

Review of: "Prevalence of visual impairment and associated factors among welders in West Shewa Zone Oromia Region, Ethiopia"

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Potential competing interests: No potential competing interests to declare.

This is an interesting article. Some inputs for consideration by the authors

1. "This is achieved by measuring visual acuity (VA) via the Snellen chart at a distance of 6 meters (m) and visual acuity would be recorded as the smallest line in which the individual being tested can identify the letters correctly [6]". It is important to note that other charts such as ETDRS can also be used and the distance can vary, though Snellen's E is commonly used, especially in settings where the population is likely to not be able to read. So the authors may reword the statement as follows: This is commonly achieved by measuring visual acuity (VA) via the Snellen chart at a distance of 6 meters (m), and visual acuity would be recorded as the smallest line in which the individual being tested can identify the letters correctly [6].
2. "Visual impairment is a main public health concern" → "Visual impairment is a main public health concern"
3. "Approximately 89% of the visually impaired people live in developing nations, with 37.58% in Ethiopia [8]" - The reference is incorrect, with the cited reference having no mention of Ethiopia and the data appearing wrong. If one checks the IAPB Vision Atlas, **in 2020 in Ethiopia [Link], there were an estimated 8.8 million people with vision loss, and of these, 780,000 people were blind, as against nearly 600 million visually impaired plus blind and 43 million blind globally [Link] (for distance)**. Thus, the proportions of contribution of Ethiopia to the global burden are 1.5% and 1.8% for VI and blindness, respectively. Authors may wish to correct the data presented and cite proper references.
4. "Long-term exposure to ultraviolet radiation is associated with conditions like pterygia, pinguecula, band-shaped keratopathy, and climatic droplet keratopathy [10] ." Authors may wish to add cataract to the list since cataract is one of the leading causes of visual impairment and has a close association with UV and sun exposure.
5. All aspects of the study methods are well described. Appreciations.
6. "the 22 listed below West Shewa zone woredas towns" may be reworded to "the 22 woreda towns in West Shewa zone"
7. One observation is about the need to include a few more details about how welders were specifically sampled. The authors first selected five towns and then welders from the five towns. How many clusters were selected, and cluster size is not mentioned.
8. While the sampling scheme is described, it seems more attuned to a study for general population prevalence. It would

be helpful to understand at what level occupation screening was done.

9. In Ethical approval, authors may please specify whether written informed consent was taken, although admittedly, it has been written that consent was signed. Since the study employed cluster sampling, it may be noted whether the analysis employed survey data analysis techniques that account for the cluster sampling design.
10. Was a trained ophthalmologist / clinical ophthalmic officer involved in the survey?
11. The low burden of chronic disease seems to tie in with the age profile of the respondents.
12. "164 (25.9%) were coffee drunker" may be rephrased to "164 (25.9%) were coffee drinkers"
13. "diabetic Mellitus" → "diabetes mellitus"
14. A very important finding in Table 4 that may be highlighted in results is "Eye Injury at time of welding" was 33.3% and occasional use of PPE during welding by 33.8%. A clarification is required whether the "Eye Injury at time of welding" refers to "History of eye injury at time of welding".
15. "out of 634 welders, 29.34% (95% CI: 26.6-32.3%) of them had visual impairment." → "out of 634 welders, 29.34% (95% CI: 26.6-32.3%) had visual impairment."
16. "Out of 186 visually impaired welders, 79(42.47%) stated they had bilateral VI and 107 (57.53%) had monocular VI as shown below Figure 1" → "Out of 186 visually impaired welders, 79(42.47%) had bilateral VI and 107 (57.53%) had monocular VI as shown below Figure 1"
17. "Additionally, 47 of them have moderate VI on the right eye and 5.7% of them had on the left eye." → "Additionally, 47 of them had moderate VI on the right eye and 5.7% had on the left eye."
18. "Table 5. The severity of visual acuity at five selected woreda towns of West Shewa zone Oromia Region, Ethiopia, 2022(n=634)" → "Table 5. The severity of visual impairment among welders at five selected woreda towns of West Shewa zone, Oromia Region, Ethiopia, 2022(n=634)"
19. "the association between visual impairment" was it assessed for bilateral VI or for bilateral plus monocular VI? Given the numbers in the table, it appears that the latter is the case. The same may be clarified in the methods and in the table title and relevant text. "Table 6. Bi-variable and multivariable analysis of different independent variables with dependent variables among selected woreda towns of West Shewa zone, Oromia Region, Ethiopia, 2022(n=634)" → "Table 6. Bi-variable and multivariable analysis of factors associated with visual impairment (monocular or bilateral) among welders in selected woreda towns of West Shewa zone, Oromia Region, Ethiopia, 2022(n=634)."
20. "The possible discrepancy might be due to the fact that the study in Malaysia included a large sample size (n=1522)." I disagree on the rationale given. Sample size being larger or smaller affects precision of estimates and will not affect the overall estimate, given the study has been done well. More important reasons would include the awareness of VI, access to eye care services, health seeking behaviour, etc.
21. Use of capital letters in the middle of sentences needs to be addressed: "therefore, protection from UV radiation", "revealed that the prevalence of maculopathy", "This could be explained as visible" etc