Low Vision Service Delivery by Optometrists in Ghana

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ABSTRACT

Aim: To investigate the barriers to the delivery of low vision services by Ghanaian optometrists.

Methods: A short questionnaire was sent to 135 optometrists in Ghana between January to May 2018. The survey collected information on type of practice, year of graduation, type of low vision services provided and if not, the reasons or limitations.

Results: Completed forms were submitted by 128 optometrists and this represents a significant number of practicing optometrists in Ghana. Most optometrists worked in government practice (78.9%) and even though all responders received training in low vision during their Doctor of Optometry (OD) degree, only 3.1% were delivering such services. Those who did not deliver low vision services attributed most of the reasons to the absence of low vision aids/devices in their practice (95.2%) and therefore made referrals mainly to the Koforidua regional hospital (34.6%).

Conclusion: Low vision services in Ghana are underdeveloped mainly due to the unavailability of low vision aids. Incorporating low vision delivery into the eyecare system may increase its uptake and reduce the number of visual impairment cases.

Key words: Ghana, low vision, optometrists, rehabilitation.

INTRODUCTION

The International Agency for the Prevention of Blindness reports 0.74 percent of Ghanaians have visual acuity of less than 3/60 in the better eye, with an additional 1.07 percent having severe visual impairment with the main causes being refractive errors (44.4%), followed by cataracts (42.2%). [1] Even though a high prevalence of low vision has been reported, [2] there is low patronage for low vision rehabilitation services. The uptake of eye care services in Ghana have been reported to be influenced by parent’s negative perceptions, societal and cultural misconceptions, inadequate resources and absence of collaboration among vision care providers as well as weak national support studies. [2,3] Individuals with low vision have some residual vision which when rehabilitated, can help them live an independent life. Patients with low vision in developed countries are given the appropriate aids/rehabilitation which enables them to become competent print readers and therefore renders Braille unnecessary. In contrast, most of these individuals are referred to schools of the Blind in Ghana. Ocloo [4] reported that children with low vision are educated together with those with blindness; using the same non-visual means predominantly. Indeed, about 40% of students in the schools of the blind in Ghana have been reported to...
have varying degrees of low vision with
majority of these pupils using Braille
because they assume it is been imposed on
them. [5] Optometrists in Ghana receive
training in the provision of primary low
vision services as part of their course
requirement in school; however, the practice
of low vision is on the downside. There are
numerous anecdotes but little research on
the topic of referral and provision of services for visually impaired people in
Ghana. This situation has led to assumptions
that many eye care providers lack interest or
do not find the practice of low vision to be
rewarding. [6] Even when they do refer
patients, most wait until the patients have
counting fingers vision, which makes the
rehabilitation process much more difficult
than it would have been had the patient been
sent earlier when the vision was better.
Optometrists in Ghana are well suited to
provide accessible vision rehabilitation and
low vision services due to their distribution
nationwide in cities and rural areas. So,
what are the reasons that optometrists do not
commonly provide low vision services? The
aim of this study was to identify barriers to
the provision of low vision services by
Ghanaian optometrists.

METHOD
The study was a cross sectional
descriptive study which used a short
questionnaire generated to access the extent
of low vision service provision among
Ghanaian optometrists. The questionnaire is
a modified form used in an earlier study [7]
which came in an online and print version to
encourage responses; these were
anonymous. The survey collected
information on type of practice, year of
graduation, type of low vision services
provided and if not, the reasons or
limitations. Most of the questions allowed
multiple answers and therefore the
percentages totaled more than 100% in such
circumstances. All analysis were done using
R studio. The study adhered to the tenets of
the Declaration of Helsinki and was
reviewed and approved by the Committee

RESULTS

<table>
<thead>
<tr>
<th>Table 1. Characteristics of study respondents (n=128)</th>
</tr>
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<tbody>
<tr>
<td><strong>Type of practice</strong></td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Private practice</td>
</tr>
<tr>
<td>Government practice</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Low vision training</strong></td>
</tr>
<tr>
<td>Doctor of Optometry</td>
</tr>
<tr>
<td>Postgraduate</td>
</tr>
<tr>
<td><strong>Provides low vision services</strong></td>
</tr>
</tbody>
</table>

One hundred and thirty-five optometrists
were surveyed between January to May
2018, out of which 128 submitted complete
responses. The majority 78.9% (101/128)
worked in private practice (Table 1) with
male and female genders representing
78.1% and 21.9% of total responders
respectively. Although all respondents had
low vision training during their OD training,
only 2.3% (4/128) reported providing low
vision services. Out of those that practiced
low vision, 75% (3/4) had received
postgraduate training. Those practicing low
vision had been doing so for about 3.9 ±
2.3 years. Low vision practitioners in
government practice reported seeing more
than 100 low vision patients in a year (Table
2). All responders delivering low vision
services reported conducting low vision
assessment for their patients. As expected,
100% of low vision practitioners had their
cases referred from other optometrists.
About 64.3% reported getting their referrals
from ophthalmologists. Handheld
magnifiers and magnifying glasses were the
most commonly available aids, 75% and
100% respectively. The availability of field
enhancing devices was reported by only one
optometrist. Out of the 124 optometrists
who do not provide low vision services, the
non - availability of low vision aids

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accounted for the main reason (95.2%) for not delivering low vision services.

Table 2. Delivery of low vision services (n=4)

<table>
<thead>
<tr>
<th>Type of practice (n)</th>
<th>Number of patients seen in a year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Private practice (1/4)</td>
<td>0</td>
</tr>
<tr>
<td>Government practice (2/4)</td>
<td>0</td>
</tr>
<tr>
<td>Other (1/4)</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients are referred from</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own practice</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ophthalmologists</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Optometrists</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>General practitioners</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Ophthalmic nurses</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment provided</th>
<th>n</th>
<th>percent</th>
</tr>
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<tbody>
<tr>
<td>Low vision history taking</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Vision assessment</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>50</td>
</tr>
</tbody>
</table>

Surprisingly, most responders considered the time-consuming nature of low vision practice too as a barrier. Most of these non-low vision practitioners referred low vision cases to the Koforidua regional hospital (34.7%) and the Korle-Bu Teaching Hospital (25%), (Table 3).

DISCUSSION

To the knowledge of the authors, this is the first exploratory survey on the barriers to low vision delivery by optometrists in Ghana. In Ghana, optometrists are relatively spread more evenly geographically in cities and rural areas compared to other eye care practitioners. Also, every optometrist in Ghana has been trained to provide low vision assessment and rehabilitation. Therefore, optometrists are well suited to deliver accessible low vision services. The main objective of this study was to determine the barriers for the delivery of these services by optometrists in Ghana. Most people with low vision retain some useful vision that when rehabilitated with optical devices, can help to maximize the residual sight and improve quality of life. Indeed, the effectiveness of low vision rehabilitation has been demonstrated in several studies; [8,9] but despite these benefits, low vision service delivery rates are alarmingly low in Ghana. About 40% of students in the schools of the blind who use braille for learning have been reported to have some useful sight.5 Despite the urgent demand for low vision services, few (4/128) optometrists reported delivering low vision services in their practice. Devices for near work were the commonest visual aids which corroborates findings by Ogbomo and
colleagues.\[10] Results from this current study show the inaccessibility of visual aids for patients with field loss (e.g. hemianopes) and those needing them for far work. This shows how mobility may be limited for the cohort of patients who will need them. Also, it’s imperative to state that the optometrists who reported practicing low vision have had some sought of post-graduate low vision training overseas; this is of no surprise since there is no such training in Ghana. Most optometrists who do not practice low vision reported referring patients to the Koforidua regional hospital (34.7%), Korle-Bu teaching hospital (25%) and the Komfo Anokye teaching hospital (21%). It is noteworthy that these hospitals are found in the capital cities of the three most developed regions of Ghana. With an aging population, many of those affected will be among the oldest and will be unable to travel long distances for such services. Due to the expensive nature of these devices, an insurance plan that absorbs some of these costs may be beneficial. In Ghana, the national health insurance scheme (NHIS) which is a government sponsored program designed to cater for the health care needs of its citizenry does not support costs associated with devices for vision rehabilitation. This imposes a huge burden on the patients most of whom are unemployable or have lost their jobs as a result of them being visually impaired. Since costs is a major barrier to the delivery and uptake of low vision services among patients, any national health and social policy on eye care which considers the blind should consider the plight of persons with low vision as well. The NHIS could include basic and less expensive devices for improving the everyday lives of persons with low vision in the benefits package of the scheme. Counselling sessions included as part of the care package for persons with low vision visiting large tertiary hospital such as the Korle-Bu Teaching Hospital is essential. This calls for increased role of other professionals like clinical psychologist in the eye care team. Therefore, there should be a vocacy for increased remuneration for low vision practitioners and a moderate reimbursement for low vision devices. With these in place, Optometrists in Ghanamay strive to expand optometric primary care services to include low vision and improve access to care for Ghanaians with low vision. Also, optometrists together with other eye care practitioners have a central role in advancing the provision of low vision services in Ghana. Education is also very important since most visually impaired people would avail themselves of these services if they would only be told about them.

This study’s findings highlight potential areas for action: building confidence of optometrists by providing ‘refresher’ training for those interested in low vision care but who see few patients with low vision and by increasing optometrists’ access to low vision devices. Extensive research is needed on the characteristics of low vision patients as well as the factors that influence its utilization among patients.

REFERENCES
6. Gadagbui GY, Ocloo MA. The attitude of children with low vision towards braille as a
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7. Lim HY, O'Connor PM, Keeffe JE. Low vision services provided by optometrists in Victoria, Australia. Clinical and Experimental Optometry. 2008 Mar;91(2):177-82.


SUPPLEMENTARY QUESTIONNAIRE
1. Age:
2. Sex:
3. Type of practice:
   - Private practice
   - Government practice
   - Other: please specify----------------------
4. What level of training do you have in low vision?
   - Doctor of optometry
   - Postgraduate

LOW VISION SERVICES ARE PROVIDED
5. Do you provide low vision services? A. Yes B. No
   If yes, how many years of practice?
6. How many patients with low vision do you see per year?
   - <20
   - 20-100
   - >100
7. Where are these patients usually referred from?
   - Own practice
   - Ophthalmologists
   - Optometrists
   - General practitioners

LOW VISION SERVICES ARE NOT PROVIDED
8. What assessments are you likely to provide for the next five low vision patients?
   a. Low vision history taking
      - Medical
      - General functional
      - Illumination and contrast
      - Daily living skills
      - Mobility
      - Objectives and expectations
      - Other: please specify____________________
   b. Vision assessment
      - Distance visual acuity
      - Near visual acuity
      - Refraction
      - Visual fields
      - Contrast sensitivity
      - Other: please specify____________________
9. What low vision equipment do you have available for purchase in your practice?
   - Handheld magnifiers
   - Stand magnifiers
   - Telescopes
   - Magnifying glasses
   - CCTV
   - Field enhancing devices
   - Others; please specify______________

LOW VISION SERVICES ARE NOT PROVIDED
10. According to you what are the major barriers that you face in your practice in providing low vision care? (Tick all that apply)
    - Lack of adequate training
    - Lack of interest or motivation
    - Non availability of low vision aids
    - Low vision services are time consuming
    - Low vision care is less profitable
    - Others

11. According to you, how can we improve low vision practice?
    - Advanced training in low vision
    - Creating public awareness
    - Incorporating low vision delivery in eye clinics
    - Others

12. Where do you refer low vision patients to?
    - Koforidua Regional Hospital
    - KomfoAnokye Teaching Hospital
    - Korle-Bu Teaching Hospital
    - Ghana Blind Union
    - 37 Military Hospital
    - Others

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