Original Article

Individual factors influencing research culture among faculty of Combined Military Hospital Lahore Medical College, Lahore, Pakistan

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Objective: To determine the faculty member's perception about the individual factors contributing to research productivity in Combined Military Hospital (CMH) Lahore Medical College.

Methodology: In this descriptive study, 100 faculty members participated. Study time period was from January to June 2021 andconvenient sampling technique was used. Data was analyzed using SPSS version 20.

Results: Out of 100 members, 34% were male and 66% female. Mean score of all the individual factors was 3.57 ± 0.44. Male participants managed to take time for research activities more (M = 3.52) as compared with females (M = 2.97) (p = 0.016). More males managed to publish their articles in international journals. This difference was statistically significant (p = 0.040).

Conclusion: Time management for research activities, international publications and grant getting skills were major constraints faced by the faculty and negatively influenced research culture.

Keywords: Individual factors, research culture, globalization, health professionals.

INTRODUCTION

Embedding research is mandatory for academic development and translates into the performance of health professionals. It is an integral part of academics, quality health care and professional development.[1] Focus is on developing teaching excellence through faculty research performance, a key indicator regarding national and international university ranking and quality assurance of higher education.[2] Rich research culture supports faculty in their carrier, personal growth, contributes to the literature and serves the community.[3] Research culture comes from activities and support system in any institution that culminates into faculty research output in the form of articles. Positive research culture is correlated with enhanced faculty's research output.[4-6]

Promoting and encouraging research activities are associated with sustainable benefits for patients, academics and community. Faculty capacity building at organizational and individual level could meticulously contribute towards demanding field of research.[7,8] Still the faculty responses need to be improved. Research skills and time dedication is regarded inevitable for research culture.[9] It is forthright to look at what the faculty members have imbibed from the existing research culture and whether the organizational culture is healthy for research.[10] Rationale is to find out the major constraints faced by faculty and recommend strategies for capacity building. The aim of this study was to determine the faculty's perception regarding individual factors contributing towards research culture of Combined Military Hospital (CMH) Lahore Medical College.

METHODOLOGY

This study was conducted at CMH Lahore medical college from January to June 2021. Out of 192 study population, 100 faculty members responded. Non probability convenient sampling technique was used. Ethical approval from Institutional Review Board of CMH Lahore medical college was taken.

Questionnaire was adopted from thesis report submitted to the University of Leeds School of Education.[11] Questionnaire was self-administered. First section covered demographic information, second section comprised of 12 main statements with sub questions. Responses on individual factors were gathered on five point Likert scale. Questionnaire reliability based on Cronbach's alpha value was 0.78.

Statistical Analysis: The data were analyzed by using SPSS version 20. Independent sample-t test was used to compare mean scores. $p < 0.05$ was considered statistically significant.

RESULTS

Out of 100 participants, 34 (34%) were males and 66 (66%) were females. Mean age was 34.6 ± 2 years. Majority of participants were in age group 25 – 35 years (73%), followed by 36 – 45 years (15%). Qualification

wise most were FCPS. Academic rank showed demonstrators (37%), FCPS trainees (27%) and lecturers (15%) (Table 1).

Table 1: Demographic characteristics of the study participants (n = 100).

Age Ranges	**Number**
25 – 35	73
36 – 45	15
46 – 55	06
56 – 65	06
Gender	
Male	34
Female	66
Qualification	
MBBS	32
Masters	08
M.Phil	15
FCPS	37
PhD	03
BDS	05
Rank	
Professor	08
Associate Professor	07
Assistant Professor	05
FCPS Trainees	28
Demonstrator	37
Lecturer	15

Table 2: Response on individual factors of research culture (n = 100).

1. I have adequate time to:

		Male	**Female**
1.	Conduct Research	3.4	3.26
2.	Teach	3.62	4.00

2. As a junior faculty member, I have/was formally assigned an advisor or mentor with in my department/institute, and was provided valuable guidance in:

		Male	**Female**
1.	Research	3.59	3.30
2.	Teaching	3.67	3.68

3. I had an unassigned mentor with in my department/other departments/institution:

		Male	**Female**
1.	Research	3.15	3.26
2.	Teaching	3.47	3.47

4. I stay very up to date with current literature in my:

		Male	**Female**
1.	Research interest areas	3.79	3.52
2.	Teaching areas	3.85	3.94

5. I am highly committed to contributing to the success of my:

		Male	**Female**
1.	Department/Institute	4.12	4.18
2.	Faculty	4.06	4.06

6. I would describe myself as self-motivated to:

		Male	**Female**
1.	Conduct Research	3.85	3.58
2.	Teach	3.97	4.02

7. I have a system that allows me to protect period of uninterrupted time to address:

		Male	**Female**
1.	Research Activities	3.52	2.97
2.	Teaching Activities	3.73	3.33

8. You are currently up to date to:

		Male	**Female**
1.	Quantitative, Quantitative Research design	3.38	3.11
2.	Grant getting skills	3.16	2.68
3.	Presentation skills	4	3.82

9. To be promoted at my present institution, understand the expectations of my university regarding:

		Male	Female
1.	Research	3.82	3.92
2.	Teaching	3.94	8.92

10. I feel appreciated and valued by my department/institute/college for my work in:

		Male	Female
1.	Research	3.76	3.80
2.	Teaching	3.91	3.91

11. I feel appreciated and valued by my colleagues for my work in:

		Male	Female
1.	Research	3.76	3.76
2.	Teaching	3.88	3.88

12. I have excellent opportunities here to pursue my interest in:

		Male	Female
1.	Research	3.82	3.7
2.	Teaching	3.76	3.88

Table 3: Gender comparison, regarding periods of uninterrupted time for research activities, international articles and grant getting skills (n = 100).

Factor	Group	N	Mean ± SD	T-value	P-value
Research Activities	Male	34	3.52 ± 1.00	2.44	0.016
	Female	66	2.97 ± 1.06		
Grant Getting Skills	Male	34	3.16 ± 1.092	2.20	0.030
	Female	66	2.68 ± 1.04		
Factor	**Group**	**N**	**Frequency**	**P-value**	
International Publications	Male	34	18 (52.9%)	0.040	
	Female	66	21 (31.89%)		
National Publications	Male	34	16 (47.10%)		
	Female	66	45 (68.2%)		

Males stayed up to date with current literature (M = 3.79) as compared with females (M = 3.52). Faculty response towards having formally assigned mentors, presentation skill scores, faculty management to take time for research activities, management to publish their articles in international journals are shown in Table 2. Males managed more grant getting skills (M = 3.16) as compared to female faculty (M = 2.68) and this difference was statistically significant (p = 0.030) (Table-3).

DISCUSSION

Research culture could have positive or negative effect on research productivity.[12] Our faculty members reported moderate level of overall individual factors, with mean scores (M = 3.57 ± 0.44). Our two third study population comprised of females. Gender differences was perceived with male predominance in staying up to date with current literature in research. Females faculty found adequate time to teach (M = 4.00) as compared to conduct research (M = 3.26). Similar findings were stated by another study.[11] Grant getting skills were more in males as compared to females. Faculty was aware of university expectations regarding research required for promotion and optimally received appreciation. Mentoring and resources were perceived as barriers by majority of the participants in our study. Similarly, other studies suggested time and other resource as a constraint.[13,14]

A positive correlation was seen between computer skills and research in a Saudi study.[15] Our study partially revealed that presentation and publisher hunting skills favored male faculty members to publish more international article.Faculty occupied by job could not find time for research activities due to individual restraining factors, reason being that multiple responsibilities hinder research work.[16,17] In our study, poor research conducting skills and preoccupation by job negatively affected research. Gender differences suggested that male faculty published more researches

than female faculty. This is consistent with other studies.[18-20]

College environment was found favorable for teaching but time hindrances were perceived regarding research activities. Males had more grant getting skills, managed time out for conducting research activities, and scored high in international publications.

This is cross sectional, one center study with small sample size so the results cannot be generalized. To promote research culture, individual factors influencing research culture should be strengthened by mentoring and providing workshops for grant getting skills. Proper time should be dedicated for research activities. Cultivating research culture should be our prime focus. Researches focusing other domains of research culture should be conducted to have a better situation analysis.

CONCLUSION

Time management for research activities, international publications and grant getting skills were major constraints faced by the faculty and negatively influenced research culture.

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