SHORT REPORT

Exploring gender disparities in public health education: A gender-disaggregated analysis of selected public sector institutions in Pakistan

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Abstract

There is a dearth of gender disaggregated analysis of faculty at public sector institutes and schools of public health in Pakistan. A web-based search was conducted to identify public health institutes in the public-sector, offering postgraduate education with faculty names on their websites. Four institutions were identified: APPNA Institute of Public Health at Jinnah Sindh Medical University in Karachi, Health Services Academy in Islamabad, Institute of Public Health in Lahore, and the School of Public Health at Dow University of Health Sciences in Karachi. Faculty data, including gender and academic titles, were extracted from the official websites between April 19 and 20, 2025. Cumulatively, data was analysed for 100 full-time teaching faculty members, which revealed that women were predominantly represented in junior and mid-level roles, while senior academic ranks were largely held by men. Findings highlight the need for focussed policy action to address gender disparities among the faculty imparting public health education in Pakistan.

Keywords: Women, Faculty, Schools, Public health, Pakistan.

DOI: https://doi.org/10.47391/JPMA.31843

Introduction

Gender inequality continues to shape many aspects of professional life, and the academic health sector is no exception. Globally, women working in academic health settings face challenges in career advancement and acquiring senior leadership positions. Although female representation in student enrolment and junior faculty positions has increased; stark disparities remain and are more pronounced in senior faculty positions.[1-3]

The World Economic Forum's 2023 Global Gender Gap Report surmises that no country has achieved full gender parity, underscoring substantial gender-based disparities hindering the realisation of a fair and just world,[4] while UN Women echoed similar concerns in its "Gender snapshot 2023".[5] These disparities in general and in health academic settings in particular, shape the culture of academic environments. Female faculty members diversify academic discussions, research, and mentorship opportunities, in addition to serving as role models and inspiration for female students. Eliminating gender disparities and promoting gender equity in academic health is important as a human rights issue and pivotal for improving public health systems and population health outcomes.

Female faculty in Pakistan's medical institutions face challenges that hamper their professional growth. They face gender-based discrimination and are under-represented in Pakistani medical and dental teaching institutes. A recent study covering 28 medical and dental colleges in the Khyber Pakhtunkhwa province reported that women as a group were a minority at all levels of faculty positions and formed a particularly small segment of top leadership positions.[6] Studies conducted in several medical colleges in the country have reported endemic gender discrimination affecting female medical students.[7,8] Three recent qualitative studies highlighted deeply embedded cultural and structural barriers that hinder women's rise as faculty members and in leadership positions.[9-11]

In Pakistan, public and private sector medical and public health schools and institutes have mushroomed in the past couple of decades, with resultant rising demand for careers in medicine and public health. Pakistan, a country characterised by diverse public health challenges ranging from high communicable and non-communicable disease burden and persistent maternal and child health issues, provides a unique setting to explore gender disparities within public health education.

However, there is a dearth of studies concerning faculty gender disparities within public health institutions in the country. This study attempted to address this gap by conducting a gender disaggregated analysis of selected public sector institutes and schools of public health faculty in Pakistan, based on content analysis of web-based information.

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Submission completed: 23-08-2025 **1st Revision received:** 12-09-2025
Acceptance: 25-01-2026 **Last Revision received:** 24-01-2026

Methods and Results

In this cross-sectional descriptive study, the contents of web-based information were analysed. The selection criteria for identifying relevant government/public health institutes and schools required that each institution be part of the public sector, offer a master's or higher-level degree in public health (such as an MPH, MS, MPhil, or PhD), and maintain an official website that lists faculty members by name. Institutions were excluded if they were in the private-sector, did not offer postgraduate degree in public health, or did not provide information about faculty on their official websites. As the study used publicly available information, it did not require ethical approval.

Through a structured web-based search, several institutions offering master's or higher-level education in public health were identified. Among these, four institutes met all the predefined selection criteria and were included in the analysis., after retrieving faculty data: APPNA Institute of Public Health – Jinnah Sindh Medical University,[12] Health Services Academy,[13] Institute of Public Health – Government of Punjab,[14] and Dow University of Health Sciences – School of Public Health.[15]

Several other public-sector institutions offering public health education in Pakistan were identified during the initial screening phase; however, they were excluded from the final analysis due to unmet inclusion criteria. The University of Health Sciences, Lahore, while offering multiple public health degrees, including an MPH and a doctorate in epidemiology, does not provide a separate faculty listing specific to its public health programme, making it unfeasible to identify relevant teaching staff.[16] Similarly, the University of Azad Jammu & Kashmir, Muzaffarabad, though it offers an MPH degree, does not list faculty on its Department of Public Health webpage.[17] Khyber Medical University (KMU), Peshawar, was also excluded because its website does not provide a faculty directory for its public health programme, despite offering a two-year MPH programme.[18] Finally, the Khyber Institute of Child Health, which offers a specialised MPH in Maternal, Neonatal & Child Health, was excluded for the same reason—no publicly accessible faculty listing was available at the time of review.[19] The exclusion of these institutes was necessary to maintain consistency in data collection and to ensure that faculty could be independently verified based on publicly available information online.

The official websites of the selected four institutes were accessed between April 19 and 20, 2025 to extract and analyse the publicly available information on faculty names and titles. This data was compiled into an Excel spreadsheet for analysis in terms of academic ranks and gender distribution, using frequencies and percentages. Only full-time teaching faculty were included in the analysis; administrative personnel, visiting faculty, and adjunct staff were excluded to ensure that the study focussed solely on core academic staff. The gender of faculty members was determined based on accompanying photographs and/or names. With the exception of the Institute of Public Health, Lahore, websites of all other institutes provided photographs for most of the faculty, which allowed for easier gender identification. For the Lahore institute, where photographs were not available, gender was inferred from names. In the few remaining cases across the other institutes where photographs were missing, names were used to determine the gender of the faculty members.

Data was collected on 100 full-time teaching faculty members from four public-sector institutes and schools of public health in Pakistan, using information available on their official websites accessed on April 19 and 20, 2025.

These included: APPNA Institute of Public Health at Jinnah

Table: BGender-disaggregated distribution of full-time teaching faculty across public-sector institutes and schools of public health in Pakistan.

	APPNA Institute of Public Health, Jinnah Sindh Medical University, Karachi [n = 12] n (%)	Health Services Academy, Islamabad [n = 34] n (%)	Institute of Public Health Government of Punjab, Lahore [n = 29] n (%)	School of Public Health Dow University of Health Sciences Karachi [n = 25] n (%)
Professor				
Male	1 (50)	10 (91)	0	1 (100)
Female	1 (50)	1 (9)	2 (100)	0
Associate Professor				
Male	0	5 (45)	0	2 (67)
Female	1 (100)	6 (55)	1 (100)	1 (33)
Assistant Professor				
Male	3 (50)	5 (56)	0	3 (50)
Female	3 (50)	4 (44)	3 (100%	3 (50)
Senior Lecturer	N/A	N/A	N/A	
Male				1 (13)
Female				7 (87)
Lecturer				N/A
Male	1 (33)	2 (67)		1 (14)
Female	2 (67)	1 (33)		6 (86)
Demonstrator	N/A	N/A	N/A	
Male				4 (36)
Female				7 (64)
Specialist	N/A	N/A	N/A	
Male				2 (50)
Female				2 (%))
HoD*	N/A	N/A	N/A	
Male				5 (63)
Female				3 (37)

* HoD = Head of Department; N/A = Not Applicable

Sindh Medical University, Karachi (n=12); Health Services Academy, Islamabad (n=34); Institute of Public Health, Government of Punjab, Lahore (n=29); and the School of Public Health at Dow University of Health Sciences, Karachi (n=25). Table presents the distribution of full-time faculty by academic rank and gender across graduate and postgraduate public health degree-granting institutions.

APPNA Institute of Public Health, Karachi, and the Institute of public Health, Lahore, listed women as leading the institute (Chairperson/Dean); Health Services Academy, Islamabad, was being led by a man, while the School of Public Health, affiliated with the Dow University of Health sciences, did not clearly list any individual as heading the school, on their website. Overall, female faculty were rather well-represented in junior and mid-level positions, whereas men were more prominent in higher academic ranks. At the professor level, the Health Services Academy and Dow University listed a majority or exclusive presence of male professors. In contrast, the Institute of Public Health in Lahore had only female professors, while APPNA Institute showed an equal split between male and female professors.

Among associate professors, female representation was strong across all reporting institutions. APPNA had one female associate professor, while Health Services Academy reported six females and five males. The Institute of Public Health, Lahore had one female and no male associate professors. Dow University showed a male majority in this rank.

At the assistant professor level, gender distribution seemed more balanced. Both APPNA and Dow reported an equal number of males and females in this role. The Health Services Academy showed a slight male majority, and all assistant professors at the Institute of Public Health, Lahore, were females.

In lower-ranked teaching positions, women formed the majority. Lecturer roles at APPNA and the Institute of Public Health were mostly held by women, while Health Services Academy showed an even split. The Institute of Public Health also reported female dominance in demonstrator and senior lecturer roles. For the specialist category, the available information showed a gender balance. Leadership roles such as Head of Department, reported only by the Institute of Public Health, Lahore, were more frequently held by men 5(63%), though women also held a sizeable share 3(37%).

Discussion

This study provides a first snapshot of gender-disaggregated faculty representation within selected public-sector institutes and schools of public health in Pakistan. The findings reveal persistent gender imbalances, particularly at senior academic ranks, despite the noticeable presence of women in junior and mid-level teaching roles. These patterns reflect broader national and global concerns regarding women's under-representation in academic leadership, particularly within the health and medical education sectors.[1-3,9-11,20-22]

An important observation from this analysis is that while females are relatively well represented at the assistant professor and lecturer levels, their presence declines markedly at the associate professor and professor ranks in most public-sector public health teaching institutes. Only one institute (the Institute of Public Health, Lahore) had women holding all professor-level positions, while in other institutions, male faculty either dominated or exclusively held senior posts.

The issues highlighted in this study are consistent with what earlier qualitative research has shown in Pakistan. Cultural norms, limited mentorship, and the strain of balancing professional demands with societal expectations of family responsibilities likely contribute to hampering women's career paths. The absence of visible female leaders probably also contributes to discouraging younger women from pursuing a future in senior roles, potentially leading to career stagnation and/or early exits from their chosen field.

Limitations of the study include exclusion of several public-sector institutes/universities offering MPH programmes that either do not have websites or their websites lack information on their faculty composition. Secondly, analysis relied exclusively on the available online information, which may not always be up to date. Finally, private-sector universities were excluded, whose faculty composition profiles may differ. The observed disparities in this study could be reduced by offering stronger mentoring programmes for early-career women, and by ensuring that faculty recruitment and promotion decisions are fair and gender sensitive. Future studies need to address the limitations of this study by including private-sector public health academic institutions as well as public sector institutions without official websites.

Based on the findings, the implications for policy and education would entail: transparent and gender-responsive hiring and promotion policies; establishment/ strengthening of mentorship and leadership programmes for women; regular institutional gender audits for monitoring gender-based disparities; and perhaps more importantly, the formulation and implementation of family-friendly polices like more generous maternal leave,

flexible working schedules including options for working remotely, and child-care support for female faculty. This would ensure that gender-balanced faculties in public health education meaningfully play their part in improving the health of the population in the country.

Conclusion

The presence of more women in early academic roles is encouraging, but the fact that they are under-represented in senior positions highlights gender-based disparities in the selected public sector public health academic institutes in Pakistan. Efforts to address these disparities would entail gender-sensitive and fairer hiring and promotion decisions, in addition to mentoring programmes for early-career women. These actions would ensure more inclusive public health institutions in Pakistan and strengthen educational and health systems in the country.

Disclaimer: None.

Conflict of interest: None.

Funding disclosure: None.

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