



Journals' policies of storage and reuse of raw research data

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Purpose

- To analyse **open-data policies** concerning the availability of raw data in journals
- **5 subject categories** of the JCR
- Relation of these policies with the **impact factor** and the **quartile**

Methods

Revision of the websites of **451 journals** included in the following JCR subject categories:

- ✓ Food Science and Technology (FS&T) (124 journals)
- ✓ Pediatrics (115 journals)
- ✓ Information Science & Library Science (IS&LS) (85 journals)
- ✓ Substance Abuse (39 journals)
- ✓ Dentistry (88 journals)

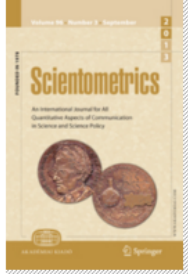
Methods

For each journal we documented rules related to public availability of sharing research data as stated in the [instructions to authors](#)



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Instructions for Authors

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This journal is committed to upholding the integrity of the scientific record. As a member of the Committee on Publication Ethics (COPE) the journal will follow the COPE guidelines on how to deal with potential acts of misconduct.

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Methods



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Collecting Multiple Files

It is possible to collect multiple files in a .zip or .gz file.

Methods

Variables analysed:

- a) Statement on deposit of supplementary material attached with the manuscript
- b) Acceptance of reuse of data included as supplementary material
- c) Acceptance of storage in thematic or institutional repositories

Methods

Variables analysed:

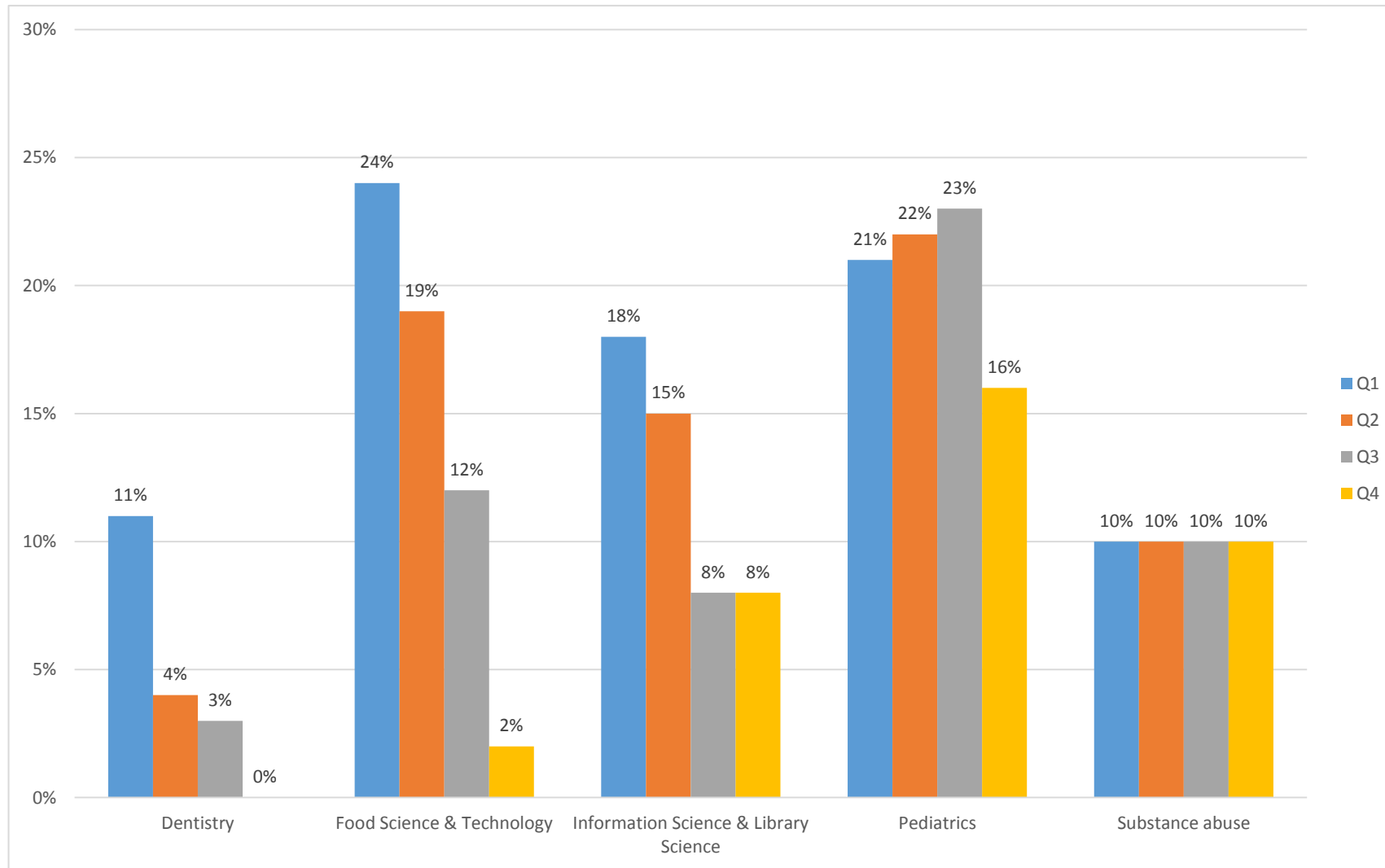
- ✓ Impact factor
- ✓ Quartile in JCR



Table 1. Acceptance of the variable “Statement of supplementary material”

Quartile in JCR	Dentistry	FS&T	IS&LS	Pediatrics	Substance abuse
1	10 (11.4%)	30 (24.2%)	16 (18.8%)	24 (20.9%)	4 (10.3%)
2	4 (4.5%)	24 (19.5%)	13 (15.3%)	25 (21.7%)	4 (10.3%)
3	3 (3.4%)	16 (12.9%)	7 (8.2%)	26 (23.6%)	4 (10.3%)
4	0	3 (2.4%)	7 (8.2%)	19 (16.5%)	4 (10.3%)
Total*	17 (19,3%)	73 (59%)	43 (50.6%)	94 (81.7%)	16 (41.2%)

Figure 1. Acceptance of the variable “Statement of supplementary material”



Results

“Statement of supplementary material”

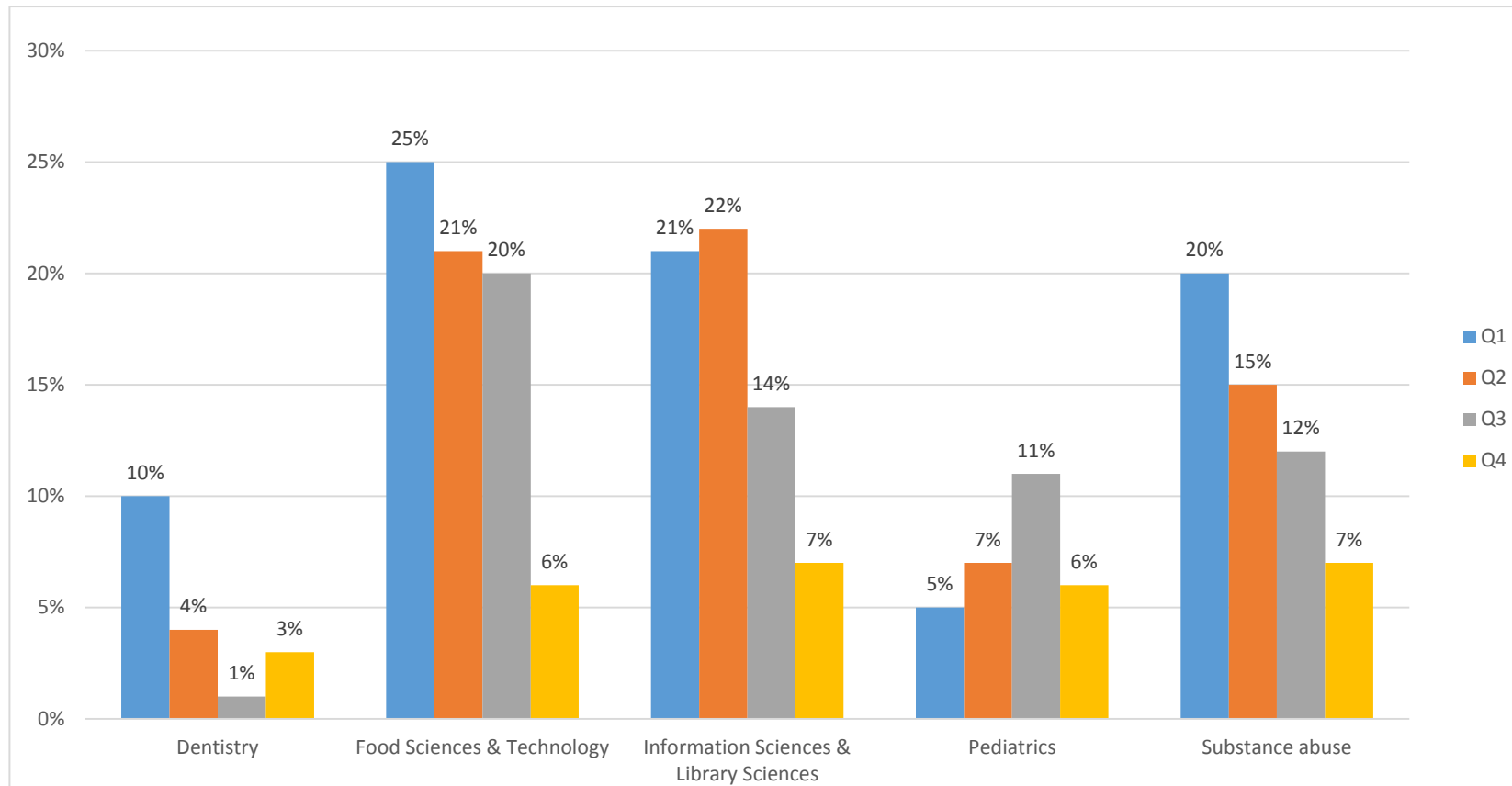
- From 82% in Paediatrics to 19% in Dentistry
- Statistical significant differences have been found in this variable through the four quartiles, with a higher acceptance in the upper quartiles (Q1 and Q2) and lower in Q3 and Q4.
- The highest values for journals ranked in the Q1 correspond to FS&T (24.2%) and Pediatrics (20.9%).

RESULTS

Table 2. Acceptance of the variable “Reuse”

Quartile in JCR	Dentistry	FS&T	IS&LS	Pediatrics	Substance abuse
1	9 (10.2%)	31 (25%)	18 (21.2%)	6 (5.2%)	8 (20.5%)
2	4 (4.5%)	27 (21.7%)	19 (22.3%)	9 (7.8%)	6 (15.4%)
3	1 (1.1%)	25 (20.2%)	12 (14.1%)	13 (11.3%)	5 (12.8%)
4	3 (3.4%)	8 (6.5%)	6 (7.1%)	7 (6.1%)	3 (7.7%)
Total*	17 (19,3%)	91 (73.4%)	55 (64.7%)	35 (30.4%)	22 (56.4%)

Figure 2. Acceptance of the variable “Reuse”



Results

"Reuse"

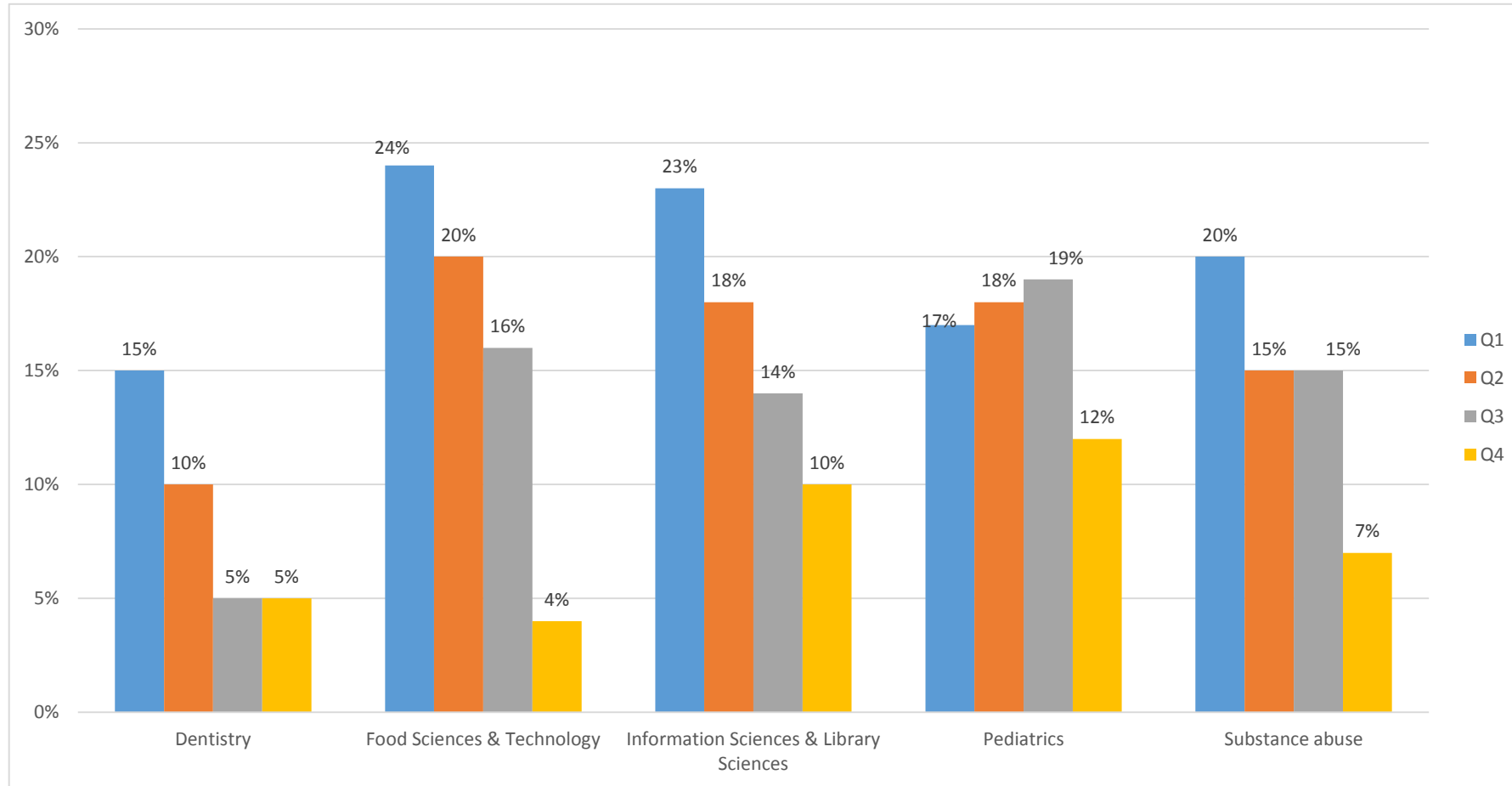
- From 65% in ISLS to 19% in Dentistry
- The acceptance is higher in the upper quartiles
- The highest values for journals ranked in Q1 correspond to FS&T (25%), IS&LS (21.2%) and Substance abuse (20.5%).

RESULTS

Table 3. Acceptance of “Storage in thematic or institutional repositories”

Quartile in JCR	Dentistry	FS&T	IS&LS	Pediatrics	Substance abuse
1	14 (15.9%)	30 (24.2%)	20 (23.5%)	20 (17.4%)	8 (20.5%)
2	9 (10.2%)	25 (20.2%)	16 (18.8%)	21 (18.38%)	6 (15.4%)
3	5 (5.7%)	20 (16.1%)	12 (14.1%)	22 (19.1%)	6 (15.4%)
4	5 (5.7%)	6 (4.8%)	9 (10.6%)	14 (12.1%)	3 (7.7%)
Total*	33 (37.5%)	81 (65.4%)	57 (67%)	77 (67%)	23 (59%)

Figure 3. Acceptance of “Storage in thematic or institutional repositories”



RESULTS

“Acceptance of storage in thematic or institutional repositories”

- From > 65% in IS&LS, Pediatrics and FS&T to only 37% in Dentistry
- The acceptance is higher in the upper quartiles.

CONCLUSIONS

- Different behaviours according to the thematic areas, including within the health sciences areas (from 82% in Paediatrics to 19% in Dentistry)
- Journals with a better position in the impact factor ranking have an open policy about scientific data.
- This behaviour has been also observed in previous works analysing policies of open research data in high impact factor journals (Alsheikh-Ali et al, 2011)

CONCLUSIONS

- If journals are the appropriate location for data sharing, it would be helpful to know not only what journals' policies are but also what their actual practices are.

Limitations and questions

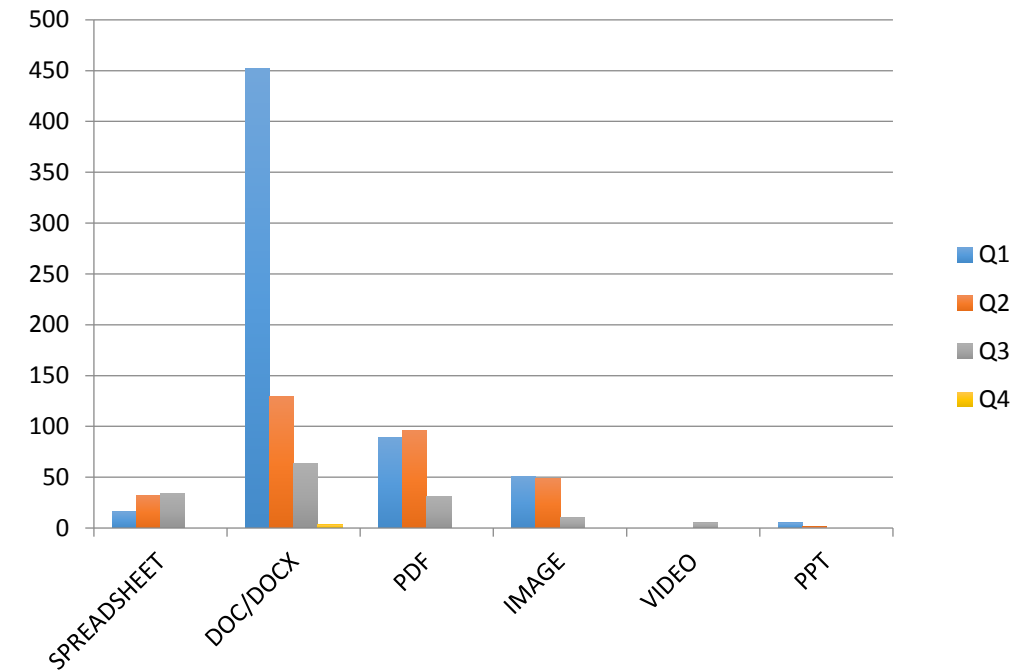
- 1.** Only in five subject categories
- 2.** We do not know the real frequency of data sharing among scientists
- 3.** If journals permit but do not require data to be shared, what percentage of authors choose to share their data?

Future research

- To analyse policies in other subject categories of JCR.
- To investigate the rate of papers in each subject category that really provide data for reuse
- To identify the nature of these data

Advancement of future research

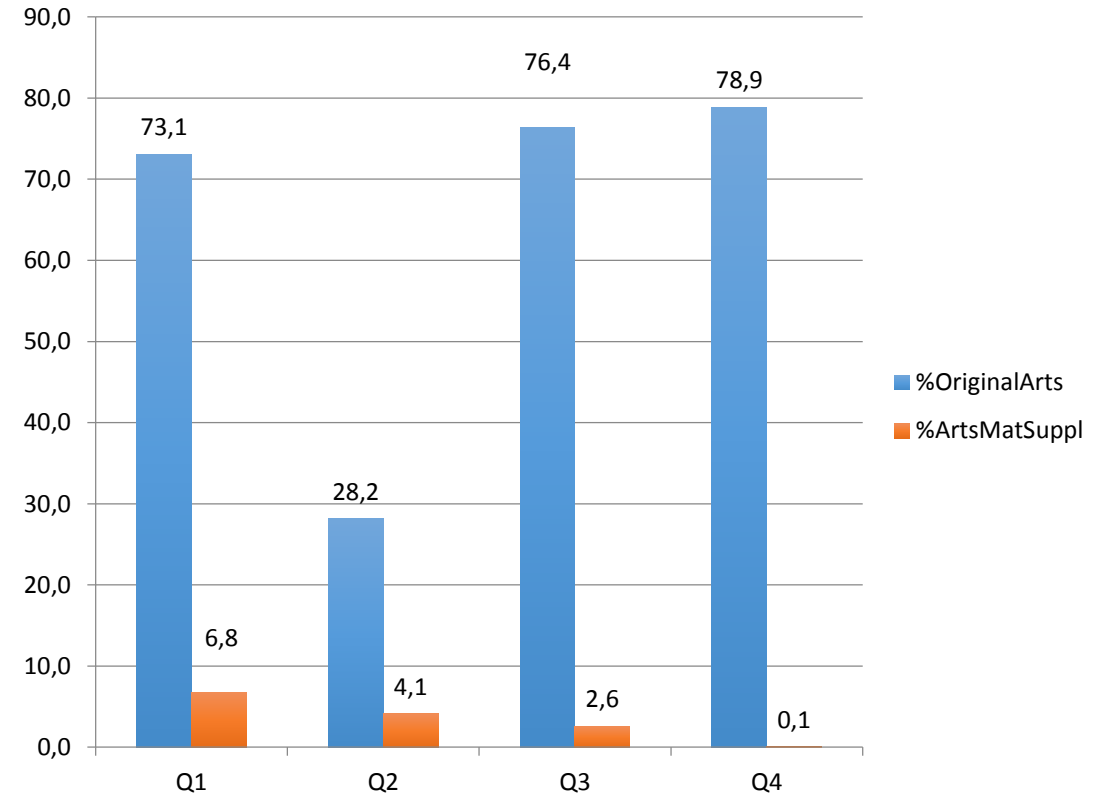
- 697 (4,7%) of 14,911 original articles published in 39 Substance Abuse journals included in Pubmed Central repository contained supplementary material



Advancement of future research

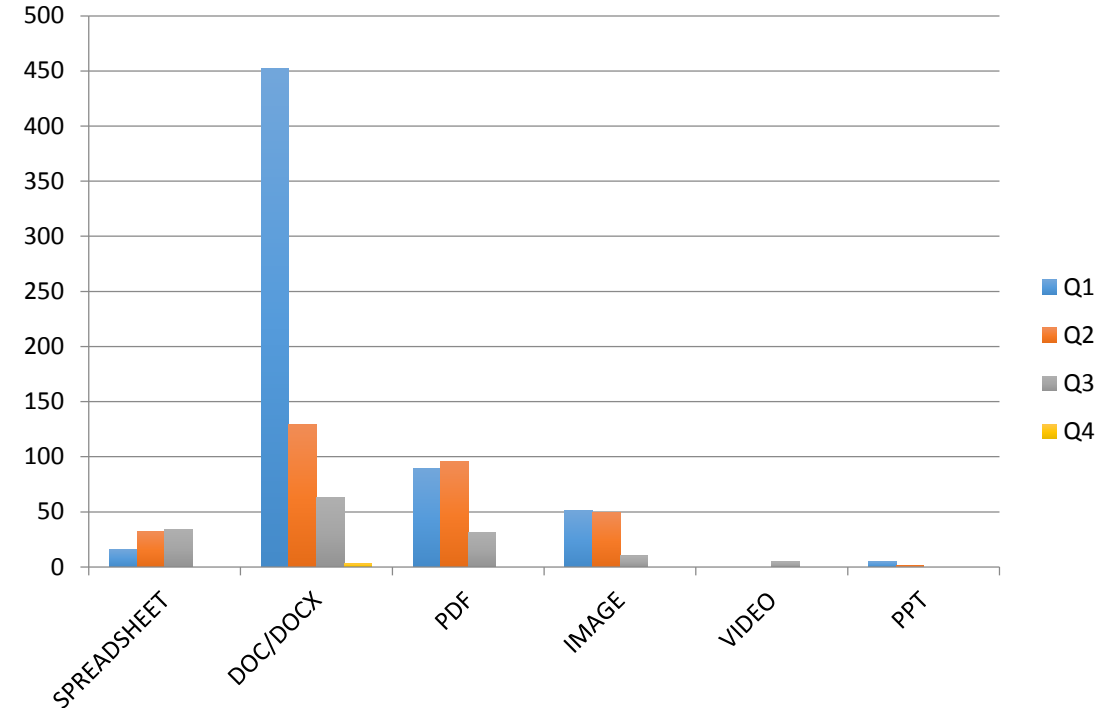
- The percentage of papers with supplementary material is higher in upper quartiles (7% in Q1; 4% in Q2; 3% in Q3)

**SUBSTANCE
★ ABUSE ★**



Advancement of future research

- Type of suppl. material uploaded:
 - Text and .pdf files are the most frequent especially tables and figures.
 - Spreadsheets and raw data (i.e., .xls or .xlsx files) represent 7.7%



Advancement of future research



41% of journals: Statement of supplementary material



5% of papers contain s.m.



8% of papers with s.m. contain raw data

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