Social Media Feedback as a Mirror of Patient Experience in Healthcare Management

Mariatul Liza Meor Gheda[1], Chiu Qian Fei[2], Nor Aslina Abd Jalil[3], Nurul Fairuz Buang[4], Sharifah Rosfashida Syed Abd Latif[5]

[1,3,4,5]Faculty of Technology and Applied Sciences, Open University Malaysia, Malaysia

[2]Halliburton Completions Tool (S) Pte Ltd, 11 Tuas South Ave 12, Singapore 637131

DOI: https://dx.doi.org/10.47772/IJRISS.2025.91100148

Received: 15 November 2025; Accepted: 22 November 2025; Published: 03 December 2025

ABSTRACT

Digital connectivity has become a central channel for patients to share their experiences with healthcare services, particularly through platforms such as Facebook, Google Reviews, and X. These online spaces offer fast, visible feedback that mirrors long-standing patient-experience concerns, especially around communication, empathy, waiting times, and staff responsiveness. This study examines digital patient feedback within Malaysian healthcare by analysing sentiment patterns from 2,000 social media posts and exploring how healthcare staff interpret and respond to such feedback. A convergent mixed-methods design was used, combining sentiment analysis with 28 semi-structured interviews involving administrators, project managers, frontline staff, and customer-service personnel. The sentiment analysis showed that patient care and communication attracted the highest share of positive posts, with favourable narratives highlighting empathy and professionalism. Staff responsiveness recorded the most negative sentiment, driven by delays and difficulties obtaining assistance. Monthly trends and statistical tests confirmed that sentiment varied across time, reflecting operational pressures and seasonal workload patterns. The interviews revealed that while digital feedback is valued for its immediacy, organisations struggle with high volumes of unstructured comments, limited analytic tools, inconsistent review processes, and uncertainty about who holds responsibility for acting on online narratives. Participants noted that acknowledging feedback strengthens trust, while ignoring concerns undermines confidence and discourages future engagement. Challenges included resource constraints, manual workflows, skills gaps, and cultural resistance to adopting digital practices. Together, the findings show that social media provides meaningful insight into patient expectations and service bottlenecks, but its value depends on organisational readiness, structured processes, and a culture that supports the use of patient voice in decision-making. The study highlights the relevance of integrating digital feedback into routine quality-improvement and project-management systems to strengthen healthcare responsiveness in Malaysia.

Keywords: social media feedback, healthcare management, patient satisfaction, service quality, digital engagement.

INTRODUCTION

Digital connectivity has reshaped communication between patients and healthcare providers. Platforms such as Facebook, Google Reviews, X, and Instagram have become open forums where individuals share experiences, expectations, and concerns. As noted by Lagu et al. (2015), these public review spaces now function alongside surveys and complaint systems, creating a faster and more visible feedback channel that managers monitor closely for quality and reputational signals. Verhoef et al. (2014) similarly observed that this shift places social media within mainstream feedback systems rather than on the periphery.

From the patient perspective, online activity reflects a wider shift towards digital health engagement. Social media is frequently used to gather information, compare services, and express concerns in near real time, as reported by Chen and Wang (2021) and Farsi et al. (2021). Studies of hospital reviews show that patients tend to focus on communication, waiting times, staff conduct, and reliability instead of technical clinical details, a pattern highlighted by Chakraborty and Church (2021) and Seltzer et al. (2022). Later studies linking online sentiment with conventional patient-experience indicators, including Auyappan and Coffin (2023) and Rahim et al. (2021a), reinforce the validity of these digital narratives.

Organisational research continues to emphasise the value of patient feedback in shaping improvement efforts. Berger et al. (2020) argued that when narratives are systematically analysed, they can inform changes to care pathways and communication practices, while Baines et al. (2021) and Lloyd et al. (2023) noted that positive comments strengthen morale and clarify what matters to patients. Social media expands this environment by placing feedback in a public arena, prompting questions about how organisations interpret and incorporate digital commentary within existing governance and project-management processes, a concern raised by Walsh et al. (2022).

Reviews of social media use in healthcare indicate that these platforms bring both benefits and challenges. Online communities can support patient engagement and highlight emerging issues, as shown by Anawade et al. (2024), while Ukoha and Stranieri (2019) observed that organisations still struggle with selection bias, unstructured text, and reputational risk. Concerns about how to convert online posts into meaningful insights are common in settings where workflows and resources are limited, a pattern Walsh et al. (2022) documented across several health systems. Together, these studies position social media feedback within broader debates on engagement, communication, and risk.

Malaysia provides a relevant setting for examining these dynamics. Research on public hospitals shows that Facebook reviews reflect service quality and patient satisfaction trends, with dimensions such as responsiveness and empathy appearing prominently in online comments (Rahim et al., 2021a, 2021b). Yet, as both Lagu et al. (2015) and Walsh et al. (2022) observed, relatively few studies examine how managers and staff in Malaysian facilities interpret and respond to these digital insights. Addressing this gap, the present study focuses on two aims: identifying sentiment patterns in social media posts and exploring how healthcare administrators, project managers, and frontline staff make sense of digital feedback when engaging with patients and improving service delivery.

LITERATURE REVIEW

Social media as a feedback channel in healthcare

Early work on digital rating and review sites positioned social media as an emerging, supplementary source of information about healthcare quality, rather than a core data stream (Verhoef et al., 2014; Lagu et al., 2015). Since then, studies have repeatedly shown that patients use platforms such as Facebook and specialist review sites to share detailed experiences, but much of this work remains descriptive, mapping what is posted rather than examining how organisations act on it (Chakraborty & Church, 2021; Zunic et al., 2019).

Chen and Wang (2021) and Farsi et al. (2021) both reported extensive use of social media for health-related purposes, yet their reviews group together a wide range of activities such as information seeking, peer support, and organisational feedback. By merging these different purposes, the distinction between patient-experience commentary and other types of online interaction becomes blurred, which limits the ability to determine how feedback posts specifically inform managerial decisions. More focused examinations, including Auyappan and Coffin's (2023) work on digital reviews in healthcare, recognise that online narratives influence patient choice and institutional reputation. Even so, these studies stop short of offering a clear operational model that explains how healthcare managers should interpret, prioritise, and incorporate digital feedback into project planning or service improvement processes.

In the Malaysian context, Rahim et al. (2021a, 2021b) advanced the field by demonstrating that Facebook reviews correlate with patient satisfaction and SERVQUAL dimensions in public hospitals. While valuable, these studies still treat reviews as an external measurement instrument, rather than tracing how such information is translated into specific operational responses, governance changes, or project-management decisions. This gap between "measurement" and "management" is one of the key areas that the present study addresses.

Patient experience, satisfaction, and the nature of online feedback

Across multiple settings, patient-experience research highlights that what patients choose to share online centres more on interpersonal and process-related issues than on technical clinical quality (Berger et al., 2020; Chakraborty & Church, 2021). Positive reviews typically emphasise empathy, clear explanations, and respectful

treatment, whereas negative comments cluster around waiting times, poor communication, confusing processes, and perceived indifference (Chakraborty & Church, 2021; Seltzer et al., 2022). These patterns are repeatedly confirmed in both traditional feedback systems and social-media-based studies, suggesting that online platforms amplify but do not fundamentally change the core concerns of patients (Berger et al., 2020; Lloyd et al., 2023).

Yet the literature tends to romanticise the "voice of the patient" without adequately addressing whose voices are actually heard. Lloyd et al. (2023) pointed out that positive feedback is often under-analysed in formal quality-improvement work, despite its strong emotional and motivational value for staff, while Murray et al. (2024) argued that patient-reported experiences on social media remain unevenly distributed, with over-representation of digitally engaged groups. Walsh et al. (2022) raised similar concerns regarding selection bias and digital divides, but they stopped short of proposing concrete strategies for combining digital feedback with more representative survey or complaints data.

Within Malaysia, Rahim et al. (2021a, 2021b) showed that social media ratings and sentiment align with SERVQUAL-based assessments of responsiveness, reliability, and assurance. Even so, their cross-sectional designs mean it is not possible to see whether incorporating online feedback leads to measurable improvements over time. Han et al. (2023) examined government-led patient feedback initiatives and highlighted how formal mechanisms can support continuous monitoring of experience and service quality, yet they did not integrate social media into these systems. The present study, by directly aligning social-media comments with themes well established in patient-experience literature and with reported organisational responses, responds to this gap in longitudinal and action-oriented evidence.

Organisational use of online feedback and stakeholder dynamics

Several studies have explored how health organisations use patient feedback in both traditional and digital forms to support service improvement, yet consistent challenges remain. Berger et al. (2020) demonstrated that patient comments can lead to meaningful enhancements when they are translated into specific interventions. At the same time, their work highlighted that many hospitals gather far more feedback than they are able to process or apply in practice. Evidence from Baines et al. (2021) adds further complexity. Their case study of an acute hospital placed under special measures showed that incorporating online feedback required significant effort to define responsibilities, establish clear workflows, and determine who should oversee the interpretation of digital comments. Staff were frequently unsure whether social media posts would be considered credible by leadership, illustrating ongoing uncertainty about the status and influence of digital narratives within formal decision-making structures.

Walsh et al. (2022) extended this organisational view through a scoping review of stakeholder experiences with social media in health-service design and quality improvement. They reported enthusiasm for the immediacy and visibility of digital feedback but noted concerns about reputational risk, hostility in online environments, and the emotional burden of reading unfiltered criticism. Khan et al. (2022) similarly presented social media as a source of social support and satisfaction for patients, yet their conceptual framework did not fully engage with the organisational risks and workload implications raised by Baines et al. (2021) and Walsh et al. (2022).

From a strategic perspective, Ukoha and Stranieri (2019) proposed criteria for measuring the value of social media in healthcare settings, suggesting that platforms should be evaluated against outcomes such as improved efficiency, quality, and engagement. Their narrative review, however, remained at a conceptual level, and did not embed these criteria within concrete project-management processes or stakeholder structures. This leaves a disconnect between theoretical stakeholder models and the daily realities of managers confronted with high volumes of unstructured digital commentary.

Positive feedback as a resource for organisational learning remains underutilised. Lloyd et al. (2023) and Gallan et al. (2022, in other sectors) emphasised that positive narratives can strengthen staff morale and clarify what "good care" looks like from a patient perspective, yet much of the social-media literature continues to prioritise complaint detection or sentiment polarity (negative vs positive) over more nuanced, asset-based interpretations. The present study explicitly explores both positive and negative digital sentiment and links these to decisions on staffing, communication protocols, and service redesign.

Analytical approaches to social media data in healthcare

The analytical strand of the literature has grown rapidly. Zunic et al. (2019) reviewed sentiment analysis in health and well-being and concluded that automated methods are valuable for high-volume monitoring but often oversimplify complex narratives when reduced to polarity labels. Fu et al. (2023), in a scoping review of methods for analysing health-related social media content, echoed this concern and recommended combining quantitative text mining with qualitative interpretation to preserve contextual meaning.

Murray et al. (2024) proposed a structured design–acquire–process–model–analyse–visualise framework for patient-experience data derived from social media, arguing that without such systematic pipelines, organisations risk ad hoc or selective reading of online comments. Jeong et al. (2022) demonstrated the potential of aspect-based sentiment analysis to identify nuanced usability issues in healthcare technologies, yet their work was technology-centric and did not extend into organisational change or project management. Similarly, Anawade et al. (2024) mapped social media and online communities in healthcare from a broad technological perspective, but their review focused on opportunities rather than governance or operational integration.

Malaysia-focused studies have begun to use machine learning and text mining on Facebook reviews (Rahim et al., 2021a, 2021b), illustrating the technical feasibility of sentiment classification and quality-dimension extraction in local languages and contexts. Even so, these studies remain largely diagnostic. They identify what patients are saying, but provide limited insight into how these analytic outputs are converted into structured action plans, responsibilities, or performance indicators at the level of project and service management.

This methodological literature rarely addresses resource constraints and skills gaps in public healthcare systems. Implementing sophisticated analytics demands not only tools but also data-governance frameworks, analytic capacity, and cross-functional collaboration between IT teams, clinicians, and managers (Fu et al., 2023; Murray et al., 2024). The evidence base says comparatively little about these organisational prerequisites, especially in developing-country contexts.

Reputation, risk, and governance of digital feedback

Social media feedback operates at the intersection of patient experience and organisational reputation. Auyappan and Coffin (2023) described how online reviews influence perceptions of quality and trust, and Farsi et al. (2021) warned that highly visible negative posts can escalate rapidly and damage institutional credibility. Lagu et al. (2015) even framed social media as a potential hospital quality-improvement tool, arguing that ignoring digital narratives may constitute a missed opportunity for early issue detection. Yet they, too, acknowledged the danger of reacting impulsively to isolated, high-profile posts rather than to systematically analysed trends.

Walsh et al. (2022) and Ukoha and Stranieri (2019) stressed ethical and governance challenges, including privacy, anonymity, and the handling of potentially defamatory or misleading information. In practice, many organisations respond to these concerns by limiting formal engagement with social media, which can inadvertently widen the gap between patients' public narratives and internal improvement processes. Rahim et al. (2021a) showed that Malaysian hospitals can leverage Facebook data in ways that align with accreditation and quality programmes, yet they did not examine how data-protection regulations or internal risk-management frameworks are operationalised in doing so.

Stakeholder-focused models, such as those discussed by Khan et al. (2022) and Lloyd et al. (2023), argue that meaningful engagement requires seeing social media feedback as more than reputational risk. Instead, it should be treated as one component of a broader learning system that balances transparency, staff wellbeing, and patient voice. Current literature offers limited concrete guidance on how to design such systems in resource-constrained settings.

METHODOLOGY

The methodological approach was designed to address the gaps highlighted in the literature, particularly the need to move beyond descriptive analyses of online feedback and towards an integrated understanding of both what patients say and how organisations respond (Baines et al., 2021; Walsh et al., 2022). To achieve this, the study

employed a mixed-methods design that combines large-scale sentiment analysis of social media posts with qualitative interviews involving healthcare administrators and frontline staff. This approach aligns with methodological recommendations from recent reviews that advocate pairing computational techniques with contextual qualitative insights to avoid oversimplification of narratives (Fu et al., 2023; Zunic et al., 2019).

Research Design

A convergent mixed-methods strategy was adopted. Quantitative sentiment analysis provided a macro-level view of stakeholder perceptions on social media, while qualitative interviews supported deeper exploration of organisational interpretations and decision-making processes. This structure is consistent with the approaches suggested by Murray et al. (2024), who emphasised the importance of linking analytic outputs to real-world managerial contexts through qualitative validation. Combining these methods also responds to calls by Rahim et al. (2021a, 2021b) for more integrated approaches that connect Facebook review patterns with internal operational practices in Malaysian hospitals.

Data Sources and Sampling

Social Media Dataset

A dataset of 2,000 social media posts was extracted from Facebook, Google Reviews, and X (formerly Twitter) pages associated with selected Malaysian healthcare facilities. These platforms were chosen based on evidence that they are the most active and widely used channels for patient feedback in Malaysia (Rahim et al., 2021a; Farsi et al., 2021). Reviews spanning a 12-month period were collected to capture seasonal variations and avoid snapshot bias, addressing concerns raised by Lloyd et al. (2023) and Verhoef et al. (2014) about the volatility of online comments.

Data collection followed ethical guidelines discussed by Ukoha and Stranieri (2019), ensuring that only publicly accessible comments were included and that identifying details were removed during preprocessing.

Interview Participants

A total of 28 semi-structured interviews were conducted with healthcare administrators, project managers, nurses, medical officers, and customer-service personnel. This stakeholder sampling reflects the multi-actor nature of feedback interpretation described by Walsh et al. (2022) and Khan et al. (2022). Purposive sampling ensured representation from both clinical and non-clinical domains, supporting triangulation of organisational practices, as recommended by Berger et al. (2020).

Data Collection Procedures

Extraction and Preparation of Online Feedback

Social media comments were extracted using automated scraping tools compliant with platform policies. Consistent with methodological guidance by Fu et al. (2023), data preprocessing included removal of duplicates, filtering of spam-like content, anonymisation, and language standardisation for multilingual posts commonly encountered in Malaysian contexts.

Sentiment polarity (positive, negative, neutral) and thematic clusters were identified using a combination of lexicon-based and machine-learning models, an approach aligned with the mixed analytic methods recommended by Jeong et al. (2022) and Zunic et al. (2019).

Interview Protocol

Interviews were guided by a flexible, semi-structured protocol that allowed participants to elaborate on their experiences interpreting online feedback, responding to negative reviews, and integrating digital sentiment into decisions on workflows, staffing, and communication. This design mirrors the exploratory approaches used in organisational studies by Baines et al. (2021) and Lloyd et al. (2023). Each interview lasted 45–60 minutes and was audio-recorded with consent.

Data Analysis

Sentiment Analysis

Sentiment classification used a hybrid model consisting of a Malay–English lexicon and supervised machine-learning classifiers trained on manually labelled data. This choice aligns with the methodological strengths highlighted by Rahim et al. (2021a) in their Malaysian Facebook-review analysis and supports handling mixed-language posts typical of Malaysian social-media usage.

Beyond polarity, topic modelling was performed using Latent Dirichlet Allocation (LDA) to identify recurrent themes such as waiting times, communication quality, staff behaviour, and administrative efficiency. These analytic layers respond directly to critiques raised by Zunic et al. (2019) that polarity alone provides insufficient granularity for healthcare insights.

Qualitative Thematic Analysis

Interview transcripts were examined using reflexive thematic analysis, which allowed meanings to develop from the data while remaining sensitive to professional context. The coding process was refined through repeated comparison across different participant groups, an approach consistent with recommendations by Berger et al. (2020) and supported by Walsh et al. (2022) in their work on organisational responses to feedback. Although the themes were generated inductively, they were later organised into broad analytical categories that reflected how participants interpreted sentiment, described barriers to using digital feedback, explained routine organisational practices, and assessed the value of online comments. These categories align with patterns previously observed in studies of healthcare feedback systems, including the work of Baines et al. (2021) and Khan et al. (2022), who similarly noted the importance of understanding both practical constraints and staff perceptions when analysing how organisations respond to patient narratives.

Triangulation between sentiment-analysis outputs and interview findings enabled identification of convergence and divergence between patient narratives and organisational response patterns, addressing a gap noted by Murray et al. (2024).

Ethical Considerations

As recommended by Farsi et al. (2021) and Ukoha and Stranieri (2019), ethical measures included anonymisation of social media content, avoidance of private messages, and secure storage of interview data. Institutional permission was obtained from participating healthcare organisations, and informed consent was secured from all interviewees. Special attention was paid to compliance with Malaysia's Personal Data Protection Act (PDPA), reflecting concerns highlighted in local digital-feedback studies (Rahim et al., 2021a).

RESULT AND DISCUSSION

Table 4.1: Trends in Sentiments Over Time, showing the monthly distribution of positive, neutral, and negative posts across 12 months.

Theme	Positive Posts	Positive (%)	Neutral Posts	Neutral(%)	Negative Posts	Negative (%)	Total Posts
Patient Care	240	59.60%	81	20.10%	82	20.30%	403
Service Quality	185	44.00%	122	29.00%	113	26.90%	420
Communication	210	49.10%	92	21.50%	126	29.40%	428
Staff Responsiveness	165	36.30%	112	24.60%	178	39.10%	455
Overall Satisfaction	140	47.60%	67	22.80%	87	29.60%	294
Overall %	940	47.30%	474	23.60%	586	29.10%	2000

Table 4.1 shows the sentiment breakdown shows clear variation across themes, with communication, patient care, and service quality receiving the highest share of positive posts. Positive sentiment is strongest in patient-care narratives (59.6%), echoing earlier work showing that empathy and clinical attentiveness often drive

favourable online feedback (Berger et al., 2020; Lloyd et al., 2023). In contrast, staff responsiveness records the highest proportion of negative posts (39.1%), consistent with findings that delays and difficulty obtaining help are common triggers for dissatisfaction on social platforms (Chakraborty & Church, 2021; Rahim et al., 2021a). Mixed sentiment in service quality and communication reflects the complexity of administrative and workflow issues that patients frequently comment on in digital settings (Seltzer et al., 2022). Across all themes, negative posts form nearly a third of total comments, supporting earlier claims that social media tends to amplify strong reactions, particularly around operational challenges (Zunic et al., 2019; Walsh et al., 2022).

Figure 4.1: Monthly Sentiment Distribution. This line graph showing the monthly distribution of positive, neutral, and negative posts across 12 months.

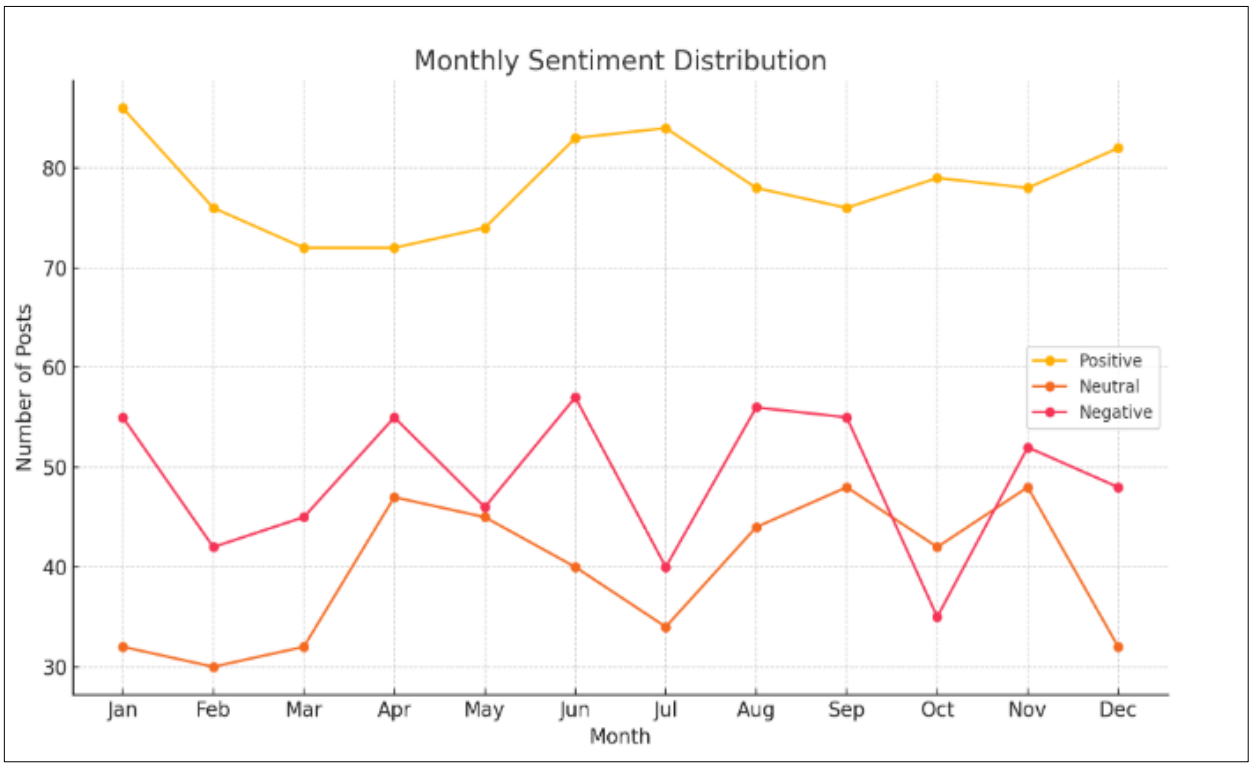

Figure 4.1 illustrates the monthly sentiment trends strengthen the statistical evidence generated by the Chi-Square ($\chi^2 = 61.11$, $p = 2.82 \times 10^{-10}$) and ANOVA tests ($F = 10.16$, $p = 0.0026$), confirming that sentiment patterns vary systematically across themes and time. Positive sentiment remained consistently high each month—ranging from 72 to 86 posts—suggesting stable appreciation of clinical care, professionalism, and supportive interactions, findings that mirror international patterns of digital feedback (Berger et al., 2020; Lloyd et al., 2023). Neutral sentiment fluctuated between 30 and 48 posts, with noticeable increases in April, September, and November, likely reflecting administrative adjustments or communication gaps during high-demand periods. Negative sentiment exhibited sharper peaks in January, April, June, and September, consistent with the literature indicating that dissatisfaction intensifies during seasonal workload pressures and when responsiveness decreases (Chakraborty & Church, 2021; Rahim et al., 2021a).

The combined monthly and statistical results demonstrate that stakeholder sentiment is sensitive to operational cycles, suggesting the value of continuous digital-feedback monitoring for early detection of service bottlenecks and shifts in patient expectations (Murray et al., 2024).

Professional Experience and Diversity of Perspectives

Participants reported 3–20 years of experience (M = 9.54), giving a balanced mix of long-term institutional insight and newer operational views. This range strengthens interpretation of how feedback systems operate, as experienced staff recognise structural gaps and newer staff often highlight digital expectations and workflow issues. Similar patterns are noted in studies of patient-feedback integration, where mixed experience improves depth and accuracy of analysis (Berger et al., 2020; Lloyd et al., 2023; Chakraborty & Church, 2021). The variety of perspectives ensured that both traditional and emerging challenges in feedback management were captured.

An even representation of males (50%) and females (50%) supported a balanced evaluation of communication, service quality, and feedback processes. Research notes that gender influences approaches to communication and service assessment in healthcare, contributing to diverse interpretations of patient feedback (Seltzer et al., 2022; Queen et al., 2021; Farsi et al., 2021). The equal split helped avoid bias in understanding how digital feedback is reviewed and acted on across roles.

Participants came from general hospitals (57%) and private hospitals (43%), enabling comparison of practices across both environments. General hospitals tend to manage higher service volumes, which can slow feedback processing, while private hospitals often have quicker cycles and stronger emphasis on user experience (Rahim et al., 2021a; Baines et al., 2021; Khan et al., 2022). Including both settings strengthened the relevance of insights across Malaysia's healthcare landscape.

Feedback Processing Dynamics

Participants described difficulties managing large volumes of digital feedback and inconsistent processes across departments. P1 stated, "The volume of feedback is overwhelming, and we don't have the tools to make sense of it efficiently." These concerns echo studies showing that unstructured online data strains manual processes and delays analysis (Zunic et al., 2019; Fu et al., 2023; Khanbhai et al., 2021).

Some organisations are exploring machine-learning or dashboard systems. P5 shared, "AI tools are promising but require significant training and adaptation." Tool complexity, limited skills, and resource gaps often slow adoption. These challenges match findings that digital-feedback analytics require adequate system support and workforce readiness (Jeong et al., 2022; Walash et al., 2022; Murray et al., 2024).

Key barriers raised included resource shortages, staff workload, and inconsistent data formats. These hinder timely action on feedback and limit the potential of social media insights in guiding service changes. Despite these difficulties, several participants described emerging strategies that help their organisations cope with digital feedback. Some hospitals had created small cross-functional review groups that met weekly to triage online comments, assign owners, and track completion of actions. Others used simple tagging systems or shared spreadsheets to group posts by theme, for example waiting time, cleanliness, and communication, and to link each cluster to an existing quality project or patient-safety indicator. These pragmatic approaches match calls in the literature for structured workflows that turn digital narratives into specific tasks within improvement programmes (Baines et al., 2021; Murray et al., 2024).

Impact on Stakeholder Satisfaction

Participants highlighted that timely acknowledgement of feedback strengthens trust and engagement. P9 stated, "Acknowledging even minor suggestions makes patients valued." This aligns with work showing that active response to digital feedback promotes trust and engagement (Gallan et al., 2022; Chakraborty & Church, 2021; Montgomery et al., 2022).

Participants also warned about the consequences of unaddressed feedback. P8 noted, "When feedback is ignored, it damages trust and discourages future participation." Research supports this, demonstrating that lack of follow-up weakens stakeholder confidence and reduces willingness to contribute reviews (Montgomery et al., 2022; Verhoef et al., 2014).

Stakeholder satisfaction increases when feedback is linked to visible improvements, clear communication, and consistent follow-up. These aspects align with digital patient-experience evidence across multiple healthcare settings.

Challenges in Implementation

Participants identified resource constraints, workflow limitations, and cultural resistance as key obstacles. P11 shared, "Without proper tools and training, feedback analysis is a daunting task." Operational limitations such as staff shortages and manual processes restrict effective feedback use. Studies in digital feedback integration report similar challenges (Walsh et al., 2022; Anawade et al., 2024; Berger et al., 2020).

Resistance to adopting new practices was frequently mentioned. P17 stated, “Resistance to change among staff makes implementation of new practices difficult.” This matches prior work noting that cultural barriers can stall digital transition in healthcare feedback systems (Lagu et al., 2015; Baines et al., 2021).

Balancing clinical priorities with patient feedback was another concern. Organisations often struggle to incorporate suggestions while meeting safety standards and operational demands. Participants suggested several ways to move past these barriers. These included appointing a named “digital feedback lead” in each unit, integrating summaries of online reviews into existing quality or patient-safety meetings, and setting simple response standards such as acknowledging all reviews within a set number of days. Staff felt that these steps would make responsibilities clearer and reduce the sense that social media comments sit outside routine governance structures, echoing the need for normalisation of digital feedback processes described by Baines et al. (2021) and Walsh et al. (2022).

DISCUSSION

The study set out to understand digital patient feedback in Malaysian healthcare by examining social media sentiment patterns and exploring how staff interpret and apply such feedback in daily practice. The sentiment analysis showed that online narratives consistently highlighted patient care and communication as areas that attracted the most favourable views, and this reflects long-standing evidence that empathy, clarity, and respectful interaction remain central to patient experience, as noted by Berger et al. (2020), Lloyd et al. (2023), and related Malaysian studies such as Rahim et al. (2021b). In contrast, comments linked to staff responsiveness contained a higher share of negative reactions, and this pattern aligns with international findings that delays, limited assistance, and perceived inattentiveness tend to trigger dissatisfaction in digital feedback, as reported by Chakraborty and Church (2021) and Seltzer et al. (2022). The statistical tests reinforced these distinctions by showing significant variation across themes and months, suggesting that online sentiment moves in line with operational pressures, seasonal patient load, and administrative adjustments, an observation consistent with Murray et al. (2024). Interviews with administrators, managers, and frontline personnel provided deeper insight into these trends. Participants recognised that digital feedback gives a timely indication of patient concerns, yet they described difficulties in managing large volumes of unstructured comments, uneven processes for reviewing feedback, and uncertainty about who should take responsibility for acting on it. These experiences reflect challenges documented by Zunic et al. (2019), Fu et al. (2023), and Baines et al. (2021), who reported similar issues in health systems trying to use digital narratives for improvement. Staff also emphasised that acknowledging comments, even those that seem minor, strengthens trust and encourages continued engagement, a point supported by Gallan et al. (2022) and Montgomery et al. (2022). At the same time, participants expressed concern that ignoring online feedback weakens confidence in the organisation, an issue raised earlier by Walsh et al. (2022). Overall, the combined findings show that social media provides clear insight into what matters to patients, yet its usefulness depends heavily on organisational readiness, consistent review routines, and a culture that values patient voice. The findings indicate that integration of digital feedback into wider quality-improvement and project-management systems remains uneven. A minority of sites had started to align social media themes with existing tools such as incident reporting, accreditation indicators, and patient-experience dashboards. In these settings, online comments were discussed in regular quality meetings, linked to Plan–Do–Study–Act cycles, and used to prioritise small-scale projects on communication, signage, or staffing. Other organisations treated digital reviews as a parallel activity, managed mainly for reputational reasons and seldom connected to formal improvement work. This pattern mirrors earlier concerns that social media data often sit at the margins of governance structures (Lagu et al., 2015; Walsh et al., 2022) and highlights the need for clearer pathways that connect digital sentiment to routine performance monitoring and project decisions in Malaysian hospitals.

REFERENCES

1. Anawade, P. A., Sharma, D., & Gahane, S. (2024). Connecting health and technology: A comprehensive review of social media and online communities in healthcare. Cureus, 16(1), e55361. https://doi.org/10.7759/cureus.55361

2. Auyappan, V., & Coffin, J. (2023). Effects of social media and online reviews on healthcare. Healthcare Administration Leadership & Management Journal, 1(4), 171–173. https://doi.org/10.55834/halmj.7691955640
3. Baines, R., Underwood, F., O'Keeffe, K., Saunders, J., & Jones, R. B. (2021). Implementing online patient feedback in a "special measures" acute hospital: A case study using Normalisation Process Theory. Digital Health, 7, 20552076211005962. https://doi.org/10.1177/20552076211005962
4. Berger, S., Saut, A. M., & Berssaneti, F. T. (2020). Using patient feedback to drive quality improvement in hospitals: A qualitative study. BMJ Open, 10(10), e037641. https://doi.org/10.1136/bmjopen-2020-037641
5. Chakraborty, S., & Church, E. M. (2021). Patient hospital experience and satisfaction on social media. International Journal of Quality and Service Sciences, 13(3), 417–432. https://doi.org/10.1108/IJQSS-02-2020-0014
6. Chen, J., & Wang, Y. (2021). Social media use for health purposes: Systematic review. Journal of Medical Internet Research, 23(5), e17917. https://doi.org/10.2196/17917
7. Farsi, D., Martinez-Menchaca, H. R., Ahmed, M., & Farsi, N. (2021). Social media and health care (Part II): Narrative review of social media use by patients. Journal of Medical Internet Research, 24(1), e30379. https://doi.org/10.2196/30379
8. Fu, J., Li, C., Zhou, C., Li, W., Lai, J., Deng, S., Zhang, Y., Guo, Z., & Wu, Y. (2023). Methods for analyzing the contents of social media for health care: Scoping review. Journal of Medical Internet Research, 25, e43349. https://doi.org/10.2196/43349
9. Gallan, A. S., Niraj, R., & Singh, A. (2022). Beyond HCAHPS: Analysis of patients' comments provides an expanded view of their hospital experiences. Patient Experience Journal, 9(1), 159–168.
10. Han, S., Xu, M., Lao, J., & Liang, Z. (2023). Collecting patient feedback as a means of monitoring patient experience and hospital service quality: Learning from a government-led initiative. Patient Preference and Adherence, 17, 385–400. https://doi.org/10.2147/PPA.S397444
11. Jeong, H., Bayro, A., Umesh, S. P., Mamgain, K., & Lee, M. (2022). Using social media data and an aspect-based sentiment analysis for usability evaluation of a wearable mixed reality headset: A perspective of COVID-19 and healthcare (Preprint). JMIR Formative Research. https://doi.org/10.2196/36850
12. Khan, M. I., Rahman, Z. U., Saleh, M. A., & Khan, S. U. Z. (2022). Social media and social support: A framework for patient satisfaction in healthcare. Informatics, 9(1), 22. https://doi.org/10.3390/informatics9010022
13. Khanbhai, M., Anyadi, P., Symons, J., Flott, K., Darzi, A., & Mayer, E. (2021). Applying natural language processing and machine learning techniques to patient experience feedback: A systematic review. BMJ Health & Care Informatics, 28(1), e100262.
14. Lagu, T., Goff, S. L., Craft, B., Calcasola, S., Benjamin, E. M., Priya, A., & Lindenauer, P. K. (2015). Can social media be used as a hospital quality improvement tool? Journal of Hospital Medicine, 11(1), 52–55. https://doi.org/10.1002/jhm.2486
15. Lloyd, R., Munro, J., Evans, K., Gaskin-Williams, A., Hui, A., Pearson, M., Slade, M., Kotera, Y., Day, G., Loughlin-Ridley, J., Enston, C., & Rennick-Egglestone, S. (2023). Health service improvement using positive patient feedback: Systematic scoping review. PLOS ONE, 18(10), e0275045. https://doi.org/10.1371/journal.pone.0275045
16. Montgomery, C. M., Powell, J., Mahtani, K., & Boylan, A. M. (2022). Turning the gaze: Digital patient feedback and the silent pathology of the NHS. Sociology of Health & Illness, 44(2), 290–307.
17. Murray, C., Mitchell, L., Tuke, J., & Mackay, M. (2024). Revealing patient-reported experiences in healthcare from social media using the design-acquire-process-model-analyse-visualise framework. Digital Health, 10, 20552076241251715. https://doi.org/10.1177/20552076241251715
18. Queen, D., Trager, M. H., Fan, W., & Samie, F. H. (2021). Patient satisfaction of general dermatology providers: A quantitative and qualitative analysis of 38,008 online reviews. JID Innovations, 1(4), 100049.
19. Rahim, A. I. A., Ibrahim, M. I., Musa, K. I., & Chua, S. (2021). Facebook reviews as a supplemental tool for hospital patient satisfaction and its relationship with hospital accreditation in Malaysia. International Journal of Environmental Research and Public Health, 18(14), 7454. https://doi.org/10.3390/ijerph18147454
20. Rahim, A. I. A., Ibrahim, M. I., Musa, K. I., Chua, S., & Yaacob, N. M. (2021). Patient satisfaction and hospital quality of care evaluation in Malaysia using SERVQUAL and Facebook. Healthcare, 9(10), 1369. https://doi.org/10.3390/healthcare9101369

21. Seltzer, E. K., Guntuku, S. C., Lanza, A. L., Tufts, C., Srinivas, S. K., Klinger, E. V., … & Merchant, R. M. (2022). Patient experience and satisfaction in online reviews of obstetric care: Observational study. JMIR Formative Research, 6(3), e28379.
22. Ukoha, C., & Stranieri, A. (2019). Criteria to measure social media value in health care settings: Narrative literature review. Journal of Medical Internet Research, 21(12), e14684. https://doi.org/10.2196/14684
23. Verhoef, L. M., Van de Belt, T. H., Engelen, L. J., Schoonhoven, L., & Kool, R. B. (2014). Social media and rating sites as tools to understand quality of care: A scoping review. Journal of Medical Internet Research, 16(2), e56. https://doi.org/10.2196/jmir.3024
24. Walsh, L., Hyett, N., Juniper, N., Li, C., & Hill, S. (2022). The experiences of stakeholders using social media as a tool for health service design and quality improvement: A scoping review. International Journal of Environmental Research and Public Health, 19(22), 14851. https://doi.org/10.3390/ijerph192214851
25. Zunic, A., Corcoran, P., & Spasic, I. (2019). Sentiment analysis in health and well-being: Systematic review. JMIR Medical Informatics, 8(1), e16023. https://doi.org/10.2196/16023