

A Retrospective Evaluation of the CBPR Model: Crisis Communication Synergy in Bandung's Vaccination

Kartika Singarimbun¹

London School of Public Relations Communication and Business Institute

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ABSTRACT

The COVID-19 health crisis required a fundamental shift in governmental crisis communication from a top-down command style to a participatory framework embracing citizens. Utilizing a single explanatory case study design, this qualitative research examines the efficacy of integrating Community-Based Participatory Research (CBPR) with the Two-Step Flow of Communication Theory to mitigate vaccine hesitancy during Level 4 Community Activity Restrictions (PPKM) in Sumur Bandung District, Bandung City (August 2021–February 2022). Data collection involved field observations, in-depth interviews with eleven key stakeholders, and official document reviews, validated via data triangulation and member-checking. The study reveals that severe operational overload at primary health centers (*Puskesmas*) initially created convenience barriers for residents. These bottlenecks were resolved through a cross-sectoral coalition combining sub-district authorities, military-police personnel, and local opinion leaders (religious figures, family welfare cadres, ethnic groups, and youth organizations). These actors translated rigid clinical messages into flexible everyday narratives, effectively alleviating frustration, anxiety, and *halal*-related doubts. Achieving herd immunity relied on balancing persuasive appeals, social welfare incentives, measured enforcement, and external nudges like travel mandates under Inmendagri No. 24/2021. Theoretically, this study enriches crisis communication literature in developing nations by synthesizing CBPR and Two-Step Flow principles. Practically, it presents an actionable, community-partnered framework to foster public health resilience in future emergencies.

Keywords: *crisis communication, CBPR, two-step flow, vaccine hesitancy, opinion leaders, public relations*

INTRODUCTION

The COVID-19 pandemic, which has swept the globe since early 2020, rapidly transformed from an acute public health emergency into a complex, multifaceted global communication crisis. For state authorities worldwide, including Indonesia, the most formidable challenge extended far beyond securing medical supply chains or ensuring the operational readiness of primary healthcare facilities. Rather, it centered on the capacity to construct transparent, empathetic, and highly adaptive public narratives

amid a relentless influx of disinformation (Coombs & Holladay, 2022; Hyland-Wood et al., 2021). Within contemporary strategic crisis communication discourse, academic focus has increasingly pivoted toward evaluating the degree to which public authority interventions can effectively bridge formal medical directives with grassroots community acceptance and active civic participation, particularly in driving national immunization campaigns to fruition (Lazarus et al., 2023).

In Indonesia, the national government's ambitious pursuit of herd immunity was anchored in a massive target of administering one million vaccine doses daily. However, empirical realities on the ground revealed that the mere physical availability of medical logistics did not automatically guarantee rapid vaccine uptake. The phenomenon of vaccine hesitancy—defined as the delay in acceptance or outright refusal of vaccines despite the availability of vaccination services (MacDonald et al., 2015)—emerged as a multidimensional barrier. This resistance was heavily exacerbated by convenience barriers (attitudinal, geographic, and structural accessibility constraints) alongside a notable erosion of institutional trust (Dyer, 2020; Razai et al., 2021). When primary healthcare infrastructure, particularly primary healthcare centers (*Puskesmas*), suffered severe capacity overloads, physical distance, prolonged waiting times, and cumbersome administrative procedures became primary drivers of public reluctance. This volatile situation was further compounded by rampant misinformation surrounding vaccine safety and religious compliance (*halal* status), which directly undermined the credibility of official state messaging.

Sumur Bandung District, situated in the heart of Bandung City, serves as a highly representative empirical locus for investigating this phenomenon. As a densely populated urban area characterized by high ethnic and religious heterogeneity within the economic epicenter of West Java, Sumur Bandung faced stark crisis communication challenges during the enforcement of strict Level 4 Community Activity Restrictions (PPKM Level 4) in mid-2021. Local authorities initially relied on top-down, somewhat coercive communication models by mandating vaccination certificates as a prerequisite for public mobility. While explicitly designed to curb viral transmission, this top-down directive primarily induced pragmatic-administrative compliance—where citizens sought vaccination merely to fulfill regulatory travel requirements—rather than cultivating an internalized, health-seeking behavior. This behavioral disconnect underscores the inherent limitations of linear, one-way crisis communication frameworks.

To resolve this operational deadlock, a paradigm shift toward participatory communication became imperative—one that methodologically integrates the

Community-Based Participatory Research (CBPR) framework with the Two-Step Flow of Communication Theory. The CBPR framework centers on principles of equitable partnership, shared ownership, and the strategic mobilization of local social capital (Israel et al., 2013; Wallerstein et al., 2017). Concurrently, the Two-Step Flow model posits that crisis messages originating from macro-level authorities rarely alter public behavior directly; instead, they are filtered, interpreted, and re-transmitted by trusted local opinion leaders who possess moral legitimacy and strong emotional proximity to the community (Chen & Sesay, 2025).

Although international crisis communication scholarship has extensively explored public engagement, a rigorous theoretical synthesis combining CBPR principles, Two-Step Flow dynamics, and the integration of coercive-persuasive strategies to alleviate vaccine hesitancy in heterogeneous urban settings within developing nations remains underexplored (Wong & Kohler, 2020). Existing crisis literature frequently concentrates on top-down message dissemination by formal institutional actors while overlooking how CBPR principles—specifically the leverage of social capital and localized leadership—can articulate formal crisis directives into culturally tailored, locally resonant narratives (Huynh, 2020).

This study aims to critically analyze the implementation of community-participatory crisis communication within Sumur Bandung District. Specifically, it evaluates how the deployment of diverse opinion leaders—including religious figures (clergy and Islamic scholars), sub-district administrators (*Camat* and *Lurah*), neighborhood community heads, women's empowerment cadres (PKK), youth organizations, and ethnic associations (such as *Masyarakat Tionghoa Peduli*)—facilitated the translation of formal medical guidelines, dismantled accessibility and convenience barriers, and blended persuasive appeals with structural regulations to foster inclusive herd immunity.

As a retrospective investigation, this research advances theoretical discourse by synthesizing CBPR and crisis communication literature within the context of public health emergencies in the Global South. Beyond documenting the historical dynamics of pandemic management in Bandung City, the findings offer an analytical framework and practical guidelines for public relations practitioners and policymakers seeking to cultivate community resilience through inclusive, community-partnered crisis communication strategies in future health emergencies..

LITERATURE REVIEW OR RESEARCH BACKGROUND

a. *Dynamics of Vaccine Hesitancy and Accessibility Barriers in Health Crises*

Vaccination is globally recognized as one of the most significant achievements in public health for reducing morbidity and mortality rates associated with infectious diseases. When the COVID-19 pandemic emerged, vaccination was positioned as the primary instrument for establishing herd immunity (Lazarus et al., 2023). However, the availability of medical supplies and logistical infrastructure does not automatically correlate with public participation (Harapan et al., 2020; Putri et al., 2021; Wong et al., 2020). The phenomenon of vaccine hesitancy—defined by MacDonald (2015) as the delay in acceptance or refusal of vaccines despite the availability of vaccination services—has surfaced as a complex, multidimensional obstacle (Razai et al., 2021).

To articulate the determinants of this hesitancy, MacDonald (2015) conceptualized the 3Cs Analytical Model, which encompasses three primary domains:

- **Confidence:** Measures the degree to which the public trusts the medical efficacy and safety of biological products, alongside the credibility of the health authorities and political systems delivering them (Dyer, 2020).
- **Complacency:** Indicates a low personal risk perception regarding the threat of disease, leading individuals to view vaccination as a non-urgent priority.
- **Convenience:** Maps physical affordability, time feasibility, financial cost, bureaucratic efficiency, and the quality of service delivery within primary healthcare centers.

In the context of developing nations, public skepticism is frequently triggered by a confidence crisis rooted in widespread concerns regarding halal status and fears over insufficiently tested clinical side effects (Sukmana et al., 2021; Sinuraya et al., 2024). Nevertheless, an often overlooked barrier in crisis research is the presence of convenience barriers. When primary health facilities—such as primary healthcare centers (*Puskesmas*)—experience capacity overload, sprawling queues, intricate administrative procedures, and restricted operational hours function as structural roadblocks that extinguish citizens' intentions to receive complete dosages (Razai et al., 2021). This discrepancy indicates that health crisis interventions necessitate not only medical education but also the radical streamlining of accessibility at the grassroots level.

b. "Infodemic" Disinformation, the Two-Step Flow Theory, and the Role of Opinion Leaders

The escalation of vaccine hesitancy is further exacerbated by the "infodemic"—an overwhelming surge of misinformation and disinformation across the digital ecosystem (Hyland-Wood et al., 2021; Ullah et al., 2021). Conspiracy theories framing vaccines as commercial commodities for foreign pharmaceutical conglomerates, mechanisms of genetic manipulation, or violations of religious tenets have been proven to significantly erode institutional trust (Harapan et al., 2020; Khadafi et al., 2022). In high-uncertainty crisis situations, formal instructions issued by governmental bureaucracies are frequently met with skepticism by citizens suffering from information overload.

To overcome the deadlocks of top-down communication from formal authorities, the Two-Step Flow of Communication Theory—pioneered by Katz and Lazarsfeld—offers a highly

relevant explanatory framework. This theory postulates that messages originating from mass media or macro-level authorities do not directly influence the broader public on an individual basis; rather, they are filtered, translated, and reinforced by opinion leaders embedded within community social networks (Chen & Sesay, 2025).

Opinion leaders occupy a central position because they possess two vital assets that rigid institutional authorities lack: social capital and cultural legitimacy (Kinanggi et al., 2022). Within the context of health crises, opinion leaders—such as religious figures, neighborhood association heads (RT/RW), local health volunteers (*kader*), and indigenous leaders—serve as intermediaries who translate complex clinical data into flexible, culturally tailored communication (Airhihenbuwa et al., 2020). Through empathetic, symmetrical interpersonal communication, opinion leaders are uniquely equipped to clarify negative rumors, alleviate emotional anxieties, and rebuild grassroots public trust (Priatna et al., 2022).

c. Community-Based Participatory Research (CBPR) Framework in Health Communication

Fundamentally, health communication functions to influence, engage, and guide diverse societal segments toward adopting behaviors that safeguard public health (Schiavo, 2007). Schiavo articulates the core pillars of health communication as focusing on information dissemination, individual motivation, behavioral modification, and community empowerment through collaborative information exchange. However, during acute qualitative crises, traditional communication models—predominantly linear and paternalistic—frequently fail because they neglect the localized social contexts in which citizens interact.

As an alternative paradigm, the Community-Based Participatory Research (CBPR) approach offers a transformative philosophical and practical framework for crisis management (Israel et al., 2013; Wallerstein et al., 2017). CBPR emphasizes several fundamental principles:

1. **Equitable Partnership:** Equalizes power dynamics between medical authorities, academic researchers, and local residents across all intervention phases.
2. **Co-Ownership:** Encourages communities to foster genuine ownership over health initiatives rather than functioning merely as passive operational targets.
3. **Capacity Building:** Optimizes the internal social capital and networks of the community to autonomously resolve localized challenges.
4. **Co-Learning:** Fosters a continuous dialogue that integrates rigorous scientific expertise with local wisdom.

In public health emergencies, operationalizing CBPR shifts the paradigm from "speaking to the community" to "speaking with the community." Integrating this socio-ecological framework allows crisis intervention programs—such as mass vaccination centers—to be inclusively designed by accounting for local norms, ethnic values, and religious networks (Airhihenbuwa et al., 2020). The application of CBPR facilitates precise message framing, thereby dismantling passive resistance and fostering sustainable community resilience.

d. Typology of Crisis Communication Strategies and Urban-Participatory Interventions

The execution of crisis communication in Indonesia during the COVID-19 pandemic revealed diverse operational models that were heavily contingent upon local leadership structures and regional sociological conditions. Certain metropolitan areas favored technocratic-digital approaches emphasizing data efficiency; however, these were frequently constrained by digital literacy gaps among marginalized groups. Conversely, regions characterized by conservative cultural values emphasized cultural-religious approaches to address citizens' spiritual validation needs (Harapan et al., 2020).

In dense and heterogeneous urban spaces, such as the Sumur Bandung District in Bandung City, a sophisticated synthesis of interventions is required. Urban environments marked by sharp socio-economic, ethnic, and religious diversity necessitate a framework designated as the Urban-Participatory Model. This model does not treat external mandates and persuasive engagement as mutually exclusive binaries; rather, it integrates them into a cumulative intervention ladder.

Theoretically, crisis management in heterogeneous urban settings relies on combining four strategic intervention quadrants:

- **Persuasive & Educative Strategy:** Employs door-to-door interpersonal outreach and empathetic medical consultations to cultivate internal health awareness among residents.
- **Positive Incentives:** Provides material assistance (such as basic food packages) to offset economic and logistical barriers faced by lower-to-middle-income demographics.
- **Power-Coercive Tactics:** Enforces targeted administrative constraints (such as requiring vaccination certificates for social aid disbursement) to drive compliance among highly resistant groups.
- **External Reinforcement:** Leverages formal law enforcement and public mobility restrictions established by macro authorities (e.g., Instruction of the Minister of Home Affairs No. 24/2021) to define an absolute legal compliance framework.

The success of the Urban-Participatory Model is fundamentally determined by maintaining a delicate equilibrium between external regulatory pressure and internal persuasive grassroots engagement (Hyland-Wood et al., 2021; Ramesh et al., 2024). Without the foundation of participatory communication and the active involvement of local opinion leaders, coercive governmental actions risk triggering passive resistance or severe public backlash (backfire effect). Conversely, without strong regulatory enforcement, purely persuasive methods lose the sense of urgency required to reach herd immunity thresholds. Consequently, a theoretical synthesis combining the CBPR framework, the Two-Step Flow Theory, and an integrative intervention typology serves as a critical conceptual foundation for analyzing health crisis management at the urban regional level.

METHODOLOGY

This study employs a qualitative, explanatory single-case study design to investigate contemporary social phenomena within their real-world contexts, where the boundaries between phenomenon and context are not explicitly evident (Yin, 2018). The empirical focus is directed at the dynamics of participatory communication during the COVID-19 mass vaccination campaign in Bandung City between August 2021 and February 2022, amidst strict Community Restrictions (PPKM Level 4). Operationalizing the principles of Community-Based Participatory Research (CBPR), this study examines how symmetric two-way communication and opinion leaders bridged government messaging with grass-root community needs (Israel et al., 2013)

Primary data were collected through two primary techniques: participatory observation and semi-structured in-depth interviews. Participatory observation was conducted across six mass vaccination events at key community locations, including Jalan Van Deventer No. 1, Bandung, allowing the researcher to establish rapport and record authentic behavioral interactions. For interview procedures, a semi-structured interview guide was developed based on core CBPR dimensions, focusing on trust-building, co-ownership, and risk communication channels.

A purposive sampling strategy yielded eleven key informants representing critical stakeholder groups: local bureaucrats (Head of Sub-district/Camat and Head of Urban Village/Lurah), technical organizers, community volunteers (Karang Taruna, LPM, PKK), and sector-based religious/ethnic representatives (e.g., *Masyarakat Tionghoa Peduli* and local church leaders). Interviews were conducted both face-to-face and via secure digital platforms (Zoom and audio phone calls) to strictly adhere to health protocols. Each session lasted between 45 to 75 minutes, was audio-recorded with explicit consent, and was verbatim transcribed in Indonesian for analysis.

Data validity was strictly maintained through method triangulation, source triangulation, and member-checking (Cresswell & Cresswell, 2017). Triangulation was conducted by comparing interview transcripts with field notes and official policy documents. Member-checking was conducted by returning the analysis summary to key informants to confirm the accuracy of interpretations and eliminate subjective researcher bias. The data were then analyzed using the interactive model of Miles, Huberman, and Saldaña (2014), which includes data reduction, thematic coding, data presentation, and conclusion drawing.

RESULTS AND DISCUSSION

Vaccine Distribution Dynamics: Between Medical Urgency and Accessibility Barriers

Field research conducted in Bandung City reveals two fundamental public understandings regarding the urgency of mass COVID-19 vaccination. First, vaccination was conceptualized from a biomedical perspective as a vital instrument for achieving herd immunity. Second, a sociopolitical interpretation emerged wherein vaccination certificates were perceived as mandatory "administrative passports," enabling citizens to resume public activities and participate in local economic recovery.

However, the acceleration of this national program confronted complex technical bottlenecks at the grassroots level. During the initial implementation phase, the Bandung City Government designated Primary Health Centers as the frontline hubs for vaccination service delivery. As the target demographics expanded from the elderly population to the productive age group, an overwhelming surge in demand materialized. Primary Health Centers experienced critical capacity overloads due to a severe disparity between limited healthcare personnel and the heightened enthusiasm and mobility demands of the population. The initial operational capacity—capped at approximately 200 doses per day per sub-district level—led to severe queuing congestion and created potential new transmission clusters.

This operational reality underscores the presence of convenience barriers—specifically physical accessibility constraints and logistical inconveniences—as delineated in the integrative framework of vaccine hesitancy (MacDonald et al., 2015; Razai et al., 2021). These barriers stemmed not from ideological rejection of biomedical science, but rather from cumbersome bureaucratic procedures, transit distances, and inadequate primary care infrastructure. As articulated by a representative from the Kebon Pisang Sub-district Office:

"Directives from the central government were continuously pushed forward with a 100% target achievement. However, we faced immense difficulties in tracking residents because many received independent vaccinations at their workplaces or through other institutions such as the City Police Headquarters and the Armed Forces without reporting back to us. Meanwhile, our local Primary Health Centers capacity was severely constrained..."

To mitigate these convenience barriers, the Sumur Bandung District administration exercised policy discretion by forging cross-sectoral partnerships with religious and ethnic-based community organizations possessing suitable physical infrastructure. A key strategic collaboration was established with the Indonesian Christian Church (*GKI Taman Cibunut*). District and sub-district officials conducted rigorous site feasibility assessments to ensure adequate natural ventilation and open-air waiting zones aligned with health protocol standards. A representative from the Sumur Bandung District Office noted:

"We recognized GKI's local initiative to host mass vaccination drives. We immediately initiated a formal partnership because the sub-district administration was suffering from severe operational and budgetary constraints during the peak of COVID-19 cases. The collaboration, which was originally planned for a single sub-district, was subsequently scaled up to the district level to expand overall dose capacity..."

Reallocating vaccination hubs from formal healthcare institutions to places of worship and educational complexes demonstrates that localized health crisis management requires structural administrative flexibility. Nevertheless, these public-private partnerships did not automatically eliminate administrative complexities. Tiered licensing protocols, cold-chain data synchronization with the Municipal Health Office, and operational division of labor required continuous inter-institutional negotiations to ensure grassroots community initiatives complied with overarching regulatory frameworks.

Cross-Sectoral Coalitions Within the CBPR Framework: Infrastructure Reinforcement and Social Capital

The central government's assignment of the Indonesian National Armed Forces and the Indonesian National Police as core pillars for national vaccination acceleration represents a form of Strategic Government Relations. This mechanism offloaded complex medical-logistical burdens onto command-oriented institutions with high organizational discipline (Dyer, 2020). Within the Sumur Bandung District, the integration of defense and security personnel served as an effective "infrastructure amplifier." Armed with nationwide reach, Indonesian National Armed Forces and Indonesian National Police effectively operated vaccination drives within their jurisdictional facilities by coordinating with local primary healthcare centers /*Puskesmas* units for clinical execution. However, military and police authorities could not achieve optimal coverage without relying on local grassroots organizations. Crucially, empirical findings confirm that physical mobilization by military personnel does not automatically yield public compliance unless complemented by a humanistic, community-grounded approach.

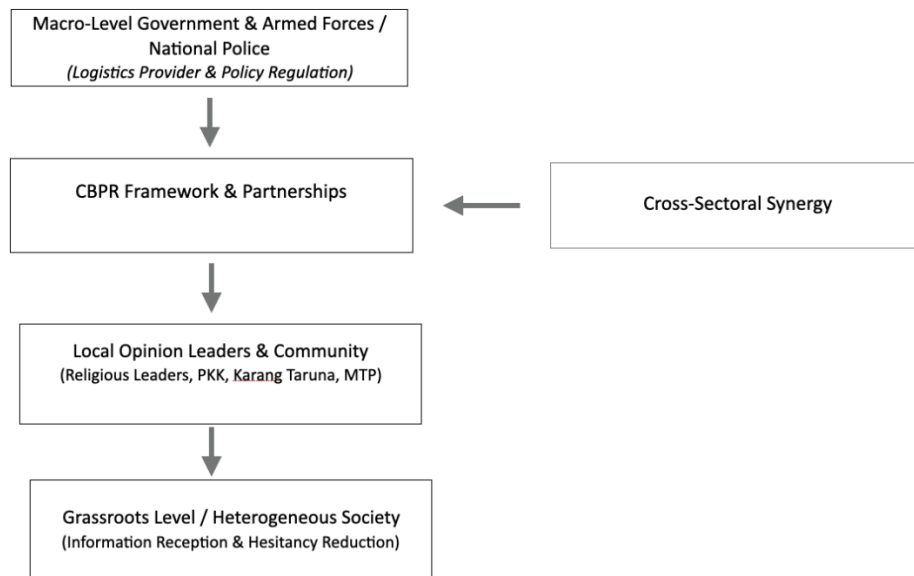


Figure 1. Schematic Integration of the CBPR Framework and Cross-Sectoral Coalitions in Health Crisis Mitigation

Figure 1 illustrates the multi-tiered systemic integration:

- **Macro Level (Top Level):** Denotes formal institutional authorities (Municipal Government, Indonesian National Armed Forces, and Indonesian National Police) holding regulatory mandates, budgetary allocations, and vaccine cold-chain distribution networks. During peak crisis periods, this level functions as the principal infrastructure amplifier.
- **Meso/Intermediary Level (Core Integration):** Represents the core of the Community-Based Participatory Research (CBPR) framework. At this juncture, command-and-control (top-down) modalities transition into collaborative governance models characterized by equitable partnerships. Local community entities are transformed from passive program recipients into active co-owners of crisis interventions.
- **Micro/Local Level (Opinion Leadership):** Depicts the crucial role played by religious leaders, church/mosque administrators, *PKK* cadres, youth organizations (*Karang Taruna*), and ethnic association leaders (e.g., *MTP*). These actors leverage localized social capital and emotional proximity to reduce public anxiety and institutional mistrust.
- **Grassroots Level (Output & Behavioral Change):** Reflects the final outcome of cross-sectoral synergy—namely, the comprehensive reception of public health messaging

across heterogeneous communities, the erosion of vaccine hesitancy, and the equitable attainment of mass immunization coverage.

Under the Community-Based Participatory Research (CBPR) theoretical framework, the ultimate efficacy of public health interventions hinges on how effectively macro-structures (governmental and military authorities) integrate with micro-contexts (the internal social dynamics of local communities) (Israel et al., 2013; Wallerstein et al., 2017). The proactive engagement of local civil society actors—such as the *PKK* / Family Welfare Movement, *Karang Taruna* / youth networks, Community Empowerment Agencies (*LPM*), the Caring Chinese Community (*MTP*), and local religious leaders—served as an indispensable counterweight to top-down leadership styles. This multi-layered collaboration established an organized, trustworthy environment, thereby alleviating public apprehension regarding vaccine safety and procedural transparency (Dyer, 2020).

This synergy transformed rigid crisis communication channels into participatory dialogic governance. Local community groups operated as process co-owners, while state security apparatuses and clinical personnel assumed technical facilitation roles. Deploying vaccination drives in neutral, culturally inclusive spaces successfully dismantled institutional mistrust among marginalized groups and minority demographics. Ultimately, the social capital embedded within local grassroots networks proved far more effective at establishing psychological safety than coercive state enforcement alone (Wong & Kohler, 2020).

The Sumur Bandung Locus and Two-Step Flow Communication Dynamics

The Sumur Bandung District exhibits a highly heterogeneous sociological profile. Characterized by high population density within the commercial center of Bandung City, the core crisis communication challenge was not merely information dissemination, but rather how diverse ethnic, religious, and socioeconomic groups interpreted and contextualized health messaging.

In alignment with the Two-Step Flow of Communication Theory (Chen & Sesay, 2025), macro-level public health communications regarding vaccine safety and halal certification issued by the Ministry of Health did not directly induce behavioral change upon mass broadcast. Mass-mediated official communication remains largely impersonal, frequently inducing cognitive dissonance, skepticism, or confusion amidst widespread digital mis/disinformation. Consequently, resident decision-making shifted only after macro-level information was filtered, culturally translated, and ratified by trusted local opinion leaders possessing relational proximity and affective credibility.

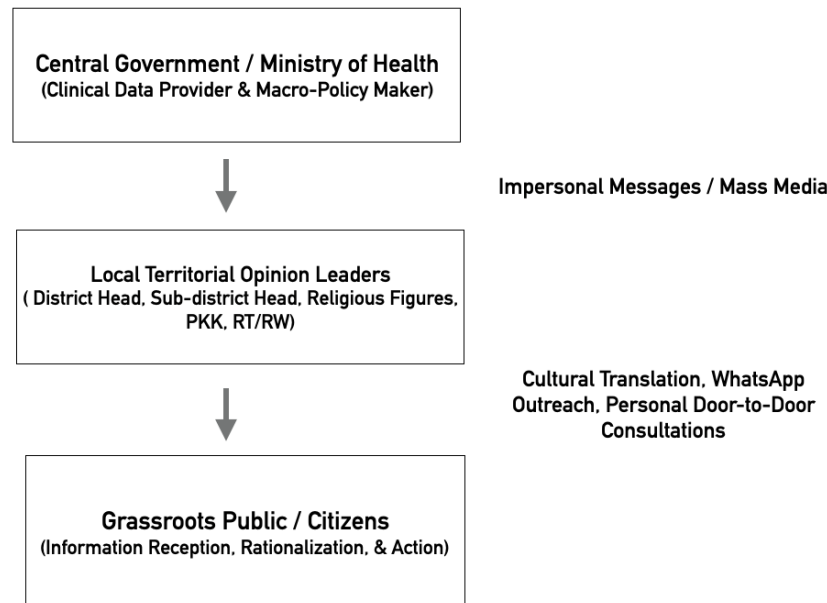


Figure 2. The Two-Step Flow Communication Model in Pandemic Health Message Translation

As outlined in Figure 2, the operational flow proceeds across three functional tiers:

- **Primary Step (Primary Source):** The Central Government and the Ministry of Health generate clinical data and establish macro-level mandates. Information disseminated through mass media or press broadcasts operates linearly and impersonally, often leaving cognitive gaps or skepticism at the community level.
- **Intermediary Step (Filtering & Translating):** Official directives are received, filtered, and contextualized by territorial opinion leaders (District Heads, Sub-district Heads, Religious Figures, *PKK* cadres, and neighborhood leaders / *RT/RW*). At this stage, vital "cultural translation" occurs:
 - Translating technical medical terminology into accessible lay language.
 - Clarifying and countering online rumors concerning vaccine safety and religious compliance (*halal* status).
 - Distributing information through trusted interpersonal channels (e.g., neighborhood WhatsApp groups, religious gatherings, church bulletins, and door-to-door visits).
- **Audience Reception & Action:** Grassroots citizens process information endorsed by community figures they trust. This cultural encoding alleviates cognitive anxiety, prompting a positive shift in attitude from initial skepticism to voluntary vaccine compliance.

In the Kebon Pisang Sub-district, the District (*Camat*) and Sub-district (*Lurah*) leaders acted not merely as administrative bureaucrats, but as formal opinion leaders

who successfully mobilized local educational infrastructure (e.g., BPP Senior High School) and community networks. Nevertheless, the primary engines at the micro-social level were local *PKK* cadres and *RT/RW* neighborhood representatives. These grassroots actors deconstructed technical protocols issued by the Municipal Health Office into accessible, culturally responsive narratives. Language barriers, anxieties concerning Adverse Events Following Immunization, and religious uncertainties were systematically addressed through dialogue within community WhatsApp groups and direct door-to-door engagements.

Opinion Leadership and the Negotiation of Trust

Vaccine hesitancy within the Sumur Bandung District was driven by three primary determinants: clinical apprehension regarding physical pain and post-vaccination adverse effects, systemic distrust toward government economic/political motives, and religious/doctrinal concerns regarding ingredient halal status (World Health Organization, 2021; Lazarus et al., 2023). This phenomenon was explicitly recorded in the accounts of a Kebon Pisang *PKK* cadre:

"I reached out to residents through WhatsApp groups and phone calls. Most declined, citing fear of side effects or arguing that the vaccine wasn't halal. Even though the site was nearby, they remained reluctant to attend..."

To address hesitancy rooted in religious norms and beliefs, engaging faith-based leaders became a critical strategic imperative. Within the Christian community, the Synod of the Indonesian Christian Church issued an official decree instructing all local churches to support the national immunization drive. Church leaders operationalized this directive by embedding vaccine advocacy into weekly bulletins and Sunday sermons. A pastor from *GKI Taman Cibunut* noted:

"There was a synodal directive issued via official circular. We followed up by integrating the mandate directly into our weekly church announcements and Sunday morning sermons..."

A parallel strategy was deployed by local Islamic scholars (*Ustadz*) and Muslim community figures through post-Friday prayer announcements and routine religious study groups (*pengajian*). From a sociology of religion perspective, faith leaders function as powerful secondary agents of socialization possessing the moral authority to reframe medical compliance into an act of religious and civic responsibility (Suryani et al., 2023). This moral legitimacy successfully mitigated negative social stigma and softened doctrinal resistance across diverse community segments.

Integration of Persuasive Communication, Coercive Strategies, and External Reinforcement

The Bandung City Government continuously strived to meet the target set by the Central Government—specifically, achieving a 70% first-dose coverage rate by December 2021. As a strategic measure, the Sumur Bandung District Head mobilized local community cadres to act as frontline opinion leaders. Their core mandate encompassed conducting extensive public health outreach, delivering educational campaigns, and actively countering the proliferation of digital misinformation and health-related rumors (*hoaxes*).

Educational campaigns were deployed across multiple communication channels, ranging from neighborhood WhatsApp groups and mosque public address systems to proactive door-to-door outreach for household enumeration. These pro-active interventions prioritized vulnerable populations, including the elderly, individuals with disabilities, and vaccine-hesitant residents. Educational content explaining vaccine benefits was shared continuously across community chat groups to ensure clear understanding and debunk circulating myths. A cadre from Kebon Pisang Sub-district outlined the operational challenges faced:

"There were rumors circulating that the vaccine was not halal and that its efficacy was unproven. As a result, many residents hesitated and initially refused to be vaccinated."

To incentivize broader public participation, mass vaccination events were paired with the distribution of basic food aid packages (*sembako*). The Sumur Bandung District Head highlighted the importance of this logistical integration:

"Everyone was involved, both in terms of infrastructure support and logistical provision. The inclusion of food package incentives was remarkably effective. I personally conducted field visits to engage directly with residents and encourage vaccination attendance."

Beyond health education, community cadres routinely distributed updates regarding vaccination schedules and venue locations while providing timely reminders as event dates approached. When encountering persistent refusal, cadres conducted targeted personal outreach via phone calls or home visits. A local cadre detailed this persuasive strategy:

"If residents remained hesitant, we continuously persuaded them. We explained the medical benefits, government mandates, and logical consequences—such as restricted entry to shopping malls or the risk of transmitting the virus to children and elderly relatives at home. At times, I had to explain the same points four times to a single household."

When repeated persuasive attempts proved ineffective, local actors shifted toward coercive framing, such as highlighting restrictions on holiday travel permits (*mudik*). Cadres executed this secondary approach with full structural backing from RT/RW leaders and the Sub-district Head. Concurrently, medical personnel—including physicians, nurses, and midwives—were deployed to conduct educational seminars via virtual platforms like Zoom to explain vaccine typologies, mechanisms, and side effects from a biomedical standpoint. A healthcare provider recalled:

"In the beginning, very few elderly residents visited the primary healthcare centers / *Puskesmas*. Consequently, we went directly into the field to conduct outreach. We collaborated with RT heads and District officials to explain COVID-19 and vaccine safety, as some residents were receptive while others remained highly skeptical."

Public shifts toward vaccination acceptance were driven not only by opinion leaders like religious figures and neighborhood heads, but also by stringent government regulations. A key regulatory driver was the Instruction of the Minister of Home Affairs (*Inmendagri*) No. 24 of 2021, which mandated that all domestic travelers (utilizing private or public transport modalities including air, land, maritime, and rail travel) present a vaccination certificate confirming at least a single dose.

The successful achievement of vaccination targets within the Sumur Bandung District relied not on a single communication strategy, but rather on a dynamic interplay combining Persuasive Communication, Power-Coercive Strategies, and External Reinforcement Analysis. Persuasive communication was established through dialogue, motivational support, and empathetic health education delivered by cadres and clinicians to foster voluntary compliance. However, when persuasion encountered deep-seated resistance, local governance structures strategically integrated power-coercive measures.

Table 1. *Typology Matrix of Crisis Communication Strategies and Resident Compliance Response Continuum.*

Communication Strategy	Field Intervention Mode	Resident Response Indicator
Persuasive & Educational	Continuous education via WhatsApp groups, religious sermons, clinical consultations, and door-to-door visits by cadres.	Organic awareness growth and improved understanding of biomedical vaccine functions.

Communication Strategy	Field Intervention Mode	Resident Response Indicator
Positive Incentives	Distribution of basic food assistance packages (<i>sembako</i>) at vaccination hubs co-hosted by private/community partners.	Increased attendance and engagement among low-to-middle-income demographics.
Power-Coercive Strategy	Mandatory vaccine card requirements for social aid, travel permit restrictions, and local administrative clearance.	Forced compliance among previously resistant or hesitant community segments.
External Reinforcement	Enforcement of <i>Inmendagri</i> No. 24/2021 regulations (mandatory travel permits & restricted access to malls/public spaces).	Paradigm shift in public perception from "optional choice" to "absolute legal necessity."

The strategic categorization presented in Table 1 illustrates that health crisis management in the Sumur Bandung District operated not as a linear process, but as a cumulative intervention ladder. Each matrix tier targeted a distinct psychological threshold within a demographically heterogeneous population:

- **Behavioral Penetration Gradation:** A conceptual shift occurred, moving from internal consciousness-raising approaches (intrinsic motivation) toward structurally imposed external regulations (extrinsic compliance). Persuasive messaging and positive incentives functioned as primary filters to capture residents classified as "uncertain but open."
- **Segmentation of Respondent Resistance:** The matrix demonstrates that individuals non-responsive to medical-educational narratives (Row 1) were mobilized by economic-logistical incentives such as food assistance (Row 2). When voluntary instruments reached a saturation point among highly resistant cohorts, interventions transitioned toward authoritative policy pressures (Row 3) and public accessibility restrictions (Row 4).
- **Inter-Element Interdependence:** The four strategy quadrants operated synergistically rather than in isolation. Without a baseline of persuasive engagement established by local grassroots cadres, the immediate enforcement of coercive tactics and external regulations would have risked triggering public backlash or civil non-compliance (backfire effect). Conversely, without macro-level legal

enforcement, local persuasive efforts lacked the structural urgency needed to achieve timely herd immunity thresholds.

During initial execution, healthcare personnel and local cadres prioritized persuasive interactions grounded in empathetic medical communication. Facing persistent refusal, local governance integrated positive incentives (food aid distribution) alongside proportional coercive tactics (power-coercive strategy). Cadres communicated administrative sanctions and mobility limitations to non-compliant residents.

The efficacy of this combined approach was significantly augmented by national legal frameworks, particularly *Inmendagri* No. 24 of 2021, which mandated proof of vaccination for transit and public space entry. This macro-regulation served as an External Reinforcement mechanism, validating the persuasive messaging delivered by grassroots cadres. Ultimately, the integration of macro-regulatory pressure and localized relational persuasion effectively dismantled convenience barriers, enabling the comprehensive realization of herd immunity across the Sumur Bandung District.

Notwithstanding these analytical findings, this study acknowledges several methodological limitations. Because of the retrospective research design, data collection relied on participant recall regarding the implementation of the COVID-19 vaccination program, introducing potential recall bias. To mitigate this risk, rigorous data triangulation was conducted through cross-verifying informant accounts against official policy documents. Future prospective studies are encouraged to capture public health communication dynamics in real-time during emerging public health emergencies.

CONCLUSION

This study confirms that public health crisis management at the local level cannot rely solely on linear communication models characterized by instructive and authoritative top-down approaches. Coercive policy frameworks—such as mandatory vaccination certificates for public mobility during Level 4 Community Restrictions (PPKM Level 4)—successfully induced administrative compliance; however, they failed to foster internalized health-seeking behavior among citizens. The initial paralysis of primary healthcare capacity exacerbated convenience barriers for residents, which subsequently collided with declining institutional trust driven by rumors regarding vaccine halality and potential medical side effects. This structural disconnect highlights the fundamental limitations of traditional, top-down crisis communication when intervening in heterogeneous urban dynamics.

The successful acceleration of vaccination coverage in Sumur Bandung District provides compelling empirical evidence regarding the necessity of a paradigm shift

toward community-participatory crisis communication. This study concludes that integrating the Community-Based Participatory Research (CBPR) framework with the Two-Step Flow of Communication Theory effectively breaks the communicative gridlock of governmental authorities. Engaging local opinion leaders—including religious figures (clergy and Islamic scholars), territorial officials (district heads and sub-district heads), Family Welfare Movement (PKK) cadres, youth organizations (Karang Taruna), and ethnic coalition groups such as *Masyarakat Tionghoa Peduli* (MTP)—proved vital in establishing a trusted communicative bridge. These opinion leaders served as functional filters and translators, transforming rigid clinical messaging from macro-level authorities into adaptable, empathetic, and culturally tailored communication. By leveraging trusted interpersonal channels, community hesitation surrounding vaccine safety and halality was incrementally mitigated.

Typologically, this study reveals that the efficacy of health crisis management in Sumur Bandung District was driven by a cumulative intervention ladder that dynamically synergizes four strategic quadrants:

1. **Persuasive and Educational Strategies:** Relying on door-to-door interpersonal communication led by PKK cadres alongside clinical consultations by local healthcare workers to cultivate autonomous health awareness.
2. **Positive Incentives:** Utilizing food relief packages (sert/sembako) generated through private-community collaborations to incentivize lower-middle-class participation and overcome socio-economic and logistical hurdles.
3. **Measured Power-Coercive Measures:** Implementing administrative prerequisites for social aid and mobility clearance to reach demographic segments highly resistant to voluntary appeals.
4. **External Reinforcements:** Enforcing travel regulations and public facility access restrictions in compliance with the Instruction of the Minister of Home Affairs (Inmendagri No. 24/2021), thereby shifting public perception of compliance from an optional choice to a mandatory legal necessity.

These four strategies did not operate in isolation; rather, they acted as mutually reinforcing mechanisms. Without the persuasive foundations and social capital mobilized by local actors at the grassroots level, strict coercive regulations risked triggering a civil backfire effect. Conversely, without clear external regulations, purely persuasive approaches lacked the requisite urgency to achieve herd immunity within critical timeframes.

Theoretically, this research makes a significant contribution to the literature on crisis communication and public relations within developing nations by synthesizing the CBPR

framework with the Two-Step Flow of Communication Theory. This study demonstrates that social capital and localized leadership serve as vital mediating variables in re-articulating formal crisis messaging. Two-way symmetrical crisis communication does not merely operate within macro-institutional arenas; instead, it relies heavily on micro-social structures that already possess established moral and emotional legitimacy among residents.

Practically, these findings provide a operational blueprint for community-partnered crisis communication tailored for government public relations practitioners and public health policymakers. Public authorities are advised to stop treating grassroots communities merely as passive targets of public socialization, but rather as strategic partners integrated into the earliest phases of intervention planning. Local governments should institutionalize networks of local opinion leaders and establish platforms for symmetrical dialogue to proactively counter disinformation and resolve convenience barriers before public anxiety reaches its peak.

This study acknowledges certain methodological limitations. Due to its retrospective research design, data collection relied on participants' historical recollection of the COVID-19 vaccination drive, introducing potential recall bias. Although rigorous data triangulation was executed through cross-verifying informant accounts and analyzing official policy documentation, prospective studies in future public health emergencies are strongly recommended to observe crisis communication dynamics and citizen compliance behavior in real time.

BIODATA

Kartika Singarimbun is an Assistant Professor of Communication Studies in the Postgraduate Program at LSPR Institute of Communication and Business, Jakarta. She holds a Ph.D. in Communication Science from Universitas Padjadjaran (2019). Her research specialization encompasses strategic media management, competitive communication strategies, and corporate branding. Her scholarly work is grounded in nearly two decades of professional experience within the broadcasting industry, where she held various leadership and operational roles over a 17-year tenure.

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