

# Online Attention of Scholarly Papers on Psychosocial Hazards - Job Stress, Bullying and Burnout

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## Introduction

This study focuses on the articles of Polish and Italian researchers related to psychosocial hazards. Workplace environment plays a major role in the performance and productivity of an employee and can exert enormous influence on physical well-being of man, or a lack of it thereof. In 2005 nearly one in four workers in the European Union (EU)-27 reported to be affected by work-related stress and it has become the second most reported health-related problem at work (Mellor, 2017 OSHWiki). It seems worthwhile then to examine whether those works that analyse the phenomena of job stress, bullying and burnout are met with enough appreciation and get proper attention on social media sites, within and beyond scientific communities. These similar phenomena are defined in different ways. Stress is usually defined as a perceived imbalance between the demands made on people and their resources or ability to cope with those demands; can be caused by multiple factors, one of that is work) (Mellor 2017, OSHWiki). Various terms are used to describe repeated and long-term negative treatment at work - bullying is the English term most commonly used by researchers all over the world, other ones "harassment" or sometimes "psychological harassment" is being used more widely. "Mobbing" is used in some countries and by some researchers (Vartia, 2016 OSHWiki). Burnout has been defined as a prolonged response to chronic emotional and interpersonal stresses on the job) (Ahola, 2013 OSHWiki).

Altmetrics is a method to assess the spread of scientific knowledge, e.g. sharing papers on Twitter, Facebook or blogs (Halevi & Schimming, 2018). The main aim of this study was to examine if scholarly papers on psychosocial risks provide altmetric indicators and to compare papers written by Polish and Italian scholars. The publications in question are indexed in the Web of Science and Scopus and have a sizeable representation within the field of Occupational Safety and Health (OSH), including psychosocial hazards. There are institutes responsible for conducting research on OSH issues in either of the countries. In Italy, it is the National Institute for Prevention and Safety at Work, whereas

in Poland the counterpart institution is the Central Institute for Labour Protection – National Research Institute.

On the basis of the obtained data, the authors attempt to provide answers to the following questions: RQ1. Do Polish and Italian scientific articles in the field of psychosocial risks have altmetric indicators? RQ2 Which altmetric indicators are most common, and which are the least frequent indicators in Polish and Italian works? RQ3 What are the average numbers of altmetrics per paper? RQ4 Do citation counts of articles correlate with Twitter mentions and Mendeley readers?

## Methods

The study was divided into two stages. Stage 1 was to collect and filter the data obtained from the Scopus database. The metrics data collected from Scopus were related to the authors affiliated to Polish and Italian scientific institutions, included the keywords in the field of psychosocial hazards, and were limited to articles only (a simple search in Scopus "keywords": bullying, burnout, job stress and "affiliation country": Poland and Italy). The chronological scope of the study covered the years 2013-2018. Citation counts were collected for all papers. Only articles that were assigned a DOI were analysed (*N* Italy=594, *N* Poland=241).

The other stage of the study involved the use of the Altmetric Explorer (<http://www.altmetric.com>), which provided the present authors with altmetric indicators (Robinson-García, Torres-Salinas, Zahedi, & Costas, 2014). The data were collected on 27-29 of March 2019.

## Results

The articles collected 23,069 altmetric indicators. The highest number of altmetrics was provided by Mendeley and Twitter, both for Italian and Polish papers.

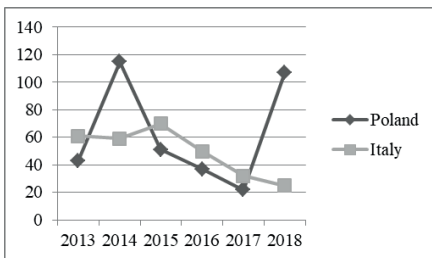
**Table 1. Altmetrics of Italian / Polish scholarly papers.**

| Keyword      | Number of papers with DOIs |            | Number of papers with altmetrics |           | Number of altmetric indicators |             |
|--------------|----------------------------|------------|----------------------------------|-----------|--------------------------------|-------------|
|              | IT                         | PL         | IT                               | PL        | IT                             | PL          |
|              | N                          |            | N                                |           | N                              |             |
| Bullying     | 160                        | 29         | 117                              | 24        | 6226                           | 1515        |
| Burnout      | 196                        | 107        | 84                               | 28        | 5088                           | 1416        |
| Job stress   | 238                        | 105        | 119                              | 37        | 5537                           | 2044        |
| <b>Total</b> | <b>594</b>                 | <b>241</b> | <b>320</b>                       | <b>88</b> | <b>16851</b>                   | <b>4975</b> |

The highest Altmetric Score (an indicator of the amount of attention that a research output has received) for Italian articles was 537 (bullying paper). This means that the article was in the 97<sup>th</sup> percentile of outputs of the same age and source. The highest Altmetric Score for Polish articles was 340 (job stress paper). The article was in the 90<sup>th</sup> percentile.

The results show a significant positive correlation between Mendeley readers and citation counts for both Italian and Polish articles (Thelwall, 2016), (Ortega, 2016). However, the correlation between Twitter and citation counts is statistically insignificant.

The average number of altmetric indicators per article was the highest for an article in Polish and was 151 (bullying paper). The highest average number of altmetrics for the Italian papers was 99 (bullying paper). The lowest average numbers of indicators were 17 for works in Polish (burnout paper) and 23 for the Italian papers (burnout paper), respectively.



**Figure 1. Average number of altmetrics per paper - job stress**

### Limitations

An important limitation of this paper is that in the study we chose arbitrarily only three keywords related to psychosocial hazards, even though a number of various terms are used to describe repeated and long-term negative treatment at work.

By searching PubMed with the MeSH terms we also found other, far more expanded, entry terms related to the topic (e.g. job stress - 29 entry terms).

In addition, the key words: job stress, bullying and burnout had much higher representation in Scopus as compared to their derivatives or related terms (Scopus query: All countries, All years – query 20 May 2019; for the term “bullying” there are 14,400 records, whereas for the term “mobbing” the number is 1261; for “job stress” – 10,044 records and for “work stress” – 3,780.

It should be emphasised, that the purpose of this article is to show the tendency to non-traditional reach of articles, therefore, it was not that important to analyse all possible terms.

### References

- Halevi, G., & Schimming, L. (2018). An Initiative to Track Sentiments in Altmetrics. *Journal of Altmetrics*, 1(1). <http://doi.org/10.29024/joa.1>
- Ortega, J. L. (2016). To be or not to be on Twitter, and its relationship with the tweeting and citation of research papers. *Scientometrics*, 109(2), 1353–1364. <http://doi.org/10.1007/s11192-016-2113-0>
- Robinson-García, N., Torres-Salinas, D., Zahedi, Z., & Costas, R. (2014). New data, new possibilities: exploring the insides of *Altmetric.com*. *El Profesional de La Informacion*, 23(4), 359–366. <http://doi.org/10.3145/epi.2014.jul.03>
- Thelwall, M. (2016). Interpreting correlations between citation counts and other indicators. *Scientometrics*, 108(1), 337–347. <http://doi.org/10.1007/s11192-016-1973-7>
- Vartia, M. (2016). Harassment at work. *OSHWiki*. Retrieved 15:57, May 20, 2019 from [https://oshwiki.eu/index.php?title=Harassment\\_at\\_work&oldid=245876](https://oshwiki.eu/index.php?title=Harassment_at_work&oldid=245876).
- Mellor, N. (2017). Psychosocial risks and work-related stress: risk assessment. *OSHWiki*. Retrieved 16:08, May 20, 2019 from [https://oshwiki.eu/index.php?title=Psychosocial\\_risks\\_and\\_work-related\\_stress:risk\\_assessment&oldid=247240](https://oshwiki.eu/index.php?title=Psychosocial_risks_and_work-related_stress:risk_assessment&oldid=247240).
- Ahola, K. (2013). Understanding and Preventing Worker Burnout. (2013, April 26). *OSHWiki*. Retrieved 16:42, May 20, 2019 from [https://oshwiki.eu/index.php?title=Understanding\\_and\\_Preventing\\_Worker\\_Burnout&oldid=237985](https://oshwiki.eu/index.php?title=Understanding_and_Preventing_Worker_Burnout&oldid=237985)

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