



## ORIGINAL RESEARCH

# Knowledge, Attitude and Perception of Disability among Healthcare Workers in a Nigerian Tertiary Health Institution

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## Abstract

**Purpose:** In Nigeria, people living with disabilities often face unintentional poor treatment and neglect. This cross-sectional study was aimed at exploring the level of knowledge, attitude, and perception of healthcare professionals towards PLWD in Nnamdi Azikiwe Teaching Hospital, Nnewi Anambra State.

**Materials and methods:** A total of 293 healthcare professionals were recruited through a random sampling technique. An adopted Knowledge, Attitude, and Perception of Physically Disabled People (KAPDAP) questionnaire was used to assess the level of knowledge, attitude, and perception. Participants' characteristics were summarized using mean, standard deviation, frequency, and percentages. Chi-square test was used to examine the association between selected participants' variables and the level of knowledge, attitude, and perception of physical disability.

**Results:** 242 (82.6%) of the participants had fair knowledge, 151 (51.5%) had fair attitude, while 142 (48.5%) of the participants had fair perceptions of PLWD. There was a significant association between professions and knowledge about disability.

**Conclusions:** The findings from this study indicated that healthcare professionals within the study area had adequate knowledge of physical disability-related issues capable of impacting positively their attitude and perception towards PLWD. There was a significant association between professions and knowledge ( $p < 0.001$ ), with physiotherapists possessing the highest knowledge level. However, more efforts on advocacy should be made until a disability-friendly environment is achieved across all studied professions.

## Keywords

Knowledge of disabilities, Attitude to disabilities, Perceptions of disabilities, Physical Disabilities, Health care professionals

## Introduction

About 15% of the world's population is estimated to have some form of disability and 2-4% of this population faces substantial challenges in their daily lives and functioning [1]. It has been reported that of all persons living with disability, 15.3% had moderate to severe disability, while 2.9 % had a severe disability. Among these persons, 5.8 % were aged 0-14 years, while 19.4% of the persons were those aged 15 years and above [1]. Disability has been described from a variety of domains, including medical, economic, social, and administrative. According to World Health Organization [2] disability in the context of health experience is any restriction or lack (resulting from impairments) of ability to perform an activity in the manner or within the range considered normal for a human being." People with physical disabilities are those who have impaired movement, dexterity, or stamina [3]. There are more physically disabled people than any other minority group in Nigeria [4]. Stigma, discrimination, violence, as well as lack of access to health care, housing, and education, are just some of the many human rights cases of abuse

that many people with disabilities must contend with every day [4].

In Nigeria, people living with disabilities often face unintentional harsh treatment and neglect. It took disability rights groups and activists nine years of tenacious campaigning before the Discrimination against Persons with Disabilities (Prohibition) Act, 2018, was signed into law on January 23<sup>rd</sup>, 2018 [4]. It has been reported that students with disabilities have reduced participation rates in after-school activities, which could result in a decline in sociability and leadership development [5]. A history of discrimination and devaluation against people with disabilities is based primarily on their being different from the non-disabled general population [6]. People with impairments may be stigmatized as outliers in society, as noted by Bedini [6]. People with disabilities are not only affected by their disabilities but their families and careers are also affected. Societal attitudes toward the disabled are often hostile and discriminatory, and sadly, some believe that disability is a result of the sins committed by individuals affected [7]. Some people with disabilities have also been accused of being responsible for their conditions. This has led to discriminations which in-turn has widened the gap between those who are disabled and those who are not [8].

Providing medical services to people with physical limitations is sometimes characterized by complexities [9]. There are people today who are strongly in favor of non-treatment of newborns with severe disabilities and that disability is caused by evil spirits, much as in the nineteenth century [10]. People with disabilities' health needs aren't given the attention they deserve because there aren't enough experts in the field in addition to health workers' ill-conceived perception of disability [11]. Physicians' views on disability seem to be conflicting in profound ways; one-fifth of doctors failed to adequately account for the impairment, while another fifth fail to investigate new concerns and complaints as extensively as are necessary [12]. Patients with disabilities and their doctors have varying views and expectations about patients' overall health, the likelihood of improvement, and even their life expectancies [13]. The knowledge, attitudes, and perceptions of healthcare practitioners about patients with physical disabilities, as well as how to best address those variables that are correctable are still unclear, especially in the Nigerian context. However, the ability of patients with disabilities to access healthcare and the quality of care they receive are both influenced by the knowledge, attitudes, and perceptions of their healthcare providers [14]. Healthcare providers' attitudes and a focus on the disability rather than the person may result in the withholding of treatment, the provision of poorer treatment, and the neglect of general preventative care [15-17]. As part of the strategies directed towards the promotion of health for-all, it is imperative to examine healthcare providers'

knowledge, attitudes, and perceptions of disability, as well as identify the underlying factors.

## Materials and Methods

### Research setting and design

This was a cross-sectional survey, and was conducted at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, from January 2021 to April 2021. The tertiary health institution is in one of the South-Eastern States in Nigeria that provides a wide range of medical, surgical, diagnostic, out-patient, rehabilitative, and support services to a catchment population of about 30,994,559. The institution has a staff strength of 2,700 comprising clinical and non clinical members. The hospital employs a multi-disciplinary approach in the development and delivery of health services. A random sampling technique was used to recruit participants into this study. A sample size of 312 participants were recruited into this study. The sample size was calculated using Yaro Yamane formulae.

### Study participants

The study involved 293 healthcare professionals including physicians, nurses, physiotherapists, medical laboratory scientists, radiographers, pharmacists, and dieticians/nutritionists. Interns and Youth Corps members currently serving in the hospital were excluded as they were temporary staff members. Informed consent was obtained from all the participants of this study after the aims of the study were explained. Ethical approval was also obtained from the ethical review committee of Nnamdi Azikiwe University Teaching Hospital Nnewi before the commencement of the study.

### Variables

Knowledge, perception, and attitude towards persons with disabilities were the major outcome variables in this study. Socio-demographic and clinical data such as gender, profession, level of education, years of experience, relationship with persons with disabilities were also considered. Self-administered measures including the Knowledge, Attitude, and Perception of Physically Disabled People (KAPPDP) questionnaire was administered to consenting health workers.

### Instrument

The KAPPDP questionnaire is divided into sections A, B, C, and D, addressing socio-demographics (10 questions), knowledge of physical disability (10 questions), attitude towards physically disabled persons (9 questions), and Perception about physically disabled persons (16 questions) respectively [18,19]. In scoring the questionnaire, more desirable answers were given higher scores than less desirable answers and the frequency of each question was summed up.

### Data analysis

Descriptive statistics of frequency, percentage,

**Table 1:** Socio-demographics of the participants.

Variables	Class	Frequency	Percentage
Gender	Male	161	54.9
	Female	132	45.1
Age	20-29	124	42.3
	30-39	107	36.5
	40-49	36	12.3
	50+	26	8.9
Highest Educational Level	1 <sup>st</sup> degree	242	82.6
	M.Sc.	45	15.4
	PhD, fellowship	6	2.0
Occupation	Doctors	120	41.0
	Nurses	110	37.5
	Lab. Sci.	26	8.9
	Physiotherapists	12	4.1
	Radiographers	8	2.7
	Pharmacists	15	5.1
	Dieticians	2	0.7
Yrs. of work exp.	0-10	183	62.5
	11-20	80	27.3
	21+	30	10.2
Disability in family	Yes	23	7.8
	No	270	92.2

**Note:** Yrs: years; exp: experience; Lab. Sci.: Laboratory scientists.

**Table 2:** Level of knowledge, attitude, and perception of healthcare workers towards people with physical disabilities.

Variables	Category	N (%)
Knowledge Level	Poor	13 (4.4)
	Fair	242 (82.6)
	Good	38 (13.0)
Attitude Level	Poor	0 (0.0)
	Fair	151 (51.5)
	Good	142 (48.5)
Perception Level	Poor	56 (19.1)
	Fair	142 (48.5)
	Good	95 (32.4)

mean, standard deviation was used to summarize participants' variables. Chi-square test was used to examine the association of profession gender, years of work experience, presence of disability in family and highest educational level, on the level of knowledge, attitude, and perception of physical disability. The level of significance was set at  $p < 0.05$ . Data were analyzed using SPSS version 21.

## Results

Among the 293 healthcare workers who participated in this study, majority were 1st degree holders with 0-10 years of work experience. Almost all 270 (92.2%) of the participants had no disability in their families (Table 1).

The majority (82.6%) of the participants had fair

knowledge, approximately 52% had a fair attitude, while less than half (48.5%) possessed a fair perception of disability (Table 2).

There was a significant association between profession and knowledge ( $p < 0.001$ ), with physiotherapists possessing the highest knowledge mean rank. Neither of the participants' gender ( $p = 0.059$ ) nor the presence of disability in the family ( $p = 0.062$ ) was associated with knowledge of disability. There was no statistically significant association between attitude and each professional tribe ( $p = 0.059$ ), gender ( $p = 0.230$ ) and presence of disability in the family ( $p = 0.352$ ). Similarly, we observed no statistically significant association between perception of disability with the professional tribe ( $p = 0.062$ ), gender ( $p = 0.376$ ) and presence of disability in the family ( $p = 0.698$ ) (Table 3). Neither educational level nor the year of experience was significantly associated with knowledge attitude or perception of disability ( $p > 0.05$ ) (Table 4).

## Discussion

The findings of this study revealed that the participants had a fair level of knowledge, attitude, and perception of disability. This is contrary to some previous studies that found that medical students and health professionals have low levels of knowledge and attitude [20-23]. Differences in the study populations and the types of instruments utilized could explain the contradictory results found in this study and the results from previous researchers. The fair level of attitude

**Table 3:** Association of gender, presence of disability in family and profession on total knowledge, attitude, and perception.

Variables	Gender		Disability in Family		Profession						
	Male	Female	Yes	No	Doc.	Nrs.	PT	Lab. Sci.	Rad	Pharm	Dt.
<b>Total Knowledge</b>											
Mean Score	142.90	152.00	148.57	146.87	151.37	150.25	199.21	47.96	117.13	77.03	125.50
Chi-square	966.50		3069.000		33.739						
p-value	0.357		0.926		0.000*						
<b>Total Attitude</b>											
Mean Score	141.64	153.54	162.72	145.66	148.63	150.90	138.00	178.71	99.29	107.20	119.0
Chi-square	976.00		2743.500		12.115						
p-value	0.230		0.352		0.059						
<b>Total Perception</b>											
Mean score	148.30	151.42	155.35	149.22	151.22	142.50	194.61	88.74	122.89	121.50	113.01
Chi-square	0161.000		3312.000		10.211						
p-value	0.376		0.698		0.062						

**Note:** \*Significance at  $\alpha = 0.05$ ; Doc: Doctors; Nrs: Nurses; PT: Physiotherapists; Lab. Sci: Laboratory Scientists; Rad: Radiographers; Pharm: Pharmacists; Dt: Dieticians.

observed in this study may be attributed to the fair level of knowledge observed; the more people know about disability, the more likely they have a good attitude [8,24].

In this study, the gender of the participants had no significant association with their knowledge, attitude, or perception of physical disability. Previous studies [21,25,26]. Had reported similar findings, however, females scored higher on attitude than their male counterparts. This may be due to gender differences and traits, such as females having more empathy and compassion, being more caring, affectionate, emotional, and sensitive to other people's feelings and thoughts than the males [23]. Furthermore, there were no significant associations among knowledge, attitude, and perception of disability among the healthcare workers. Similar studies [23,27], found no significant association between attitudes towards people with disabilities and the presence of relatives with disabilities. However, it has been established that the frequency and quality of contact with persons with disabilities can influence attitudes, resulting in a more balanced and realistic view of individuals with a disability [24]. Contrary to our study, Tervo, et al. [8] reported that individuals with relatives that have disabilities, have positive attitude towards people with disabilities. Despite the insignificant associations found in this study, those having relatives with disabilities had a higher score for knowledge, attitude, and perception in this study than those without. Similar findings have also been reported [8,28]. In this context, while the frequency of contact can influence attitude, it's also important to consider the quality of contact, because increased exposure can lead to unexpectedly uncomfortable or unpleasant feelings, and people may associate these negative experiences with having relatives with disabilities [29]. Additionally, extensive knowledge of disabilities may be required in some contact situations to improve the attitude toward disabilities [24]. No significant association was observed between level of educational attainment and knowledge, attitude and perception of disabilities. Similar results have been reported in previous studies [8,26]. This suggests that strategies to promote attitude and perception of Nigerian health workers towards disabilities should be very comprehensive. Having more years of experience also had no significant association with having greater knowledge, a good attitude, or a positive perception of physical disabilities. This is in line with previous studies, which found no correlation between knowledge, attitude, and years of work experience [21,23,26]. Some previous studies had reported a negative correlation between health workers attitude, years of experience and physical disabilities [22,28]. However, in this study, there was a progressive increase in perception with increasing years of work experience. Considering that all the participants had a 1<sup>st</sup> Degree as their minimum

**Table 4:** Association of level of education and years of experience on total knowledge, total attitude, and total perception.

Variables	Educational Level			Years of Experience		
	1 <sup>st</sup> Degree	M.Sc.	PhD	0-10	11-20	21+
<b>Total Knowledge</b>						
Mean score	149.82	140.73	80.42	144.16	154.96	143.10
Chi-square	4.282			0.991		
p-value	0.118			0.609		
<b>Total Attitude</b>						
Mean score	144.53	161.63	136.92	146.36	145.25	155.55
Chi-square	1.646			0.353		
p-value	0.439			0.838		
<b>Total Perception</b>						
Mean score	138.85	145.43	169.12	152.34	153.87	156.21
Chi-square	2.843			0.872		
p-value	0.312			0.532		

educational level, these findings could be the result of the interaction of prior knowledge (knowledge derived from first principles), posteriori knowledge (knowledge derived from experience or practical knowledge), and empirical knowledge (knowledge derived from qualitative or quantitative observations, experiments, or measurements) of physical disability.

There was a significant association between profession and healthcare practitioners' knowledge, attitude, and perception of physical disabilities, as certain professions performed better than others. Physiotherapists scored highest in the knowledge and perception domains. This might be attributed to their rich disability-centered curriculum. Physiotherapists are very conversant with physical disabilities according to Roush and Sharby [30], and they spend years trying to detect even the slightest anomalies in order to address impairments and improve function using evidence-based interventions. However, in this study, laboratory scientists despite having the least professional contact with patients with disabilities, scored higher in terms of attitude. This may also be due to the role of empathy as a guide in the absence of substantial knowledge about physical disability, as evidenced by less interactions with patients with disabilities.

This study, to the best of the researchers' knowledge, is the first to explore the level of knowledge, attitude, and perceptions of healthcare workers towards people living with disabilities in Nigeria, a country where people with physical disabilities comprise the largest minority group. Generally, there is a dearth of literature particularly on perception and knowledge of healthcare workers. However, the unavailability of adequate studies to draw comparisons constitutes one of the limitations of this study. Recall bias due to the use of self-reported outcome measures may have impacted the study outcome.

## Conclusions

Overall, healthcare professionals in Nnamdi Azikiwe University, Nnewi, Nigeria have a fair level of knowledge, attitude, and perceptions towards persons with disabilities. Physiotherapists ranked highest in terms of knowledge of disability. Disability outreaches and seminars to keep advocating the need for inclusion and acceptance of people living with disabilities should be extended even to the clinical staff of tertiary institutions in Nigeria. Further studies should be carried out on the levels of knowledge, attitude, and perceptions of healthcare professionals, as well as the general public, towards people living with disabilities. In doing so, a more disability-friendly environment will be created; issues and shortcomings would be identified and adequately addressed.

## Implications of the Study

An improved knowledge, attitude and perceptions of disabilities among healthcare workers in Nigeria will help the advocacy for a better healthcare access for PLWD. It will also help reduce the stigma that PLWD face on daily basis.

## Declaration of Interest

There are no conflicts of interest to be declared.

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## References

1. World Health Organization, The World Bank (2011) World report on disability.

2. World Health Organization (1980) International classification of impairments, disabilities, and handicaps.
3. Gloucestershire Clinical Commissioning Group (2016) Physical and Sensory Impairment Needs Analysis.
4. Ewang A (2019) Nigeria passes disability rights law: Offers hope of inclusion, improved access.
5. Solish A, Perry A, Minnes P (2010) Participation of children with and without disabilities in social, recreational and leisure activities. *Journal of Applied Research in Intellectual Disabilities* 23: 226-236.
6. Bedini LA (2000) "Just sit down so we can talk:" Perceived stigma and community recreation pursuits of people with disabilities. *Therapeutic Recreation Journal* 34: 55-68.
7. Sightsavers (2021) Disability-related stigma and discrimination in Sub-Saharan Africa and South Asia: A systematic literature review. Haywards Heath, UK.
8. Tervo RC, Palmer G, Redinius P (2004) Health professional student attitudes towards people with disability. *Clin Rehabil* 18: 908-915.
9. Satchidanand N, Gunukula SK, Lam WY, McGuigan D, New I, et al. (2012) Attitudes of healthcare students and professionals toward patients with physical disability: A systematic review. *Am J Phys Med Rehabil* 91: 533-545.
10. Khan TM, Umar M, Naeem A, Marryam M (2016) Attitude of medical professionals towards persons with disabilities. *Ann Pak Inst Med Sci* 12: 17-20.
11. Elwan A (1999) Poverty and disability: A survey of the literature. *Social Protection Discussion Papers and Notes*, The World Bank.
12. Veltman A, Stewart DE, Tardif GS, Branigan M (2001) Perceptions of primary healthcare services among people with physical disabilities - Part 1: Access issues. *MedGenMed* 3: 18.
13. Iezzoni LI, Davis RB, Soukup J, O'Day B (2003) Quality dimensions that most concern people with physical and sensory disabilities. *Arch Intern Med* 163: 2085-2092.
14. Drainoni M, Lee-Hood E, Tobias C, Bachman SS, Andrew J (2006) Cross-disability experiences of barriers to health-care access: Consumer perspectives. *J Disabil Polic Stud* 17: 101-115.
15. Byron M, Dieppe P (2000) Educating health professionals about disability: 'Attitudes, attitudes, attitudes'. *J R Soc Med* 93: 397-398.
16. Martin HL, Rowell MM, Reid SM, Marks MK, Reddihough DS (2005) Cerebral palsy: What do medical students know and believe? *J Paediatr Child Health* 41: 43-47.
17. Kirschner KL, Breslin ML, Iezzoni LI (2007) Structural impairments that limit access to healthcare for patients with disabilities. *JAMA* 297: 1121-1125.
18. Bray N, Edwards RT, Squires L, Morrison V (2019) Perceptions of the impact of disability and impairment on health, quality of life and capability. *BMC Res Notes* 12: 287.
19. Tahoe (2016) The perception and attitude of health workers towards persons with disabilities in the Bekwai Municipality in the Ashanti region of Ghana.
20. Khan KA, Khan SA, Wahaj U, Hussain SA, Farooq U (2019) Attitude of the students towards people with disability; A Cross-Sectional Survey. *Northwest J Med Sci* 4: 43-48.
21. Iftikhar K, Alamgir A, Maqbool S, Rehan W, Akhtar S (2019) Knowledge and attitude of health care professionals towards persons with disability. *Pak Armed Forces Med J* 69: 147-153.
22. Devkota HR, Murray E, Kett M, Groce N (2017) Healthcare provider's attitude towards disability and experience of women with disabilities in the use of maternal healthcare service in rural Nepal. *Reprod Health* 14: 79.
23. Şimşek Ç, Çavdar S, Temiz E, Gündüz B, Yılmaz Yalçinkaya E (2020) The attitude of healthcare professionals towards disabled individuals. *Jaren* 6: 545-553.
24. Wang Z, Xu X, Han Q, Chen Y, Jiang J, et al. (2021) Factors associated with public attitudes towards persons with disabilities: A systematic review. *BMC Public Health* 21: 1058.
25. Tervo RC, Azuma S, Palmer G, Redinius P (2002) Medical students' attitudes toward persons with disability: A comparative study. *Arch Phys Med Rehabil* 83: 1537-1542.
26. Al-Abdulwahab SS, Al-Gain SI (2003) Attitudes of Saudi Arabian health care professionals towards people with physical disabilities. *Asia Pacific Disability Rehabilitation Journal* 14: 63-70.
27. Chadd EH, Pangilinan PH (2011) Disability attitudes in health care: A new scale instrument. *Arch Phys Med Rehabil* 90: 47-54.
28. Ismail FFB, Ab Rahman NS, Muda SMB, Noor ZM (2018) Attitude of healthcare professionals towards people with disabilities in hospital Tengku Ampuan Afzan, Pahang. *International Journal for Studies on Children, Women, Elderly and Disabled* 4: 177-184.
29. Keith JM, Bennetto L, Rogge RD (2015) The relationship between contact and attitudes: Reducing prejudice toward individuals with intellectual and developmental disabilities. *Res Dev Disabil* 47: 14-26.
30. Roush SE, Sharby N (2011) Disability reconsidered: The paradox of physical therapy. *Phys Ther* 91: 1715-1727.