

## Original Article

MANAGEMENT SKILLS OF PRIMARY HEALTHCARE MANAGERS IN BANGLADESH:  
A CROSS-SECTIONAL STUDY AT UPAZILA HEALTH COMPLEXESMd. Nazmul Hassan Refat<sup>1</sup>, Md. Ashraf Alam<sup>2</sup>, Kamrun Nahar<sup>3</sup>, Tanzila Nawreen<sup>4</sup>

## ABSTRACT

**Background:** Primary healthcare managers at the Upazila Health Complex (UHC) level play a critical role in ensuring the effective delivery of essential health services in Bangladesh. Despite their importance, there is limited empirical evidence assessing their management capabilities. This study aimed to evaluate the management skills of primary healthcare managers in selected UHCs across Bangladesh, focusing on identifying strengths and areas requiring targeted improvement.

**Methods:** The descriptive cross-sectional study was conducted over six months, involving 230 primary healthcare managers from 59 UHCs across four divisions of Bangladesh. Participants included Upazila Health and Family Planning Officers (UH&FPOs), Upazila Family Planning Officers (UFPOs), Resident Medical Officers (RMOs), and Nursing Supervisors. Data were collected using a pre-tested, structured questionnaire adapted from a validated scale developed by Kitreerawutiwong et al., measuring nine key dimensions of management skills: leadership, communication, partnership, system thinking, professionalism, emotional intelligence, proactive approach, financial planning, and information management. A multistage sampling method was used, and data were analyzed using SPSS version 27. Ethical approval was granted by the Institutional Review Board (IRB) of NIPSOM, and informed consent was obtained from all participants.

**Results:** Of the 230 respondents, 67% were male, and 61.3% had more than one year of managerial experience. While 46.1% held MBBS degrees, only 3.9% had an MPH qualification, and 54.3% had received formal management training. Based on mean score classifications, 44.3% of managers demonstrated good management skills, 50.4% had average skills, and 5.2% exhibited poor skills. Strengths were observed in professionalism (mean score: 4.3), leadership (mean score: 4.2), and communication (mean score: 4.1). However, lower performance was noted in financial planning (mean score: 3.8) and information management (mean score: 3.6), indicating critical gaps in these areas.

**Conclusions:** This study highlights that while primary healthcare managers in Bangladesh possess foundational competencies in several management domains, significant gaps persist in financial planning and information management. Addressing these deficiencies through targeted, context-specific training programs is essential to strengthen managerial effectiveness and improve the performance of UHCs. Policymakers should prioritize the integration of structured capacity-building initiatives within the national health workforce development strategy.

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## INTRODUCTION

Effective healthcare management is essential for the delivery of quality health services, especially in

resource-constrained settings like Bangladesh. At the primary care level, Upazila Health Complexes (UHCs) serve as the backbone of rural health service

provision, acting as the first point of referral and bridging communities with district and national health systems. The World Health Organization (2022) emphasizes that strong management capacity among primary healthcare managers is critical to achieving Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs), particularly in low- and middle-income countries (LMICs) with complex health system challenges.<sup>1</sup>

In Bangladesh, the health system faces persistent challenges such as human resource shortages, logistical constraints, and increasing demands for quality service delivery. According to the Ministry of Health and Family Welfare (2023), only 36% of sub-district-level healthcare managers have received formal training in management.<sup>2</sup> Consequently, many primary healthcare managers are tasked with leadership responsibilities without adequate preparation, undermining efficiency and strategic decision-making.<sup>3</sup>

Key competencies such as leadership and communication are essential for motivating teams, navigating crises, and aligning institutional goals with service delivery. However, communication barriers remain a concern at the primary care level, with 47% of healthcare managers reporting difficulties in conveying institutional priorities and health messages effectively.<sup>4</sup> Similarly, partnership building—a critical skill for engaging community stakeholders and intersectoral collaboration—remains underutilized in many UHCs across South Asia.<sup>5</sup>

System thinking and strategic planning are indispensable for resource coordination and performance improvement. Yet, many UHCs operate in siloed structures with poor integration between planning, service delivery, and evaluation. Khan et al. (2023) found that inadequate system thinking among UHC leadership has led to fragmented services and weak referral mechanisms.<sup>6</sup>

Beyond technical skills, soft skills such as professionalism and emotional intelligence are also vital in fostering a supportive work environment. Hossain et al. (2024) demonstrated a strong link between emotional intelligence and job satisfaction among healthcare workers in Bangladesh.<sup>7</sup> Despite this, mid-level managers often lack structured support to develop these competencies, resulting in workplace tension and reduced motivation.

Moreover, proactive management approaches—including early identification of service gaps and anticipation of future needs—are inconsistently applied. The COVID-19 pandemic exposed these weaknesses, particularly in preparedness and rapid response at the UHC level.<sup>8</sup>

Two particularly weak areas identified in previous studies are financial planning and information

management. The Health Economics Unit (2023) reports that less than half of UHCs use financial data for planning purposes, and most lack robust systems for health information tracking.<sup>9</sup> These gaps affect decision-making, accountability, and resource allocation.

Despite the critical role primary healthcare managers play, there is a scarcity of empirical research evaluating their management competencies in the Bangladeshi context. Most existing literature emphasizes clinical outcomes or health system performance more broadly, with limited focus on the managerial capacities of those in frontline leadership positions.

This study seeks to address that gap by systematically assessing the management skills of primary healthcare managers working at UHCs across Bangladesh. It focuses on nine key dimensions: leadership, communication, partnership, system thinking, professionalism, emotional intelligence, proactive approach, financial planning, and information management. The findings aim to support the design of targeted training interventions and inform policy reforms to strengthen primary healthcare management capacity in pursuit of Universal Health Coverage.

## **MATERIALS AND METHODS**

A descriptive cross-sectional study was conducted over a six-month period starting from July 2023 to assess the management skills of primary healthcare managers working at selected Upazila Health Complexes (UHCs) across four divisions of Bangladesh. The study population included 230 primary healthcare managers, comprising Upazila Health and Family Planning Officers (UH&FPOs), Upazila Family Planning Officers (UFPOs), Resident Medical Officers (RMOs), and Nursing Supervisors—key personnel responsible for managing day-to-day operations and administrative functions of UHCs.

A multistage sampling technique was employed. Initially, four divisions were purposively selected to ensure geographic diversity. From each selected division, UHCs were randomly chosen, resulting in 59 UHCs being included in the study. All eligible primary healthcare managers in these facilities were invited to participate.

Management skill was operationally defined as the ability to effectively perform across nine core dimensions: leadership, communication, partnership, system thinking, professionalism, emotional intelligence, proactive approach, financial planning, and information management. These competencies were assessed using a structured, pre-tested questionnaire adapted from the validated management competency scale developed by Kitreerawutiwong et al. (2011). The tool

demonstrated high internal consistency in similar healthcare settings (Cronbach's  $\alpha = 0.85$ ). Each dimension was measured through multiple items using a five-point Likert scale (1 = Never to 5 = Always). Individual dimension scores were averaged, and an overall management skill score was calculated by taking the mean of the nine domain scores.

Skill levels were classified based on the overall score: scores  $\geq 4.0$  were categorized as good, 3.0–3.9 as average, and  $< 3.0$  as poor, following the adapted scoring approach of Kitreerawutiwong et al. The questionnaire also captured socio-demographic variables and information on prior management training. The instrument was pilot-tested among a similar group of managers to ensure contextual relevance and clarity before implementation.

Data were verified daily for completeness and accuracy. All data were analyzed using SPSS version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize participant characteristics and management skill scores.

Ethical approval was obtained from the Institutional Review Board (IRB) of the National Institute of

Preventive and Social Medicine (NIPSOM), Dhaka. Written informed consent was obtained from each participant. Confidentiality and anonymity were strictly maintained, and participation was voluntary with the option to withdraw at any stage without consequence.

## RESULTS

A total of 230 primary healthcare managers from 59 Upazila Health Complexes (UHCs) across four divisions of Bangladesh participated in the study. The mean age of respondents was 41.8 years ( $SD \pm 7.4$ ), ranging from 28 to 58 years. The majority were male (67%) and most were married (94.8%). In terms of family structure, 62.6% lived in nuclear families, while 37.4% resided in joint families. Monthly household income varied: 41.3% of respondents reported earnings between BDT 50,000 and 100,000, 35.7% earned below BDT 50,000, and 23% earned above BDT 100,000. Regarding educational qualifications, 46.1% held MBBS degrees, while 3.9% had completed an MPH. More than half of the participants (54.3%) had received formal training in management. Work experience in managerial roles also varied, with 61.3% having over 12 months of experience.

**Table 1: Socio-Demographic Characteristics of Managers (n=230)**

Characteristics	Category	Frequency Percentage (%)	
Age (years)	Mean $\pm$ SD	41.8 $\pm$ 7.4	
Gender	Male	154	67.0
	Female	76	33.0
Marital Status	Married	218	94.8
	Unmarried	9	3.9
	Divorced	2	0.9
	Widowed/Widower	1	0.4
Family Type	Nuclear	144	62.6
	Joint	86	37.4
Monthly Family Income (BDT)	< 50,000	82	35.7
	50,000–100,000	95	41.3
	> 100,000	53	23.0
Designation	UH&FPO	59	25.7
	UFPO	55	23.9
	RMO	57	24.8
	Nursing Supervisor	59	25.7
Work Experience	Less than 6 months	44	19.1
	6-12 months	45	19.6
	More than 12 months	141	61.3
Educational Qualification	MBBS	106	46.1
	MS/MD	14	6.1
	MPH	9	3.9
	Fellowship (FCPS/MCPS)	12	5.2

	Others	89	38.7
<b>Management Training</b>	Received Training	125	54.3
	No Training	105	45.7

In terms of management skills (Table-2), leadership emerged as a key strength, with 49.6% of managers always practicing clear communication of institutional vision, mission, and goals. Similarly, 44.8% frequently innovated and created new strategies to improve performance, while 37.4%

consistently integrated institutional missions into community activities. Communication skills were also notable, with 49.1% of managers always providing clear information to patients and stakeholders and 43.5% consistently reporting public health issues to policymakers.

**Table 2: Assessment of Key Management Skill Dimensions (n=230)**

Skill Dimension	Category	Frequency	Percentage (%)
<b>Leadership</b>	Always	114	49.6
	Frequently	104	45.2
<b>Communication</b>	Always	113	49.1
	Frequently	94	40.9
<b>Partnership</b>	Always	49	21.3
	Frequently	117	50.9
<b>System Thinking &amp; Decision Making</b>	Always	65	28.3
	Frequently	105	45.7
<b>Professionalism</b>	Always	168	73.0
	Frequently	53	23.0
<b>Emotional Intelligence</b>	Always	138	60.0
	Frequently	87	37.8
<b>Proactive Approach</b>	Always	105	45.7
	Frequently	98	42.6
<b>Financial Planning</b>	Always	102	44.3
	Frequently	67	29.1
<b>Information Management</b>	Always	101	43.9
	Frequently	93	40.4

System thinking and strategic decision-making were evident in the ability of 45.7% of managers to use evaluation feedback to enhance staff performance. Approximately 50.9% of managers demonstrated the ability to predict manpower needs and align them

with institutional goals. However, the study identified gaps in financial planning and information management, where only 43.9% of managers consistently managed information systems effectively.

**Table -3: Overall Management Skill Levels of Managers**

Skill Level	Frequency (n=230)	Percentage (%)	Mean Score ( $\pm$ SD)
Good Management Skills	102	44.3	4.3 $\pm$ 0.3
Average Management Skills	116	50.4	3.5 $\pm$ 0.3
Poor Management Skills	12	5.2	2.8 $\pm$ 0.2
<b>Total</b>	<b>230</b>	<b>100.0</b>	<b>3.94 <math>\pm</math> 0.8</b>

Management skill levels were categorized based on mean scores derived from self-assessments across nine dimensions using the validated

Kitreerawutiwong scale. Participants scoring  $\geq 4.0$  were classified as having good management skills, scores between 3.0–3.9 as average, and scores below

3.0 as poor. Using these cut-offs, table -3 demonstrates 44.3% of participants demonstrated good management skills, 50.4% exhibited average skills, and 5.2% were identified with poor skills (Table-3). The data were assessed for normality using the Shapiro-Wilk test, which confirmed approximate normal distribution ( $p > 0.05$ ), permitting the use of mean scores for analysis.

In table-4, further analysis of individual skill dimensions revealed that professionalism (mean score  $4.3 \pm 0.6$ ), leadership ( $4.2 \pm 0.7$ ), and emotional intelligence ( $4.0 \pm 0.8$ ) were the strongest areas. Conversely, information management ( $3.6 \pm 1.1$ ) and proactive approaches ( $3.7 \pm 0.9$ ) were the lowest-scoring dimensions (Table 2). No inferential statistical testing of differences between dimensions was performed, so the mean scores are reported descriptively.

**Table 4: Combined Scale Score of Management Dimensions**

Dimension	Mean Score	Standard Deviation
Leadership	4.2	0.7
Communication	4.1	0.8
System Thinking and Strategy	3.9	0.9
Financial Planning	3.8	1.0
Professionalism	4.3	0.6
Emotional Intelligence	4.0	0.8
Proactive Approach	3.7	0.9
Information Management	3.6	1.1
<b>Overall Management Skill</b>	<b>3.94</b>	<b>0.8</b>

Comparative analysis using independent sample t-tests and ANOVA explored associations between management skill levels and participant characteristics. Managers with formal training demonstrated significantly higher overall mean scores ( $4.1 \pm 0.5$ ) compared to those without training ( $3.6 \pm 0.7$ ) ( $p < 0.01$ ). Educational qualifications also showed a significant relationship with management

skills; participants with MPH degrees had higher mean scores ( $4.3 \pm 0.4$ ) compared to those with MBBS only ( $3.8 \pm 0.6$ ) ( $p < 0.05$ ). Gender differences were not statistically significant ( $p = 0.08$ ). However, managers with over 12 months of experience had higher skill scores ( $4.0 \pm 0.5$ ) than those with less experience ( $3.7 \pm 0.6$ ) ( $p < 0.05$ ) (Table-5).

**Table 5: Comparison of Overall Management Skill Scores by Key Characteristics (n = 230)**

Variable	Category	Mean Score ( $\pm$ SD)	p-Value
<b>Gender</b>	Male	$3.95 \pm 0.7$	0.08 (Independent t-test)
	Female	$3.92 \pm 0.8$	
<b>Education</b>	MBBS	$3.8 \pm 0.6$	0.03* (One-way ANOVA)
	MPH	$4.3 \pm 0.4$	
	Other	$3.9 \pm 0.7$	
<b>Experience</b>	< 12 months	$3.7 \pm 0.6$	0.02* (Independent t-test)
	$\geq 12$ months	$4.0 \pm 0.5$	
<b>Training</b>	Received	$4.1 \pm 0.5$	< 0.01* (Independent t-test)
	Not Received	$3.6 \pm 0.7$	

\*Significant at  $p < 0.05$

## DISCUSSION

This study provides important insights into the management skills of primary healthcare managers working at Upazila Health Complexes (UHCs) in Bangladesh. The findings highlight both strengths

and gaps in the managerial competencies of UHC managers, offering a comprehensive view of their ability to manage key health system functions effectively.

The study identified significant strengths in leadership, communication, and professionalism

among UHC managers. Over 49% of respondents demonstrated strong leadership capabilities, particularly in communicating institutional vision and mission, suggesting that many healthcare managers are effective in motivating their teams and aligning them with institutional goals. Furthermore, the high performance in professionalism (mean score of 4.3) indicates a strong commitment to ethical standards and patient-centered care. These findings are consistent with the results of Hossain et al. (2024), who found a strong link between emotional intelligence, professionalism, and job satisfaction among healthcare workers in Bangladesh.<sup>7</sup>

Such strengths reflect the clinical background of many of the managers, most of whom are experienced medical professionals. However, while these clinical skills are essential for quality healthcare delivery, they alone do not guarantee effective management, which requires additional expertise in areas such as planning, budgeting, and resource management.

The study also identified critical gaps in financial planning and information management, which are areas that are consistently underperformed across the sample. With a mean score of 3.8 in financial planning and 3.6 in information management, it is clear that UHC managers face significant challenges in these domains. These findings are in line with Sarker et al. (2023), who noted that many sub-district healthcare managers in Bangladesh lack proficiency in financial management and the use of health data for strategic decision-making.<sup>13</sup>

Inadequate training in these areas, combined with weak digital infrastructure, may contribute to suboptimal management of financial resources and health information systems. This gap in digital health literacy is also highlighted in the Bangladesh Digital Health Strategy 2023–2027, which calls for the integration of digital health systems to improve healthcare delivery at the primary level.<sup>21</sup>

The deficiencies in financial planning are particularly concerning, as poor resource allocation and lack of financial oversight can undermine the sustainability and effectiveness of health services, especially in resource-constrained settings. Similarly, ineffective information management may lead to poor data-driven decision-making, hindering the ability of healthcare managers to track performance, monitor service delivery, and make informed decisions. This issue has been highlighted by WHO (2023), which emphasizes the importance of digital health systems in improving healthcare management in LMICs and Revolutionizing Healthcare in Bangladesh: Share Health Record initiative (2023), which aims to improve healthcare connectivity and management through digital health platforms.<sup>14,22</sup>

One of the most significant findings of this study was the relationship between educational qualifications and management skills. Managers with an MPH degree scored significantly higher in management skills compared to those with an MBBS degree ( $4.3 \pm 0.4$  vs.  $3.8 \pm 0.6$ ). This suggests that advanced training in public health, which covers vital areas such as health systems management, strategic planning, financial management, and policy development, plays a crucial role in enhancing managerial effectiveness. Conversely, while MBBS-trained managers possess strong clinical expertise, they may lack formal education in management, which could explain the lower performance in certain managerial domains.

These findings are supported by previous studies that highlight the importance of management training for healthcare leaders. Khan et al. (2022) found that formal management training significantly improved the performance of healthcare managers, particularly in areas like leadership, planning, and communication.<sup>17</sup> Similarly, the lack of formal training in areas such as financial planning and information management among primary healthcare managers was identified by Sarker et al. (2023), reinforcing the need for comprehensive training programs in these critical areas.<sup>13</sup>

Another important aspect of the study was the gender disparity in leadership roles. The male-dominated profile of respondents (67% male vs. 33% female) reflects persistent socio-cultural and institutional barriers that limit women's access to leadership positions in the healthcare system in Bangladesh. Gender equality in healthcare leadership is crucial not only for achieving equity but also for fostering diverse and innovative management practices. This gender gap in leadership positions is consistent with the findings of Alam et al. (2021), which documented the challenges faced by female healthcare leaders in Bangladesh.<sup>16</sup> To address this disparity, policymakers must prioritize gender-equitable leadership development through mentorship programs, policies, and other institutional mechanisms.

The study also found that proactive management, including anticipating service gaps and planning for future needs, remains an area of weakness among UHC managers. Only 45.7% of managers reported using evaluation feedback to enhance staff performance, and less than half demonstrated the ability to predict manpower needs effectively. These findings highlight the need for UHC managers to adopt a more proactive approach to healthcare management, particularly in the context of responding to public health emergencies such as the COVID-19 pandemic. As Islam et al. (2023) found, proactive management is crucial for preparedness and rapid response during crises.<sup>8</sup>

The findings of this study emphasize the urgent need to address gaps in managerial competencies through targeted training initiatives. The results suggest that structured, context-specific training programs focusing on financial planning, information management, and proactive leadership are essential for enhancing the effectiveness of UHC managers. As Khan et al. (2022) argued, providing healthcare managers with formal management training can significantly improve their ability to lead effectively, make informed decisions, and manage resources efficiently.<sup>17</sup>

Incorporating management training into the professional development pathways for healthcare managers, particularly those without formal management education, is essential for strengthening the capacity of primary healthcare systems in Bangladesh. Policymakers should consider integrating management education into the career advancement frameworks for healthcare managers, ensuring that all managers have access to continuous professional development opportunities. Furthermore, the World Bank's Urban Health, Nutrition, and Population Project (2023) underscores the importance of strengthening healthcare management at the primary care level to improve service delivery, especially in urban settings.<sup>19</sup> Additionally, the Strengthening Capacity of Primary Healthcare Facilities to Manage Non-Communicable Diseases in Bangladesh (2023) highlights the role of UHCs in addressing chronic disease management, further stressing the need for enhanced managerial skills to tackle emerging health challenges.<sup>20</sup>

## CONCLUSION

This study highlights that while primary healthcare managers in Bangladesh possess foundational strengths in leadership, communication, and professionalism, significant gaps remain in financial planning, information management, and proactive decision-making. Addressing these deficiencies through targeted training programs is essential for improving healthcare management and ensuring the sustainability of primary healthcare services. In addition, promoting gender equity in healthcare leadership and fostering a culture of continuous professional development are critical steps towards achieving Universal Health Coverage and strengthening the healthcare system in Bangladesh.

## RECOMMENDATIONS

- Introduce mandatory management training for primary healthcare managers, with a particular focus on financial planning, digital health systems, and proactive leadership.

- Promote gender-equitable leadership development through national policies and structured mentorship programs.
- Institutionalize regular assessments of management competencies using validated tools to inform workforce development and ensure continuous improvement.
- Conduct longitudinal studies to evaluate the long-term impact of capacity-building programs on health system performance and managerial effectiveness.
- Foster a culture of continuous professional development, supported by blended learning platforms, on-site coaching, and mentorship.

## Conflicts of interest

The authors declare no conflicts of interest related to the conduct, analysis, or publication of this study.

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