

# **Awareness about disability among school going children aged 9-12years in Pune city, India**

Authors: Rujuta Bhave PT, Dr. Apoorva Pavnaskar PT

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## **Index-**

Sr number	Title	Page number
1	Research Question	3
2	Introduction	3
3	Need of study	5
4	Objectives	5
5	Literature Review	6
6	Methodology	7
7	Result and discussion	8
8	Conclusion	19
9	Limitation & Future scope	19
10	Clinical Implication	19
11	References	20
12	Annexure A	21

## **Research Question-**

What is the awareness regarding knowledge, skill, attitude, and behavior towards disability in school going children of 9-12-years of age?

## **Introduction-**

Disability rate in India is 2.21% of total population [1]. As per the Census 2011, in India the total population is 121 Cr [2] out of which 2.68 Cr persons are disabled. This is a big number.

Community is losing out on a big population by being ignorant towards disabled. Disability is now termed as specially-abled for the same reason. As a community we are not aware of this 2.68 Cr population and their capabilities.

School going children know about concept of specially-abled or handicapped through television shows, movies, or cartoons. A better source of accurate information could be from educational system including this topic in syllabus. Parents or families discussing this topic from empathetic neutral approach towards the disabled, families teaching the children inclusion by modelling behavior. These will be better sources of information along with audio-visual aids for better understanding.

There are many acts, policies and strategies for supportive integration and inclusive education. Lack of awareness, presence of shame and stigmatization related to disability leads to poor response to the policies and strategies. Improving social inclusion and participation of persons with disability in mainstream education is important. Education of types of disability and their capabilities is required. There are five main types of disability stated by Persons with disability (equal opportunity, protection of rights and full participation) Act 1995 [3]. Visual impairment, Locomotor or orthopedic disability, speech and hearing disabilities, mental retardation (now called as intellectual deficits) and multiple disabilities.

There are five possible reactions to persons with disability as mentioned by community-based rehabilitation literature. Elimination, poor house approach, institutional care, integration, self-actualization are the 5 reactions to persons with disability. Elimination is removing disabled from the community. Poor house approach suggests disabled are kept at house disconnecting from community. Institutional care talks about educating or including with segregation. Integration is a process leading to full involvement of disabled persons in life of their families, community, and society. Lastly, self-actualization is ability of disabled person to fulfil his or her need for

living a life in dignified independence with self-esteem. Working towards integration and self-actualization is a way to go for the community [4].

Secondary and higher secondary school going children have already started bullying other children for not fitting in or being normal. The older children already have their perspectives set and it is difficult to make them aware and feel empathetic towards certain areas of community. The primary school going children are still in the molding stage, neutrally communicated concept can be accepted by children in this age in much better way. Developing empathy is the key than developing sympathy. Disabled do not want help, or to be treated specially. All they are asking for is acceptance and to be treated normally. Once the children learn about disability and develop empathetic approach, they will take this perspective further ahead with them in their adulthood. Henceforth, making adults and their kids around them understand the perspective they have instilled in them since their childhood.

Increased awareness about disability will have more empathetic community in the future. The future of disabled humans will have more supportive community which will help in easier inclusion and self-actualization. The disabled humans will gain more respect and will have to suffer less. As a result of increased awareness, social barriers in development of disabled humans will be minimum to none.

Children's lack of knowledge about disability can adversely impact their attitude towards people with disability. Awareness programs in schools about capabilities of persons with disability could create better acceptance by school going children. This study will be useful to have detailed data for creating and arranging awareness programs in community. Health education awareness programs for school children are very important to bring changes in their attitude, behavior, and practice integration of disabled.

## **Need of study-**

Previous literature lacks awareness about disability in school going children aged 9-12 in India.

## **Objectives-**

1. To design disability awareness questionnaire for school going children of 9-12 years of age.
2. To assess awareness about disability amongst school children of 9-12 years of age in Pune city.

## **Literature Review-**

1. A study by Nicole Ison, Sarah McIntyre, Sophie Rothery, Hayley Smithers-Sheedy, Shona Goldsmith, Samantha Parsonage, Liz Foy in Australia was published in 2010 in *Developmental Neurorehabilitation Journal*. Study titled, “Just like you”: disability awareness program for children that enhanced knowledge, attitude, and acceptance. This study was performed in age group of 9-11 with sample size of 147 children. Focal group-based pre-post questionnaires were used. Intervention included discussions, written activities, demonstrations, and disability simulation activities with disabled person co-presenting. As a conclusion, awareness program of children showed improved knowledge, attitude, and acceptance in short term. [5]
2. A systematic review of disability awareness interventions in child and youth by Sally Lindsay and Ashley Edwards. Published online in 2012 in the journal of disability and rehabilitation. This study included 42 articles. Five different disability awareness interventions were studied. These interventions showed improved knowledge about disability and better attitude towards disabled. Several different intervention strategies should be included in the awareness program. [6]
3. Madhab Ray and team published their study in *Indian Heart Journal* in 2020. A questionnaire-based survey was conducted in 20 schools of West Midnapur, India. Questionnaire had 29 pointer scale from 9 different domains of the disease. The study was conducted to check awareness about rheumatoid heart diseases in school going children. Awareness was found to be modest in rural area. Mean age was 13 years. Increase in level of knowledge was found in all aspects individually as well as combined. [7]

## **Methodology-**

- Study design- Cross sectional observational study
- Study type- Qualitative study
- Study setting- Activity classes, Residential areas, Sports clubs
- Study population- Children aged 9-12years in Pune city
  
- Sample size- 116 children.
- Inclusion criteria- Children aged 9-12years, all genders.
- Exclusion criteria- Children with cognitive impairment, Children with disability, Children not going to school, Children without assent, Children without parental consent.
  
- Procedure- Candidates fitting in the inclusion criteria has been chosen. Oral assent of the candidates taken. Self-administered questionnaire was given to the candidates in person. Small introduction given to children. This was followed by individual filling of the questionnaire with doubt solving session if any. (Questionnaire has been attached in Annexure A) Questionnaire included open ended questions which gave children the freedom to answer in any format. Children were briefed that all these questions do not have wrong answers and they can answer whatever they feel like writing or drawing. Children were given a free environment without any parental or external pressure. No leading on information was given to children. Data collection was done. Qualitative assessment of data was done with the help of statistician.
  
- Data analysis- Data analysis was done by scanning the entire data for each question. Data was grouped according to similar responses for each question. Similar answers were then counted and put into graphs. Interpretation of the graphs were written. Extreme, unique responses of open-ended questions were selected and mentioned in the report as it is. Data was analyzed for knowledge, attitude, and skills of children towards specially-abled.

## Result and discussion-

116 samples were collected across Pune city, over 7 months. These samples were collected from sports clubs, residential areas, and activity classes. Distribution of age across the sample collected is represented in Figure 1. Age group of 9 years to 12 years. Close to equal distribution across age group. 24 candidates in age 9 and 11. 34 candidates in age 10 and 12 During the filling of questionnaire many older candidates helped the younger once, in helping them read fast.

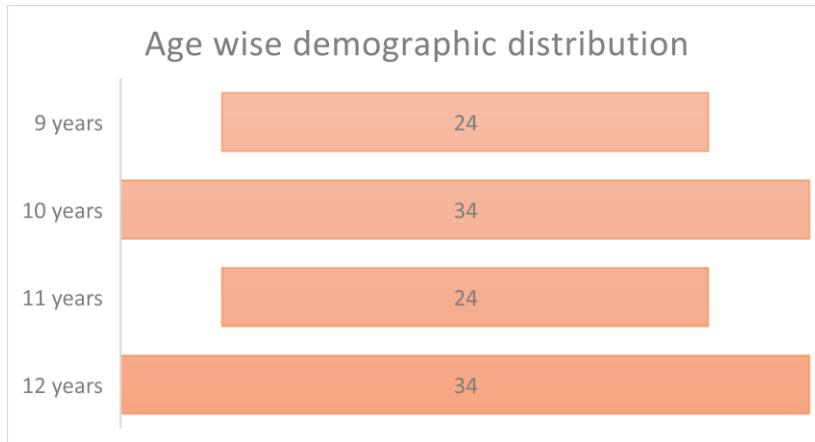


Figure 1

Gender distribution is shown in the pie chart (Figure 2). 53 females participated in the study. Male candidates were 63 out of 116 total candidates. Males being more than females. All candidates wrote either boy or girl.

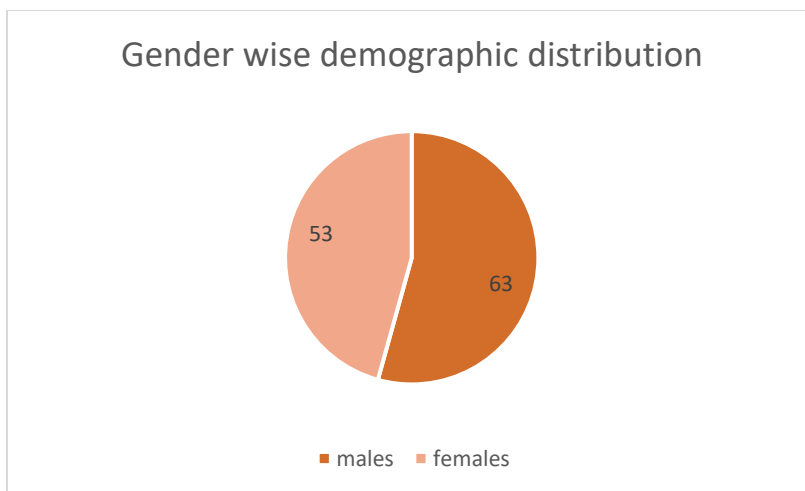


Figure 2



After demographics a question was asked in simple words to see how many candidates had been already in contact with one or more disability. Options were humans having problems with hearing, seeing, walking, running, jumping and understanding. 94 candidates had been in contact with atleast one specially abled person. 22 candidates had never ever met a specially abled person. Candidates who had met these special humans was at either school, classes, play grounds or in their relative circle.

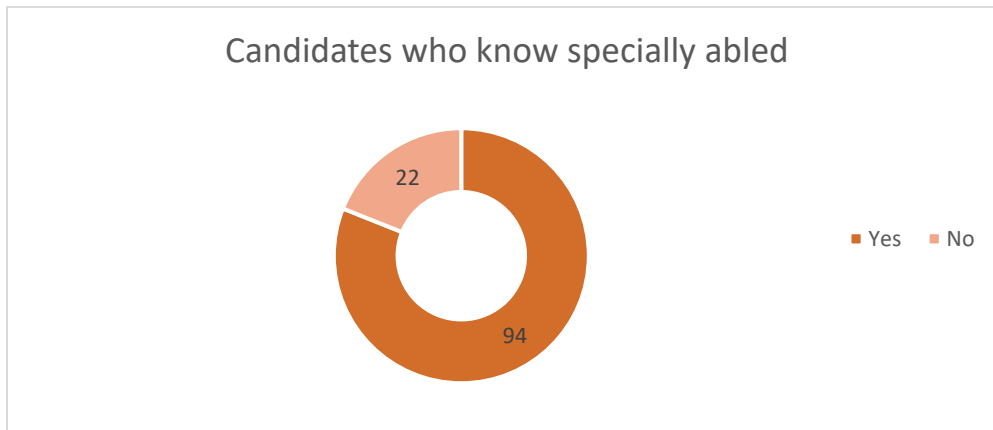


Figure 3

A question was asked to all the candidates about what do they understand by the term 'Handicap' to check general awareness about the topic. Figure 4 shows pie graph representing percentage of candidates and their answers. 43% of the candidates did not know the term at all. 7% of the candidates knew the term but had wrong responses. 49% of the candidates could write what handicap meant and it described one of the 5 types of disabilities. The common responses by the candidates were 'People who don't have either hands or legs or both' 'Cannot hear' or 'Can't see' Few responded, 'People who can't understand' 'Someone who has a disorder or injured or sick' Few others responded that it is 'Humans who are physically disabled' Few others responded using phrases, "Someone born with specific body part" "People who are hurt, for example bandage" "People who are deprived of certain abilities which does not allow them to walk or talk", "Someone who can't do something that others can do", "A person with something less than normal as compared to a normal person means handicap" and "who are permanently damaged"

We had asked the candidates if they knew what specially abled means. 12% candidates understood what specially abled meant. 21% of candidates attempted to answer the question but did not give correct answers. 65% of the candidates didn't know what specially abled means and had never heard the word.

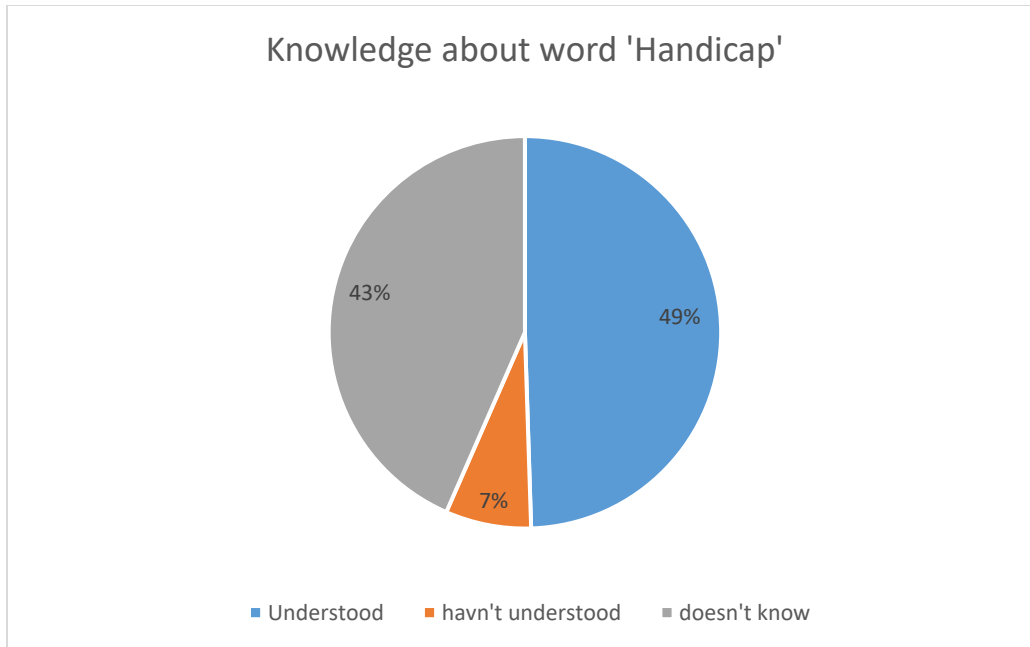


Figure 4

Next question was asked to candidates about how many of them know humans having problems around them. 81 percent of candidates have met at least one human with someone who has problem with hearing, seeing, walking, running, jumping, or understanding. Despite of knowing specially abled individuals, candidates were unaware of the term handicap or what it means. Candidates were asked to draw a picture of disability and then draw a picture of themselves. This question was asked to assess pictorial understanding of the candidates. Additionally, checking difference in perception between self and disabled. 87 candidates attempted to draw a pictorial representation. According to responses of candidates, responses were divided into 6 categories. 'External aids', 'No limbs', 'Deaf', 'Blind', 'No difference' and lastly 'Not attempted'. Figure 4 shows number of candidates according to mentioned categories. A maximum number of 33 candidates have drawn some external aid. It includes axillary crutches, elbow crutches, walking stick, wheelchair, motorized wheelchair, platforms with wheels, etc. Around 25 other candidates have drawn humans with no upper or lower limb. Few have shown fractured limbs, paralyzed limbs, prosthetic limb, or even bilateral loss of limb. Visually disabled humans were represented by 9 candidates using black glasses and white canes. 4 candidates have drawn hearing disability. They have represented hearing deficit by drawing mute sign, hearing aid or writing "hearing loss" In 12 candidates it was difficult to interpret the difference between drawing of self and the

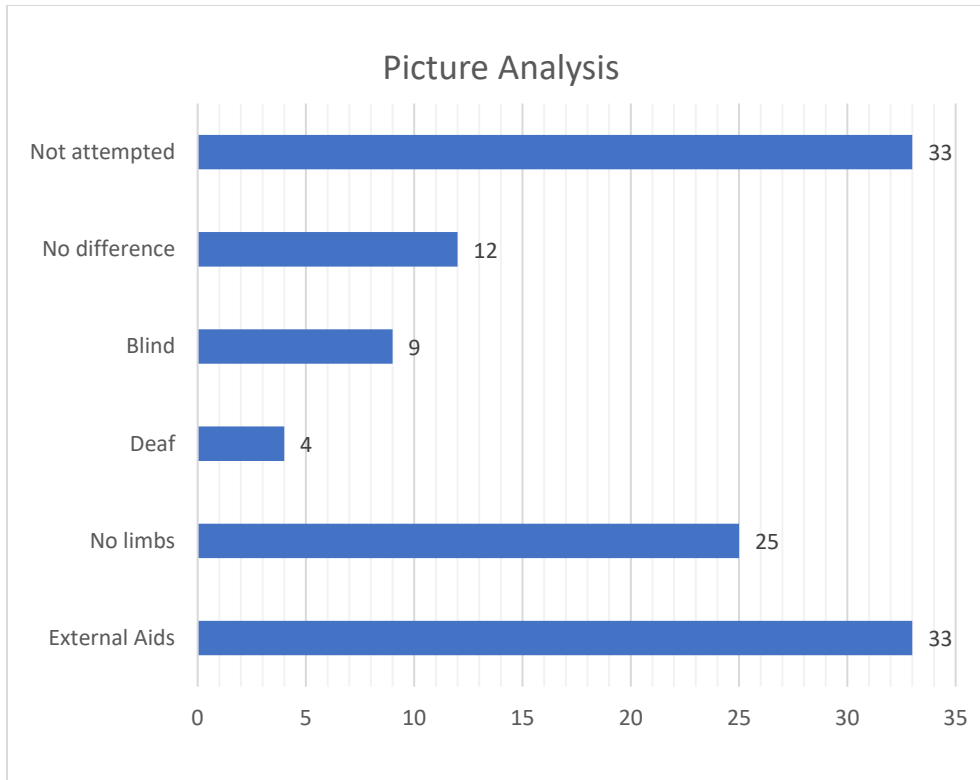
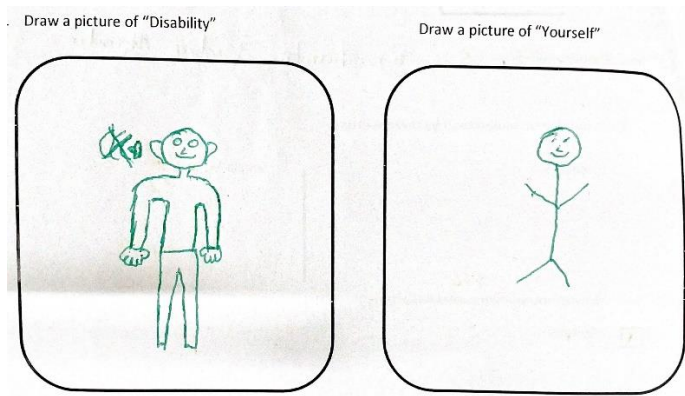


Figure 5

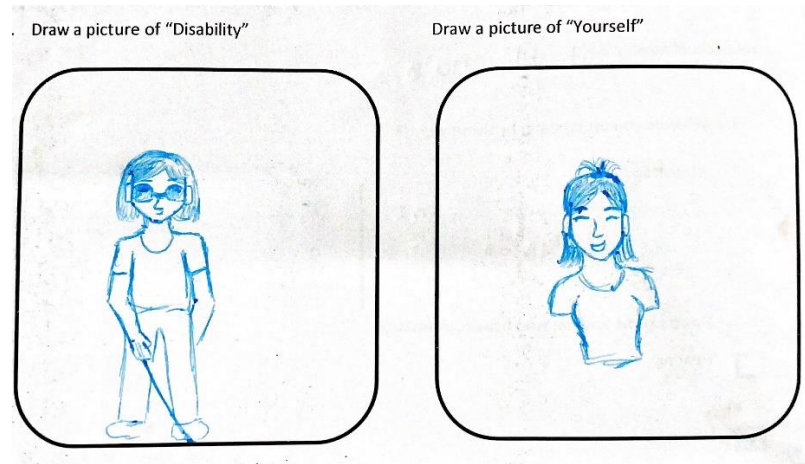
Limitation of this question was observed. First being, only visual understanding component was assessed from this question. Few candidates could not attempt to draw a picture because they showed lack of ability to draw or convert their awareness into visual representation. Hence, only visual awareness can be stated from this question. Second limitation is that visually significant disability was more commonly drawn, when candidates were aware about other disabilities too. Other disabilities like hearing deficit, visual impairment, and intellectual differences.

Few remarkable representations of disability through pictures were as follows.

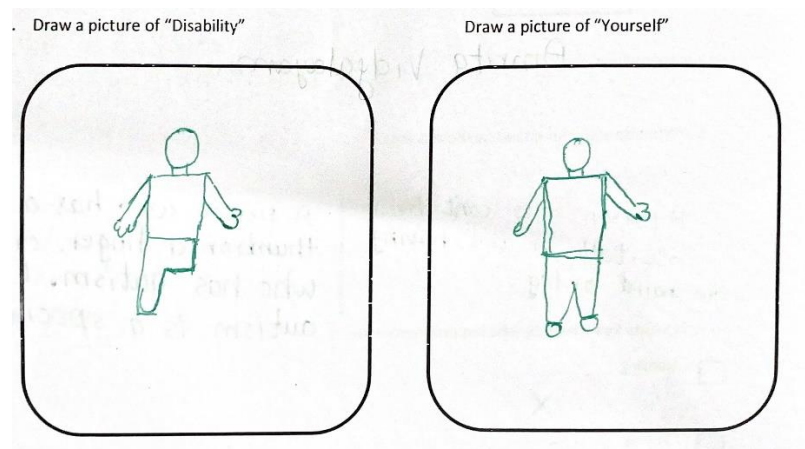
Deaf-



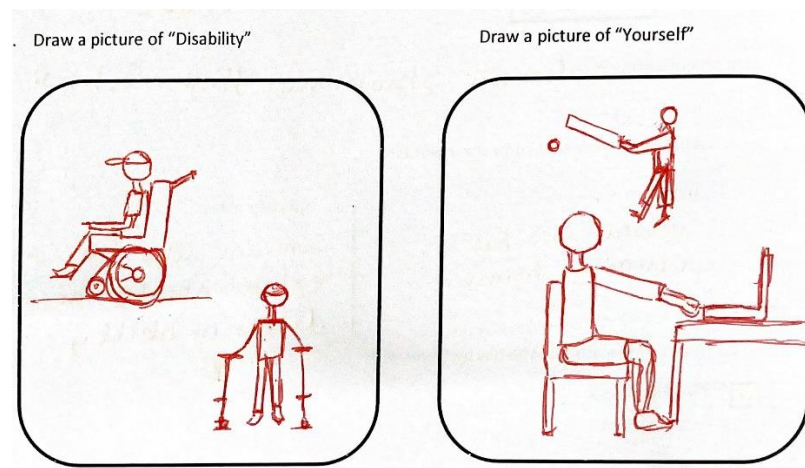
## Blind-



## No limbs-



## External aid-



A question was asked to find out knowledge about capabilities of specially abled. Six categories were given and each had three possible activities. One activity from daily living, one activity from functional use and one from community activities was included. All activities were included such that those are possible for that specially abled person.

Candidates were asked to tick mark whatever activities they think are possible by these human beings after learning, practicing and hard working. Candidates were able to fill Table 1 with ease. Though, many of the candidates stumbled upon words ‘deaf’ and ‘lower intellectual deficit’ These terms explained to the candidates in simple words so that they understand the meaning.

<b>Specially abled humans</b>	<b>Maximum activity possible for those humans</b>		
Blind	Tie shoe lace	Make paper bag	Play with friends
No arms/ arms are not working	Eat	Write	Paint
Brain cannot control the body	Move around	Mental math	Narrate a story
Deaf	Wear clothes	Buy from a shop	Dance
No legs/ legs aren't functional	Take bath	Go to school	Swim
Lower Intellectual Quotient (IQ)	Cook	Sweep floor	Bicycle

Table 1

Figure 6 is bar graph of candidates according to their responses of Table 1. Every candidate was scored out of 18 in total. Each category having maximum of 3 score and minimum of 0. Commonly found score was 1. Least found score was 3 across all categories and candidates. Candidates lack knowledge about capabilities of specially abled, as the entire bar graph can be yellow that is all 3 activities are possible for all 6 categories of specially abled. From the bar graph we can analyze that 32 candidates think that humans with hearing deficit can perform all three activities. Whereas 40 candidates think that humans with upper limb disability can not perform any of the activities mentioned in the table. Lack of knowledge is seen the most in neurological and locomotor category as only 7 and 8 candidates think that all activities are possible respectively.

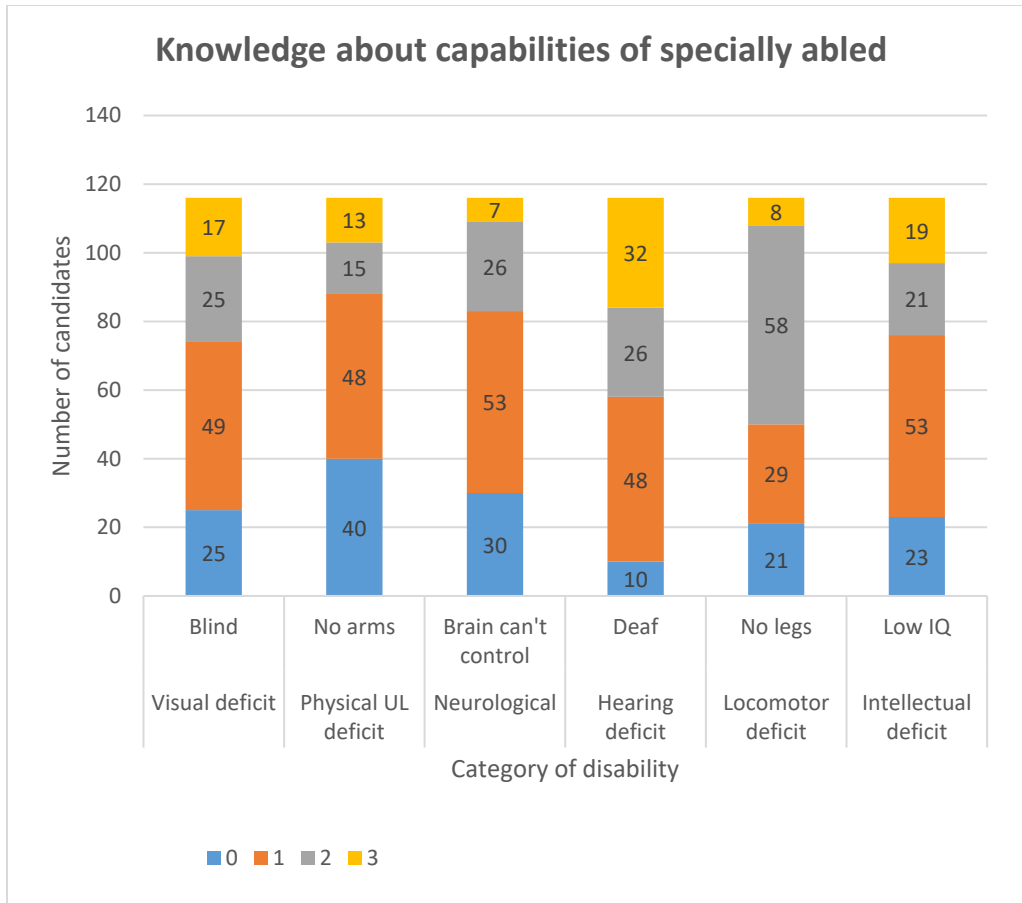


Figure 6

We had asked three questions to understand attitude of children towards specially abled. One of the question was if human beings using wheelchair, walker, crutches or special shoes are sick not. Figure 7 depicts attitude of candidates towards humans using external aids. 80 candidates said that these human beings are not sick and 11 candidates said empathetic things additionally. 30 candidates said that these human beings are sick if they are using external aid. Few empathetic responses, “A human using a wheelchair is not sick because their leg or hand or any body part is just hurt or can’t do a few things but, not sick” “They are special meaning they are born disabled or their disability has occurred maybe by an accident”, and “They are not sick, just a little different from us in fact they are unique.” One candidate shared a personal experience, “I have height problems, I am short. The God has given us what he thinks and God always thinks good for us.” A candidate explained why that person feels these individuals are sick in these words, “A human being using wheelchair or walker can be little sick or different from others.”

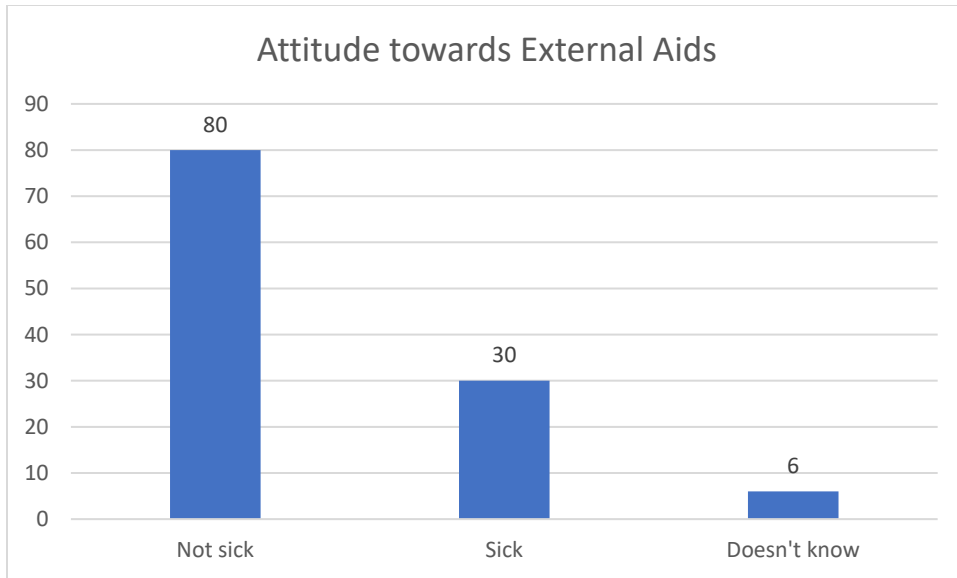


Figure 7

Another question was asked to candidates if they feel comfortable being friends with someone who behaves or looks differently. Figure 8 is a representation of their comfort. 77% of the candidates said they will be comfortable being friends with such humans. Out of which a 62% of them even mentioned what they would like to play with them. Only 19% candidates said that they will not be comfortable being friends with someone who behaves or looks differently than them. Few empathetic responses were, “Not playing with someone because they have a disability is wrong” “We should treat them equally” Someone said, “Don’t judge a book by its cover”

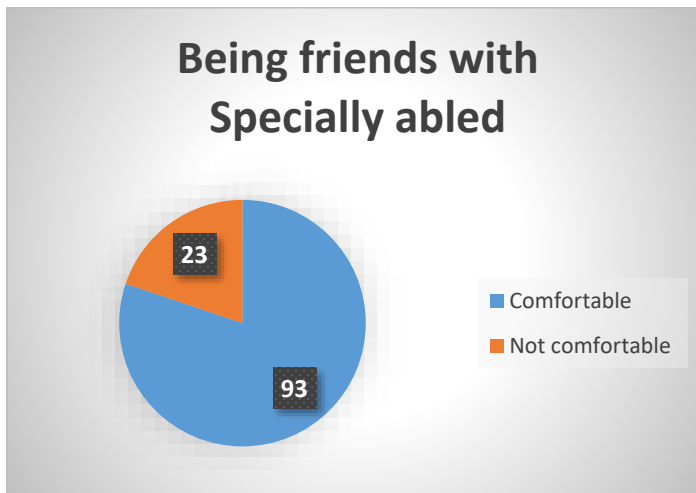


Figure 8

Responses about what will they play were varied. Few candidates wrote their own favorite sports, few wrote easy games so the specially abled can play with them easily whereas few said

they will play games that they would play with their normal friends. Some responses mentioned that they will explain the game in simple words before playing. Few wrote, “I would try my best to play with them as normally as possible, any game or something that they are really good at”, “I will play the games in which they are completely comfortable”, “I will try to distract them of their disabilities by playing games” and “What I will play depends on that person’s disabilities but I will never stop trying.”

The last question in the category of the analyzing attitude was asked about inclusive behavior. The question was, “Some humans need help for doing some activity/ task/ work. Is it okay to exclude them from doing that thing?”

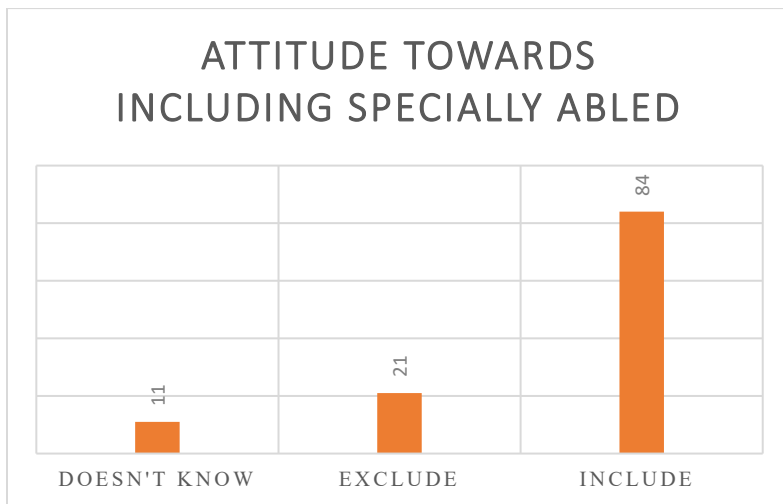


Figure 9

Many candidates had difficulty in understanding the term ‘exclude’, it was explained in simple words. As shown in Figure 9, 11 candidates could not answer the question. 21 candidates were unwilling to accept individuals who need help and include them. Rest 84 candidates agreed to include these individuals. Out of which 18 wrote justification for including these individuals. Responses mentioned, “It’s our job to help them without even thinking”, “Unless the activity is harming them, they should be included”, “If they think they can do the task, they surely can”, “If they practice and perform the work, then can do better than us” and “If it is something they love to do they will feel sad.” One responded, “Include them, because they never give up”



A question was asked to candidates to find out how will they communicate with specially abled and if they have any new ideas regarding the same. Responses will help us understand level of integration possible by the children. Responses showed that about 66% of the candidates knew how to talk to visually impaired but, only 9% of them knew about braille language. Similarly, about 77% candidates knew how to communicate with impaired hearing individual and 29% of them knew about sign language. Most candidates were aware of communication strategies but, it was opposite in case of individuals who have lesser understanding. Only 32% candidates could tell effective strategies to communicate with intellectual deficit individuals.

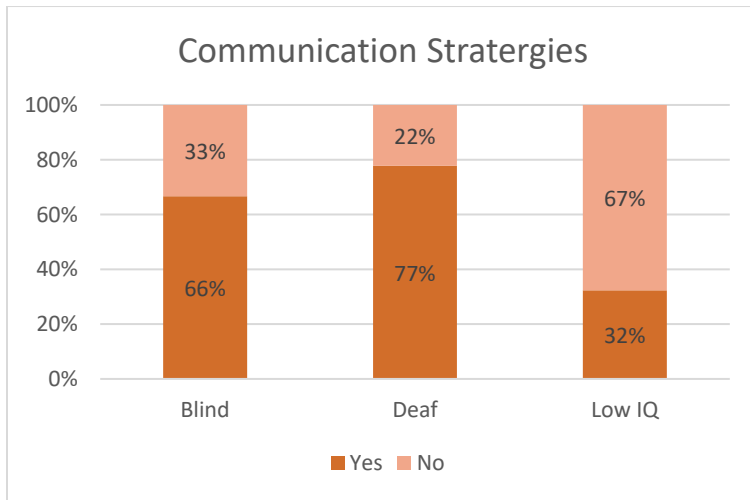


Figure 10

Most of candidates have responded positively. Few responses were, “Never stop trying” and “Help and encourage.” Someone wrote about helping visually impaired human, “I will help the blind person to cross the road” “I will explain the surroundings to them”, “Will give directions about where to go” Few suggested that they will use actions to explain, use lip movements or learn sign language to communicate with individuals having hearing deficit. For intellectual deficit, candidates mentioned explaining slowly or explaining in simple words. “Explain as much as possible. Do not give up if they do not understand. Explain it till they understand” “I will try explain them in a friendly and polite way”

After candidates had filled the questionnaire, few points were discussed with them. They were explained how specially abled children can't go to school because their parents are afraid that they will get bullied. These children are taught how to behave nicely with everyone but, often others do not behave nicely with the children. Candidates agreed that these things were wrong and it wasn't the specially abled human's fault. A story was narrated to them about a human who does not have both hands and legs. Problems faced by that human were discussed and the candidates gave a whole list of all the suspected problems. The story was further narrated where the specially abled human has overcome all problems in his life. The only problem that now remains in his life is that 'People don't behave normally with him' Candidates were able to sink in this thought and accepted that it was community's role to work on this.

Additionally, around 10 candidates wanted to discuss this topic further. They shared their experience. Told stories that they had seen, watched, or heard. Many of them had seen videos of these humans through some or the other electronic devices. They shared stories of seeing videos on YouTube, watching movies and cartoons. They also told stories about Paralympic athletes and their achievements.

## **Conclusion-**

Less awareness was observed with respect to knowledge of disability. 49% of candidates knew what handicap means. 65% of the candidates didn't even know what 'specially abled' word means. Knowledge about capabilities of specially abled was low and significantly low in categories of lower limb disability and neurological impairment. 38% of candidates could not draw a picture of disability.

About attitude towards disabled, even though candidates showed low awareness they showed empathetic and accepting attitude towards specially abled. 80% of them showed empathy in all 3 different questions. Most candidates were willing to be friends with specially abled, include them in activities that are difficult for them and showed empathy towards humans using external aids.

Skills of candidates involved towards disabled varied according to the category. Candidates had more awareness about communicating with visual impairment and hearing deficit than communicating with intellectual disability. Very few knew disability specific communication strategies like braille language and sign language.

## **Limitation-**

1. Behavior of candidates towards disabled was not checked through this study. Only knowledge, attitude and skills of candidates was checked towards specially abled.

## **Future scope-**

1. Social strata wise research can be conducted to find out if there is any correlation between social background and level of awareness.

## **Clinical Implication-**

1. Disability awareness program can be designed for school going children. Considering the categories of less awareness, more stress can be given upon those. Different methods like roll plays, picturization, audio-visual aids or experience of being with specially abled can be incorporated.
2. Disability integration can be achieved in educational institutions leading to higher rates of literacy in future. Reducing psychosocial barrier in growth and development of specially abled individuals by creating more aware and accepting environment around the individuals. Especially, in age group 9-12 as these children are already willing to include with an empathetic attitude.

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# Annexure A

## “Just like you”

Your age:

Your gender:

Your school name:

1. What do you understand by these words?

Handicap

Specially abled

2. Do you know anyone who has problems with

Hearing

Seeing

Walking, running, jumping

Understanding

If yes, rate their confidence level-

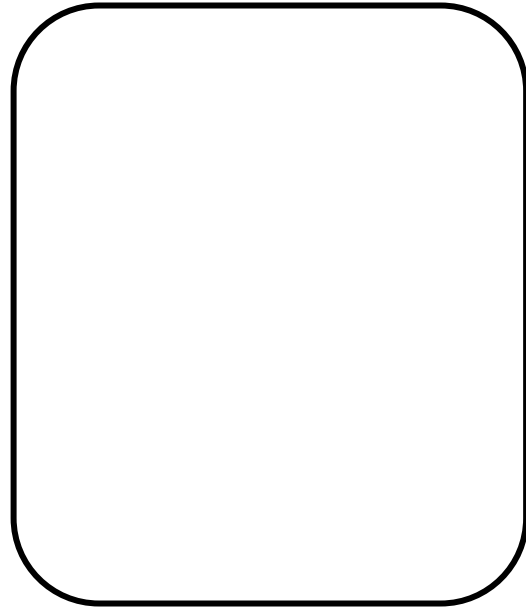
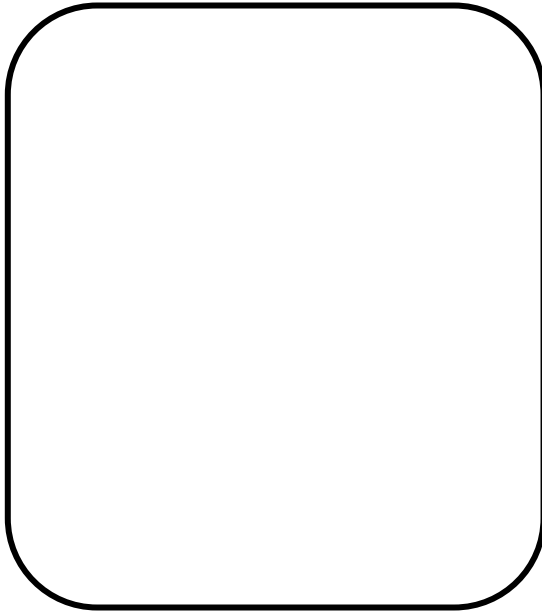
If yes, how do you know them?



3. How many humans out of 100 are disabled? Any guesses?

4. Draw a picture of "Disability"

Draw a picture of "Yourself"



5. Tick mark whatever activities are possible by following human being after learning, practicing and hard working.

Specially abled humans	Maximum activity possible for those humans		
Blind	Tie shoe lace	Make paper bag	Play with friends
No arms/ arms aren't working	Eat	Write	Paint
Brain can't control the body	Move around	Mental maths	Narrate a story
Deaf	Wear clothes	Buy from a shop	Dance
No legs/ legs aren't functional	Take bath	Go to school	Swim
Lower Intellectual Quotient (IQ)	Cook	Sweep floor	Bicycle

6. Do you feel that a human being using wheelchair, walker, crutches, special shoes are sick?

7. Will you be comfortable being friends with a human who looks or behaves differently?

Yes / No

What will you play with these humans?

8. Some humans need help for doing some activity/ task/ work. Is it okay to exclude them from doing that thing?

9. How will you communicate with these humans?

Cannot see:



Cannot hear:



Cannot write:



Cannot understand:



*Thank you human!*