

## EVALUATION OF THE QUALITY OF ETHIOPIAN JOURNAL OF REPRODUCTIVE HEALTH

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### ABSTRACT

**INTRODUCTION:** The Ethiopian Journal of Reproductive Health (EJRH) is a local journal that has been published by the Ethiopian Society of Obstetrics and Gynecology (ESOG) for over 10 years. The objective of this study was to examine the quality of the journal.

**METHODS:** A mixed-methods approach that employed reviews of published editions of the journal, key informant interviews of those who have roles in the management of the journal, researchers who have the experience of publishing in EJRH and other journals, and editors-in-chief of other journals was conducted from September 1, 2017 – November 30, 2017. Self-appraisal of the journal using a standard checklist and office visits to assess staffing, infrastructure, manuscript follow-up, and coordination were also conducted. In addition, an online survey questionnaire was administered to assess perception and use of the EJRH by members of ESOG.

**RESULTS:** There have been 9 issues with 4-6 articles per issue in the last 10 years (2007 - 2017), giving 0.9 issues per year which is a 30% performance against plan. It has not been published in 2016 and 2017. The total number of issues was lower than average when compared to other local journals. Seven out of the nine issues of EJRH were available online. The journal has no online submission system and was yet to be indexed. The journal scored low in 19 of the 20 self-appraisal criteria. The majority of ESOG members knew about EJRH, but only 10% had a publication in the journal. Findings suggest that there are critical areas that need improvement for the journal to be reputable and influential.

**CONCLUSION:** A substantial reform with focus on having a fully functional editorial team, a web-based submission and peer review process, a well-equipped editorial office, and human resources were needed. Benchmarking experiences from other journals and adopting standard operating procedures were recommended. Strengthening collaboration with universities and research institutions will also be critical.

**KEYWORDS:** Ethiopian Journal of Reproductive Health, evaluation, quality

(The Ethiopian Journal of Reproductive Health; 2023; 15;51-58)

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## INTRODUCTION

Robust medical evidence is essential for continuous quality improvement of medical practices. One approach that can be used to identify sound medical evidence is to rely on high-quality journals for information (Lavis et al., 2008). High-quality journals positively impact health policy decisions as they publish outstanding research that can inform policy decisions. Consequently, these journals have a positive reputation in medical and health science fields (Ana, 2004).

The quality of a journal is fundamentally evaluated by the peer review process, where an author's submission is subjected to the scrutiny of experts in the same field, prior to addition and publication in the journal. Other bibliometric techniques, such as the journal and article citation rates, impact factors, circulation, manuscript acceptance rates, and indexing on Medline or other bibliographic and citation databases, can also be used as quality assessment tools for journals (Rousseau, 2002; Durieux & Gevenois, 2010). Indexing of a journal in relevant databases contributes to its improved visibility and wider availability, and it is considered one of the key indicators of its impact on the international scientific production (Gasparac, 2006).

Most scientific papers are published in a small number of high-quality and prestigious journals, the majority of which are from the developed world. Journals from developing countries, however, are poorly visible in the scientific literature despite producing almost a quarter of the world's scientists (Marusic et al., 2004). For instance, analysis of documents published between 2011 and 2015 in biomedical journals, which were included in an internationally renowned citation database known as the Science Citation Index, indicated that only 9.3% of the papers published were led by authors from low-income countries (González-Alcaide et al., 2017). This difference is largely due to the

fact that the vast majority of scientific research in the developing world is distributed through local or domestic scholarly and professional journals or other publication outlets with a geographically or linguistically restricted range of disseminations (Tijssen et al., 2006).

Africa is a region that faces the challenge of low visibility of its journals, which occurs due to the limited representation of its scientific publications in the international citation or bibliographic databases (Kebede et al., 2014). Bibliometric analysis by Hugo and Manuel in 2014, for instance, indicated that Africa's share of the world's scientific output only represented 2.6% of publications in open access journals (Confraria & Godinho, 2015). This finding confirmed the reality that many of the locally or domestically derived African journals are also challenged by inefficient review process, inadequate funding, and ineffective management of the journals' overall logistical operations (Gondwe, 2008).

In Ethiopia, only a handful of medical journals are published. Of those that exist, the oldest and most regularly published journal is Ethiopian Medical Journal (EMJ). EMJ is published by the Ethiopian Medical Associations (Magge et al., 2019). Another journal, the Ethiopian Journal of Health Sciences, is published by Jimma University. The Ethiopian Journal of Health Development (EJHD) is the most widely cited public health journal and is published by Ethiopian Public Health Association. In 2016, the Ethiopian Public Health Institute launched a new journal called the Ethiopian Journal of Public Health and Nutrition (EJPHN). Albeit a good number of biomedical journals are emerging in the country in recent years, very few of them are indexed on Medline (PubMed) or other internationally recognized databases.

The Ethiopian Journal of Reproductive Health (EJRH) is an organ of Ethiopian Society of Obstetrics and Gynecology (ESOG), which was

launched in May 2007. Since then, the EJRH published eight volumes and nine issues. Although the journal has been serving as an appropriate channel for dissemination of scientific information in reproductive health research in Ethiopia (Gautham et al., 2014), it faced several challenges during its first 10 years of its existence. As a result, its reviewing process and quality of published research had not been evaluated, and solutions for the prevailing challenges were not explored. Therefore, the objective of this study was to examine the quality of EJRH by comparing it with selected local and international journals and consider possible recommendations for its quality improvement.

## **METHODS**

### **Study design**

We used a mixed-methods approach that included a review of the journal against standard checklists, a comparison of randomly selected articles from EJRH with ones from other journals, key informant and in-depth interviews with different respondents, and a survey questionnaire with the members of ESOG. In order to evaluate the quality of the EJRH, a standard appraisal checklist that contains key quality measurement indicators developed by Beaubien and Eckard (2014) was also used. Data collection was conducted from September 1 - November 30, 2023.

### **Comparison with other journals**

We also examined EJRH's publishing processes in comparison with the local journals in Ethiopia, namely EMJ, EJHS, and EJHD. Comparison of the publishing process was also made with international journals including BMC and PLOS ONE. Consequently, from each of the above journals, we randomly selected three papers that were published from 2010 onwards. The inclusion criteria for the selection was that the articles contain information on reproductive health and related issues.

To compare the articles from each journal, we used indicators such as the number of authors in the paper, submission system of the journal, open access

or online availability of the paper, indexing services, presence of Digital Object Identifier, regularity of publications, the presence of RG journal impact, general attractiveness of the published papers, and information on the article processing charges.

### **Qualitative study**

We interviewed both potential and actual users of the EJRH. The groups included those who have never published, those who have published in EJRH but not elsewhere, those who have published elsewhere but not in EJRH, those who have published in both journals, editors-in-chief, and previous editors. A total of 21 key informant interviews were conducted with different groups of ESOG members and non-members. All the interviews were recorded, transcribed, and translated by the research team. A thematic synthesis was used to summarize the findings.

### **Observation and benchmarking**

We visited the offices of EJHS in Jimma University, Southwestern Ethiopia and EMJ in Addis Ababa and compared both locations with the office management of EJRH. For the office visits, a team of two data collectors used checklists with standardized indicators for an open access journal to document their observations. During the visits, all relevant components including infrastructures, human resources, electronic systems, guiding documents, and other related elements were observed and documented.

### **Online quantitative study**

An online survey questionnaire was sent via email to all members of ESOG. The survey questions included background information; the participants' previous research practice and publication experiences, such as attendance of research methodology (other than at the undergraduate or graduate levels); manuscript writing training, whether having access to electronic journals, journal reading, and use habit; and their publication experience with EJRH and other local or international journals. The participants' perception of the quality of EJRH was also assessed. The resulting data were analyzed using Stata 14.0.

## RESULT AND DISCUSSION

### Review of EJRH publications

The average number of authors was three for EJRH, five in EJHS, and as high as eight in BMC. EJRH did not have an online submission system. Therefore, submissions were made through email. The process of reviewing the papers for the EJRH journal is not clearly indicated when compared with the international journals (BMC and PLoS ONE). We have also learnt that the three local journals, including EJRH, lack important information about copyright of each journal, detailed description of author contribution, availability of data and materials, digital object identifier (DOI), and length of the process from acceptance to publication.

Review of the journal's home page showed that most of the local journals considered in this study, including EJRH, were not attractive and lacked essential elements when compared with BMC and PLOS ONE journals. It was also observed that EJRH published only eight volumes during its 10 years of existence—far less than the EJHD, EJHS, and EMJ, which produced 31, 27, and 55 volumes respectively.

### Quality appraisal

At the time of this assessment, EJRH was not listed in the directory of Open Access Journals and did not have an article processing charge. The EJRH publisher was not under a creative commons license. The journal also was not a member of Open Access Scholarly Publishers Association. In addition, it was not indexed in any of the following databases: Science Citation Index (SCI), Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI), Medline, Inspec, or a specialized subject specific database.

EJRH publications did not have Digital Object Identifier (DOI) numbers. The journal was not a member of the STM Publishers Association or the Committee on Publication Ethics (COPE), and it was not being preserved in LOCKSS, CLOCKSS, Portico, PubMed Central, or at least one national

archive or national library. Also, the journal was not regularly able to publish 10 or more papers per issue and was not offering keywords to a search engine. The editors did not swiftly respond to email inquiries sent to their institutional email address, and the publisher/publishing house was not clearly identified in the imprint.

### Observation and benchmarking

EJRH had one editor-in-chief and eight associate editors. During our visit, we learned through documentation that the journal's editorial board used to meet every month; minutes were recorded for every session. However, the editorial board of EJRH was not functional at the time of our visit, and most of the activities were being performed by the editor-in-chief. The editor made decisions on his own, with limited consultation with the board. EJRH submissions were received via personal email, the tracking was through phone, and documented tracking and communication were nonexistent. Unlike the other journals, EJRH did not have an annual plan for the current fiscal year, but on its inception a decade ago, the journal aimed to publish four editions every year. However, that goal has never been implemented.

### Findings from email survey

A total of 81 respondents who are all members of ESOG responded to the emailed questionnaire. Of these, 73 (90%) were male and 24 (32%) were earning below 15,000 ETB monthly. The majority (58%) of them were working at teaching hospitals. Nearly half (48%) worked in public facilities with limited private practice. More than a quarter or 22 (27.2%) ever published a manuscript in journals, and only 8 (9.9%) published in EJRH. Most (93%) knew about the existence of EJRH. The above characteristics are summarized in Table 1 below.

**Table 1: Research and publication experience of study participants**

Variable	Subcategory	Number
Knowledge of EJRH	Yes	75(92.6)
	No	6(7.4)
Published in EJRH	Yes	8(9.9)
	No	73(90.1)
Read EJRH article(s)	Yes	66(81.5)
	No	15(18.5)
Major challenge publishing in EJRH	Long review process	5(62.5)
	Poor feedback	1(12.5)
	Submission problems	2(25.0)
Consider EJRH a good impact journal	Yes	35(43.2)
	No	46(56.8)

### Qualitative findings

Researchers who had published in EJRH expressed their experience as “not good” or “neutral” when asked about their general feelings on the publication process. Informants indicated that the call for papers was not regular, and there was a long turnaround period for submitted manuscripts. Lack of clear guidance, lengthy process, unpredictable timing, and lack of follow-up were repeatedly mentioned by the informants. Researchers found the EJRH publication process less explicit than and deviated from the experience provided by international journals. Learning opportunity and transparency of review process were considered as missed opportunities when publishing in EJRH. However, transparency was not considered a major problem.

Formatting was a recurrent quality problem with the papers, especially on the last editions. Tables were not well-placed, citations and references were not up to standard, and font types were not consistent. Researchers reflected that the issues were discouraging and would fail to attract authors to consider publishing in the journal. They suggested that EJRH needed to work on improving content, language, and article formatting. Although some of the respondents expressed that EJRH was

in a unique position to reach local readers, the researchers who have published in EJRH and other journals predominantly stated their preference to publish in other journals. Many of the qualitative respondents believed that ESOG had missed many opportunities, including its original plan of publishing four times a year and using the various sources of support that were available in the early stages of the journal.

Many of the researchers considered EJRH the right platform for their publications as it is relevant to the OBGYN community in Ethiopia and is a specialized journal focusing on reproductive health. However, the opportunities were limited by the journal’s current quality. Suggested areas to improve included creating a support structure at the ESOG office level with finance and technical support for research, strengthening collaboration with universities and research institutions, and finding ways to regularly publish articles in the journal to stimulate people to conduct more research in the reproductive health field. It was also suggested that the journal should have a web-based submission system and electronic copies of articles. Moreover, informants indicated that ESOG should provide active funding to support the editorial office. A related suggestion was for the journal to organize research methodology and writing workshops on a regular basis to enhance research capacity and promote its publications.



## DISCUSSION

The EJRH is a great platform for sharing research findings among the OBGYN and other reproductive health communities. Members of ESOG value the platform as a specialized opportunity in the country. The office structure, management, and functions of EJRH are suboptimal. The editorial board is not fully functional and is not guiding the journal. Many irregularities were present in the publication process of EJRH, with its volume and corresponding issues showing limited numbers, long and irregular intervals, and missed opportunities to qualify for a good level of prestige. Regardless of its poor quality and limited visibility, the members of ESOG have a positive perception of EJRH and highly value its existence as it is a good impact journal. The members also intend on publishing in the journal if its current gaps and challenges are addressed.

### **Substantial improvement is needed**

The findings of this quality assessment of EJRH indicated that there are several areas that need to be improved for the journal to be competitive and influential in the field of reproductive health in Ethiopia, Africa, and worldwide. Although similar local publications also lack the important qualities that are deficient in EJRH, the journal should nevertheless make rigorous improvements and become a high-impact journal at continental and international levels (Schoonbaert, 2009). Several other journals have achieved this milestone. However, doing so would require a progressive and continuous effort from the professional society, reproductive health researchers, and the journal management team. The main areas of focus for further improvement would be strengthening the editorial team and office; improving manuscript submission, review, and editorial process; and promotion of the journal articles in local and international media.

### **Strengthening editorial team and office**

Having a fully functional and well-equipped editorial office and a multidisciplinary team of editorial members are key to ensure the quality of any journal (Gasparyan, 2013). The findings

of this study have clearly indicated that the EJRH editorial office needs to be equipped with the modern hardware and software required for a quality journal review and editorial process. Beyond these, the assessment findings also indicated that a fully functional editorial team (consisting of editors and associate editors) as well as a pool of selected reviewers specialized in reproductive health need to be strengthened. These changes are critical for the quality of the publications of EJRH.

### **Improve submission, review, and editorial process**

Another key area in need of improvement was the system for article submission, peer review, and journal editing process (Ali & Watson, 2016). The findings of this assessment clearly indicated that potential authors need an online portal with a user-friendly interface for submission of manuscripts, an online invitation for potential reviewers and a similar system to receive reviewers' comments, a tracking system for real-time status of the manuscript, and a portal for copyediting and proofreading of the articles. As these features are common in many other journals, the findings of this assessment imply that EJRH would need to implement them in order to be competitive and impactful in the field of reproductive health. However, this process would require a step-wise approach that can yield the aspired goal overtime.

### **Promote the visibility of the journal and its publications**

Promotion of the journal products in local and international media and through indexing in scientific databases is critical for wider visibility of the journal (Goehl & Flanagan, 2008). Only a handful of African journals were indexed in Science Citation Index, a multidisciplinary international bibliographic database. Moreover, the clear majority of local researchers in Africa choose to publish in Western journals and even predatory international journals in some cases, which, due to having higher impact factors and larger circulation, leave local journals with inadequate and poor-quality submissions (Tarkang & Bain, 2019). One must note that local journals have the potential

for stronger influence in local media and policy, and researchers need to be encouraged to submit to local journals. Doing so would enhance the likelihood of application of the findings at the local level. Mainstream media and social media can be used to present highlights of key publications in EJRH and thus improve the visibility of the journal.

#### **Strengthen collaboration with universities and research institutions**

For a research journal, collaborating with universities and research institutions is critical (Breugelmans et al., 2019). First, a significant proportion of manuscripts originate from these institutions. Collaborating with them would foster submission of quality articles to the journal. Secondly, many potential peer reviewers are based in these institutions, and collaboration would encourage them to serve as trusted peer reviewers for the journal. Thirdly, libraries in the universities and research institutions are the most important areas to share the knowledge products of the journal with students, early-career researchers, and the wider scientific communities. Therefore, EJRH needs to strengthen its collaboration with universities and research institutions that conduct research in the reproductive health field.

#### **Use the recommendations from the informants as inputs**

This assessment used triangulated evidence to assess and describe the quality of EJRH and its processes. Findings from review of EJRH publications, suggestions from key informants, responses from ESOG members, and observations of the research team attained from visiting the EJRH office are factual sources of information intended to inform the journal to improve its systems and process, thereby becoming a competitive and impactful journal in the field of reproductive health. As with any evaluation, the findings should not discourage potential authors from submitting to this journal nor researchers from reading articles published in EJRH. Rather, the findings of this assessment need to trigger researchers to contribute to the quality improvement of this journal by submitting good

articles, joining the journal as associate editors and peer reviewers, and citing articles published in EJRH when necessary.

#### **CONCLUSIONS AND RECOMMENDATIONS**

Reproductive health problems account for a significant proportion of disease burden in Ethiopia. To address this public health challenge, there is a need for a scientific platform to share up-to-date, research-based evidence in the field of reproductive health. EJRH could function as an excellent platform to publish reproductive health research in Ethiopia and even the entirety of Africa. Addressing the identified areas for improvement in this study would help the journal achieve this goal. Accordingly, ESOG and EJRH teams can use the findings of this assessment to improve the systems, process, and outputs of this journal. More specifically, the following recommendations need EJRH's priority: the editorial team and editorial office need to be strengthened; manuscript submission, review, and editorial process must be improved; the journal needs to learn from the experiences of reputable reproductive health journals; the journal must promote its visibility at local and international levels; and the journal should strengthen collaboration with universities and research institutions.

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