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Relationship between Social Deprivation and Dry Age-Related Macular Degeneration (AMD) Related Quality of Life

(1) Introduction

AMD is a condition that carries a considerable global health burden. There are 196 million people suffering from AMD worldwide and the condition accounts for 50% of blind registrations in the UK. As it is generally accepted that Dry AMD 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 Dry AMD-related QOL. It must be noted that QOL is an entirely different concept as a Dry AMD patient with poor vision could still maintain a good vision-related QOL.

The purpose of this project is to investigate the relationship between social deprivation and its impact on AMD-related QOL and advance the Macular Society's aim of Dry AMD management, which is to maintain QOL in affected patients.

Another purpose of the project was to investigate the impact of the Age-Related Eye Disease Study (AREDS/AREDS2) vitamins formula on the QOL of affected patients.

(2) Methodology

The research study included the following:

- Systematic Literature Review to determine the best instruments to measure social deprivation and Dry AMD-related QOL
- Patient Questionnaire Study (60 patients) to investigate the correlation between social deprivation and Dry AMD-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 **Scottish Index of Multiple Deprivation (SIMD)** and the best instrument to measure Dry AMD-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 Dry AMD condition to be interplaying with various aspects of their life
- The VFQ-25 Composite Score is the patient's Dry AMD-related QOL score

What is the SIMD?

- Based on 7 global domains that play a pivotal role in social deprivation, the data zones in Scotland are stratified into 5 SIMD 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 SIMD Quintile

(3) Results

120 Dry AMD patients, comprising 64 males and 56 females, undertook the Patient Questionnaire Study.

The mean age was 76 years and all patients were of Caucasian race.

General	SIMD Quintile					
	1	2	3	4	5	Total
Average Age (years)	72	86	74	78	76	-
Number of Patients	12	18	22	42	26	120
Number of Males	8	8	10	24	14	64
Number of Females	4	10	12	18	12	56
VFQ-25 Composite Score	77.59	78.13	83.21	84.04	85.46	-

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

Therefore based on the study, those with lower SIMD 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 = 0.385 with p-value = 0.012

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

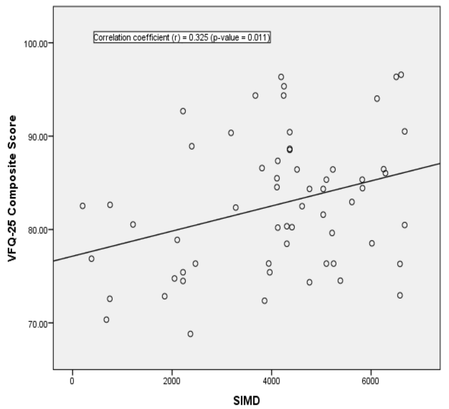


Figure 1: Graph demonstrating relationship between individual SIMD and individual VFQ-25 Composite Scores

(4) Discussion

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

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

Potential initiatives to support them include:

- Improving transport strategies to facilitate patient accessibility to attend AMD appointments
- Arrange further counselling regarding monitoring (Amsler, OCT) and red-flag symptoms and signs to look out for to prevent loss of vision from Dry AMD
- Create Dry AMD support groups for patients living in areas of social deprivation to encourage ongoing engagement with vision aids and monitoring process

(5) Conclusion

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

However, this study has now established that greater social deprivation leads to a lower Dry AMD-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 Dry AMD patients, and thereby maintain QOL.

(6) References

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