Studying the Relationship between Social Deprivation and Glaucoma-related Quality of Life (QOL)

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(1) Introduction

Glaucoma is a condition that carries a considerable global health burden. There are 67 million people suffering from glaucoma worldwide and approximately 10% of these glaucoma patients are blind.

As it is generally accepted that glaucoma is incurable, it is critical to maintain or improve the QOL of afflicted patients.

Social deprivation is known to be associated with poor vision. However, less is known about the relationship between social deprivation and its impact on glaucoma-related QOL.

It must be noted that QOL is an entirely different concept as a glaucoma patient with poor vision could still maintain a good vision-related QOL.

The purpose of this project was to identify a potential gap in the provision of care for socially deprived glaucoma patients and advance the European Glaucoma Society's aim of glaucoma treatment, which is to maintain QOL in affected patients at a sustainable cost.

(2) Methodology

The research study included the following:

- Systematic Literature Review to determine the best instruments to measure social deprivation and glaucoma-related QOL
- Patient Questionnaire Study (60 patients) to investigate the correlation between social deprivation and glaucoma-related QOL
- Statistical Analysis of the results from the Patient Questionnaire Study

It was decided that the best tool to assess social deprivation was the **Index of Multiple Deprivation (IMD)** and the best instrument to measure glaucoma-related QOL in this context was the **25-item National Eye Institute Visual Functioning Questionnaire (VFQ-25).**

Both instruments were then utilised to administer the Patient Questionnaire Study.

IBM SPSS Statistics was used to conduct data analysis on the collated results.

What is the VFQ-25?

- Comprises 25 questions and patients answer based on how they subjectively view their glaucoma condition to be interplaying with various aspects of their life
- The VFQ-25 Composite Score is the patient's glaucoma-related QOL score

What is the IMD?

- Based on 7 global domains that play a pivotal role in social deprivation, the data zones in England are stratified into 5 IMD Quintiles:
  - Quintile 1 being most deprived
  - Quintile 5 being least deprived
- Each patient's postal code was entered into the database to determine his or her IMD Quintile

(3) Results

60 patients, comprising 32 males and 28 females, undertook the Patient Questionnaire Study.

The mean age was 73 years and all patients were of Caucasian race.

General	IMD Quintile					
	1	2	3	4	5	Total
Average Age (years)	62	80	74	74	72	-
Number of Patients	6	9	11	21	13	60
Number of Males	4	4	5	12	7	32
Number of Females	2	5	6	9	6	28
VFQ-25 Composite Score	77.59	78.13	83.21	84.04	85.46	-

Table 1: Results of Pilot Questionnaire Study comparing IMD and VFQ-25 Composite Score

Therefore based on the study, those with lower IMD scores (more socially deprived) reported lower VFQ-25 scores (lower quality of life).

<u>After data analysis with IBM SPSS Statistics, the results were as follows:</u>

Pearson correlation coefficient r = 0.325 with p-value = 0.011

The significance threshold was set at 0.05 for the p-value.

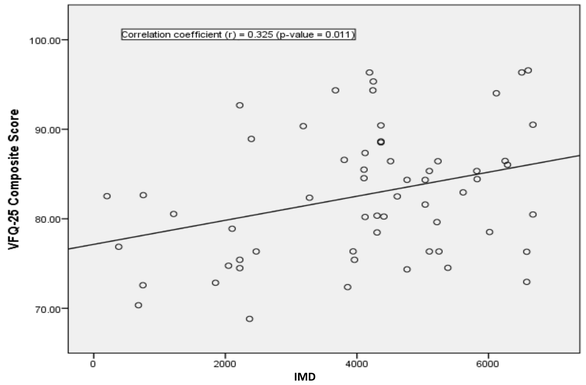


Figure 1: Graph demonstrating relationship between individual IMD and individual VFQ-25 Composite Scores

(4) Discussion

The results suggest there is a strong inverse relationship between social deprivation and glaucoma-related QOL.

This is extremely useful as it highlights that more can and should be done to help socially deprived glaucoma patients.

Potential initiatives to support them include:

- Improving transport strategies to facilitate patient accessibility to attend glaucoma appointments
- Arrange further counselling regarding compliance to medications (i.e. eye drops are a mainstay in glaucoma treatment) and red-flag symptoms and signs to look out for to prevent insidious loss of vision from glaucoma
- Create glaucoma support groups for patients living in areas of social deprivation to encourage ongoing engagement with the treatment and monitoring process

(5) Conclusion

It has been known that greater social deprivation leads to poorer vision and presentation of glaucoma in its later stages.

However, this study has now established that greater social deprivation leads to a lower glaucoma-related QOL, which encompasses the physical, psychological, emotional and social well-being of the patient.

More measures, must therefore be implemented to help improve the overall well-being of socially deprived glaucoma patients, and thereby maintain QOL.

(6) References

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