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Short Communication

Factors influencing the propensity of nurses to counsel patients for eye donation: a pilot study in a tertiary care hospital in north India

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Introduction

The prevalence of blindness in India is 1%, of which around 1.9 million people are corneal blind with 20,000 new corneal blind patients added every year. A healthy cornea from a deceased person is a simple requirement to restore the vision of a corneal blind patient. The statistics provided by the Ministry of Health & Family Welfare, Government of India, show that the number of corneal donations has been stagnant around 40 thousand per year since 2007.¹ The figures bring out a simple fact that a huge number of corneas that could be used to restore the vision of a corneal blind person are being allowed to go waste.

A program to retrieve the corneas of deceased patients in a hospital, if implemented effectively and successfully, can provide a solution for this shortage and a freedom from darkness for millions. Cornea retrieval in India is opt in i.e. the

relatives of the deceased decide about eye donation and inform the hospital of this at the time of death of the patient. Therefore, an effective method to increase eye donation would be to counsel and convince the relatives at the time of the patient's death of the need for eye donation. The nurses are most in contact with the patients and their attendants during their stay in a hospital, often leading to the development of a unique relationship. Nurses could hence act as effective motivators in this cornea retrieval program. The aims of this study were two-fold: firstly to assess the propensity among nurses to counsel patients and their attendants for eye donation and secondly to find the important factors that affect this propensity. This knowledge should help hospital authorities in implementing programs and setting up systems in their institute which effectively utilize nurses to increase eye donation rates.

A self-administered, structured questionnaire was designed for the study to elicit the following information vis-à-vis the nurses:

- 1) the demographic profile;
- 2) the knowledge of the nurses regarding various legal, technical and other aspects of eye donation;
- 3) their willingness for eye donation; and
- 4) the frequency with which nurses counselled the patients/ attendants under their care for eye donation.

250 nurses of the total 1874 nurses working in the hospital, selected by simple random sampling, participated in the study conducted during the period from January 2012 to June 2012.

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[Mean Age – 36.3 years with a SD – 9.83 years. 83.2% of the nurses in the study group were females with 4.8% being postgraduates and the remaining graduates. Work experience of the nurses ranged from less than five years to more than 20]. Permission to conduct the study was given by the ethics committee and thesis committee of the hospital, and each respondent gave informed verbal consent before participating in the study.

A section of the questionnaire dealt with questions regarding medico legal and technical aspects of eye donation. Each correct answer was given a score of one and every incorrect reply a score of zero. The total knowledge score of each nurse was the sum of marks scored in this section which was considered as an indicator of the level of awareness in the nurses regarding eye donation. The nurses with a knowledge score in the range of mean score $\pm \frac{1}{2}$ standard deviation were classified as those with an average level of awareness. A score above or below this range was taken as a high or low level of awareness. Descriptive statistics in the form of means, proportions and percentages were used to express the results. Pearsons' Chi-square test was used to test the strength of association, if any, between various factors with the level of significance taken at $p < 0.01$. Regression analysis was used to find the most important predictor/s for the propensity of nurses to counsel the attendants of patients under their care for eye donation.

Awareness regarding eye donation

A majority of the nurses had a high level of awareness regarding various aspects of eye donation. Almost half of the nurses (49.6%) had quoted mass media as the source of awareness, 41.2% cited their course curriculum while only 6% of the nurses said that they had been given information about eye donation by counselors of the hospital. The level of awareness of the nurses regarding eye donation was not significantly influenced by qualification of the nurses [$p = 0.162$], their years of work experience [$p = 0.607$] or the grade at which the nurses worked [$p = 0.738$]. No significant difference was seen in the pledging of eyes for donation by nurses with different levels of awareness about eye donation [$p = 0.26$]. Significantly, the level of awareness regarding various aspects of eye donation did not have any influence on the propensity of the nurses to counsel patients/attendants for eye donation [$p = 0.562$].

Willingness of the nurses for eye donation

78.8% of the nurses were willing for eye donation and 34% had actually pledged their eyes. 21.2% of the nurses were unwilling to sign up for eye donation for the following reasons:

- 1) 52.8% felt that the process involved a lot of hassles;
- 2) 28.3% were unwilling for religious reasons;
- 3) 9.4% were unwilling due to fear of disfigurement in the next life.

The qualification of the nurses [$p = 0.44$], number of years of work experience [$p = 0.115$], sex [$p = 0.556$] or religion [$p = 0.347$] of the nurses did not affect their willingness to donate eyes.

Counselling of patients/attendants for eye donation

44.8% of nurses had ever counselled a patient's attendant on eye donation. The results showed that nurses of different age groups or with different qualifications or work experience did not show any significant difference in their propensity to counsel patients/attendants for eye donation. The nurses willing to donate their own eyes were the only group that counselled the attendants of the patients under their care for eye donation significantly more than other nurses [$p < 0.001$]. Adjusting for various dependent variables like qualifications, experience, etc of the nurses in a multiple logistic regression model, it was found that the willingness of the nurses for self eye donation and the pledging of their eyes were the only significant predictors for the nurses to attempt counselling of patients/attendants under their care for eye donation [$p = 0.016$] [Odds Ratio - 0.388. Confidence interval 0.180 – 0.837] (Table 1).

Conclusion

The study revealed a high level of awareness regarding various aspects of eye donation among the nurses, and the

Table 1 – Multiple logistic regression analysis for the Predictor/s of the propensity of nurses to counsel patients for eye donation.

Predictors	Category	P value	Odds ratio	95% CI
Sex	Male	0.453	1.364	0.606/3.071
	Female			
Nursing grade	Grade 1	0.643	1.217	0.530/2.796
	Grade 2			
Qualification	Diploma	0.983	1.015	0.263/3.914
	Graduate	0.909	1.085	0.268/4.399
	Postgrad			
Experience (in years)	<5	0.784	0.847	0.258/2.776
	5–10	0.403	0.623	0.206/1.887
	10–20	0.789	0.883	0.356/2.192
	>20			
Knowledge score	Low	0.998	0.999	0.519/1.923
	Average	0.659	1.175	0.575/2.401
	High			
Willingness	Yes	0.016	0.388	0.180/0.837
	No			
Pledging of eyes	Yes	0.016	0.388	0.180/0.837
	No			

A. The reference category is No. B. This parameter is set to zero because it is redundant.

^a In the study institution, the nurses work at different grades based on their experience. An entry level nurse works at grade 2. After a minimum of ten years of work experience and other qualifying criteria, a nurse is then promoted to grade 1.

majority had quoted mass media as a source of knowledge about eye donation which corresponds with similar other studies.^{2–4} This study showed that neither the willingness of the nurses to donate their eyes nor their propensity to counsel their patients/attendants for eye donation was significantly influenced by their level of awareness regarding eye donation, or by other factors like their work experience, education level, etc. which correlates with similar other studies.⁵ This study clearly showed that it was only nurses who were willing to donate their eyes or who had actually pledged their eyes counselled the attendants/patients under their care significantly more than other nurses. So the question that arises is whether the limited resource available for promoting eye donation should be spent on IEC measures or on hiring dedicated, qualified and trained social workers in major hospitals who in turn could go on to motivate and train the nurses to become effective promoters of eye donation. In concert with the findings of this study, the hospital has now developed a comprehensive module to promote eye donation which addresses relevant parameters like the availability of counselors round the clock in the hospital, involving nurses in a big way in the program, and increased coordination between nurses and counselors. This intervention and its results are the subject of further study by the authors.

Author statements

All the authors acknowledged have contributed significantly in the preparation of this manuscript. This is an original study done as a thesis study for a Master's program offered by PGIMER, Chandigarh, India.

Ethical approval

This study has been approved by the ethics committee and thesis approval committee of PGIMER, Chandigarh, India.

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Competing interest

None declared.

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