Suggestions for Exercise Science’s Promotion to a Top-Tier Journal in the Category of Sports Science

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THE NUMBER OF ENGLISH-LANGUAGE ARTICLES INCREASED SINCE 2021

Exercise Science, the official journal of the Korean Society of Exercise Physiology, was launched in 1992. In 2022, it published its 31st volume. The journal has been indexed in Scopus since 2020. It published 56 articles in 2020, 65 in 2021, and 27 as of May 2022. English-language articles have frequently appeared since 2021, with a proportion increasing from 4 out of 16 (25.5%) in February 2021 to 7 out of 11 in May 2022 (63.6%) (Fig. 1).

WHY ENGLISH ARTICLES?

Why do authors in Korea publish articles in English, although it is possible to write in Korean? As a journal, Exercise Science aims ‘to scient-

Fig. 1. Number of English and Korean articles from the February 2021 issue to the May 2022 issue of Exercise Science.

HOW TO BE PROMOTED TO A TOP-TIER JOURNAL IN THE CATEGORY OF SPORTS SCIENCE

Although submissions from Korean researchers are enough to maintain a regular publication schedule, it is essential to recruit manuscripts from researchers worldwide in order to internationalize the journal. A prerequisite for a journal to be disseminated to world researchers is its inclusion in PubMed Central (PMC). If a journal is listed in PMC, its abstracts are searchable from PubMed, the largest and the most famous abstract database of biomedical journals. Because the scope of Exercise Science is suitable to be listed in PMC, it can apply for inclusion in this full-text database. PMC was launched in 2000 with two journals: Proceedings of the National Academy of Sciences and Molecular Biology of the Cell. On August 11, 2022, it comprised 2,633 fully participating journals.
There are already 127 journals from Korea listed in PMC as full participants, with immediate free access, no embargo period, no predecessor, and new content, as of June 1, 2021 [1]. According to the PMC's change of language policies starting in 2019, non-MEDLINE, non-English journals are eligible to apply to PMC if the primary content is largely in English. This offers an excellent opportunity for editors or publishers of local society journals that are published in the local language and English. The exact criterion of a “large proportion” is known to be at least half of the articles per issue. Seven articles out of 11 (63.6%) were published in English in the most recent issue, as well as 6 out of 16 (37.5%) in the February 2022 issue. Therefore if society members submit a few more English-language manuscripts, the journal can be a candidate for PMC. Another way to achieve this goal is to translate accepted manuscripts written in Korean into English. Although this option requires some budgetary resources, if the society's executive board can provide assistance, this is the easiest method to obtain English-language articles.

**SCIENTIFIC RIGOR OF THE ARTICLE CONTENT**

After fulfilling the minimum requirements to apply to PMC, the most critical review item for PMC is the scientific rigor of the article content. What are the critical components of high scientific quality? There is a list of scientific and editorial quality assessments for journal selection for PMC (https://www.ncbi.nlm.nih.gov/pmc/pub/journalselect/). Out of them, I emphasize the following:

**First**, the study design should be robust and appropriate to the stated aims. I strongly recommend adding the study design to each article title, for example, *Effect of regular aerobic activity training on the degree of range of movement of shoulder and ankle joints in an elderly population in Korea: a non-randomized controlled study.*

**Second**, each article should be described according to reporting guidelines, such as CONSORT for randomized controlled trials, PRISMA for systematic review, and ARRIVE for animal studies. A list of more reporting guidelines for each study design is maintained by the United States National Library of Medicine at https://www.nlm.nih.gov/services/research_report_guide.html. This recommendation is already announced in the “Instructions for Authors” of the journal.

**Third**, the study size should be clearly stated to verify the statistical power [2].

**Fourth**, the interpretation should be based on the results. Overstatements are not recommended. The conclusions drawn should be supported by the data.

Out of the above four suggestions, the study design was well-documented in some articles [3]. The interpretation is reasonable and logical in all manuscripts. However, the main text should confirm that the article is presented according to the reporting guidelines, and the study size estimation in experimental studies should be more clearly described.

**TECHNICAL QUALITY OF JOURNAL ARTICLE TAG SUITE XML**

The technical quality of Journal Article Tag Suite (JATS) XML is not a problem for *Exercise Science* because the present JATS XML-producing company already supports 59 journals published in Korea, including the *Journal of Exercise Rehabilitation* in the category of sports science (https://m2-pi.com).

**PUBLISHING POLICIES**

The following policies are prerequisites for PMC application and should be described explicitly on the journal homepage: editorial policies; peer review process; policies on conflict of interest, human and animal rights, and informed consent; data sharing policy; advertising policy; research ethics policy; informed consent policy; and the process for handling cases requiring corrections, retractions, and editorial expressions of concern. All the above policies were already well presented on the journal homepage.

**WHAT HAPPENS IF THE JOURNAL IS INDEXED IN PMC?**

Submissions from researchers worldwide will increase year by year. The language of the main texts will be changed to English more rapidly. Furthermore, the citation frequency will grow by 2-10 times [4], facilitating the journal’s inclusion in SCIE. Society members will be satisfied with the journal’s inclusion in PMC. They will be proud of the society’s journal. If the journal is indexed in PMC, all articles with the main text in Korean are also included in PMC, which is an excellent way to maintain scientific writing in Korean. In other words, inclusion in PMC is a way for the Korean language to survive in the scientific world.
ACTION PLAN TO BECOME A PMC JOURNAL

As described above, the editorial board’s primary task is to recruit English-language articles to make up for half of the articles in each issue. Once the number of English articles reaches 25, the application to PMC can be started. Before submitting the application form, the scientific rigor of article content should be vigorously checked during the peer review process and editorial work. Regular training of young society members on reporting guidelines at the annual society meeting is a good option to increase the article quality. The journal’s content is excellent and adheres to the journal’s scope. Therefore, Exercise Science is eligible to be accepted by PMC soon if more English-language articles are recruited.

CONFLICT OF INTEREST

Sun Huh has been the president of the Korean Council of Science Editors since January 2020. Exercise Science is a member journal of this organization. Otherwise, the author declares that he does not have a conflict of interest.

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