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## Pattern of refractive error and visual impairment due to uncorrected refractive error among the pediatric populations attending Ophthalmology Department of Dhulikhel Hospital

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**Background:** Uncorrected refractive errors are common cause of visual impairment and blindness worldwide. According to mid-term review of Nepal Blindness Survey 2010, estimated 1,013,141 children under 16 years of age have refractive error and the prevalence of refractive error among the children of this age group is assumed to be 10% based on different studies ranging from 3 to 20%. Pediatric populations are not quick in sharing their visual problems and also parents are unaware of the problems. So, most of children are presented lately and hence are forced to live visually impaired life prior to the interventions.

**Design:** A hospital based prospective study.

**Methods:** Data were collected from December 1<sup>st</sup> 2015 to May 30<sup>th</sup> 2016. Presenting visual acuity, age of presentation, refractive status, best corrected visual acuity and status of visual impairment were assessed in children ages ranging from 3-15 years presenting to the Ophthalmology Department of Dhulikhel Hospital.

**Result:** Out of a total of 1,498 children examined during the study period, 116 (7.74%) had refractive error. Among these 60 (51.70%) were females and 56 (48.30%) were males. The mean age at presentation was  $11.45 \pm 3.62$  years. Astigmatism was the most common subtype seen in 45.26% (N=105 eyes), followed by Myopia (42.67%, N=99 eyes) and hypermetropia (11.21%, N=26 eyes). Only 36.20% (N=42) pediatric population were using spectacle and rest 63.8% (N=74) didn't use spectacle prior to the examination. 62.90% (N= 73 children) had some of visual impairment during their presentation. There was statistically significant improvement in visual acuity after appropriate refractive correction.

**Conclusion:** Lack of awareness, infrequent ocular examination and lack of community or preschool vision screening were the main causes for the late presentation and significant visual impairment associated with the condition. Uncorrected or lately corrected refractive error may cause amblyopia and other complications.

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