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SEMANTIC AMBIGUITY AND LEXICAL CONFUSION IN OPTOMETRIC TERMINOLOGY AMONG NON-SPECIALISTS

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ABSTRACT
This paper investigates the semantic ambiguity and lexical confusion associated with some optometric terms among non-specialists. It examines how this group of language users interpret common eye-care terms. Adopting a qualitative descriptive research design and drawing on Cognitive Semantics and Relevance Theory, the study analyses seventeen optometric terms drawn from official publications of the Nigerian Optometric Association and public health communication materials, alongside interpretations of these terms provided by fifteen non-specialist respondents through a Google Forms questionnaire. Findings reveal that confusion arises from five distinct sources: tension between everyday and technical meaning; literal and metaphorical misreading of terms; partial understanding and overgeneralisation; conflation of related but distinct conditions; and straightforward technical unfamiliarity. These patterns persist even among literate respondents with prior exposure to eye-care settings, suggesting that the confusion stems largely from the terminology itself rather than from a lack of exposure to eye-care settings. The study concludes that improving optometric communication with the public requires targeted attention to the specific cognitive and linguistic mechanisms by which technical terms are misread, rather than a general effort at simplification.

Keywords: semantic ambiguity, lexical confusion, optometric terminology, non-specialists, health communication

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Introduction

Language is central to human existence and communication. Its effectiveness depends on shared understanding of meaning within context. Consequently, words do not carry the same meaning across every field, and a word's general meaning may shift considerably once placed within a specific profession. In specialised fields like medicine, law, and engineering, words often acquire technical meanings that differ significantly from their everyday use. Optometry, a branch of healthcare concerned with the examination, diagnosis, and management of visual disorders, is one such field with specialised terminology. Interestingly, many of the terms used by optometrists are also found in everyday English, thereby confusing non-specialists.

General and technical meanings often overlap, especially in client-expert conversations, because the technical meaning of such terms often appears unrelated to their morphological properties, which gives rise to semantic ambiguity and miscommunication, especially when patients interpret medical advice literally or figuratively. Yule (2010) makes clear that meaning in language depends heavily on context, and ambiguity arises when an expression or word can receive more than one interpretation. In professional registers, such ambiguity can mislead comprehension and reduce the precision of communication. Crystal (2008) also adds that professional registers develop to suit communicative purposes in the professional domain, but where such vocabulary spills over into general vocabulary, lay speakers impose ordinary senses on technical vocabulary. This difference in the interpretation can create a gap in understanding between experts and non-experts, one which can affect how people take up and respond to medical information.

In Nigeria and other English-speaking contexts, this gap can have serious consequences. Patients who misread medical terms may misunderstand their diagnoses (Estopà & Montané, 2020), and eye-care information written in jargon can be hard for them to follow (Fylan & Grunfeld, 2002). Such misinterpretation affects patients' compliance with medical advice and can hinder appropriate treatment. This study thus examines semantic ambiguity and lexical confusion in optometric terminology among non-specialists with the aim of examining how they interpret, and misuse some optometric terms. It seeks to identify the words that induce confusion, examine the nature of their ambiguity, and suggest practical linguistic and communication solutions to the problem.

Literature review and theoretical framework

The concept of semantic ambiguity continues to receive attention because clear communication remains fundamental to human interaction. It arises when a word, phrase, or sentence can be interpreted in more than one way. According to Leech (1981), "ambiguity is a property of linguistic expressions that allows for two or more distinct interpretations" (p. 108), meaning users can attach different meanings to the same word depending on context, leading to confusion in some cases. Cruse (2004, p. 66) supports this, arguing that ambiguity results from the multiplicity of senses linguistic items may have, which cannot be simultaneously realised in a single interpretation. Ambiguity, then, is not a flaw in language but a by-product of its flexibility.

Palmer (1981) distinguishes two main kinds: lexical, occurring when a single lexical item has two or more distinct meanings, and structural, resulting from the arrangement of words in a sentence (p. 32). For instance, the word *light* can mean either "not heavy" or "illumination," while a phrase like "visiting relatives can be annoying" carries two possible interpretations depending on whether *visiting* is read as a gerund or a participial adjective.

In professional and scientific fields, lexical ambiguity tends to be more problematic because many technical terms originate from ordinary vocabulary but are given specialised

meanings. As Lyons emphasises, "the intersection between ordinary language and technical language is one of the major sources of semantic misunderstanding" (1977, p. 253). Semantic ambiguity is thus not merely a linguistic curiosity but a practical communication issue in specialised domains like optometry. Related to this is lexical confusion, which occurs when one word form is wrongly interpreted because of the presence of related senses, a phenomenon known as polysemy, “the association of two or more related senses with a single linguistic form” (Cruse, 2004, p. 109), which is distinguished from homonymy, whose senses are completely distinct. In natural conversation, however, speakers rarely make this distinction, and lexical ambiguity results. Leech (1981) notes that “polysemy enriches the vocabulary but at the same time presents interpretative difficulties when context does not disambiguate intended meaning” (p. 143), a Janus-like quality that renders it both a linguistic asset and a threat to communication.

Misinterpretation in professional registers often occurs when specialised terms are read as everyday language, leading to meaning distortion and communication failure. Hyland (2004) states that "disciplinary language is not just a terminology but rather a community's way of seeing and representing knowledge" (p. 12); when people outside this discourse community use professional terms without the necessary background knowledge, misunderstanding is likely to follow. Martin and White (2005) similarly note that "meaning is context-dependent, and professional registers are based on unspoken assumptions that outsiders do not usually understand" (p. 88). Terms open to different meanings can therefore confuse and mislead people, particularly in the medical field, where miscommunication can have serious consequences, which makes linguistic transparency and an understanding of register differences vital to bridging the semantic divide between experts and non-experts.

Semantic ambiguity and lexical confusion have mainly been studied within specialised languages such as medicine, law, and science, with comparatively little attention paid to optometry specifically. Liu, Medlar, and Głowacka (2022) demonstrate that lexically ambiguous terms in professional discourse, such as law, statistics, and medicine routinely confuse non-specialists because specialists tend to assume shared knowledge of terms that carry a different, more specific meaning within their field, a phenomenon they link to what Camerer, Loewenstein, and Weber (1989) call the "curse of knowledge." Within medical communication specifically, Estopà and Montané (2020) analyse lexical indicators in medical reports and find that patient misunderstanding is closely tied to measurable textual parameters, including semantic opacity and semantic ambiguity, arising from a proliferation of specialised terminology. Turning to the optometric domain directly, Fylan and Grunfeld (2002) examine patients' comprehension of optometric information leaflets and diagrams, reporting that jargon and inappropriate presentation of visual materials substantially impeded understanding, and that patients consistently preferred concise, jargon-free explanations over technical language. In the Nigerian context, Odebunmi (2008) examines the pragmatic strategies used in the delivery of diagnostic news in Nigerian hospitals, observing that specialised terms are frequently misread by patients owing to a lack of contextual and pragmatic knowledge. Taken together, these studies point to a consistent gap between professional and lay understanding of specialised terminology across fields, but also suggest that optometric terminology remains underexamined, particularly regarding the fine-grained lexical mechanisms, rather than the general comprehension difficulty, by which specific terms such as *short-sighted* or *colour blindness* come to be misread. The present study builds on these findings, aiming to clarify the gap between intended meaning and word choice in optometric communication, and to contribute to the broader understanding of how language varies between professional and everyday use.

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Theoretically, this study is anchored on Cognitive Semantics and Relevance Theory. The former, especially its Prototype Theory, proposes that meaning is not fixed or purely referential but rather organised around prototypes, which are the most typical examples of a category (Rosch, 1975, p. 193). Rosch (1975) argues that people mentally place words and concepts into categories according to representations that are influenced by experience and social use rather than by strict definitions. Thus, when non-specialists come across technical terms, they interpret them through the lens of their cognitive prototypes rather than scientific meanings. Hence, the theory can account for the misunderstanding of optometric terms, since the public relies on the conceptual categories of daily life, which differ from the professional ones (Lakoff, 1987, p. 68).

Cognitive Semantics clarifies how these misunderstandings arise in the mind. On the other hand, Relevance Theory, as advanced by Sperber and Wilson (1986), explains how they occur in interaction. It contends that meaning is not simply conveyed but inferred by the hearer from context, guided by the expectation of relevance (Sperber & Wilson, 1986, p. 112). The theory is important because it shows the pragmatic side of lexical confusion: misunderstanding occurs when the hearer's cognitive environment is not aligned with the speaker's technical meaning. Both theories therefore provide a broad framework for this study. Cognitive semantics accounts for the mental structure of meaning that creates ambiguity, while Relevance Theory clarifies the context-based interpretation that keeps such ambiguity alive in everyday communication.

Methodology

This study adopts a qualitative descriptive research design guided by Cognitive Semantics and Relevance Theory. The data consist of seventeen (17) optometric terms and the written interpretations of those terms given by fifteen (15) non-specialists. The seventeen terms were extracted from official publications and websites of the Nigerian Optometric Association (NOA), health communication materials, and online articles meant for the general public. Their selection reflects the researcher's judgement, based on past contact with non-specialists, that these terms are often misunderstood. This judgement was not tested independently before data collection; the survey responses themselves provide the evidence examined in this study.

The non-specialists' interpretations were collected through a questionnaire administered via Google Forms. Respondents were not selected by the researcher. The link was shared in various WhatsApp platforms, and those who chose to follow it took part voluntarily, so the sample is self-selected rather than random. Consent was the first item on the form, and respondents had to give it before they could fill in the questionnaire. The questionnaire had two parts. The first collected each respondent's gender, age range, occupation, educational level, and whether they had ever visited an eye clinic or consulted an optometrist. The second asked respondents to explain each of the seventeen terms in their own words in an open text box. Respondents' names were replaced with codes (R1 to R15) in this paper.

Dictionary meanings were taken from the Merriam-Webster.com Dictionary, using the entry for the term itself where one exists and the closest related headword otherwise (for example, *mydriasis* for *pupil dilation* and *intraocular pressure* for *eye pressure*). Professional meanings were drawn from the National Eye Institute (NEI) and the American Academy of Ophthalmology (AAO), with one page from the Centers for Disease Control and Prevention (CDC) for contact lenses. The page used for each term is cited in Table 1.

Responses were coded by the researcher in three steps. First, blank responses, answers such as "No idea" or "Nil," and keyboard strings with no meaning were treated as non-answers. Second, each remaining response was compared with the dictionary and professional meanings

and coded as broadly accurate, partial (vague or incomplete), or inaccurate (reversed, unrelated, or based on a literal reading of the words). Third, partial and inaccurate responses were grouped by their likely source of confusion. The data are presented in a table, and the analysis entails comparing the dictionary meanings and professional definitions of each term, analysing non-specialists' interpretations, and examining contextual inference to determine how communication context contributes to the confusion. All counts in the paper are out of the fifteen respondents.

Analysis

The study drew on responses from fifteen non-specialist participants: twelve females and three males. Nine were aged 18–25, five were aged 26–35, and one was aged 36–45. Thirteen held a Bachelor's degree and two held postgraduate qualifications, indicating a literate, tertiary-educated sample. Occupations included one student, one researcher, two business owners, one engineer, one public relations staff member, one makeup artist, one freelancer, and one self-employed person; one respondent described themselves as a "private servant," one as "working," and one as not employed, while three gave no occupation. Ten of the fifteen respondents (66.7%) had previously visited an eye clinic or consulted an optometrist, and five had not. Section 4.4 considers whether this prior contact made a difference to their interpretations.

Comparison of meanings and interpretation

Table 1: Comparison of Dictionary Meanings, Professional Meanings and Respondents' Interpretations

Optometric Term	Dictionary Meaning	Professional Meaning	Respondents' Interpretation(s)	Source of Confusion
Short-sighted	Short sight is listed as myopia; nearsightedness is a condition in which images focus in front of the retina, giving poor distance vision. The related myopic also means lacking foresight.	Myopia (nearsightedness): a refractive error in which light focuses in front of the retina, so far-away objects look blurry (NEI, 2025c).	Nine described difficulty seeing distant objects (e.g., R2: "The is when a person cannot see objects that are far."); four reversed the meaning (R5, R7, R9, R12; e.g., R12: "Can not see from a close distance"); R1 gave a literal reading ("Not having long eye"); one gave no answer.	Everyday meaning vs. technical meaning; literal interpretation
Long-sighted	Long-sighted (chiefly British) is listed as farsighted. Farsightedness is a condition in which images focus behind the retina and distant objects are seen better than near ones; it also means the ability to plan for the future.	Hyperopia (farsightedness): a refractive error in which light focuses behind the retina, so nearby objects look blurry (NEI, 2025c).	Ten described difficulty seeing close objects (e.g., R13: "…you cannot see objects closer clearly"); three reversed the meaning (R5, R7, R12; e.g., R12: "Cannot see from far distance"); R1 gave a literal reading ("Having long eye"); one gave no answer.	Everyday meaning vs. technical meaning; literal interpretation
Colour blindness	Partial or total inability to distinguish one or more colours. A second sense is treating all people	Colour vision deficiency: seeing colours differently from most people, most often with difficulty telling red	Eleven described an inability to tell colours apart or identify them correctly (e.g., R3: "Can't differentiate between colours."); R9 narrowed it	Largely accurate; partial understanding/over generalisation (R8, R9)

	alike regardless of race.	from green or blue from yellow. Most people are born with it, and seeing no colour at all is rare (NEI, 2025a).	("except white and black") and R8 overstated it ("Does not see colors"); two gave no answer.	
Lazy eye	Amblyopia, or an eye affected by it. Amblyopia is reduced vision, typically in one eye, that develops when the brain suppresses input from that eye.	Amblyopia: poor vision, usually in one eye, that starts in childhood when the brain and eye do not work together properly and the brain comes to rely on the stronger eye. It has nothing to do with laziness (NEI, 2024a).	Four described reduced vision in one eye (R4, R7, R10, R13); R3 and R12 gave vague answers ("Weak eye sight," "Cannot see well"); R14 described misaligned eyes ("Your eyes aren't looking in the right direction."); R1 and R8 read "lazy" literally ("Can't see hardworking," "Stress less"); six gave no answer.	Literal and metaphorical interpretation; confusion between related terms (R14)
Astigmatism	A defect of an optical system, such as the eye, that stops light focusing accurately and gives a blurred image; medically, often due to corneal irregularity. A figurative sense is distorted understanding.	A refractive error in which the cornea or lens has a different shape from normal, so light bends unevenly and far-away and nearby objects look blurry or distorted (NEI, 2025c).	Eight described blurred or distorted vision (e.g., R3: "Blurry vision"), two of them (R10, R13) also mentioning irregular lens or cornea shape; R9 named it a refractive error and added other symptoms ("light sensitivity itchy eyes and blurryness"); six gave no answer.	Partial understanding (symptom known, cause largely not); technical unfamiliarity (six non-answers)
20/20 vision	Twenty-twenty: meeting a standard of normal visual acuity (on a common scale, telling apart characters of a set size at 20 feet). A figurative sense is accurate judgement, as in hindsight.	A measure of visual acuity (sharpness of distance vision): the person sees at 20 feet what an average person sees at 20 feet. It describes normal acuity, which is only one aspect of eye health (AAO, n.d.-e; AAO, 2022).	Four described normal or perfect vision (R4, R9, R10, R13); R1, R7 and R12 gave general answers (e.g., R12: "Is the ability to see things clearly"); R14 overgeneralised ("especially from a very long distance"); seven gave no answer.	Partial understanding/over generalisation (R9, R14); technical unfamiliarity (seven non-answers)
Pupil dilation	Not a headword. Mydriasis is excessive or prolonged dilation of the pupil of the eye.	Widening of the pupil. In an eye examination, drops dilate the pupil so that more light enters the eye and the inner eye can be checked; vision stays blurry and light-sensitive for a few hours afterwards (NEI, 2021). The iris controls the size of the pupil (AAO, n.d.-c).	Six described enlargement of the pupil (R4, R7, R8, R10, R12, R13); R2, R3 and R9 gave unrelated answers ("I think watery eyes," "Getting the pupil examined," "The relaxed state of the eyes"); six gave no answer.	Largely accurate among those who answered; unrelated guesses (R2, R3, R9); six non-answers

Eye strain	Eyestrain: weariness or a strained state of the eye.	Asthenopia (eyestrain): a group of symptoms, such as tired, aching or sore eyes and sometimes blurred vision, that follow prolonged intense use of the eyes, such as screen work (AAO, n.d.-a; AAO, n.d.-b).	Eleven linked it to tiredness, stress or overuse of the eyes (e.g., R10: "Eye fatigue."); four gave no answer.	Largely accurate; everyday and technical meanings converge
Refractive error	Not a headword. Refractive means relating to or due to refraction. Ametropia is an abnormal refractive condition (such as myopia, hyperopia, or astigmatism) in which images fail to focus on the retina.	A vision problem in which the shape of the eye keeps light from focusing correctly on the retina. The four common types are myopia, hyperopia, astigmatism and presbyopia (NEI, 2025b; NEI, 2025c).	Two gave accurate technical definitions (R7, R13); R4, R8, R9 and R10 gave vague answers (e.g., R4: "Not seeing clearly"; R10: "Focusing issue."); R5 gave an unrelated answer ("Retina detachment"); eight gave no answer.	Technical unfamiliarity
Cataract	A clouding of the lens of the eye, or of the membrane around it, that blocks light. The same entry lists a large waterfall and a sudden rush or flood.	A cloudy area in the lens of the eye that develops gradually, mostly with age, and makes vision blurry, hazy or less colourful. It cannot spread from one eye to the other (NEI, 2026a).	Four described a cloudy lens (R4, R7, R10, R13); R2, R3 and R9 gave vague or partly accurate answers (e.g., R3: "A whitish growth around the eyes that obstructions vision."); R11 called it "An eye infection" and R14 "A sour in the pupil"; six gave no answer.	Confusion between related terms; partial understanding
Glaucoma	A disease of the eye marked by increased pressure within the eyeball that can damage the optic disc and cause gradual loss of vision.	A group of eye diseases that can cause vision loss and blindness by damaging the optic nerve. High eye pressure raises the risk, but some people with glaucoma have normal eye pressure (NEI, 2026b; NEI, 2024b).	Three identified optic-nerve damage (R7, R10, R13); six showed general awareness of pressure, blindness or seriousness (e.g., R11: "A serious eye issues that can lead to blindness"); R4 defined it as "Eye pressure"; five gave no answer.	Confusion between related terms; partial understanding
Eye pressure	Not a headword. Intraocular pressure is the pressure within the eyeball that gives it a round, firm shape, caused by the aqueous humor and vitreous body.	The pressure inside the eye, which rises when fluid cannot drain normally. High eye pressure raises the risk of glaucoma, but not everyone with it develops glaucoma, and what is normal differs between people (NEI, 2024b).	Two described fluid pressure inside the eye (R7, R13); R2 and R10 mentioned pressure in the eye without a mechanism; four read it as strain or stress (R3, R5, R9, R14; e.g., R5: "Strain on the eye"); seven gave no answer.	Everyday meaning vs. technical meaning

Night blindness	Reduced visual capacity in faint light, as at night; also called nyctalopia.	Nyctalopia: considerable difficulty seeing at night or in poor light, which occurs when the retinal cells that allow dim-light vision are affected by a disease or condition (AAO, 2016).	Twelve described being unable to see at night or in low light (e.g., R4: "Inability to see at night"); three gave no answer.	Largely accurate; everyday and technical meanings converge
Contact lens	A thin lens designed to fit over the cornea, usually worn to correct defects in vision.	A lens that sits on the surface of the eye to correct a refractive error. Some are tinted or decorative, and all contact lenses are medical devices that need a prescription and a fitting by an eye doctor (NEI, 2025b; AAO, n.d.-d; CDC, n.d.).	Eight described a corrective lens worn on the eye (e.g., R10: "Thin lens that corrects vision."); R2 and R14 framed it as cosmetic only ("made in different colors," "especially for fashion"); R2, R5 and R14 linked it to the pupil; five gave no answer.	Partial understanding/over generalisation (cosmetic-only framing; location of the lens)
Pupil	The contractile, usually round aperture in the iris that controls the light entering the eye. A separate entry defines pupil as a student.	The opening whose size the iris controls to let light into the eye (AAO, n.d.-c). It is widened (dilated) with drops for some eye examinations (NEI, 2021).	Six described the black, round opening of the eye (R3, R4, R5, R7, R13, R14); R9 gave a vague answer ("An important part of the eyes"); eight gave no answer.	Largely accurate among those who answered; eight non-answers
Prescription	Medical senses include a written direction for preparing and using a medicine, a prescribed remedy, and a written formula for grinding corrective lenses for eyeglasses. A legal sense concerns a claim acquired through long use.	The lenses (eyeglasses or contact lenses) that an eye doctor prescribes after finding a refractive error, to give the clearest possible vision (NEI, 2021; NEI, 2025b).	Three gave the eyewear sense (R7, R9, R10; e.g., R10: "Doctor's order for corrective lenses."); seven gave a general medical sense (e.g., R5: "Medication given by a doctor"), five of them referring to medicine or drugs; five gave no answer.	Everyday meaning vs. technical meaning
Depth perception	The ability to judge the distance of objects and the spatial relationship of objects at different distances.	The ability to see objects in three dimensions and tell how near or far they are. It is one of several visual functions checked in an eye examination (AAO, 2022), and it can be poor in children with amblyopia (NEI, 2024a).	Four described judging distance or seeing in three dimensions (R4, R7, R10, R13; e.g., R10: "Ability to judge distances."); eleven gave no answer.	Technical unfamiliarity

Source: **Researcher's Field Survey, 2026. Dictionary meanings: Merriam-Webster.com Dictionary (Merriam-Webster, n.d.). Professional meanings: sources cited in the table. AAO = American Academy of Ophthalmology; CDC = Centers for Disease Control and Prevention; NEI = National Eye Institute.**

Table 1 shows that confusion does not arise from a single cause but from at least five distinguishable dynamics. First, for terms with a transparent everyday counterpart such as *short-sighted*, *long-sighted*, *eye pressure*, and *prescription*, respondents drew on the general sense of the words rather than the narrower clinical one. In the sighted pair, four respondents (R5, R7, R9, and R12) inverted the meanings, three of them for both terms, by reading "short" and "long" as literal spatial descriptors of the object rather than as clinical shorthand for the range of clear vision. The dictionary column shows why such readings come easily: Merriam-Webster gives several of these terms an everyday or figurative sense alongside the eye sense, such as lacking foresight for *myopic*, the ability to plan ahead for *farsightedness*, a waterfall for *cataract*, and a student for *pupil*. Second, terms whose surface form invites a figurative reading, most notably *lazy eye*, produced genuine metaphorical misreadings (R1 and R8) rather than approximations of the clinical concept.

Third, terms describing closely related but distinct clinical phenomena were conflated with one another: R4 defined *glaucoma* simply as "Eye pressure," collapsing a disease with one of its risk factors, while R11 classified *cataract* as "An eye infection," confusing two unrelated ocular conditions. Fourth, terms with no accessible everyday equivalent, namely *refractive error* and *depth perception*, drew the fewest substantive responses (seven and four of the fifteen respondents). All four who answered on *depth perception* described it accurately, while *refractive error* produced two accurate definitions, four vague ones and one unrelated guess (R5's "Retina detachment"); it is the low response rate, rather than competing meanings, that marks these terms. A fifth dynamic, partial understanding and overgeneralisation, is evident in *colour blindness*, *contact lens* and *20/20 vision*, where respondents grasped part of the meaning but narrowed or extended it inaccurately. *Astigmatism* and *pupil dilation* sit between these groups: each drew nine substantive responses, and eight and six of those, respectively, were broadly accurate, so their six non-answers each point to partial unfamiliarity rather than to confusion. This distribution, in which some terms are genuinely ambiguous and others are simply unfamiliar, forms the basis of the discussion that follows.

Sources/patterns of semantic ambiguity and lexical confusion

The data point to several distinguishable sources of confusion. The clearest pattern is tension between everyday meaning and technical meaning, most evident in the *short-sighted*/*long-sighted* pair, where the ordinary spatial sense of "short" and "long" led four respondents (R5, R7, R9, and R12) to describe the opposite of the intended clinical condition. A similar dynamic appears with *eye pressure* and *prescription*. Four respondents (R3, R5, R9, and R14) read pressure as general "stress" or "strain," and seven read *prescription* as a general medical order, five of them specifically as a medicine or drug, rather than the narrower optometric meanings of intraocular fluid pressure and a lens specification. In each case, the everyday word supplies a plausible but incorrect anchor for interpretation because the clinical sense is a specialised extension of a term the respondent already knows in another context.

Related to this but distinct in mechanism is literal and metaphorical interpretation, where respondents parsed a term by its component words rather than its established clinical sense. For instance, R1's account of *long-sighted* as "Having long eye" and of *short-sighted* as "Not having long eye" treats the compound adjective compositionally, building a meaning from "long" and

"eye" rather than retrieving the conventional medical definition. *Lazy eye* shows the same process operating metaphorically (R1: "Can't see hardworking"; R8: "Stress less"). Both respondents read "lazy" through its ordinary association with idleness instead of its technical reference to amblyopia, and R14's "Your eyes aren't looking in the right direction" describes misaligned eyes, a related but different condition. These responses are not simply failures of vocabulary. In the absence of specialist knowledge, respondents reach for the most accessible literal or figurative sense of the words themselves.

The third pattern of ambiguity and confusion arises from partial understanding and overgeneralisation, in which respondents grasped part of a term's meaning but extended or narrowed it inaccurately. *Colour blindness* was generally understood as an inability to distinguish colours, but R9 narrowed this further to "except white and black," overgeneralising a partial truth into a categorical claim, and R8's "Does not see colors" overstates it as the absence of all colour vision. *Contact lens* was similarly narrowed by R2 and R14 to a cosmetic device alone, omitting its primary corrective function, while R2, R5 and R14 each linked the lens to the pupil rather than the cornea. *20/20 vision* shows the reverse tendency: R14's "One can see clearly especially from a very long distance" expands a measure of standard visual acuity into a claim about long-distance vision. Each case shows that respondents were not simply unfamiliar with the term; they had captured a genuine but incomplete component of its meaning and generalised from it.

The fourth pattern of confusion arises from the conflation of two related terms that respondents treated as interchangeable. For instance, R4 defined *glaucoma* as "Eye pressure," collapsing a disease with one of its risk factors. Similarly, R11 classified *cataract* as "An eye infection," merging two unrelated ocular conditions that share only a general association with impaired vision. This pattern suggests that these respondents organised optometric knowledge around loose semantic clusters (conditions grouped by shared symptoms or general association with eye trouble, rather than by the precise clinical distinctions that separate them).

Importantly, a substantial portion of the confusion in the data set reflects straightforward technical unfamiliarity rather than any specific misreading. *Refractive error* and *depth perception* produced the fewest substantive responses (seven and four of fifteen) and among the highest numbers of non-answers (eight and eleven); where respondents did attempt a definition of *refractive error*, the results were often vague or loosely associated, as in R5's "Retina detachment." Unlike the patterns above, these terms have no readily available everyday equivalent for respondents to draw on, so confusion here is better characterised as an absence of relevant background knowledge rather than a competing or mistaken interpretation. Non-answers must be read with caution, however, because they may also reflect reluctance to guess or fatigue with a seventeen-item questionnaire.

Cognitive and contextual interpretation

The patterns above reflect how people often make sense of unfamiliar language by relating it to what they already know. When a term had a familiar everyday meaning, respondents leaned on that meaning instead of its clinical sense, which is why "short" and "long" were read spatially, "pressure" was read as general strain, and terms like "lazy eye" were read by their individual words rather than as fixed clinical labels.

Familiarity mattered too. Terms tied to familiar health experiences, like *night blindness* and *eye strain*, were understood accurately by twelve and eleven respondents respectively, while *refractive error* and *depth perception* drew mostly blanks (eight and eleven non-answers). Two respondents also grouped related conditions together by shared symptoms (R4 linking *glaucoma*

to eye pressure, R11 classing *cataract* as an infection), suggesting that they organise optometric knowledge around familiar associations rather than precise clinical distinctions.

Taken together, this points to lexical confusion as more than scattered vocabulary gaps. It is a patterned process of drawing on familiar meanings, word structure, and context to make sense of terms that were never explicitly taught.

Discussion of findings

The findings show that semantic ambiguity and lexical confusion in optometric terminology among non-specialists follow identifiable patterns rather than occurring randomly. Respondents' interpretations were influenced by the form of a term and its similarity to familiar everyday vocabulary. From a cognitive, prototype-based perspective, respondents often relied on the most familiar meaning available to them. Terms whose clinical meanings were close to their everyday meanings were generally understood more accurately, while terms whose clinical meanings differed from their everyday associations generated greater confusion.

Prior exposure to eye-care settings did not clearly separate accurate from inaccurate interpretations. The ten respondents who had visited an eye clinic or consulted an optometrist gave an average of 11.6 substantive answers out of seventeen, against 9.6 for the five who had not, but a similar share of those answers was broadly accurate (73 of 116, or 63%, against 34 of 48, or 71%). Three of the four respondents who reversed *short-sighted* or *long-sighted* (R5, R9, and R12) had visited an eye clinic. With so few respondents these figures are descriptive only, but they suggest that contact with eye care does not by itself remove the confusion.

Relevance Theory similarly helps explain why respondents tended to select interpretations that were readily accessible and required less cognitive effort. The findings also reveal an important distinction between semantic confusion and technical unfamiliarity. Terms such as *short-sighted*, *long-sighted*, *lazy eye*, *glaucoma*, and *eye pressure* attracted incorrect interpretations, suggesting that respondents were actively constructing alternative meanings. In contrast, *refractive error* and *depth perception* more often produced blank or vague responses, suggesting unfamiliarity rather than competing meanings. Therefore, the findings suggest that improving optometric communication requires attention not only to the complexity of technical vocabulary but also to familiar meanings and associations that non-specialists bring to such terms.

These results connect with the studies reviewed in Section 2. Fylan and Grunfeld (2002) found that jargon impeded patients' understanding of optometric information and that patients preferred jargon-free explanations. The present data add that plain wording is not enough on its own: *short-sighted* and *long-sighted* are ordinary words rather than jargon, yet four respondents reversed them, so the everyday sense of a familiar word can mislead as much as an unfamiliar term can. Estopà and Montané (2020) tie patient misunderstanding to textual features such as semantic opacity and ambiguity, and terms like *lazy eye* and *eye pressure*, whose words point towards meanings other than the clinical one, can be read as examples of what they describe. The dictionary column also shows that several terms carry an everyday sense alongside the specialised one (*myopic*, *farsightedness*, *cataract*, *pupil*), which fits Liu et al.'s (2022) concern with ambiguity between general and specialised senses in professional discourse, where non-specialists read the specialist term through the meaning they already know. Odebunmi (2008) shows that Nigerian doctors deliver diagnostic news by asserting the condition, citing the evidence, and mitigating blunt news through veils and hedges. Because patients must make sense of such talk without a shared technical vocabulary, the present findings suggest that the words chosen to name a condition matter as much as the manner in which it is delivered.

The small, young and highly educated sample of fifteen respondents nevertheless limits the generalisability of these findings, which should be regarded as indicative rather than conclusive.

Conclusion

Since respondents often relied on familiar everyday meanings when interpreting clinical terms, optometrists should not assume that patients who use the terms necessarily understand their professional meanings. They should instead briefly explain such terms and confirm patients' understanding where necessary. Informal expressions such as *lazy eye* can be misleading when read literally, and they should be accompanied by simple explanations of their actual clinical meaning. Confusion between related conditions, as in the case of *glaucoma* and *eye pressure*, indicates the need for public health materials to distinguish clearly conditions that may have similar symptoms but different causes and treatments. Terms such as *refractive error* and *depth perception*, which generated considerable unfamiliarity, should likewise be explained in concrete, everyday language rather than presented as technical labels alone. Overall, effective optometric communication does not require the complete avoidance of technical terminology; rather, it requires clearer, patient-centred communication, particularly through brief plain-language explanations and explicit clarification of potentially misleading terms. Future studies with larger and more varied samples are recommended.

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