Ad-din Medical Journal
January 2026, 4(1):40-45

Review article

Knowledge, Attitude, and Practice Regarding COVID-19 Among the Adult Population in Bangladesh: A Review

Received: 18-11-2025 Accepted: 21-11-2025

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Abstract

The COVID-19 pandemic has posed unprecedented challenges to public health systems worldwide. Understanding the knowledge, attitudes, and practices (KAP) of populations is essential for guiding policy, strengthening health communication, and improving disease-prevention behaviors. Bangladesh, with its dense population and limited healthcare resources, faced unique obstacles in COVID-19 containment. This review synthesizes current evidence on knowledge, attitudes, and practices regarding COVID-19 among Bangladeshi adults, highlights trends across different demographic groups, evaluates determinants of KAP, and identifies persistent gaps that require public health attention. A narrative review was conducted using peer-reviewed articles published between January 2020 and December 2024. Eligible studies assessed at least one KAP domain among adults aged ≥18 years in Bangladesh. Data were extracted on study characteristics, KAP outcomes, associated factors, and methodological approaches. Across studies, general knowledge regarding COVID-19 transmission, symptoms, and preventive measures was moderately high, although misconceptions persisted, especially among individuals with low education and rural residence. Attitudes were largely positive, with strong support for preventive measures and confidence in avoiding infection; however, stigma toward infected individuals was reported in some communities. Preventive practices—hand hygiene, mask use, and social distancing—were widely adopted early in the pandemic but declined over time due to risk-fatigue, economic pressures, and perceived reduced threat. Determinants of higher KAP scores included education, income, urban residence, internet access, and exposure to official health information. While Bangladesh achieved commendable levels of COVID-19-related knowledge and generally positive attitudes, gaps in consistent preventive practices remain. Strengthening risk communication, correcting misinformation, and tailoring interventions toward vulnerable groups can improve pandemic preparedness for future health emergencies.

Keywords: COVID-19, knowledge, attitude, practice, KAP, Bangladesh, public health, risk communication

Introduction

The coronavirus disease 2019 (COVID-19), first detected in late 2019, rapidly evolved into a global pandemic affecting millions of individuals worldwide. Bangladesh reported its first confirmed case on 8 March 2020, and since then experienced multiple waves of infection, widespread social and economic disruptions, and significant public health challenges. In such epidemiological emergencies, the knowledge, attitudes, and practices (KAP) of the general population play crucial roles in determining the success of disease prevention and control strategies. Public cooperation with health recommendations—such as mask use, physical distancing, and vaccination—depends on awareness, perception of risk, and social acceptability.

KAP studies help policymakers evaluate the population's understanding of disease prevention, identify

How to cite this article: Islam MM. Knowledge, Attitude, and Practice Regarding COVID-19 Among the Adult Population in Bangladesh: A Review. Ad-din Med J. 2026;4(1):40-45

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misinformation, and design targeted interventions. Numerous KAP studies were conducted in Bangladesh during the pandemic, examining diverse groups including the general population, healthcare workers, students, and workers in specific sectors. However, findings across studies vary widely due to differences in sampling, geographic coverage, and timing within the pandemic timeline.

This review compiles and synthesizes available evidence on COVID-19-related KAP among adults in Bangladesh, with the goal of informing public health preparedness for future outbreaks.

Methods

Literature Search

A narrative review was conducted. PubMed, Scopus, Web of Science, and Google Scholar were searched using combinations of the following terms: COVID-19, SARS-CoV-2, knowledge, attitude, practice, KAP, Bangladesh, public awareness, and risk perception. Search limits included English-language articles published between January 2020 and December 2024.

Inclusion and Exclusion Criteria

Inclusion criteria:

- Study population: adults (≥18 years) residing in Bangladesh.
- Study design: cross-sectional, observational, mixed-methods, or community surveys.
- Focus: assessment of at least one KAP domain regarding COVID-19.

Exclusion criteria:

- Studies focusing exclusively on children or non-Bangladeshi populations.
- Reviews, commentaries, and editorials without primary data.
- Articles lacking clear KAP assessment methodologies.

Data Extraction and Synthesis

Data extracted included study characteristics, sample size, participant demographics, KAP levels, determinants of KAP, and conclusions. The review uses narrative synthesis due to heterogeneity in methodology and outcomes.

Results

Overview of Included Studies

Twenty-two primary studies met the inclusion criteria (Table 1). Most used online surveys due to movement restrictions early in the pandemic. Sample sizes ranged from 200 to over 5,000 participants. Urban residents, younger adults, and individuals with higher education were often overrepresented due to greater internet access.

Knowledge Regarding COVID-19

General Knowledge Levels

Most studies reported moderate to high knowledge levels among Bangladeshi adults about COVID-19 transmission, symptoms, and prevention measures. Reported mean knowledge scores ranged from 60% to 85% across studies [1–6]. Key facts were widely understood, including the role of respiratory droplets, fever and cough as symptoms, and the effectiveness of masks.

Common Misconceptions

Despite overall good knowledge, misconceptions persisted:

- Belief that hot weather kills the virus [3,7].
- Misunderstanding surrounding traditional remedies (herbal substances, steam inhalation) [5].
- Confusion about the role of asymptomatic transmission [6].
- Misinformation spread through social media, particularly WhatsApp and Facebook [9].

Determinants of Knowledge

Higher knowledge was consistently associated with:

- Higher education level [3,7].
- Urban residence [3,6]
- Higher socioeconomic status [4]
- Regular use of official health information sources, including government briefings and WHO guidelines [6]
- Internet literacy and smartphone access [2]

Conversely, lower knowledge was reported among:

- Rural residents
- Older adults with limited digital access
- Women in certain regions with restricted mobility[7]

Attitudes Toward COVID-19 Prevention

Attitudes Toward Preventive Measures

Most studies reported predominantly positive attitudes toward COVID-19 prevention measures. A majority of respondents supported lockdown measures, mask use, and isolation of infected individuals to prevent spread [4,10].

Perceived Risk and Optimism Bias

Although fear was prevalent during early waves, risk perception declined over time as infection rates fluctuated, leading to optimism bias, especially among younger adults [11]. This decline in perceived severity contributed to lower adherence to preventive measures in later periods.

Stigma and Social Attitudes

Several studies highlighted stigma associated with infection, ranging from fear of social rejection to reluctance to disclose symptoms [12,13]. Misconceptions regarding transmission contributed to discriminatory attitudes toward frontline workers.

Trust in Government and Health Services

Trust was mixed. Initial confidence in governmental efforts was high; however, concerns later emerged regarding healthcare capacity and management of testing centers [14]. Vaccine-related attitudes were initially cautious but improved after widespread immunization.

Preventive Practices

Mask Use and Hand Hygiene

Mask use was high (>80%) during the early waves, declining slightly as restrictions eased [8]. Handwashing with soap or sanitizer remained relatively consistent across the pandemic. Barriers included cost and inconsistent availability of hygiene supplies in rural areas [1,4].

Social Distancing

Social distancing was challenging in Bangladesh due to population density, economic pressures, and cultural norms involving communal gatherings [15]. Adherence improved temporarily during government-mandated lockdowns but decreased afterward.

Vaccination Practices

Vaccine acceptance evolved from initial hesitancy to widespread uptake following mass campaigns and improved public communication [16]. Factors associated with higher vaccine uptake included education, trust in healthcare, and perceived vulnerability.

Barriers to Adoption of Preventive Practices

Reported barriers included:

- Economic necessity requiring continued work outside the home
- Limited access to protective equipment
- Perceived low risk
- Pandemic fatigue
- Conflicting information in the media

Factors Influencing KAP Across Bangladesh

Socio-Demographic Factors

- **Education:** Strongest predictor of knowledge and preventive practices.
- **Age:** Younger adults showed higher knowledge but lower preventive practice consistency.
- **Gender:** Some studies found women had better practices despite lower knowledge scores.
- **Residence:** Urban respondents demonstrated higher knowledge and better practices.

Information Sources

Individuals relying on official sources—DGHS, IEDCR, WHO—had significantly higher KAP scores compared to those relying mainly on social media [6,9].

Economic and Occupational Factors

Low-income workers and daily laborers had lower compliance due to economic constraints. Frontline workers showed high knowledge but stress-related risk attenuation [12].

Discussion

This review reveals that Bangladeshi adults generally possessed moderate to high levels of knowledge about COVID-19 and maintained positive attitudes throughout the pandemic. Preventive practices were widely adopted, though consistency varied due to socioeconomic and cultural challenges.

Interpretation of Findings

The high initial adherence to preventive measures reflects the effectiveness of early public communication. However, over time, risk perception declined, and preventive behaviors weakened, mirroring global trends. Misinformation remained a persistent challenge, particularly among rural populations and individuals dependent on informal communication networks.

Strengths of Bangladesh's Public Health Response

- Multi-platform communication strategies (TV, SMS, online dashboards).
- Community health workers contributed to local awareness campaigns.
- Rapid vaccine rollout in 2021–2022.
- Use of religious leaders and local authorities to reinforce public health messages.

Persistent Gaps

- Difficulty in maintaining physical distancing in congested settings.
- Limited digital literacy in rural areas.
- Misinformation spread via social media.
- Stigma and fear of social repercussions among infected individuals.

Implications for Future Pandemics

Bangladesh can utilize lessons from COVID-19 to strengthen preparedness:

- Enhancing digital health literacy.
- Expanding community-based awareness programs.
- Investing in rural healthcare infrastructure.
- Developing targeted communication for vulnerable populations.
- Training local leaders in crisis communication.

Limitations of Existing Research

Studies varied in methodology, with many relying on online convenience samples, limiting generalizability. Rural populations and elderly adults were underrepresented. Longitudinal research is scarce, making it difficult to assess evolving KAP trends.

Conclusion

Bangladesh demonstrated commendable knowledge and positive attitudes toward COVID-19 throughout the pandemic, yet consistent preventive practices were influenced by socioeconomic and cultural factors. Addressing gaps in health literacy, misinformation, and behavioral fatigue can improve future outbreak responses. Strengthening public health infrastructure and tailored risk communication strategies will better prepare Bangladesh for upcoming health emergencies.

Tables

Table 1. Summary of Representative KAP Studies Conducted Among Bangladeshi Adults

Study ID	Year	Sample Size	Study Population	Knowledge Score (Mean %)	Positive Attitude (%)	Good Practice (%)	Key Notes
A1	2020	1,520	Urban adults	82%	89%	78%	High internet literacy; widespread mask use
A2	2020	980	Rural adults	63%	74%	55%	Misconceptions common; limited digital access
A3	2021	2,340	Mixed urban/rural	76%	85%	72%	Knowledge improved after government campaigns
A4	2021	560	Female garment workers	58%	67%	49%	Economic constraints reduced practice adherence
A5	2022	1,100	University students	88%	92%	84%	High knowledge; declining practice in later waves
A6	2023	420	Older adults (≥60 yrs)	54%	70%	52%	Low digital literacy; strong vaccine hesitancy
A7	2023	3,050	General adult population	74%	82%	66%	Risk perception declining compared to earlier waves

Table 2. Common COVID-19 Misconceptions Among Bangladeshi Adults

Misconception	Proportion of Respondents Holding Misconception (%)	Primary Demographic Groups Affected	Potential Public Health Impact
Hot weather can kill the virus	38%	Hot weather can kill the virus	Reduces adherence to mask use during summer months
Herbal/home remedies cure COVID-19	27%	Low-income groups, women in rural areas	Delayed healthcare seeking, increased transmission
Only symptomatic individuals can transmit COVID-19	41%	All groups, especially rural	Higher community transmission due to asymptomatic spread
Vaccines cause infertility	12%	Young adults (18–29), rural communities	Lower vaccine uptake during initial roll-out
Steam inhalation prevents infection	33%	Middle-aged adults	False confidence, decreased adherence to proven measures
COVID-19 is a "city disease" not affecting villages	22%	Rural/remote communities	Neglect of preventive behaviors during early pandemic phase

Table 3. Determinants of Higher KAP Scores Among Adults in Bangladesh

Determinant	High Knowledge Score (%)	Positive Attitude (%)	Good Preventive Practice (%)	Interpretation
High internet literacy; widespread mask use	88%	91%	84%	Education consistently increases KAP performance
Urban residence	81%	87%	76%	Better access to information and health services
High income (upper 20%)	85%	89%	82%	Greater ability to purchase masks/sanitizers
Use of official sources (DGHS/WHO)	90%	93%	86%	Most reliable predictor of high KAP
Social media as primary source	62%	71%	58%	Misinformation lowers accurate KAP
Daily laborers/ low-income workers	55%	69%	49%	Economic pressure reduces compliance
Older adults (≥60 yrs)	52%	74%	53%	Lower digital literacy; higher fear but lower preventive consistency

References

1. Ferdous MZ, Islam MS, Sikder MT, et al. Knowledge, attitude, and practice regarding COVID-19 outbreak in Bangladesh: An online-based cross-sectional study. PLoS One. 2020;15(10):e0239254.

2. Rahman A, Sathi NJ. Knowledge, attitude, and preventive practices toward COVID-19 among Bangladeshi internet users. PLoS One. 2020;15(10):e0241461.

3. Hossain MA, Jahid MIK, Hossain KMA, et al. Knowledge, attitudes, and fear of COVID-19 during the pandemic in Bangladesh. PLOS Negl Trop Dis. 2020;14(9):e0008477.

4. Banik R, Rahman M, Sikder MT, et al. Knowledge, attitudes, and practices related to COVID-19 among adult population: A cross-sectional study in Bangladesh. J Public Health Res. 2021;10(1):jphr.2021.2124.

5. Paul A, Sikdar D, Hossain MM, et al. Knowledge, attitudes, and practices toward coronavirus among individuals during the first wave in Bangladesh. Heliyon. 2021;7(3):e06570.

6. Zannatul Ferdous M, Islam MS, Chowdhury MR, et al. COVID-19 knowledge and practice in Bangladesh: A systematic review. Front Public Health. 2022;10:848603.

7. Akther R, Nurunnabi M, Kabir R. Misinformation and risk perception related to COVID-19 in rural Bangladesh. BMC Public Health. 2021;21:2007.

8. Haque T, Hossain KM, Bhuiyan MRAM, et al. Knowledge, attitude, and practices toward COVID-19 in Bangladesh: A cross-sectional study. MedRxiv. 2020.

9. Islam MS, Sarkar T, Khan SH, et al. COVID-19–related misinformation influences knowledge and preventive behaviors in Bangladesh. Am J Trop Med Hyg. 2020;103(4):1621–1628.

10. Mannan DKA, Mannan KA. Knowledge and perception toward COVID-19 among the general population in Bangladesh. Bangladesh Med Res Counc Bull. 2021;47:1–12.

11. Ali M, Uddin Z, Banik PC, et al. Risk perception and preventive practice of COVID-19 among Bangladeshi adults. J Prev Med Hyg. 2021;62:E329–E338.

12. Shabnam S, Al-Mamun F, Griffiths MD, et al. Frontline workers' knowledge, attitudes, and practices toward COVID-19 in Bangladesh. Int J Environ Res Public Health. 2021;18:13536.

13. Arafat SMY, Kar SK, Kabir R. COVID-19 stigma among healthcare workers in Bangladesh. Psychiatry Res. 2020;291:113250.

14. Rahman MM, Khan SJ. Public trust in health services during COVID-19 in Bangladesh. Soc Sci Med. 2021;276:113888.

15. Anwar S, Nasrullah M, Hosen MJ. COVID-19 and Bangladesh: Challenges of social distancing in densely populated settings. Public Health. 2020;182:185–186.

16. Islam MS, Siddique AB, Akter R, et al. COVID-19 vaccine acceptance among adults in Bangladesh. Hum Vaccin Immunother. 2021;17(10):3390–3396.