Original Article

AWARENESS AND KNOWLEDGE ABOUT CATARACT AND GLAUCOMA AMONG NON-OPHTHALMOLOGY HEALTHCARE PROFESSIONALS WORKING IN DIFFERENT CADRES AT TWO TERTIARY CARE HOSPITALS IN MIRPUR, AZAD KASHMIR

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ABSTRACT:

Cataract and glaucoma are the leading causes of blindness and visual impairment in the general population, particularly in middle and old aged individuals. A very large number of patients presenting to the general medical OPDs with symptoms relating to non-communicable diseases also have complaints pertaining to cataract and glaucoma and those complaints are often attended by non-ophthalmology healthcare professionals having different levels of academic qualifications. This study was conducted to evaluate the level of awareness and knowledge about cataract and glaucoma in non-ophthalmology healthcare professionals working in various cadres, including specialists, junior doctors and paramedics at two tertiary care hospitals in Mirpur, Azad Kashmir. The results of the study indicate lack of basic cataract and glaucoma knowledge in consultants and paramedical staff. On the other hand medical officers were found to have sufficient knowledge of the diseases. Health education programs targeting non-Ophthalmology healthcare providers will help improve the accuracy of advice offered to patients and may enhance early detection and treatment.

Keywords: Cataract, glaucoma, knowledge, blindness, healthcare professionals, paramedics, medical officers, specialists, hospitals.

INTRODUCTION:

Cataract and glaucoma have been reported to be the two most important and leading causes of preventable blindness in Pakistan (1). Patients with complaints of poor vision or blindness end up in the hospitals and interact with healthcare professionals of ophthalmology as well as other departments. Middle and old age patients having chronic illnesses like diabetes mellitus, ischemic heart disease, hypertension and other metabolic and endocrine disorders usually seek consultation at the medical OPDs. Patients are attended by an array of medical professionals including paramedical staff, medical officers and a few are attended by the specialists. This wide spectrum of qualifications of health professionals translates into different levels of knowledge about the disease which may affect referral of the patients to the Ophthalmologist. Research has indicated that awareness and knowledge of eye diseases that promotes seeking specialist care is one of the most important steps in preventing visual impairment (2), thus having a potential impact on the diagnosis, progression and management of the disease in these patients. Furthermore, health personnel have the potential to raise awareness about cataract and glaucoma among the general population, facilitating optimal and timely utilization of healthcare resources and favourable treatment outcomes.

Studies of the general population have

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indicated low levels of knowledge about cataract, glaucoma and diabetic retinopathy [3, 4, 5, 6] and a lack of treatment compliance associated with negative healthcare attitudes among glaucoma patients [7]. Even the Ophthalmologists have been reported to undergo a lower than expected rate of screening for glaucoma [8]. As cataract and glaucoma are both treatable, there is a dire need for raising awareness among the public about their prevention, management and seriousness of complications [9]. Despite the importance of this issue, very few studies have been directed at evaluating the level of knowledge and awareness of non-ophthalmology healthcare staff working in hospital settings. Studies carried out in economically and socially comparable countries have shown mixed results with some reporting a relatively high level of glaucoma awareness among the non-ophthalmologic clinical staff [10], whereas others have indicated a low level of knowledge among doctors and nurses working in non-opthalmologic departments [11] as well as among medical students [12]. A similar study from Malaysia found high levels of awareness but low levels of knowledge concerning common eye diseases among highly educated non-medical teaching faculty at a local university [13]. In Pakistan, no such study has been reported so far.

This study was conducted to determine the level of awareness and knowledge about cataract and glaucoma among non-ophthalmology healthcare professionals working in different cadres at two tertiary care government hospitals in Mirpur, Azad Kashmir. The information thus generated can be used to outline a plan of action to improve what the healthcare system has to offer to the patients to prevent blindness from cataract and glaucoma.

MATERIALS AND METHODS:

This study was a cross-sectional survey whereby two self-administered questionnaires, one each for cataract and glaucoma, were distributed to a convenience sample of health professionals working in departments other than Ophthalmology at two tertiary care hospitals in Mirpur, Azad Kashmir. The survey tools were developed by the first author in light of previous research and were pilot tested on 5 respondents. Necessary amendments were made to the tool to optimize field performance and face validity was established by obtaining expert opinion. The population of interest included paramedics, medical officers and consultants who were to fill out their biodata and the respective post in the hospital. Further down the form were the questions for the assessment of knowledge. Some questions were to be answered in either yes or no while others had multiple choices from which the correct answer or the best answer was to be selected. Since all the respondents had a minimum secondary school educational level, literacy was not an issue. However, the questionnaire was written in both English as well as Urdu to overcome any language barrier.

Awareness was assessed by a positive reply to the question "Have you heard of the term Cataract/glaucoma?" The rest of the questions assessed further knowledge of the two diseases regarding cause, risk factors, signs and symptoms and treatment options. This made up a total of 10 knowledge questions, each carrying 1 mark. The results of the questionnaire were categorically documented. Those who scored 8-10 had a good knowledge. Those who scored 4-7 were labelled to have satisfactory knowledge and those scoring 3 or less had a poor knowledge of the disease and its various aspects.

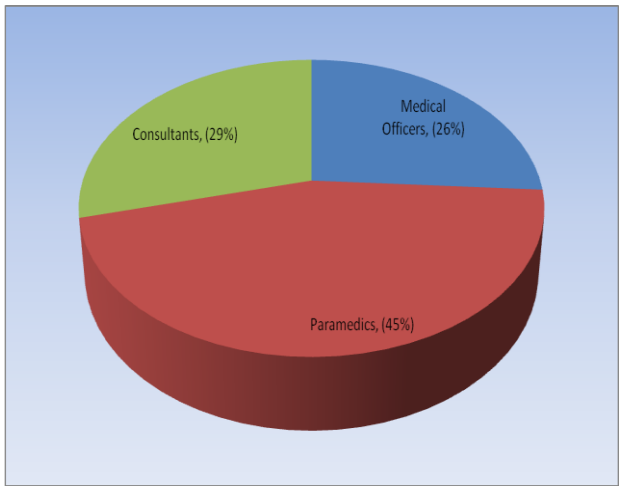
RESULTS:

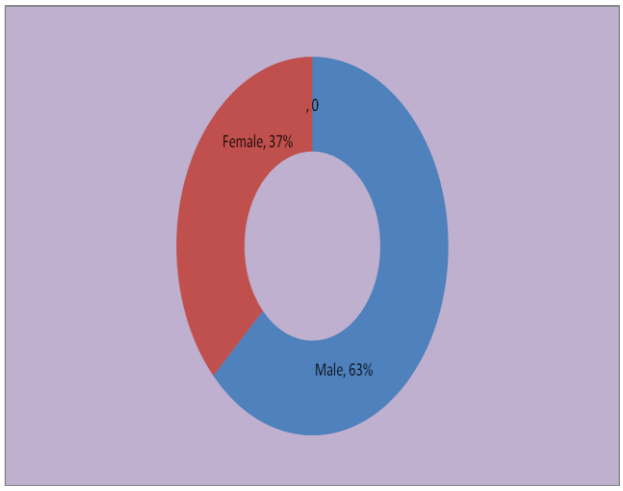
Sample characteristics:

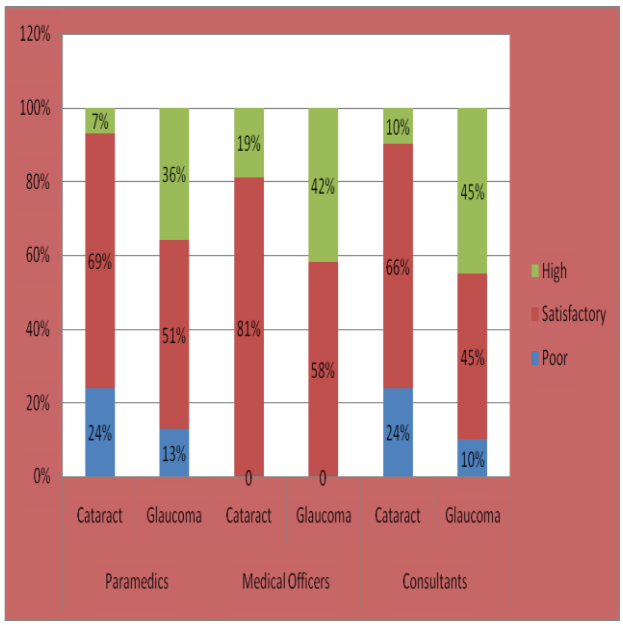
The sample consisted of 100 individuals out of which 63 were male while 37 were females.

The consultants comprised 29% of the sample with 79% males (n=23) and 21% females (n=06). The mean age of the consultants was 50.81 years with a range of 34 to 65 years.

Twenty six percent of the sample consisted of medical officers with 69% males (n=18) and 31% females (n=08). Mean age of the medical officers was 31.57 years with a range of 23 to 57 years.







Paramedics made up 45% of the sample with a gender break-up of 49% males (n=22) and 51% females (n=23). Mean age of this sub-sample was 32.42 years with a range of 19 to 60 years.

Level of awareness and knowledge:

Overall 97% of the target population were aware of cataract and 92% had awareness of glaucoma. Awareness of cataract was highest among the consultants and medical officers at a level of 100% each. However, 6.6% of the paramedics were unaware of cataract. Awareness of glaucoma was 93% among consultants, 96% among medical officers and 89% among paramedical staff.

In cumulative categorical terms, 11% of the sample had good knowledge of cataract, 71% had satisfactory while 18% had poor knowledge. Forty percent of the sample exhibited good knowledge of glaucoma, 51% had satisfactory while 9% had poor knowledge of the disease.

In group-wise analysis, 24% of the consultants had poor knowledge of cataract, 66% showed satisfactory levels while 10% had high levels of knowledge. Ten percent of the consultants had poor knowledge of Glaucoma, 45% showed satisfactory knowledge and 45% had high levels of knowledge about the disease.

Among the medical officers, none showed poor levels of cataract knowledge, 81% had satisfactory while 19% had high levels of cataract knowledge. For glaucoma, 58% of the medical officers showed satisfactory levels while 42% had high levels of knowledge with none in the poor category.

Among the paramedics, 24% had a poor knowledge of cataract, 69% showed satisfactory while 7% exhibited high level of knowledge. The knowledge of glaucoma in paramedics was 13% poor, 51% at satisfactory and 36% at high level.

In terms of knowledge of cataract, 69% of

the consultants knew that cataract was a clouding of the lens in the eye causing loss of vision, 72% were aware that age is a likely risk factor for development of cataract and all had correct knowledge about treatment of cataract. With regard to glaucoma, 97% of the consultants knew that it was caused by damage due to increase in pressure in the eye, 38% knew that a family history was the most likely risk factor for glaucoma while 58% were aware of the correct treatment for glaucoma.

Among the medical officers, 85% knew the cause of cataract, 92% had correct knowledge of the risk factor and all of them knew about the correct treatment of the disease. In terms of knowledge of glaucoma, 92% of medical officers knew the cause, 77% knew the most likely risk factor and 96% had correct knowledge of its treatment.

Almost half of the paramedics knew the cause of cataract, 71% of them correctly identified the risk factor and 84% knew about the right treatment for the disease. When responding to questions about glaucoma 78% of the paramedics knew the cause of the disease, 44% exhibited knowledge about the most likely risk factor while 42% knew about its treatment.

The level of knowledge about cataract and glaucoma as shown by the different categories of health professionals is shown as under.

DISCUSSION:

The present study was conducted with the aim to determine the level of awareness and knowledge about cataract and glaucoma among the non-ophthalmology healthcare staff including consultants, medical officers and paramedics working in two tertiary care hospitals in Mirpur, Azad Kashmir. The results bring many important issues to the fore.

Cataract and glaucoma have been reported to be the two most important causes of blindness in Pakistan, contributing to 12.2% and 7.1% of cases of preventable blindness [(1)]. The fact that this disease burden may be prevented from affecting the lives of people who, in many cases, are already in financial hardship underscores the importance of early diagnosis of these diseases.

Healthcare providers are important sources of information to the public and their levels of awareness and knowledge about important health issues may affect the kind of advice they offer to their listeners. Research has indicated that a lack of disease related knowledge is more of a barrier in seeking care than a lack of access to care [(14).] Advice to seek ophthalmologic consultation has been shown to be one of the key factors in preventing visual impairment [(2)]. Thus the role of healthcare providers in shaping the healthcare seeking behaviours of the public regarding eye diseases cannot be overemphasized. As the population is aging with increasing life expectancy so is the prevalence of chronic diseases. Many of these older adults with visual problems seek consultation for their ailments at the medical departments. The knowledge level of physicians and other staff working in these departments could determine the quality and accuracy of the advice offered.

Although studies have been conducted to evaluate awareness and knowledge levels of the various population subgroups [(13, 16, 17, 18),] studies involving healthcare professionals from non-ophthalmology fields have been fewer. This study found out that despite the vast majority of the non-ophthalmology healthcare providers being aware of cataract and glaucoma (97% and 92% respectively), there still was a minority that were not aware of these diseases. This is in contrast to studies in India and Nigeria where 100% of healthcare workers were reportedly aware of glaucoma [(10, 11).] Furthermore, around one in four respondents in this study had poor

knowledge about cataract and almost one in ten had poor knowledge about glaucoma. These findings are comparable to those reported by similar studies in other developing countries involving doctors and paramedical staff [11].

Some group differences that emerged from this study were startling. The finding that while one-fourths of the consultants in the sample had poor knowledge of cataract and 10% showed a poor knowledge of glaucoma, none of the medical officers showed knowledge levels in this category. This could be explained on the basis of higher mean age of consultants, 50.81 years versus 31.57 years in case of medical officers and hence the time elapsed since having studied Ophthalmology in medical school. Furthermore, it is heartening to find that medical officers that make up the bulk of the medical workforce in any hospital are sufficiently knowledgeable about these diseases and can provide accurate advice to their patients.

The paramedics showed knowledge levels lower than consultants and medical officers which may be explained on the basis of their comparatively lower educational attainment. The paramedics are admitted to their specific speciality programs after matriculation and as such are not exposed to eye-related medical education.

The responses to questions related to deeper knowledge pertaining to cause, most likely risk factor and treatment for cataract and glaucoma revealed some interesting findings. Thirty-one percent of consultants did not know that cataract was caused by a clouding of the lens causing loss of vision, in contrast to 15% of medical officers. Combining consultants and medical officers as one group, the percentage of doctors in this study who did not know the exact cause of glaucoma comes out to be 5.5%. This is far lesser than the 20% proportion of doctors reported by Ichhpujani et al as lacking knowledge of the cause of glaucoma [11].

Knowledge of most likely risk factors for cataract and glaucoma among the non-ophthalmology consultants was a cause for concern. Twenty-eight percent of them were unaware that age was a risk factor for cataract and an overwhelming 62% did not know that a family history of glaucoma was the most important risk factor for development of the disease. Combining the sample findings on this variable, we found that 19% of our sample of doctors and paramedics did not know about the risk factor for glaucoma. This is in contrast to the findings of the North India study and others whereby 24% of the sample of doctors and nurses was reported to be unaware of the risk factor for glaucoma [11].

In contrast to 58% of consultants, all the medical officers reported knowledge of treatment for glaucoma. This may be due to their more recent graduation from medical school where ophthalmology is taught as a subject and clinical rotations are also compulsory. [19,20].

There are some limitations to this study that have to be acknowledged and considered for the purposes of interpretation of results. It was conducted on a convenience sample of healthcare providers and as such, the findings though indicative, are not generalizable to the total population of healthcare providers in the country. The data were based on self-report by respondents and are likely to be influenced by attendant biases.

CONCLUSION:

The findings of this study underscore the importance of introducing Continuing Medical Education programs for eye diseases with a high public health impact to reduce the burden of blindness in the country. Glaucoma and cataract, when diagnosed in the early

stages are treatable and the ensuing blindness is preventable. Research suggests that blindness has a greater negative impact on quality of life as compared to other degrees of visual impairment. Thus prevention of blindness attains an even greater importance when inexpensive and widely available treatment methods are available.

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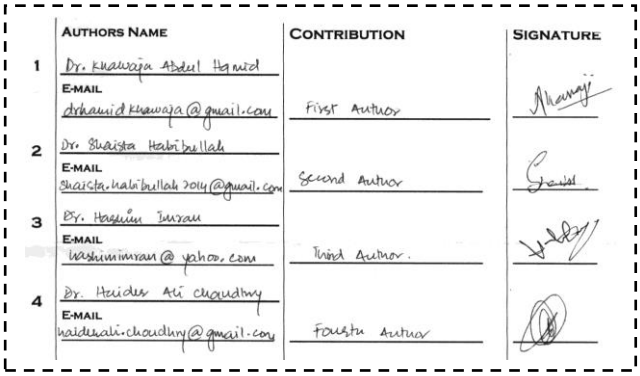

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