ORIGINAL ARTICLE

Awareness of Inclusive Eye Health among Eye Care Professionals

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ABSTRACT

Aims: 1. To determine how Eye Care Professionals (ECP) perceive the needs of people with various forms of disability or vulnerability.

2. To highlight the modifications required to remove the barriers and make eye health facilities attainable to all members of society including people with disability (PWD), and marginalized groups.

Study Design: Descriptive cross-sectional study.

Duration and Setting of Study: Study duration was three months (September - December 2021) and was conducted at College of Ophthalmology and Allied Vision Sciences, Mayo hospital, Lahore.

Methods: This study was conducted using self-designed questionnaire to evaluate the awareness level of Inclusive Eye Health (IEH) among Eye Care Professionals (ECPs) in Lahore. Questionnaire was pre tested on 10 participants and then necessary changes were made. After descriptive analysis, distribution of responses among different categories of participants was assessed.

Results: Out of total 95 participants, 60 (63.16%) were female. Most of the subjects had adequate level of awareness and knowledge regarding disability etiquettes and their application. But still lack of understanding in few arenas, like sign language, attitudinal barriers, and accessibility exists. There were lack of workshops and training programs on Inclusion and Disability to remove the barriers and to ensure Universal Health Coverage.

Conclusions: Eye Care Professionals had fair level of awareness and knowledge regarding Inclusive Eye Health and Disability. There is still a need of organizing sessions/seminars for ECPs regarding awareness of inclusion, accessibility, and conducting accessibility audit to make hospitals/clinics accessible.

Keywords: Inclusive Eye Health, Eye Care Professionals, People with Disability, Universal Health Coverage, Accessibility, Awareness.

INTRODUCTION

People with Disability (PWD) and marginalized groups have same health care necessities like others but they have to face hurdles in accessing health care facilities. The barriers include inaccessible buildings, stereotypic attitudes, stigma, discrimination, communication barriers. Globally, there are one billion people with all types of disabilities.[1] According to the 6th Population and Housing Census of 2017, the number of people with disability in Pakistan is 3,286,630 which constitutes 0.48 percent of the total population of Pakistan.[2] PWD have to experience discrimination, obstacles, poor access to education and health care facilities, stereotypic attitudes, feeling of being ignored and incompetent, lack of employment, being patronized and abused.[3,4] Disability Inclusive Development (DID) uplifts awareness about PWD and active participation of PWD.[5] DID commence to attain equality of human rights and full participation in community.[6]

Disability inclusion (DI) is considered as one of the prime concern areas in 2030 Agenda for Sustainable Development. Their aim is to remove the all types of hurdles and increase approach to health care services for PWD to achieve Sustainable Development Goals (SDGs).[7] PWD have a right to get health care services according to the article 25 of United Nation Convention on the Rights of People with Disability (CRPD) which is ratified by Pakistan on 5th July 2011.[8]

Marginalization is the social phenomena of excluding a minority or subgroup by ignoring their needs, desires, and expectations. It can be caused by range of factors including disability, gender, age, ethnicity, poverty levels, and geographic isolation.[9,10] Community-Based Rehabilitation (CBR) is the engagement and empowerment perspective to DI, social inclusion, equity of opportunities and poverty reduction through rehabilitation.[11] CBR allows specific advancement at community level, reaching poorest people in society, and most marginalized groups in the community including PWD.[12]

Eye Care Professionals (ECPs) provide Comprehensive Eye Care (CEC) [13] which not only concentrates on cure but on promotion, prevention, and rehabilitation of untreatable blindness.[14] Most of the health care systems still face problems in the implication of CEC. Gender-specific discrimination, social status, and availability of resources all lead to less accessibility of eye care facilities. Therefore, by addressing these hurdles in providing information

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and accessibility, eye care facilities could be made available and affordable for all, reducing the risk of marginalization and social exclusion.[15] Older people face a number of barriers which restrict their active social and political participation in the society.[16]

This study will determine the awareness level of (ECPs) about (IEH) and that how ECPs perceive the needs of people with various forms of disability or vulnerability. In addition, it will highlight the modifications required to remove the barriers and make eye health facilities accessible to people with disability, and other marginalized groups.

METHODS

It was descriptive cross-sectional study, 95 was the sample size of eye care professionals practicing in Lahore. This study was conducted at College of Ophthalmology and Allied Vision Sciences, Mayo hospital, Lahore. Self-designed questionnaire was used to evaluate the awareness level of IEH among ECPs. The sampling technique used in this study was non-probability convenient sampling. Questionnaire containing personal profile, questions regarding awareness of various aspects of IEH was used. All genders, graduate, and postgraduate practicing ECPs were included in this study. Non-practicing ECPs and those not willing for signing consent forms were excluded. Awareness level of IEH among ECP, disability etiquettes relevant to their role and work of ECPs in clinical practices, willingness of ECPs to remove the barriers so that all people get benefit, accessible eye care facilities were dependent variables while age, gender, experience, and training on inclusion and disability were independent variables. After descriptive analysis, distribution of responses among different categories of participants were assessed. ANOVA was used as test of significance. P-value less than 0.05 was considered statistically significant. Informed consent was obtained from each participant separately. .

RESULTS

The study included 95 ECPs, which were ophthalmologists, optometrists, orthoptists, investigative technologists, ophthalmic technicians, and ophthalmic nurses. Out of whom, 35 (37%) were male ECPs and 60 (63%) were female ECPs. Mean age of all ECPs was 31.5 ± 5.39 years.

Among participants, 60% participants had insufficient knowledge and awareness regarding accessibility and its importance (P=0.000) (Table 1). They had a bit of knowledge about the importance of Universal Design and accessibility audit. Less than half of the participants (42%) answered that they or their organization had conducted any accessibility audit in their hospitals/clinics. Only 42% ECPs had knowledge about standard size of accessible ramp. From the responses of ECPs, it was indicated that most of the facilities available at the hospital were not accessible. Many advancements like conducting accessibility audits, installing braille box in elevators, accessible signage, accessible entrances like installing ramps, and making washrooms accessible are needed to provide completely accessible facilities. Most of the ECPs (58%) always introduced themselves prior to the clinical examination (Table 2). Seventy four percent ECPs spoke directly to PWD and not their assistant during clinical examination. Fourty Seven Percent ECPs informed the person with visual impairment while approaching towards or away from them during clinical examination. Thirty Three percent ECPs always asked PWD their preferred means of communication before clinical examination. Most of the ECPs positioned themselves at eye level when speaking to a PWD. Hence, majority of the participants (75%) had fair level of awareness and knowledge regarding disability etiquettes while dealing with PWD and their application in their clinical practices.

Table 1: Awareness about accessibility and availability of accessible facilities

Questions	Yes	No	P-value
Awareness about Accessibility	**n(%)**	**n(%)**	
Insight about Accessibility	38 (40)	57 (60)	0.000
Conducted any accessibility audit in hospital	40 (42)	55 (58)	0.070
Understanding about standard size of accessible ramp	40 (42)	55 (58)	0.720
Accessible facilities available at hospitals responded by ECPs			
Accessible equipment	72(75.8)	23(24.2)	0.017
Accessible ramp	73(76.8)	22 (23.2)	0.152
Accessible signage	59(62.1)	36(37.9)	0.199
Accessible elevators	59(62.1)	36(37.9)	0.224
Accessible entrance	69(72.6)	26(27.4)	0.563
Accessible washrooms	42(44.2)	53(55.8)	0.057

n=(%)

Table 2: Attitude of Eye Care Professionals towards people with disability (n=95)

Disability Etiquettes	Responses	OPh(43)	Opt(26)	Ort(7)	IT(4)	OT(5)	ON(10)	Total	P-Value
		n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	
Introduction prior to the clinical examination	All the times	13 (30)	7 (27)	0 (0)	1 (25)	3 (60)	8 (80)	34	0.005
	Often	13 (30)	6 (23)	1 (15)	2 (50)	0 (0)	1 (10)	24	
	Sometimes	15 (35)	11 (42)	5 (71)	1 (25)	2 (40)	1 (10)	37	
	Hardly ever	2 (5)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	3	
	Never	0 (0)	1 (4)	1 (15)	0 (0)	0 (0)	0 (0)	2	
Speaking directly to the PWD	All the times	16 (37)	11 (42)	3 (43)	0 (0)	0 (0)	6 (60)	38	0.13
	Often	16 (37)	9 (35)	3 (43)	2 (50)	3 (60)	1 (10)	36	
	Sometimes	9 (21)	6 (23)	1 (14)	1 (14)	1 (25)	2 (20)	21	
	Hardly ever	2 (5)	0 (0)	0 (0)	1 (25)	0 (0)	1 (10)	4	
	Never	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	1	
Informing PWD while approaching them	All the times	17 (40)	16 (62)	2 (29)	1 (25)	4 (80)	5 (50)	47	0.08
	Often	11 (26)	6 (23)	0 (0)	3 (75)	0 (0)	3 (30)	24	
	Sometimes	10 (23)	4 (15)	2 (20)	0 (0)	0 (0)	0 (0)	17	
	Hardly ever	4 (9)	0 (0)	3 (43)	0 (0)	1 (10)	0 (0)	8	
	Never	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	2 (20)	3	
Ask PWD preferred means of communication	All the times	12 (28)	11 (42)	1 (14)	0 (0)	1 (20)	6 (60)	33	0.5
	Often	13 (30)	9 (35)	3 (43)	4 (100)	3 (60)	1 (10)	35	
	Sometimes	13 (30)	6 (23)	2 (29)	0 (0)	1 (20)	1 (10)	24	
	Hardly ever	2 (5)	0 (0)	1 (14)	0 (0)	0 (0)	0 (0)	4	
	Never	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	2 (20)	5	
Positioning at eye level while speaking with PWD	All the times	20 (47)	16 (62)	5 (71)	2 (50)	1 (20)	6 (60)	53	0.37
	Often	16 (37)	6 (23)	0 (0)	1 (25)	2 (40)	3 (30)	30	
	Sometimes	6 (14)	4 (15)	2 (29)	1 (25)	1 (20)	1 (10)	16	
	Hardly ever	1 (2)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	2	
	Never	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0	

n=number, %=percentage, PWD= People with disability, Oph=Ophthalmologist, Opt=Optometrist, Ort=Orthoptist, IT=Investigative Technologist, OT=Ophthalmic Technician, ON=Ophthalmic Nurse

The attitudinal and communication barriers faced by PWD to the utilization of eye care services are presented in Table 3. More than half of the participants (60%) claimed that they did not touch the mobility aids of PWD without their permission during clinical examination. Majority of the participants (86%), maintained noise free environment while dealing with PWD. Half of ECPs felt pity for PWD and only 22% ECPs did not feel pity for PWD. Less than half of the participants had the knowledge about sign language. Only 38% ECPs reported that they use sign language while dealing with person with hearing and speech impairment. Majority of ECPs (70%) had little awareness about how to overcome attitudinal and communicational barriers while dealing with PWD in their clinical practices.

Table 3: Attitudinal and communication barriers faced by people with disability (n=95)

Barriers to utilization of eye care services	Responses	Oph(43) n(%)	Opt(26) n(%)	Ort(7) n(%)	IT(4) n(%)	OT(5) n(%)	ON(10) n(%)	Total n(%)	P-Value
Touching mobility aids of PWD without permission	All the times	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (20)	3	0.77
	Often	1 (2)	0 (0)	0 (0)	1 (25)	1 (20)	0 (0)	3	
	Sometimes	7 (16)	4 (15)	1 (14)	1 (25)	0 (0)	0 (0)	13	
	Hardly ever	9 (21)	9 (35)	1 (14)	0 (0)	0 (0)	1 (10)	20	
	Never	26 (61)	13 (50)	5 (72)	2 (50)	4 (80)	0 (0)	57	
Maintaining noise free environment	All the times	7 (16)	10 (39)	2 (29)	2 (50)	1 (20)	5 (50)	28	0.002
	Often	9 (21)	10 (39)	1 (14)	1 (25)	1 (20)	5 (50)	28	
	Sometimes	17 (40)	5 (19)	3 (43)	0 (0)	3 (60)	0 (0)	30	
	Hardly ever	7 (16)	1 (3)	1 (14)	1 (25)	0 (0)	0 (0)	11	
	Never	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3	
Knowledge about sign language	Yes	11 (26)	14 (54)	3 (43)	3 (75)	0 (0)	9 (90)	42	0.006
	No	19 (4)	5 (19)	0 (0)	1 (25)	2 (40)	0 (0)	28	
	Some extent	13 (30)	7 (27)	4 (57)	0 (0)	3 (60)	1 (10)	30	
Using sign language while dealing with PWD	All the times	4 (9)	6 (23)	0 (0)	1 (25)	0 (0)	3 (30)	15	0.04
	Often	8 (19)	6 (23)	1 (14)	1 (25)	1 (20)	5 (50)	23	
	Sometimes	12 (28)	6 (23)	4 (58)	1 (25)	2 (40)	2 (20)	28	
	Hardly ever	9 (21)	5 (19)	1 (14)	0 (0)	1 (20)	0 (0)	17	
	Never	10 (23)	3 (12)	1 (14)	1 (25)	1 (20)	0 (0)	17	
Feel pity for PWD	Yes	21 (49)	11 (42)	3 (43)	2 (50)	4 (80)	7 (70)	50	0.04
	No	5 (12)	11 (42)	1 (14)	2 (50)	1 (20)	1 (10)	22	
	Sometimes	17 (40)	4 (16)	3 (43)	0 (0)	0 (0)	2 (20)	28	

n=number, %=percentage, PWD= People with disability, Oph=Ophthalmologist, Opt=Optometrist, Ort=Orthoptist, IT=Investigative Technologist, OT=Ophthalmic Technician, ON=Ophthalmic Nurse

Table 4 represents how often ECP get chance to receive a training on capacity building program regarding inclusion and disability. Most of the participants had little awareness about inclusion and disability. When different questions regarding training on special clinical needs of PWD and IEH were asked, less number of participants showed positive responses. There were lack of workshops and training programs on Inclusion and Disability to remove the barriers and to ensure Universal Health Coverage. Seventeen percent ECP claimed that they always follow international guidelines towards disability inclusive practices. Eighty two percent of the participants told that, they had awareness regarding removing barriers and ninety three tried to identify and remove the barriers to the utilization of eye care services for PWD. Majority of the participants responded that they used various methods of effective communication while dealing with PWD and tried to remove attitudinal barriers in accessing eye care facilities.

Table 4: Training on capacity building of Eye Care Professionals (n=95)

Capacity Building Program	Responses	Oph(43) n(%)	Opt(26) n(%)	Ort (07) n(%)	IT(04) n(%)	OT(05) n(%)	ON(10) n(%)	Total n(%)	P-Value
Receive any training on special clinical need of PWD		0 (0)	3 (11)	1 (14)	1 (25)	0 (0)	0 (0)	5	<0.001
	Occasionally	9 (21)	16 (62)	2 (29)	2 (50)	2 (40)	6 6(0)	39	
	Rarely	10 (23)	4 (15)	2 (29)	0 (0)	1 (20)	1 (10)	19	
	Never	24 (56)	3 (11)	2 (28)	1 (25)	2 (40)	3 (30)	37	
Attended any awareness session on IEH.	Several time	5 (12)	8 (30)	1 (14)	1 (25)	0 (0)	4 (40)	28	0.004
	Occasionally	12 (28)	14 (54)	2 (28)	1 (25)	2 (40)	3 (30)	28	
	Rarely	11 (26)	3 (12)	2 (29)	1 (25)	0 (0)	1 (10)	30	
	Never	15 (35)	1 (4)	2 (29)	1 (25)	3 (60)	2 (20)	3	
Developed any capacity building initiative	Several time	3 (7)	2 (8)	0 (0)	0 (0)	0 (0)	1 (10)	6	0.03
	Occasionally	6 (14)	10 (38)	1 (14)	2 (50)	0 (0)	3 (30)	23	
	Rarely	8 (19)	7 (27)	2 (29)	2 (50)	1 (20)	3 (30)	24	
	Never	26 (61)	7 (27)	4 (57)	0 (0)	4 (80)	3 (30)	47	
Try to identify and remove barriers	Several time	20 (47)	12 (46)	1 (14)	1 (25)	2 (40)	0 (0)	38	0.007
	Occasionally	22 (51)	12 (46)	4 (57)	3 (75)	3 (60)	8 (80)	55	
	Rarely	1 (2)	1 (4)	2 (29)	0 (0)	0 (0)	0 (0)	4	
	Never	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	2 (20)	3	
Ensuring eye care services to the marginalized group in community	All the times	19 (44)	9 (35)	4 (57)	1 (25)	2 (40)	6 (60)	43	0.55
	Often	19 (44)	10 (38)	3 (43)	3 (75)	2 (40)	2 (20)	41	
	Sometimes	3 (7)	3 (12)	0 (0)	0 (0)	0 (0)	1 (10)	8	
	Hardly ever	0 (0)	1 (4)	0 (0)	0 (0)	1 (20)	0 (0)	2	
	Never	2 (5)	3 (11)	0 (0)	0 (0)	0 (0)	1 (10)	6	
Follows international guidelines towards DI practice	All the times	2 (5)	7 (27)	2 (28)	0 (0)	0 (0)	5 (50)	17	<0.001
	Often	11 (26)	9 (35)	1 (14)	2 (50)	0 (0)	4 (40)	28	
	Sometimes	12 (28)	8 (31)	3 (43)	2 (50)	4 (80)	1 (10)	32	
	Hardly ever	15 (35)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	17	
	Never	3 (7)	1 (4)	1 (14)	0 (0)	1 (20)	0 (0)	6	

n=number, %=percentage, PWD= People with disability, Oph=Ophthalmologist, Opt=Optometrist, Ort=Orthoptist, IT=Investigative Technologist, OT=Ophthalmic Technician, ON=Ophthalmic Nurse, IEH=Inclusive Eye Health

DISCUSSION

In our study, participants had a fair level of knowledge and awareness regarding accessibility and its importance. Lack of awareness among ECP leads to health care inequalities, which ultimately leads to marginalization and social exclusion. In current study, less than half of the ECP had knowledge about accessibility audit and only 42% conducted accessibility audit in their hospitals / clinics. P value < 0.05 indicates poor awareness about the importance of Universal Design and accessibility audit. Other studies reported that lack of awareness about accessibility and accessible facilities is the major obstacle in providing best quality health care services.

Literature reported that equipment for clinical examination like motorized and height adjustment tables and chairs were advantageous for people with any physical disability, elderly people and children.[17,18] Use of these accessible equipment for clinical examination reduces the environmental barriers faced by PWD.[19] Our results are consistent with literature. Contrary results were observed in another study conducted in Kentucky to check the pliability of Americans Disability Act which implies that most of the clinics/hospitals did not have accessible equipment like height-adjustable examination tables.[20]

Our results are in concordance with previous literature in which most of the participants responded that they had many attainable facilities in their clinics/hospitals for all including PWD.[21] Consistent with previous investigations, in our study, only 44% answered that they have accessible washrooms in their hospital and most of the participants (56%) reported that they did not

have accessible facilities. There is a great need to identify and address all physical barriers faced by PWD. ECP should make sure that their services are inclusive and accessible to all.[22]

In this study, majority of the ECP introduced themselves prior to the clinical examination. They informed the person with visual impairment while approaching them. They spoke directly to the PWD and not their assistant during clinical examination. In accordance with literature, ECP should communicate directly to their patients including PWD.[23] They positioned themselves at eye level when speaking to the PWD. It shows participants have good level of awareness of disability etiquettes while dealing with PWD. According to another study conducted in US, most of the participants reported that their practices were disability inclusive.[24] Hence, our results are in accordance with literature.

In recent studies, health care professional's knowledge towards PWD was determined. The knowledge included understanding of PWD attributes, disability etiquettes, clinical examination, and communication skills.[25] In our study, more than half of the participants claimed that they did not touch the mobility aids of PWD without their permission during clinical examination. As PWD considers their mobility aids as the part of their body. Majority of the participants, maintained noise free environment while dealing with PWD. It means that they have good level of awareness of disability etiquettes while dealing with PWD.

Majority of ECP felt pity for PWD and only 22% ECP do not feel pity for PWD. However, ECP should be empathetic not sympathetic. P-value 0.05 indicated that they have little awareness about how to overcome attitudinal barriers while dealing with PWD. In previous research, lack of awareness about attitudinal barriers among health care practitioners was determined as the major issue in providing quality care services.[26] Hence, literature support our results. According to previous studies, communication barriers were identified as the major issue in providing best quality care inclusive to all.[27] Our results showed that, most of the ECP asked PWD their preferred means of communication before starting clinical examination. In our study, participants responded that they used various methods of effective communication while dealing with PWD and tried to remove communication barriers in accessing eye care facilities.

In present study, less than half of the participants had the knowledge about sign language. P-value < 0.05 indicated that ECP had a little level of awareness about sign language. Only 38% ECP reported that they use sign language while dealing with person with hearing and speech impairment. According to another study in accordance with Americans Disability Act, it was suggested that more education and training of ECP is required to communicate effectively.[28] Hence, our results are consistent with previous studies.

Majority of the ECP ensured the eye care services to the marginalized group of people (PWD, impoverished people, nomads, minorities, women, and prisoners) in the community in the present study. It shows ECP have good level of awareness about Inclusive Eye Health. Previous studies showed that marginalized group in low and middle-income countries had less access to health care facilities due to attitudinal barriers, stigmatization. In high-income countries, health care services were less accessible to the vulnerable groups in the society.[29]

In present study, it was observed that most of the participants had little awareness about inclusion and disability. When different questions regarding training on special clinical needs of PWD and IEH were asked, less number of participants showed positive responses. P value < 0.05 indicated statistically significant differences between the responses of ECP. There is a great need to organize workshops and training sessions about IEH. So that, PWD and other marginalized groups get best quality care. Literature also suggests organizing training and awareness sessions regarding special clinical needs of PWD and Inclusion to develop understanding about disability and to achieve Sustainable Development Goals.[30]

In our study, a quarter of the ECP claimed that they follow international guidelines towards disability inclusive practices. This promotes social inclusion of marginalized groups and increases awareness about disability. According to the previous studies, disability inclusion in eye health programs include awareness, participation, comprehensive accessibility and twin track approach (disability specific and mainstream inclusion)[31].

In our study, 82% of the participants reported that, they had awareness regarding removing barriers and 93% tried to identify and remove the barriers to utilize of eye care services for PWD. Overall ECP had sufficient level

of knowledge regarding the importance of removing all kinds of barriers. These include attitudinal, physical, communication, policy, programmatic, and social barriers. United Nations Convention on the Rights of Persons with Disabilities (CRPD), developed an inclusion policy for people with disability and ensured their participation in the society.[32]

CONCLUSIONS

Overall participants had sufficient knowledge about disability etiquettes. However, they had inadequate knowledge regarding sign language. Accessible facilities available at majority of the hospitals were good but there is still a great need of organizing sessions for ECP regarding awareness of accessibility and conducting accessibility audit to make hospitals and clinics approachable to everyone including vulnerable groups.

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