need to make use of their residual vision to interpret the environment. Depending on the type of vision loss, the condition of the environment itself and the perception, an individual may use a combination of visual, auditory, tactile and olfactory cues to gain the necessary information when moving around in their homes or externally. Information is decreased for a person who is visually impaired and even further when a person also has hearing loss or is deaf. Familiarity with the environment is vital for a person to maintain independence and find their way around safely. But according to UNESCO (2001) the biggest obstacle to inclusion is usually negative attitudes. Children may not be accustomed to other children who look and behave differently in the society. Parents may also be worried about 'lowering the standards' if children with disabilities and other special needs are included in ordinary classrooms. These negative attitudes from parents, students, and teachers restricts persons with disabilities including those with deaf-blindness from gaining accommodations in schools which are supposed to be part of their daily living activities.

Sensory awareness includes any activity that stimulates your young child's senses: touch, smell, taste, movement, balancing, sight, and hearing. Orientation and Mobility is a term that is used when referring to our ability to find our way or navigate our environment and being mobile with the physical ability to move about safely. Subconsciously, we all use our senses of vision, hearing, smell, and kinaesthetic reactions to help us find our way whether in a familiar environment such as our home or in a new and unfamiliar environment. Our vision is used more than the other senses to get ourselves around. For example, finding the toilet in public places, we use our vision to follow the signs. We use our hearing to follow sounds, for instance, when a young child playing at home cries out because they have hurt themselves, we can use our directional hearing to find them and assist. Persons with deaf-blindness will be unable to perform this help to children due to the vision and hearing loss. Our sense of smell alerts us and gives environmental cues such as the baker's or a florist shop. It is frustrating when people have difficulties using the above senses to interact with the environment. According to Hull and Hull (1973) persons with severe disabilities like deaf-blindness may experience frustration in trying to express themselves to other people. Based on his assertion, frustration could lead to poor self-concept or negative self-evaluation. In his opinion, this may intensify the adolescent's withdrawal tendency and even make the person hostile and anti-social, which are all negative implications in daily living. For people with deaf-blindness, they need to make use of the residual vision and hearing to interpret their environment. Depending on the type of vision and hearing loss, the condition of the environment itself and their perception, an individual may use a combination of visual, auditory, tactile, and olfactory cues to gain the necessary information when moving around their home or externally. Information is decreased for a person who is blind and/or having hearing loss or deaf. This could be because of poor orientation and mobility skills. Thus, it is vital to keep an eye on them to find their way around safely.

Martinez (2020) noted that, when a child cannot access his world efficiently through his vision, he must learn to use his other senses more effectively. Systematic instruction is needed to develop the

other senses for use in travel and finding things in the environment. She admitted that persons with deaf-blindness must understand that some of the sounds and smells, textures he experiences can be used as permanent markers (landmarks) to let him know where he is in the world. Other pieces of information may be there sometimes and not at other times (clues) such as the sound of the water fountain. Developing sensory awareness is critical for children with deaf-blindness. As a matter of fact, sounds when not paired with clear visual information can be very confusing. Try sitting in a busy park for a period of time with your eyes closed. You will probably hear sounds that you can't identify and be tempted to open your eyes, to try to pair a sound to its source. You might assume that sounds which get louder and louder are coming towards you because of your visual knowledge of the world. A child with deaf-blindness will not make the same assumption. They have lost the sense of hearing to a certain degree. Thus, need the sense of touch, smell, taste to interpret the world around them which is insufficient. According to Moss (2020) if the sense of hearing of persons with visual impairments is impaired even to a smaller degree, daily tasks will become much more difficult. Close your eyes and plug your ears while you stand on a busy street corner. Can you tell which way the traffic is flowing or when it will be safe to cross the street? Are you distracted by other noise you hear? Children need to learn to localize sounds and use sound clues for Orientation, straight line travel and safety. According to him, persons who have lose their sense of vision or hearing to any degree will find it difficult crossing the street and performing other daily tasks.

Persons with deaf-blindness learn most of the things in the world through touch. However, if the things you touch feel funny or hurt, you may become resistant to using touch to examine the environment. According to Martinez (2020) touch alone may not be helpful in identifying an object if you can't touch the whole object at one time. For example, if you touch the foot of a rabbit without touching the ears, teeth, or tail, you might not know that it is a rabbit. Thus, developing the tactual sense entails a lot especially when it comes to identifying objects. This is very difficult especially for persons with deaf-blindness. The problem of Mobility over protectiveness of adults and relationships with peer and sighted children have led many to suspect that persons with visual impairments have problems in personal adjustment, suffer from helplessness, and dependency. Fraibary (1868) speculated that children with visual impairments do not imitate activities because they cannot see the consequences of their own acts. Abosi (1978) described the neighbourhood's attitudes to handicapped children as being a greater source of trouble to parents than the attitude of the community at large. Neighbours walk and by-passed a handicapped child as though he was not there. This is why Keller's view becomes most appropriate, "not blindness but the attitude of the seeing to the blind is the hardest burden to bear." These negatively affect the daily living skills of handicapped children including persons with deaf-blindness.

According to Moss (2020) developing the sense of smell will help you know where you are in certain environment. Smell can also serve as land marks or clues for environmental awareness. For example, the smell in the kitchen differs greatly from the smell in the bedroom. Thus, looking at the clues to a particular location both smells will mean different location. It is easier for a person to identify himself beside a dust bin than in an environmental free area. It is important for children with deaf-blindness to participate in activities that enable them to fully use their other senses. But environmental awareness restricts them from full participation in daily living activities. Also, learning to interpret the information they tune into, is equally important. Parents and educational staff, with support from the Orientation and Mobility, can do a lot to help children develop their other senses. For persons with deaf-blindness, it is difficult to fully develop the other senses to enhance environmental awareness. These hinder activities of daily living.

### **Opinions and Researches on Daily Living Skills**

The concept of Daily Living Skills (ADLs) was proposed by Sidney Katz and his team (1950) to be a person's daily self-care activities. This was done at the Benjamin Rose Hospital at Cleveland. To him, health professionals usually use a person's ability or inability to perform ADLs as a measurement of their functional ability or status. This occurs mostly to persons who are injured, persons with disabilities, the elderly, and the young. Younger children often require help from adults

to perform ADLs, as they have not yet developed the skills necessary to perform them independently. In his view, daily living things are "the things we normally do... such as feeding ourselves, bathing, dressing, grooming, work, home making, and leisure." Adaptive equipment and devices may be used to enhance and increase independence in performing ADLs. The skills of daily living such as grooming, eating, cooking, and money management, is important for persons with deaf-blindness, allowing them to reach the goal of independent living in the society (Tuttle 1974). He argues that without these essential skills, the persons with visual impairments will be unable to take their rightful place in the society.

To Kernisan (2018) activities of daily Living are those Self-Care tasks that people usually learn in early childhood. They include feeding, toileting, selecting proper attire, grooming, maintaining continence, putting on clothes, bathing, walking and transferring (such as moving from bed to wheelchair). They represent the skills that people usually needs to be able to live as independent adults. Whether or not an individual is capable of performing these activities on their own or if they rely on a family care giver to perform the ADLs, serves a comparative measure of their independence. One way to think about basic ADLs is that they are the things many people do when they get up in the morning and get ready to go out of the house: get out of bed, go to the toilet, bathe, dress, groom, and eat. According to Cratty (1989) the human eye is like a mirror that sees things and imitate. To her, students with visually impairment may likely be less fit because of their inability to see others to imitate, since exercise and training are psycho-motor oriented. It is difficult for them to be effective in daily living skills due to their impairment.

Lawton, (2008) talk about Instrumental activities of daily living (IADL), which are not necessary for fundamental functioning, but they let an individual live independently in the community. To him, IADLs are actions that are important to being able to live independently but do not necessarily required activities on a daily basis. The instrumental activities are more skilful than the Activities of Daily Living. They can help determine with greater detail the level of assistance required by an elderly or disabled person.

The skills of daily living such as grooming, eating, cooking, and money management form an essential part of the curriculum of persons with visual impairments, allowing them to reach the goal of independence living in the society. Davidow (1974) confirmed this by emphasizing that the function of education is to prepare one for complete living which cannot be achieved in the absence of such skills. Chapman (1979) notes that difficulties in managing routine social skills are likely to occur if the child with visual impairments has been discouraged from doing things for himself at home. On the other hand, they are more likely to cooperate in this training if parents take time to ensure that their children understand the values of mastering each daily living skill. This could only be possible if they have mastered skills in Orientation and mobility. It must not be assumed that children will just want to be socially acceptable (Tuttle, 1974). Possession of daily living skills is strongly believed to complete a balanced picture of a well-educated and adjusted person who has the ability to manage his personal life without undue reliance of others. Thus, persons with visual impairments and deaf-blindness need Orientation and Mobility skills to achieve the stated daily living skills. Orientation and Mobility skills are the first skills to be taught to any person who suddenly became deaf-blind. The lack of the ability to use Orientation and Mobility skills hindered persons with deaf-blindness from achieving their endeavours in life.

### **Research questions**

1. To investigate the impact of sensory awareness training as an indicator of Orientation and Mobility on the daily living skills of persons with deaf-blindness.

### **Theoretical Framework**

Gardner's theory is based on the theory of multiple intelligence to human, spatial intelligence and bodily kinaesthetic intelligence. The theory of multiple intelligences to human holds that a child is exposed to objects in the environment and interacts with the objects. It is when children go through this process that they later detach themselves from the world of concrete objects and begin to think

abstractly. A person with deaf-blindness does not see an object unless being introduced to by someone. He/she cannot gain awareness of them. This skill can best be achieved through environmental Orientation and Mobility that helps the person to move from one place to another to achieve the contacts with the world. In the same way, spatial intelligence explains the need for children to manipulate objects in the environment using their spatial intelligence. He noted that, mental abilities should be thought of as a means of carrying out bodily actions. It is the brain that controls our bodily actions. The motor behaviour is executed through thinking. Therefore, the control of our bodily motions and the ability to handle objects skilfully are features of intelligence. Therefore, combining sensory awareness skills as an indicator of Orientation and Mobility skills which involves carrying out the bodily actions with other skills, needs intellectual functioning in order to participate in daily living chores.

### **Research Methodology**

The quasi experimental pre – test post – test research design was used. 10 persons with deaf-blindness were sampled. Purposive, accidental, snow ball and stratified sampling technique was used based on the basis of age of onset of the impairment (congenital and adventitious). The instruments used were observation and interview guide. Data was analysed using descriptive statistics, inferential statistics and thematic analysis. Hypothesis was tested using the independent t-test.

The results for experimental and control group were as follows:

#### **Multiple response set of the experimental group on sensory awareness**

	Not at all	Mildly	Very well	Total
PRE-TEST	45	5.0	0	50
	90%	10%	0%	100%
POST-TEST	22	28	0	50
	44%	56%	0%	100%
Amount of change	-23	23	0	
	-46%	46%	0%	

### **Discussion**

The table above presents the multiple response set of sensory awareness of the experimental group. During the pre-test, the multiple response set presented an overall of 90% inability to use the sensory awareness, and a 10% mild ability. However, no subject could use sensory awareness very well.

After the training, the multiple response set showed 44% inability to use sensory awareness and 56% mild ability. Looking at the amount of change, there was a 23% reduction in their inability to use sensory awareness and a 23% increase in their mild ability to use sensory awareness. However, no subject could master his/her sensory awareness skills very well before and after the training.

The result of the research showed that training on sensory awareness can enhance the participation of daily living skills. The experimental group performed better than the control group.

### **Conclusion**

As seen in the review of related literature, persons with deaf-blindness have not been trained in sensory awareness as reflected in the control group, due to lack of special educators in our schools and communities. When sensory awareness skills are taught to persons with deaf-blindness, it enhances the achievements of daily living skills as reflected in the experimental group. Therefore, sensory awareness skills can be used to enhance daily living participation of persons with deaf-blindness.

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