



## Content Analysis of the Articles Published in the Ethiopian Sport Science Journal (EJSS) from 2020 through 2023

Abera Assefa<sup>1</sup>, Abebe Eshau<sup>2</sup>, BekagnAbera<sup>3</sup>

<sup>1</sup>Kotebe University of Education, <sup>2,(Ph.D)</sup> <sup>3</sup> Ethiopian Sports Academy

### Abstract

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*This study analysis the content of 45 research papers published in the Ethiopian Journal of Sport Science (EJSS), affiliated with the Ethiopian Sport Academy. The papers were retrieved from the African Journals Online platform (AJOL), for their complete article and abstract accessibility. In this study, content analysis was employed considering the following four key dimensions: 1) Subjects covered and units of analysis 2) Methodology and Design 3) Authorship and collaboration and 4) Types of papers or formats and numbers of papers' per volume. The findings of the study revealed that the papers included in the four volumes primarily centered on exercise physiology and sport pedagogy at the sport 'team level' units of analysis. Quantitative research methods were predominantly used across various sports science disciplines, with limited representation of pure qualitative and mixed-methods studies. Additionally, while most research lacked clearly stated conceptualizations, a considerable number of papers did include research objectives. It was also noted that the majority of authors were male individuals working independently from universities. Therefore, the study highlights the potential of a journal to become a leading platform for disseminating innovative research in sports and physical education, particularly in Ethiopia. The findings suggest that some amendments may be necessary.*

### 1. INTRODUCTION

The Ethiopian Sports Academy (ESA) is a public institution established by

Proclamation No. 691/2011. This proclamation designated ESA as an autonomous federal institution responsible

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for sports education and training(Ethiopian journal of sport science [EJSS], 2023).

According to this proclamation, ESA has given four missions and has been actively engaged in their execution since its inception. These missions are the following:1. Developing Elite Athletes: ESA aims to nurture and train young athletes to reach peak performance levels in Olympic sports. 2. Fostering Professional Development: The Academy offers capacity-building programs to enhance the skills of sports professionals in various fields.3. Conducting Research and Innovation: ESA engages in research to advance knowledge and improve practices within different sports disciplines. 4. Serving as a Center of Excellence: The Academy strives to be a leading institution in sports development, setting high standards and providing expertise(Federal Negarit Gazeta, 25<sup>th</sup> July 2011).

Among the missions given in this proclamation , as outlined above, this Article focuses on the third mission, which centers on the academy's role in conducting research and Innovation.In fact, in order to achieve this mission, the ESA annually allocates funds for academic research and invites staff, private researchers and universities to submit proposals through open calls for research in

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specific thematic areas, as indicated in the Research and Education Policy and Guidelines (EJSS, 2023; Wendifraw, 2017). Additionally, the ESA hosts an annual national sport research conference since its establishment by Council of Ministers Regulation No. 249/2011. This conference showcases both sponsored and privately funded research studies. Furthermore, the academy has been providing professional development training for sports practitioners across the nation, particularly coordinated at its main campus located in Bole Sub City, Addis Ababa, as well as at the Athlete TiruneshDibaba Sports Training Center situated in Assela, approximately 175 kilometers to the southeast of Addis Ababa.

In this respect, a total of nine research conferences were held every year from 2011 to 2023. In addition, since 2020, the EJSS has published official journals every year.The journal has been recognized by African Journals Online[AJOL] and, notably, by the Ethiopian Ministry of Education [MoE] on October 17, 2017, for a three-year period(Federal Democratic peoples of Ethiopia Ministry of Education, personal communication, 2024). While this is a significant achievement, the journal



continues to strive for recognition on global publication platforms (EJSS, 2023).

What distinguishes this journal is its unique position as the only locally available sports journal published by the [ESA]. In effect, it has gained local recognition and serves a community of over 25 universities offering undergraduate and postgraduate programs in sport science or physical education, including three universities that offer PhD programs. Moreover, it is important to note that sports federations at various levels, sports clubs, fitness centers, and organizations involved in sports and physical educations across the country consider this platform a fundamental tool to address perceived challenges and introduce new innovations.

In keeping with this, the journal strives to be a contemporary, high-visibility platform for publishing original research papers, systematic review articles, and critical analyses related to Ethiopian sports and physical education (EJSS, 2023). Additionally, the journal's website (<http://ejss-esa.edu.edu.et>) demonstrates its commitment to open access by waiving author publication fees. This clearly indicates the academy's intention to encourage scholars from various disciplines—not just in the field

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of sports—to engage in research endeavors. As we know, sport is a multidisciplinary field that integrates knowledge and expertise from a wide range of disciplines to enhance performance and understanding.

At this juncture, it is important to note that conducting analysis on journals' content supports identifying emerging trends and patterns by systematically categorizing research topics, revealing underrepresented areas, and highlighting sub-disciplines where research is concentrated, ultimately guiding future research directions and resource allocation (Wilson et al., 2022). To this end, periodic content analysis is essential to achieving the objectives of the EJSS. This practice not only helps maintain the journal's ongoing strength but also provides valuable insights into its potential to become a leading publishing platform in the field of sports science & physical Education at both local and regional levels.

This study, therefore, aims to analyze the content of all 45 papers published in the EJSS between December 2020 and December 2023 (EJSS, 2023). In doing so, this review is limited to the 2020-2023 periods due to the lack of electronic access to full texts and abstracts of earlier conference papers. In particular, this systematic analysis



is directed to answer the following four questions:

1. What are the primary research focuses & units of analysis in the Ethiopian Journal of Sport Science (EJSS)?
2. What are the typical methodologies & research designs employed in studies published in the EJSS?
3. How are authorship & collaboration typically structured in EJSS articles?
4. What are the dissemination & accessibility practices of the EJSS?

In subsequent sections, the paper outlines the method sections, followed by a content analysis. A conclusion that sheds light on areas that need more attention comes after the findings section.

## Method

Content analysis was employed to collect and process the data. As Gilbert and Kelley (2024) noted, this method is used to evaluate published articles across various fields, revealing trends, methodologies, and thematic focuses. Consistent with this Amare (2000, p.27) asserts, the core questions in content analysis are "what" and "how". These questions help to understand what is being said and how it is being said. However, it's

important to note that content analysis cannot directly answer the question of why something is being said. One can, therefore, conclude that conducting content analysis on journal publications allows researchers to gain a deeper understanding of the scholarly landscape, identify emerging trends, and inform evidence-based decision-making (Dereli et al. (2011).

## Sampling

This study included a total of 45 articles from EJSS, volumes 1-4, which were accessible online. Earlier conference papers were excluded due to the unavailability of full texts and abstracts in electronic format. In this context, when analyzing the entire population, it cannot be considered a sample. Instead, it is referred to as a census (Amare, 2000; Levy & Lemeshow, 2013). This study employs a census approach, involving a complete list of the population.

## Data Collection and analysis

This study presents a systematic review of 45 papers published in the EJSS, volumes 1-4. The review is based on four main dimensions, as indicated above, and employed a direct count (frequency counts) and the answers are presented in 12 diagrams.

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## Results

**RQ1: What are the primary research focuses & units of analysis in the Ethiopian Journal of Sport Science (EJSS)?**

❖ Subjects covered

❖ Units of analysis

❖ 1.1. Subjects Covered

❖ Figure 1

❖ *The Subjects covered in four Volumes of the EJSS (N=45)*

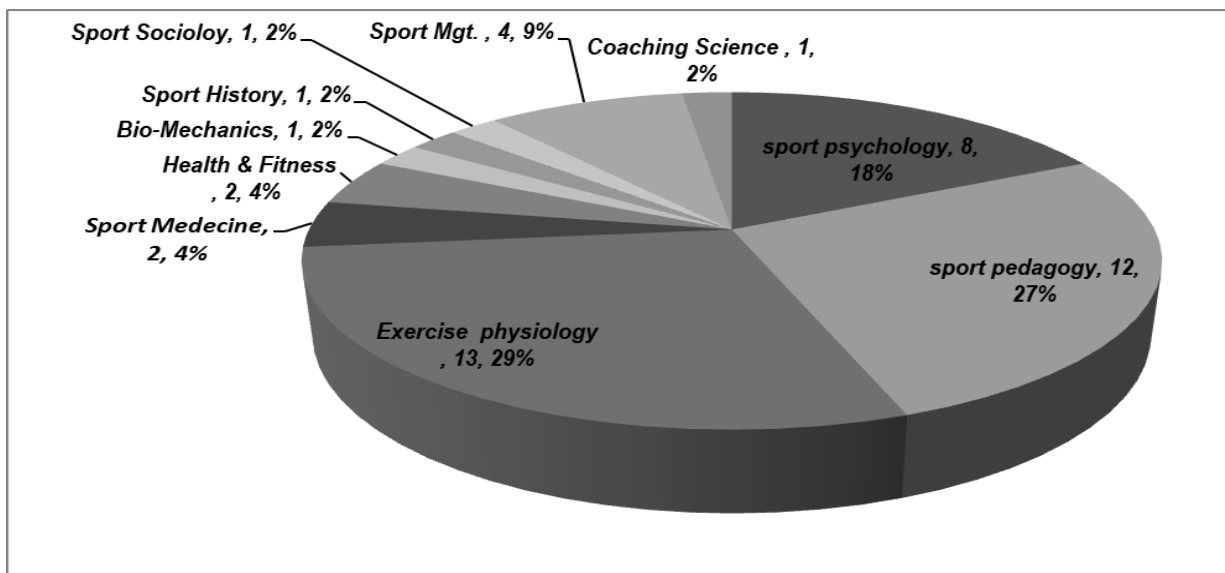


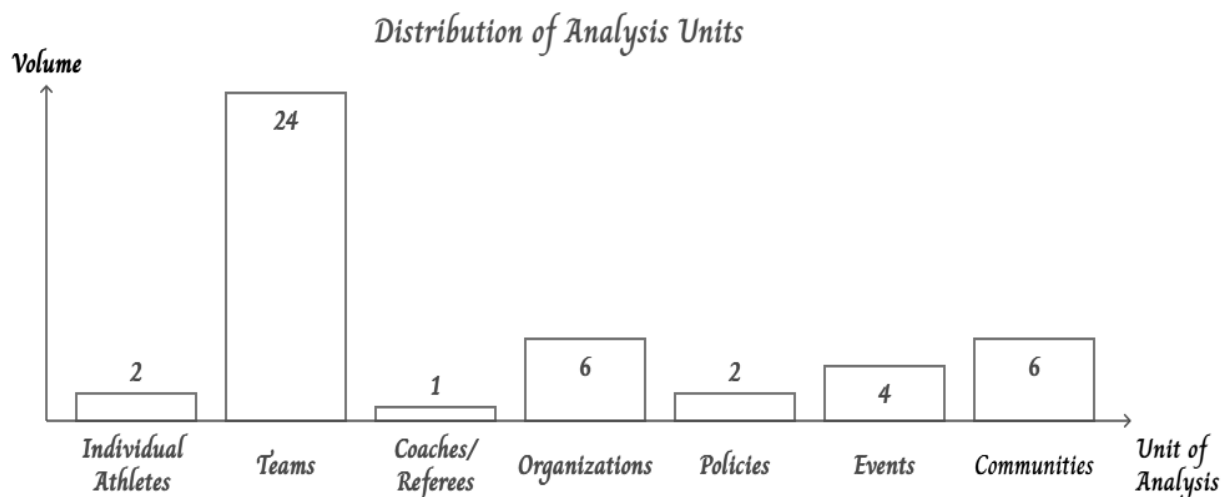
Figure 1 presents a breakdown of research papers published across four volumes within various sports science disciplines. Exercise physiology and sport pedagogy were the most prominent areas of research, collectively accounting for 56% (25 papers) of the published work. Sport psychology followed with a significant 18% share (8 papers), and sport management contributed 9% (4 papers). Sport medicine

and coaching science each accounted for 4% (2 papers), while the remaining 4 papers, each comprised 2% (1 paper). This indicates a clear focus on physiological and pedagogical aspects of sports science within the analyzed research.

### 1.2. Units of Analysis

**Figure 2**

*The distribution of the unit of analysis in four volumes of the EJSS (N=45)*



In Figure 2, we can see the distribution of units of analysis across four volumes of the EJSS. A total of 45 units were analyzed, with teams being the most frequently studied unit at 24 instances. On the other hand, individual athletes and coaches/referees were only studied in 2 and 1 instances respectively, making them the least frequent units. Organization policies and events also had relatively low frequencies at 2 and 4 instances respectively. Communities appeared in a

slightly higher number at six instances throughout the volumes.

**RQ2: What are the typical methodologies employed in studies published in the EJSS?**

- ❖ Research approaches
- ❖ Format of conceptualization
- ❖ Research Designs

**2.1. Research approaches**

**Figure 3**

*The Research Approaches Applied in four Volumes of the EJSS(N=45)*



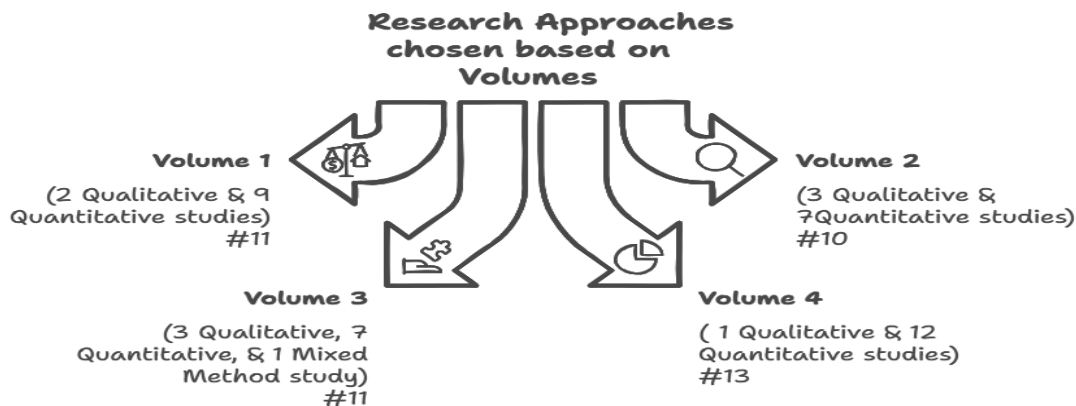


Figure 3's data, which includes (n = 9, n = 7, n = 12, and n = 9), respectively, shows a clear preference for quantitative research methodologies across all four volumes. When compared to qualitative or mixed-methods studies, the frequency of quantitative studies (n=35 of 45 total papers) is noticeably greater. The lack of mixed-methods studies indicates that using both qualitative and quantitative methods has not

been as common among researchers in this discipline. Additionally, the variability in the number of qualitative studies across volumes indicates that interest in qualitative research may fluctuate over time or across different research areas within the field.

## 2.2. Format of conceptualization

### Figure 4

*Format of conceptualization applied in four volumes of the EJSS*

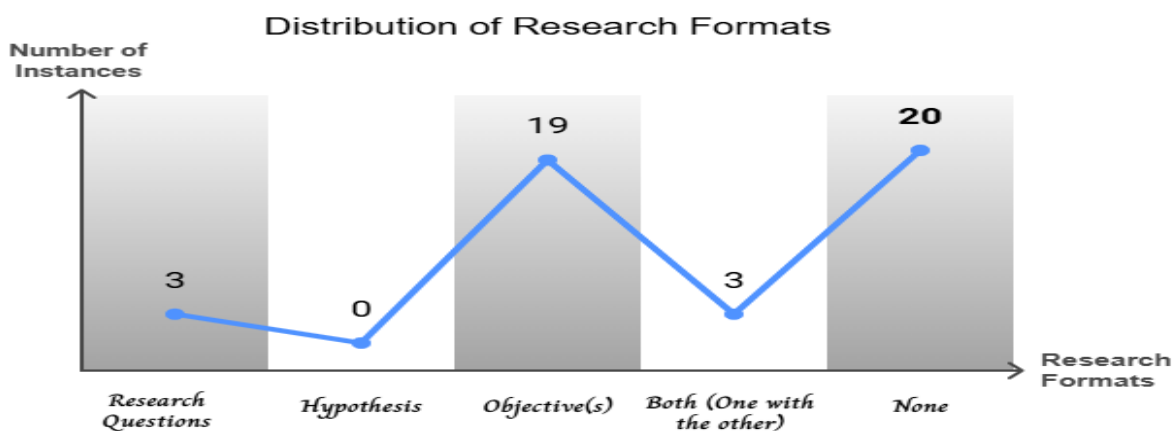


Figure 4 displays that the distribution of research conceptualization across four volumes. The highest count is for none n= 22

(48.89%), followed by objective(s) n= 20 (44.44%). Research Questions and Both (the instances where research questions and

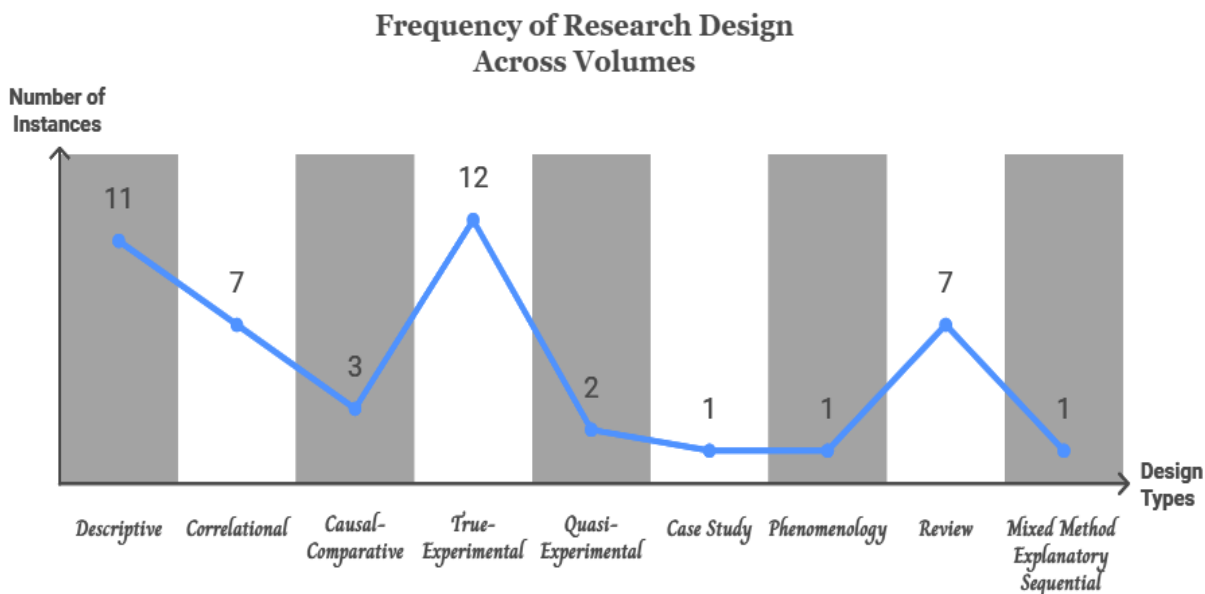
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hypotheses, or objectives, are combined) have counts of each 3(6.67%), while Hypothesis has a count of 0. This suggests that the research primarily focuses on objectives, with limited use of research questions and any hypotheses.

### 2.3. Research Designs

**Figure 5**

*Types Research Design Applied in four Volumes of the EJSS (N=45)*



As can be seen in Diagram 5 that a strong preference for quantitative research methods, especially descriptive, correlational, and True experimental designs, representing (n= 11, n= 7 and n=12) studies respectively, of which (n=30 out of N=45) articles of EJSS. Other quantitative designs, such as causal-comparative and quasi-experimental, are used moderately (n=6) and rarely (n=2), respectively. Case studies and phenomenology are two examples of qualitative techniques used (n=1

each). Over all the volumes offered in EJSS, review articles provide a substantial contribution (n=7), while mixed approaches are also rarely employed (n=1).

### **RQ3: How are authorship & collaboration typically structured in EJSS?**

- ❖ Sex distribution of the Researchers
- ❖ The affiliations of authors
- ❖ Number of author(s)

### 2.3. Sex distribution of the Researchers

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**Figure 6**

*Gender of the Researchers in four Volumes of the EJSS (N=45)*

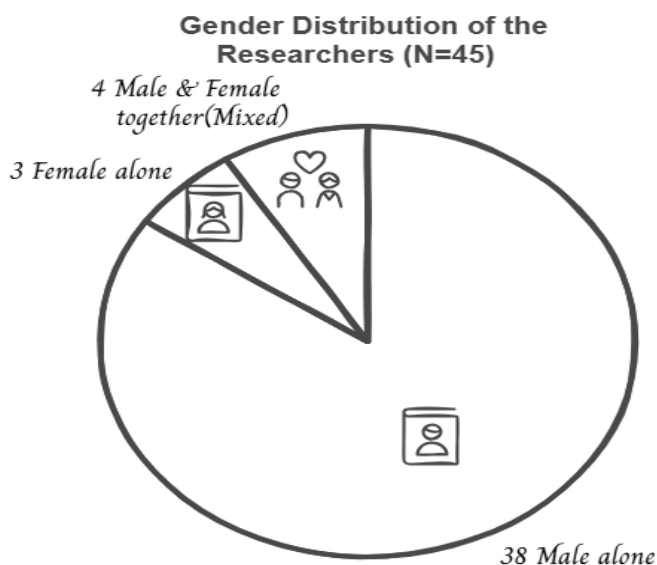


Figure 6 provides a breakdown of the sex distribution of researchers in four volumes of the EJSS. Overwhelmingly, the research was conducted by male researchers, accounting for 38 out of 45 total articles. Female researchers contributed to

only 3 articles, while the remaining 4 articles were produced by mixed-gender teams.

**Figure 7**

*The affiliations of authors*



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Figure 7 result indicate that the majority of researchers affiliations were with universities, with a total of (n=39) across the four volumes. Sport associations and fitness & recreation centers had minimal

representation, with (n=2) and (n=1) affiliations, respectively. Academy or research institutes had (n=3) affiliations.

**Figure 9**  
**Number of author(s)**

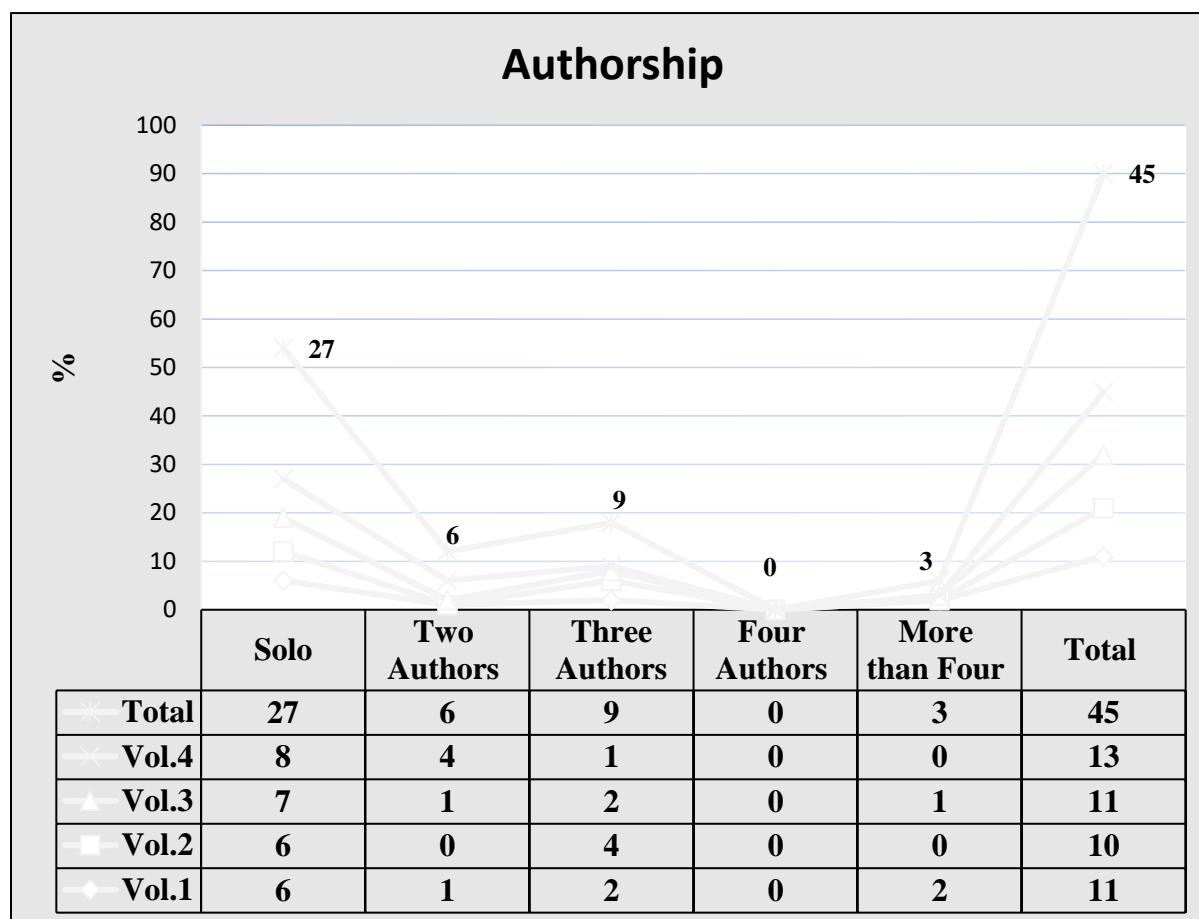


Figure 8 reveals a distinct trend towards single-authored papers (n=27 out of N=45 total) across the four volumes, peaking in Volume 4 (n=8). Two-author papers (n=6) follow, succeeded by three-author papers (n=9), while papers with more than four authors are less common (n=3). This pattern

suggests a potential shift towards more individual research projects or an increased preference for independent authorship.

**RQ4: What is the dissemination & accessibility practices of the EJSS?**

- ❖ Types of papers or Formats

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- ❖ Numbers of articles' published per volume
- ❖ Numbers of articles' possess recommendations
- ❖ The distribution of recommendations

#### 4.1. Types of papers or Formats

**Figure 9**

*Types of papers or Formats in four Volumes of the EJSS (N=45)*

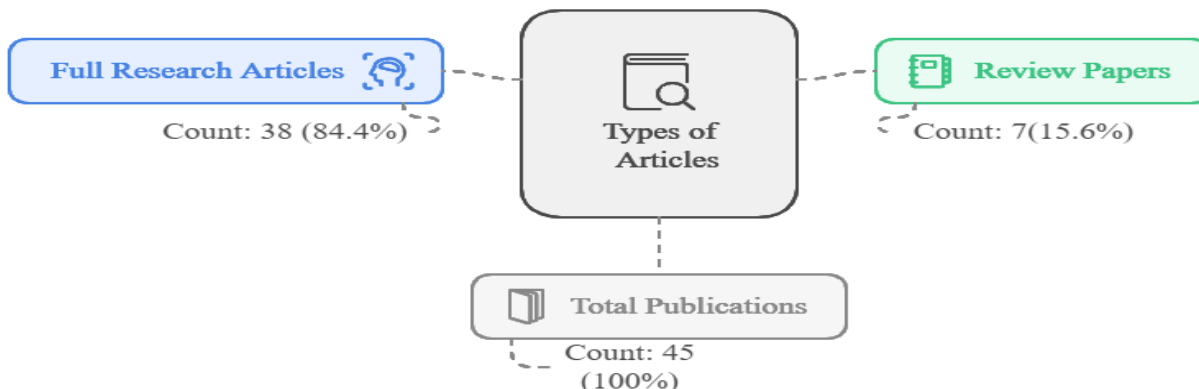


Figure 9 illustrates that there were 38 (84.44%) full-length research articles and 7 (15.56%) review articles. We can infer that research concentrated mostly on full research articles, with a lower percentage of review papers, since these are the only two formats present in the paper.

#### 4.2 Numbers of articles' published per volume

**Figure 10**

*Numbers of Articles' per volume in EJSS (N=45)*

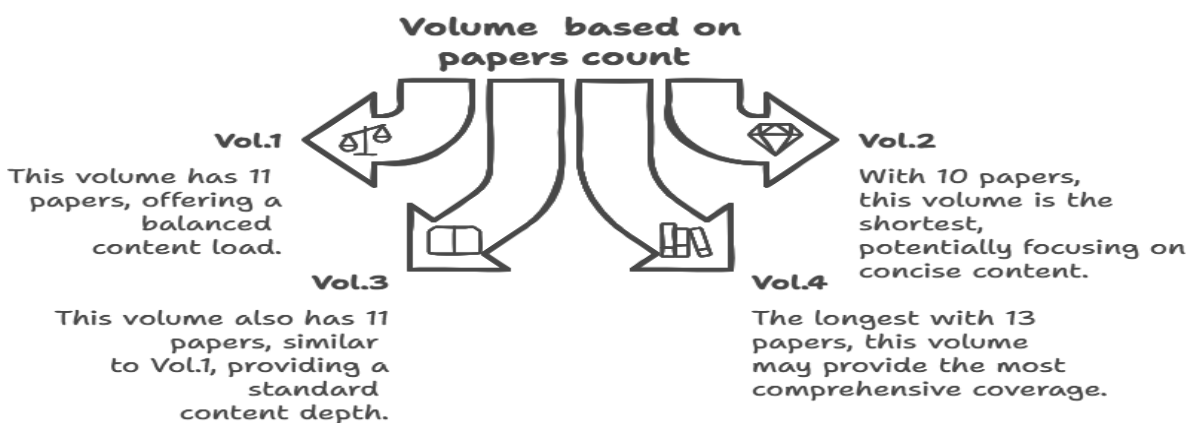


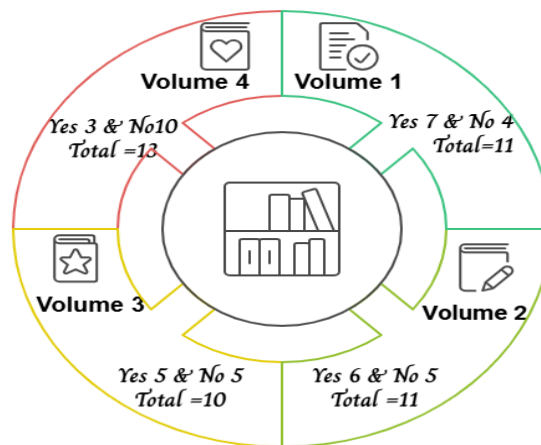
Figure 10 shows that a total of N=45 articles were included in the four volumes examined for this study. 11 (24.44%) pieces were contributed by Volumes 1 and 3, 10 (22.22%) by Volume 2, and thirteen (29.09%) by Volume 4. According to this statistics, the articles are distributed rather evenly over the four volumes, with Volume 4 having a little higher number of articles. This would suggest that, as the publication period

covered by these volumes came to a conclusion, there was a greater amount of study being done or interest in the topic. The distribution of articles among the volumes, however, might have been impacted by EJSS's publication policy, which caps each book at 10 articles (<http://ejss-esa.edu.edu.et>)

### 4.3. Numbers of articles' possess recommendations

**Figure 11**

*The presence of recommendations across volumes in EJSS (N=45)*



The distribution of recommendations among the four EJSS volumes is depicted in Figure 11. The vast majority (24 out of the total 45) examined publications lacked any recommendations.

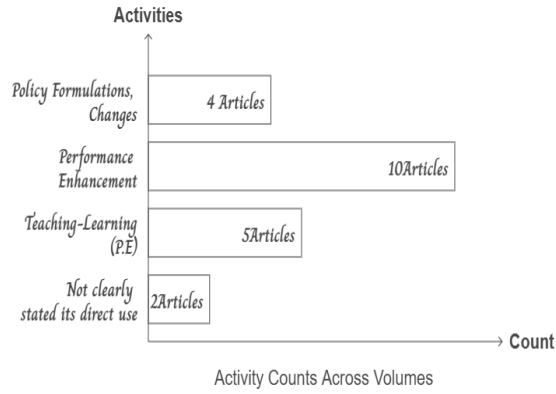
The other 21 articles did. Articles with recommendations were most prevalent in Volume 3 (7 out of 11), followed by Volume 2 (6 out of 11) and Volume 1 (5 out

of 10). Despite having the most articles (13), Vol.4 had the fewest recommendations (3).

### 4.3. The distribution of recommendations

**Figure 12**

*The distribution of recommendations across volumes in EJSS*



(N=45)

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The distribution of recommendations across different bodies is seen in Figure 12. Total (N=45) articles in four volumes were reviewed. 10 of these recommendations were centered on enhancing athletic performance, making performance enhancement the most prevalent category. With 5 recommendations showing a sufficient emphasis on enhancing pedagogical methods and students' learning experiences, the Teaching-Learning (P.E.) category is the second most popular. 4 recommendations that emphasize the need for new or modified policies to address certain issues in the field come after the formation and modification of policies. Finally, two recommendations were not explicitly mentioned in terms of how they were to be used directly, which may indicate that the recommendations lacked clarity or specificity.

## Conclusion

The first section of the results showed that ESSJ's coverage of various sports science disciplines across four volumes heavily focused on exercise physiology and sport psychology. These two fields accounted for over half of all published papers. While the journal aims to cover a wide range of subjects, it is evident that there is an imbalance in the distribution of coverage,

even leading to certain topics being neglected or not addressed at all. Related with unite of analysis, a total of 45 units were analyzed, with teams being the most frequently studied unit at 24 instances. The others were evenly distributed across various subjects.

The second section revealed that EJSS research has predominantly relied on quantitative methods, with a notable scarcity of pure qualitative and mixed-methods studies. This indicates a strong preference for numerical data analysis over other types of research approaches within the discipline. When examining the conceptualization format in the four volumes of EJSS, we observe that while many published papers do not explicitly state their conceptual framework, a significant number still employ research questions as part of their methodology. Interestingly, despite focusing on quantitative research methods, the conventional hypothesis-testing approach is not explicitly mentioned in this section. The research design utilized in was primarily descriptive, correlational, and true experimental. This is consistent with previous findings that showed a predominance of quantitative approaches being used. Overall, the information points to a dependence on quantitative research techniques to investigate the problems.

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The analysis in the third part reveals that male researchers continue to dominate overall when it comes to gender distribution. However, upon closer examination of each volume, there has been a gradual increase in the representation of female and mixed-gender research teams. This shows progress towards a more diverse and inclusive research collaboration. Besides, the authorship pattern suggests a potential increase in individual (solo) research projects and preference for independent work; possibly due to lack of funding and large scale collaborative projects were not being pursued as much.

In the final section, related with types of papers formats, it was found that the majority of papers published in ESSJ were full research articles and this implies a preference for novel research findings over critical synthesis of previously published works. Upon examining the distribution of articles across the four volumes, it becomes evident that there is a relatively even spread. However, upon closer inspection, volume four shows an increase in published articles compared to previous volumes. This could be attributed to the fact that this journal is released annually and as time goes on, there is a growing demand for new content to be published. To this end, another important consideration is that while the majority of these papers are considered full-

fledged research articles, it is worth noting that most do not include any recommendations. However, the few papers that do include recommendations tend to focus on performance enhancement and teaching/learning strategies.

As with any research, this study has limitations. The categorization of articles element, while carefully considered by the authors, some may still be subject to omissions. Additionally, a more comprehensive investigation would require considering a broader range of factors



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