

Article

# Women's Studies in the Muslim World: A Bibliometric Perspective

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**Abstract:** This study investigates the scientific outputs made by scholars residing in Muslim countries in the field of Women's Studies as represented in the Web of Knowledge between 1900 and 2016. Focusing on countries whose population was at least 50% Muslim, we found 741 publications in this field. However, scholars in 16 out of 49 (32.65%) Muslim countries did not publish any works in Women's Studies. Although the first work appeared in 1977, an exponential increase in the number of such publications was seen from 2008 on. Most of the articles were written by scholars in Turkey (188, 30.9%), followed by those in Malaysia (59, 9.7%), Nigeria (51, 8.4%), Lebanon (43, 7.07%), Bangladesh (42, 6.91%), and Iran (40, 6.58%) in the fields of Public, Environment & Occupation Health (37.1%), General Internal Medicine (17%), Obstetrics Gynecology (17%), and Psychology (9.4%). The most frequently used words in the titles and abstracts and as keywords were women, women's, Turkey, gender, violence, and health. We predict that the number of such publications will continue increasing in the coming years.

**Keywords:** Women's Studies; Muslim countries; Bibliometrics; Web of Knowledge; corpus linguistics

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## 1. Introduction

The status of women has always been a topic of heated discussions throughout the world in general and in the Muslim world in particular. For this reason, one of the United Nations' (UN) 17 goals for Sustainable Development is to achieve gender equality, thereby avoiding discrimination against and violence toward women [1]. The Muslim world offers a striking example of gender (in)equality. Although women have gained some status in Muslim societies, their status varies among these societies. For example, in Turkey women achieved the right to vote in local elections as early as 1930 and gained full universal suffrage in 1934. Yet, in Saudi Arabia it was not until 2015 that women gained the right to vote, and in local elections only. The present study aims to contribute to this knowledge by focusing on scientific works in Women's Studies in the Muslim world as represented in the Web of Knowledge and analyzing them from a bibliometric perspective. For this, we focused on the scientific outputs published in journals by scholars residing in Muslim countries in the field of Women's Studies as indexed in the Web of Science between 1900 and 2016. We aim to reveal various features of publications in Women's Studies in the Muslim world such as publication types, research areas, publication years, number of authors, abstract, keywords, and titles. Our analysis showed that the number of studies in Women's Studies in the Muslim World has increased very recently. Our analysis also revealed that the research focus of publications in Women's Studies differs across the Muslim countries; some countries focus on health issues more than psychological, historical, and economic issues in relation to Women's Studies. This study not only contributes to the bibliometric

studies on social sciences and humanities but also highlights the contributions of Women's Studies to societies all over the world including the Muslim countries.

**The birth and development of Women's Studies:** The emergence of Women's Studies as an academic specialty in the United States can be traced back to the 1960s [2–4]. However, the discipline became more recognized during the 1970s. Women's Studies grew in a political context, one in which the women's liberation movement, the Civil Rights movement, the movement for gay and lesbian equality, and protests against the Vietnam War took place [5]. In this political climate, by the late 1960s, women had started challenging the male-dominated structure of the standard curriculum [6]. Women faculty started offering courses that would lead to more reflection on women's experience and feminist aspirations. These courses were offered in Canada, Britain, the United States, and India to investigate women's literature, psychology, and history through the lens of sociology, economics, and politics [7,8].

The 1970s were Women's Studies' age of discovery. The first official program began at San Diego University in 1970. By the end of the 1970s, there were more than 300 Women's Studies programs and 30,000 courses in the U.S. The number of programs increased from 150 in 1970 to 300 in 1980, 350 in 1985, and 600 in 1990. Additionally, Women's Studies programs were initiated in different parts of the world; for example, one began in Ewha University in South Korea in 1977 and one began in India in the early 1970s. During the 1980s, issues of ethnicity, nationality, language, religion, sexual preference, social class, and other differences among women became sources of contention in Women's Studies. Women's Studies began focusing on gender equity as well as on sexuality studies during the 1990s. These years also witnessed an increasing number of graduate options, such as certificates and masters and doctoral programs offered by universities [2–8].

As Ginsberg stated in 2009, Women's Studies had been a very successful venture. For example, the U.S. had more than 800 Women's Studies programs [9]. There was also a huge proliferation of both national and international books, journals, networks, blogs, and conferences about the field. In other words, the courses offered during the 1960s had been transformed into programs with majors and graduate curricula, as well as an international phenomenon with journals published and read internationally. Furthermore, Women's Studies has been referred to as “multidisciplinary, intradisciplinary, nondisciplinary, antidisciplinary, neo-disciplinary, transdisciplinary, cross-disciplinary, critical interdisciplinary, intersectional, intertextual, and pluri-disciplinary” [5]. This was because scholars in Women's Studies have worried that they would be looked at suspiciously in their home disciplines. Therefore, Women's Studies covers many fields, including natural sciences, social sciences, law, and art.

**Women's Studies in the Muslim world:** Scholars have been increasingly interested in women and gender issues in the Middle East, as reflected in the existence of a greater number of books, journal articles, dissertations, and conference panels [10]. “By drawing attention to the diversity of social location, consciousness, and action, Middle East scholars of women and gender have contributed to broader feminist inquiries into the intersections of gender with other social fault lines, and into the capacity of women in general, and Middle Eastern women in particular” [11]. The argument that Women's Studies in the Middle East emerged as a separate field in the late 1970s with the publication of Elizabeth Fernea and Basima Bezirgan's *Middle East Women Speak* and Lois Beck and Nikki Keddie's *Women in the Muslim World* is prevalent. However, the emergence of the field might even be traced back to the Arab Women's Conference in 1944, where a Lebanese delegate called upon all Arab universities to integrate women into their curricula [10].

Women's Studies programs in some Muslim countries were created as early as the second half of the 1980s. In Turkey, for example, the Women's Research and Education Center was founded at Istanbul University in 1989; this can be considered the first step toward the institutionalization of Women's Studies in Turkish academia [12]. Furthermore, the Women's Library and Information Center was opened in 1990, followed by women's centers at other universities. The first center at Istanbul University began offering an interdisciplinary Women's Studies graduate program in 1990–1991; it became an independent master's program in 1993. This was followed by another at the Middle East

Technical University in Ankara in 1993 [12]. In Iran, the first center, though connected to the state, was founded in 1986 with the goal of enhancing women's integration into the state-guided process of economic development. In 2000, the state allowed the opening of master's programs in Women's Studies with only three specializations: women and family, women's rights in Islam, and women's history. The first programs accepted students in 2002–2003. However, private universities in Iran still do not maintain Women's Studies programs [13]. In Central Asia, the field of Women's Studies began emerging in the 1990s. For example, in Tajikistan, gender studies started in 1996. In Turkmenistan, gender development has always been a part of government policy. In Kyrgyzstan, public awareness of gender started in the second half of the 1990s. In Azerbaijan, the Women's Studies Center at Khazar University was established in 1991 [14].

**Bibliometric studies on Women's Studies:** Studying the journals in Women's Studies is important because, as McDermott suggests, they “offer a rich area for research because they explicitly address the practices and processes of academic publishing while shaping the parameters of an available body of feminist research and contributing to the advancement of Women's Studies scholars” [15]. However, the number of bibliometric studies on Women's Studies is limited. Tsay and Chia-ning [16] showed that the journal article was the most prevalent form of publication in Women's Studies. They found that there were 3506 journals, which together published 16,303 articles on Women's Studies from 1900 to 2013. Among them, 481 journals published only one paper on Women's Studies. While 50% of the literature was concentrated in only the first 147 journals, the remaining 50% was published in 3359 journals, indicating that Women's Studies literature has been widely spread to many different journals. This is consistent with the fact that 481 journals published only one article and 280 journals published two articles associated with Women's Studies. The authors argued that the scattering of the articles poses a great problem in terms of the complete retrieval of relevant information.

A series of related studies identified core journals in Women's Studies. The first five journals on their list were the same: *Feminist Studies*, *Frontiers: A Journal of Women's Studies*, *Signs: Journal of Women in Culture*, *Women's Studies International Forum*, and *Women's Studies Quarterly* [17,18]. Cronin and colleagues [15] examined the authorship, acknowledgment, and editorial patterns and practices of three of these leading Women's Studies journals—*Feminist Studies*, *Signs: Journal of Women in Culture and Society*, and *Frontiers: A Journal of Women's Studies*—for the period between 1975 and 1994, and found 1504 authors associated with 1302 articles.

Publications in Women's Studies come from various subject areas. For example, Mack [17] examined the 1266 citations in *Signs: Journal of Women in Culture and Society* and found that these citations came from 11 subject areas including psychology, sociology, history, economics, anthropology, philosophy, literature, political science, and law. Tsay and Chia-ning [16] categorized the subjects contained in the 117 core journals as follows: humanities (including literature, history, and philosophy) (27.4%), Women's Studies (23.9%), medical science (15.4%), psychology (8.6%), political science (7.7%), sociology (4.3%), and others (12.8%).

There are also studies that examine the growth pattern of Women's Studies. A recent study [16] analyzed 16,852 items in Women's Studies between 1900 and 2013. While the number of articles published each year was no more than 15 during the period between 1979 and 1988, the number of articles published each year increased to more than 100 and reached 602 in 1999, pointing to exponential growth. This growth rate was about twice as much as that of the total growth in research collected in Web of Science (WoS). Another study, Zainab [19], that investigated the growth of Women's Studies in Malaysia found a similar pattern. The number of publications in Women's Studies increased from 691 in the years up to 1989 to 3346 between 1990 and 2004. The second period contributed 80% of the total publications.

Research also showed that great majority of the articles (94% for *Feminist Studies* and *Frontiers*, and 84% for *Signs*) were single-authored, and 93% of the authors (of single-authored articles) were women [15]. Similarly, Zainab [19], on publications in Women's Studies in Malaysia, revealed that 87%

of publications were single-authored. Moreover, most of the publications in Malaysia authored by five or more people were in the fields of health and welfare of women.

A study [20] that investigated the number of citations given to Women's Studies journals in dissertations found that there were one or more citations given to the 1989 core list of seven journals in 37 out of 57 January 1990 dissertations (citation rate of 65%). There were citations to the 1994 core list of 12 journals in 60 out of 103 January 1995 dissertations (citation rate of 58%). Another study [16] showed that 109 articles were cited more than 50 times by the articles published in 117 core journals that they identified. These articles were published in 37 journals. This study revealed that more than half the core 117 journals began publishing between 1979 and 1990 and that the largest number of articles was written by authors in the U.S. (50.6%) and the United Kingdom (28.9%), followed by those in Canada (2.8%), the Netherlands (2.4%), Germany (1.8%), and France (1.75%). However, these 117 journals were not published by publishers in the Muslim world with the exception of Saudi Arabia and Turkey, which have one core journal in Women's Studies [16].

The present study contributes to this line of research by focusing on publications in the field of Women's Studies in the Muslim world, where gender inequality is more prevalent than in Western Europe and North America.

## 2. Methods

We followed established research methods in general bibliometric studies [21,22]. For database selection, we selected the Social Sciences Citation Index (SSCI) and Arts & Humanities Citation Index (A&HCI) of the Web of Science databases because these databases are widely-used databases in bibliometric studies and Women's Studies is considered as one of the fields of social sciences and humanities.

For inclusion criteria, we selected countries/territories with a Muslim population of more than 50% according to the CIA's *World Factbook*. There were 49 countries: Afghanistan, Albania, Algeria, Azerbaijan, Bahrain, Bangladesh, Brunei, Burkina Faso, Chad, Comoros, Djibouti, Egypt, Guinea, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kosovo, Kuwait, Kyrgyzstan, Lebanon, Libya, Malaysia, Maldives, Mali, Mauritania, Mayotte, Morocco, Niger, Nigeria, Oman, Pakistan, the Palestinian Territories, Qatar, Saudi Arabia, Senegal, Sierra Leone, Somalia, Sudan, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, the United Arab Emirates, Uzbekistan, Western Sahara, and Yemen (Figure 1).



**Figure 1.** Map of targeted countries with a Muslim population of more than 50%.

In the advanced search section of the Web of Science database, we also included Women's Studies as a Web of Science category, used the AND operator, and selected one of the 49 countries as an address (i.e., wc = women's studies AND ad = [country]). We restricted the dates between 1900 and 2016.

For exclusion criteria, we excluded the studies published from 2017 on. We also excluded publications by Muslim scholars working in non-Muslim countries since we are interested in the publications in Women's Studies only in Muslim countries. If the studies were not classified as Women's Studies in the Web of Science category, we did not include them. Since neither SSCI nor A&HCI keeps information about books or book chapters, we excluded those types of publications.

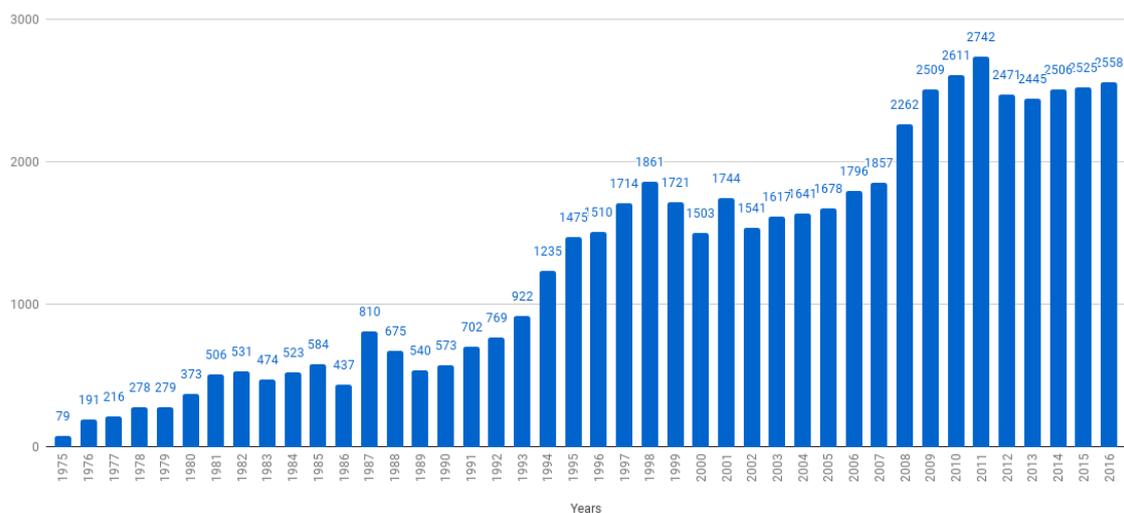
For defining the variables criteria, because we aimed to examine Women's Studies publications by the scholars residing in Muslim countries, we created the following variables: the number of publications, the types of publications, research areas, publication years, the names of journals, languages, the number of authors, citations and references, abstracts, and keyword.

For coding and analysis criteria, we saved the search results as an Excel file and coded the data accordingly. The saved files included information about the titles of scientific works, authors, names of journals, publication dates, citations, cited references, abstracts, publications' languages, types of documents, keywords, and addresses, among others (i.e., full record and cited references). We also focused on titles, abstracts, and keywords to examine the publications' main topics. To analyze the titles, abstracts, and keywords we used a corpus linguistics software, AntConc, Waseda University, Tokyo, Japan [23]. To access scientific publications from the field of Women's Studies, we used the library facilities at Purdue University in October 2017.

### 3. Results

#### 3.1. General Findings: Contexts

There were 54,983 publications published between 1900 and 2016 in SSCI and A&HCI in the field of Women's Studies. Of them, 29,541 were articles (53.72%), 16,652 were book reviews (30.28%), and 4321 were editorial materials (7.86%), followed by meeting abstracts, proceedings papers, reviews, and letters, among others. The very first publications appeared in 1975 (Figure 2). More than half the publications were authored by scholars with an address in the U.S. (30,124 publications, 54.79%), followed by England (4816 publications, 8.76%), and Canada (2714 publications, 4.93%). As a research area, 10,215 publications were also cross-listed with Psychology (18.58%) followed by Public, Environmental & Occupational Health (9355, 17.01%), Obstetrics Gynecology (5351, 9.73%), Social Studies Other Topics (4544, 8.26%), and Sociology (2376, 4.32%). The number of publications had increased over the years. The journals that published the highest number of articles in this field were the following: *Sex Roles* (5309, 9.66%), *Signs* (5068, 9.22%), and *Journal of Women's Health* (4545, 8.27%), among others. The languages of the publications were English (53,525, 97.35%), French (1004, 1.93%), German (442, 0.80%), Spanish (4), Romanian (2), Italian (2), Portuguese (1), Korean (1), Georgian (1), and Estonian (1).



**Figure 2.** Number of publications/year in the field of Women's Studies (Trendline  $y = -65.88x + 2658$ ,  $R^2 = 0.938$ ).

### 3.2. Findings from the Muslim World

We examined publications in the field of Women's Studies with an address in the 49 Muslim countries/territories. We found that in this field, there were no publications indexed in either SSCI or A&HCI in the following countries/territories: Azerbaijan, Chad, Comoros, Djibouti, Kosovo, Libya, Maldives, Mali, Mauritania, Mayotte, Niger, Somalia, Turkmenistan, Uzbekistan, Western Sahara, and Yemen.

### 3.3. Publications and Publication Types

We have observed a variety of publication types: articles, meeting abstracts, book reviews, editorial materials, proceedings papers, letters, reviews, and items about an individual. The Muslim countries that published most frequently were Turkey, Nigeria, Malaysia, Lebanon, and Iran, in descending order. Of them, Turkish scholars (220) were far ahead of the others (followed by Nigeria (79), Malaysia (64), Iran (56), and Bangladesh (49)) in terms of the number of publications.

A closer examination of the articles indicated that the average number of authors ranged from 1 to 21 per publication, the average number of citations ranged from 0 to 15.64, the average number of references ranged from 17.5 to 55.33, and the average number of keywords ranged from 0 to 6.5. Moreover, after deleting duplicates due to collaborations among scholars from various Muslim countries, 587 articles remained, including proceedings papers. Among them, 224 (38.16%) were single-authored.

### 3.4. Research Areas

The data showed that work in the field of Women's Studies was conducted in the following research areas: Public, Environmental & Occupational Health (37.1%), General Internal Medicine (17%), Obstetrics Gynecology (17%), Psychology (9.4%), and Government Law (3.4%), followed by other research areas (Figure 3). This finding suggests that most of the works focused on women's health in Muslim countries. Nevertheless, differences were seen across countries (Table 1). For example, scholars residing in Egypt, Indonesia, Iran, and Jordan did not publish any works in the field of History and Women's Studies.

**Table 1.** Number of scientific publications across research areas by country (Top 10).

	Public Environmental Occupational Health	Government Law	Psychology	Obstetrics Gynecology	General Internal Medicine	History	Geriatrics Gerontology	Geography	Business Economics	Social Issues	Social Sciences Other Topics	Social Work	Sociology	Philosophy	Linguistics
Bangladesh	13	1	2	3	3	1		1	1						
Egypt	14		4	13	13			1	1	1	1				
Indonesia	4	2		1	1				1			1			
Iran	39		2	22	22		4								
Jordan	16		3	2	2							1			
Lebanon	30	1	3	13	13	3						1			
Malaysia	7	1	7	1	1	1	2	3		3	4				
Nigeria	46	1	3	27	27	2			1	3	3				
Pakistan	10		5	1	1	1		2	2				1		
Turkey	43	11	33	14	14	9	3	7	11	14	6	1	1	2	1

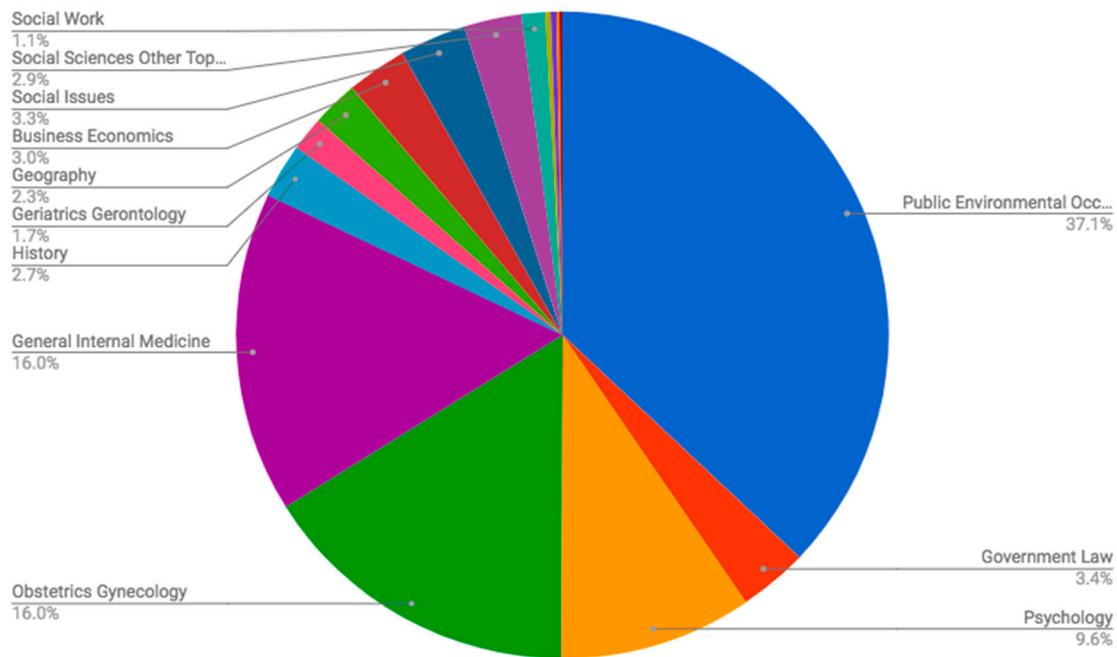


Figure 3. Research areas of scientific publications in Women’s Studies.

### 3.5. Publication Years

The first scientific study by Muslim scholars in the field of Women’s Studies was published in 1977. The number of publications increased exponentially very recently from 2008 on (Figure 4). The reason for this could be the expansion of SSCI and A&HCI in 2005, though in all of Women’s Studies the increase in the number of publications in the Muslim world was exponential rather than linear (Figure 2). This suggests that the interest in Women’s Studies in the Muslim world also increased rapidly.

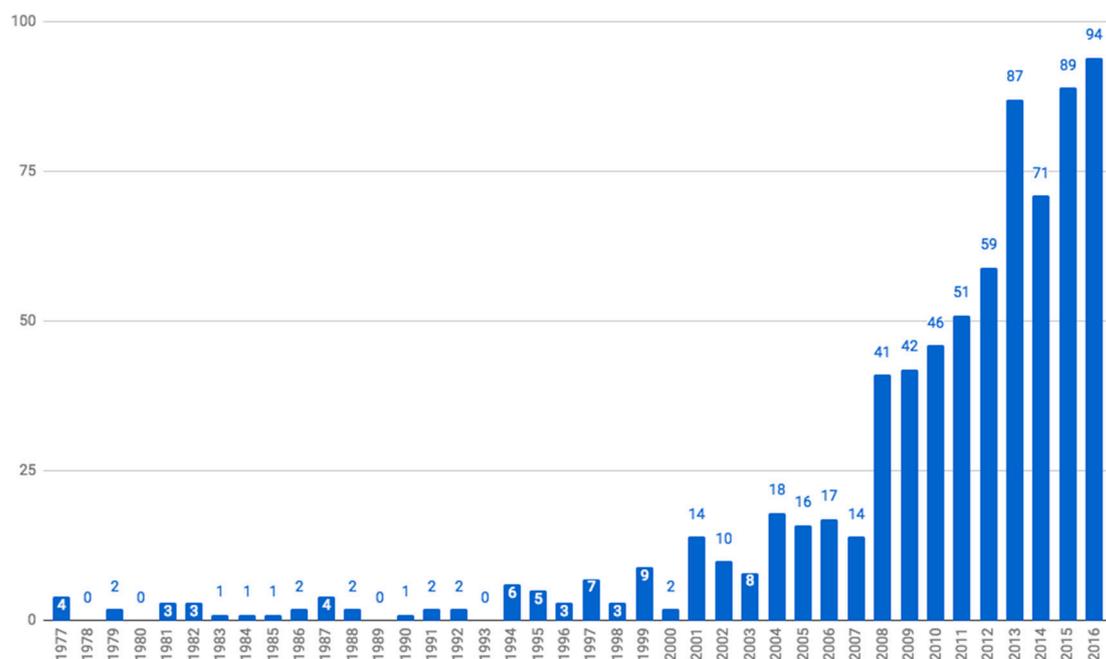


Figure 4. Number of publications per year in the field of Women’s Studies in Muslim countries (Trendline  $y = 96.2e^{-0.12x}$ ,  $R^2 = 0.938$ ).

### 3.6. Journals

The publications appeared in 42 journals (Table 2). *Journal of Women's Health* (105) had the most publications about the topic of Women's Studies and with an address in a Muslim country, followed by *Women's Studies International Forum* (82), *Health Care for Women International* (76), *Women & Health* (52), and *Sex Roles* (51). Moreover, among the 42 journals, *Gender & Society* had the highest impact factor (2.765), ranked number one in the Journal Citation Reports (JCR) 2016 Rankings for Women's Studies and number eight in Sociology. This was followed by *Psychology of Women Quarterly* (2.432), ranked number two in the JCR 2016 Rankings for Women's Studies and number 29 for Multidisciplinary Psychology; and by *Journal of Women's Health* (2.322), ranked number three in the JCR 2016 Rankings for Women's Studies and number 92 for Public, Environmental & Occupational Health. Nevertheless, there were only two publications in *Gender & Society* and five in *Psychology of Women Quarterly*.

**Table 2.** The 20 journals out of 42 that published works on Women's Studies by scholars in the Muslim world.

Sources	No. of Publications	%	JCR 2016	
			Five Year IF	IF
<i>Journal of Women's Health</i>	105	14.44	2.546	2.322
<i>Women's Studies International Forum</i>	82	11.28	0.885	0.686
<i>Health Care for Women International</i>	76	10.45	1.247	1.2
<i>Women &amp; Health</i>	52	7.15	1.746	1.437
<i>Sex Roles</i>	51	7.02	2.616	1.954
<i>Asian Journal of Women's Studies</i>	48	6.60	0.27	0.321
<i>Journal of Middle East Women's Studies</i>	31	4.26	0.522	0.154
<i>Signs</i>	28	3.85	1.532	0.906
<i>Asian Women</i>	25	3.44	0.162	0.133
<i>Journal of Women's History</i>	19	2.61	0.274	0.232
<i>Indian Journal of Gender Studies</i>	17	2.34	0.330	0.150
<i>Violence Against Women</i>	17	2.34	2.155	1.423
<i>Gender Place and Culture</i>	15	2.06	1.856	1.605
<i>Feminist Economics</i>	14	1.93	1.628	1.476
<i>Journal of Gender Studies</i>	14	1.93	1.036	0.676
<i>Women's Health Issues</i>	14	1.93	2.308	1.801
<i>Feminist Review</i>	13	1.79	1.135	1.519
<i>International Feminist Journal of Politics</i>	13	1.79	1.500	1.246
<i>European Journal of Women's Studies</i>	12	1.65	1.452	1.132

### 3.7. Languages

All the publications were in English with the exception of three publications in French from Algeria, Malaysia, and Morocco. Therefore, the publications in Women's Studies followed the trend that English is the dominant language in WoS in general and in Women's Studies in particular (97.35%).

### 3.8. Number of Authors

The average number of authors per article was 3.68. Of all the articles that had at least one author from a Muslim country (in this case, Albania), the highest number of authors was 21 [24].

### 3.9. Citations and References

The average number of citations per article was 4.87. One study [25] received 192 citations, which was the highest number of citations received by an article for which at least one of the authors was from a Muslim country (in this case, Jordan).

The average number of references per article was 36.66. In their references section, one study [26] referred to 75 studies, which was the highest number of references cited for an article with at least one author from a Muslim country (in this case, Sierra Leone).

### 3.10. Titles of Articles

The titles of articles consisted of a total of 7264 words and 2122 unique word forms. The most frequently used words in the titles were as follows: *women* (218), *women's* (94), *Turkey* (82), *gender* (72), *violence* (55), *study* (40), *health* (37), *case* (32), *Nigeria* (32), *Bangladesh* (31), *Turkish* (30), *female* (27), *factors* (25), *care* (24), *rural* (24), *Malaysia* (21), *attitudes* (20), *domestic* (20), *Muslim* (20), *men* (18), *sexual* (18), *risk* (17), *role* (17), *experiences* (16), and *impact* (16).

To illustrate the relationship between the frequently used words in the titles, we conducted a word relation analysis. We found that *women* co-occurred with *violence*, *Turkey*, *health*, *Nigeria*, *Bangladesh*, *study*, *gender*, *case*, and *women's*, whereas *Turkey* was associated more frequently with *women*, *women's*, *case*, *gender*, *violence*, and *female*. *Violence* co-occurred with *women*, *women's*, *intimate*, *Turkey*, *Nigeria*, *health*, and *Bangladesh*. The last finding indicates that violence was a shared topic in Nigeria, Turkey, and Bangladesh, which contributed most of the articles (approximately 40%) to Women's Studies in Muslim countries. We also observed that topics related to gender, such as gender role, gender equality, and gender differences, were among the most frequently studied topics, especially among Turkish scholars.

### 3.11. Keywords

A total of 268 articles had keywords. The corpus consisting of the keywords in these articles had a total of 2202 words and 988 unique word forms. The most frequently used words in the abstracts were the following: *women* (99), *gender* (85), *violence* (43), *Turkey* (29), *women's* (22), *health* (19), *female* (17), *sexual* (17), *social* (17), *work* (16), *domestic* (14), *Muslim* (13), *culture* (12), *Malaysia* (12), *roles* (12), *Turkish* (12), *intimate* (11), *partner* (11), *sexism* (11), *attitudes* (10), *body* (10), *Nigeria* (10), *sex* (10), *Islam* (9), and *law* (9). The frequently used phrases were *Muslim women*, *gender relations*, *gender inequality*, *social support*, *Turkish culture*, and *violence against women*.

We also conducted a word relation analysis of the keywords. We found that *women* co-occurred with *violence*, *gender*, *Turkey*, *Arab*, *women's*, *female*, *social*, and *work*, whereas *violence* was associated more frequently with *women*, *intimate*, *sexual*, *Bangladesh*, *Turkey*, and *female*.

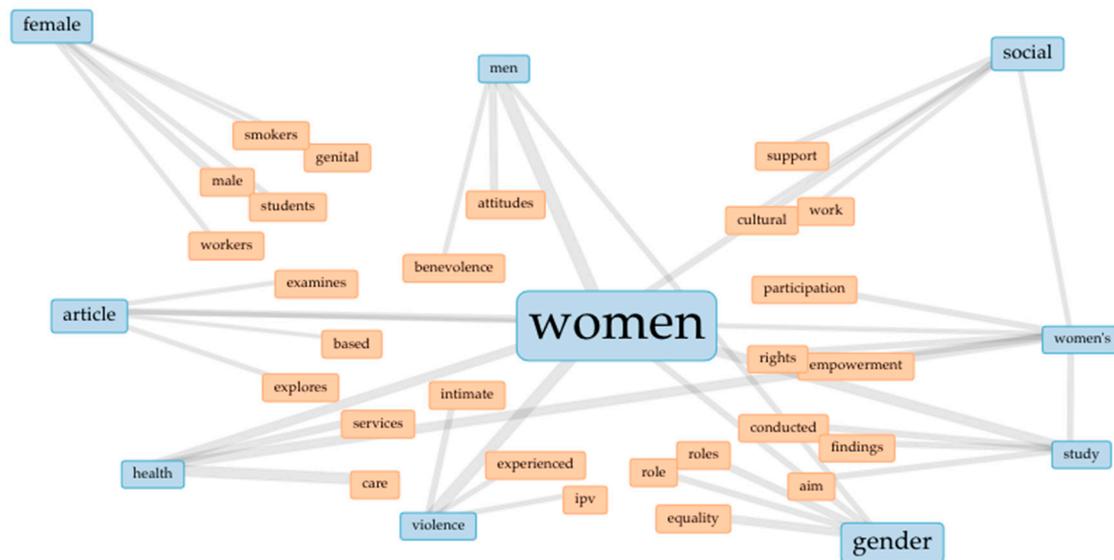
### 3.12. Abstracts

There were 520 abstracts that consisted of a total of 84,561 words and 9348 unique word forms. The most frequently used words in the abstracts were as follows: *women* (1383), *study* (428), *women's* (403), *health* (338), *gender* (321), *violence* (245), *men* (201), *social* (191), *female* (186), *article* (185), *Turkey* (176), *results* (162), *care* (153), *using* (151), *age* (145), *factors* (143), *data* (136), *family* (133), *years* (124), *attitudes* (120), *associated* (119), *sexual* (118), *used* (115), *work* (115), and *use* (112).

The word-relation analysis (Figure 5) showed that *women* co-occurred with *men*, *violence*, *study*, *health*, *social*, *article*, and *gender*, whereas *gender* was associated more frequently with *equality*, *roles*, *women*, *role*, and *men*. *Women's* co-occurred with *health*, *rights*, *participation*, *empowerment*, and *women*. These associations together suggest that some studies focused on (the lack of) women's rights, which highlights the importance of women empowerment and violence, while others focused on attitudes toward women. *Health*, which was related to the most frequently studied topic in Women's Studies, was more frequently used with *care*, *women's*, *women*, and *services* as in health care, women's care, and health services.

We then compared the content of abstracts from the top five countries (Turkey, Nigeria, Malaysia, Iran, and Bangladesh) to examine to what extent they differ from one another (Table 3). Series of log-likelihood analyses showed that the use of words indicating country or ethnicity such as *Bangladesh*, *Iran*, *Iranian*, *Malaysia*, *Malaysian*, *Nigeria*, *Nigerian*, *Turkey*, and *Turkish* differed significantly. The results showed that words related to religious identity such as *Muslim* were used in the publications from Malaysia, Bangladesh, and Iran significantly more than those from Nigeria and Turkey. The results showed that words related to population areas such as *rural* were used in the publications from

Malaysia, Bangladesh, and Nigeria significantly more than those from Iran and Turkey. These findings indicate that publications from a Muslim country have focused on their own populations suggesting that collaborative works among the scholars from different Muslim countries were rare. They also show that the publications differed from each other in their focus on population, population areas, and religion with regard to the origin of population.



**Figure 5.** Word relation illustration for the 10 words used most frequently in the abstracts. The lines between words became thicker as the number of co-occurrences increased.

**Table 3.** Log-likelihood analysis of abstract comparisons between countries (frequency > 10, Keyn. = Keyness,  $p < 0.0001$  across the board when keyness is reported, effect size Hardie’s Log-ratio calculated as a word is  $2^{\text{effect size}}$  times more common in corpus A than in corpus B).

Countries		Bangladesh		Iran		Malaysia		Nigeria		Turkey	
	Words	Keyn.	Effect	Keyn.	Effect	Keyn.	Effect	Keyn.	Effect	Keyn.	Effect
Bangladesh	Bangladesh	n/a	n/a	70.76	6.7425	82.88	6.3074	71.43	6.7623	165.67	8.8919
	health	n/a	n/a			21.3	2.0694			30.59	2.0323
	care	n/a	n/a			19.32	2.9855				
	rural	n/a	n/a	27.53	4.71					48.88	3.8595
	work	n/a	n/a	20.4	4.9511						
	empowerment	n/a	n/a	18.83	4.8356						
Iran	Iran	34.22	5.5567	n/a	n/a	50.93	6.3723	39.27	5.8271	94.92	94.92
	Iranian	18.32	4.6563	n/a	n/a	27.26	5.4719	21.02	4.9267	50.82	7.0564
	risk	21.25	3.0713	n/a	n/a	41.66	4.4719	17.85	2.3417	43.96	2.8084
	cancer			n/a	n/a	41.82	6.0885	32.25	5.5433	36.13	2.9726
	health			n/a	n/a	38.89	2.4793			59.94	2.4422
	breast			n/a	n/a	32.72	5.7349	25.23	5.1897	26.96	2.86
	disasters			n/a	n/a	25.44	5.3723	19.62	4.8271	47.43	6.9568
	screening			n/a	n/a	25.44	5.3723	19.62	4.8271		
	blood			n/a	n/a					29.98	4.7344
Malaysia	Malaysia	35.15	5.4698	40.35	5.7204	n/a	n/a	40.78	5.7402	108.24	7.8699
	Malaysian	24.32	4.9393	27.92	5.1899	n/a	n/a	28.22	5.2097	74.91	7.3394
	Malay	19.82	4.6438	22.74	4.8944	n/a	n/a	22.99	4.9142	61.03	7.0439
	symptoms	20.72	4.708			n/a	n/a	24.03	4.9784		
	Muslim					n/a	n/a	27.17	5.1552	21.75	2.037
	legal			18.6	4.6049	n/a	n/a				
	depressive					n/a	n/a			19.92	2.9064
	body					n/a	n/a			19.55	1.9995

Table 3. Cont.

Countries	Words	Bangladesh		Iran		Malaysia		Nigeria		Turkey	
		Keyn.	Effect	Keyn.	Effect	Keyn.	Effect	Keyn.	Effect	Keyn.	Effect
Nigeria	Nigeria	61.78	6.402	70.21	6.6526	63.52	3.8957	n/a	n/a	171.91	8.8021
	Nigerian			17.86	4.6807	25.63	5.2456	n/a	n/a	43.75	6.8301
	African	21.76	4.8995	24.73	5.1501	23.41	4.7151	n/a	n/a	60.59	7.2996
	antenatal					21.61	5.1302	n/a	n/a	40.39	6.7146
	education					21.61	5.1302	n/a	n/a	18.53	1.8887
	marriage					21.61	5.1302	n/a	n/a		
	violence					19.39	1.9322	n/a	n/a		
	rural							n/a	n/a	24.06	3.0366
	partner							n/a	n/a	23.7	4.0041
	maternal							n/a	n/a	21.88	2.6702
	poor							n/a	n/a	19.2	3.2672
	health							n/a	n/a	18.56	1.6151
Turkey	Turkey	65.79	6.1622	77.08	6.4128	109.11	6.9778	78.04	6.4326	n/a	n/a
	Turkish	33.71	5.1998	39.5	5.4504	55.91	6.0154	39.99	5.4702	n/a	n/a
	sexism					24.76	4.8418			n/a	n/a
	attitudes							32.97	5.1923	n/a	n/a
	gender			36.48	3.0502					n/a	n/a
	work			21.16	4.551					n/a	n/a

In addition to the differences with regard to the ethnicity, living areas, and religion, we observed differences in the focus of publications with regard to gender. The results showed that in the publications from Turkey *sexism* was used significantly more frequently than those from Malaysia; *attitudes (toward women)* was used significantly more frequently than those from Nigeria; and, *gender* and *work*-related issues were investigated more frequently than those from Iran.

The other differences were related to the focus on health and education. The results showed that words related to health issues such as *health*, *health care*, *antenatal*, and *(breast) cancer* were used in the publications from Bangladesh, Nigeria, and Iran significantly more than those from Malaysia and Turkey. The results also showed that words related to *education* were used in the publications from Iran, Bangladesh, and Nigeria significantly more than those from Malaysia and Turkey.

#### 4. Discussion and Conclusions

The preceding three decades witnessed important developments regarding Women's Studies in the Muslim world. Furthermore, scholars have been increasingly interested in women and gender issues in the Middle East [10]. However, as we showed in the present study, the Muslim world's contribution to the total number of publications in Women's Studies during the same period (54,983) remained limited; only 1.35% of the publications in Women's Studies were created by scholars in Muslim countries. This might be because of the relatively recent development of Women's Studies in the Muslim world. As we also showed, the number of publications in Women's Studies in the Muslim world began to rapidly increase only after 2007, while the number of publications in Women's Studies in general began to increase exponentially starting in the first years of the 1990s.

The results showed that Turkey, in contributing approximately one-third of the publications in Women's Studies in the Muslim world, plays an important role. One reason for this could be that Turkey started taking legal measures to achieve gender equality starting in the first decades of the twentieth century. For example, in 1934, Turkey became the first among the Muslim countries to grant women the right to vote and to be voted for. However, even Turkey's contribution to the field is limited compared to the total number of publications in Women's Studies. This finding is not surprising because, for example, the number of publications in sociology with an address in Turkey in SSCI and A&HCI between 1900 and 2016 was only 491 [27].

Our findings also showed that most of the publications in Women's Studies in the Muslim world were in such research areas as Public, Environmental & Occupational Health (37.1%), General Internal Medicine (17%), and Obstetrics Gynecology (17%). This finding indicates that Women's Studies

scholars in the Muslim world have not paid much attention to research areas such as History, Sociology, and Government Law (e.g., Political Science). However, research in these areas is needed to explain the reasons for gender inequalities and the consequences of gender roles in Muslim societies, as well as to produce solutions to women's problems.

In addition, our analysis revealed that several journals with the highest number of publications from Muslim countries, including *Women's Studies International Forum* (82) and *Sex Roles* (51), were in the list of core journals that was identified before [20]. While publications in Women's Studies throughout the world began increasing exponentially starting in 1989, we found that this happened in the Muslim world starting only in 2008. While publications in Women's Studies in general concentrated mainly on research areas such as Psychology (18.58%), Public, Environmental & Occupational Health (9355, 17.01%), Obstetrics Gynecology (5351, 9.73%), Social Studies Other Topics (4544, 8.26%), and Sociology (2376, 4.32%), most of the publications from the Muslim countries were in Public, Environmental & Occupational Health (37.1%), General Internal Medicine (17%), Obstetrics Gynecology (17%), Psychology (9.4%), and Government Law (3.4%). This finding indicates that although overlaps existed between the number of publications in the Muslim world and the number of all publications in the first five research areas (i.e., Psychology and Public, Environmental & Occupational Health), the percentages of publications in these categories were different (i.e., in Psychology 18.58% in the world vs. 9.4% in the Muslim world). Additionally, the fact that Social Studies Other Topics and Sociology did not exist in the first five research areas of publications from the Muslim countries indicates that a great majority of Women's Studies publications in the Muslim world focused on health issues rather than social issues regarding women. Scholars in the Muslim world also have a small number of publications in the two journals, i.e., *Gender and Society* and *Psychology of Women Quarterly*, with the highest impact factor in Women's Studies. However, *Journal of Women's Health*, which has the highest number of publications in Women's Studies from the Muslim world, ranked number three in the JCR 2016 Rankings for Women's Studies.

Based on the exponential increase in the number of publications in Women's Studies in Muslim countries over the last decade, we predict that these countries' contributions to Women's Studies will continue increasing. The gradual amelioration of women's status in the Muslim world also points to such a trend in the future. As women's rights and freedoms become subject to political and public discussions, women will be more likely to become subjects of scientific investigation. This, in turn, will lead to an increase in the number of scientific publications on women in these countries. Additionally, we expect that the coming years will witness the foundation of new Women's Studies programs in Muslim countries, which will also increase the number of publications in the field.

We found that *health* and *violence* were among the most frequently used words in both titles and abstracts and as keywords in the scholarly outputs from Muslim countries. *Health* was frequently used because most of the publications in Women's Studies in the Muslim world appeared in journals related to women's health. Moreover, *violence* was frequently used because of the high prevalence of violence against women, especially in some Muslim countries. According to an OECD report in 2018, 38% of women in Turkey, 35% of women in Lebanon, and 53% of women in Bangladesh reported that they had experienced physical and/or sexual violence from an intimate partner at some time in their lives [28]. Therefore, the prevalence of violence against women in these countries led Women's Studies scholars to pay special attention to the issue of violence. Nevertheless, across the Muslim countries, the focus of publications differed from each other with respect to the population, religion, living areas, gender and work issues, attitudes toward women, specific health issues, and the level of education.

One could argue that reliance on databases other than SSCI, A&HCI, and JCR provides a rather different picture (see Reference [29]). Therefore, we consulted another resource, *ProQuest: Worldwide Political Science Abstracts*, which has 42 databases, including Education Resources Information Center (ERIC), Library and Information Science Abstracts (LISA), Modern Language Association International Bibliography (MLA), Linguistics and Language Behavior Abstracts (LLBA), Sociological Abstracts, and Worldwide Political Science Abstracts. Compared to those in WoS (54,983 publications), as of 2017

there were 307,786 peer-reviewed materials—including 237,045 articles related to Women’s Studies—in ProQuest. While the publications in WoS were in 10 different languages, those in ProQuest were in 40 different languages. Nevertheless, most of them were in English: 97.35% in WoS and 98.9% in ProQuest.

When it came to Women’s Studies in Muslim countries, ProQuest and WoS differed in terms of their coverage but not the trends. The number of publications was highest in Turkey, both in WoS (220) and ProQuest (653), followed by Nigeria in WoS (79) and ProQuest (555). Although the languages of those publications were English and French in WoS, there were publications in other languages, such as Turkish, German, and Polish, in ProQuest. Nonetheless, most of them were in English. For example, 643 of 653 (98.46%) publications from Turkey in ProQuest were in English.

We agree with Hicks et al. [30] who argues that bibliometric characteristics are not the only characteristics demonstrating the quality of publications. Therefore, our future research will expand this work to include books, theses, and dissertations, as well as Women’s Studies publications written in languages other than English, such as Turkish, Arabic, Persian, and Malay.

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