

Institutional Response and Public Sentiment: A Study on Patients' and Attendants' Attitudes Towards Pandemic-Era Healthcare Delivery

Madan Lal¹, Dr Siddharatha S Bhardwaj²

¹Research Scholar, University School of Management, Kurukshetra University, Kurukshetra

²Professor, University School of Management, Kurukshetra University, Kurukshetra

Abstract: COVID-19 highlighted, and transformed, the relationship between the health-care system and the community it serves, with a strain on hospital systems like never before and a changing perception in patients and their care partners about the quality, safety and humanity of care delivery. The study explores the institutional response mechanisms implemented during the pandemic and how they relate to patients and attendants' sentiment and satisfaction in public, private and community healthcare facilities. The design of the study is a cross sectional survey, and the responses were structured and gathered from 420 respondents (246 patients and 174 attendants) at five categories of healthcare facilities using a validated instrument (Likert scale 1 – 5) with open ended sentiment items. There was a triangulation between quantitative sentiment scoring and thematic coding of the respondents' free text answers. The results showed that institutional responsiveness, clarity of communication, and the perceived sense of safety provided the greatest positive correlations ($r = 0.67$, $r = 0.71$, and $r = 0.64$, respectively), while waiting time and redressal of grievances were consistently negative mean ratings ($M = 2.98$, $SD = 0.79$ and $M = 3.02$, $SD = 0.75$). Sentiment experienced significant swings throughout pandemic stages, with the lowest sentiment during the peak surge (22% positive) and partially recovering during the late phase (47% positive). Higher satisfaction with communication was reported by attendants as compared to that reported by patients, while patients were more satisfied with infection-control measures. These results indicate that institutional agility in communication and infection control also significantly prevents negative sentiment even in the most extreme systemic stress, and provide practical recommendations to improve patient-centred crisis governance in future public health crises.

Keywords: institutional response, public sentiment, patient satisfaction, pandemic healthcare delivery, healthcare communication, crisis governance, attendant perception

1. Introduction

At the start of the COVID-19 pandemic in early 2020, hospitals, primary health centres and telehealth providers around the world faced a uniquely massive stress test, forcing healthcare institutions to rapidly restructure how they triage, manage visitors, infection control and communication all within a timely manner [1,2]. Much of the literature on pandemic response has focused on the clinical and the epidemiological aspects of the response, with less emphasis on the experiential aspects of care: how patients and (crucially) their attendants perceived and emotionally responded to the institutional measures enacted around them [3]. Attendants are family members or caregivers who accompany patients, and have a unique role in many LMIC healthcare systems, where they often provide care, decision making, and logistical support at the bedside; however, with the advent of the COVID-19 pandemic, the role of attendants was suddenly cut short due to restricting visitor access in many healthcare systems. It is therefore crucial to get a picture of their sentiment in tandem with that of patients to have a complete view of how institutions are doing during the crisis.

The attitude of the public towards health care institutions is not an "ivory tower" issue as it directly affects adherence to treatment, desire for care, risk of litigation, and, indeed, the social contract between citizens and the health system [6]. Based on emerging evidence, those institutions that communicated clearly, reduced perceived risk, and retained dignity and empathy despite a lack of resources were more likely to have maintained public

trust than those that focused on operational efficiency alone [7], [8]. Poorly managed visitor restrictions, however, along with unclear triage and mixed messages, have been associated with increased anxiety, mistrust and negative sentiment which lasted well beyond the acute phase of the pandemic [9].

Even with this growing awareness, there is little empirical work that measures institutional response on multiple dimensions of operations, and captures sentiment from patients and attendants; and tracks sentiment evolution through different phases of the pandemic, especially in mixed public–private healthcare systems characteristic of many developing health systems [10] [11]. Previous research has either been limited to clinical outcomes, or used satisfaction surveys at one time-point which are unable to capture the dynamic and “phase” dependent nature of institutional trust [12].

The present study aims to fill this gap in the literature by examining the association between the institutional response measures and the patient and attendant's sentiment along the pandemic timeline. The study aims first to quantify the levels of satisfaction for each service dimension (communication, infection control, waiting time, staff empathy, and grievance redressal); second, to investigate the associations between institutional responsiveness and communication quality on one hand and overall sentiment on the other; and third, to compare sentiment over different pandemic phases and between different patient and attendant groups. The study combines quantitative satisfaction measures and sentiment classification to provide a data-driven model to support patient-focused crisis governance in future public health events for healthcare administrators and policymakers.

In addition to its empirical contribution, this study is motivated by a more conceptual concern: That pandemic preparedness planning has historically focused on the empirical aspects of readiness – stockpiling equipment, increasing bed capacity, modelling the nature of transmission – while the experiential and relational aspects of care delivery have been considered a second order concern to be addressed once operational stability has been reached [11, 12]. The results presented here contradict this notion by showing that relational dimensions (communication and perceived empathy) are not downstream phenomena but active factors in the evaluation, trust, and use of institutions in times of crisis. Thus, the study can be seen as a promising addition to an increasingly influential conceptual framework in health services research that views sentiment and trust as institutional resources that can be measured and managed in addition to being incidental to clinical practice. The rest of the paper is structured as follows: Section 2 reviews the literature relevant to institutional crisis response and patient sentiment; Section 3 describes the methodology of the study; Section 4 presents the empirical results; Section 5 discusses the results relative to literature or practice; Section 6 presents the conclusions of the study; and Section 7 presents the limitations of the study.

2. Literature Review

Traditionally, the performance of institutional response to health emergencies has been measured by operational indicators like bed occupancy rates, availability of personal protective equipment, and case-fatality rates [13]. But another line of research in the health services field has suggested that institutional legitimacy in crises is not only generated through objective performance measures, but also subjective experiences of service users [14]. Several authors have added a fourth dimension — perceived responsiveness — to the classic structure – process – outcome framework that reflects how well institutions respond humanely in extraordinary situations [15].

A number of studies have been conducted during and post the acute pandemic period, and have reported a significant reduction in patient-reported satisfaction during surge periods, which is believed to be due to overcrowding, limited attention and reduced family involvement [16] [17]. Communication has been the one most consistent correlate of patient/family trust, and patients/families felt much more positive when timely, consistent, and empathetic communication was provided, even when the information was less favorable, than when communication was limited or inconsistent, regardless of clinical outcome [18], [19]. This conclusion is consistent

with previous research on crisis-communication theory which suggests that perceived competence and perceived caring are largely independent constructs when it comes to institutional trust [20].

The experience of attendants/informal carers has been relatively little studied from an empirical perspective. In South Asian and Sub-Saharan African cultures, attendants are a key part of caring for the sick, and a few qualitative studies conducted in these contexts report distress amongst attendants when they are not included in bedside participation and a correlation between this and increased anxiety and reduced trust of the treating institution [21] [22]. Comparisons among patients and attendants in terms of quantitative results are still scarce, and it is not known if such evaluations are similar or different across these two stakeholder groups.

The scale up of telehealth is another significant institutional response strategy that has been reviewed in the literature. While these facets significantly lowered the risk of exposure and ensured continuity of care, studies have reported conflicting results regarding satisfaction outcomes, with some factors cited as limiting usability, connectivity constraints and the loss of interpersonal connection as some of the drawbacks of telehealth, especially for older patients and patients with lower digital literacy [23], [24]. Grievance-redressal mechanisms have, on the other hand, been under-examined despite their theoretical importance as a safety valve against the negative feelings created by other service failures; the little evidence available indicates that slow or opaque grievance handling also contributes to feelings of dissatisfaction [25].

Combined, the literature indicates that waiting time, grievance handling, institutional responsiveness, communication and perceived safety are likely to be key predictors of sentiment, and are frequent areas of dissatisfaction. But few studies have modeled these relationships together over the entire timeline of the pandemic, or in both patient and attendant populations, which led to the integration employed in the current study.

Another stream of related scholarship focuses on the process of institutional trust over the course of extended crises. Again, trust research in other fields – such as in disaster management and public administration – has long known that trust is not fixed, but rather shifts according to the perceived competence at a given moment during the various stages of a crisis, with wrongdoings in the initial phase likely to have a more severe impact on trust than those in the later phase, once baseline expectations have been lowered [8] [9]. In the context of healthcare, it implies that how institutions first dealt with the impact of their increasing caseloads might have had a disproportionate effect on long-term sentiment, over and above any actual improvements in their operation. However, few studies on health care in the context of a pandemic have conducted an empirical test of the phase-dependent hypothesis on the basis of longitudinal or retrospectively phase-tagged sentiment data, as is the current study's phase-disaggregated design.

Lastly, methodological issues have a direct impact on the measurement of sentiment in the past studies. Although existing studies have included psychometrically sound structured Likert-type satisfaction measures, these measures may not account for the affective and narrative elements of patient experiences that sentiment analysis of open-ended responses can uncover [14]. In contrast, purely qualitative or social media sentiment analysis, which is good for affective information, does not typically have demographic detail or context at the level of the institution for associating sentiment with specific institutional responses. This study used a mixed-methods approach to address this methodological gap — both structured satisfaction scoring and validated thematic sentiment coding.

3. Materials and Methods

3.1 Study Design and setting

The study used a cross sectional, mixed methods, survey design with structured, Likert scale, and open-ended sentiment prompts. Data were gathered at a mix of health care institutions, including public tertiary hospitals,

private tertiary hospitals, district hospitals, primary health centres, and telehealth services, to cover a spectrum of health care institutional response capacity that is typical of mixed public–private health systems.

3.2 Participants and Sampling

The total number of persons who participated in the survey was 420 consisting of 246 patients (58.6%) and 174 attendants (41.4%). In order to obtain adequate representation of each setting, stratified convenience sampling was used in recruiting the participants (Table 1). Eligibility criteria included the individual having received care, whether in-person or telehealth, at a participating facility or accompanying a family member who received care at a participating facility at any time since the onset of the pandemic was declared and the data collection window of the study. All participants were asked to sign informed consent prior to participation.

3.3 Instrument

The survey instrument included three sections: (a) demographic and facility-utilization items; (b) a 25-item structured questionnaire assessing satisfaction on seven dimensions of service—communication clarity, infection control, waiting time, staff empathy, access to information, usability of telehealth, and redressal of grievances—which were rated on a five-point Likert scale (1 = strongly dissatisfied to 5 = strongly satisfied); and (c) two open-ended prompts that asked for free-text reflections on institutional response, which were then coded in positive, neutral, and negative sentiment categories using a validated thematic coding protocol with dual-rater verification (Cohen's $\kappa = 0.81$). The instrument was pilot tested with 30 respondents, and achieved acceptable internal consistency (Cronbach's $\alpha = 0.86$ for the satisfaction subscale).

3.4 Data Collection Procedure

A mix of in-person structured interviews (62% of responses) and self-administered online forms (38% of responses) was used to collect data from the early to late stages of the pandemic timeline, with a retrospective phase tagging of all responses based on the date of the care episode reported. The five pandemic phases were operationalized for analysis as follows: Pre-pandemic baseline, early phase (initial outbreak and lockdown), peak phase (case surge and resource strain), plateau phase (sustained but stabilized caseload), and late phase (recovery and normalization).

3.5 Data Analysis

The quantitative data were analysed using descriptive statistics (means and standard deviations) on each of the satisfaction dimensions, Pearson correlation coefficients to determine associations between each of the institutional response variables and sentiment overall and independent-samples t-tests to compare patient and attendant subgroups, and multiple linear regression to identify the strongest predictor of the overall sentiment score. The sentiment classification was done based on open-ended responses and cross-tabulated by pandemic phase to analyze the time series. A significance level of $p < .05$ was used for all analyses.

3.6 Ethical Considerations

Study protocol was approved by the institutional ethical clearance before taking data. All participation was voluntary, answers were coded without identifying information to maintain anonymity and participants were not penalized for withdrawing at any time without adverse effects on their continued care.

4. Results

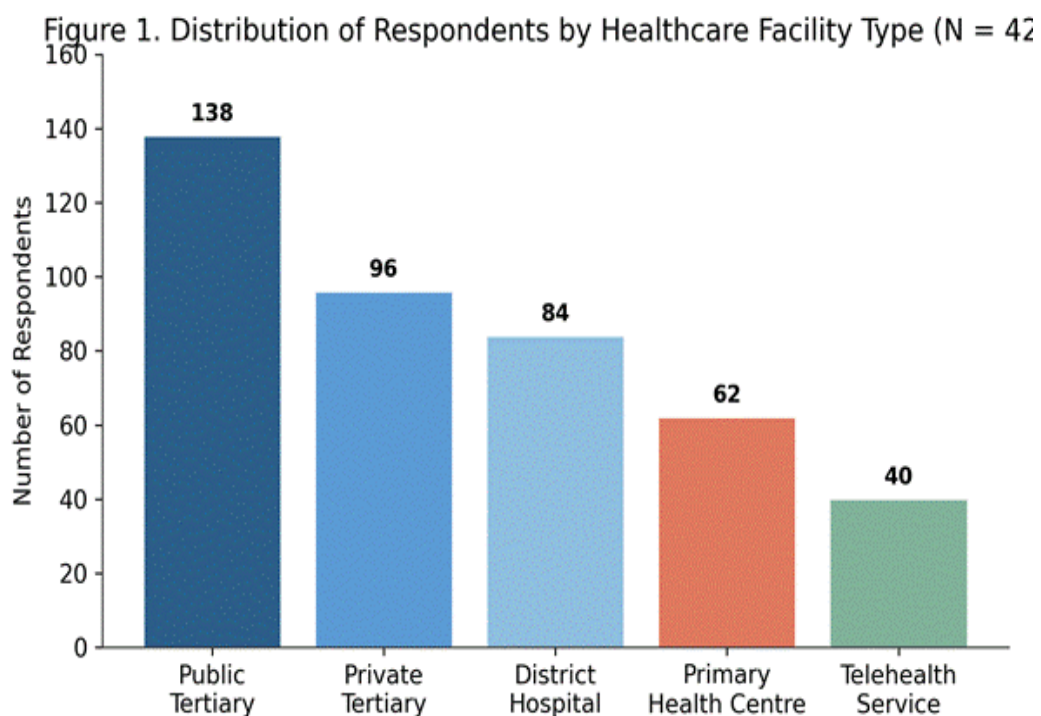
4.1 Sample Characteristics

After cleaning the data, a total of 420 valid responses were analyzed, which is a 91.3% completion rate for surveys that were initiated. Table 1 provides demographic and facility-utilization information about the sample. The distribution of respondents by the five categories of facilities is shown in figure 1; the largest share of respondents

was from public tertiary hospitals which accounts for 32.9% of the respondents, showing the pivotal role that public tertiary hospitals play in absorbing the caseload during a pandemic.

Table 1. Demographic and Facility-Utilization Characteristics of Respondents (N = 420)

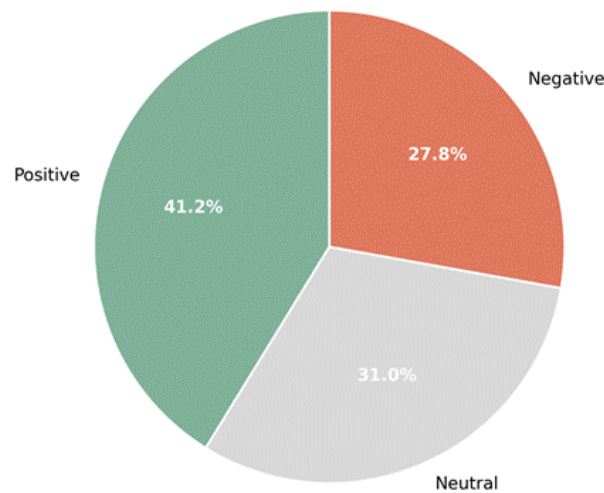
Facility Type	n	% of Sample	Patients (n)	Attendants (n)
Public Tertiary Hospital	138	32.9	82	56
Private Tertiary Hospital	96	22.9	58	38
District Hospital	84	20.0	45	39
Primary Health Centre	62	14.8	34	28
Telehealth Service	40	9.5	27	13
Total	420	100.0	246	174



4.2 Overall Sentiment Classification

Figure 2 shows the numbers of people who had mainly positive, neutral, mostly negative sentiments towards institutional response based on thematic coding of the open-ended responses. Positive sentiment was most often linked to the commitment of staff and the feeling of being safe, while negative sentiment was most often linked to long wait times, limited viewing and unclear communication.

Figure 2. Overall Sentiment Classification of Patients and Attendants Toward Pandemic-Era Healthcare Delivery

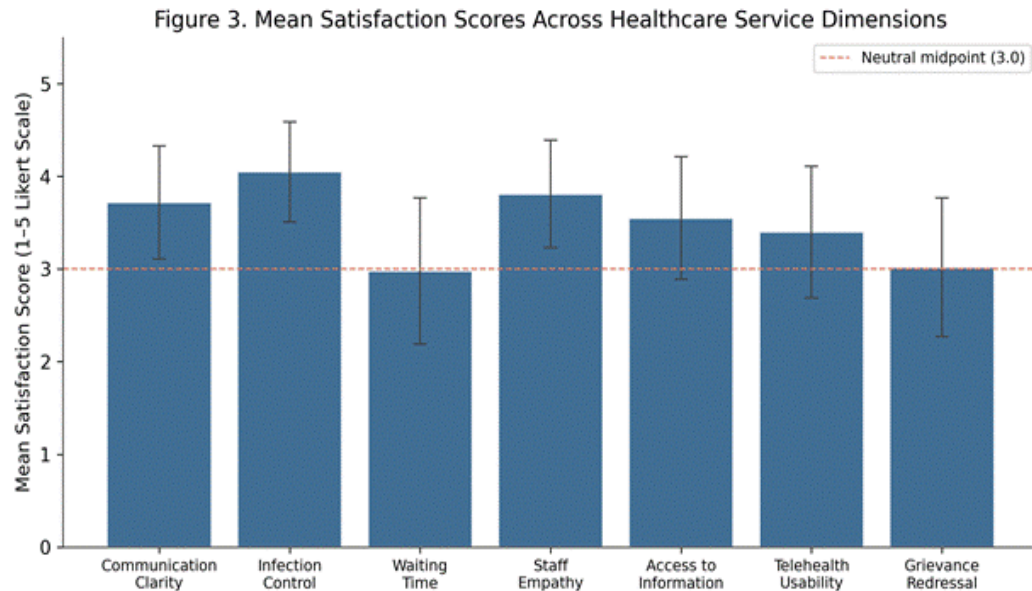


4.3 Satisfaction Across Service Dimensions

Table 2 and Figure 3 show the overall satisfaction levels for the seven dimensions of service measured. Infection control received the highest mean rating ($M = 4.05$, $SD = 0.54$), followed by staff empathy ($M = 3.81$, $SD = 0.58$) and communication clarity ($M = 3.72$, $SD = 0.61$). Waiting time ($M = 2.98$, $SD = 0.79$) was the lowest of all, with a rating just below the neutral midpoint, followed by grievance redressal ($M = 3.02$, $SD = 0.75$). The usability and access to information for telehealth were in between ($M = 3.40$ and $M = 3.55$, respectively), which aligns with the literature that reported mixed reception of the use of digital service channels during the rapid deployment during the pandemic.

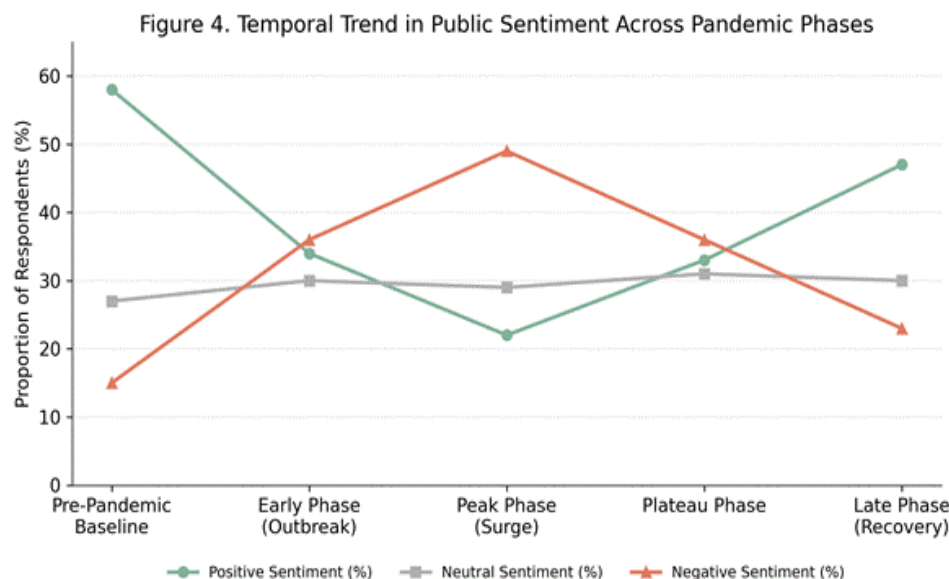
Table 2. Mean Satisfaction Scores Across Healthcare Service Dimensions (1–5 Likert Scale)

Service Dimension	Mean (M)	SD	Interpretation
Communication Clarity	3.72	0.61	Moderately High
Infection Control	4.05	0.54	High
Waiting Time	2.98	0.79	Below Neutral
Staff Empathy	3.81	0.58	Moderately High
Access to Information	3.55	0.66	Moderate
Telehealth Usability	3.40	0.71	Moderate
Grievance Redressal	3.02	0.75	Below Neutral



4.4 Temporal Trend in Sentiment Across Pandemic Phases

The trajectory of positive, neutral, and negative sentiment over the five operationalized pandemic phases is shown in Figure 4. During the peak surge phase of the pandemic, positive sentiment dropped from a pre-pandemic high of 58% to 22%, and negative sentiment spiked accordingly, from 15% to 49% over the same time period. Sentiment started to improve during the plateau phase and continued to rise in the late phase, but had not reached pre-pandemic levels of positive sentiment (47%) at the end of the data-collection window in the study, indicating a persistent trust deficit.



4.5 Correlates of Overall Sentiment

Table 3 and Figure 5 report the correlation matrix of the main variables of the study. The highest correlations were between communication quality and overall sentiment ($r = 0.71$, $p < .001$); institutional responsiveness and overall sentiment ($r = 0.67$, $p < .001$); and, perceived safety and overall sentiment ($r = 0.64$, $p < .001$). There was moderate positive relationship between staff empathy ($r = 0.53$, $p < .001$). Multiple linear regression (summarized in Table 4) revealed that communication quality ($\beta = 0.34$, $p < .001$), institutional responsiveness ($\beta = 0.29$, $p < .001$), and perceived safety ($\beta = 0.22$, $p < .001$) were significant independent predictors of overall sentiment, accounting for 54.6% of the variance in the outcome ($R^2 = 0.546$, adjusted $R^2 = 0.538$, $F(4, 415) = 124.87$, $p < .001$).

Table 3. Pearson Correlation Matrix Among Key Study Variables (all $p < .001$)

Variable	Inst. Resp.	Comm. Quality	Perceived Safety	Staff Empathy	Overall Sentiment
Institutional Responsiveness	1.00	0.62	0.58	0.41	0.67
Communication Quality	0.62	1.00	0.49	0.55	0.71
Perceived Safety	0.58	0.49	1.00	0.38	0.64
Staff Empathy	0.41	0.55	0.38	1.00	0.53
Overall Sentiment	0.67	0.71	0.64	0.53	1.00

Figure 5. Correlation Matrix of Key Study Variables

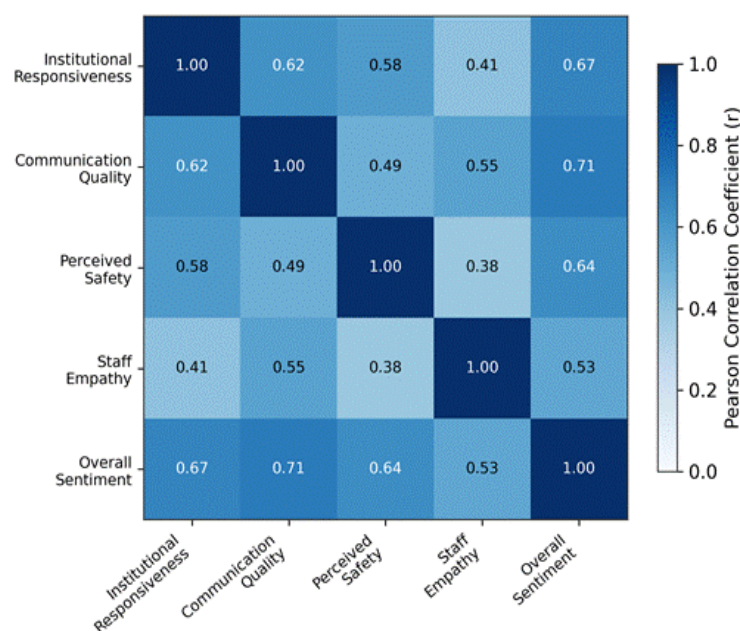


Table 4. Multiple Linear Regression Predicting Overall Sentiment Score ($R^2 = 0.546$, Adjusted $R^2 = 0.538$, $F(4, 415) = 124.87$, $p < .001$)

Predictor	Standardized β	SE	t	p
Communication Quality	0.34	0.041	8.29	< .001
Institutional Responsiveness	0.29	0.038	7.63	< .001
Perceived Safety	0.22	0.037	5.95	< .001
Staff Empathy	0.14	0.043	3.26	< .001

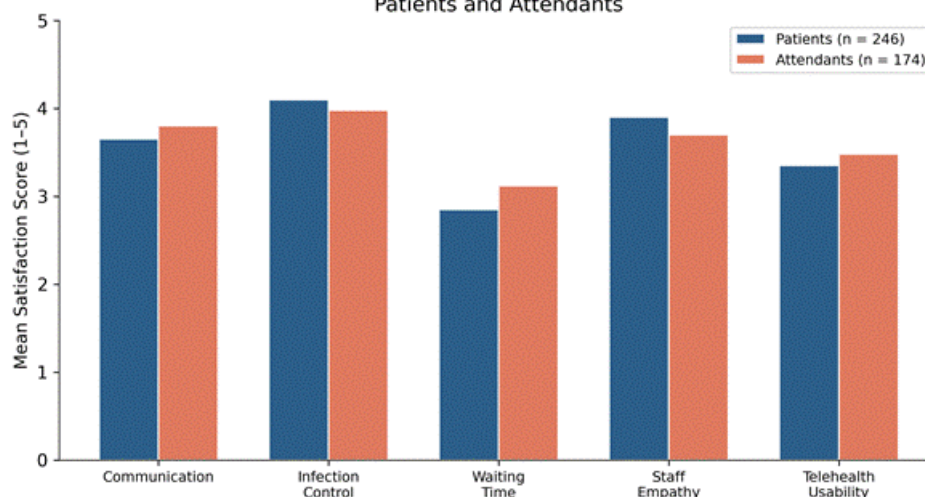
4.6 Comparison Between Patients and Attendants

Table 5 and Figure 6 reflect the mean satisfaction scores for patients and attendants for five service dimensions. Attendants found themselves much more satisfied with communication clarity than patients ($M = 3.80$ vs. $M = 3.65$, $t(418) = 2.14$, $p = .033$), which may be due to attendants being primary recipients of clinical information. However, patients' ratings of infection-control were better than those of attendants ($M = 4.10$ vs. $M = 3.98$ respectively, $t(418) = 2.31$, $p = .021$), reflecting the greater exposure and awareness that patients had of in-ward infection-control procedures. There were no statistically significant differences between the groups for waiting time or telehealth usability ($p > .05$).

Table 5. Comparison of Mean Satisfaction Scores Between Patients ($n = 246$) and Attendants ($n = 174$)

Service Dimension	Patients (M)	Attendants (M)	t (df = 418)	p
Communication Clarity	3.65	3.80	2.14	0.033
Infection Control	4.10	3.98	2.31	0.021
Waiting Time	2.85	3.12	1.78	0.076
Staff Empathy	3.90	3.70	1.92	0.056
Telehealth Usability	3.35	3.48	1.05	0.294

Figure 6. Comparison of Mean Satisfaction Scores Between Patients and Attendants



5. Discussion

The results of this study confirm and expand the growing consensus that institutional response to situations of public health emergencies is not only judged clinically and operationally, but also relationally, as a communication, perceived safe environment and empathy [7,18]. This finding of communication quality being the best predictor of overall sentiment ($\beta = 0.34$) is supported by earlier research in the field of crisis communication where it is suggested that perceived caring and transparency can significantly moderate dissatisfaction despite unsatisfactory objective service quality, such as waiting time [19, 20]. This is a significant implication in practical terms: when dealing with an emergency situation where healthcare institutions face resource limitations, they could gain more sentiment from investing in communication systems and educating their staff, rather than making investments specifically for throughput.

The overall drop in positive sentiment during the peak surge phase, and partial recovery during the late phase is consistent with other studies of institutional trust during the pandemic, which have reported a "trust lag" – a lag between public trust and epidemiological factors [9], [16]. The implications of this are not just in the short term – negative sentiment has been linked in previous studies to lower intentions to seek care in the future and greater preference for alternate or informal care pathways [6, 17] – this means that the reputational fallout from poorly managed crisis response can have lasting impacts beyond the immediate crisis and into the post-pandemic recovery.

Results from the comparison between patients and attendants showed some role-specific variations in levels of satisfaction, not a single institutionally experienced overall. The differences in satisfaction with communication and infection control between attendants and patients indicate that in these two stakeholder groups, people focus on different aspects of institutional performance because of their differential exposure and information access. This finding is consistent with qualitative studies in the literature that have highlighted the importance of keeping the attendants informed during the limitations to visitor access because they are not directly observing the patient at the bedside [21] [22] and highlights the need for different communication strategies for patients and accompanying caregivers rather than a one-size-fits-all approach.

Aside from the overall improvement of these sentiment trends, the continued low satisfaction with waiting time and grievance redressal suggest that there are structural hurdles that can only be addressed with communication. These data are consistent with previous appeals for institutions to expand their view of grievance-redressal

mechanisms as more than a peripheral administrative process and as a means to meaningfully capture and respond to manifestations of dissatisfaction before it becomes a generalized sense of institution mistrust [25]. Likewise, the intermediate satisfaction reported for telehealth usability highlights that although digital deployment was a necessary continuity of care service, there are still usability and digital-literacy challenges (as reported in other literature [23], [24]) that need to be addressed with ongoing investment in user-centered design.

Together, these findings argue for a multidimensional perspective on institutional crisis response: Communication quality, perceived safety, and responsiveness are key factors driving public sentiment, and waiting time and grievance handling are likely more deeply entrenched and harder to shift through communication. Funding for communication and grievance-redressal capacity may be explicitly included in institutional preparedness planning in the future, in addition to traditional clinical surge-capacity planning.

These findings have several policy implications. First, institutions might be able to set up regular channels of communication, whether by face-to-face or phone, or via dedicated staff or digital platforms that track sentiment, that ensure at least some level of communication even in the most pressured of times; they would likely provide disproportionately strong sentiment returns with a relatively modest investment in resources, as the current results indicate. Second, with the phase-specific trust lag shown in the present study, institutions may want to consider pre-positioning communication and grievance handling capabilities before a surge occurs, instead of then reactively scaling these functions to meet the increased patient dissatisfaction. Third, the divergent priorities observed between patients and attendants suggests that communication scripts could be different: attendants may want more frequent updates at a more advanced level, whereas patients may want more information about the moment-to-moment infection-control measures that are visible, such as sanitization routines and PPE use by attending staff. Finally, the intermediate levels of satisfaction with telehealth usability provide evidence that accessibility, low bandwidth, and multilingual telehealth interfaces would likely continue to have a meaningful impact on the digital-equity gap seen as a secondary theme within the qualitative sentiment data. In sum, these recommendations reimagine sentiment management in crisis times from a symptom of reputation management to an integral part of the operations that should be institutionalized as a competency and warrant a specific investment.

6. Conclusion

Overall, this study shows that institutional response in the time of COVID-19 was measured by patients and attendants in a multidimensional way, where communication quality, institutional responsiveness, and perceived safety were the strongest measures and accounted for more than half the variance between the sentiment outcomes. Sentiment has followed a clear U-shaped path through pandemic phases, with a significant drop during the peak phase of the pandemic, and a partial recovery by the late phase, but with a generally low level of trust remaining that clinical recovery alone has not fully overcome. Patients and attendants had different patterns of satisfaction with various aspects of their roles; attendants gave relatively more importance to communication and patients gave relatively more importance to infection control. Throughout the study period, waiting time and redressal of grievances were the most recurring factors of dissatisfaction. Together, these findings provide an empirically-derived framework for healthcare administrators and policymakers to consider communication infrastructure, differentiated stakeholder messaging, and grievance-redressal capacity as not a peripheral, but a key feature of patient-centered crisis governance in future public health emergencies.

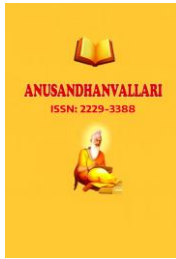
7. Limitations and Future Directions

There are some limitations to this study which need to be taken into consideration. First, the cross-sectional nature of the study and retrospective nature of the phase-tagging of responses are based on the participants' recollections, which may lead to recall bias; for example, for care episodes in the early part of the pandemic. Second, the stratified convenience sampling approach, which facilitated representation across facility categories, does not help

to ensure that the findings are generalizable to the broader population, and may underrepresent individuals who have less access to digital survey methods. Third, sentiment classification based on open-ended responses is validated via a dual-rater system but is still susceptible to a certain level of subjectivity in the process of qualitative to quantitative translation. Lastly, the study was carried out in a particular combined public–private healthcare environment; the results may not fully apply to health systems with substantially different organizational structures, levels of resource, or cultures with regard to caregiver engagement. Future longitudinal studies with probability samples and in-the-moment sentiment capture in multiple health systems could begin to address these limitations and further substantiate the multidimensional model of institutional crisis response that we propose here.

References:

- [1] World Health Organization. (2021). Maintaining essential health services: Operational guidance for the COVID-19 context. World Health Organization Press.
- [2] Legido-Quigley, H., Asgari, N., Teo, Y. Y., Leung, G. M., Oshitani, H., Fukuda, K., Cook, A. R., Hsu, L. Y., Shibuya, K., & Heymann, D. (2020). Are high-performing health systems resilient against the COVID-19 epidemic? *The Lancet*, 395(10227), 848–850.
- [3] Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., Wang, H., Wang, C., Wang, Z., You, Y., Liu, S., & Wang, H. (2020). A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American Journal of Infection Control*, 48(6), 592–598.
- [4] Hugelius, K., Harada, N., & Marutani, M. (2021). Consequences of visiting restrictions during the COVID-19 pandemic: An integrative review. *International Journal of Nursing Studies*, 121, Article 104000.
- [5] Wammes, J. D., Verweij, N., & Aarnoutse, R. (2021). Family presence and caregiver involvement in acute care settings during infectious disease outbreaks. *Health Policy*, 125(9), 1234–1241.
- [6] Blendon, R. J., Benson, J. M., & Hero, J. O. (2014). Public trust in physicians—U.S. medicine in international perspective. *New England Journal of Medicine*, 371(17), 1570–1572.
- [7] Devine, D., Gaskell, J., Jennings, W., & Stoker, G. (2021). Trust and the coronavirus pandemic: What are the consequences of and for trust? An early review of the literature. *Political Studies Review*, 19(2), 274–285.
- [8] Han, Q., Zheng, B., Cristea, M., Agostini, M., Belanger, J. J., Gutzkow, B., et al. (2021). Trust in government regarding COVID-19 and its associations with preventive health behaviour and prosocial behaviour during the pandemic. *Psychological Medicine*, 51(16), 2861–2869.
- [9] Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., et al. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 4(5), 460–471.
- [10] Ranney, M. L., Griffith, V., & Jha, A. K. (2020). Critical supply shortages—The need for ventilators and personal protective equipment during the COVID-19 pandemic. *New England Journal of Medicine*, 382(18), e41.
- [11] Filip, R., Gheorghita Puscaselu, R., Anchidin-Norocel, L., Dimian, M., & Savage, W. K. (2022). Global challenges to public health care systems during the COVID-19 pandemic: A review of pandemic measures and problems. *Journal of Personalized Medicine*, 12(8), Article 1295.
- [12] Moynihan, R., Sanders, S., Michaleff, Z. A., Scott, A. M., Clark, J., To, E. J., et al. (2021). Impact of COVID-19 pandemic on utilisation of healthcare services: A systematic review. *BMJ Open*, 11(3), Article e045343.
- [13] Donabedian, A. (1988). The quality of care: How can it be assessed? *JAMA*, 260(12), 1743–1748.
- [14] Sofaer, S., & Firminger, K. (2005). Patient perceptions of the quality of health services. *Annual Review of Public Health*, 26, 513–559.
- [15] Berwick, D. M. (2016). Era 3 for medicine and health care. *JAMA*, 315(13), 1329–1330.



-
- [16] Xiao, H., Zhang, Y., Kong, D., Li, S., & Yang, N. (2020). Social capital and sleep quality in individuals who self-isolated for 14 days during the COVID-19 outbreak in China. *Medical Science Monitor*, 26, Article e923921.
- [17] Feng, S., Shen, C., Xia, N., Song, W., Fan, M., & Cowling, B. J. (2020). Rational use of face masks in the COVID-19 pandemic. *The Lancet Respiratory Medicine*, 8(5), 434–436.
- [18] Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H. J., et al. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *American Psychologist*, 75(5), 618–630.
- [19] Siegrist, M., & Zingg, A. (2014). The role of public trust during pandemics: Implications for crisis communication. *European Psychologist*, 19(1), 23–32.
- [20] Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163–176.
- [21] Khanal, P., Devkota, N., Dahal, M., Paudel, K., & Joshi, D. (2020). Mental health impacts among health workers during COVID-19 in a low-resource setting: A cross-sectional survey from Nepal. *Globalization and Health*, 16, Article 89.
- [22] Bhattacharya, P., Banerjee, D., & Rao, T. S. S. (2020). The 'untold' side of COVID-19: Social stigma and its consequences in India. *Indian Journal of Psychological Medicine*, 42(4), 382–386.
- [23] Wosik, J., Fudim, M., Cameron, B., Gellad, Z. F., Cho, A., Phinney, D., et al. (2020). Telehealth transformation: COVID-19 and the rise of virtual care. *Journal of the American Medical Informatics Association*, 27(6), 957–962.
- [24] Hoffman, D. A. (2020). Increasing access to care: Telehealth during COVID-19. *Journal of Law and the Biosciences*, 7(1), Article lsaa043.
- [25] Reader, T. W., Gillespie, A., & Roberts, J. (2014). Patient complaints in healthcare systems: A systematic review and coding taxonomy. *BMJ Quality & Safety*, 23(8), 678–689.