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# A trend analysis of the low-vision literature

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Gregory L. Goodrich and Aries Ardit

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**An account is given of the design and compilation of a freely-available database, updated on a monthly schedule, listing journals, books, conference proceedings and online publications concerned with any and every aspect of low vision. Specific topic areas can be located by means of keywords and through other bibliographical details such as author's name, year of publication, etc. The authors present a summary historical analysis revealing that there has been an unprecedented rise over the last few decades in the number and diversity of journals and other literature sources addressing issues to do with low vision. Among the opportunities provided by the database are searches to ascertain not only what is currently being practiced and researched but also to identify the changes in the priorities being given to the multitude of topics of interest to optometrists, ophthalmologists, paediatricians, psychologists, educators, rehabilitation practitioners, epidemiologists, gerontologists and other professional workers.**

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Between 1903 and 1950 there were approximately 162 publications relating to low vision. In the 50 years that followed, the number of publications had increased to over 10,000 citations. Of these citations some 80 per cent have been published in the last 20 years, and over 40 per cent in the last decade. This rate of growth in the low-vision literature is highlighted by the fact that in the five year period from 1999 through 2003, over 2000 articles were published, representing over 20 per cent of all low-vision publications. In this brief report we catalogue the journals most frequently publishing low-vision articles and summarize the content areas of those articles.

The low-vision literature has been compiled into Low Vision: The Reference (LVTR) and is freely available on Lighthouse International's Vision Connection website at: <http://www.visionconnection.org/Content/Research/VisionScience/BooksPeriodicalsandDatabases/LowVisionTheReference/default.htm>. LVTR is

keyword indexed and is searchable using any of 82 keywords or by author, year or other field. The search function is very useful in locating articles on specific topic areas, populations (e.g. children or the aged) or functional areas (e.g. low-vision services, orientation and mobility, daily living skills, etc.). We update the contents monthly and the entire bibliography can be downloaded into an EndNote™ citation database. While we do not claim that the bibliography contains all low-vision publications, it is evident that LVTR is the single most comprehensive guide to the low-vision literature in existence, and therefore can be used as a significant sampling source for trend analysis.

In this presentation we have used LVTR to explore the current low-vision field as reflected in its publications, and we attempt to draw inferences and trends useful for practitioners working in the field. We have chosen the literature published during the five-year period of 1999 through 2003. LVTR reflects 2118 citations produced during this period. The majority of these citations are journal articles (N = 1512 or 71%) with the remainder comprised of books, conference proceedings and (increasingly) online publications. For purposes of this article we will focus only on the journal publications. In large part our rationale for focusing on journal publications is that they generally represent the most current, state-of-the-art literature and are therefore most relevant for trend analysis, although arguably conference proceedings could be included.

As shown in Table 1, 21 journals accounted for over two thirds (68%) of low-vision publications; however, a very wide variety of journals accounted for the other third. These included journals from the fields of gerontology, psychology, occupational therapy, dentistry, technology, neurology, podiatry, and pediatrics, among many others. Low vision has also become a very international field with seven of the 21 journals shown in Table 1 published outside the borders of the United States, and virtually all journals contained articles written by contributors from around

the world. The journals published outside the United States accounted for over 17 per cent of the journal articles included in this analysis.

Journal	% of total
Journal of Visual Impairment & Blindness	6
American Journal of Ophthalmology	18
Optometry and Vision Science	5
Archives of Ophthalmology	4
British Journal of Visual Impairment	4
Integración	4
Re:View	4
American Journal of Ophthalmology	3
Visual Impairment Research	4
British Journal of Ophthalmology	3
Accessworld	2
Optometry (Journal of the American Optometric Association)	2
Ophthalmic Epidemiology	1
Clinical & Experimental Optometry	1
Eye	1
Generations	1
Investigative Ophthalmology and Vision Science	1
Journal of Rehabilitation Research and Development	1
Klinische Monatsblätter für Augenheilkunde und Augenärztliche Fortbildung	1
Ophthalmic and Physiological Optics	1
Ophthalmic Epidemiology	1

Table 1: Journals by % of contribution to the low-vision field for the years 1999–2003. Only journals contributing 1% or more are listed.

The topic areas of the articles do not necessarily reflect the demographics of the low-vision population. For example, while the elderly comprise the vast majority of the population, journal articles addressing that population comprised 19 per cent of the total, while articles targeting children comprised 23 per cent. Studies seeking to better define the demographics of the population and/or the incidence and/or prevalence of eye diseases accounted for about 16 per cent of all publications.

Articles dealing with outcomes of services, training and/or devices accounted for almost 12 per cent of the total number of journal articles. This is remarkable because this number of studies doubles the number of outcome studies conducted in all prior years, and indicates that this topic area is becoming increasingly important to the field.

Devices are common topic areas across all journals. Articles on computers and computer access accounted for some 6 per cent of all articles, while low-vision devices (telescopes, magnifiers, CCTV, etc.) accounted for 9 per cent of articles.

Functional activities are also prevalent in the literature. Orientation and mobility and daily living skills each accounted for 9 per cent of the literature. Reading accounted for 7 per cent of articles.

Psycho-social areas were also heavily represented. Psychological adjustment issues represented 8 per cent of the literature, psychiatric disorders 3 per cent and family issues 4 per cent. General societal considerations represented 7 per cent of the literature. Accessibility issues accounted for some 5 per cent of journal topics and communication topics accounted for almost 5 per cent.

## Conclusions

The field of low vision continues to grow and evolve at a rapid rate. Its publications are global in scope and cover a wide range of demographic and topical areas. It appears to be receiving increasing attention from a wide variety of disciplines. While the majority of journal articles occur in 'predictable' journals (i.e. those in rehabilitation, special education, optometry and ophthalmology), about one-third of the literature occurs in journals covering occupational therapy, gerontology, epidemiology, pediatrics, neurology and a wide variety of other disciplines. This may well reflect the increasing number of elderly, visually-impaired individuals who seek services from these professions. Optometric and ophthalmological journals account for one-third of all publications, while journals published outside the United States accounted for about one in six journal articles.

This trend analysis suggests that professionals working in the area of low vision will, if their knowledge and skills are to remain current, need to utilize education courses, workshops, conferences, journals and other continuing education activities. Certification, for these professionals, will also need to reflect the rapidly changing field. And finally, the breadth of journals found in the literature suggests that professionals from a wide range of disciplines are addressing the needs of individuals with low vision.

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**Gregory L. Goodrich**  
**Supervisory Research Psychologist**  
**Psychology Service and Western Blind**  
**Rehabilitation Center**  
**VA Palo Alto Health Care System**  
**Palo Alto, CA**  
**USA**

**Aries Arditi**  
**Arlene Gordon Research Institute**  
**Lighthouse International**  
**New York, NY**  
**USA**  
**Email: [Gregory.Goodrich@med.va.gov](mailto:Gregory.Goodrich@med.va.gov)**