

Librarians and Academic Libraries' Role in Promoting Open Access: What Needs to Change?

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Profound changes due to Open-Access (OA) publications lead to organizational changes in universities and libraries. This study examines Israeli librarians' perceptions regarding their role and the academic library's role in promoting OA-publications, including the barriers, challenges, needs, and requirements necessary to promote OA publishing. Lack of a budget for OA-agreements, no cooperation from university management, and researchers' unfamiliarity with OA were among the most prominent barriers. Librarians see great importance in their role of advising researchers regarding OA. However, they insist on a regulated OA-policy at the national and institutional levels to strengthen their status as change-leaders of the OA-movement.

Introduction

Open Access (OA) is a term that is used to describe unrestricted online access to scientific articles as part of an effort to "open up" scientific output to the public.¹ The premise is that OA may improve the rigor, validity, replicability, and availability of research.² One of the major arguments against the subscription-based model of publishing is that while authors contribute their work to publishers without monetary gain, readers are required to pay a subscription fee to the journal.³ At the same time, organizations and academic institutions have to pay publishers through mega-agreements, known as the "big deals," to allow researchers and students access to those articles.⁴

Following OA initiatives from the early 2000s, which formed the ideological and practical basis of the movement, countries, funders, and research institutions across the globe commenced to provide OA for their research output, while also attempting to develop a clear OA policy.⁵ The evolving form of new business models of academic publishing and the entry of "new players" to this field are among the main reasons for the transformation of academic libraries.⁶

However, open access has its own concerns. These include the costs associated with article processing charges (APCs) for OA journals, which affect the ability of academics from the social science and humanities (SSH) to publish in OA journals. Other problematic issues are implementing and maintaining an institutional repository and the fear of copyright infringement when depositing articles in open repositories.⁷ In addition, there is the rise of predatory journals interested in only making quick money that pay little or no attention to

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peer review.⁸ These predatory journals negatively influence researchers' attitudes towards OA publishing.⁹

Many previous studies have dealt with the new and emerging roles of librarians resulting from a new digital era and the change from the traditional publishing models to OA.¹⁰ Scholars have explored librarians' role changes and have suggested ways to improve and promote OA in their institutions.¹¹ However, only a few have explored ways to promote OA from the perspective of librarians, who are considered experts in their field. The present study aims to address this gap by exploring Israeli librarians' perceptions of their role and the academic library's role in promoting OA publication, as well as the barriers, challenges, needs, and requirements needed to promote OA publishing in their institutions and on a national level.

Literature Review

Librarians' and Libraries' Roles in the Scientific Communication System over Time

In the scholarly world, libraries and librarians have always played a central role in the creation, preservation, and dissemination of information.¹² Over the years, academic libraries have evolved alongside the development of higher education institutions, and have adapted to social, political, and technical changes.¹³ Thus, the ever-changing research landscape and the relentless advances in technology have significantly influenced the responsibilities of academic librarians.¹⁴

Traditional functions, such as reference work and collection management, are rapidly losing their status as primary responsibilities of librarians, while new functions related to research support, data management, bibliometrics, and digital initiatives, are increasingly becoming part of the academic librarian's responsibilities.¹⁵ These changes enable librarians to perform new and significant roles, redefine their roles, and provide libraries with the opportunity to remain relevant in the digital age.¹⁶

Open-access Publication and its Impact on Librarians' Roles

Digital developments are not the only factor that have influenced academic library service. Major changes in scientific communication such as the OA movement affected scientists and publishers and led to organizational changes in universities and libraries.¹⁷

The OA movement was initiated in the 1990s, as access to the Internet became widely available and online publishing became the norm. It was intensified by three initiatives, known as the BBB declarations: the *Budapest OA Initiative*, the *Bethesda Statement on OA Publishing* in 2002, and the *Berlin Declaration on OA* in 2003. These initiatives represent the most highly regarded definitions of OA, and all agree on the essentials. As stated by Peter Suber, "an OA work is digital, online, free of charge, and free of most copyright and licensing restrictions" (para. 1).¹⁸ The *Budapest OA Initiative* recommended two approaches to providing open access to the research literature: open access journals (known as the "gold" road) and institutional or individual self-archiving in digital repositories (known as the "green" road).¹⁹ Heather Piwowar et al. prefer a less strict definition: "OA articles are free to read online, either on the publisher website or in an OA repository."²⁰

Following the BBB declarations, major research institutions across the globe committed to providing OA for their research output.²¹ More recently, grant conditions of many funding organizations, including Plan S, Europe PMC Funders' Group, and Horizon Europe, began

requiring peer-reviewed research output to be freely available. These aims can be achieved either by publishing in OA journals, archiving publications in an OA repository, or in some cases, both options are required.²² Although there is an increased awareness regarding OA over the years, there is still confusion and misunderstanding concerning the various OA models. Moreover, following the rise of the gold OA model (OA journals), many predatory journals have emerged.²³ Hence, researchers' suspicions towards OA journals are understandable. Researchers question the reliability of OA journals and now consider gold journals as providers of lower-quality articles.²⁴

Because of this, researchers need to recognize and distinguish between OA publication models and routes, as well as between legitimate and predatory journals. In addition, the increasing costs of toll-access subscriptions, particularly via so-called "Big Deals" from publishers, forced libraries and other institutions to initiate large-scale subscription cancellations.²⁵ As libraries make difficult budgetary decisions, the OA movement allows them to redefine their roles within this emerging publishing model.²⁶ Further, with the development of OA, there has been an expectation that academic libraries will take on additional responsibilities like managing research data and open access requirements.²⁷ As a result, OA promoters asked librarians to be the change leaders in their institutions,²⁸ adding suggestions on how to promote OA publication among researchers and management.²⁹ Studies have found that academic libraries promote OA in a variety of ways such as: including records for OA journals in their public catalogs and electronic journal lists, collaborating with their institutions to establish institutional repositories, participating in institutional initiatives to encourage faculties to deposit research outputs in the institution's database and more.³⁰ However, some studies have argued that for experienced librarians as well as those new to the profession, there may be a lack of understanding about potential roles in a changing vision of scholarly communication that includes advocacy for openness.³¹ Furthermore, some librarians may not believe that "open access" has relevance to their busy roles in the library and they need clear instructions on how to change their daily work in the library.³²

In addition, previous studies demonstrated that faculty staff did not perceive librarians as team members for policy development, funding, publishing, or rewards and recognition regarding OA.³³ Faculty members would like to have librarians' assistance and support while keeping the traditional vision of the library as a useful warehouse of information and of librarians as selectors and minders of the inventory.³⁴ Thus, although academic libraries have the ability to provide services in accordance with OA requirements and information system management, they may encounter a lack of cooperation and support for their initiatives from the institution's leaders and faculty.³⁵ Moreover, scholars question the ability of librarians to integrate the new requirements into the library's administrative structure.³⁶ Therefore, the aim of this study was to examine Israeli librarians' perceptions regarding their role and the academic library's role in promoting OA publishing, including barriers, challenges, and difficulties. Further, it explored the factors and requirements needed to promote open access publishing in their libraries and nationally. The research questions that guided the study are:

- RQ1. How do librarians perceive their role and the academic library's role in promoting OA publishing?

- RQ2. What are the barriers, challenges, and difficulties in implementing open-access?
 RQ3. What are the factors and needs that are required to promote open access?

Method

Participants

The study was conducted within the qualitative research paradigm. Qualitative interviews offer ecological validity, provide rich and insightful descriptions, and have the ability to aid in the understanding of complex organizational realities.³⁷ Monique Hennink et al. found that in order to reach code saturation, the point when no additional issues are identified and the codebook begins to stabilize, qualitative research needs 9 interviews.³⁸ In this study, the consideration in choosing the number of research participants was to allow one representative participant from each of the ten existing universities in Israel. The participants were 10 librarians and academic library administrators from ten universities in Israel. Regarding gender, 90% were female. Among them: five (50%) were administrators of the library system at their institution, three (30%) were directors of disciplinary libraries and two (20%) were directors of information systems at the libraries within their institution. In terms of seniority, six (60%) had been employed by their institution for over 10 years, and four (40%) had less than 10 years in their current positions.

Procedure and Instruments

An email was sent to Israeli academic librarians having positions of administrators or directors of disciplinary libraries or information systems in academic libraries of universities, with a request to participate in the study. Respondents were provided with full details about the research and were invited to an informal telephone discussion with the interviewer to discuss the research aims and procedures. The researcher then conducted semi-structured interviews via Zoom with the participants who agreed to take part in the project. All interviews were conducted between April to June 2020 and lasted between 30 and 90 minutes. The librarians' interviews were based on items extracted from the "Librarians' attitudes towards open access, principles and related behaviors survey,"³⁹ and included items that deal with changes in the practice of the academic library based on Perkins and Slowik's (2013) study.⁴⁰ During the interviews, librarians were asked: 1) to report how they perceive their role and the role of academic libraries in promoting OA publishing; 2) to address the barriers, challenges and difficulties regarding promoting open access; and 3) to address the factors and needs required to promote open access publication.

The answers were analyzed from the "bottom-up." Researchers categorized the answers using a thematic analysis technique.⁴¹ This analysis allowed researchers to reach the main categories. Further, it enabled researchers to catalog and code the interviewees' quotes and to identify common expressions and recurring themes. In addition, during the analysis process, researchers merged themes and categories and identified the overlap between themes. The richness of responses justified the number of participants, showing data collected are of sufficient depth to provide salient information in relation to the research purpose.

The thematic content analysis of the librarians' narratives yielded 1,264 statements which were classified into three main and broad categories. Each main category included several sub-categories (see Table 1). The unit of analysis in this study was a statement presenting a content unit. The coding was not exclusive, as the same statements could be attributed to

TABLE 1
Research Categories (no. of statements=1,264)

Main Category	Sub-categories
1. The role of the library and librarians in promoting open access (N = 428, 34%)	1. The library is responsible for implementing the change, after setting OA policy 2. Guidance and advising researchers regarding issues in OA publishing 3. Involvement in agreements through "MALMAD" consortium 4. Contacts with university administration and the research authority 5. CRIS (Current research information system) operation 6. Promotion of an institutional repository
2. The barriers, challenges and difficulties in promotion of open access (N = 541, 43%)	1. Lack of budget and OA agreements with publishers 2. Lack of cooperation with management, the research authority, and the rector 3. Researchers' lack of awareness regarding OA publication and fear of predatory journals and copyright infringement 4. The Journal Impact Factor (IF) effect 5. Fear of changes resulting from the transition to OA 6. Lack of information regarding the researchers' publications venues and norms 7. Difficulties in "marketing" the OA publishing and the fear of leading the change 8. Lack of personnel, guidance, and training for the librarians 9. Opposition from stakeholders and researchers to OA promotion
3. Factors and requirements that are needed to promote open access (N = 295, 23%)	1. The need to change policy at the national level and adopt advanced OA policy 2. The need for cooperation between academic institutions to establish new agreements and an institutional repository 3. Collaboration of the university management, research authority, and the library for the advancement of OA 4. The need tutorials and training for library staff regarding OA publishing 5. The need to guide researchers and reward them for OA publications 6. The need to establish the library's status as a central body for OA care

several categories. To ensure inter-rater reliability of the coding, 25% of the statements were analyzed by a second coder (a trained researcher knowledgeable in research methods and the relevant topic, in addition to the study researchers) and the agreement level between them had a Cohen's Kappa of .86. Table 1 describes the final research categories and sub-categories.

Rigor

To ensure reliability in the findings, rigor in interviews was based on "trustworthiness of data,"⁴² by adhering to four principles: 1. *Truth-value of data*: Librarians were informed in advance that their perspectives and reports would be confidential. To preserve the privacy of the participants, researchers removed all names and places from data sheets; 2. *Applicability of the data*: was achieved by selecting librarians from different universities, genders, and seniority; 3. *Consistency of the data* was assured by verbatim transcriptions of the interviews and keeping records of data collection. However, there are no ages, genders, or names associated with the quotes; and 4. *Neutrality of data* was assured by recording all steps during data coding of the interviews and trying to present librarians' perceptions concerning the phenomenon.

Results

Role and Contribution of Librarians and the Library in Promoting Open Access

The first research question examined the contribution and role of librarians and the library in promoting open access. The librarians discussed six main aspects of their actual role in promoting OA publication in their institutions. Table 2 presents the sub-categories according to their frequency.

TABLE 2		
The Role and Contribution of Librarians and the Library in Promoting OA (N = 428, 34%)		
Subcategory	Total Number of Statements Including	
	N = 428	%
1. The library is responsible for implementing the change, after setting OA policy	111	26%
2. Guidance and advising researchers regarding issues in OA publishing	101	24%
3. Involvement in agreements through "MALMAD" consortium	67	16%
4. Contacts with university administration and the research authority	65	15%
5. CRIS (Current research information system) operation	46	11%
6. Promotion of an institutional repository	38	9%

Analysis of the sub-categories and representative quotes are presented below:

1. The library as leader of the change, after setting OA policy.

Librarians expressed their feeling that they are leading the process of promoting open access in their institution. However, they claim that promoting OA is not their sole responsibility; it is the national government's and university administration's role to establish a regulated policy on the subject: "We try to promote OA in every possible way. But still, the library is not the regulator, it is the execution contractor. We can be the ones in the field who encourage policy, recommend, educate and implement the changes" (L10).

2. Guidance and advising researchers regarding issues in OA publishing.

Librarians advise and guide researchers: "We provide information; we have a special page on our library portal that really explains the different routes in OA, what to do not to do, questions and answers. We also conduct individual and group trainings" (L10). In addition, librarians reported that they help researchers obtain research funding for publishing in OA journals: "We have a small fund to support OA. The founder invests a relatively small amount in it, and set very strict criteria for which researchers. The whole process is managed through the library" (L5).

3. Involvement in agreements through MALMAD consortium.

Most librarians mentioned the connection with MALMAD as the body responsible for promoting OA in Israel. MALMAD is the "Inter-University Center for Digital Information Services" and is a consortium for acquiring, licensing, and managing digital information services to Israel's universities and colleges. The director of MALMAD reported that there are significant conflicts with publishers to lower the price of those "big deals," and transfer to models that would incorporate OA: "We are partners in the whole process and try to involve stakeholders in the university" (L4).

4. *Contact with university management and the research authority.*

Contact with management and the research authority is one of the important roles in promoting OA: "As part of the ongoing process, there are meetings with deans and the research authority, and in every meeting the issue of OA arises, and we are asked to explain why this issue is important and worthwhile to the university" (L7).

5. *CRIS system operation.*

Librarians referred to CRIS (Current Research Information System), a database that stores and manages data about research activities, as a system that will eventually promote OA: "After a struggle, now the CRIS returns to the library. Finally, the university managers understand that it's the library's role. Perhaps this will promote OA" (L1).

6. *Promoting an institutional repository.*

Librarians referred to promoting and establishing an institutional repository (IR) at their universities: "There is now a demand among many researchers, due to the funders' requirements—to deposit not only the article but also the research data. We contacted the university administration, showed them researchers' requests, and asked for a budget to promote the construction of IR" (L9).

Barriers, Challenges, and Difficulties

The second research question examined the barriers, challenges, and difficulties of OA as perceived by librarians. Librarians' response to this topic yielded the largest category (541 statements, 43% of all statements). Table 3 presents the sub-categories according to their frequency.

TABLE 3 Librarians' Perceptions: Challenges and Barriers (N = 541, 43%)		
Subcategory	Total Number of Statements Including	
	N = 541	%
1. Lack of budget and OA agreements with publishers	112	21%
2. Lack of cooperation with management, the research authority, and the rector	83	15%
3. Researchers' lack of awareness regarding OA publication and their fear concerning predatory journals and copyright infringement	80	15%
4. The Journal Impact Factor (IF) effect	73	13%
5. Fear of changes resulting from the transition to OA	54	10%
6. Lack of information regarding researchers' publications venues and norms	44	8%
7. Difficulties in "marketing" OA publishing and the fear of leading the change	50	9%
8. Lack of personnel, guidance, and training for the librarians	33	6%
9. Opposition from stakeholders and researchers	12	2%

Analysis of the sub-categories and representative quotes are given below.

1. *Lack of budget and OA agreements with publishers.*

Librarians expressed helplessness in the face of mega-agreements with publishers that leave them no budget for further agreements with OA journals: "Once these mega-agreements with publishers are signed, we have no ability to deal with it. We renew agreements from year-to-year and we need almost the entire operating budget for acquisition" (L4). Thus, there is no budget left to OA journals: "Researchers contact us to request a budget for OA publication, but unfortunately, we have nothing to offer them" (L10).

2. Lack of cooperation with management, the research authority, and the rector.

Lack of cooperation and disconnection is a frequently mentioned barrier by the librarians, as expressed in the following quote: "For many years there has been no contact with the research authority. They did not see or meet us unless they needed the help of the library. Thus, we cannot make such progress in promoting OA" (L9).

3. Researchers' lack of awareness regarding OA publication and fear of predatory journals and copyright infringement.

Researchers, according to librarians, are unaware of OA in general, and in their field of research in particular: "Our feeling is that researchers are not aware of OA. They need someone to explain them both the OA ideology and information relevant to their discipline" (L1). Researchers are also afraid of predatory journals: "We expose researchers to the fact that there are many quality open journals. Many researchers think that all OA journals are predatory journals" (L7). Regarding self-archiving in repositories, according to the librarians, researchers are concerned about copyright infringement and scooping: "Researchers are afraid to deposit a post-print article in an open database because they fear violating the copyrights they have committed to with the publisher. In addition, they are also afraid to deposit a pre-print article, because of the fear of plagiarism" (L1).

4. Journal Impact Factor (IF).

Researchers are evaluated by publishing in high IF journals: "Researchers do not want to publish in an open journal or in an institutional repository that we as a library want to promote. They want to publish in a journal with a high IF, which will improve their CV (curriculum vitae) as their promotion depends on publications. Some OA journals have a high IF, but most have a relatively low IF for their field, so this is one of the main reasons why researchers refuse to publish in OA journals" (L5).

5. Fear of changes resulting from the transition to OA.

Librarians discussed their own concerns. They have difficulties adjusting to the transition to OA, which often reduces the need for library services: "The library is changing, and this world of OA will change the world of access to information. The librarians will still be needed, but everything will look different and that is a cause for concern" (L7). Librarians have also mentioned researchers' concerns. Researchers are also afraid of changing the existing traditional model: "Researchers think; why do we have to change the existing publishing model? What's wrong with what we do today? Why rock the boat?" (L3).

6. Lack of information regarding researchers' publications venues and norms.

Another difficulty is the lack of information regarding researchers' publications: "The infor-

mation is not centralized, we actually make surveys and ask our researchers: Tell us where do you publish? How much money do you pay for publications? Otherwise, how do we know what to offer them?" (L1).

7. Difficulties "marketing" OA publishing and the fear of leading the change.

Librarians reported difficulties marketing OA to researchers and the institution's management. They were worried about being responsible for failure: "Agreements that contain open components are expensive, and if in the end there are not enough publications to justify the investment, it will be our fault. That is why it is very difficult for us to explain, market, and promote OA" (L2). In addition, researchers are not aware of library's activities regarding OA, and it leads to researchers' lack of information: "One of the most difficult problems is that researchers are unaware of how much help they can get from the library, so they don't use the library to publish in OA" (L3).

8. Lack of personnel, guidance, and training for librarians.

A number of statements addressed the lack of manpower and insufficient guidance regarding OA: "In addition to the manpower we lack, we lack professional training to learn about OA, so that we can be professional while conveying the information to researchers and management" (L8).

9. Opposition from stakeholders and researchers to OA promotion.

Librarians have reported opposition regarding OA, resulting in conflicts between researchers and the management at their institution: "Unfortunately, some of the researchers are employees of some of journals' publishers, and they resist promoting open-access journals. This is a blatant intervention by stakeholders in academia" (L10).

Factors and Requirements Needed to Promote Open Access

The third research question examined what is needed to promote OA publication. This category includes 295 statements (23% of the total). The librarians gave six factors and requirements to promote OA.

Table 4 presents the sub-categories according to their frequency.

TABLE 4		
Factors and Requirements Needed to Promote Open Access (N = 295, 23%)		
Subcategory	Total Number of Statements Including	
	N = 295	%
1. The need to change policy at the national level and adopt advanced OA policy	89	30%
2. The need for cooperation between academic institutions to establish new agreements and an institutional repository	60	20%
3. Collaboration of the University management, research authority, and the library for the advancement of OA	50	17%
4. The need for tutorials and training for library staff regarding OA publishing	49	17%
5. The need to guide researchers and reward them for open access publications	32	11%
6. The need to establish the library's formal status as a central body for open access care	15	5%

Analysis of the sub-categories and representative quotes are listed below.

1. The need to change policy at the national level and adopt an advanced OA policy.

The largest number of statements addressed the need to change policy: "Why would researchers consider publishing in OA? It should be a policy. The breakthrough of OA will come from a national policy, as exists in many other countries in Europe and United States. Currently, we are 'tilting at windmills'" (L1).

2. The need for cooperation between academic institutions to establish new agreements and an institutional repository.

Cooperation between all academic institutions in Israel would create a greater advantage to negotiate with the publishers: "It's too big for each university individually. If all universities are together, they will consist one incorporated group that can negotiate with publishers" (L2). In addition, the librarians mentioned the establishment of a common IR: "If there was a common institutional repository for all institutions, it would give researchers an alternative to the publishers" (L10).

3. Collaboration between the University management, research authority, and the library for advancing OA.

Collaboration between university authorities will help promote OA open access: "The university management and the research authority must cooperate with us (the library) if we really want to promote OA" (L8).

4. The need for tutorials and training for library staff on OA publishing.

Librarians mentioned the need for professional development regarding OA: "The library staff must specialize in OA. We must be ready to guide and advise both researchers and management" (L4).

5. The need to guide researchers and reward them for open access publications.

Librarians argued that researchers need guidance concerning high IF OA journals, and their added value: "Researchers need guidance because they do not understand the value in publishing OA, they wonder why do they need it. And even if they do understand, it is not certain that they will publish on their own initiative" (L6). Therefore, librarians offer to provide funding for researchers: "The Higher Education Council should budget OA publications, and at the same time oblige researchers to self-archive pre-post version in open repository" (L3).

6. The need to establish the library as a central body for Open Access.

Librarians suggested that the library would take a major role and handle everything related to OA: "It would be correct if we as the library centralize the issue of OA publication and not the dean. If researchers need help, they should contact us because we work with publishers" (L9).

Discussion

Academic libraries have the expertise and mindset to be early adopters of new technologies such as digital curation, digital preservation, digital archiving, and more.⁴³ This study examined Israeli librarians' perceptions regarding their role and the academic library's role

in promoting OA publication, the barriers, challenges, needs, and requirements needed to promote OA publishing in their institutions as well as at the national level. Interpretation of the findings was presented in an integrative way.

It reveals that librarians perceive themselves as being at the forefront of promoting OA in their institutions. However, they emphasized that they are not the first or only persons to be responsible for promoting OA publishing. They assert that since there is not a definite policy towards OA in Israel, it is the national government's and the university administration's role to create a regulated policy towards OA. Once the policy is outlined, they will be the ones to guide, recommend, educate, and implement the changes. A number of studies evaluated the involvement of countries in the international OA movement, and in particular examined the distribution of the number of OA repositories, OA journals, institutional OA policies, and OA articles among selected countries.⁴⁴ Studies found a positive relationship between countries' involvement in OA and the proportion of research outputs published in gold/green OA.⁴⁵

Librarians perceive the relationship with the university management as key to promoting OA. However, they emphasized that a lack of cooperation with management, the research authority, and the rector does not enable a substantial advancement in agreements with OA components or promotion of an institutional repository. Librarians also reported that sometimes, due to conflicts of interest, management actively opposes librarians' initiatives. Therefore, and as found in past studies,⁴⁶ cooperation with the university administration is a necessary condition for promoting OA publishing and strengthening the library's role in it.

The lack of budget for OA agreements with publishers is the greatest barrier according to librarians in this and previous studies.⁴⁷ Librarians feel frustrated by the mega-agreements with publishers that leave them no budget for further agreements with OA journals. Further, they added that they have no budget for researchers who approach them for help in funding APCs to publish in an OA journal. Therefore, to confront the budget barrier, they are involved in supporting activities carried out through the MALMAD consortium aimed at promoting OA, even without the support of university management. Librarians assume that their involvement in two major current projects will lead to OA awareness. The first is the CRIS database. Librarians assert that in order to recommend and advise researchers and university management regarding publishing in OA, they need information about all researchers' publications. CRIS assists them in achieving this goal by centralizing publications and performing data analysis.⁴⁸ The second system is the institutional repository (IR), which was mentioned in other studies as contributing greatly to the OA movement.⁴⁹ Librarians note that researchers ask them to deposit their work in an institutional repository based on requests from funding agencies. Therefore, they suggest establishing a shared institutional repository for all academic institutions, which would emphasize cooperation between academic institutions. According to the librarians, the collaboration of all academic institutions in Israel will result in a consolidation of forces and a better position to negotiate with the publishers.

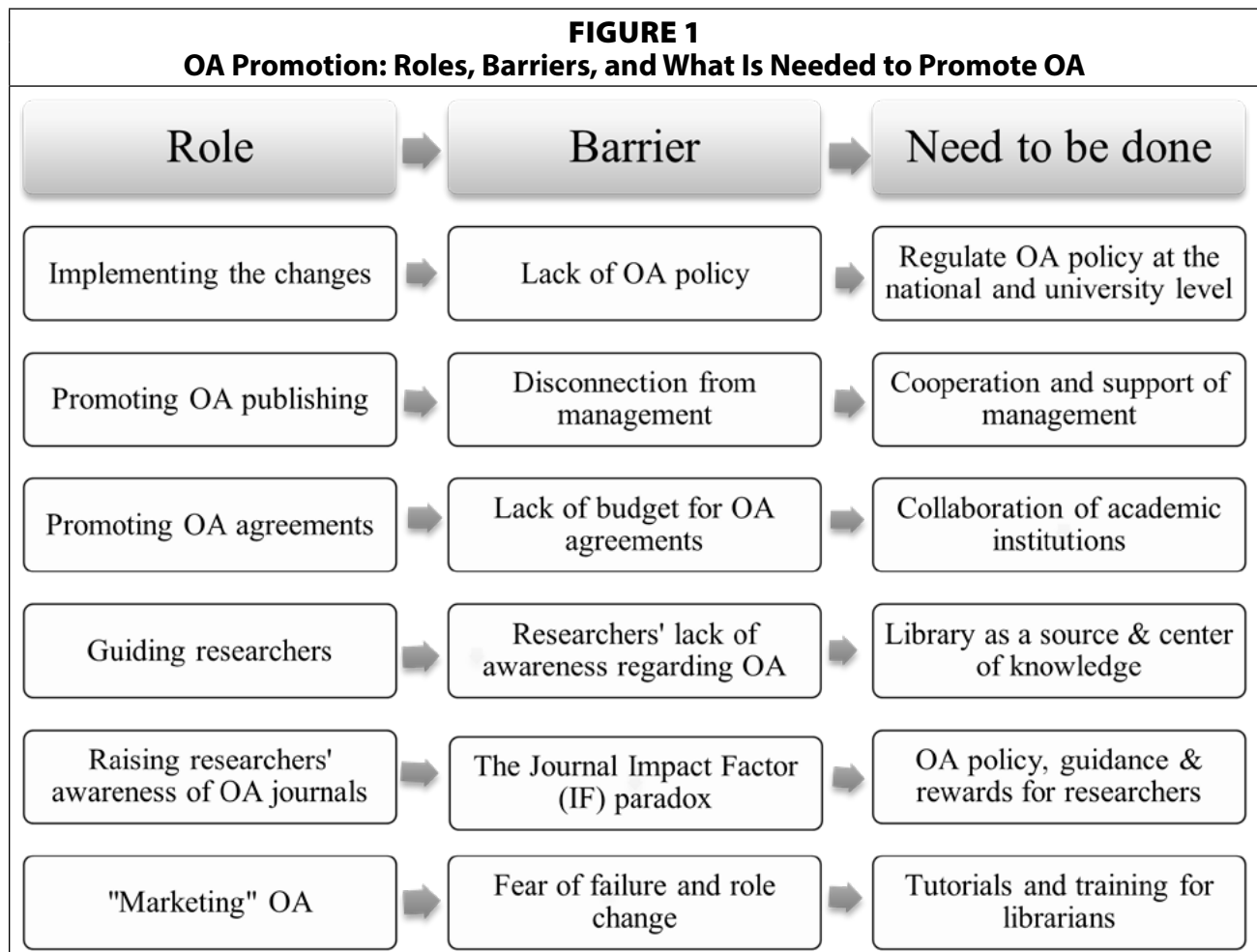
Librarians see great importance in their role of guiding and advising researchers regarding OA publishing. One of the biggest barriers in promoting OA is researchers' lack of awareness concerning OA in general, and in their field of study. Further, researchers fail to distinguish between legitimate OA journals and predatory journals. Librarians mention the journal impact factor as one of the main barriers to OA promotion. The journal IF index has a broad

and long-term impact on research institutions and researchers. In most academic disciplines, researchers have to publish in journals with a high IF in order to succeed, especially for those on a tenure track. In many cases, OA journals have a less established IF.⁵⁰

Thus, due to these considerations, junior academics have less experience with OA journals.⁵¹ In addition, researchers, according to librarians, do not know the copyright terms of publishers and therefore avoid self-archiving. They are also concerned about depositing a pre-print version for fear of "scooping" (i.e., that someone will steal their research idea). Moreover, librarians add that researchers are afraid of changing the traditional publishing model and need guidance adjusted for their discipline. Therefore, and as found in other studies, librarians consider their role as facilitating and guiding proper publication in OA.⁵²

Open access is transforming scholarly communication. Various modes of OA include: gold, hybrid, delayed, bronze, institutional and subject-based repositories, and others, which reflect the complexity of OA.⁵³ Thus, new challenges emerge for academic library faculty that require investing in developing skills and continuous improvement.⁵⁴ With professional development, support and proper guidance, librarians will be able to be real promoters and leaders for OA in their institutions.

To summarize librarians' findings and to outline what can be drawn from this study, Figure 1 shows the roles, barriers, and what is necessary to promote OA:



Librarians referred in this study to several stakeholders who can promote open access: at the state level, at the universities management level, and at researcher, and academic library level. Librarians see great importance in their role of advising researchers regarding issues in OA publishing. In order to provide the appropriate training, librarians acknowledge that they need professional development in the various aspects of OA. At the universities management level—the findings indicate the need for support in libraries' activities in relation to OA, but also the need for collaboration between the academic institutions to promote the publication of OA. However, librarians insisted on a regulated OA-policy at the national and institutional levels, which would strengthen their status as change-leaders of the OA-movement. Finally, as Figure 1 indicates, academic libraries have the opportunity to contribute to the adoption of OA and change their traditional roles, provided they get the support they need.

Conclusions and Future Work

Over a decade ago, and 10 years after the BBB declarations, some scholars argued that the growth in OA publication is encouraging. Considering the indicators of progress made by the OA movement against the obstacles in the first decade, there is a reason for great optimism for the next decade.⁵⁵ Now, 20 years after the BBB declarations, the struggle continues and OA publishing is not yet the norm in some countries and academic institutions. According to the librarians, the university administration and researchers are not aware of the potential of open access publishing. To encourage the adoption of OA practices—publishing in OA journals, depositing in OA repositories—advocacy is important but insufficient. Librarians require a set of regulated and legal OA policies. Otherwise, they are “tilting at windmills.” Much is written in the literature about the difficulty of adapting to the change of roles with the transition to the digital world.⁵⁶ The librarians in the current study are willing to lead the change, guide researchers, and support the transition to the OA publishing model. Yet, they need the strengthening that comes from regulated policies at the national level, as well as public support from academic institutions' management of their libraries.

The current study has some recommendations for future research. Future studies may expand the sample and crosscheck librarians' perspectives with other quantitative methods. In addition, future studies should include and examine researchers' and policymakers' perspectives too.

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Notes

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