Role of Academic Social Networking Sites in Knowledge Sharing and Research Collaboration among Research Scholars

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ABSTRACT

Academic Social Networking Sites (ASNSs) like ResearchGate, Academia.edu, Google Scholar, LinkedIn, etc., are created predominantly for scholars to set up their profiles, upload their scholarly publications, and convey among peers. The prime objectives of the present study are to explore their awareness and use of ASNS amongst the research scholars of science and social science discipline of a prestigious central university in north India, i.e., Aligarh Muslim University (AMU). The survey method was employed, and a simple random sampling technique was used to select the sample by using a structured questionnaire administered to the sample population. Further, it explores its individual use across two dimensions i.e., "Collaborative Research" (CR) and "Information Sharing and Consumption" (ISC) with respect to the gender and discipline. Different hypotheses were framed which signify that there was no significant difference with respect to the gender and discipline across the dimension "CR" with p-value = 0.624 and 0.968, respectively. Moreover, there was again no significant difference with respect to the gender and discipline across the dimension "ISC" with p-value = 0.127 and 0.828, respectively. Further, there is a positive but weak correlation between the constructs CR and ISC, whereas weak to moderate association between their respective items. The implications of the present study would be helpful for regulatory bodies in recognizing the academic activities of the researchers with the use of possible metrics.

Keywords: Social media; Academic social networking sites; Knowledge sharing; Research collaboration; Research scholars

1. INTRODUCTION

In the digital era, the ways to communicate and establish the networks between peer and dear ones has become swift and smooth. There are multiple platforms associated with the essence of social media, are upsurging with respect to time. In the same context, these social media have become fruitful in the academic sectors too, producing an academic content for the research community. Some well-known highly preferred Academic Social Networking Sites (ASNSs) are ResearchGate, Academia.edu, Mendeley, Zotero, etc.

From Facebook, and LinkedIn to online scientific communities (e.g., Lab Meeting, Ologeez, Vivoweb, Academia. edu, ESnet, NetSci), scientists are using ASNSs to foster teamwork and quicken the research rate. This is due to greater and flexible interoperability of these websites which delivers an exhaustive online community service for sharing information, interacting with others, and further exploring expertise in varied areas of interest (Mohammad, *et al.*, 2018)[16]. It is seen from these networking sites that the content floated over the ASNSs and SNS is now heterogeneous in nature. That means there is no constraint in terms of the type of content/information used over these sites. Thus, every domain of knowledge is being shared across all the types of media platforms and making them crucial for the researchers.

With this profound understanding of literature, the investigators took a case study by selecting the sample from one of the prominent universities of north India, i.e., Aligarh Muslim University (AMU), where the sample data consisted of the research scholars of science and social science discipline. The university's history has been remarkably acclaimed due to its pan-India character and has produced several prominent professionals serving worldwide. On September 14th, 2020, the entire AMU community witnessed the 100 magnificent years of excellence in education. The centenary celebrations were held virtually due to the Covid-19 pandemic restrictions, in the gracious presence of the Hon'ble Prime Minister of India. Thus, the study aims to explore the awareness and use of ASNSs amongst the scholars of science and social science disciplines, especially in terms of information sharing, collaboration, and consumption.

2. LITERATURE REVIEW

In the present section, investigators had searched plenty of scholarly literature and reviewed only selected documents which can build a foundation for conducting the present study. An abundant literature ranging from quantitative to qualitative studies have been published on various aspects of ASNSs. A good number of review studies have paved the way forward regarding the use, impact, and several issues concerning ASNSs to assess the academic performance of academicians like faculty

members, scholars, and students while analysing with their knowledge sharing behaviors[2,8,15]. On the contrary, quantitative studies on ASNSs offered ground-breaking findings regarding the level of use, depth of awareness, and several other facets of ASNSs through the perceptions of the librarians, lecturers/ faculty members, scientists, scholars, and various college students, were also analysed. As a result, social networks have become prevalent among researchers and scientists. They offer different specialised platforms regarding the research metrics and several indicators to assess their research performance and the university's overall ranking (Wiechetek & Pastuszak, 2022)[29]. Tafesse (2022)[28] suggested that moderate and excessive use of ASNSs is positively and negatively associated with the academic performance of college students, respectively. *Google Scholar* and *ResearchGate*, followed by *Academia. edu*, are the most used ASNSs in Nigeria among professionals like librarians and lecturers[1,3]. Social Networking Sites (SNSs) have become a vital part in digital age and also expanding their networking possibilities for academia (Nentwich & König, 2014)[18]. The research-related activities like participating in multidisciplinary projects, publishing in journals, and contribute most to scholarly repute is in vogue (Relojo & Pilao, 2016)[23]. Presently, the social web and network technology are increasing, resulting in more and more scholars' engagement with different online research communities (Singson & Amees, 2017)[26].

Prabhakar & Manjula Rani (2017)[22] studied the influence of social networking sites on libraries and information centers. The study results indicate that libraries use social media to deliver varied form of user services, with dissemination of the institutions' scholarly output. Hajli & Lin (2016)[9] conducted a study on the security of information sharing through SNSs, where the findings questioned ethical issues about users' information security and privacy. SNS users are anxious about their privacy and showed that perceived control is negatively related to perceived privacy risk and attitude toward information sharing, which affects their "information-sharing" behaviors.

Nicholas & Rowlands (2011)[19] conducted a study on social media use in the research workflow. Their survey suggests that significant use of social media during the entire research life cycle, from classifying research prospects to disseminating outcomes. The three most popular task in research backdrop are collaborative authoring, conferencing, and scheduling meetings, which is being done by SNSs. Age is a lousy forecaster of social media use in a research context. The results also reveal that humanities and social science researchers benefit from social media and provides a significant harmonizing channel for disseminating and discovering research. Koranteng & Wiafe (2019)[13] explored several factors that promote knowledge sharing on academic and social networking sites. The results reveal that ASNSs support all the indicators of the social capital dimensions, like social interaction ties, trust, reciprocity, identification, shared language, and shared vision. Thus, it is revealed from the literature analysis that no study has been reported to explore the role of ASNSs, particularly in Information sharing and collaborative research amongst the research scholars of Indian universities. The current study attempts to fill the required gap by assessing the use of ASNSs for Information sharing and research collaboration by the researchers.

3. OBJECTIVES OF THE STUDY
- To explore the awareness and use of ASNSs among the research scholars
- To identify the gender-wise variation in the use of ASNSs by the scholars
- To explore the subject-wise usage of ASNSs by the research scholars
- To compare the gender-wise correlation between research collaboration and Information sharing skills amongst research scholars
- To compare the subject-wise correlation between research collaboration and information sharing and consumption via ASNSs amongst the research scholars
- To identify the association between the respective items of the variables 'collaborative research' and 'information sharing & consumption'.

4. HYPOTHESES OF THE STUDY
The investigators framed few hypotheses to check the significant difference between the selected user-group across two different posed dimensions. These dimensions are Collaborative Research (CR) and Information Sharing & Consumption (ISC), in which the item correlation is also established. The four items of CR and seven items of ISC is given in Appendix I. Thus, the hypotheses are as following:

H1: There is no significant difference in the research collaboration among research scholars with respect to their gender.
H2: There is no significant difference in the information sharing & consumption among research scholars with respect to their gender.
H3: There is no significant difference in the collaborative research among research scholars with respect to their discipline.
H4: There is no significant difference in the information sharing & consumption among research scholars with respect to their discipline.
H5: There is a positive correlation between the dimensions "information sharing and consumption" and "collaborative research" among research scholars.

5. METHODOLOGY
For the present study, a quantitative approach was adopted in which a survey method was employed. Subsequently, the sample of research scholars drawn from two randomly selected faculties of AMU, i.e., the Faculty of Social Science and the Faculty of Science. After an extensively done literature review and preparing the objectives for the present study, an online questionnaire was developed through Google forms and conducted survey from November 2021 to January 2022. Investigators collected the email ids of research scholars from different sources (from faculty members, research scholars, and offices of the departments) and administered the questionnaire link to 300 research scholars. Of the total, 210

valid responses were received, attaining a response rate of 70 per cent. The collected data were then exported from Google forms to Microsoft Excel 2019 and analysed with the help of SPSS software (version 20.0). A descriptive statistic was used to present the demographics and preliminary information. Besides using SPSS software, investigators prepared a heatmap (Fig. 3) of correlation coefficient by using the software JASP (version 0.16.3).

6. DATA ANALYSIS AND INTERPRETATION
6.1 Demographic Analysis
In this section, investigators presented the gender-wise and subsequently faculty-wise distribution of survey participants. After analysis, it is revealed from Table 1 that the representation of male scholars is more dominant than that of their counterparts, i.e., 116 (55.2 %) scholars were male and remaining 94 (44.8 %) scholars were female. On the other hand, regarding the ASNSs usage and awareness by the research scholars of AMU, it was highlighted that research scholars of the faculty of social sciences are using ASNSs more than the research scholars of the faculty of sciences. However, the difference was not significant, i.e., 108 (51 %) scholars from social sciences and 102 (49 %) scholars from science faculty. Further, a dichotomous question was incorporated to assess their interest in using ASNSs and SNSs amongst male and female respondents.

Table 1. Demographics

	Male	Female
Gender-wise representation of respondents	116 (55.2%)	94 (44.8%)
	Social Science	**Science**
Faculty-wise distribution of respondents	108 (51%)	102 (49%)
Faculty-wise distribution of ASNS users	84	86
	Male	**Female**
Use of ASNS	90 (77.6%)	80 (85.1%)
Use of SNS	110 (94.8%)	94 (100%)
Gender-wise distribution of ASNS users	95	75

Note: The values given in parentheses are their percentages

Thus, approximately 97 % of the total sample use SNS while 3 % don't use it, while male members are using it more than female members. It was found that 170 (81 %) of the total respondents use ASNSs, and 40 (19 %) of them don't use any academic social network, where the male users are actively using ASNSs as compared to their counterparts. Since it was revealed that only 80.95 per cent of the sample population were found to be users of ASNSs, hence the further analysis was carried out on 170 respondents. Out of 170 researchers, 84 respondents hail from the social science discipline, whereas 86 researchers responded from the science discipline. Further, the male and female representation was found out to be 95 and 75 respondents respectively, as shown in Table 1.

6.2 Level of Usage and Awareness of various SNSs and ASNSs
Investigators then asked about their usage level of SNSs and ASNSs to indirectly assess their level of awareness too. Figure 1 reveals that 80 per cent of respondents reported the use of Facebook, followed by 58 % of respondents who were using Instagram, whereas 47.60 % of users use Twitter. However, there was no one using Tumbler.
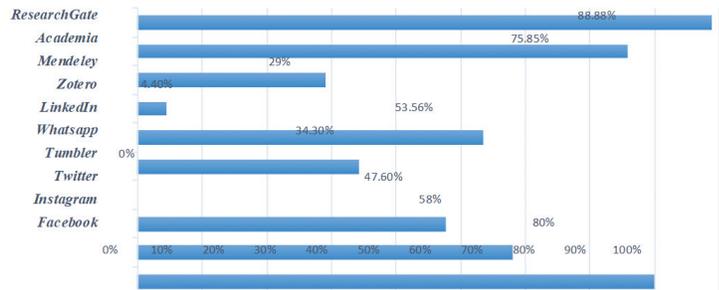
Figure 1. Use of Various SNSs and ASNS (Multiple answers were permitted).
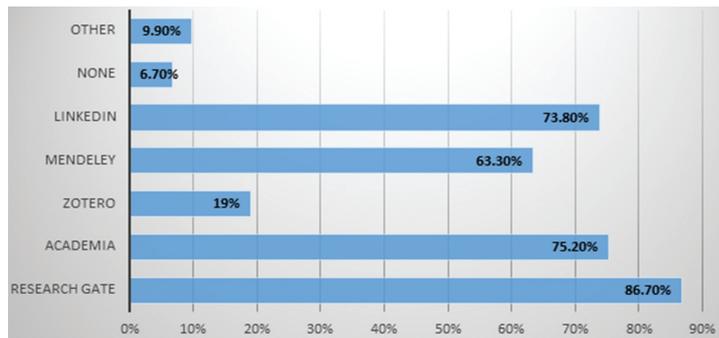
Figure 2. Respondents' awareness about ASNS (Multiple answers were permitted).

On the other hand, regarding the distribution of ASNSs usage, the use of ResearchGate is very high (i.e., 88.88 %) as compared to other ASNSs, which is followed by academia with 75.85 %, and LinkedIn with 53.56 % usage.

Figure 2 represents the number of respondents who were aware of different ASNSs. It is revealed that 86.70 per cent of respondents were aware of ResearchGate, 75.20 per cent of respondents reported their awareness about Academia.edu, which is consistent with the study findings of Akwang, (2022)[1]. Moreover, 73.80 % of respondents were aware of LinkedIn, followed by Mendeley (63.30 %), and so on. In the present study, the objective of indicating Fig. 1 and Fig. 2 signifies that the use of SNS is shared amongst the scholars and the netizens. Still, the usage and awareness of ASNSs are far more critical amongst scholars because users use various ASNSs but are not aware of their categorisation and functionality. Hence, the primary purpose of the investigators is to assess the usage and awareness level of ASNSs amongst the research scholars, along with the component of the usage of SNS.

6.3 Use of ASNSs by Research Scholars Across Two Dimensions in Accordance with Their Gender
In the following section, the analysis will be carried out on two crucial parameters, i.e., "collaborative research" and

"information sharing and consumption". It has been well articulated in previous research that ASNSs has now become a prominent medium for sharing academic achievements as well as academic milestones (Gorska, *et al.*, 2020; Zaugg *et al.*, 2011)[7,30], through which the fellow researchers would get to know various types of information related to their subject domains. For the same purpose, the hypothesis was framed to determine the significant differences between the male and female research scholars of the selected university, where the use of independent sample t-test was used.

H1: There is no significant difference in the research collaboration among research scholars with respect to their gender (Table 2).

Investigators analysed the usage of ASNSs between male and female research scholars, across the dimension CR. Table 2 revealed that the mean and standard deviation values of female research scholars (M= 15.73, SD= 2.298) is relatively less than the male research scholars (M= 15.926, SD= 2.718) with p= .624, which is greater than the recommended p-value of .05. It means that deviation from the null hypothesis is not statistically significant, and the null hypothesis is not rejected. This means that both male and female research scholars collaborate on the ASNSs for their research work. Thus, the hypothesis H1 "There is no significant difference in the collaborative research among research scholars with respect to their gender", stands accepted.

H2: There is no significant difference in the Information sharing & consumption among research scholars with respect to their gender (Table 3).

Investigators analysed the usage of ASNSs between male and female research scholars, across the dimension ISC. The mean and standard deviation values of female research scholars (M= 22.933, SD= 3.138) is relatively less than the male research scholars (M= 23.779, SD= 3.879) with p= .127, which is greater than the recommended p-value of .05. It means that deviation from the null hypothesis is not statistically significant, and the null hypothesis is not rejected. Thus, Table 3 suggested that there is no significant difference between male and female scholars across the dimension "Information sharing & consumption" while using the ASNSs. This means that both male and female research scholars share and consume the information on the ASNSs for their research work. Thus, the hypothesis H2 "There is no significant difference in the information sharing & consumption among research scholars with respect to their gender", stands accepted.

6.4 Use of ASNSs by Research Scholars Across Two Dimensions in Accordance with Their Discipline

The hypothesis was framed to determine the significant differences between the science and social science research scholars of the selected university.

H3: There is no significant difference in the collaborative research among research scholars with respect to their discipline (Table 4).

Investigators analysed the usage of ASNSs between science and social science research scholars across the dimension CR. Table 4 revealed that the mean and standard deviation value of social science research scholars (M= 15.833, SD= 2.424) is relatively less than the science research scholars (M= 15.849, SD= 2.655) with p= .968, which is greater than the recommended p-value of .05. It means that deviation from the null hypothesis is not statistically significant, and the null hypothesis is not rejected. This means that both science and social science research scholars collaborate on the ASNSs for their research work. Thus, the hypothesis H3 "There is no significant difference in the collaborative research among

Table 2. Gender-wise analyses of scholars' collaborative research (CR) through ASNS

Dimensions	Groups	N	Mean	SD	df	*t-value*	p-value
Collaborative research	Female	75	15.733	2.298	168	-0.492	.624*
	Male	95	15.926	2.718			

*Significant at 0.05 level

Table 3. Gender-wise analyses of scholars' information sharing & consumption (ISC) through ASNS

Dimensions	Groups	N	Mean	SD	df	*t-value*	p-value
Information sharing & consumption	Female	75	22.933	3.138	168	-1.533	0.127[a]
	Male	95	23.779	3.879			

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Table 4. Discipline-wise analyses of scholars' collaborative research (CR) through ASNS

Dimensions	Groups	N	Mean	SD	df	*t-value*	*p-value*
Collaborative research	Science	86	15.849	2.655	168	0.040	0.968*
	Social Science	84	15.833	2.424			

*Significant at 0.05 level

Table 5. Discipline-wise analyses of scholars' Collaborative Research (CR) through ASNS

Dimensions	Groups	N	Mean	SD	df	*t-value*	*p-value*
Information sharing & consumption	Science	86	23.465	3.719	168	0.217	0.828*
	Social Science	84	23.345	3.466			

*Significant at 0.05 level

Table 6. **Correlation Matrix between the dimensions "collaborative research" and "information sharing & consumption" through ASNS**

	Collaborative research	Information sharing & consumption
Collaborative research	1	0.284***
Information sharing & consumption	0.284***	1

* p < .05 if the correlation is significant at alpha = .05 level; ** p < .01 if the correlation is significant at alpha = .01 level; *** p < .001 if the correlation is significant at alpha = .001 level.

research scholars with respect to their discipline", stands accepted.

H4: There is no significant difference in the Information sharing & consumption among research scholars with respect to their discipline (Table 5).

Investigators analysed the usage of ASNSs between science and social science research scholars across the dimension ISC. Table 5 indicates that the mean and standard deviation value of social science research scholars (M= 23.345, SD= 3.466) is relatively less than the science research scholars (M= 23.465, SD= 3.719) with p= .828, which is greater than the recommended p-value of .05. It means that deviation from the null hypothesis is not statistically significant, and the null hypothesis is not rejected. This means that both science and social science research scholars share and consume the information on the ASNSs for their research work. Thus, the hypothesis H4 "There is no significant difference in the Information sharing & consumption among research scholars with respect to their discipline", stands accepted.

6.5 Correlation Between the Dimensions

To measure the correlation between the dimension of both the constructs, the correlation coefficient method has been used. The correlation coefficient 'r' is a statistical measure that expresses the strength of the relationship between two variables. Thus, in the present study, the Karl Pearson's correlation coefficient 'r' is used which is defined as a linear correlation and the strength of correlation between two variables that falls in value range of -1 to +1. As proposed in previous research papers, the correlation coefficient could either be interpreted as a "good", "moderate", or "weak" correlation, depending on the applied rule of thumb (Asuero *et al.,* 2006; Schober *et al.*, 2018)[4,24]. The rule of thumb suggests that correlation values ranging from

- 0.00 to 0.10 is considered as 'negligible correlation';
- 0.10 to 0.39 is considered as 'weak correlation';
- 0.40 to 0.69 is considered as 'moderate correlation';
- 0.70 to 0.89 is considered as 'strong correlation';
- 0.90 to 1.00 is considered as 'very strong correlation'.

The above cut-off points were differed in different studies depending upon the size of the data and nature of the study. The sign of the correlation coefficient indicates the direction of the association. The magnitude of the correlation coefficient indicates the strength of the association. It is said that if the degree of correlation between independent variables is very strong, then it may cause problems when the researcher fits the model and interprets the results (Frost, 2022)[6]. Further, it is opined in previous research that if two independent variables exhibits a correlation coefficient of 0.90 or greater, then there is a need to check the multicollinearity issue and a need to remove highly correlated independent variables from the study (Jensen, 2005; Shrestha, 2020; Studenmund, 2014)[11,25,27]. In this section, it is important to establish the relationship between the framed dimensions which are considered here as the crucial parameters to check the dependency of one variable upon another variable. For the same purpose, the following hypothesis was framed:

H5: There is a positive correlation between the dimensions "Information sharing and consumption" and "collaborative research" among research scholars of AMU (Table 6).

From Table 6, the correlation depicts that there exists a positive correlation between Information Sharing & Consumption (ISC) and Collaborative Research (CR) among research scholars i.e., 0.284. It can be interpreted as an increase in ISC scores leads to a corresponding increase in CR or a decrease in ISC scores leads to a corresponding decrease in CR scores. As far as the previous research is concerned, information and knowledge sharing phenomena have been widely adopted or highly practiced amongst the researchers (Eid & Al-Jabri, 2016; Kapoor, *et al.*, 2018)[5,12] due to the abundance of literature being produced day by day. This concludes that the hypothesis H5 is accepted, but the correlation is found to be weak between the variables.

6.6 Inter-Construct Correlation Matrix

In the present section, researcher aimed to determine the correlation between each item of the construct. It is also affirmed that if the investigator did not observe relatively high value of correlations between the dimensions, then there is

no need to check for multicollinearity. For this, researchers determined the inter-item correlation coefficient and created a correlation heatmap.

After examining Table 7 and Fig. 3, it reveals that across four dimensions of "collaborative research", the minimum and maximum value of correlation is 0.364 and 0.548, respectively between CR2↔CR1 and CR3↔CR2, when p < .001 when the correlation is significant at alpha = .001 level. This indicates that there is a weak to moderate correlation between the items of the first construct i.e., "collaborative research". Similarly, across

Table 7. Cross-item correlation coefficient matrix

Variable	Mean	Std Dev	CR1	CR2	CR3	CR4	ISC1	ISC2	ISC3	ISC4	ISC5	ISC6	ISC7
CR1	4.04	.791	—										
CR2	3.75	.997	0.364***	—									
CR3	4.03	.717	0.436***	0.548***	—								
CR4	4.03	.757	0.522***	0.449***	0.522***	—							
ISC1	3.29	.725	0.096	0.101	0.109	0.081	—						
ISC2	4.12	.614	0.369***	0.059	0.248**	0.375***	0.136	—					
ISC3	3.20	1.335	0.161*	0.132	0.105	0.234**	0.136	0.217**	—				
ISC4	2.76	1.281	0.190*	0.100	0.124	0.148	0.145	0.134	0.451***	—			
ISC5	3.85	.730	0.286***	0.117	0.099	0.180*	0.218**	0.265***	0.141	0.283***	—		
ISC6	3.25	1.177	0.168*	0.090	0.166*	0.184*	-0.266***	0.016	0.126	-0.046	-0.024	—	
ISC7	2.94	1.462	-0.024	-0.108	-0.117	-0.057	-0.324***	0.054	0.064	0.043	0.058	0.208***	—

* p < .05 if the correlation is significant at alpha = .05 level; ** p < .01 if the correlation is significant at alpha = .01 level; *** p < .001 when the correlation is significant at alpha = .001 level.
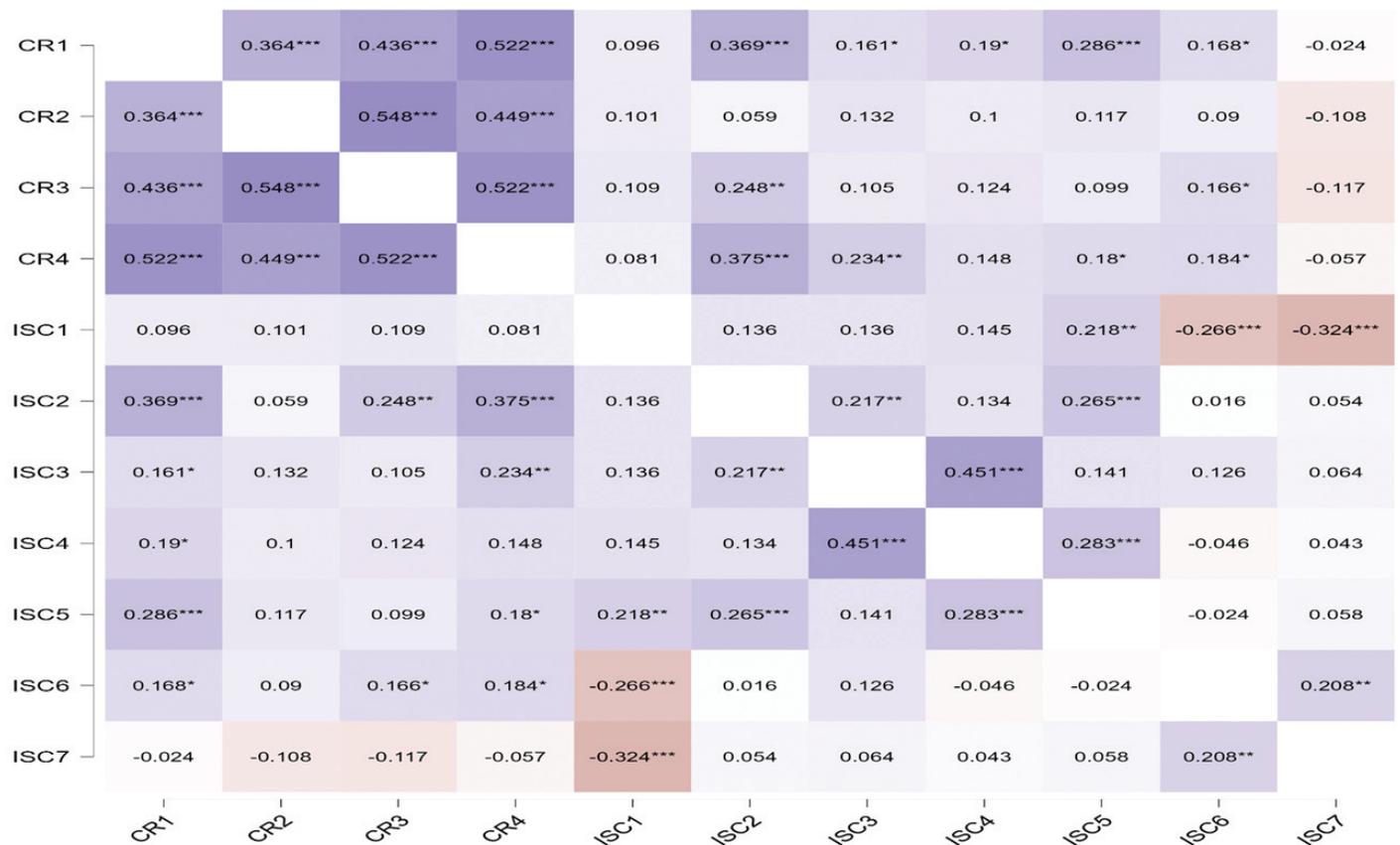
Figure 3. The correlation heatmap of inter-construct matrix (The heatmap is symmetric along the diagonal. Blue colors correspond to positive correlation coefficients, red colors correspond to negative correlation coefficients. The saturation of colors reflects the absolute value of the correlation coefficient).

seven dimensions of "Information sharing and consumption", the minimum value of correlation is -0.324 between ISC1 and ISC7, that is these items are negatively correlated with each other. On the other hand, the maximum value of correlation reflected between the items ISC4 and ISC3 i.e., 0.451 when p < .001 when the correlation is significant at alpha = .001 level. This indicates that there is negligible to moderate correlation between the items of the second construct i.e., "Information sharing and consumption", but most of them are negatively correlated to each other.

7. FINDINGS

After analyses and discussion, investigators came out with few major findings. It was found that most participants were active users of SNSs like Facebook, and Instagram, followed by Twitter and WhatsApp. ResearchGate is the most popular ASNSs among Aligarh Muslim University research scholars, followed by Academia.edu, LinkedIn, Mendeley and Zotero. Apart from the use and awareness of ASNSs by the research scholars, the study discusses about two constructs. "Collaborative research" (CR) has four items, and "Information sharing & consumption" (ISC) has 7 items. With respect to the constructs CR and ISC, investigators explored the usage of ASNSs, where it was revealed that there was no significant difference across gender and discipline respectively. Thus, H1, H2, H3, and H4 stands accepted. The correlation coefficient (r) is calculated further to check the tenability of remaining hypothesis. The inter-construct correlation coefficient between CR and ISC is found to be r = .284, showing a positive but weak correlation. It indicates that the H5 stands accepted. Moreover, researcher figure out the inter-item correlation matrix to establish the association between the different items of the variables and the overall relation between them. The inter-item correlation matrix suggested that there is weak to moderate but positive correlation between the items of CR. Regarding the items of ISC, it was revealed that there is a variation from negligible to moderate correlation across the items of ISC, but most of them are negatively associated with each other.

8. DISCUSSION

The data analysis results show that approximately 97 per cent of the total sample use SNSs, whereas male members are using it more than female members. It was found that 81 per cent of the total respondents use ASNSs while 19 per cent of them don't use any ASNSs. The most dominant SNS used by the researchers are Facebook, Instagram, Twitter, and WhatsApp, which is synchronised with the study findings by (Olajide *et al.*, 2017)[20]. The most used ASNSs are ResearchGate, Academia, and LinkedIn. These findings are in line with the findings of Singson & Amees (2017)[26] and Eid & Al-Jabri (2016)[5] which suggests the maximum use of ResearchGate across various ASNSs and Facebook among various SNSs. This shows that academic social networking platforms are now increasing their role in the academic world by providing essential services and applications required for better research work.

The findings of the first construct of CR describe different collaborative techniques of ASNSs which suggested that there is no significant difference across the gender and discipline with

p-value =0.624 and 0.968, respectively. Another construct of ISC describes the required skills and practices of information sharing through ASNSs which again suggested that there is no significant difference across the gender and discipline with p-value = 0.127 and 0.828, respectively. This result is supported by a study conducted by Nández & Borrego, (2013)[17], and they concluded that most of the research scholars and lecturers use SNS mainly to communicate and follow other researchers and share their research work.

The result of the present study also shows that many scholars also believe that academic networks are the best platforms to share information. Moreover, because of the ease of communication, many scholars share their research-related problems with worldwide researchers to get as many solutions as possible to solve their complex research problems more effectively. There is a weak correlation coefficient between the constructs CR and ISC which is found to be .284, which contradicts the findings of Huang (2018)[10]. Further, the inter-item correlation coefficient between the items of CR and ISC ranges from negligible to moderate which connotes that various practices of collaborative research and skills included in Information sharing are moderately related to each other, which relates to the model-based study findings of Malak, *et al.* (2022)[14]. Thus, the evolving usage of ASNSs has compelled the scholars to more collaborate and contribute to the profession in more comprehensive manner.

9. CONCLUSION

The ASNSs have become part of most researchers' scientific life in each discipline. In the present study, there are variations in the responses between the two faculties regarding their usage of ASNSs. Scholars have now started to incorporate these applications into their research work. Researchers of different faculties are getting knowledge about different academic networks and services provided by them, but the most popular academic networks among scholars is ResearchGate and Academia.edu. The majority of the researchers now prefer to collaborate with other researchers through ASN platforms. This has increased the number of collaborative studies than before.

These scholars also believe that sometimes ASNSs provide false and fabricated news and information, which is because of its increasing use amongst the scholarly community, whereas such type of issues must be resolved by the directors of ASNSs so that users can freely and reliably utilise the knowledge provided by academic social networking platforms. Studies have shown the increasing role of ASNSs in research work, but many researchers still don't use them as it is meant to be. They lack knowledge about the services of these platforms. To utilise it to the maximum, students must have an adequate knowledge of the roles of all ASNSs. This topic should be added in research methodology where students can learn about the technical functionalities of different ASNSs and their applications and how and where they should be used.

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He has retrieved the email ids of respondents, administered the questionnaire, and collected the data for the present study.

Appendix I

Collaborative Research (CR)	
CR1	ASNSs help in communicating with other experts/researchers easily
CR2	Online collaboration helps in conducting better research as compared to offline collaboration
CR3	Collaboration through ASNSs has made it easy to investigate complex research problems
CR4	ASNSs have increased the number of collaborative studies than before
Information Sharing and Consumption (ISC)	
ISC1	Information provided by ASNSs is reliable
ISC2	ASNSs are best tools for sharing information/knowledge easily
ISC3	Features and services of ASNSs have replaced the role of books in conducting your research/ project work
ISC4	ASNSs provide better and relevant information as compared to books
ISC5	Analytic tools provided by ASNSs for tracking readership are an essential feature for your research/project work
ISC6	ASNSs sometimes provide fake news (false, fabricated or deliberately misleading information)
ISC7	There is no need for ASN platforms to share information for higher education, research work/project work