PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)  An observational study investigating Patient-reported Outcome and Experience Measures (POEM) of a community-based glaucoma clinic in Cambridge, UK

AUTHORS  Charlesworth, Emily; Jolly, Jasleen; Farrell, Sarah; Bourne, Rupert; Pardhan, Shahina

VERSION 1 – REVIEW

REVIEWER  Stagg, Brian
University of Utah Health

REVIEW RETURNED  27-Sep-2023

GENERAL COMMENTS  This is a very good paper about an important topic—patient experience in a community-based glaucoma clinic. I have just a few questions:

1) It would be interesting to know how the POEM results from this community-based glaucoma clinic compare to the previously used hospital systems. I may have missed this, but do you have any information about how this would compare? I understand that the goal of this study was not to compare community-based to hospital-based, but some discussion might be helpful.

2) Methods, pg 6, line 8: I may have missed this, but can you please list the number that were excluded for each of the criteria?

3) Methods, pg 6, line 29: I may have missed this, but can you please explain how the survey was administered? Could glaucoma severity have impacted their ability to respond to the questions and record their responses?

4) Methods, pg 8: Do you think your survey tool requires any further validation in this population? Why or why not?

5) Results, pg 9: Is it possible to include some indication of glaucoma severity in Table 1?

REVIEWER  Liu, Qian
Henan Provincial People’s Hospital

REVIEW RETURNED  19-Oct-2023

GENERAL COMMENTS  The authors conducted a study to ascertain patient’s experiences around various aspects of their care delivered in community clinics. Patients completed a modified glaucoma POEM regarding their clinic experience and perspective on their diagnosis, treatment, and fear of blindness, and were used to find their corresponding Lower-
Layer Super Output Areas and socioeconomic status. They found a large majority of patients expressed a positive experience, felt safe under the care of their clinical team. Relatively younger patients (<60 years), and those with no confirmed diagnosis would likely benefit from more consultation time and educational materials to improve their understanding of glaucoma. The manuscript is with merit but the authors should address the comments below before publication can be considered.

1. Methods
Ninety-six consecutive patients were recruited attending a community-based glaucoma clinic at the Vision and Eye Research Institute in Cambridge from July to September 2022. The gender, age, BCVA, diagnosis, hospital care duration and so on were analyzed. Some concerns about the clinical and history collection should be explained and be considered.

a. In present study, unilateral or bilateral eyes were not mentioned. However, binocular disease might lead to higher fear of blindness.

b. The patient’s surgical history might impact the depth of disease cognition and evoke more concerns regarding blindness.

c. Dose a family history contributed to heightened the anxiety and fear in blindness.

d. The patients’ systemic disease should be assessed to exclude any underlying systemic diseases that could potentially impact the results.

e. Do the patients have any other ocular disease? If so, do they have an impact on the findings of present study, and if yes, in what manner?

f. Previous history of glaucoma treatment, including any medications or laser interventions? Are individuals equipped with anti-glaucoma medications or lasers more cognizant of this disease?

g. If the patients had a medication history, whether the types and number of medications will influence their concern regarding potential vision loss?

h. The demographic distribution across different age groups. The difference in numbers in different age groups, might lead to outcome bias.

2. Clinical Examination
a. What are the conditions of visual field impairment, and can it be quantified?

3. Statistical analysis
a. Have you conducted a multiple linear regression analysis, if so, what were the findings?

4. Results and Discussion
a. If recommendations 1-3 (method, clinical examination and statistical analysis) are approved, the results and discussion sections should be revised accordingly.

**VERSION 1 – AUTHOR RESPONSE**

Reviewer: 1
Dr. Brian Stagg, University of Utah Health
Comments to the Author:
This is a very good paper about an important topic—patient experience in a community-based glaucoma clinic.
I have just a few questions:

1) It would be interesting to know how the POEM results from this community-based glaucoma clinic compare to the previously used hospital systems. I may have missed this, but do you have any information about how this would compare? I understand that the goal of this study was not to compare community-based to hospital-based, but some discussion might be helpful.

The POEM has been used in Australian private practices (Fraenkel et al 2019) and a tertiary centre glaucoma clinic in the UK during the Covid-19 pandemic (Pujari et al 2021). These two studies findings may not be comparable to our patient’s previous typical hospital glaucoma clinic experience. Fraenkel et al, found younger patients were more worried about losing vision, and felt glaucoma interfered more with their daily lives. Female patients were found to more strongly agree that they understood their glaucoma diagnosis and management. Pujari et al, included an additional column to the POEM questionnaire to assess if each POEM item was more of a concern during the COVID-19 pandemic. They found patients had a poorer understanding of how their glaucoma was managed, felt less safe under the care of the glaucoma team, and felt their glaucoma care was well organised.

References:


There are studies comparing the accuracy and quality of care in community-based clinics in comparison to hospital-based clinics, but these do not take into account the experience of the patient. A study by Roberts et al (2015) retrospectively compared patient satisfaction attending a specialist optometrist community-based glaucoma clinic and a doctor-led hospital clinic using a patient survey. The results were comparable for the information given to patients (77% community-based, 69% HES, rated good/excellent), answering questions (95% community-based, 83% HES, rated good/excellent) and the clinician overall (75% community-based, 73% HES, rated good/excellent).

Reference:

This has been further expanded in the introduction.

“Several studies have investigated the quality of care received in community-based glaucoma clinics in comparison to hospital-based clinics. It has been shown community optometrists perform as reliably as Hospital Eye Service glaucoma review when using specified measurement techniques [13], and specialist optometrists in glaucoma demonstrate acceptable levels of accuracy with a glaucoma consultant [14]. As well as clinical accuracy, patients’ acceptability of community-based clinics are important. One previous study found satisfaction rates between patients attending a specialist optometrist community-based glaucoma clinic and a doctor-led hospital clinic were comparable for the information given to patients (77% community-based, 69% HES, rated good/excellent), answering questions (95% community-based, 83% HES, rated good/excellent) and the clinician overall (75% community-based, 73% HES, rated good/excellent) [14].”
“Within Australian private practice the POEM questionnaire found younger patients were more worried about losing their vision, and felt glaucoma interfered more with their daily lives. Female patients were found to more strongly agree that they understood their glaucoma diagnosis and management than male patients [16].”

2) Methods, pg 6, line 8: I may have missed this, but can you please list the number that were excluded for each of the criteria?
This has been further explained.

“There were seven patients who did not participate as they were outside the inclusion criteria (Alzheimer’s/dementia (n=4), arthritis (n=1), stroke (n=1), anxiety (n=1). Five did not take part due to time limitations. Four participants did not wish to take part with no further explanation.”

Lines 166 – 168.

3) Methods, pg 6, line 29: I may have missed this, but can you please explain how the survey was administered? Could glaucoma severity have impacted their ability to respond to the questions and record their responses?
Patients were given a choice of completing the survey independently, or for the researcher to complete the survey with them if they wished. The severity of the glaucoma should not have impacted the ability to respond to questions or record responses.
This has now been included.

“Patients had the option of completing the survey independently, or to complete the survey with the researcher. This was to eliminate the potential of glaucoma severity impacting the ability to respond to questions and record responses.”

Lines 163 – 165.

4) Methods, pg 8: Do you think your survey tool requires any further validation in this population? Why or why not?
The POEM questionnaire was developed at the “National Glaucoma Think Tank” event in the United Kingdom in 2012 (Somner et al. 2012). The questionnaire has since been modified and validated for use in Glaucoma in 2019 (Fraenkel et al. 2019). The questionnaire has since been used in 2021 to investigate 126 glaucoma patients experiences and self-perceived outcomes of care during the Covid-19 pandemic (Pujari et al. 2022). The questionnaire is now well established, and therefore does not require any further validation in this population.

References:
5) Results, pg 9: Is it possible to include some indication of glaucoma severity in Table 1?

The aim of the study was to gather insights into community-based eye clinics and patients' experiences of using these clinics. Gathering clinical data from patients was not one of the aims of this study. We have included visual acuity data for patients but did not collect any other clinical data regarding the severity of glaucoma. This could be included in a future large-scale study. The aim of this study was the patients' experiences of using a community-based glaucoma clinic and the potential advantages and disadvantages of these to the patient, rather than assessing the clinical data of these patients. The majority of these patients who are referred to the community clinics are deemed to have stable glaucoma. Patients with severe or unstable disease, comorbidities, or other problems are seen within the Hospital Eye Service.

The aims of the study and why clinical data was not gathered have been expanded on in the discussion. Gathering the clinical data of patients within glaucoma community-based clinics has been discussed as part of future studies.

"Patients within community-based clinics are deemed to have stable glaucoma. Patients with severe eye diseases, comorbidities, unstable disease, or developing any complications are seen within the Hospital Eye Service. The study gives an insight into community-based clinics and patients' experiences, which may help in the development of commissioning community-based clinics in the future. Future studies should be developed to gather clinical data and severity of disease on patients to further investigate the impact on anxiety and fear of blindness."

Lines 408 – 413.

Reviewer: 2

Dr. Qian Liu, Henan Provincial People's Hospital

Comments to the Author:

The authors conducted a study to ascertain patient's experiences around various aspects of their care delivered in community clinics. Patients completed a modified glaucoma POEM regarding their clinic experience and perspective on their diagnosis, treatment, and fear of blindness, and were used to find their corresponding Lower-Layer Super Output Areas and socioeconomic status. They found a large majority of patients expressed a positive experience, felt safe under the care of their clinical team. Relatively younger patients (<60 years), and those with no confirmed diagnosis would likely benefit from more consultation time and educational materials to improve their understanding of glaucoma.

The manuscript is with merit but the authors should address the comments below before publication can be considered.

1. Methods

Ninety-six consecutive patients were recruited attending a community-based glaucoma clinic at the Vision and Eye Research Institute in Cambridge from July to September 2022. The gender, age, BCVA, diagnosis, hospital care duration and so on were analyzed. Some concerns about the clinical and history collection should be explained and be considered.

a. In present study, unilateral or bilateral eyes were not mentioned. However, binocular disease might lead to higher fear of blindness.

b. The patient's surgical history might impact the depth of disease cognition and evoke more concerns regarding blindness.

c. Does a family history contributed to heightened the anxiety and fear in blindness.

d. The patients' systemic disease should be assessed to exclude any underlying systemic diseases that could potentially impact the results.

e. Do the patients have any other ocular disease? If so, do they have an impact on the findings of present study, and if yes, in what manner?
f. Previous history of glaucoma treatment, including any medications or laser interventions? Are individuals equipped with anti-glaucoma medications or lasers more cognizant of this disease?
g. If the patients had a medication history, whether the types and number of medications will influence their concern regarding potential vision loss?

In response to 1a to 1g the aim of the study was to gather insights into community eye clinics and patients experiences of using these clinics. We collected monocular visual acuity which are included in the results.

Gathering other clinical data for patients was not an aim of the study. The study intended to highlight the advantages/disadvantages of receiving glaucoma care in a community setting and when this may not be appropriate to do so. This research may help the NHS and other healthcare providers when deciding what services to commission.

The patients who attend our community eye clinic were deemed to have stable glaucoma. Any patients with more severe eye diseases, comorbidities, unstable disease, or develop any problems are seen within the Hospital Eye Service. While beyond the scope of this study, gathering other clinical data of patients would be useful and something we wish to investigate further in future studies in collaboration with the hospital, however this was not the aim of the aim of the present study.

The discussion of the study has been expanded to clarify that the aims of the study were to investigate patients experiences of a community-based glaucoma clinic. Gathering further clinical data from patients has been included as future research.

“Patients within community-based clinics are deemed to have stable glaucoma. Patients with severe eye diseases, comorbidities, unstable disease, or developing any complications are seen within the Hospital Eye Service. The study gives an insight into community-based clinics and patients experiences, which may help in the development of commissioning community-based clinics in the future. Future studies should be developed to gather clinical data and severity of disease on patients to further investigate the impact on anxiety and fear of blindness.”

Lines 408 – 413.

h. The demographic distribution across different age groups. The difference in numbers in different age groups, might lead to outcome bias.

The N for each subgroup has now been included in the description of all figures.

2. Clinical Examination
a. What are the conditions of visual field impairment, and can it be quantified?

As mentioned previously we did not collect visual field data as this was about ascertaining the experience of people attending the community clinic in general.

3. Statistical analysis
a. Have you conducted a multiple linear regression analysis, if so, what were the findings?

We did not conduct a multiple linear regression after discussion with our statistician. Our statistician recommended multiple linear regression analysis was not the most appropriate statistic for this data set. Presenting our results using ANOVAs allowed us to subgroup the variables age, years under the Hospital Eye Service and duration of disease into categorical variables which allowed for easier clinical interpretation of the results.
4. Results and Discussion
a. If recommendations 1-3 (method, clinical examination and statistical analysis) are approved, the results and discussion sections should be revised accordingly.

The discussion now clarifies the objectives of the study as investigating patients experiences of a community-based glaucoma clinic and explains that patients attending these clinics have stable disease with no comorbidities or complications. The discussion now includes the development of future studies to gather patients’ clinical data to investigate whether the severity of disease impacts the outcomes and experiences of using a community-based glaucoma clinic.

“Patients within community-based clinics are deemed to have stable glaucoma. Patients with severe eye diseases, comorbidities, unstable disease, or developing any complications are seen within the Hospital Eye Service. The study gives an insight into community-based clinics and patients experiences, which may help in the development of commissioning community-based clinics in the future. Future studies could be developed to gather clinical data and severity of disease on patients to further investigate the impact on anxiety and fear of blindness.”

Lines 408 – 413.

**VERSION 2 – REVIEW**

| REVIEWER               | Stagg, Brian  
|                       | University of Utah Health |
| REVIEW RETURNED       | 12-Dec-2023 |
| GENERAL COMMENTS      | This is an excellent paper, the authors responded to my concerns. |

| REVIEWER               | Liu, Qian  
|                       | Henan Provincial People’s Hospital |
| REVIEW RETURNED       | 03-Dec-2023 |
| GENERAL COMMENTS      | The purpose of the research needs to be clearer and more prominent. |