

Cross-Sectional Study Investigating the Prevalence of Uncorrected Refractive Error and Visual Acuity through Mobile Vision Screening in the Homeless in Wales

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Abstract : Homelessness has been shown to be correlated to poor health outcomes, including increased visual health morbidity. Despite this, there are relatively few studies regarding visual health in the homeless population, especially in the UK. This research aims to investigate visual disability and access barriers prevalent in the homeless population in Cardiff, South Wales. Data was collected from 100 homeless participants in three different shelters. Visual outcomes included near and distance visual acuity as well as non-cycloplegic refraction. Qualitative data was collected via a questionnaire and included socio-demographic profile, ocular history, subjective visual acuity and level of access to healthcare facilities. Based on the participants' presenting visual acuity, the total prevalence of myopia and hyperopia was 17.0% and 19.0% respectively based on spherical equivalent from the eye with the greatest absolute value. The prevalence of astigmatism was 8.0%. The mean absolute spherical equivalent was 0.841D and 0.853D for right and left eye respectively. The number of participants with sight loss (as defined by VA= 6/12-6/60 in the better-seeing eye) was 27.0% in comparison to 0.89% and 1.1% in the general Cardiff and Wales population respectively (p-value is < 0.05). Additionally, 1.0% of the homeless subjects were registered blind (VA less than 3/60), in comparison to 0.17% for the national consensus after age standardization. Most participants had good knowledge regarding access to prescription glasses and eye examination services. Despite this, 85.0% never had their eyes examined by a doctor and 73.0% had their last optometrist appointment in more than 5 years. These findings suggested that there was a significant disparity in ocular health, including visual acuity and refractive error amongst the homeless in comparison to the general population. Further, the homeless were less likely to receive the same level of support and continued care in the community due to access barriers. These included a number of socio-economic factors such as travel expenses and regional availability of services, as well as administrative shortcomings. In conclusion, this research demonstrated unmet visual health needs within the homeless, and that inclusive policy changes may need to be implemented for better healthcare outcomes within this marginalized community.

Keywords : homelessness, refractive error, visual disability, Wales

Conference Title : ICOO 2020 : International Conference on Ophthalmology and Optometry

Conference Location : London, United Kingdom

Conference Dates : February 13-14, 2020