## Abstract

**INTRODUCTION** OA publishing is now solidly established as a publishing model. This study examines current faculty members understanding of and perceptions of OA publishing, focusing on demographic data that divide faculty into categories by age, rank, or years teaching, to understand whether these characteristics correspond to specific perceptions and behaviors. **METHODS** A web-based survey targeting PhD faculty members at U.S. universities and colleges was distributed, the data was analyzed using SPSS to determine frequencies, significance, and relationships when possible. The open-ended answers were analyzed by grouping and coding items into categories. **RESULTS** There is a growing trend in self reported knowledge of OA across all age groups, still about 30% of respondents aren't familiar with OA. The credibility of OA journals is the top issue of concern. Neither rank, nor age, nor years teaching in higher education were statistically significant to predict whether faculty would publish in OA journals. **DISCUSSION & CONCLUSIONS** Actual OA publishing experience is still relatively conservative. Unlike early studies, the findings from this investigation indicate that factors such as age, rank, or years publishing may no longer be suitable for predicting opinions and actions. More faculty authors may already be engaging in OA publishing activity than previously assumed. Librarians must be open to the idea that supporters and engaged faculty members may come from groups and disciplines not previously considered. While not all faculty researchers may be enthusiastic supporters, there appears to be a general acceptance of the enviable change that is coming.

**Implications for Practice:**

1. This article will inform librarians of the current trends in perceptions of OA held by PhD faculty.

2. This study will assist librarians in developing strategies for prompting OA on their campus and gathering partners to work toward OA initiatives by dispelling notions that a generational or rank divide exists.

3. This study brings to light additional areas to investigate regarding faculty researchers misperceptions of access and possible barriers for OA publishing.

**Keywords: scholarly communication, open access, perceptions, demographics**

**Awareness and Attitudes about Open Access Publishing: A Glance at Generational Differences**

Librarians' roles are becoming increasingly entangled in the scholarly communications life cycle, from providing the necessary support and guidance faculty need for disseminating their research to engaging in open access outreach activities that encourage a shift to a more open and fair publishing structure. A decade ago Peter Suber (2004) defined open access (OA) literature as "digital, online, free of charge, and free of most copyright and licensing restrictions" (para. 1). OA publishing is now solidly established. The Directory of Open Access Journals (DOAJ) added nearly 1200 titles between 2011 and 2012 (Enserink, 2012).  In 2011, about 17% of all papers published (1.66 million) appeared in OA journals, a total of 340,000 articles, an increase of about one percent every year over the last decade (Laakso & Björk, 2012).

Yet, the 2009 Ithaka S+R Faculty Survey stated that even after much effort on the part of multiple stakeholders to influence scholarly communication reform, a "fundamentally conservative set of faculty attitudes continues to impede systematic change" (Schonfeld, & Housewright, 2009, p. 25), stressing that faculty members' greatest concerns are for tenure and promotion.  Three years later the Ithaka S+R Faculty Survey (Housewright, Schonfeld, & Wulfson, 2013) found that the free online availability of their published research is still one of the lowest priorities of faculty authors when making publishing decisions.

Librarians struggling to find effective ways to talk with faculty about OA issues have to contend with researchers' opinions and anxieties especially in regards to faculty concerns about tenure and promotion. Gaining a better understanding of authors' perceptions and concerns is

crucial for librarians working to increase access to their institution's scholarship, whether by

promoting OA publishing or by recruiting faculty publications for deposit into institutional

repositories.

This exploratory study investigates current awareness and perceptions of OA publishing

of research faculty from across disciplines, using the demographics factors of either age,

seniority, rank or years teaching to understand whether these characteristics correspond to

specific perceptions and behaviors.

## Literature Review

As open access and alternative publishing models were emerging there was a great deal

of interest in studying authors' perceptions, opinions, and attitudes about the new scholarly

communication innovations. Studies were conducted nearly every year dating back to 1991 with

a majority finding researchers either unaware or confused about OA (Xia, 2010).  The bulk of

recent investigations focus on authors who have already published in OA, exploring their

reasons for choosing OA, their experiences with this method of publishing (Coonin & Younce,

2010; Nariani & Fernandez, 2012; Warlick & Vaughan, 2007), and their attitudes about different

funding models (Solomon & Björk, 2012).

This literature review focuses on key studies published in the last decade (after 2003)

that investigate faculty knowledge about and opinions of OA publishing, highlighting studies

that conducted some demographic analysis.

**Knowledge of OA**

Knowledge of OA has most certainly increased over the past ten years (Swan & Brown,

2004; Xia, 2010) particularly during the early to mid-2000s. Two large international CIBER

Research Ltd. studies (Rowlands et al., 2004; Rowlands & Nicholas, 2006;) documented a

significant increase in self-reported knowledge of OA over only an 18 months time frame. Two

separate case studies with faculty from the University of California Berkeley (Harley, Earl-Novell,

Arter, Lawrence, & King, 2007;  Harley, Acord, Earl-Novell, Lawrence & King, 2010) revealed a

more nuanced perspective, with members across disciplines demonstrating a minimal

understanding of open access models but a good understanding of the high cost of journals.

A gap remains today between attitude and behavior, as faculty are unmotivated to make

changes, due in part to ingrained habits and institutional culture. In addition, a full

understanding of the importance of free and open access to information is hindered by easy

online access to publications through aggregators like Google Scholar; this perception of

convenient availability is further distorted at major universities with comprehensive collections

(University of California's Office of Scholarly Communication, 2007).

**Faculty opinions of OA**

Even with increased knowledge and awareness, misconceptions persist alongside the

growth in OA publishing. Many faculty still equate OA's free access with little or no quality

control measures and thus believe open access means lower quality (Harley, Acord, Earl-Novell,

Lawrence & King, 2010). The concerns about the quality of OA journals and the relationship

between OA and the existing tenure and promotion models are found throughout the literature

(Dallmeier-Tiessen et al., 2011; Meadows, 2012; The University of California Office of Scholarly

Communication and the California Digital eScholarship Program, 2007). Particularly in early

studies, concerns about peer review were paramount in faculty authors' minds (Swan & Brown,

2004) and continued to be hotly debated (Bosman, 2013; Buckland, Eve, Steel, Gardy & Salo,

2013). Additional concerns exist about costs to authors and the impact or prestige of OA

journals (Morris & Thorn, 2009).

A recent investigation by the Study of Open Access Publishing (SOAP) explored

international biological and medical science researchers' attitudes about OA; the study reported

that a majority of respondents (90%) felt that OA benefited their fields, but that the lack of

institutional funding for publishing in OA journals and low perceptions of journal quality were

top concerns (Dallmeier-Tiessen et al., 2011). Bias found in both the survey design and analysis

lead Davis (2011) to further analyze the SOAP data, wherein he found that the top five factors

that influence publishing choice to be prestige, relevance for community, impact factor,

likelihood of acceptance, and positive experience. Open access as a motivation for publishing

choice actually fell to the bottom, along with concern about copyright, which confirms previous

studies (Rowlands et al., 2004). The SOAP survey did collect some demographic data, but

unfortunately the limited published report did not analyze this dataset specifically.

**Demographics analysis**

Studies that collected and reported on demographic information tended to group

academic participants into categories, either by faculty seniority (junior=pre-tenure and

senior=tenured) or by the years they have been teaching or publishing. The general assumption

across studies is that tenured faculty members are older than untenured, but few analyze any

demographic data in detail, such as considering how participants' ages may impact their

perceptions. There is not enough consistency or commonality across studies that did collect and

report demographic data to allow for a longitudinal comparison of age or other demographic

characteristics (Xia, 2010).

The literature is contradictory around the notion of younger authors being open to new

publishing models. Early CIBER studies concluded that an author's age was a major determinant

for predicting their attitude toward open access, with older researchers--those over 35--being

less likely to be accepting of new publishing models (Rowlands, Nicholas, & Huntington, 2004;

Rowlands & Nicholas, 2006). While a few studies reported a lack of negative opinions of OA by

younger respondents, Morris and Thorn (2009) found that younger authors were less likely to

have published or to know whether they had published in an OA journal, indicating uncertainty

about the meaning of open access. Younger authors also expectedly demonstrated concern

about negative impacts on tenure (Harley, Acord, Earl-Novell, Lawrence, & King, 2010).

Investigations looking at rank or tenure status also are inconsistent. Norwick (2008)

found that tenured faculty tended to feel less favorably toward OA, but also no evidence to

suggest that pre-tenured faculty--at least those in the biosciences--avoid OA journals. In

contrast, recent case studies of University of California Berkley faculty (Harley, Earl-Novell, Arter,

Lawrence, & King , 2007;  Harley, Acord, Earl-Novell, Lawrence & King, 2010) found that while

there is no evidence indicating that younger graduate students are embracing new publishing

options, senior scholars "seem to exercise significantly more freedom in the choice of

publication outlet" when compared to their untenured colleagues (Harley et al., 2010, p. ii).

An unpublished Wiley and Sons report claims researcher rank influenced OA publishing

decisions, citing a statistical significance of those with five or more years of professional

experience being more likely to publish in OA journals (Meadows, 2012).  This five-year

measurement is problematic in that researchers with less than five years experience would have

much less publishing activity and it cannot be assumed that those with more experience

automatically have tenure or some higher rank.

A fact that must be considered is that those who were younger or mid-career when

many of these studies were conducted have now moved into the tenure ranks and senior roles,

which would mean that the perceived threat to tenure review is likely to be less (each year)

than may have been previously assumed. No study to date has specifically investigated opinions

of senior faculty, who are more likely to sit on tenure review committees (Hurrell and Meijer-

Kline, 2011).

This inconsistency of younger authors having positive perceptions of OA together with

concerns for tenure, while senior researchers are demonstrating increased acceptance of OA,

suggest there's opportunity for further investigation of open access publishing activity relevant

to the tenure review process.

**Methods**

The data reported in this article are a subsection of a larger data set collected through a

web-based Institutional Review Board (IRB) approved survey titled: *What Is Your Research*

*Generation?* This survey focused on research faculty members' habits, technology use,

perceptions of the library and their own research skills. The survey was delivered via Survey

Monkey from April 6-May 30, 2011. The target audience was any academic research faculty

member possessing a PhD at U.S. universities and colleges which intrinsically excluded most

librarians and a few other disciplines that do not require a PhD as a terminal degree. These

groups was chosen under the assumption that they had completed significant research and

were likely to be currently preforming some research that required engagement with the library

and online resources. The survey was distributed via email to all faculty members at the

author's home institution; a medium-sized public university located 30 miles north of Detroit,

Michigan. In addition, colleagues at other universities promoted and distributed the survey to

their faculty; it was also distributed on several library- and university-related listservs with the

request to further share the link with other research faculty colleagues.  Calls for survey

participation were also posted to Academia.edu and the *Chronicle of Higher Education*'s

research faculty forum. Taking into account studies of online survey design and incentive-based

participation (Deutskens, De Ruyter, Wetzels, & Oosterveld, 2004), respondents were given the

opportunity to partake in a lottery-style incentive system to win a gift card. Their decision to

enter the incentive drawing was not connected in any way to their survey answers.

Beyond the initial capturing of participants' IP addresses, inherent to web-delivered

surveys, participation was anonymous. IP identifiers were delinked from the survey answers,

and after the initial analysis for geographic location were deleted to comply with institutional

review board regulations.

The OA subsection of the survey consisted of four questions, with questions two through

four being dependent on whether the participant answered "yes" to the first question affirming

they know something about OA publishing. If participants answered "no," the system

automatically forwarded them to the next section. See Table 1 for survey questions related to

open access.

**OA Survey Questions:**
1. Are you familiar with open access (OA) publishing?

- Yes
- No

2. Have you published in OA journals or repositories?

- Yes
- No


3. Would you use articles found in OA journals in your scholarship research?

- Yes
- No


4. In your opinion what are the top issues impeding wide-spread adoption of OA publishing?

- Reputation of publishing house or press
- Credibility of journals
- Conflict with tenure
- Quality on par with non-OA journals
- Knowledge that journals exists
- Other (Please specify)

*Table 1 OA Survey questions*


The data was analyzed using SPSS to determine frequencies, significance, and

relationships when possible. The open-ended answers were analyzed by grouping and coding

items into categories.  Table 2 lists the demographic factors analyzed in detail when data

showed patterns worthy of highlighting. Table 3 details the subject areas of respondents

according to discipline.

| Demographic factors | Variables Included |
|---|---|
| Age | Age category by decade |
| Rank | Tenure & tenure track, adjunct & visiting |
| Years Teaching | Number of years teaching |
| Discipline | broad subject discipline in which faculty member primary teaches |

*Table 2 Demographic factors analyzed*

| Discipline categories | Subjects included |
|---|---|
| Arts & Humanities | Language & Literature, Math, History, Philosophy, Art, Music |
| Social Sciences | Sociology, Psychology, Political Science, Communication, Education |
| Natural Sciences | Chemistry, Biology, Physics |
| Business | All Business |
| Engineering | All Engineering |
| Information & CS | Information & Computer Sciences |
| HS, Nursing & Medicine | Health Sciences, Nursing and Medicine |

*Table 3 Subject areas categories by discipline*

## Results

Two hundred and twenty-four respondents participated in the survey which included 30 questions in five categories; the four questions from the OA category along questions relating to respondents' demographics constitute the data set for the current analysis. Not all respondents completed all the survey questions in each of the five categories, because of the limited numbers of respondents to the OA sections incomplete answers were still included. The participants' IP addresses located them throughout 38 states and seven countries, with about half of the respondents located outside the author's university and surrounding areas.

The majority of respondents (75.5%) fell between the age ranges of 31-60 years old; 56.9% of respondents were tenured, 34.5% pre-tenured, and 8.6% were adjunct or visiting faculty. Kruskall-Wallis ANOVA found a significant difference between the respondent's age

category at the various rank levels ($c^2$ = 60.70; *df*= 3; P=<.000).  This finding appears to reflect

the probability that pre-tenure faculty are younger than tenured faculty, most likely due to the

time it takes to achieve tenure. Table 4 reports mean age by tenure status or rank.

| RANK | MEAN | AGE CATEGORY | SD |
|---|---|---|---|
| Tenure | 3.75 | 41-50 | 0.97 |
| Pre-tenure | 2.43 | 31-40 | 1 |
| Adjunct & Visiting | 2.41 | 31-40 | 1.06 |

*Table 4 Respondents' mean age by tenure status or rank*

Faculty from Art, Humanities, and Social Sciences made up 75.6% of respondents. Table 5

displays respondents' primary teaching discipline. Note: Seven of the respondents declined to

choose a discipline or made a note in the comments field stating they did not teach.

| Disciplines | Valid % | n= |
|---|---|---|
| Arts & Humanities | 46.5% | 101 |
| Social Sciences | 30.4% | 66 |
| Natural Sciences | 4.6% | 10 |
| Business | 5.5% | 12 |
| Engineering | 1.8% | 4 |
| Information & CS | 4.1% | 9 |
| HS & Nursing | 6.9% | 15 |
| | | 217 |

*Table 5 Discipline breakdown of respondents*

**QUESTION ONE: Knowledge of OA**

The first OA-related question asked about general familiarity with OA. Overall, of the 207

respondents that participated in the OA section of the survey, 67.1% of respondents (n=141)

answered "yes," indicating that they were familiar with OA. These respondents were

predominately between the ages of 31-60 (74.9%; n=104) and many have been teaching for 7-

15 years (41%. n=31). If participants answered "no" to this question the system automatically

forwarded them to the next category and they answered no more OA-related questions.

Open-ended comments made with this question by a few respondents indicated that

some are still confused about the concept of OA.  One comment seemed to imply web-based

journals were synonymous with OA. Another stated, "I know of some open access publishing

houses and books, but it's not very easy to get review copies."

**Knowledge of OA - age.**

Knowledge of OA was fairly evenly distributed among age groups. Table 6 displays

respondents' familiarity by age category.

| AGE | YES | n= | NO | n=2 |
|---|---|---|---|---|
| 20-30 yrs | 63.6% | 7 | 36.4% | 4 |
| 31-40 yrs | 67.3% | 35 | 32.7% | 17 |
| 41-50 yrs | 62.5% | 35 | 37.5% | 21 |
| 51-60 yrs | 72.3% | 34 | 27.7% | 13 |
| 61 -70+ yrs | 65.9% | 27 | 34.1% | 14 |
|  |  | 138 |  | 69 |

*Table 6 Familiarity with open access publishing by age category*

**Knowledge of OA - rank.**

Across ranks and seniority faculty affirmed their awareness of OA at nearly equal

percentages, 62% (n=67) of tenured and 69.2% (n=45) of pre-tenure and 53.8% (n=7) of

adjuncts and visiting faculty answered "Yes."

**Knowledge of OA - years teaching.**

Respondents with 11-15 years teaching experience had the least knowledge of OA, with

48.8% (n=20) of this group answering "No," which was 29% of the total "No" responses. The

remaining groups all answered "Yes" at above 60%.

**Knowledge of OA - discipline.**

Table 7 reports respondents' awareness by discipline. Faculty teaching in the Arts and

Humanities made up 44.1% and Social Science faculty were 31.9% of the total respondents.

Actual numbers of respondents for some of the disciplines was very small.

| Reported discipline | YES | n=count | NO | n=count2 |
|---|---|---|---|---|
| Arts & Humanities | 78.9% | 71 | 21.1% | 19 |
| Social Sciences | 60.0% | 39 | 40.0% | 26 |
| Natural Sciences | 50.0% | 5 | 50.0% | 5 |
| Business | 66.7% | 8 | 33.3% | 4 |
| Engineering | 0.0% | 0 | 100.0% | 4 |
| Information & CS | 100.0% | 8 | 0.0% | 0 |
| HS, Nursing & Medicine | 40.0% | 6 | 60.0% | 9 |
| | | 137 | | 67 |

*Table 7 Familiarity with open access publishing by discipline*

**QUESTION TWO: Publishing history**

Out of the respondents who moved on (n=142) to the next three questions, 28.2%

(n=40) reported that they had already published in an OA journal or repository. However, the

open-ended comments nevertheless indicate that they are still unclear about OA journals: one

respondent stated they weren't sure and another listed a journal name with a question mark.

The journal was in fact an OA publication.

**Publishing history - age.**

Publishing history within the age brackets is reported in table 8. The 51-60 age bracket had the highest percentage of knowledge about OA publishing (72.3%), but the second lowest percentage of OA publishing activity (17.6%). Note: two respondents declined to choose an age bracket.

| AGE | YES | n=count | NO | n=count2 |
|---|---|---|---|---|
| 20-30 | 57.1% | 4 | 42.9% | 3 |
| 31-40 | 30.6% | 11 | 69.4% | 25 |
| 41-50 | 28.6% | 10 | 71.4% | 25 |
| 51-60 | 17.6% | 6 | 82.4% | 28 |
| 61-70+ | 25.9% | 7 | 74.1% | 20 |
| | | 38 | | 101 |

*Table 8 Publishing history by age bracket*

Pearson Chi Square two-sided analysis determined a significant association between OA publishing history and respondent age category ($c^2$=(4, n=139)=.289; p<.001). Respondents who were slightly older indicated they have OA publishing activity at a higher frequency than the youngest respondents.

**Publishing history – tenure status.**

A higher percentage of tenured faculty members reported having published in open access journals or repositories (31.3 %, n=21) than pre-tenured faculty (23.9%, n=11). Among adjunct and visiting faculty, 42.9% (n=3) of respondents indicated  a history of OA publishing, though the actual count was very small due to the low number of adjunct/visiting faculty respondents to this question (n=7).  Pearson Chi Square two-sided analysis determined a significant association between OA publishing history and respondent's tenure status ($c^2$(2, *n=120)=.496, p<.001*). Tenured respondents indicated at a higher frequency they have OA

publishing activity than pre-tenured, but in both categories those who had published were

predominately from the younger age brackets, see Table 9.

| AGE | Tenured | Pre-tenure | Adjunct & Visiting |
|---|---|---|---|
| 20-30 | 0.0% | 36.4% | 0.0% |
| 31-40 | 21.1% | 36.4% | 66.7% |
| 41-50 | 31.6% | 18.2% | 0.0% |
| 51-60 | 21.1% | 0.0% | 33.3% |
| 61-70+ | 26.3% | 9.1% | 0.0% |

*Table 9 Percentage of those who have published by rank, seniority & age*


**Publishing history - years teaching.**


Every group had some OA publishing activity. Researchers with the least teaching

experience indicated OA publishing activity as much or more than those with more teaching

experience, see Chart 1. Respondents with 7-10 years teaching experience had the highest

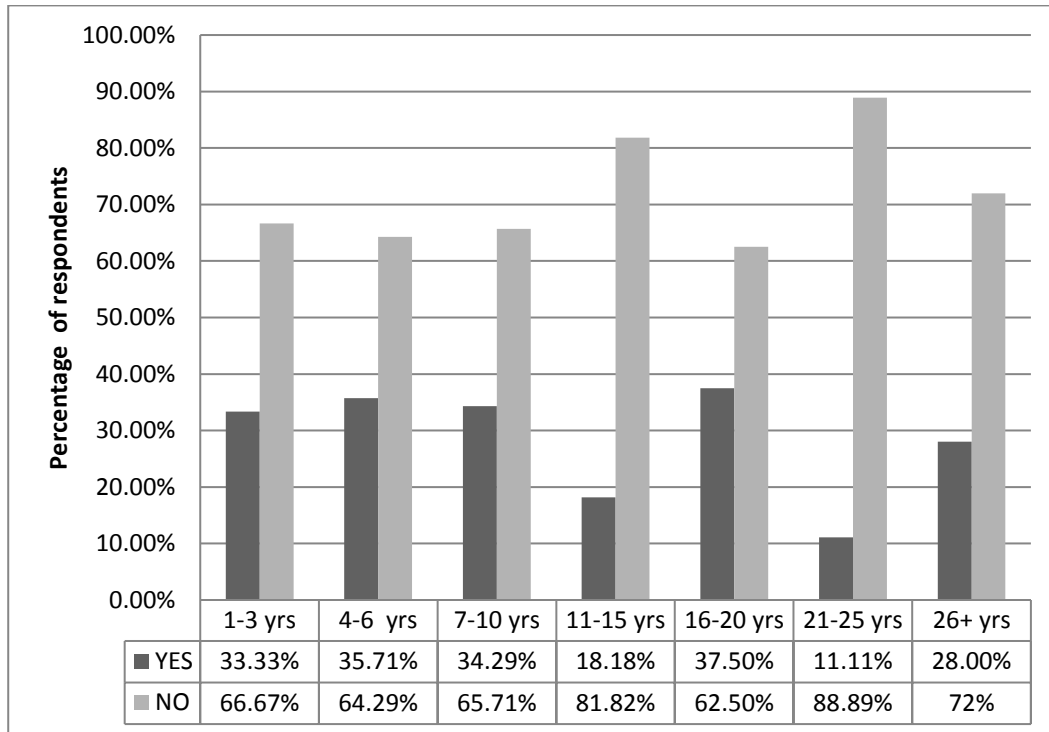number individuals (n=12) with OA publishing history.

| | 1-3 yrs | 4-6 yrs | 7-10 yrs | 11-15 yrs | 16-20 yrs | 21-25 yrs | 26+ yrs |
|---|---|---|---|---|---|---|---|
| ■ YES | 33.33% | 35.71% | 34.29% | 18.18% | 37.50% | 11.11% | 28.00% |
| ■ NO | 66.67% | 64.29% | 65.71% | 81.82% | 62.50% | 88.89% | 72% |

*Chart 1 Publishing history by years teaching*

**QUESTION THREE: Perceptions of OA journals – Use in research**

All age groups overwhelmingly affirmed they would use articles found in OA journals in
their research. Thirty respondents choose "not sure," of these 69.9% were tenured faculty. Four
respondents from across the groups answered "no."

**QUESTION FOUR: Perception of OA journal – Issues Impeding Adoption**

The credibility of OA journals was selected by all respondents as the top issue impeding
wide-spread adoption of OA publishing at a rate of 72%.

**Perceptions of OA journals - age.**

Credibility of OA journals was the top issue of concern, selected by an average of 68.6%

across age groups. The remaining four categories (reputation of publishing house or press,

conflict with tenure, quality on par with non-OA journals, knowledge that journals exists)

averaged 45.1%. Respondents could choose as many reasons as they desired. Only 45.5% of all

respondents chose conflict with tenure as one of the top issues impeding OA adoption. Across

the age groups an average 39.5% in each group selected conflict with tenure as one of their

concern, with percentages slightly higher than 50% for those under 40.  Chart 2 represents the

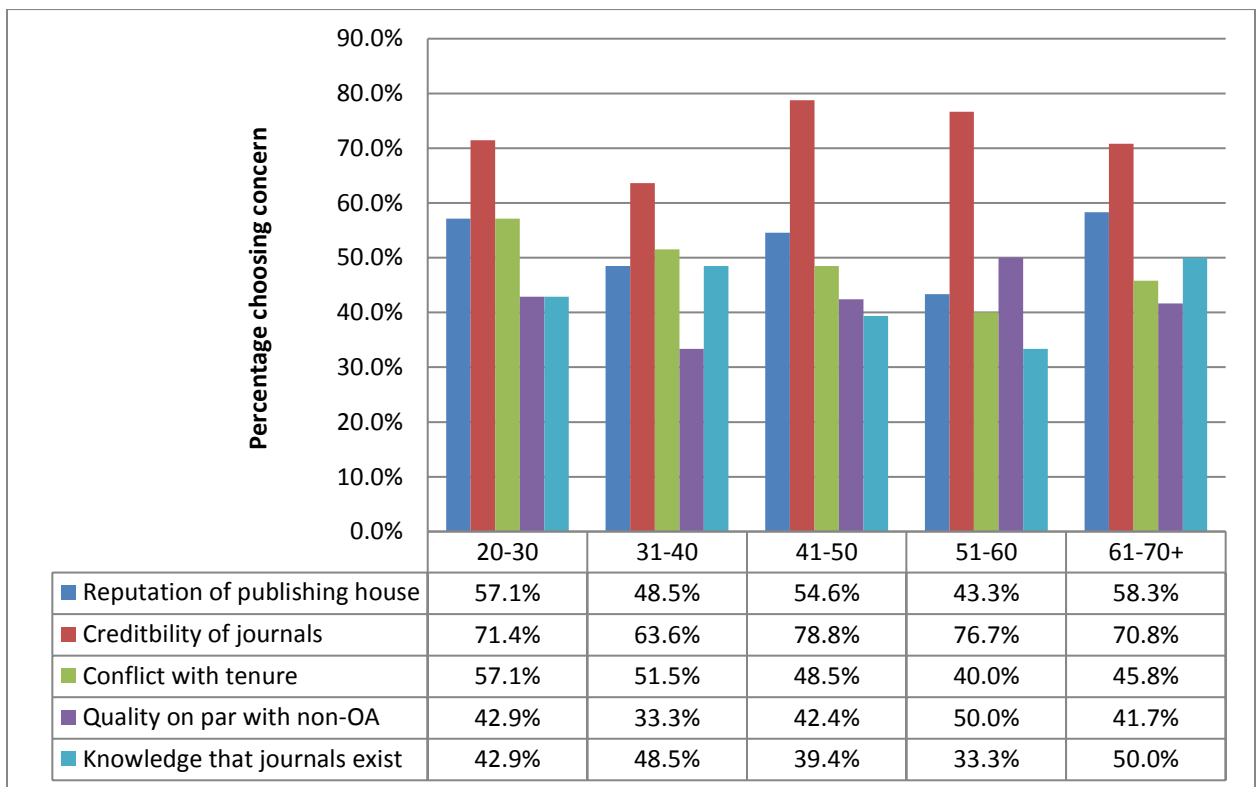age bracket distribution for the five concerns.



| | 20-30 | 31-40 | 41-50 | 51-60 | 61-70+ |
|---|---|---|---|---|---|
| ■ Reputation of publishing house | 57.1% | 48.5% | 54.6% | 43.3% | 58.3% |
| ■ Creditbility of journals | 71.4% | 63.6% | 78.8% | 76.7% | 70.8% |
| ■ Conflict with tenure | 57.1% | 51.5% | 48.5% | 40.0% | 45.8% |
| ■ Quality on par with non-OA | 42.9% | 33.3% | 42.4% | 50.0% | 41.7% |
| ■ Knowledge that journals exist | 42.9% | 48.5% | 39.4% | 33.3% | 50.0% |

*Chart 2 Top issues impeding wide-spread adoption of OA publishing by age*

**Perceptions of OA journals  - rank.**

Credibility of OA journals ranked almost 20% higher than the second greatest concern

for both tenured and pre-tenure faculty. Both faculty groups choose "conflict with tenure" at

almost equal percentages. Chart 3 details the top issues impeding wide-spread adoption of OA
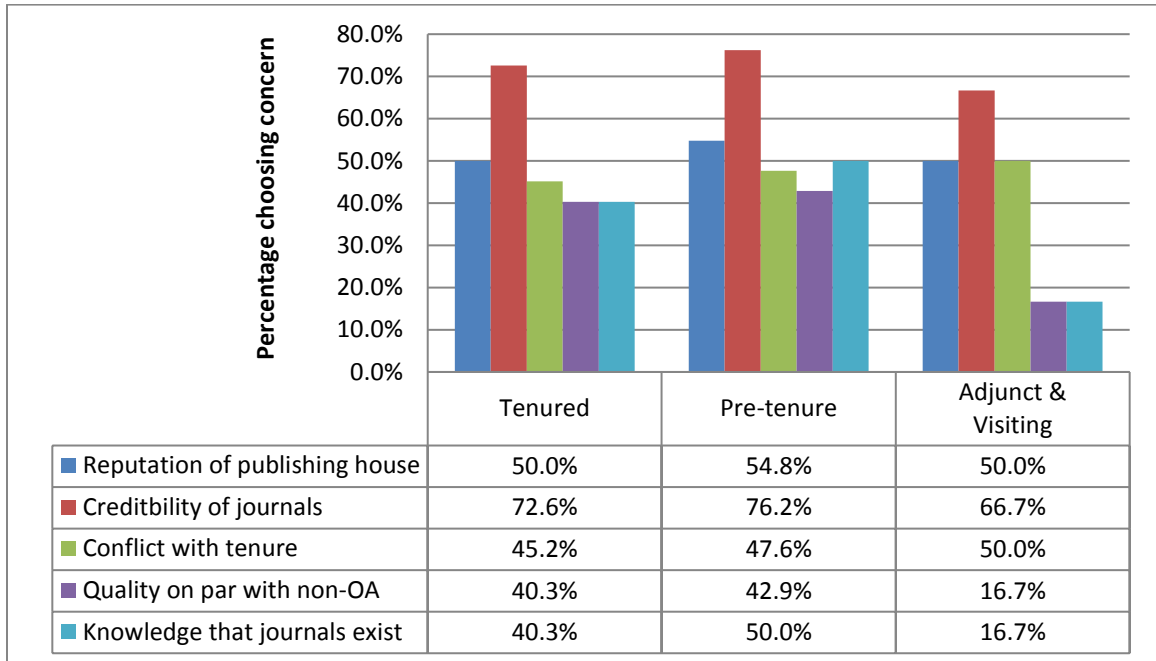
publishing by rank and seniority.

| | Tenured | Pre-tenure | Adjunct & Visiting |
|---|---|---|---|
| ▪ Reputation of publishing house | 50.0% | 54.8% | 50.0% |
| ▪ Creditbility of journals | 72.6% | 76.2% | 66.7% |
| ▪ Conflict with tenure | 45.2% | 47.6% | 50.0% |
| ▪ Quality on par with non-OA | 40.3% | 42.9% | 16.7% |
| ▪ Knowledge that journals exist | 40.3% | 50.0% | 16.7% |

*Chart 3 Top issues by rank and seniority*

**Perceptions of OA journals  - years teaching.**

Looking at results by years teaching seems to indicate that different issues also appear to

arise at different time periods throughout a faculty member's career. Chart 4 displays

respondents' choice of the top issues impeding wide-spread adoption of OA publishing by their
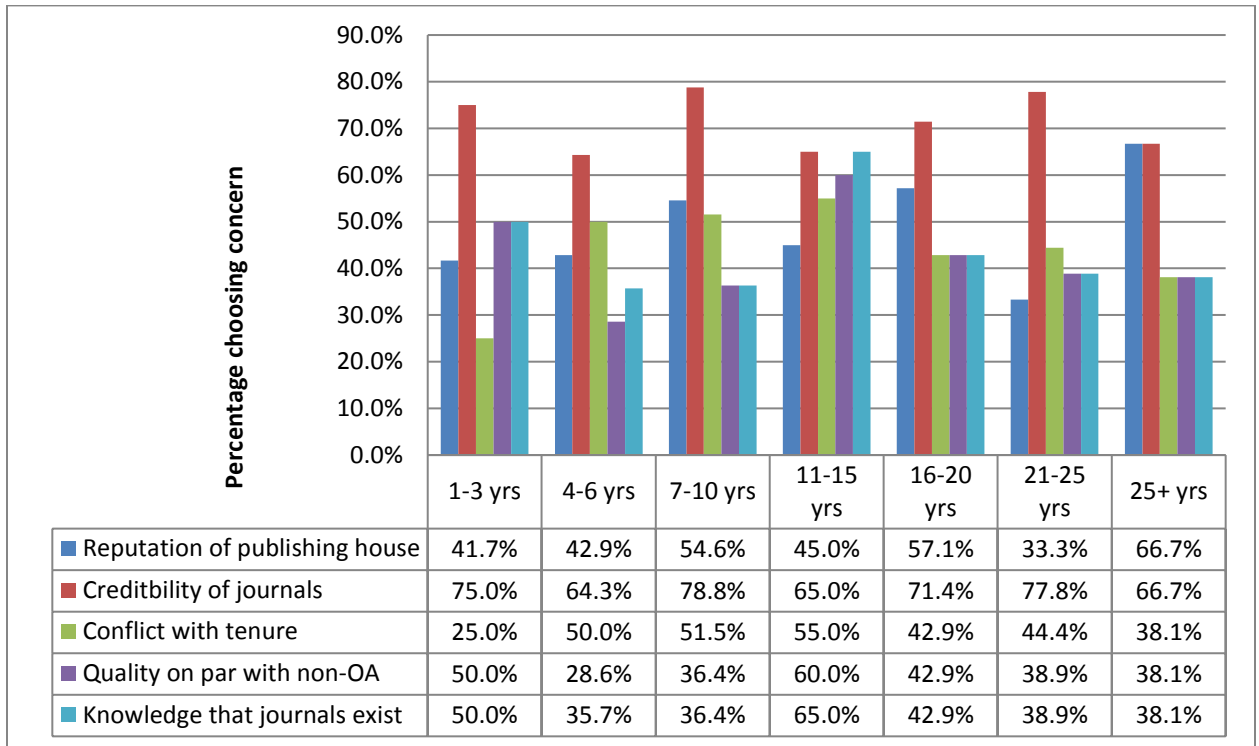
number of years teaching.

| | 1-3 yrs | 4-6 yrs | 7-10 yrs | 11-15 yrs | 16-20 yrs | 21-25 yrs | 25+ yrs |
|---|---|---|---|---|---|---|---|
| ■ Reputation of publishing house | 41.7% | 42.9% | 54.6% | 45.0% | 57.1% | 33.3% | 66.7% |
| ■ Creditbility of journals | 75.0% | 64.3% | 78.8% | 65.0% | 71.4% | 77.8% | 66.7% |
| ■ Conflict with tenure | 25.0% | 50.0% | 51.5% | 55.0% | 42.9% | 44.4% | 38.1% |
| ■ Quality on par with non-OA | 50.0% | 28.6% | 36.4% | 60.0% | 42.9% | 38.9% | 38.1% |
| ■ Knowledge that journals exist | 50.0% | 35.7% | 36.4% | 65.0% | 42.9% | 38.9% | 38.1% |

*Chart 4 Top issues by years teaching*

**QUESTION FOUR: Additional Reasons**

The open-ended responses added additional areas of concern not mentioned in the

drop-down options.  From 25 open-ended comments, eight categories emerged; (some

comments addressed more than one area): perception of journals (9 comments), lack of

credibility of journals (6 comments), fee or charge to publish (2 comments), accessibility or ease

of discovery for OA titles (3 comments), lack of "critical mass" in some disciplines (1 comment),

resistance to change (4 comments), concerns for tenure (2 comments), and general remarks (2

comments).  Comments were further grouped into categories by whether statements were

overtly negative (8), positive (7), or neutral (9) about open access.

Only one comment was made by a respondent with less than six years of experience, and the tone is most definitely positive about open access as a publishing option. This respondent was from the 20 to 30 year age bracket, had four to six years of teaching experience, had published in OA journals and choose "conflict with tenure" as the top issue impeding OA:

"I think it's the perception of online journals in the field. I think this is a generational thing, and I hope that it is changing. I've published in one open-access journal, and I hope to continue this trend."

Another overtly positive comment was made by a faculty member in the 61 to 70+ age bracket, with more than 26 years experience and prior OA publishing experience:

"The lack of imagination of colleagues to make the necessary leap. Their fears are in the list above, but my experience is that most of these fears are unfounded."

Negative comments were about perception of peer review, the accessibility and discoverability of journals, and the charge to publish.

**Limitations of the Study**

The methods for the survey distribution relied on a convenience sample of self-selected participants. However, with the OA questions being a subset of a broader survey, this may have enticed more participants than those who would have responded to a narrowly focused survey about open access. The OA section was intentionally brief, yet some limitations of the questions

impeded analysis; for example, it would have enriched the discussion to know more detail

about the timing and frequency of OA publishing activity.

The data set was relatively small, limiting the ability to make predictions based on

researchers' characteristics.  Conclusions are considered exploratory only and can be used to

inform future investigations.

## Discussion

Faculty researchers across disciplines and age brackets are aware of OA publishing yet

actual OA publishing experience is still relatively limited.  The self-reported knowledge of

respondents may have been different if this survey had provided a definition of OA publishing,

as noted by Schroter and Tite (2006), or if participants could rank their level of understanding,

similar to the method used by the CIBER studies (Rowlands et al., 2004; Rowlands & Nicholas,

2006).  Misguided concerns and mistaken beliefs about OA still stand; open-ended comments

demonstrate that even those who have knowledge of OA still are confused about what OA

means.  The large majority of faculty authors participating in this study taught primarily in Art

and Humanities and Social Sciences disciplines indicating a growing awareness and participation

in areas which historically have less OA publishing activity.

This investigation varied slightly from other studies that suggest that younger faculty

members and those with less experience were not likely to publish in OA journals (Harley et al.,

2010; Meadows, 2013).  On the contrary, the younger age brackets in this investigation had a

higher percentage of respondents with OA publishing history, and faculty members with the

least teaching experience indicated as much or more OA publishing activity as those with more

experience. However, younger respondents that had OA publishing experience tended to also

be tenured. Investigating the timing of the OA publishing activity would inform whether these

individuals are waiting until they achieve tenure before publishing in OA journals.

The main issues of concern expressed by faculty authors about OA publishing are

consistent with previously published studies (Harley et al., 2007; Hurrell & Meijer-Kline, 2011).

However, this didn't hold true for concerns about conflict with tenure. This concern was not

selected as a top issue by more than half of the respondents in this study sample (see Chart 2 &

3), and only seven respondents from the group with less than seven years teaching experience

chose this as one of their top issues. Interestingly, as demonstrated by one respondent's

comments, the choice of "conflict with tenure" as a top concern does not directly equate to an

individual's OA publishing activity.

Although this study represents but a small sample of research faculty members, it does

suggest a broader understanding and acceptance of OA publishing across age and rank and less

concern about tenure implications than concluded in previous studies (Harley, Acord, Earl-

Novell, Lawrence, & King, 2010; Norwick, 2008). While this study is exploratory, these results do

suggest that faculty authors are not prejudged by their age or tenure status as to their

perception of or experience with OA, because these indicators do not appear to be strong

predictors.

Librarians must be open to the idea that supporters and engaged faculty members may

come from groups and disciplines not previously considered; for example, research suggests

there is a growth in humanities disciplines (Harley et al., 2010). Concerns about paying for OA

publishing fees was not included as an issue and with the rise of traditional publishers now

offering OA publishing options this barrier should be further explored. Future investigations

should continue to explore discipline specific concerns and OA publishing activity related the

tenure process.

**Conclusion**

This study, along with the literature, demonstrates that research faculty members still

hold misconceptions about open access and do not fully grasp the fundamentals of indexing

and access restrictions. As most large publishing houses have launched new experiments with

OA publishing options, it is now more important than ever for librarians to continue to play key

roles in assisting faculty authors with evaluating open access journals for quality, including

staying abreast of predatory publishers, and educating about impact factors, alt-metrics, and

complying with open access mandates. Understanding and supporting the varying concerns for

research dissemination that take priority at different times throughout a faculty member's

career will help librarians to more effectively support the dissemination of their institution's

scholarship.

Greater awareness and acceptance of OA publishing is being seen across disciplines and

age brackets, with faculty researchers expressing less concern about tenure implications. Actual

OA publishing activity remains limited across all groups, but there is some indication that

younger faculty are participating in the new publishing options.

When planning outreach to research faculty librarians must consider the broader

academic environment, initiatives happening at the state and federal level that effect how

research needs to be disseminated and an institution's unique culture. Librarians supporting

faculty author's should have a good grasp on the complex scholarly communication network

and demonstrate appreciation for the nuances of a particular researcher's concerns related to

their specific discipline and their place in the tenure cycle. Researchers' will be influenced by

their current knowledge or lack of understanding about OA. Librarians should keep in mind that

researchers who were in the beginning of their careers when OA was emerging have now

become mid-to-late career academics. Therefore, there is a greater chance they are currently

members of tenure review committees or in administrative roles.  As one respondent with more

than 26 years of experience stated,

> "*I expect OA publishing to become ever more widespread.*"

 So, while not all faculty researchers may be enthusiastic supporters, there appears to be a

general acceptance of the inevitable change that is coming.  Start the conversation early with

new faculty and work with researchers throughout their careers to assist with their changing

needs and as librarians inherently do, keep them informed.

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