# **Abstract EPICOH**

## Open Access indexing and publication costs of occupational health journals

Javier Mancilla Galindo Antonio d'Errico Sewon Lee Max J. Oosterwegel

2025-05-07

Objective: Open access (OA) publishing allows research to be freely available to readers, whilst costs are usually transferred to authors, funders, or institutions. This study explores OA policies and indexing among occupational health journals.

Material and Methods: We queried the Ulrichsweb database (a comprehensive catalog for academic and non-academic publications) for publications under the subject "occupational health and safety". Filters were applied to restrict the search to active peer-reviewed journals with print and online formats. After deduplication, journals were searched for indexing in the Directory of Open Access Journals (DOAJ). Data on OA status, article processing charges (APC), and author copyright retention were retrieved from DOAJ. The DIAMAS criteria (persistent identification, scholarly journal, OA with licenses, no fees, open to all authors, and community-owned) were used to define diamond OA journals when all criteria were met. Publishers were labelled as commercial and non-commercial by reviewing publishers' websites and stock exchange listings. APC were compared by type of publisher (commercial/non-commercial) with the Mann–Whitney U-test. A p < 0.05 was considered statistically significant.

Results: Out of the 107 journals analyzed, 33 (30.8%) were fully OA and 15 (14%) were diamond OA journals. In the subset of OA journals, 6 (18.2%) were commercial publishers and 27 (81.8%), non-commercial. Journals owned by commercial publishers charged higher APC (median: 1532.5 EUR, IQR: 671.25 – 1745) than non-commercial (median: 0 EUR, IQR: 0-421, p=0.02). Fifteen (14%) OA journals allowed authors to retain copyright of their works.

Conclusion: Nearly one third of occupational health journals in Ulrichsweb are fully OA and less than 2 in 10 diamond OA. Those owned by commercial publishers charge higher APC. Existing journals could evaluate transitioning to non-commercial or diamond OA, while new diamond OA journal initiatives could be encouraged.

# Description

### **Ulrichsweb**

The Ulrichsweb database (Ulrichsweb.com<sup>™</sup>, Copyright © 2025 ProQuest LLC) was searched for publications under the subject "occupational health and safety" (code: 003980) on 07/05/2025.

A total of 1418 records were retrieved. The filter "Journals" was applied, resulting in 382 publications. Subsequently, a filter for "Active" publications was applied, which led to 324 results. A filter for "Refereed / Peer-reviewed" publications was subsequently applied, resulting in 205 publications. Lastly, a filter for Print and Online publications was applied, resulting in 187 unduplicated records.

Records were deduplicated by name as there was one entry for "Print" and another one for "Electronic" for journals available in both formats. The total number of records after deduplication was  $\mathbf{n} = 107$ .

According to Ulrichsweb data, n = 31 (29%) of the journals are open access. This will later be compared against the number of matches in the DOAJ.

Open Access (OA) journals in Ulrichsweb

#### ID Journal

- 9 Scandinavian Journal of Work, Environment & Health
- 17 Arhiv za Higijenu Rada i Toksikologiju
- 18 Medycyna Pracy
- 22 Revista Brasileira de Saude Ocupacional
- 35 International Journal of Occupational Medicine and Environmental Health
- 48 Journal of Occupational Health
- 52 Archivos de Prevencion de Riesgos Laborales
- 53 Noise & Health
- 58 The Irish Journal of Occupational Therapy
- 61 Archives of Public Health
- 62 Huanjing yu Zhiye Yixue
- 63 Perspectives Interdisciplinaires sur le Travail et la Sante
- 69 Salamat-i Kar-i Iran
- 70 International Journal of Occupational Hygiene
- 73 Nordic Journal of Working Life Studies
- 75 Meikuang Anquan
- 80 Safety and Health at Work
- 33 Sbornik Vedeckych Praci Vysoke Skoly Banske Technicke Univerzity Ostrava. Rada Bezpecnos

- 88 L'vivs'kyi Derzhavnyi Universytet Bezpeky Zhyttyediyalnosti. Visnyk
- 93 Bezopasnost' Tekhnogennykh i Prirodnykh Sistem
- 94 IETI Transactions on Ergonomics and Safety
- 95 Bihdasht-i Kar va Irtiqa-yi Salamat
- 96 Archives of Occupational Health
- 97 Ocupacion Humana
- 98 Tibbi-i-kar
- 100 The Indonesian Journal of Occupational Safety and Health
- 101 International Journal of Occupational and Environment Safety
- 103 Environmental and Occupational Health Practice
- 104 International Journal of Occupational Safety and Health
- 106 Giornale Italiano di Psicologia e Medicina del Lavoro
- 107 Journal of Safety and Sustainability

## **DOAJ**

103

104

106

All journals were searched in the Directory of Open Access Journals (DOAJ).

Out of the n=107 journals, a total of n=32 (29.9%) were indexed in the Directory of Open Access Journals (DOAJ):

#### Journals from Ulrichsweb indexed in DOAJ

#### IDJournal Scandinavian Journal of Work, Environment & Health Arhiv za Higijenu Rada i Toksikologiju 17 18 Medycyna Pracy 22 Revista Brasileira de Saude Ocupacional 35 International Journal of Occupational Medicine and Environmental Health 38 Occupational Therapy International 48 Journal of Occupational Health Archivos de Prevencion de Riesgos Laborales 53 Noise & Health 58 The Irish Journal of Occupational Therapy 61 Archives of Public Health 62 Huanjing yu Zhiye Yixue 63 Perspectives Interdisciplinaires sur le Travail et la Sante 69 Salamat-i Kar-i Iran 70 International Journal of Occupational Hygiene 73Nordic Journal of Working Life Studies Meikuang Anquan 75 80 Safety and Health at Work 83 Sbornik Vedeckych Praci Vysoke Skoly Banske - Technicke Univerzity Ostrava. Rada Bezpecnos 88 L'vivs'kyi Derzhavnyi Universytet Bezpeky Zhyttyediyalnosti. Visnyk 93 Bezopasnost' Tekhnogennykh i Prirodnykh Sistem 95 Bihdasht-i Kar va Irtiqa-yi Salamat 96 Archives of Occupational Health 97 Ocupacion Humana 98 Tibbi-i-kar 100 The Indonesian Journal of Occupational Safety and Health 101 International Journal of Occupational and Environment Safety 102 XXI Vek. Tekhnosfernaya Bezopasnost'

Environmental and Occupational Health Practice

International Journal of Occupational Safety and Health Giornale Italiano di Psicologia e Medicina del Lavoro Journals indexed in DOAJ but not listed as OA in Ulrichsweb

ID	Journal
	Occupational Therapy International
102	XXI Vek. Tekhnosfernaya Bezopasnost'

Journals listed as OA in Ulrichsweb but not indexed in DOAJ

ID	Journal
94	IETI Transactions on Ergonomics and Safety

A new column open\_access was added to the journals\_dedup dataframe, which indicates whether a journal was is OA either in Ulrichsweb or DOAJ.

The status of the publisher as a *commercial* or *non-commercial* publisher was classified by reviewing the publishers' websites when available looking for declarations of for-profit opperations, or by reviewing listings of companies on a stock exchange (if true, these were labelled as commercial).

# Analysis of journals included.

## **Open Access**

A total of n = 33 (30.8%) journals were fully open access (OA).

## **Diamond Open Access**

Journals were binary classified as diamond open access (DOA) and non-DOA based on meeting all six criteria stated in the DIAMAS classification. A total of n=15 (14%) journals met all criteria to be classified as DOA:

ID	Journal
22	Revista Brasileira de Saude Ocupacional
63	Perspectives Interdisciplinaires sur le Travail et la Sante
97	Ocupacion Humana
17	Arhiv za Higijenu Rada i Toksikologiju
83	Sbornik Vedeckych Praci Vysoke Skoly Banske - Technicke Univerzity Ostrava. Rada Bezpecnos
100	The Indonesian Journal of Occupational Safety and Health
70	International Journal of Occupational Hygiene
95	Bihdasht-i Kar va Irtiqa-yi Salamat
96	Archives of Occupational Health
98	Tibbi-i-kar
101	International Journal of Occupational and Environment Safety
93	Bezopasnost' Tekhnogennykh i Prirodnykh Sistem
102	XXI Vek. Tekhnosfernaya Bezopasnost'
52	Archivos de Prevencion de Riesgos Laborales
58	The Irish Journal of Occupational Therapy

# **Article Processing Charges**

Whenever APC charges were registered in a currency distinct to euros (EUR), values were converted to EUR by using international currency exchange rates from Google Finance on 07/05/2025.

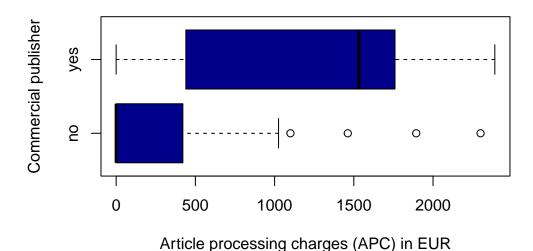
The summary of journal article processing charges (APC) per article in euros (EUR) is shown in this table:

Number of Journals m	in Q1	median (	Q3 max
----------------------	-------	----------	--------

33	0	0	15	1025	2390
----	---	---	----	------	------

The summary of APC in EUR according to commercial status of the publisher is as follows:

Commercial Publisher	Number of Journals	min	Q1	median	Q3	max
no	27	0	0.00	0.0	421	2300
yes	6	0	671.25	1532.5	1745	2390



The Mann–Whitney U-test (Wilcoxon's rank sum test) was applied to test the alternative hypothesis that the APC differed according to publisher commercial status classification:

Wilcoxon rank sum test with continuity correction

data: APC by commercial\_publisher

W = 33.5, p-value = 0.0198

alternative hypothesis: true location shift is not equal to 0

# Year of conversion to OA

The year of registration of journals as fully open access (OA) is summarized in the following table:

Number of Journals	min	Q1	median	Q3	max
33	1999	2011	2016	2018	2024

## **Author copyright**

Out of the 107 publications included for analysis, n = 15 (14%) allowed authors to retain the copyright of their works.

## Licensing

The types of licenses allowed in the journals indexed in DOAJ were the following:

license	n	Percentage
CC BY	19	57.6
CC BY-NC-ND	10	30.3
CC BY-NC	6	18.2
CC BY-NC-SA	3	9.1
CC0	1	3.0
NA	1	3.0

# R Package References

- Grolemund G, Wickham H (2011). "Dates and Times Made Easy with lubridate." *Journal of Statistical Software*, 40(3), 1-25. https://www.jstatsoft.org/v40/i03/.
- Iannone R, Cheng J, Schloerke B, Hughes E, Lauer A, Seo J, Brevoort K, Roy O (2024). gt: Easily Create Presentation-Ready Display Tables. R package version 0.11.0, https://CRAN.R-project.org/package=gt.
- Makowski D, Lüdecke D, Patil I, Thériault R, Ben-Shachar M, Wiernik B (2023). "Automated Results Reporting as a Practical Tool to Improve Reproducibility and Methodological Best Practices Adoption." CRAN. https://easystats.github.io/report/.
- Müller K, Wickham H (2023). *tibble: Simple Data Frames*. R package version 3.2.1, https://CRAN.R-project.org/package=tibble.
- Ooms J (2014). "The jsonlite Package: A Practical and Consistent Mapping Between JSON Data and R Objects." arXiv:1403.2805 [stat.CO]. https://arxiv.org/abs/1403.2805.
- Ooms J (2024). writexl: Export Data Frames to Excel 'xlsx' Format. R package version 1.5.1, https://CRAN.R-project.org/package=writexl.
- R Core Team (2024). R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.
- Rinker TW, Kurkiewicz D (2018). pacman: Package Management for R. version 0.5.0, http://github.com/trinker/pacman.
- Wickham H (2016). ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag New York. ISBN 978-3-319-24277-4, https://ggplot2.tidyverse.org.
- Wickham H (2023). forcats: Tools for Working with Categorical Variables (Factors). R package version 1.0.0, https://CRAN.R-project.org/package=forcats.
- Wickham H (2023). httr: Tools for Working with URLs and HTTP. R package version 1.4.7, https://CRAN.R-project.org/package=httr.
- Wickham H (2023). stringr: Simple, Consistent Wrappers for Common String Operations. R package version 1.5.1, https://CRAN.R-project.org/package=stringr.
- Wickham H (2024). rvest: Easily Harvest (Scrape) Web Pages. R package version 1.0.4, https://CRAN.R-project.org/package=rvest.
- Wickham H, Averick M, Bryan J, Chang W, McGowan LD, François R, Grolemund G, Hayes A, Henry L, Hester J, Kuhn M, Pedersen TL, Miller E, Bache SM, Müller K, Ooms J, Robinson D, Seidel DP, Spinu V, Takahashi K, Vaughan D, Wilke C, Woo K, Yutani H (2019). "Welcome to the tidyverse." *Journal of Open Source Software*, 4(43), 1686. doi:10.21105/joss.01686 https://doi.org/10.21105/joss.01686.
- Wickham H, Bryan J (2023). readxl: Read Excel Files. R package version 1.4.3, https://CRAN.R-project.org/package=readxl.
- Wickham H, François R, Henry L, Müller K, Vaughan D (2023). dplyr: A Grammar of Data Manipulation. R package version 1.1.4, https://CRAN.R-project.org/package=dplyr.
- Wickham H, Henry L (2023). purrr: Functional Programming Tools. R package version

- 1.0.2, https://CRAN.R-project.org/package=purrr.
- Wickham H, Hester J, Bryan J (2024). readr: Read Rectangular Text Data. R package version 2.1.5, https://CRAN.R-project.org/package=readr.
- Wickham H, Vaughan D, Girlich M (2024). *tidyr: Tidy Messy Data*. R package version 1.3.1, https://CRAN.R-project.org/package=tidyr.