

Exploring Knowledge and Perceptions of Faculty Members about Authorship: A Study from Jordan

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Received for publication: 08 January 2022.

Accepted for publication: 03 March 2022.

Abstract

Authorship has important implications and carries considerable responsibilities. The present study explored faculty members knowledge and perceptions of authorship at Jordanian universities. For this research a survey was distributed to faculty members at three major universities in Jordan. The study found that only 33% of the participants were aware about International Committee of Medical Journal Editors (ICMJE). In addition, the knowledge of the participants about basic principles of authorship was rated as medium. The number of research and level of ICMJE knowledge was found to exert a significant effect on commitment to authorship principle subscale score. Finally, the majority expressed good authorship believes that graduate students should be the lead authors on the publications that are derived from their thesis. Knowledge about authorship principles among faculty members in Jordan needs improvements.

Keywords: Authorship; Research ethics; ICMJE; Jordan, Survey.

Introduction

Authorship has vital implications, yet it carries considerable responsibilities (Resnik et al., 2016). Authorship of books and journal articles is utilized in the evaluation of researchers for jobs, promotions, fellowships, and awards (ICMJE, 2020). Retaining scientific credibility depends on complete and proper authorship, and truthfulness in reporting the research findings (The Memorial Sloan Kettering Cancer Center's (MSK), 2015). Violation of the authorship principles such as including researchers who did little or no contribution in the research (gift authorship) or exclusion names of researchers who did contribution (ghost authorship) has been reported to exist in the scientific community (Albert, & Wager, 2016). While there is no one agreeable definition of authorship (Resnik et al., 2016), an "author" is generally an individual who did a considerable intellectual contribution to the research (Menezes et al., 2016). The International Committee of Medical Journal Editors (ICMJE) identify that "All persons designated as authors should qualify for authorship, and all those who qualify should be listed" (Albert, & Wager, 2016).

Perception of authorship and its practices in developed countries are well documented (Smith et al., 2019; Patience et al., 2019; Stocks et al., 2018; Roberts, 2017). However, studies from developing countries are still limited (Breet et al., 2018; Tarkang et al., 2017). Studies from India reported some unethical practices on authorship among medical faculty members and highlighted the need for improvements on understanding authorship principles (Kavitha et al., 2016; Das et al., 2016). A study from Pakistan showed that vast majority of faculty members were not aware of the existence of authorship criteria and gift authorship was common (Jawaid, & Jawaid, 2013).

Given the paucity of literature on faculty members' knowledge regarding authorship in the Arab World, the current study aimed at exploring the faculty members' knowledge and perceptions of authorship in Jordanian universities.

Methodology

Research Design

This is a cross sectional survey examining faculty members' views on authorship. Faculty members (n=120) at three universities in Jordan (The University of Jordan, The Hashemite University, and Al-Balqa' Applied University) were contacted via e-mail to fill the survey. The final number who filled the questionnaires was 60, which represent 50% of the total sample approached. The study was conducted under the ethical code of Institutional Review Board (IRB) of Jordan University of Science and Technology. Written consent forms were obtained from each participant.

Instrumentation

To construct the survey of the present study, the investigators developed the scale and identified items based on the literature review (Jawaid, & Jawaid, 2013; Dhaliwal et al., 2006; Singh, 2018). The survey consisted of several sections. Section one, which included demographic and general information such as gender, educational level, years of experience, rank, and number of publications. Section two, asked the participants to rate their level of knowledge about ICMJE authorship criteria. Section three consisted of 19 items designed to investigate authorship principles. The items were measured using a five-point Likert-type scale ranging from (5) 'always' to (1) 'never'. The following scale: <2.34 indicated a low level, 2.34 to <3.67 indicated a medium level and 3.67 to 5.00 indicated a high level was adopted to evaluate knowledge levels. Section four included 4 items measuring faculty members perceptions toward certain aspects of authorship practice they have been through. Reliability indices were determined by using Cronbach's alpha. The coefficient alphas was 0.85, reflecting good levels of internal consistency.

Data Analysis

Means, standard deviations, and modes were calculated, and statistical analysis was performed with an independent sample t-test and one-way ANOVA using the SPSS package version 22 (Chicago, IL, USA).

Results

Table 1 shows demographic and general information of the study participants. About 63% of the sample were males, the majority (90%) were PhD degree holders. Assistant professors represented 50% of the sample studied. About 28% had more than 10 publications.

Table 1. Distribution of Sample with respect to gender, education level years of experience rank and number of published articles

Variable	N
<i>Gender</i>	
Males	38
Females	22
<i>Education level</i>	
Master degree	6
PhD degree	54
<i>Years of experience</i>	
1-3	13

Variable	N
4-10	29
More than 10 years	18
Rank	
Lecturer	9
Assistant Professor	30
Associate Professor/Professor	21
Number of published articles	
Less than three	14
4-10 research	29
10-20 research	13
More than 20 research	4

Table 2 presents responses to the item that measures level of knowledge about ICMJE among faculty. Forty participants rated their knowledge as weak, 18 participants rated their knowledge as medium, and only 2 rated their knowledge as good.

Table 2. Knowledge level of (ICMJE)

Awareness level	Frequency	Percent
Not aware	40	66.7
Aware to some extent	18	30.0
Fully aware	2	3.3

Table 3 presents responses to the subscale that measures level of authorship knowledge among faculty members. The total mean score was 3.5. Thus, faculty showed a medium level of knowledge. The highest mean score of 4.37 was calculated for “graduate students should be inserted in published paper of his thesis as the first author” statement, whereas the lowest mean score of 2.6 was calculated for ‘The person who made statistical analysis only should be inserted in the acknowledgment but not among authors’ statement (Table 3).

Table 3. Means and Standard Deviations of participants’ perceptions about authorship

Items	Mean	Std. Deviation
The name of the graduate student should be the first in the published papers of his/her thesis	4.27	1.133
Research team should decide the lead author from the beginning	4.15	.840
All authors should approve the final version of the paper	4.13	.947
Research team should decide the order of the authors from the beginning	4.03	.974
Person who has made intellectual contribution to the study should be considered among the authors	3.95	1.032
It is not accepted to exclude any author who intellectually contributed in the study.	3.77	1.184

Items	Mean	Std. Deviation
It is not accepted to insert any author who intellectually contributed in the study as a kind of acknowledgment	3.75	1.297
Funder should be listed in the acknowledgment	3.73	1.287
To be an author, you should have substantial contribution to the design of research or to the collecting and interpretation of data	3.70	.944
	3.5368	.62656
Author should have substantial intellectual contribution to revise the manuscript	3.52	1.033
All individuals who contributed to initial draft of the manuscript should be listed among authors	3.37	1.262
We should take an approval from the person before inserting his/her name in the acknowledgment.	3.35	1.505
Person who provided support and guidance should be listed in the acknowledgment	3.35	1.494
Technical revision doesn't suffice for authorship	3.03	1.507
Papers should have an author contributions section	3.02	1.372
Obtaining funding only doesn't suffice for authorship	2.87	1.096
Collecting data doesn't suffice for authorship	2.83	1.060
The person who made statistical analysis only should be inserted in the acknowledgment but not among authors.	2.63	1.426

Faculty Rating of practices

Mode was calculated in order to measure faculty members perceptions toward certain aspects of authorship practice they have been through. Participants rated all the 4 items as good practices (Table 4). To examine factors (such as gender, rank, education level, number of research and years of experience) that might influence faculty knowledge and perceptions of authorship, independent t-tests and a one-way ANOVA were used. The results revealed no significant differences based on gender and education level on perceptions of commitment to authorship principle ($t = -0.595$, $p = 0.55$; -1.93 , $p = 0.059$ respectively). In addition, number of publications and level of CIM knowledge on commitment to authorship principle subscale score were found to exert a significant effect ($F = 3.154$, $p = 0.03$; $F = 3.547$, $p = 0.03$). Moreover, no significant differences attributable to years of experience or rank on the total score for the commitment to authorship principles subscale were observed ($F = 0.335$, $p = 0.717$; and $F = 2.757$; $p = 0.07$ respectively).

Table 4. Modes of participants rating of practices

Item	Mode
Has it ever happened to have a conflict within your research team about the order of researchers?	No
Has it ever happened to have a conflict within your research team about including an author?	No
Do you consider your institution guidelines regarding authorship before publishing?	Yes
Do you consider the journal authorship policy before submitting the paper?	Yes

Discussion

The aim of this study was to explore faculty members' knowledge and perceptions about authorship in Jordanian universities. The majority of participants were not aware about ICMJE authorship guidelines. In addition, participants rated their knowledge about authorship principles as medium. This finding is reasonable and consistent with previous studies who reported that research ethic is challenging in several developing countries (Yousuf et al., 2007; Alahmad et al., 2012). The present finding is also consistent with a previous study that was conducted on faculty members of pharmacy from a university in Jordan and reported low awareness of ICMJE criteria among study participants indicated a clear unethical practice on authorship issues among medical faculty members of India and indicated the need for improvement on understanding ethical authorship (Alsho-gran, Al-Delaimy, 2018; Das et al., 2016). A study from India has reported earlier that many authors appear to be unaware of unethical practice in research publications or pay less attention to adhere to the ethical standard on authorship issues indicated that majority of dental faculty in India had poor knowledge about authorship international guidelines (Aggarwal, & Kapoor, 2004; Mallela et al., 2015).

In Jordan, the majority of academic institutions do not have responsible conduct of research training programs (Alrabadi et al., 2019; Rababa'h et al., 2019; Khabour, & Abu-Siniyeh, 2019; Khabour et al., 2017). Furthermore, researchers in the social science field need training in the research ethics. However, there are some initiatives to improve the capacity of Jordanian researchers in the research ethics domain. One of these pioneer initiative is RCR program which is led by the University of California San Diego in collaboration with Jordan University of Science and Technology (Al-Khatib, & Kalichman, 2019). The program is expected to significantly improve RCR in Jordan and the region.

Current results also revealed that researcher in Jordan have appropriate practices related to research team about the order of authors and including of researchers among authors, taking look to university and the journal guidelines in that regard.

The current findings suggest that perceptions of commitment to authorship principle were not influenced by gender, education level, years of experience and rank of faculty member. The number of published articles and level of CIM knowledge significantly influenced commitment to authorship principle subscale score. This may be attributable to the importance of these two variables in improving researcher's knowledge about authorship.

It is important to consider the findings of this study in the context of its limitations. The study sample size reduces the generalizability of the findings. The main method of data collection was a self-report questionnaire. Future studies might address these limitations.

Conclusion

The results of this study are important in understanding the current state of education faculty knowledge and perceptions of authorship in Jordanian universities. Faculty members regard themselves as having medium-level knowledge. Results also indicated that they have good practices related to authorship. Gender, education level, years of experience and rank had no significant effect on perceptions of commitment to authorship principle. The number of published papers and level of CIM knowledge significantly influenced commitment to authorship principle subscale score.

Implications

The study emphasizes the need of training programs for faculty members in related to authorship principles. Furthermore, Jordanian policy should require that faculty members, by law, hold authorship knowledge, in order to improve the status of research ethics in Jordan.

Future studies might use different resources to collect data – such as semi- structured interviews and focus groups – and by collecting data from other concerned groups, such as journal editorial boards, scientific research deans, graduate students and researchers in the settings other than universities.

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