

## Validation of the Arabic version of the impact visual impairment on children (ivi-c) questionnaire on Saudi children with visual impairment using rasch analysis

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**BACKGROUND:** Vision Related Quality of Life (VRQoL) in visual impairment children was accessed in The IVI-C questionnaire was translated to many languages and validated in many countries such as China(1) , Germany(2) , India(3) and Australia(4) using different translation of the Impact Vision Impairment of Children (IVI\_C) questionnaire. However, VRQoL in visual impairment children in Saudi Arabia (SA) was not accessed. This is because there is no Arabic valid tool in the literature that can be used to access VRQoL. Therefore, there is a need for Arabic valid and reliable instrument that can be used to assess VRQoL in children with visual impairment.

**AIM:** The aim of this study was to test the validity and reliability of the Arabic version of the 23-item of IVI\_C questionnaire on school-aged children with visual impairment in SA.

**METHODS:** This is a cross sectional study conducted in many low vision clinics in Riyadh, SA. The questionnaire was administered face-to-face to seventy-seven children with visual impairment who aged was ranged between 8 to 18 years old. Visual examinations include distance and near visual acuity were measured for all the participants. Rasch analysis was used to test the reliability and validity of the translated questionnaire.

**RESULTS:** The 23-item IVI-C questionnaire fit the Rasch analysis(5), person separation was 2.21, person reliability was 0.83 and the Cronbach alpha was 0.87. However, misfitted items were present. After deleting the misfitted items, the 14-item questionnaire had good validity and reliability as demonstrated by person separation and reliability (2.43, 0.86 respectively). The Cronbach alpha was 0.88. Person-item map of the 14-item showed good matching between children's abilities and item difficulties.

**CONCLUSION:** The 14-item of the Arabic version of IVI-C questionnaire is valid and reliable tool on school aged children with vision impairment in SA, which can be used to assess VRQOL in children with visual impairment in Arabian countries. These items include several VRQoL domains such as accessed school/ specialist instruction, social interaction, family, community and vision impairment peer interaction.

**Keywords:** low vision, children, questionnaire, vision-related quality of life, Rasch analysis.

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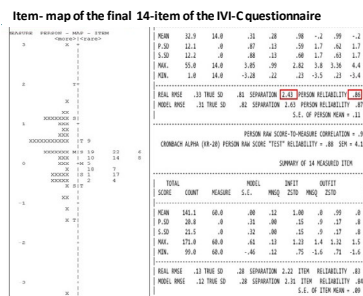
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Figure 1. The Person-item map for the 14-item IVI-C showed good matching between children's abilities and item difficulties. Skew and kurtosis values were outside normal limits (-2.00 to +2.00).



## Recent Publications (minimum 5)

- Huang, J., Khadka, J., Gao, R., Zhang, S., Dong, W., Bao, F., & Pesudovs, K. (2016). Validation of an instrument to assess visual ability in children with visual impairment in China. *British Journal of Ophthalmology*. Retrieved 29 February, 2017 from <http://bjo.bmj.com/> doi:10.1136/bjophthalmol-2016-308866
- Finger, R. P., Fenwick, E., Marella, M., Dirani, M., Holz, F. G., Chiang, P. C., & Lamoureux, E. L. (2011). The impact of vision impairment on vision specific quality of life in Germany. *Investigative Ophthalmology & Visual Science*, 52(6), 3613-3619.
- Gothwal, V. K., Sumalini, R., Irfan, S. M., & Giridhar, A. (2013). Rasch analysis of Impact of Vision Impairment for Children questionnaire. *Optometry & Vision Science*, 90(8), 820-827
- Cochrane, G. M., Marella, M., Keeffe, J. E., & Lamoureux, E. L. (2011). The impact of vision impairment for children (IVI-C): Validation of a vision-specific pediatric quality of life questionnaire using Rasch analysis. *Investigative Ophthalmology & Visual Science*, 52(3), 1632-1640.
9. Pesudovs, K., Burr, J. M., Harley, C., & Elliott, D. B. (2007). The development, assessment, and selection of questionnaires. *Optometry & Vision Science*, 84(8), 663-674.

## Biography

Maha M Alanazi has her bachelor degree in optometry Doctor and visual science in 2018 King Saud University, Riyadh SA. She has Certificate of thanks and appreciation to participate in the Research day of the Optometry Department in the Collage. She Participated in Saudi Ophthalmology symposium April, 2018 as speaker of research title Testing the Validity of the Arabic Version of the Impact Vision Impairment (IVI-C) Questionnaire on Saudi Children with visual impairment.