variability could be due to the devices rather than examiner evaluations.

References

1. Khorrami-Nejad M, Khodair AM, Khodaparast M, Babapour Mofrad F, Dehghanian Nasrabadi F. Comparison of the ocular ultrasonic and optical biometry devices in the different quality measurements. *J Optom*. 2023;16:284–295.
2. Freeman G, Pesudovs K. The impact of cataract severity on measurement acquisition with the IOLMaster. *Acta Ophthalmol Scand*. 2005;83:439–442.
3. Prinz A, Neumayer T, Buehl W, et al. Influence of severity of nuclear cataract on optical biometry. *J Cataract Refract Surg*. 2006;32:1161–1165.

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Comment on: Prevalence of refractive error within a Portuguese sample of optometric records

Dear Editor,

We read with keen interest the recently published study titled "Prevalence of refractive error within a Portuguese sample of optometric records" by V.L. Carneiro and J.M. Gonzalez-Meijome.[1] We want to congratulate the authors for their invaluable contribution to the field of ophthalmology. While we appreciate the authors' efforts, we would like to raise some questions and suggestions for further analysis in the future.

The study relies on a non-probability sampling method, which may introduce selection bias.[2] Individuals who seek eye care may not be representative of the general population, and the findings may not be easily generalized. The study only includes optometric practices from 10 out of 20 districts in Portugal. This limited geographic coverage may not accurately represent the diversity of refractive errors across the entire country.[3] The study compares its findings with a study conducted in 2009, highlighting potential temporal differences. Refractive error patterns can change over time, and comparing results from studies with a significant time gap may not provide an accurate reflection of the current situation.[4]

The study lacks detailed demographic information, such as socio-economic status, educational level, and ethnicity. These factors can influence the prevalence of refractive errors and should be considered for a comprehensive analysis.[5] The study lacks a control group or a comparison with a general population, making it challenging to determine whether the observed prevalence rates are significantly different from the overall population.[6]

The study provides prevalence rates but lacks an in-depth discussion of the clinical implications of the findings. For instance, the study could explore potential reasons behind the observed trends and their implications for public health and eye care services. We believe that the authors' commitment to advancing optometry and ophthalmology will lead to further research and improvements in the field. Your guidance and consideration of these suggestions would be highly valuable in ensuring the study's continued impact and relevance.

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Conflicts of interest

The author has no conflicts of interest to declare.

References

1. Carneiro VLA, González-Méijome JM. Prevalence of refractive error within a Portuguese sample of optometric records. *J Optom*. 2023;16:245–251. https://doi.org/10.1016/j.optom.2023.04.001.
2. Cornesse C, Blom AG, Dutwin D, Krosnick JA, De Leeuw ED, Legleye S, et al. A review of conceptual approaches and empirical evidence on probability and nonprobability sample survey research. *J Surv Stat Methodol*. 2020;8:4–36.
3. Buckingham WR, Bishop L, Hooper-Lane C, et al. A systematic review of geographic indices of disadvantage with implications for older adults. *JCI Insight*. 2021;6: e141664. https://doi.org/10.1172/jci.insight.141664.
4. Yang Z, Jin G, Li Z, et al. Global disease burden of uncorrected refractive error among adolescents from 1990 to 2019. *BMC Public Health*. 2021;21:1975. https://doi.org/10.1186/s12889-021-12055-2.
5. Khalid A, Ahmad I. Socioeconomic status and refractive error. *Ophthalmology Pakistan*. 2013;3:31–34.

6. Pithon MM. Importance of the control group in scientific research. *Dental Press J Orthod*. 2013;18:13–14. https://doi.org/10.1590/s2176-94512013000600003.

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Reply to Comment from Kumar et al. on: Prevalence of refractive error within a Portuguese sample of optometric records

We have read the Letter sent to the Editor about our previously published article entitled *Prevalence of refractive error within a Portuguese sample of optometric records*[1] written by *Kumar* and co-authors and we appreciate the time took to critically appraise the article.

However, we note that almost all the points raised had been previously acknowledged as limitations in our publication, and, in this way, we refer to the publication itself as an answer. Bellow we self-quote ("*italic*") our own writing on selection bias:

"There are important limitations in this approach, and it is not intended to be considered as a source of epidemiological data comparable to population studies. The main limitation of this study is the fact that the selection of individuals (records) was conducted using non-probability sampling. The study is based on data obtained in clinical settings and may not reflect the population distribution. Likewise, by including individuals who attended the clinic, that is searching for eye care, one could have a selection bias. However, it allows to obtain results comparable to other approaches that are much more costly and time-consuming. Although it provides useful findings, this study design, as well as the non-probability sampling approach, limits extrapolation of those findings to the general population".

Furthermore, we acknowledged that data collected in 2021 have limited comparability with previous studies published back in 2015 from previously collected data, as stated:

"The temporal distance between the studies (2015 to 2021) is also an effect to consider, assuming that an increase in the prevalence of myopia for younger generations is expected over the years".

The work provides the basic information in gender and age, in line with the previously defined goals of the study. Other aspects mentioned by *Kumar* such as socio-economic status, educational level, or ethnicity are known to influence refractive error but were out of the scope of the study as many other factors susceptible to influence the outcome.

In the beginning of the publication, we acknowledge that:

"Although substantial variations in the estimates can compromise their interpretability and utility, clinical records and health care databases are important sources of information for estimating prevalence and incidence of eye care conditions and enable extensive study of its characteristics".

Considering the scope of the study, the methodology and the inherent acknowledged limitations, we adopted a conservative approach in discussing the clinical implications of the findings or their implications for public health and eye care services.

Conflicts of interest

The authors have no conflicts of interest to declare.

Reference

1. Carneiro VLA, González-Méijome JM. Prevalence of refractive error within a Portuguese sample of optometric records. *J Optom*. 2023;16:245–251. https://doi.org/10.1016/j.optom.2023.04.001.

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