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Publication trends in the African Vision and Eye Health journal over two decades 2005–2024

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Background: Understanding the publication trends in the *African Vision and Eye Health* (AVEH) journal can help to better understand optometry research in South Africa and the continent.

Aim: To explore and describe the trends of publication in the AVEH journal over a period of two decades (2005–2024).

Setting: Bibliometric analysis of journal archives available from the AVEH journal website.

Methods: An electronic search for publication data on the journal website was conducted for the period 2005 to 2024, captured using Google Forms and Microsoft Excel and analysed with SPSS (v30) using descriptive and inferential statistics.

Results: A steady increase in growth rate of publications, particularly research articles, during the 3 years post the coronavirus disease 2019 (COVID-19) pandemic was noted. The total number of citations per year showed a slight decline. Two-thirds of the publications (64.6%) were research-related, with 82% employing a quantitative design. A university setting and a public health focus were most common. The majority of publications (69.2%) were multi-authored, with single-authored papers more likely to be submitted by males (χ^2 = 75.3, P < 0.001). Although collaborations between South African and international authors were noted in less than 10% of publications, an increase in the degree of collaboration over the study period was noted.

Conclusion: The AVEH journal has demonstrated a steady increase in the growth rate of publications and collaboration over the two decades.

Contribution: These findings contribute to the growing field of bibliometric studies in optometry and ophthalmology, particularly in Africa, which is now attracting increasing attention.

Keywords: *African Vision and Eye Health* journal; publications; optometry research; optometry; bibliometrics.

Introduction

The *African Vision and Eye Health* (AVEH) journal, formerly called 'The South African Optometrist', is the only optometry journal accredited by the Department of Higher Education and Training in South Africa. This journal publishes double-blind peer-reviewed articles relating to optometry, ophthalmology and vision science via AOSIS publishers. As per the Scopus database, based on publications between the years 2021 and 2024, the journal has a cite score of 1.0, with 140 citations in this period and 37% of papers being cited (https://www.scopus.com/sources.uri). This positions the AVEH journal as an important forum in which local and regional optometric personnel (optometrists, ophthalmologists, dispensing opticians and vision scientists) communicate scientific knowledge relating to optometry clinical practice, education and training, as well as innovation. Thus, publications in AVEH journal have the potential to impact clinical practice and decision-making, education and training, service delivery and advocacy efforts within the optometry profession.

In recent years, there has been an increasing impetus to publish scientific papers globally, and the AVEH journal has a sustained record of publication for just under a century.[1] Currently, there is limited information on the publication trends in this journal. Considering its history, focus and scope together with its position within the optometric landscape, it is necessary to address this knowledge gap. This can be achieved by bibliometric studies that report on the analysis of literature in journals to provide useful insights, particularly related to the progress and trends in the research and scientific arenas. Furthermore, bibliometric studies can identify the most populous journals, institutions and/or countries, authors, ocular conditions and topics of interest.

They can also map the type of studies in terms of methodologies, data analysis and topics of interest that are more likely to be published in particular journals, with such information being informative to both novice and established researchers. The analysis of bibliometric studies also has the potential to provide useful information to the journal editors and/or editorial boards, as they can compare their journal profiles with other journals as they strategise to increase their impact factor. The profiling of authorship during bibliometric studies, including exploration of collaborative efforts, can be used to expand the reach and scope of a journal.[2]

In the field of vision and eye health, few studies have reported on the publication trends in international optometry[3,4,5,6,7] and ophthalmology[2,3,8] journals. Also, some studies have reported on optometric researchers within certain countries[3,6,9] and optometry topics of interest.[4] In general, bibliometric studies have noted an increase in publication rates in many disciplines, including optometry,[6] optics,[7] ophthalmology,[8] medicine[10] and higher education[11] over the years. An increasing trend in the number of citations, as well as collaborative research in the field of optics, was noted by Kappi et al.[7] who further highlighted the role of the publishing house in fostering the quality of a journal.

Bibliometric analysis has also produced other valuable insights related to research methodology designs and the influence of funding on research publications.[10] Such insights enable the identification of methodological or analytical approaches that have been underutilised in the current body of optometric research. More recently, Cardona et al.[5] expanded their bibliometric analysis to include exploration related to gender and highlighted that awareness of gender bias in the field of scientific publishing is an important step to address this anomaly to ensure research initiatives are given a platform irrespective of gender.

Only one bibliometric study by Ekpenyong et al.,[12] which reported on the *Journal of the Nigerian Optometric Association*, was found for journals in the field of optometry and ophthalmology in Africa. Given the longstanding history of the AVEH journal and its position within the optometric field, mapping the publication trends in this journal can help to better understand vision and eye health research in South Africa and the African continent. Furthermore, the information obtained from this bibliometric analysis could be used by the journal in future strategic planning.

Methods

Study design

This study utilised a retrospective, quantitative and descriptive research design.

Data collection procedure

An electronic search of the AVEH journal website (https://avehjournal.org/index.php/aveh) for the period 2005 to 2024 was conducted manually. Data were extracted from all publications for the two decades and included year of publication, type of publication, study design, authorship details in terms of gender and affiliation, publication time and keywords. The dates of submission and publication for each paper were also extracted, as this allowed for the determination of the publication time (defined as time from submission to publication) in months. The number of citations of each publication was determined using Google Scholar, with the final check conducted on 25 November 2025. Two researchers independently searched the journal website and captured article characteristics using a Google Form following a discussion to standardise the data collection procedure. A third researcher performed a quality check on 10% of the entries. Any discrepancies were resolved via discussion amongst the three researchers by referring to the specific publication prior to data analysis. The focus area for the original research and review articles was determined via discussion by reviewing the title and keywords (if needed) for the relevant publications. Data for all publications in the period 2015 to 2024 were also extracted from the Scopus database to explore international collaborations as reflected in multi-authored publications. Gender of the authors, first and last, was determined using a Google search. An online tool (http://genderize.io) was utilised for any uncertainty in gender using the author's first name with a probability percentage of ≥ 80%. Publications were categorised as being either research-related or non-research publications. Research-related publications included original research articles and research notes. Non-research publications included review articles, editorials, case reports, conference papers, corrections, notices, commentaries, synopsis of a thesis, call for papers, reports, conference notices, obituaries, photo atlas, preliminary reports and tributes.

Data analysis

Data were exported to Microsoft Excel for checking and cleaning before being analysed using both Microsoft Excel and SPSS (v30) with descriptive statistics (mean, standard deviation, frequencies, median, interquartile range [IQR], range, etc.) and the Chi-square test for association. The growth rate for publications was calculated using a formula as utilised by Boudry et al.[13] (Equation 1):

$$\begin{pmatrix} \textit{annual growth} \\ \textit{rate} \end{pmatrix} = \frac{\begin{matrix}\text{current year total number of articles} - \\ \text{previous year total number of articles}\end{matrix}}{\text{previous year total number of articles}} \quad \text{[Eqn 1]}$$

A *P*-value of less than 0.05 was regarded as statistically significant. The VOS viewer software was used to analyse international collaborations in multi-authored publications and focus areas, with these results shown graphically.

Permissions

As this study only involved document analysis of journal publications, the study protocol received exemption from ethics review by the School of Health Sciences Research Ethics Committee of the University of KwaZulu-Natal (Ref: 00029798).

Ethical considerations

Ethical clearance to conduct this study was obtained from the University of KwaZulu-Natal Research Ethics Committee (No.00029798).

Results

Growth rate for publication and citation

Table 1 shows the characteristics of the publications in the AVEH journal for the two decades (2005 to 2024), including the two coronavirus disease 2019 (COVID-19) pandemic years shown in blue shading. A total of 582 publications were noted, comprising one-third non-research and two-thirds research publications (Table 1). There was a substantial increase in publications in the three years following the COVID-19 pandemic (2022 to 2024, *n* = 121) than the three years prior (2017 to 2019, *n* = 76) and during (2020 to 2021, *n* = 73) the COVID-19 pandemic. Whilst there was an increase in the number of research articles (*n* = 376; 65%) over the study period, the number of non-research articles (*n* = 206; 35%) appeared to have a slight decline. The median number of pages for the publications over this period was 7 (IQR: 5 to 8, range: 1 to 22) and appeared to be consistent over the two decades (Table 1). The median number of references for publications over this period was 27 (IQR: 16 to 39, range: 0 to 139), with a steady increase noted over the study period.

The growth rate of publications in the AVEH journal between 2005 and 2024 is illustrated in Figure 1. There was a steady increase in the number of articles over the two decades (Figure 1). The total number of citations per year over the study period showed a slight decline (Figure 1), whilst the median publication time showed a steady increase (Figure 1).

Figure 2 shows the classification of the publications for the period 2005 to 2024. Approximately two-thirds of the publications were research-related (*n* = 376), comprising original research articles (*n* = 337) and research notes (*n* = 39). Review articles (*n* = 108) accounted for almost half of the non-research publications (Figure 2). This was followed by editorials and case reports. The 'other' category included conference paper (*n* = 5), correction (*n* =5), notice (*n* = 3), commentary (*n* = 3), synopsis of a thesis (*n* = 2), call for papers (*n* = 2), report (*n* = 2), conference notice (*n* = 1), obituary (*n* = 1), photo atlas (*n* = 1), preliminary report (*n* = 1) and tribute (*n* = 1).

For those articles in which a study setting was applicable, the university setting was most common (*n* = 130) followed by public facility (*n* = 109), community (*n* = 40), schools (*n* = 39) and private practice (*n* = 15). The majority of research articles used quantitative designs (*n* = 309, 82%), with less than 5% using a qualitative (*n* = 17) and mixed methods (*n* = 14) design.

Authorship

The total number of individual authors for the time period 2005 to 2024 was 751. In terms of authorship, approximately one-third of the publications were single-authored, whilst the remaining were multi-authored (Table 2). Single-authored publications were more common in the first (2005 to 2014) than the second (2015 to 2024) decade. For the multi-authored publications, the number of authors ranged from two to ten. Males accounted for the majority (88.1%) of the single-authored publications, whilst the author gender of two publications was unknown and could not be determined. There was an almost equal

TABLE 1: Characteristics of publications in the *African Vision and Eye Health* journal for the period 2005 to 2024.

Year	Number of articles	Type of article				Number of citations	Median no. of pages	IQR	Median no. of references	IQR
		Non-research		Research						
		n	%	*n*	%					
2005	25	13	52	12	48	180	6.0	4.8	16.5	28.8
2006	18	9	50	9	50	83	6.0	4.0	14.0	20.5
2007	29	20	69	9	31	145	6.0	6.0	16.0	28.0
2008	21	11	52	10	48	200	6.0	5.5	20.0	35.5
2009	29	8	28	21	72	171	7.0	5.5	20.0	19.5
2010	27	13	48	14	52	428	7.0	3.0	25.0	26.0
2011	29	12	41	17	59	376	7.0	2.5	24.0	24.5
2012	27	13	48	14	52	194	7.0	4.0	22.0	29.0
2013	27	11	41	16	59	232	7.0	4.0	25.0	23.0
2014	7	1	14	6	86	53	6.0	3.0	18.0	25.0
2015	36	15	42	21	58	420	5.5	1.8	27.5	19.0
2016	37	9	24	28	76	411	6.0	3.0	25.0	19.0
2017	17	3	18	14	82	169	6.0	2.0	34.0	19.0
2018	28	10	36	18	64	433	7.5	4.8	33.5	30.0
2019	31	8	26	23	74	204	7.0	3.0	25.0	19.0
2020	37	14	38	23	62	284	7.0	2.0	32.0	25.5
2021	36	10	28	26	72	240	7.0	3.0	33.0	18.5
2022	45	15	33	30	67	144	6.0	2.5	27.0	23.0
2023	29	4	14	25	86	87	7.0	3.0	32.0	27.0
2024	47	7	15	40	85	38	7.0	3.0	30.0	26.0
Total	**582**	**206**	**-**	**376**	**-**	**4492**	**7.0**	**3.0**	**27.0**	**23.0**

IQR, interquartile range; no., number.

distribution of males and females in the multi-authored publications (47.9% males and 49.1% females), whilst the gender of 14 authors was unknown.

Table 3 further details the demographics of the first (n = 582) and last (n = 403) authors, including nationality, gender and professional classification. The majority of first and last authors were African, males and optometrists (Table 3). Authors placed in the category 'other' included non-optometry academics, non-optometry postgraduate students, neurologists, dispensing opticians, medical doctors and statisticians. When all 582 publications were considered, only 36.8% involved females as the first author compared with male first authors (60.8%). A significant association was found between gender and single-authored papers, with males more likely to submit single-authored articles than females (156 vs 21) ($\chi^2 = 75.3$, $P < 0.001$).

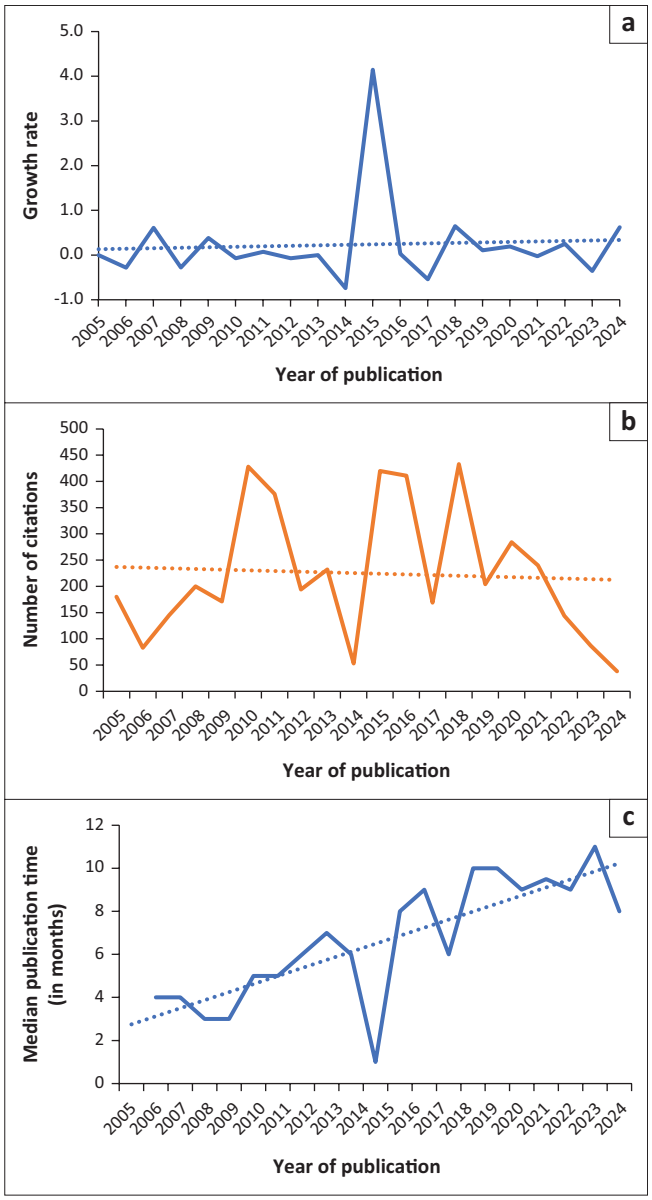

FIGURE 1: Publication growth rate in the (a) number of publications, (b) number of citations and (c) median publication time in months, per article in the *African Vision and Eye Health* journal between the years 2005 and 2024, including linear trend lines.

Figure 3 shows the gender combination of first and last author when the gender was known in multi-authored publications (n = 383). The male–male (n = 122) combination was more common than the female–female (n = 72) combination. There was a higher frequency of female–male (n = 121) combinations than male–female (n = 68). Overall, the analysis of first and last author combinations according to gender revealed parity (Figure 3).

Collaboration

The majority of publications included at least one South African author (n = 493). Based on the affiliation of

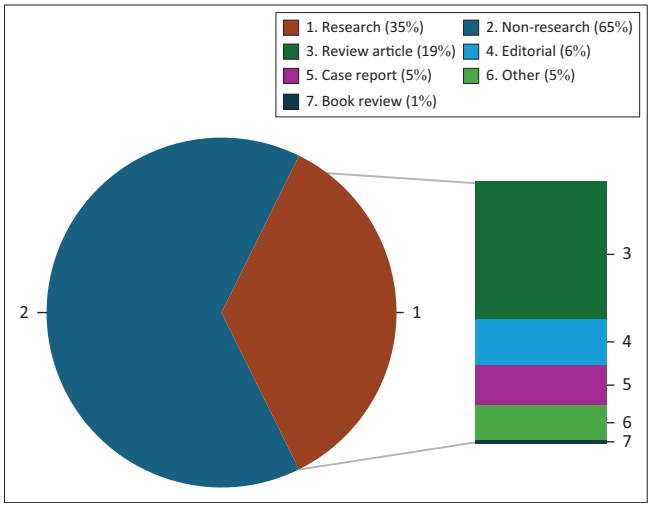

FIGURE 2: Types of publications in the *African Vision and Eye Health* journal for the period 2005 to 2024.

TABLE 2: Frequency of the number of authors per article.

Number of authors per article	Frequency	%
1	179	30.8
2	167	28.7
3	115	19.8
4	42	7.2
5	28	4.8
6	14	2.4
7	20	3.4
8	11	1.9
9	4	0.7
10	2	0.3
Total	**582**	**100**

TABLE 3: Demographics of authors.

Demographic	First author (n = 582)		Last author (n = 403)	
	n	%	n	%
Nationality				
African	532	91.4	354	60.8
Non-African	50	8.6	49	8.4
Gender				
Male	354	60.8	250	43
Female	214	36.8	141	24.2
Unknown	14	2.4	12	2.1
Classification				
Optometrist	469	80.6	283	48.6
Ophthalmologist	67	11.5	55	9.5
Other	46	7.9	65	11.2

the first author, the most common publishing institution location was South Africa (n = 470), followed by Nigeria (n = 27), Saudi Arabia (n = 17), Ghana (n = 8), Egypt (n = 7) and Zimbabwe (n = 6). Collaborations between South African authors and international authors were present in less than 10% of publications (n = 47). Figure 4 shows the country collaboration network for the period 2015 to 2024. In Figure 4, the larger the circle or the thicker the lines connecting two circles, the higher the number of collaborations between the two countries represented by the circles. In terms of international collaborations, South Africa had the highest number of collaborations, particularly with Australia and Ghana. Other countries that also had collaborative relationships included Saudi Arabia, Australia, United States (US) and Nigeria (Figure 4).

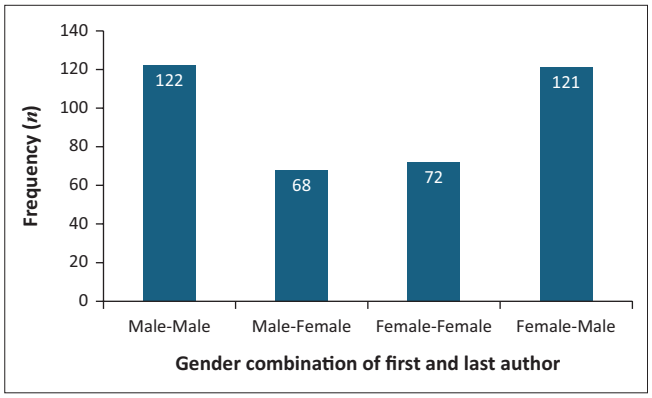

FIGURE 3: Gender combinations of multi-authored publications appearing in the *African Vision and Eye Health* journal for the period 2005 to 2024.

Table 4 details the degree of collaboration (DC) in the AVEH journal for the study period. This DC was calculated using the formula defined by Subramanyam[14] and utilised by Kappi et al.[7] which is as follows (Equation 2):

$$DC = \frac{Nm}{Nm + Ns} \quad \text{[Eqn 2]}$$

where Nm is the number of multi-authored papers; Ns is the number of solo-authored papers. The DC in the AVEH journal is 0.69 (Table 4). The highest DC was found in the year 2024 (0.96) and the lowest in 2006 (0.17). Of note was that the second decade (2015 to 2024) had more papers than the first decade (2005 to 2014), a greater number of multi-authored papers and a higher DC (Table 4).

Research focus areas

Figure 5 shows the frequency of the focus areas of the publications in the study period. The categories for the focus areas emerged inductively from the data. The most common focus area was public health (21%), followed by ocular pathology (13.7%), instrumentation (9.2%) and ocular anatomy (8.9%). The least common focus areas were environmental optometry (EO, 1%), neuro-anatomy (NA, 0.6%), dry eye (DE, 0.4%), practice management (PM, 0.4%) and ocular device (OD, 0.2%).

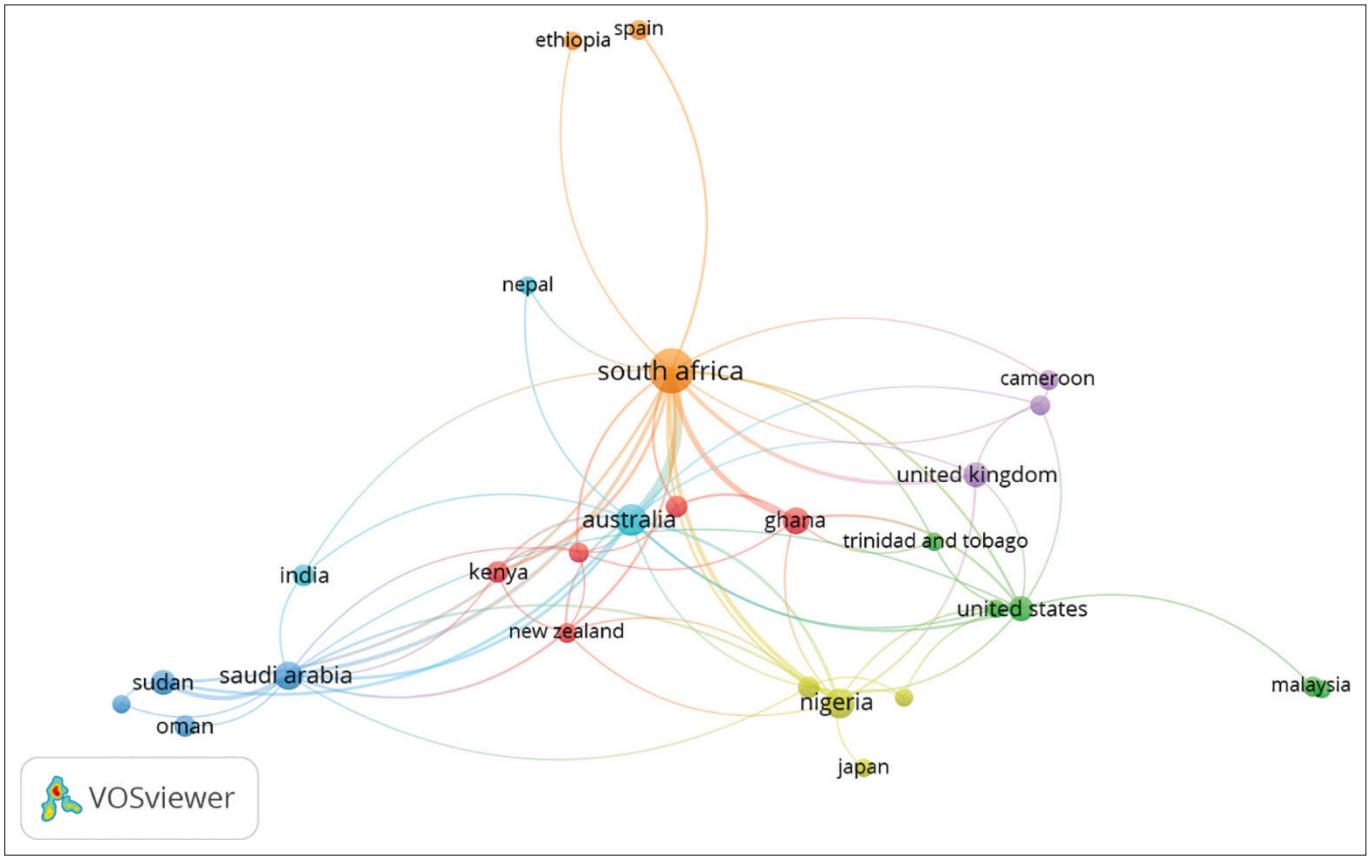

FIGURE 4: Country collaboration network for publications appearing in the *African Vision and Eye Health* journal for the period 2015 to 2024.

TABLE 4: Collaborative publication trend in the journal *African Vision and Eye Health*.

Year	Single-author		Multi-author		Total papers	DC
	n	%	*n*	%		
2005	17	68	8	32	25	0.32
2006	15	83	3	17	18	0.17
2007	13	45	16	55	29	0.55
2008	14	67	7	33	21	0.33
2009	13	45	16	55	29	0.55
2010	14	52	13	48	27	0.48
2011	10	35	19	65	29	0.66
2012	13	48	14	52	27	0.52
2013	14	52	13	48	27	0.48
2014	2	29	5	71	7	0.71
2015	11	31	25	69	36	0.69
2016	4	11	33	89	37	0.89
2017	4	24	13	76	17	0.76
2018	3	11	25	89	28	0.89
2019	6	19	25	81	31	0.81
2020	6	16	31	84	37	0.84
2021	4	11	32	89	36	0.89
2022	9	20	36	80	45	0.80
2023	5	17	24	83	29	0.83
2024	2	4	45	96	47	0.96
Total	**179**	**-**	**403**	**-**	**582**	**0.69**

DC, degree of collaboration.

TABLE 5: Frequency of the total number of citations in each focus area for the study period.

Research focus areas	Total number of citations (2005 to 2024)	Frequency (%)
Binocular vision	157	3.5
Contact lenses	23	0.5
Dry eye	14	0.3
Education	155	3.5
Environmental optometry	28	0.6
Epidemiology	570	12.7
Instrumentation	265	5.9
Low vision	190	4.2
Neuro-anatomy	19	0.4
Ocular anatomy	466	10.4
Ocular devices	0	0.0
Ocular pathology	425	9.5
Optics	151	3.4
Practice management	6	0.1
Public health	1208	26.9
Refractive error	379	8.4
Refractive surgery	7	0.2
Sports vision	91	2.0
Therapeutics	83	1.9
Visual science	218	4.9
Other†	37	0.8

†, Editorials, book reviews, commentary letters, tributes, conference papers, obituaries, photo atlas, thesis synopsis.

Table 5 details the total number of citations in each research focus area for the study period. The highest number of citations was in the focus areas of public health (*n* = 1208, 26.9%), epidemiology (*n* = 570, 12.7%) and ocular anatomy (*n* = 466, 10.4%). The least number of citations were noted for practice management (*n* = 6, 0,13%) and ocular devices (*n* = 0).

Discussion

Journal characteristics (growth, design, type of article)

Bibliometric studies, seen as essential tools for assessing scientific publications, are gaining importance in the fields of optometry and ophthalmology.[15] This study thus reports on the publication trends in the AVEH journal over two decades (2005 to 2024). An interval of 10 years has been considered an adequate amount of time to conduct a bibliometric analysis of a journal to make inferences about trends.[5] The AVEH journal, which is one of the few regional ophthalmic journals in Africa, was recently identified as the second most active source journal for African ophthalmic research;[16] however, there is limited information related to its publications. Therefore, a bibliometric analysis of the AVEH journal can provide useful insights for authors, peer reviewers, supporting organisations (African Vision Research Institute, South African Optometric Association and African Ophthalmology Council), editors and librarians. Consequently, the results of this study contribute to the expanding field of ophthalmic bibliometric studies[17,18] and specifically in Africa, which is now attracting increasing attention.[16]

The results showed a steady increase in publications in the AVEH journal over the study period, consistent with findings reported in bibliometric studies of other international optometry journals.[18] Several editorials have emphasised the importance of research in the optometry profession and its crucial role in advancing knowledge, clinical practice and patient care.[19,20] The increase in publications directly relates to the growing interest in optometry research that may be a consequence of developments in optometry education, technology and research infrastructure.[16] It is also possible that the expanding scope of practice and increasing recognition of the optometry profession,[18] together with the growing number of active researchers, particularly in Africa,[16] account for the increased contributions to the AVEH journal over the study period. The increase in growth rate of the AVEH journal is significant, as journals with increased rates of publications have subsequently noted a dramatic increase in the number of citations received by their articles.[21]

The majority of publications in the AVEH journal were research-related, consisting of original research articles and research notes. This is not surprising as optometry journals are usually the written repositories that researchers use to disseminate their research findings.[17] The 20-year period (2005–2024) in this study further corroborates this finding as non-research publications, including editorials and reports, accounted for most of the publications in optometry journals until the 1960s.[18] Previous studies have also noted more research than non-research publications in their bibliometric studies.[3,16]

There was an increase in the median publication time in months in the AVEH journal over the study period. Previous bibliometric studies reported that the median time between submission and publication varied widely from ~2 to 20

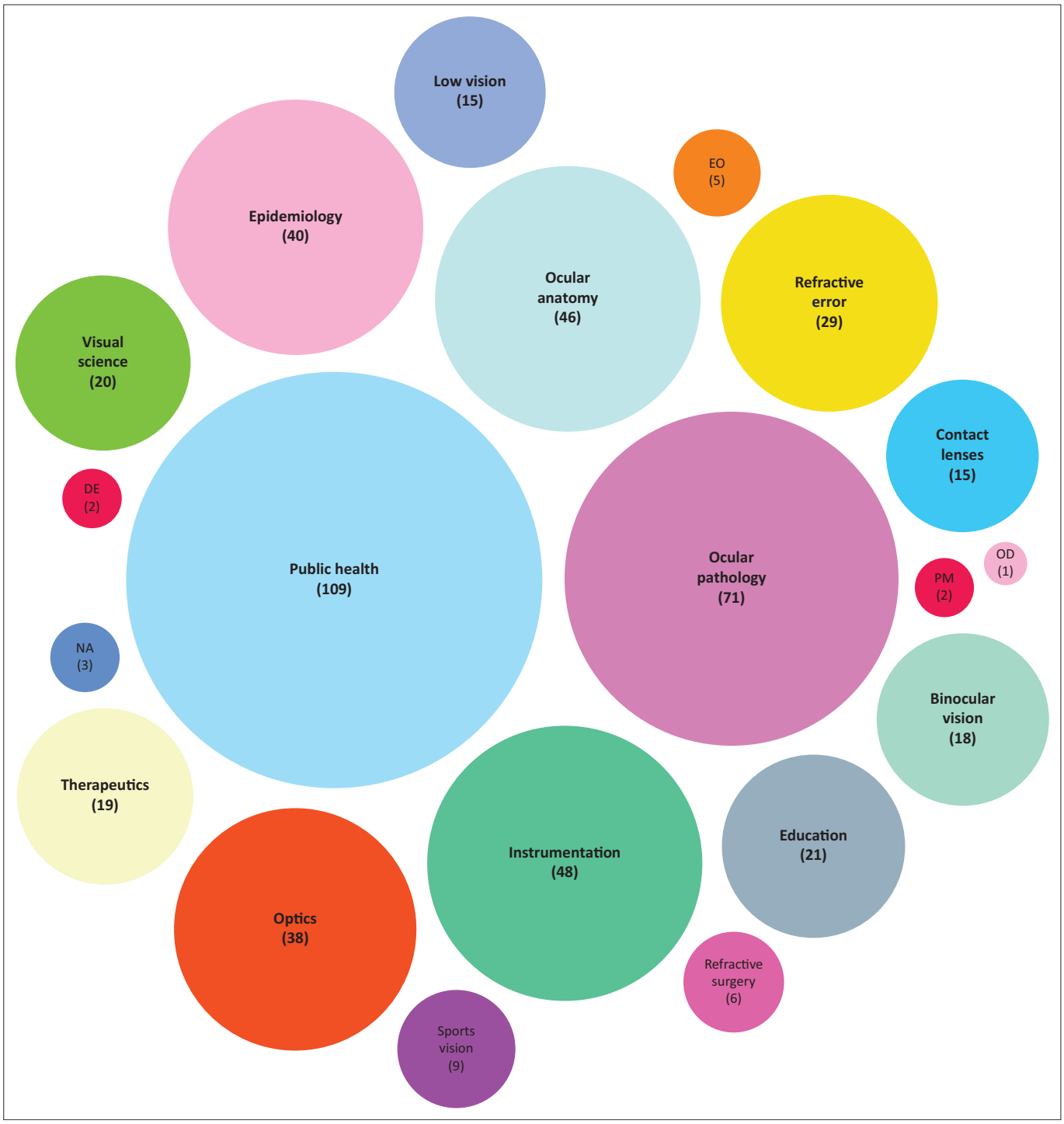

FIGURE 5: Bubble chart showing the frequency of the focus areas for the publications appearing in the *African Vision and Eye Health* journal for the period 2005 to 2024.

months for ophthalmology journals.[22,23] The two important stages that take place in the time period between submission and publication include peer-review and production,[22] with the former influenced more by the journal's editorial policies, peer-reviewers, peer-review process, etc. Indeed, the editors of the AVEH journal and another optometry journal have recently highlighted the complex yet critically important peer-review process and the challenge of finding suitable, available and willing peer-reviewers.[24,25] An association between submission-to-publication time and impact factor has been reported, with higher impact factor ophthalmic journals having shorter publication times.[22,23] Although the increase in median publication time in the AVEH journal may be related to the increased number of submissions and factors in the peer-review and production stages, the link to impact factor is interesting and should be explored in future studies.

The publications in the AVEH journal were undertaken in varied settings, which included universities, public facilities, communities, schools and private practices, reflecting the multifaceted nature of the studies in terms of research focus area, populations, samples collaborations, etc., being

published in the AVEH journal. The most common methodology adopted by the research studies was a quantitative design. A review of three ophthalmology journals reported a similar finding, whereby less than 1% of publications used qualitative methods.[26] The study found that whilst qualitative research is being conducted, they are not often published in ophthalmology journals.[26] A possible explanation could be limitations with the critical assessment of qualitative research compared with quantitative research.[26]

Authorship and collaboration

Just over 30% of publications over the two decades were single-authored, which were more common in the first (2005 to 2014) than the second (2015 to 2024) decade. Male authors accounted for the majority of single-authored publications, similar to that reported by Cardona et al.[5] who also found male predominance of single-authored publications when assessing authorship in leading optometry journals in 2021. When multi-authored publications were considered, an almost equal number of male and female first authors were found. However, for the last author, a position generally seen to denote seniority,[5] the number of males was almost twice that of females. Possible reasons for this gender disparity are unconscious bias, females being more likely to choose clinical practice, as well as females being more prone to the Imposter Phenomenon.[27] In addition, one study reported that the combination of a female first author and a female last author papers took significantly longer to be reviewed and published.[28] Cardona et al.[5] reported that whilst gender disparities were present in the earlier years with a bias toward males in editorial boards, first authorships and co-authorships, a significant change towards a greater number of mixed gender authorships has been noted in the more recent years. Despite the predominance of male authors in the AVEH journal, the first and last author gender combinations revealed parity, which is encouraging as it indicates increasing female representation.

Collaborative research involving multiple authors, disciplines and/or countries has the advantage of diverse expertise and resources over single-authored papers.[29] The overall DC for the AVEH journal over the two decades was lower than that reported for the *Journal of Optics*[7] for the period 1996 to 2021. However, the increase in the number of multi-authored publications, and corresponding increase in DC, over the years shows a trend towards greater collaboration, similar to that reported by Kappi et al.[7] The majority of authors and publishing institutions were from South Africa, likely because the AVEH journal is the only national optometry journal for South Africa. This is further shown in the country collaboration network for the second decade (2015 to 2024), whereby the largest circle (indicating the greatest number of publications) was for South Africa. This aligns with findings from a recent study that found South Africa to be a significant contributor to ophthalmology and optometry research in Africa.[16] Despite being a South African optometry journal, AVEH also publishes articles by other professionals besides optometrists and from other countries. Furthermore, most of the collaborations were not restricted to countries from a single continent but rather collaborations occurred across continents. This pattern suggests that AVEH is functioning not only as a national outlet for South African optometry research but also increasingly as a platform for cross-border and cross-continental scholarly exchange in vision and eye health. It is, however, in contrast with Boudry et al.[13] who found that European countries collaborate with others in Europe, whilst the US often collaborates with East Asian countries for dry eye-related research. The greatest collaboration was found between South Africa and Australia, likely due to an association with the Brien Holden Vision Institute based in Australia.

Research focus areas and citations

Overall, publications in the AVEH journal over the study period spanned 20 focus areas, demonstrating the diversity of ophthalmic research topics published by the journal. Public health was the most common research focus area and also received the highest number of citations. Other common research focus areas, which also received comparatively higher numbers of citations, included ocular pathology, instrumentation and ocular anatomy. Establishing citations based on focus areas is useful for compiling research policies and strategies[7,30] and assessing the quality of research in a particular field.[4,31] It may also be used to determine the main topics of interest.[32] In the current study, epidemiology studies had the second highest number of citations, even though they produced only the fifth highest number of publications. The least common research focus areas, which also had the least number of citations, were environmental optometry, neuro-anatomy, dry eye, practice management and ocular devices. Identifying focus areas which have received little attention can help direct future research endeavours and assist researchers in widening their scope of scientific enquiry knowledge.[21]

Similar focus areas have been noted in other bibliometric studies of optometry and ophthalmology journals, even though this aspect has received relatively less attention previously.[6,8,9,16,19,33] The research focus areas in the AVEH journal for the study period suggest a large database of clinical studies that practitioners can use in ensuring evidence-based practice. This is in keeping with the expectation that academic journals serve as a repository of evidence for respective professions that often inform best practice and standards of care.[12,17,19,21] Notably, a greater number of publications in the AVEH journal were within clinical science rather than visual science, including optics. This trend was also noted by Montés-Micó et al.[21] following a bibliometric analysis of the *Journal of Optometry*, although an increase in visual science publications was observed in the latter years of investigation (2000–2007). Kumaragurupari et al.[9] similarly reported that basic science contributed only 12% of the total publications in various journals by ophthalmologists, optometrists and vision science researchers in India between 2001 and 2006. The lower number of visual science publications could be attributed to many factors including a lack of interest or expertise, the focus of

undergraduate optometry programmes both nationally and internationally on clinical optometry rather than visual science, a change in practice from predominantly optics to a primary health care approach, limited resources and/or funding to support such research and yet may also be influenced by preferences of editorial boards or reviewers.[4]

A slight decline in the total number of citations was noted since the year 2020. That this decline reflects reduced impact should be interpreted with caution, as it could relate to other factors, including citation lag effects for recently published papers, increases in publication output of the journal relative to citation accumulation, indexing changes across bibliographic databases and shifts in topic relevance within the fields.

Strengths and limitations

As this study focused on only the AVEH journal, which is currently accredited in South Africa, its findings may not be generalised to other optometry journals within or outside Africa. Despite this, the study presents novel information as it is the first bibliometric analysis of this journal. The desktop review was conducted by two independent researchers, and this may have introduced inter-observer variability. However, discussion and standardisation of the data collection procedure, especially in terms of definitions, categories, search strategy, determination of publication time, etc., were established prior to data extraction. Furthermore, a third researcher independently conducted a quality check for 10% of all data entries randomly at a subsequent time and noted consistent findings confirming the standardised procedure used for data extracting and capturing. The analysis related to gender was based solely on the first and last authors in multi-authored publications as done in previous bibliometric studies. This study only considered citations accrued until 25 November 2025, as this metric is dynamic and may likely change. Future studies should also explore the relationship between citation counts and research designs and/or focus areas. As data for publications in the AVEH journal prior to 2015 were not available in the Scopus database, results related to international collaborations for the period 2005 to 2014 could not be determined. Furthermore, citations were determined using the Google Scholar database and may vary slightly if other databases like Web of Science is used. Lastly, the current study did not investigate the influence of funding on publications in the AVEH journal, and this should be considered in future studies.

Conclusion

A steady increase in the growth rate for publications, particularly research articles, and DC was noted over the period 2005 to 2024 in the AVEH journal. The research focus areas of the publications in the journal suggest that clinical optometry is the established domain with less emphasis on the visual science domain. A fair degree of gender parity was noted for the first and last author combinations across the publications. This study presents valuable insight into the publication trends in the AVEH journal and can be used by the editorial board for future strategies aimed at enhancing the impact factor of the journal. This information may also be useful to researchers and/or authors who may be considering submitting their manuscripts to the AVEH journal for publication.

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CRediT authorship contribution

Shivani Naipal: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft and Writing – review & editing. Rekha Hansraj: Investigation, Methodology, Resources, Writing – original draft and Writing – review & editing. Nishanee Rampersad: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Resources, Writing – original draft and Writing – review & editing. All authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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Data availability

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