

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

---

October 2021

## Use Of open Access Journals By Librarians In Ghana

Edward Mensah Borteye Mr.

*Kwame Nkrumah University of Science and Technology, edborteye1@gmail.com*

Kodjo Atiso

*Cape Coast Technical University, kojoatiso@gmail.com*

Richard Bruce Lamptey

*Kwame Nkrumah University of Science and Technology, phanerosis75@gmail.com*

Jenna F. Kammer

*University of Central Missouri, jkammer@ucmo.edu*

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Scholarly Communication Commons](#), and the [Scholarly Publishing Commons](#)

---

Borteye, Edward Mensah Mr.; Atiso, Kodjo; Lamptey, Richard Bruce; and Kammer, Jenna F., "Use Of open Access Journals By Librarians In Ghana" (2021). *Library Philosophy and Practice (e-journal)*. 6315. <https://digitalcommons.unl.edu/libphilprac/6315>

## USE OF OPEN ACCESS JOURNALS BY LIBRARIANS IN GHANA

### **Abstract**

*Introduction: This study examined the use of open access journals by librarians in Ghana. The objectives were to establish the familiarity, attitude and benefits of open access journals among librarians in Ghana.*

*Method: This study uses a survey research design. A web-based questionnaire was used to seek information on respondents' demographics, awareness, use, attitudes and benefits of open access journals.*

*Analysis: Descriptive statistics was used to analyze survey results. The Statistical Package for the Social Sciences (SPSS) was used for the analysis of data collected from 103 librarians who are members of the Ghana Library Association.*

*Results: All the respondents were aware of open access journals and to a greater extent that they showed positive attitude towards open access journals. Many of them however, are not fully committed to publishing their articles in open access journals. It is recommended that, librarians should be willing to publish more of their research works in open access journals in order for them to be ambassadors and advocate for open access.*

*Conclusion: Knowledge of open access journals and related content among librarians is crucial not only in disseminating research quality but also in weeding out poor content.*

**Keywords:** Open access; scholarly communication; open access journals; information professionals; Ghana

## **Introduction**

In the 21st century, some researchers posit that information has joined land, labor, capital and entrepreneurship as another factor of production (Dewan and Min, 1997; Braunstein, 1985; Berczi, 1981) because of the role information plays in shaping our development. Knowledge of this fact has attracted attention from many disciplines and professions from around the globe. For information professionals in many developing economies in general, and Ghana in particular, this is a call to duty. The reasons may not be farfetched. Ghana is a region that has lagged behind the rest of the world in terms of scholarly communication (Atiso, 2017). While unrestricted access to research information is good for all regions, precarious economic conditions of developing countries make the open access model more attractive to users.

Open access (OA) comes with a number of benefits for its users such as author and institutional visibility, free access, high citations and impacts and many others. But free and unrestricted access comes with its own challenges. Within a system inundated with a huge barrage of research, the question of ensuring quality research needs further investigation. This study was designed with the belief that competence from the gatekeepers of information, like librarians, becomes rather crucial. In developing countries where OA journals have the potential to become the major source of scholarly information, the amount of knowledge stakeholders have on this subject is a major source of academic conversation. Further investigation into the extent to which it is true that the knowledge of OA is indispensable, and how the librarians, who are the first point of call, ensure research quality for its users, is necessary in Ghana.

Based on their work ethics, librarians see themselves as custodians of information, whose knowledge in contemporary informational trends is paramount. In Ghana, the status of the academic librarian is set by a national agency with oversight responsibility on education. In Ghana regulatory body for tertiary education, the National Council for Tertiary Education (NTCE) requires that all librarians must have a minimum of a master's degree to work in academic settings. Librarians are considered academics in Ghana and thus must meet this standard for their professional and academic status. (National Council for Tertiary Education, 2020). Beyond this custodian role, librarians in Ghana are also involved in knowledge creation. They are thus actively involved in the creation and use of open access journals. Like academics, librarians are also expected to publish in reputable peer reviewed journals before they can be promoted. Librarians also provide research and publication support to academics mainly in the area of guiding and assisting them to access scholarly literature and the selection of good journals in which to publish their works. They are therefore the first point of contact regarding the use and access of OA journals. This study examines the knowledge and use of open access scholarly publications by librarians in Ghana.

### **Use of journals in Ghana**

Through their membership of the Consortium for Academic and Research Libraries in Ghana (CARLIGH) and support from the Electronic Information for Libraries (EIFL), Ghanaian universities have access to over 40,000 electronic journals from 50 academic databases and more than 100 million full text documents, bibliographic information, abstracts, book reviews, etc. from well-known publishers such as Sage, Elsevier, Taylor and Francis, Emerald, Oxford University Press, Cambridge University Press etc. These subscriptions are renewed every year by the members of the consortium. Both academics and students use these subscribed electronic resources to support teaching, learning, research and knowledge dissemination. Access to these resources are mostly through internet protocol (IP) authentication and off campus access. Beyond the subscription resources, academics and students also have access to a vast array of

open access resources freely available online to choose from to support their activities. Academics in Ghanaian universities are expected beyond teaching to also carry out research and make the outcome available through publication. Publication is therefore tied to promotion in Ghanaian universities. An academic will therefore have to show evidence of having contributed to knowledge in a well-recognized and reputable peer review journal before he/she can move from one rank to the other. Any journal article that appears in a predatory journal (journals in which the author pays for publication or lacks a quality assurance process) will not be accepted for promotion. Universities in Ghana work with their libraries to try to ensure that their academics do not publish in predatory open access journals. This is achieved through the recommendation of prescribed journals and publishers to all academics in their various universities.

## **Literature Review**

### **Awareness and use of open access journals**

There are a plethora of studies on awareness and use of open access journals in Africa and other parts of the world (Baro and Eze, 2017; Bosah et al., 2017; Iqbal and Naushad Ali, 2017; Odell, Palmer, and Dill, 2017; Lwoga and Questier, 2014); Gul et al., 2010; Kaba and Said, 2015; Kassahun and Nsala, 2015; Lwoga, 2013). Varying level of awareness and use of open access journals were reported by these studies. Baro and Eze (2017) found that more than 90% of the respondents were reported to be aware of the gold, green and diamond routes of open access publishing. The study also revealed that a large number of the academic librarians have made use of open access publishing through the publication of papers in open access journals. Mixed results were reported in Bosah et al. (2017) who examined the awareness of open access publishing by the respondents. While a greater majority of the respondents were aware of the gold and green routes of open access publishing, there were still a greater majority who were also not aware of the diamond route of open access publishing. A majority of the respondents in this study also made use of open access publishing through the publication of a number of papers in open access journals. Iqbal and Naushad Ali's (2017) study on the awareness and use of open access resources by library users of Cochin University of Science and Technology (CUSAT) and Pondicherry University (PU) revealed that majority of respondents (i.e. 77.78% and 80% of CUSAT and PU respectively) were familiar with the concept of open access. A majority of the respondents in the study from the two universities, (65% and 70.63% of users from CUSAT and PU respectively) made use open access resources. A large majority of the respondents 89% in Odell et al's. (2017) study were very familiar with open access. The study however reported marginal use of open access through the number publications authored by the respondents in open access journals. A majority of respondents (93.5%) in a similar study by Lwoga and Questier (2014) reported that they were aware of open access issues. Another study by Lwoga (2013) reported that majority of respondents (93.5%) in the study were aware of open access. The study also revealed that majority of the respondents have either accessed open access content or used open access venues to disseminate their research materials. In Gul et al's. (2010) study of the culture of open access in the University of Kashmir, about four-fifths (83.33%) were reported to have used open access journals. A study by Kaba and Said (2015) about faculty members who are part of the Association of American University's (AAU) found that these faculty possess good knowledge of open access awareness, use, and perception. The study reported that faculty members from schools within the AAU frequently use open access resources for teaching, learning and research activities. Beard (2016) reveals in a study of graduate student knowledge and usage of open access journals that (76%) of the respondents showed greater awareness and use of open access sources. Sharply contrasting the

high level of awareness and usage of open access journals is the study conducted by Kassahun and Nsala (2015). In their study they reported that 67% of academic librarians in private higher learning institutions were not aware of the concept of open access. This low level of awareness exhibited by the respondents will also imply low usage of open access resources. Thus they reported that out of the 33% who were aware of open access, only 50% of them used open access resources. Similarly the study by Chiedza (2018) also reported low awareness level among the respondents. In that study more than half of the respondents were not aware of open access resources.

### **Attitude towards open access journals**

Several studies have also reported on the attitude of respondents towards open access journals (Beaubien and Eckard, 2014; Chiedza, 2018; Sandhu and Daviet, 2012; Ugwuanyi et al., 2013; Togia and Korobili, 2014; Odell et al., 2017). Mixed attitudes (i.e. both positive and negative towards open access journals) were reported by these studies. In Chiedza (2018) study 61% of the respondents showed positive attitude towards open access resources. These respondents were of the firm belief that open access resources are of good quality and that they are of internationally competitive standards. Beaubien and Eckard (2014) revealed in their study that most of the participants were not enthusiastic about open access journals. They perceive the peer review process for open access journals to be murky and also resent the fact that some more experienced faculty members in their respective disciplines view open access as a vanity press. A majority of the respondents in Dulle and Minishi-Majanja's (2009) study were very positive about open access journals. The first four attitude statements were positively rated by more than 50% of the respondents, implying that they supported open access publishing. There were mixed attitudes toward open access in Sandhu and Daviet's (2012) study, but most agreed that open access resources are of high quality and that open access would benefit them. Similarly, Shuva and Taisir (2016) found that respondents showed mixed attitudes towards open access journals.

### **Benefits of open access journals**

Several authors have addressed the potential benefits of open access journals (Gul et al., 2010; Sánchez-Tarragó and Fernández-Molina, 2010; Emojorho et al., 2012; Iwighreghweta and Onoriode, 2012; Okoye and Ejikeme, 2011). Among the benefits mentioned by these authors are availability of research papers to the developing world, wider dissemination of research outputs, and increased impact of researcher's work, high quality scholarly work and free online access to the literature for research. Chiedza (2018) in her study mentioned improved breadth of resources and the enhancement of the level and depth of research produced as some benefits that may be accrued from open access resources. Benefits such as free access to literature, global visibility to scholarly publications, the elimination of the demand for payment for accessing vital information, putting the rich and the poor on equal footing to access scholarly publications among others were mentioned in Chigbu, Njoku and Uzoagba (2016) which studied the management and usage of open access scholarly online resources in university libraries in Nigeria. In their study of the awareness of open access scholarly publications among lecturers in University of Benin, Benin City in Edo State, Nigeria, Emojorho et al. (2012) mentioned increased impact of researchers work and free online access to the literature as some of the benefits of open access journals. Fully and freely available for all kinds of readers, large audience and prestige of the open access journals were mentioned in Sánchez-Tarragó and Fernández-Molina (2010) study as some of the benefits of open access journals.

### **Problems of open access journals**

Despite the enormous benefits of open access journals, it is also bedeviled with some challenges. Several authors have articulated these problems which range from the retrieval of too much irrelevant information (Ivwichreghweta and Onoriode, 2012), unavailability of internet facilities (Ivwichreghweta and Onoriode, 2012; Emojorho et al., 2012; Dulle et al., 2011; Okoye and Ejikeme, 2011; Atiso et al., 2017), lack of knowledge of the existence of OAJ (Ivwichreghweta and Onoriode, 2012; Gbaje, 2010; Dulle et al., 2011; Atiso et al., 2017), power outage (Ivwichreghweta and Onoriode, 2012; Emojorho et al., 2012; Atiso et al., 2017), improper archiving of some open access journals (Ivwichreghweta and Onoriode, 2012; Dulle et al., 2011), lack of internet search skills (Ivwichreghweta and Onoriode, 2012; Okoye and Ejikeme, 2011; Borteye and Dadzie, 2015; Atiso et al., 2017) and inadequate IT infrastructure (Borteye and Dadzie, 2015; Gbaje, 2010).

Despite the many established problems of open access journals, one of the debilitating and emerging problem of open access journals is predatory publishing, or fake science. Atiso et al. (2019) claims authors in developing economies are most likely to publish in predatory scholarship because of lack of technology to detect them. These journals provide junk information parading as scientific literature. Editors of these fake journals prey on the innocent author by inundating their inbox with promise to publish their journals within the shortest possible time with the payment of an amount. Concerns about this phenomenon long predated the work of librarian Jeffrey Beall, who famously described predatory journals as a problem in the field of scholarly communication by publishing Beall's List (a list of journals that met Beall's criteria for 'predatory') (Mills and Inouye, 2020). Several authors have highlighted the harmful effect of this phenomenon of predatory publishing in the publishing landscape. Most authors are still caught up in this quagmire in an attempt to jump the rigorous review process which is lengthy and stressful (Atiso et al., 2019; Mills and Inouye, 2020; Pyne, 2017; Richtig et al., 2018; Tsigaris and Teixeira da Silva, 2020).

### **Setting**

This study investigated the awareness of open access journals among librarians in Ghana. In order to do this, the study employed the services of a local professional association, the Ghana Library Association. In Ghana, information professionals are seen as the bridge between research and their intended audience. For this reason, the study sought the need to use librarians to understand their knowledge of the new trend in the discipline. There are three different types of library professionals supported within the Ghana Library Association: professional, para professional librarians and those without any formal training in librarianship who are called sub-professionals, nonprofessionals, library assistants, etc. (Borteye and Ahenkorah-Marfo, 2013). In this paper, the term librarian is used to refer to professionals and paraprofessionals. While library professionals are not bound by law to belong to the association, many librarians choose to join the association because it serves as the center of the information profession and includes advocacy programs for its stakeholders in the country.

### **Method**

The study used a survey research design. The survey (also referred to as a questionnaire) was distributed through an online platform (Google Forms), and made active for four months between May and August, 2018. The questionnaire was segmented into different parts in order to elicit the required information for the respondents as follows: demographics, awareness, use, attitude and benefits of open access journals. Each question was rated with a Likert scale ranging from 1-3 (with 1 indicating higher levels of agreement/awareness, and 3 indicating no agreement). The survey also used yes or no responses to measure questions about use.

As part of measure to ensure research quality, copies of the questionnaire were sent out directly to all professional and para-professional librarians on the listserv of the Ghana Library Association and the responses were individually received. One hundred and three (n=103) respondents representing 22% of the total registered members of the Ghana Library Association after a number of reminders completed the questionnaire. Respondents included 53 males and 50 females. Fifty-eight (n=58) respondents held a Masters of Arts, 29 held a Masters of Philosophy, 7 held a Bachelors of Arts, 3 held a postgraduate diploma, 2 held a Doctor of Philosophy and finally 4 were Diploma, MBA, MSc and MLS holders respectively.

### **Data Analysis**

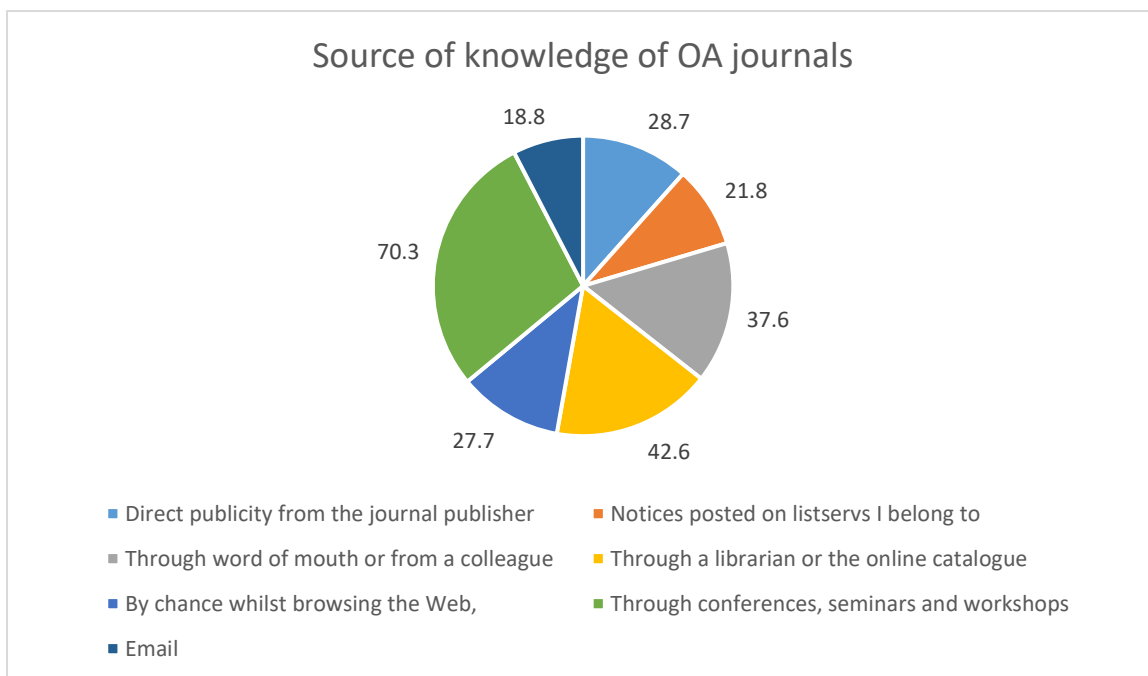
Our analysis was based on the responses from the questionnaire received electronically from the respondents, numbered 103 in total. We used the Statistical Package for the Social Sciences (SPSS) to analyze the data using descriptive statistics. Results were presented in percentages using simple tables and figures. To ensure research quality, we ran the data several times individually to eliminate any possible error. Data obtained were thus used to generate findings for this work.

## **Results and Discussion**

### **Librarian's awareness of open access journals**

Respondents were asked to indicate whether they are familiar with open access journals. Open access journal was explained to the respondents as “materials that are freely available online”. They all indicated that they were aware of the existence of open access journals in their response to the question. This supports earlier studies by Atiso et al. (2017), Borteye and Dadzie (2015), Bosah et al. (2017), Emojorho et al. (2012), Iqbal and Naushad Ali (2017), Ivwighreghweta and Onoriode (2012), Kaba and Said (2015), Lwoga (2013), Obuh and Bozimo (2012), Okoye and Ejikeme (2011), Swan and Brown (2007), Lwoga and Questier (2014), Royal Society of Chemistry (2015), Baro and Eze (2017) and Odell et al. (2017). The majority of the respondents in these studies were reported to be familiar with open access journals and open access in general. Several studies by Emojorho et al. (2012), Gul et al. (2010), Kassahun and Nsala (2015), Sanchez-Tarrago and Fernandez-Molina (2009), Togia and Korobili (2014), and Lwoga (2013), mentioned that academics learn about open access from conferences and workshops, a librarian, a colleague, publishers catalogue, the web, emails and others as means through which one can be introduced to open access journals. In this study, respondents also indicated knowing about open access journals was through these different sources (see Figure 1). However, in this study, a majority (70%) of the respondents learned about open access journals from conferences, seminars and workshops. About 43% of the librarians were introduced to open access journals through a librarian or an online catalogue, while less than 38% of them had their open access journal awareness through word of mouth or from a colleague.

**Figure 1**  
**Source of knowledge of OA journals**



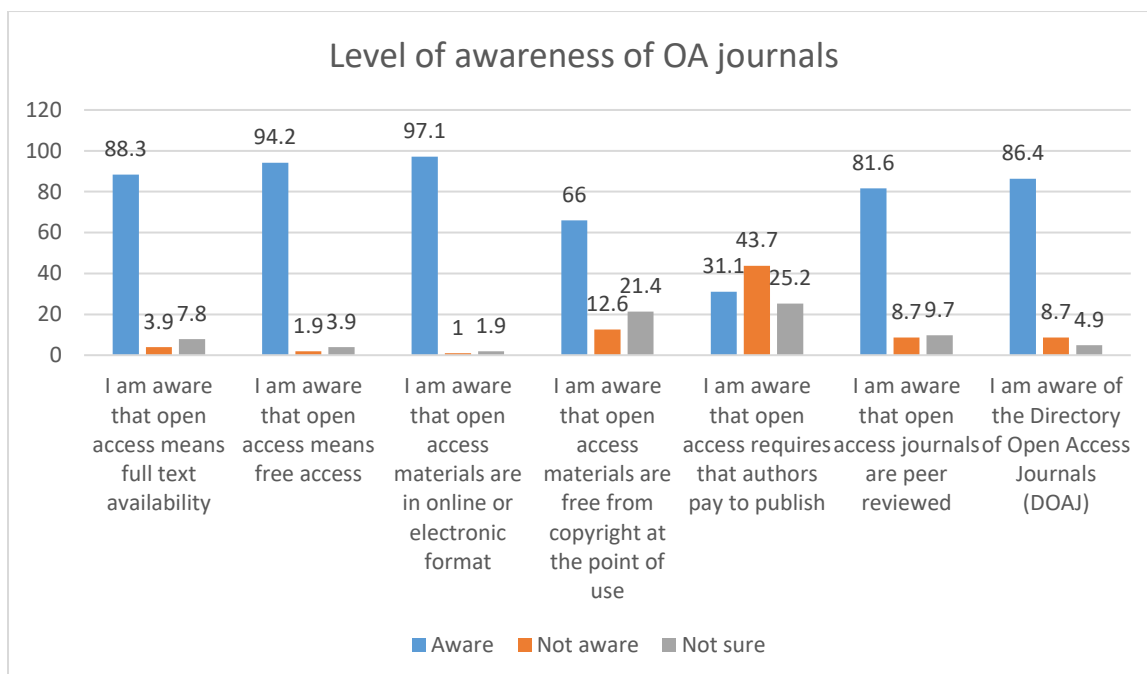
Source: Field Data 2018

### Level of awareness of open access journals

High levels of awareness was exhibited by the respondents in their response to a number of statements on open access journals. As shown in Figure 2 and Table 1, a majority of the librarians indicated that they were aware that open access materials are in online or electronic format (97.1%), that open access means free access (94.2%), that open access means full text availability (88.3%), that the Directory of Open Access Journals (DOAJ) provided access to open source journals (86.4%), that open access journals are peer reviewed (81.6%), that open access materials are free from copyright at the point of use (66%) and were aware of the Directory of Open Access Repositories (DOAR) (68%). Thus, the majority of the respondents showed a great degree of familiarity with open access journals. This corroborates earlier studies by Atiso et al. (2017), Borteye and Dadzie (2015), Dulle et al. (2011), Emojorho et al. (2012) and Kaba and Said (2015) which reported high awareness levels among respondents. A study by Chigbu et al. (2016) on the other hand reported fair understanding of open access among the respondents. A certain degree of unfamiliarity with some open access terms and initiatives were also manifested by the respondents. This confirms earlier studies by Chiedza (2018), Gbaje (2010), Ivwighreghweta and Onoriode (2012), Kassahun and Nsala (2015) and Sa´nchez-Tarrago and Ferna´ndez-Molina (2009). They all reported low levels of awareness among respondents in their studies. In this study, statements such as “I am aware that open access requires that authors pay to publish” (31.1%), “I am aware of Open Access search tools like OAIster” (30.1%) and “I am aware of the Budapest Open Archive Initiative (BOAI)” (36.9%) received low levels of awareness.

**Figure 2**  
**Level of awareness of OA journals**





Source: Field Data 2018

**Table 1**  
Level of awareness of OA journals and search tools

STATEMENTS	RESPONSE (FREQ/PERCENT)		
	Yes	No	Total
I am aware of the Directory of Open Access Repositories (DOAR)	68 (66.0)	35 (34.0)	103 (100.0)
I am aware of Open Access search tools like OAIster	31 (30.1)	72 (69.9)	103 (100.0)
I am aware of the Budapest Open Archive Initiative (BOAI)	38 (36.9)	65 (63.1)	103 (100.0)

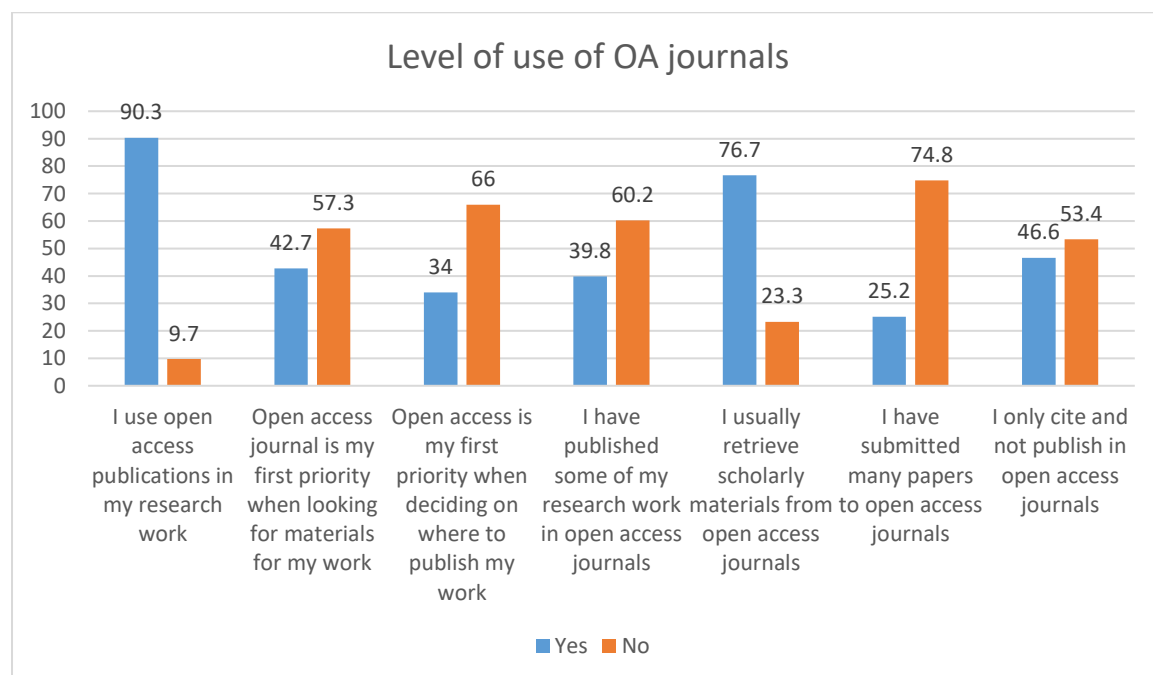
Source: Field Data 2018

### Use of open access journals

High usage of open access journals was reported by Atiso et al. (2017), Gul et al. (2010), Iqbal and Naushad Ali (2017), Kaba and Said (2015) and Lwoga (2013), while others like Kassahun and Nsala (2015) and Odell et al. (2017) reported average use of open access journals. In this study, 95.1% of the respondents affirmed that they have used open access journals before. Following this question, the respondents were asked to show the level to which they have used open access journals. Only two out of the seven statements on the extent of usage of open access journals received a positive response (see Figure 3). This confirms the findings of Borteye and Dadzie (2015) which also had only two positive responses on the extent of usage of open access journals. Some responses were marginal and others were extremely low. Thus, usage level and participation in open access publishing was very low. As can be seen in Figure 3, 90.3% of the respondents indicated that they have used open access publications in their

research work whilst 76.7% of the librarians said they ‘usually retrieve scholarly materials from open access journals’. However, only 42.7% of librarians in Ghana consider open access journals as their first priority when looking for materials for their work. Also, 46.6% said they ‘only cite and not publish in open access journals’. It is therefore not surprising that only 39.8% of librarians mentioned that they have published some of their research work in open access journals. Similarly, only 25.2% said they have submitted many papers to open access journals. Furthermore, only 34.0% of librarians considered open access journals as their first priority when deciding on where to publish their work. This confirms an earlier studies by Bosah, Okeji, and Baro (2017); Dulle and Minishi-Majanja (2009) and Baro and Eze (2017). In these studies, majority of the respondents were without any open access publication.

**Figure 3**  
**Level of use of OA journals**

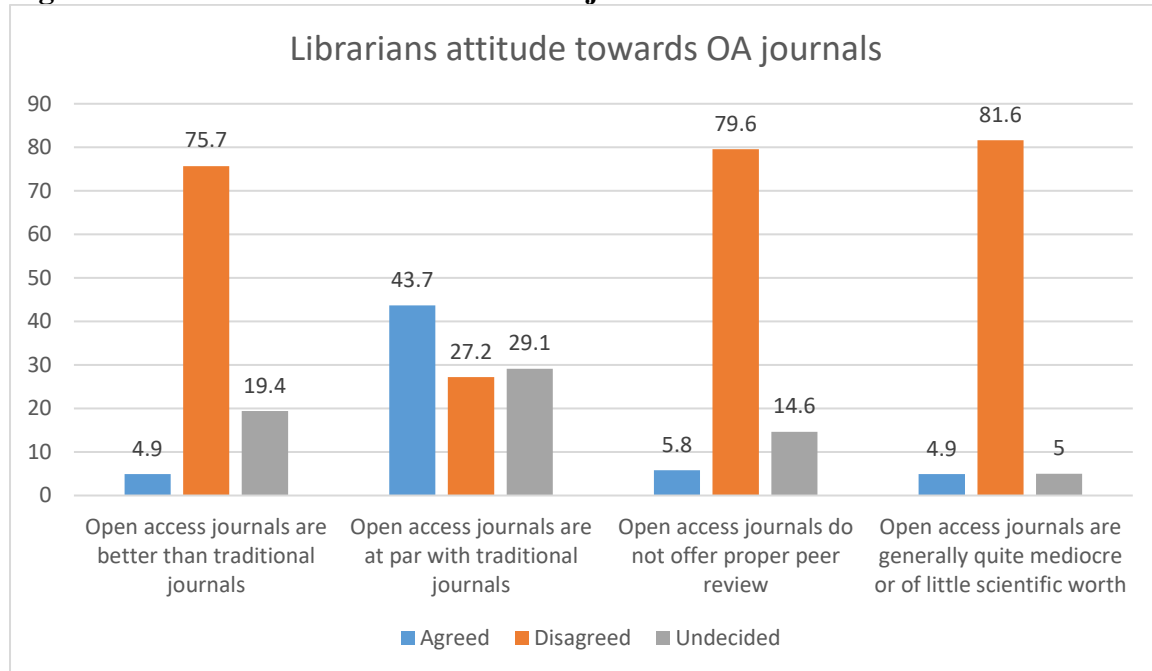


Source: Field Data 2018

### **Librarians’ attitude towards open access journals**

Attitude is an individual’s overall effective access reaction to using a system (Venkatesh et al., 2003). Togia and Korobili (2014) explain that attitudes and perceptions will determine the success and acceptance of open access journals. Positive and negative attitudes towards open access journals have been reported by Beaubien and Eckard (2014), Chiedza (2018), Dulle and Minishi-Majanja (2009), Kaba and Said (2015), Lwoga (2013), Odell et al. (2017), Sandhu and Daviet (2012) and Ugwuanyi et al. (2013). In this study, most of the librarians showed positive attitudes towards the use of open access journals. Their responses to the statements revealed a better understanding of what open access journals are. As shown in Figure 4, a majority of the librarians (75.7%) disagreed that open access journals ‘are better than traditional journals’ that open access ‘do not offer proper peer review’ (79.6%) and that open access ‘are generally quite mediocre or of little scientific worth’ (81.6%). Again, a little below half (43.7%) of librarians in Ghana agreed that open access journals are at par with traditional journals.

**Figure 4: Librarians attitude towards OA journals**

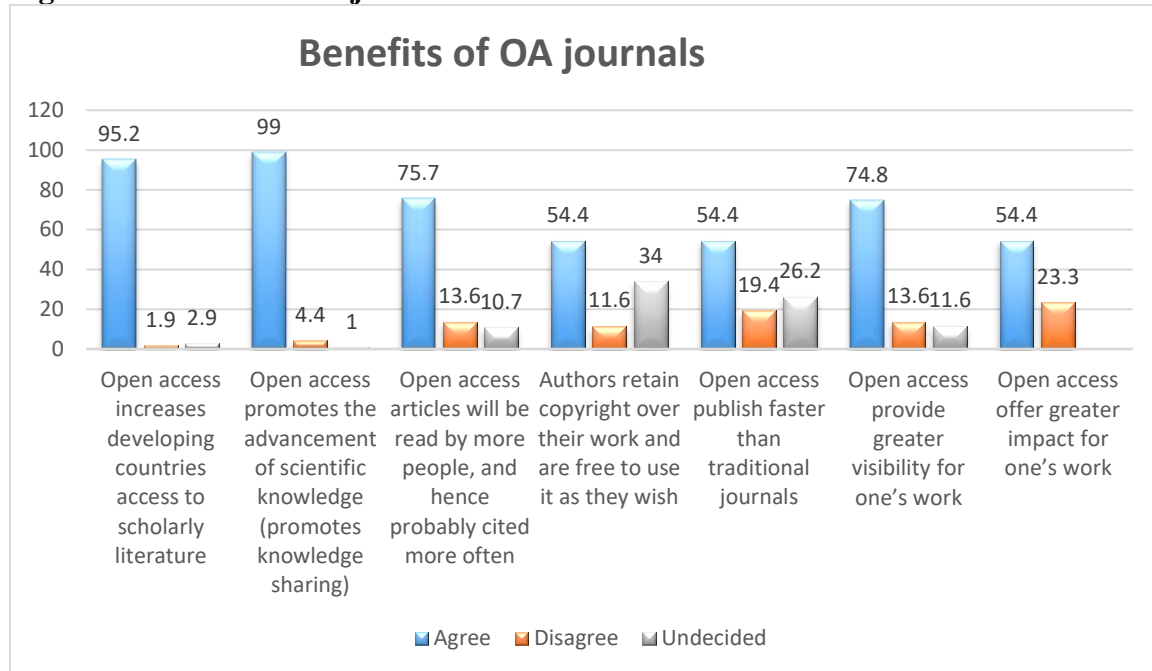


Source: Field Data 2018

### **Benefits of open access journals to librarians.**

Open access journals include many benefits. Among the benefits are equitable access to knowledge by all readers, availability of research papers to the developing world, wider diffusion of research outputs and increased impact of researchers work (Gul et al., 2010; Sánchez-Tarragó and Carlos Fernández-Molina, 2010; Sandhu and Daviet, 2012; Swan and Brown, 2004). As shown in Figure 5, a majority agreed that ‘open access promotes the advancement of scientific knowledge’ (99.0%). Over 95% also agreed that ‘open access increase developing countries access to scholarly literature’. Furthermore, 75.7% and 74.8% respectively agreed that ‘open access articles will be read by more people, and hence probably cited more often’ and ‘open access provide greater visibility for one’s work’. More than half (54.4%) of the librarians agreed that ‘authors retain copyright over their work and are free to use it as they wish’, ‘open access publish faster than traditional journals’ and ‘open access offer greater impact for one’s work’ respectively. The results clearly show that the librarians are fully aware of the benefits of open access journals and this does not come as a surprise. Over the years librarians have advocated for open access publishing and have also shown support the concepts of open access. They are now encouraging and directing users to take advantage of the enormous benefits of open access.

**Figure 5: Benefits of OA journals**



Source: Field Data 2018

### Conclusion and recommendations

Knowledge of open access journals and related content amongst librarians is crucial not only in disseminating research quality but also in weeding out poor content. This is more so for authors in developing economies who need open access journals for academic and research works. As such, the changing landscape of scholarly publishing enjoins librarians to rethink their current roles and responsibilities and consider themselves as major players in the development of open access journals, open science and scholarship. Librarians should be at the forefront of championing for open access to knowledge. They should be playing critical roles in the open access movement to enable free access to knowledge to all. Librarians should be involved and must take interest in the publishing of open access content. Generally, information professionals tend to see information as public good, access to which should not be denied any user. They would go whatever length to unravel what it takes to make access a possibility. The study has unveiled some issues regarding the use of open access journals among librarians in Ghana. Albeit the challenges of open access journals and open access in general such as power outages, lack of search skills, unwillingness to publish in open access and inadequate IT infrastructure among others which have been alluded to by Atiso et al. (2017), Borteye and Dadzie (2015), Emojorho et al. (2012), Ivwighreghweta and Onoriode (2012), Obuh and Bozimo (2012), Okoye and Ejikeme, (2011) and many others, open access is still the solution to the dwindling budgets of libraries in developing countries such as Ghana.

Even though the respondents are aware of open access journals and its benefits, many of them are not fully committed to publish their articles in open access journals. In the light of this, the various academic and research libraries in Ghana should create more awareness about the benefits of open access journals among librarians with regards to the publishing of their research works in open access journals. Librarians should be willing to publish more of their

research works in open access journals in order for them to be in a good position to advocate for open access.

On a macro level, library associations and institutions should consider how open access is included in programming and curriculum. The Ghana Library Association, the Consortium of Academic and Research Libraries in Ghana and the various libraries these librarians work in should also do more in the area of workshops and seminars about the benefits of open access publishing for its members. Open access should be part of the curriculum of the Department of Information Science at the University of Ghana so that all trained librarians will be well abreast with the open access concept well before they leave school. As Chiedza (2018) asserts, trained librarians may be huge asset in boosting the competency of faculty and students to effectively use the open access resources available in libraries. Librarians should also take it upon themselves to learn more about the open access concept through the available resources online.

Another area that often escapes all is that while some users, including lecturers, researchers or authors may have a stake in open access academic scholarship, they are not trained information professionals. This again puts the role of the librarian or information professional in the limelight, by fostering a collaboration between them and all users. This is a kind of collaboration that has the potential of enlightening all user groups of OA journals, and thereby creating the awareness and use of such materials.

## References

- Atiso, K. (2017). *Factors affecting institutional repository adoption among research scientists and related stakeholder for digital scholarship: roadmap towards research visibility and collaboration in Ghana*. University of Missouri--Columbia.
- Atiso, K., Adkins, D., & Borteye, E. M. (2017). Knowledge of Open Access Journals Among Research Scientists in Ghana. *Serials Librarian*, 73(3–4), 327–337. <https://doi.org/10.1080/0361526X.2017.1376730>
- Atiso, K., Kammer, J. & Bossaller, J. (2019). Predatory publishing and the Ghana experience: a call to action for information professionals, *IFLA Journal*, 45(4), 277-288. [https://doi: 10.1177/0340035219868816](https://doi:10.1177/0340035219868816).
- Baro, E. E., & Eze, M. E. (2017). Perceptions, Preferences of Scholarly Publishing in Open Access Routes: A Survey of Academic Librarians in Nigeria. *Information and Learning Science*, 118(3–4), 1–29. <https://doi.org/10.1108/ILS-03-2017-0015>
- Braunstein, Y. M. (1985). Information as a factor of production: substitutability and productivity. *The information society*, 3(3), 261-273.
- Beard, R. M. (2016). An investigation of of graduate student knowledge and usage of open access journals. *Journal of Electronic Resources Librarianship*, 28(1), 25–32. <https://doi.org/10.1080/1941126X.2016.1130453>
- Beaubien, S., & Eckard, M. (2014). Addressing Faculty Publishing Concerns with Open Access Journal Quality Indicators. *Journal of Librarianship and Scholarly Communication*, 2(2), eP1133. <https://doi.org/10.7710/2162-3309.1133>
- Berczi, A. (1981). Information as a factor of production. *Business Economics*, 14-20.
- Borteye, E. M. & Ahenkorah-Marfo, M. (2013). Staff development of Library Assistants in the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. *Journal of Science and Technology*, 33(1), 105-113.
- Borteye, W., & Dadzie, P. (2015). Awareness and use of open access journals by graduate students of the University of Ghana. In *Innovation : journal of appropriate librarianship and information work in Southern Africa*, <https://journals.co.za/content/innovation/2015/50/EJC174761>
- Bosah, G., Okeji, C. C., & Baro, E. E. (2017). Perceptions, Preferences of Scholarly Publishing in Open Access Journals: A Survey of Academic Librarians in Africa. *Digital Library Perspectives*, 33(1), 40–47. <https://doi.org/10.1108/DLP-07-2016-0017>
- Chiedza, P. M. (2018). *Awareness and Use of Open Access Resources by Researchers of the University of Zululand* (University of Zululand). [http://uzspace.unizulu.ac.za:8080/xmlui/bitstream/handle/10530/1687/Awareness and use of open access resources by researchers of the University of Zululand.pdf?sequence=1](http://uzspace.unizulu.ac.za:8080/xmlui/bitstream/handle/10530/1687/Awareness%20and%20use%20of%20open%20access%20resources%20by%20researchers%20of%20the%20University%20of%20Zululand.pdf?sequence=1)
- Chigbu, E. D., Njoku, E. O., & Uzoagba, N. (2016). Management and usage of open access scholarly online resources in university libraries in Nigeria. *The Electronic Library*, 34(6), 974–984. <https://doi.org/10.1108/EL-08-2015-0140>
- Dewan, S., & Min, C. K. (1997). The substitution of information technology for other factors of production: A firm level analysis. *Management Science*, 43(12), 1660–1675. <https://doi.org/10.1287/mnsc.43.12.1660>
- Dulle, F. W., & Minishi-Majanja, M. K. (2009). Researchers’ perspectives on open access scholarly communication in Tanzanian public universities. *SA Journal of Information Management*, 11(4), 1–14. <https://doi.org/10.4102/sajim.v11i4.413>
- Dulle, F. W., Minishi-Majanja, M. K., & Cloete, L. M. (2011). The Adoption of Open Access Scholarly Communication in Tanzanian Public Universities: Some Influencing Factors. *Mousaion*, 29(1), 112–35.

- Emojorho, D., Oghenetega, I., & Onoriode, K. O. (2012). Awareness of open access scholarly publications among lecturers in University of Benin, Benin City in Edo State, Nigeria. *Journal of Research in Education and Society*, 3(1), 1–11.
- Gbaje, E. (2010). Open access journal publishing in Ahmadu Bello University, Zaria, Nigeria. *World Library and Information Congress: 76th IFLA General Conference and Assembly 10-15 August 2010, Gothenburg, Sweden*. <http://www.ifla.org/en/ifla76>
- Gul, S., Shah, T. A., & Baghwan, T. A. (2010). Culture of open access in the University of Kashmir: a researcher's viewpoint. *Aslib Proceedings*, 62(2), 210–222. <https://doi.org/10.1108/00012531011035008>
- Iqbal, J., & Naushad Ali, P. M. (2017). Familiarity and Utilization of Open Access Resources: a Study of Library Users of Cochin University of Science and Technology (CUSAT) & Pondicherry University (PU). *Information and Learning Science*, 118(3–4), 1–21. <https://doi.org/10.1108/ILS-12-2016-0080>
- Ivwithreghweta, O., & Onoriode, O. K. (2012a). *Awareness and Use of Open Access Journals by LIS Students at the University of Ibadan, Nigeria*. <http://digitalcommons.unl.edu/libphilprac/719/%255Cnhttp://www.webpages.uidaho.edu/~mbolin/ivwithreghweta-onoriode.pdf>
- Ivwithreghweta, O., & Onoriode, O. K. (2012b). Use of Open Access Journals by Lecturers at Western Delta University, Oghara, Nigeria, Oghenetega Ivwithreghweta, Oghenov Kelvin Onoriode. *Library Philosophy and Practice*.
- Kaba, A., & Said, R. (2015). Open access awareness, use, and perception: A case study of AAU faculty members. *New Library World*, 116(1–2), 94–103. <https://doi.org/10.1108/NLW-05-2014-0053>
- Kassahun, K., & Nsala, C. (2015). The awareness of academic librarians towards Open Access resources to support reference services: A case of private institutions of higher learning in. *Ifla Wlic 2015*, 1–10. <http://creativecommons.org/licenses/by/3.0/>
- Lwoga, E. (2013). Health sciences faculty perception and practices on OA scholarly communication. *Proceedings and Reports of the 6th UbuntuNet Alliance Annual Conference*, 119–134.
- Lwoga, T. E., & Questier, F. (2014). Faculty adoption and usage behaviour of open access scholarly communication in health science universities. *New Library World*, 115(3/4), 116–139. <https://doi.org/10.1108/NLW-01-2014-0006>
- Mills, D. & Inouye, K. (2020). Problematizing 'predatory publishing': A systematic review of factors shaping publishing motives, decisions, and experiences. *Learned Publishing*. doi: 10.1002/leap.1325
- National Council for Tertiary Education. (2020). Leading Tertiary Education to Greater Heights. Retrieved December 30, 2020, from <https://ncte.edu.gh/>
- Obuh, A. O., & Bozimo, D. O. (2012). Awareness and Use of Open Access Scholarly Publications by LIS Lecturers in Southern Nigeria. *International Journal of Library Science*, 1(4), 54–60. <https://doi.org/10.5923/j.library.20120104.02>
- Odell, J., Palmer, K., & Dill, E. (2017). Faculty Attitudes toward Open Access and Scholarly Communications : Disciplinary Differences on an Urban and Health Science Campus. *Journal of Librarianship and Scholarly Communication*, 5, 0–22. <https://doi.org/10.7710/2162-3309.2169>
- Okoye, M. O., & Ejikeme, A. N. (2011). Open Access, Institutional Repositories, and Scholarly Publishing: The Role of Librarians in South Eastern Nigeria. *Library Philosophy and Practice*, 64–71.
- Pyne, D. (2017). The rewards of predatory publishing at a small business school, *Journal of Scholarly Publishing*, 48(3), 137-160. doi: 10.3138/jsp.48.3.137.
- Richtig, G, Berger, M., Lange-Asschenfeldt, B. Aberer, W. & Richtig, E. (2018). Problems

- and challenges of predatory journals *Journal of the European Academy of Dermatology and Venereology*, 32, 1441–1449. DOI: 10.1111/jdv.15039
- Royal Society of Chemistry. (2015). *The Role of Libraries in Open Access Publishing*. <http://www.rsc.org/globalassets/14-campaigns/m/lc/lc16013/lc16013-open-access-survey-report-librarians.pdf>
- Sánchez-Tarragó, N., & Carlos Fernández-Molina, J. (2010). The open access movement and Cuban health research work: An author survey. *Health Information and Libraries Journal*, 27(1), 66–74. <https://doi.org/10.1111/j.1471-1842.2009.00852.x>
- Sandhu, H. S., & Daviet, J. (2012). Use of Open Access Resources by the Engineering Students of Punjab (India). *International Journal of Library and Information Science*, 4(19), 10–15. <https://doi.org/10.5897/IJLIS11.030>
- Shuva, N. Z., & Taisir, R. (2016). Faculty members' perceptions and use of open access journals. *IFLA Journal*, 42(1), 36–48. <https://doi.org/10.1177/0340035216628879>
- Swan, A., & Brown, S. (2004). Authors and open. *Learned Publishing*, 17(3), 219–224.
- Swan, A., & Brown, S. (2007). Researcher awareness and access to open access content through libraries: A study for the JISC Scholarly Communications Group. Retrieved November 15, 2018, <https://eprints.soton.ac.uk/264412/>
- Togia, A., & Korobili, S. (2014). Attitudes towards open access: A meta-synthesis of the empirical literature. *Information Services and Use*, 34(3–4), 221–231. <https://doi.org/10.3233/ISU-140742>
- Tsigaris, P. & Teixeira da Silva, J. A. (2020). Bibliometric analysis of a controversial paper on predatory publishing. *Performance Measurement and Metrics*, 22(1)
- Ugwuanyi, A. A., Eze, M. E., Obi, I. C., & Ugwuanyi, E. I. (2013). Open Access to Knowledge: Perceptions of Librarians in Colleges of Education in South-East Nigeria. *Journal of Educational and Social Research*, 3(July), 29–36. <https://doi.org/10.5901/jesr.2013.v3n4p29>
- Venkatesh, V., Morris, M., Davis, G. B. & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.
- Yiotis, K. (2005). The open access initiative: a new paradigm for scholarly communications. *Information technology and libraries*, 24(4), 157–162