

Cognizance & Awareness About The Profession Of Optometry Among The Rural & Urban Populations In Northern India.

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Abstract

Purpose: The major objectives of this study were to determine the level of awareness of optometry among Northern Indians in both rural and urban locations, as well as to measure the amount of awareness.

Methods: Between the rural and urban populations, cross-sectional descriptive research was done. The overall number of participants in this study was 272, including 153 men and 119 women. Data from the participants were gathered through a survey camp using an expanded selfstructured questionnaire.

Result: Out of 272 participants (148 from rural areas and 124 from cities), only 22.3% and 46.6% of the rural and urban participants, respectively, knew what optometry was, while the remaining 77.7% and 37.2% were unaware. Among contrast, participants' perceptions that an optometrist is an assistant to an ophthalmologist were 3.4% and 4.1% among rural and urban participants, respectively. Only 8.1% and 2.7% of participants recognised the distinction between the two professions. However, only 6.1% of participants in rural areas and 6.8% of participants in urban areas believe that optometrists are trained in the diagnosis and recognition of eye problems, and only 14.9% and 14.2% of participants in rural areas and urban participants, respectively, believe that they can independently prescribe eyeglasses and contact lenses. Using the Chi square and NPar tests in SPSS version 27, it was discovered that all variables were statistically

significant ($p < 0.05$) for all of them.

Conclusion: These results appear to point to a lack of understanding and familiarity with the field of optometry. There is a need to intensify the campaign in these regions through educational programs, awareness-raising events, posters outlining eye care, social media discussing the obligations and behaviours of eye care providers, and public displays showcasing the optometry profession.

Keywords: Optometry, Eye-care services, Primary eye-care, Optometrist.

1. Introduction

1.1 Optometry Definition According To AHD:

The American Heritage Dictionary defines an optometrist as a professionally trained person and the licensed person who examines visual abnormalities diagnoses problems or disabilities and recommends correction lenses or other treatments. (Midya et al., 2022; Mifflin, 2000)

1.2 According to WCO Definition of Optometry:

According to the World Council for Optometry (WCO), ophthalmologists are “the primary providers of eye and vision care, effective treatment of the most common causes of visual impairment (refractive errors), and cooperation in diagnosis, referral, and management can reduce the burden of other causes of vision impairment. (Midya et al., 2022)

1.3 Work Done by Optometry and Patients Care:

The primary eye doctor is an optometrist, and they offer full eye care, including refraction, prescriptions, detection, diagnosis, and management of eye illnesses, as well as rehabilitation of the visual system. (Kimbonguila et al., 2019)

The provision of comprehensive eye care services involves a diverse group of dedicated professionals working collaboratively to offer preventive, curative, and rehabilitative measures. Within this framework, clinical ophthalmic treatment is provided by both ophthalmologists and optometrists, each contributing their specialized expertise.

(Dandona & Dandona, 2001; Resnikoff et al., 2008)

Ophthalmologists, as medical doctors specializing in ophthalmology, undergo extensive training in the diagnosis, treatment, and management of various eye diseases and disorders. This comprehensive training includes medical school education and specialized residency programs. Equipped with advanced knowledge and skills, ophthalmologists are capable of performing intricate eye surgeries, prescribing medications, and providing medical interventions to address a wide range of ocular conditions.

On the other hand, optometrists are healthcare professionals who specialize in primary eye care. They receive specialized education through a four-year doctoral program in optometry.

Optometrists are trained to conduct thorough eye examinations, identify visual abnormalities, diagnose eye diseases, and prescribe corrective lenses. Their expertise lies in providing primary eye care services, such as prescribing and fitting glasses and contact lenses, as well as managing common eye conditions.

Despite their differing areas of specialization, ophthalmologists and optometrists often work collaboratively to deliver comprehensive clinical ophthalmic treatment. Ophthalmologists may refer patients to optometrists for routine eye examinations, vision screenings, and the prescription of corrective lenses. Optometrists, in turn, may refer patients to ophthalmologists for specialized medical or surgical interventions when required.

This collaborative approach ensures that patients receive a continuum of care, with ophthalmologists focusing on complex and specialized treatments while optometrists deliver primary eye care services. By working together, these professionals contribute to the overall wellbeing of patients, addressing their unique eye care needs and striving for optimal treatment outcomes.

It is essential to acknowledge that the specific roles and responsibilities of eye care professionals can vary across different regions and healthcare systems due to local

regulations, training programs, and available resources. Nonetheless, their combined efforts exemplify a coordinated approach to delivering high-quality clinical ophthalmic treatment within a broader eye care team.(Arvind et al., 2021)

There are several challenges to eye health, including the growth in avoidable blindness and visual impairment caused by underqualified healthcare workers, an unfair allocation of resources, and the inability to pay for treatment. To accomplish the objectives of the global action plan, it is essential to develop the requisite human resources, particularly optometrists, as well as sustainable service delivery methods. (Fatima & Ahmad, 2018) Diagnostic, technical, direct patient care and support services are all provided by an optometrist to address these issues. In both affluent and developing countries, ophthalmologists work in multidisciplinary teams that deliver primary care. (Fatima & Ahmad, 2018)

Optometrists play a vital role in the early detection and management of various eye disorders, including cataracts and glaucoma. However, their contributions extend beyond ocular health as they serve as the frontline defense in identifying systemic diseases that can manifest with ocular symptoms. Notably, conditions like diabetes and hypertension can have significant implications for both vision and overall health. (Ashraf & Mobeen, 2016; Ms Lakshmi Shinde, 2022; Smith, 2002)

Through comprehensive eye examinations, optometrists possess the expertise to recognize signs and symptoms that may indicate underlying systemic conditions. They are adept at identifying ocular manifestations of systemic diseases, such as changes in retinal blood vessels indicating hypertension or the presence of diabetic retinopathy in patients with diabetes. By detecting these ocular indications, optometrists can promptly refer patients to other healthcare professionals for further evaluation, diagnosis, and appropriate management of these systemic diseases.(Ashraf & Mobeen, 2016)

Optometrists' involvement in the detection and management of systemic diseases underscores their indispensable role within the healthcare system. Their ability to identify these

conditions during routine eye examinations enables early intervention, leading to timely treatment and improved patient outcomes.(Ashraf & Mobeen, 2016)

Moreover, optometrists are not limited to clinical practice alone. They actively engage in research activities to advance the field of optometry, enhance diagnostic and treatment approaches, and contribute to the development of innovative technologies and therapies. Furthermore, many optometrists actively participate in educational endeavors, imparting their knowledge and expertise to educate and mentor aspiring professionals, thereby shaping the future of the field.(Ashraf & Mobeen, 2016)

It is crucial to acknowledge that the scope of practice for optometrists may differ across countries and jurisdictions. Consequently, the specific responsibilities and duties of optometrists may vary based on regional regulations, level of training, and licensure. Nonetheless, their fundamental role in early detection of eye disorders, recognition of systemic diseases, and their contributions to research and education remain integral aspects of their profession. (Ashraf & Mobeen, 2016)

Important characteristics of optometry eye care services. (*Eye Care Services*, 2022; Salal Khan¹, Kamal Pant², 2020) The optometry profession encompasses a wide range of management, practice, managerial, service delivery, and public health tasks. These programs are unique to each country and are based on the legal, social, and educational frameworks that are in place there. (Thite et al., 2015) For the benefit of the general public, WCO worked to foster the creation of a worldwide standard for optometric treatment that is standardized. (Boniface ikenna eze¹ , Obiekwe Okoye¹, 2016) Optometry's primary focus is refractive error management since worldwide, uncorrected refractive error is the second leading cause of blindness and the primary factor in visual impairment.(Holden et al., 2008; Yorston, 1999) It has been shown that key factors affecting how well people use the eye care services that are available include their awareness and understanding of such services, their level of training, their professional duties and obligations, and many

more.(JJ Wang Mmed, P Mitchell Fraco, 1999) According to earlier studies, nothing is known about the similarities between ophthalmologists and optometrists.(Foster, 2005; M. Roy Wilson, 1994; Ryan Guffey MD 1, Nadia Juzych ScD 2, Mark Juzych MD, 2009) As far as we are aware, there isn't any recent research or information available regarding how well-informed Indians are about the distinctions between ophthalmologists and optometrists.(OSUCHUKWU, 2006). The major objectives of this study were to determine the level of awareness of optometry among

Northern Indians in both rural and urban locations, as well as to measure the amount of awareness.

The information gained from this study will provide key decision-makers and educators with a basic picture of the care and support of future participants in underserved communities, help them develop awareness campaigns for rural and urban populations, and help them develop knowledgeable human resources that will enable them to provide eye health services more effectively in the field. This study's primary goals were to ascertain how well-known optometry is among Northern Indians in both rural and urban areas and to raise awareness of it.

Methodology

This research involved both rural and urban residents of Northern India and was cross-sectional survey based. All professions included in the study – worker, businessperson, tailor, housewife, barber, serviceman, student, nurse, fisher, teacher, salesman – were included because they consented to take part. Delhi, in northern India, was the site of the research. The current study was carried out from July 2022 to May 2023.

Utilizing an approved questionnaire that has previously been used in a study of a similar nature in West Bengal, the responses for this study were gathered utilising clustered sample procedures. People (from both the rural and urban groups) that are who wished to participate were then provided access to the survey online or offline in the northern region of India through an optometrist awareness campaign once it had been updated to meet the study's objectives.

Twelve of the questions were closed-ended and assessed respondents' knowledge of the optometry field as well as their demographic background.

Inclusion Criteria:

Only Northern Indian groups who accepted to engage in this study were included in the current study. These populations were only rural and urban populations, between the ages of 18 and 70, both genders and others. Exclusion Criteria:

The population that was less than 18 years old or older than 70 years old, as well as those who did not consent to participate in the survey, were excluded from the current study. Other regions other than Northern India were also not included.

3.7 Statistical Analysis:

The statistical programme for social sciences (SPSS) latest version 27 was used to collect and analyse the data. Descriptive statistics were used to analyse values such as frequencies, means, standard deviations, and percentages of the data collected. The chi-square test and the NPar test are commonly employed statistical methods to examine the association between relevant variables. These tests are utilized when dealing with categorical data, where variables are divided into distinct categories or groups. They aid researchers in assessing whether there is a significant relationship between these variables.

The chi-square test is employed to determine if a statistically significant association exists between two categorical variables. It compares the observed frequencies in a contingency table to the expected frequencies under the assumption of independence between the variables. By calculating the chi-square statistic and degrees of freedom, it quantifies the level of discrepancy between observed and expected frequencies. If the resulting p-value is below a predetermined significance level (e.g., 0.05), it suggests a significant association between the variables.

On the other hand, the NPar test, or non-parametric test, is specifically designed to analyse the association between categorical variables when the assumptions of the chi-square

test are violated. It is used when the data do not meet the criteria for a chi-square test, such as when the sample size is small or when the expected frequencies in some cells are too low. The NPar test is a versatile alternative that does not require any assumptions about the distribution of the data. It provides a robust analysis by comparing the distributions of the variables across the groups using appropriate non-parametric methods.

In conclusion, the chi-square test and the NPar test are widely employed statistical techniques for assessing the association between relevant categorical variables. These tests play a crucial role in data analysis, allowing researchers to draw meaningful conclusions about the relationships between variables while considering the specific characteristics and assumptions of the data at hand.

Result

4.1 Demographic Data

Out of 272 participants, the study revealed that 83 (56%) of the men and 65 (43.9%) of the women lived in rural regions, while male percentages in urban areas were 70 (47.3%) and 54 (36.5%), respectively. This study has no hypothesis and uses non-parametric approaches. In the table below, 1 was allocated to each gender in both groups.

Table 1 Gender distribution rural and urban participants

Rural			Urban	
Gender	Frequency	Percent (%)	Frequency	Percent (%)
Male	83	56.1	70	47.3
Female	65	43.9	54	36.5

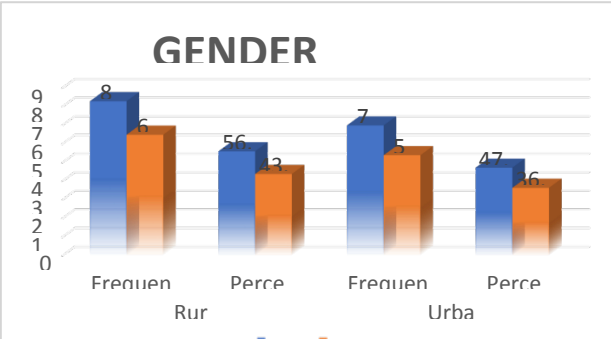


Figure 1 Gender distribution (rural & urban area)

The analysis showed that out of 272 subjects, (148 rural and 124 urban subjects) in the rural population 70 (47.3%) were literate & 78 (52.7%) were illiterate, and Urban population 110 (74.3%) were literate & 14 (9.5%) illiterate shown as Table 2

Table 2 literacy in both populations

Rural			Urban	
	Frequency	Percent (%)	Frequency	Percent (%)
LITERATE	70	47.3	110	74.3
ILLETERATE	78	52.7	14	9.5

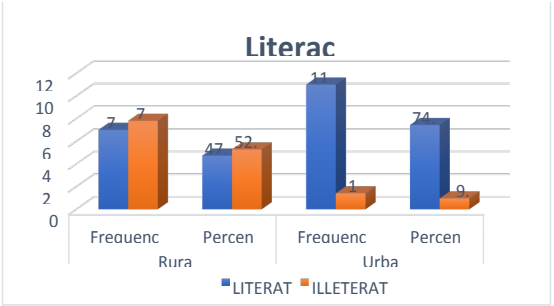


Figure 2 Literacy Rural and Urban Population

In this study, age is limited to 18 to 70 years old. Participants are included after calculating the total age distribution in rural and urban populations, shown as rural area total people numbering 148 and urban 124, and mean 41.35 and 33.08 in both populations. Urban and rural population standard deviations 13.642 and 8.712.

Table 3 Age distribution rural and urban participants

	N	Mean	Std. Deviation
Rural age	148	41.3514	13.64210
Urban age	124	33.0806	8.71276

4.3 Participants Responder:

After analysing the whole questionnaire, we found that knowledge about optometry in rural population 33(22.3%) people have knowledge about the optometry; 115(77.7%) peoples don't have any kind of knowledge about the profession. And in urban population 69(46.6%) have the knowledge about the profession and 55(37.2%) persons don't know about the profession. Knowledge about the difference between optometrists and ophthalmologists in rural areas 12(8.1%) have the knowledge about the difference between optometrists and ophthalmologists, participants have no knowledge between optometrists and ophthalmologists 13(8.8%); and 123(83.1%) participants marked they don't know about anything & in urban areas 38(25.7%) have the knowledge about the difference between optometrists and ophthalmologists; 13(8.8%) people have no knowledge between optometrists and ophthalmologists; and 73(49.3%) participants marked they don't know about anything. The survey results indicate that opinions about optometrists vary between rural and urban populations. In the rural population, a small percentage (3.4%) consider optometrists as assistants to ophthalmologists, while a larger percentage (14.9%) disagree with this notion. The majority (81.8%) expressed uncertainty or lack of knowledge about the role of optometrists.

In the urban population, a slightly higher percentage (4.1%) acknowledge optometrists as assistants to ophthalmologists,

while a significant proportion (30.4%) hold a negative view or disagree with this statement. Similarly, a substantial percentage (49.3%) expressed uncertainty or lack of knowledge about the role of optometrists.

Regarding the utilization of optometrists for eye examinations, a significant proportion in both rural (45.9%) and urban (46.6%) populations reported having had their eyes examined by optometrists. However, a notable percentage in both populations (54.1% in rural and 37.2% in urban) indicated that they have not undergone eye examinations by optometrists.

When asked about the use of spectacles, a considerable proportion in both rural (34.5%) and urban (35.8%) populations reported having used them, indicating a need for vision correction. Conversely, a substantial percentage in both populations (65.5% in rural and 48.0% in urban) indicated that they have not utilized spectacles.

When it comes to knowledge about the drawbacks of spectacles, a significant proportion in both rural (37.2%) and urban (33.1%) populations demonstrate awareness of these drawbacks, while a notable percentage (62.8% in rural and 50.7% in urban) lack this knowledge.

Regarding the use of contact lenses instead of spectacles, a small percentage in both rural (3.4%) and urban (14.2%) populations report having used contact lenses, while the majority (96.6% in rural and 69.6% in urban) have not. (Table 4).

These findings highlight the need for further education and awareness campaigns to improve understanding and knowledge about the role of optometrists, especially in rural areas where a higher proportion of individuals express uncertainty or lack of knowledge. Enhancing awareness can promote better utilization of eye care services and ensure access to appropriate vision correction methods, such as spectacles.

Table 4 Participant's responses on knowledge about the Optometry profession:

Variables	Characteristics	Rural		Urban		P value
		Frequency	Percent (%)	Frequency	Percent (%)	
Knowledge about optometry	Yes	33	22.3	69	46.6	0.001
	No	115	77.7	55	37.2	
Knowledge about the difference between optometrists and ophthalmologists	Yes	12	8.1	38	25.7	0.001
	No	13	8.8	13	8.8	
	Don't know	123	83.1	73	49.3	
Opinion on optometrist is assistant of an ophthalmologist	Yes	5	3.4	6	4.1	0.002
	No	22	14.9	45	30.4	
	Don't know	121	81.8	73	49.3	
Have ever done your eye examination by an optometrist?	Yes	68	45.9	69	46.6	0.043
	No	80	54.1	55	37.2	
Have you ever used spectacles?	Yes	51	34.5	53	35.8	0.096
	No	97	65.5	71	48.0	
Knowledge about the benefits and drawbacks of spectacles	Yes	55	37.2	49	33.1	0.013
	No	93	62.8	75	50.7	
Have you ever used contact instead of spectacles?	Yes	5	3.4	21	14.2	0.00
	No	143	96.6	103	69.6	

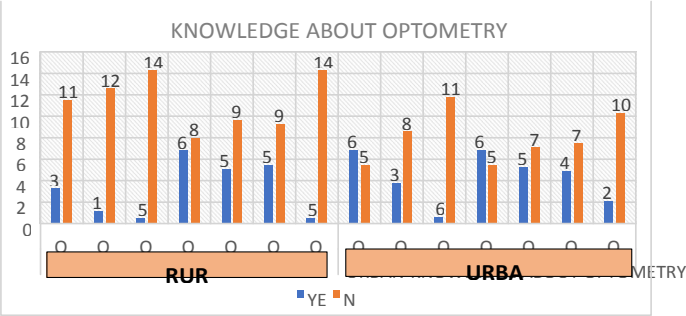


Figure 3 Knowledge about the optometry profession

The study investigated the level of knowledge and opinions about optometry among individuals residing in rural and urban areas. The results indicated that 22.3% of participants in rural populations had knowledge about optometry, while a higher proportion of 46.6% exhibited awareness in urban populations. This disparity suggests a significant difference in knowledge between the two groups.

Furthermore, the study explored the understanding of the distinction between optometry and ophthalmology. In rural areas, 8.1% of participants correctly recognized the difference, while 8.8% answered negatively, indicating a lack of understanding. Conversely, in urban areas, a greater proportion of 25.7% responded affirmatively, while 8.8% answered negatively. These variations highlight the disparity in knowledge levels between rural and urban populations.

The participants' opinions regarding optometrists as assistants to ophthalmologists were also examined. In rural populations, a meagre 3.4% agreed with this perception, whereas 14.9% disagreed, indicating a prevailing misconception. Similarly, in urban populations, only 4.1% agreed, but a higher proportion of 30.4% disagreed. A considerable percentage of participants in both rural (81.8%) and urban (49.3%) areas expressed uncertainty about the role of optometrists. These findings underscore the existence of misperceptions and uncertainty regarding the professional status of optometrists, particularly among the rural population.

Additionally, the study investigated the utilization of optometrists for eye examinations. The findings revealed that 45.9% of individuals in rural areas and 46.6% in urban areas had received eye examinations by optometrists. However, a significant portion of the population in both settings did not undergo such check-ups.

To determine the statistical significance of these findings, the NPar test was employed using SPSS version 27. The test confirmed that all the factors examined in the study (knowledge about optometry, understanding the difference between optometry and ophthalmology, opinions about optometrists as assistants, and eye examination utilization) were statistically significant with a pvalue less than 0.05. This statistical analysis strengthens the credibility and reliability of the study's findings.

In conclusion, the study's results highlight the disparities in knowledge, understanding, and opinions about optometry between rural and urban populations. The significant associations identified through statistical analysis emphasize the importance of targeted interventions and educational campaigns to improve awareness and address misconceptions regarding optometry, particularly in rural areas. The study findings reveal interesting insights into the perceptions of the rural and urban populations regarding the roles of optometrists and ophthalmologists. When it comes to prescribing glasses independently, a significant percentage of respondents in both rural and urban areas identified optometrists and ophthalmologists as independent prescribers. In the rural population, 14.9% recognized optometrists, 10.1% recognized ophthalmologists, 26.4% recognized both, and 48.6% were unsure. Similarly, in the urban population, 14.2% recognized optometrists, 4.7% recognized ophthalmologists, 45.3% recognized both, and 19.6% were unsure.

Regarding the conduct of eye examinations, the study found that there is a preference for a combination of optometrists and ophthalmologists in both rural and urban areas. In the rural population, 6.1% identified optometrists, 10.8% identified ophthalmologists, 36.5% identified both, and 46.6% were unsure. Similarly, in the urban population, 6.8%

identified optometrists, 4.7% identified ophthalmologists, 51.4% identified both, and 20.9% were unsure.

The study also examined the perception of primary eye care professionals. It was observed that in both rural and urban areas, a significant proportion of the population considered optometrists as primary eye care providers. In the rural population, 25.7% considered optometrists, 5.4% considered ophthalmologists, 13.5% considered both, and 55.4% were unsure. Similarly, in the urban population, 27.7% considered optometrists, 4.7% considered ophthalmologists, 25.0% considered both, and 26.4% were unsure.

These findings shed light on the understanding and awareness of the roles and responsibilities of optometrists and ophthalmologists among the rural and urban populations. It is evident that there is a considerable portion of respondents who are uncertain or lack knowledge regarding the specific functions performed by these eye care professionals. [Table 5]

Table 5 Participant's knowledge level about the role of an optometrist:

Variables	Characteristics	Rural		Urban	
		Frequency	Percent (%)	Frequency	Percent (%)
Which of them can prescribe Glasses/spectacles independently?	Optometrist	22	14.9	21	14.2
	Ophthalmologist	15	10.1	7	4.7
	Both	39	26.4	67	45.3
	Not sure	72	48.6	29	19.6
Which of them fits and prescribes the contact lenses?	Optometrist	11	7.4	33	22.3
	Ophthalmologist	2	1.4		
	Both	12	8.1	24	16.2
	Not sure	123	83.1	67	45.3
Which of them can operate an eye surgery?	Optometrist	0	0	0	0
	Ophthalmologist	53	35.8	65	43.9
	Both	54	60.8	7	4.7
	Not sure	69	6.1	52	35.1
Which of them can conduct an eye examination?	Optometrist	9	6.1	10	6.8
	Ophthalmologist	16	10.8	7	4.7
	Both	54	36.5	76	51.4
	Not sure	69	46.6	31	20.9
Which of them consider a primary eye care professional?	Optometrist	38	25.7	41	27.7
	Ophthalmologist	8	5.4	7	4.7
	Both	20	13.5	37	25.0

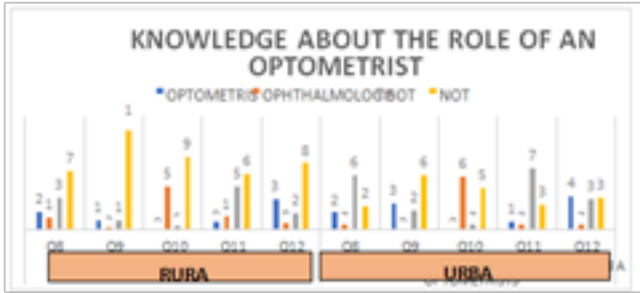


Figure 4: Knowledge about the role of an optometrist

5. Discussion:

Ophthalmologists and optometrists have a lot in common professionally, which leads to misunderstandings among the general public about the precise tasks and responsibilities that each performs in the system for visual health. The survey analysis reveals that, compared to the study conducted by Aldebas et al., which found that 68% of respondents were aware of optometry, 81.1% of rural respondents and 51.7% of urban respondents, respectively, were uninformed of optometry, and 18.9% and 48.3% were aware of the study (Aldebasi et al., 2018). Previous research indicates that 16.5% of respondents believe that ophthalmologists conduct eye exams, 37.8% believe that optometrists do so, 27.4% believe that both can perform eye exams, and 18.3% are unsure, while Okoye et al. study's showed that 18.5% of the participants knew the precise duties of both ophthalmologists and optometrists. (Boniface ikenna eze¹, Obiekwe Okoye¹, 2016)

When questioned about the distinction between an optometrist and an ophthalmologist, respondents indicated that just 4.9% and 14% of respondents in rural and urban areas, respectively, were aware of it. (Midya et al., 2022) The remainder 95.1% and 86% were unaware of the distinction. The previous study's rural and urban response rates of 29.3% and 32.6%, respectively, were lower than those of Guffy et al's (56%) and Eze's (55.6%) studies. (Midya et al., 2022)

According to the survey results, it was observed that there is a disparity in the awareness levels of the distinction between

optometry and ophthalmology among rural and urban populations. In rural areas, 22.3% of individuals demonstrated awareness of the distinction, while in urban areas, a higher percentage of 46.6% displayed awareness. This highlights a notable knowledge gap in both populations, with rural areas having a knowledge gap of 8.1% and 25.7%, compared to urban areas with a knowledge gap of 4.1% and 30.4%.

Furthermore, the survey findings indicated that optometrists performed eye exams on a comparable proportion of the population in both rural and urban areas. In rural areas, optometrists conducted eye exams on 45.9% of the population, while in urban areas, they performed eye exams on 46.6% of the population.

These findings underscore the importance of addressing the knowledge gap and promoting awareness of the distinctions between optometry and ophthalmology in both rural and urban populations. There is a clear need for educational initiatives and targeted awareness campaigns to enhance understanding among individuals regarding the distinct roles and responsibilities of these eye care professionals, particularly in rural areas.

It is essential to bridge the knowledge gap and ensure that individuals have access to accurate information about the services provided by optometrists and ophthalmologists. By doing so, individuals can make informed decisions about their eye care needs and seek appropriate services from the respective professionals.

According to the survey data, in rural locations, 14.9% of optometrists and 10.1% of ophthalmologists believe that they have the authority to independently prescribe glasses. In contrast, in urban areas, a higher percentage of optometrists (26.4%) and a lower percentage of ophthalmologists (4.7%) hold this belief. However, a significant proportion (48.6%) of respondents in urban areas express uncertainty regarding this matter.

Regarding eye examinations, the survey findings indicate that in rural areas, 6.1% of participants consider optometrists as the primary providers, followed by 10.8% for ophthalmologists,

36.5% for eye doctors (potentially including both optometrists and ophthalmologists), and 4.7% for ophthalmologists alone. The majority (51.4%) of respondents believe that both optometrists and ophthalmologists perform eye exams. In urban areas, a similar pattern emerges, with 27.7% perceiving optometrists as the main providers, 4.7% for ophthalmologists, and 25.0% for both. Additionally, a notable percentage (26.4%) of respondents in urban areas remain unsure about the primary eye care provider.

These findings highlight the recognition of optometrists as significant contributors to eye care services in both rural and urban areas. However, there appears to be some confusion and uncertainty among the public regarding the roles and responsibilities of optometrists and ophthalmologists. Clear and comprehensive communication, as well as educational initiatives, are necessary to enhance public understanding of the respective roles of these professionals in delivering eye care services.

It is crucial to provide accurate information to the public, emphasizing the expertise and specialized services that optometrists and ophthalmologists can offer. This will facilitate informed decision-making and help individuals make the best choices for their eye health.

Conclusion:

These results appear to show a larger lack of knowledge about the profession of optometry among rural participants in Delhi than among urban participants (Northern India). There is a need to intensify the campaign in these regions through educational programs, awareness-raising activities, posters that explain eye care, social media posts about the obligations and behaviours of eye care providers, and public exhibits of the optometry profession. According to this survey, the public has a poor awareness of the difference between ophthalmologists and optometrists. Raising public awareness of the duties and practices of eye care professionals through campaigns and social media must be a top priority for policymakers and the Ministry of Health. Additionally, it is advised that researchers carry out additional, comparable

studies among rural communities and take into account various techniques to include people on the street and those employed by businesses to obtain more generalizable results.

Limitations:

The present study had certain limitations that should be acknowledged to ensure a comprehensive understanding of its findings. One notable drawback was the absence of full eye examinations or the use of eye care accessories during the data collection process. The study solely relied on participant responses to assess their knowledge, opinions, and utilization of optometry-related services. Unfortunately, eye care accessories such as spectacles, contact lenses, sunglasses, or reading glasses were not administered or observed, which could have provided additional objective data regarding participants' eye care practices.

Another limitation stems from the reliance on self-reported data obtained through surveys and interactions with study participants. While these methods are valuable for gathering information, they are susceptible to various response biases. Social desirability bias and recall bias, for instance, can influence participants' responses, leading to potential inaccuracies. Participants may provide answers that align with social expectations or might struggle to accurately recall specific details. Thus, the findings should be interpreted with caution, considering the limitations inherent in self-report measures.

Furthermore, the study employed methods such as posters, lectures, and other means to disseminate information and raise awareness about optometry. While these approaches can effectively increase knowledge and awareness, they may not necessarily translate into changes in behaviour or actual utilization of eye care services. It is important to recognize the potential gap between knowledge or awareness and the subsequent actions or behaviours of individuals.

Moreover, the study focused exclusively on a specific population comprising individuals from rural and urban areas. This limited scope may restrict the generalizability of the findings to other populations or regions. Therefore,

caution should be exercised when extrapolating the results to broader contexts or different demographic groups.

To address these limitations in future research, it would be beneficial to incorporate objective measures, such as comprehensive eye examinations, alongside self-reported data. By integrating both types of data, a more holistic understanding of participants' eye health and practices can be obtained. Additionally, expanding the sample to include a more diverse and representative population, encompassing various socioeconomic backgrounds and geographical locations, would enhance the external validity of the findings. Longitudinal studies could also be conducted to track changes in knowledge, perceptions, and behaviours over time, providing valuable insights into the long-term impact of optometry awareness initiatives.

In conclusion, while the present study contributed valuable insights into optometry awareness, it is crucial to consider its limitations. By addressing these limitations in future research, a more comprehensive understanding of the relationship between knowledge, perceptions, and actual eye care practices can be achieved.

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