



Community Engagement in Urban Areas of South Tangerang Regency, Indonesia: A Study on COVID-19 Response

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Abstract

In Indonesia, particularly in South Tangerang, Banten Province, high COVID-19 cases are intensified by urban density. A comprehensive study was initiated by 106 students from UIN Syarif Hidayatullah Jakarta. Employing a cross-sectional design with purposive sampling, they surveyed 5,326 households across 13 Community Health Centers. The Chi-Square tested data uncovered that 79% consistently wore masks, 74% practiced hand hygiene, 59% followed social distancing, and 37% regularly disinfected. Intriguingly, there's a substantial correlation between protocol adherence and factors like knowledge, attitude, and proactive community leadership. These factors amplified adherence effectiveness between 2.0 to 3.5 times. The findings highlight the potential of the Community-Based Fighting Initiatives Against COVID-19 (PARC-19) approach, stressing grassroots engagement. Implementing PARC-19 successfully mandates fostering community autonomy in health management. Such autonomy flourishes when forged through a collaboration net comprising academia, government agencies, social organizations, influential community and religious leaders, and business stakeholders. This synergized effort paves the way for a holistic and efficient health management strategy during these pandemic times.

Introduction

COVID-19 is the most frightening disease since the 1918 Spanish flu pandemic, killing 260,000 Spaniards and 50 million people worldwide (Ferguson *et al.*, 2020; Short *et al.*, 2018; Trilla *et al.*, 2008). The Pandemic, officially announced on March 11, 2020, has hit many countries world (World Health Organization, 2020). Until October 4, 2021, in Indonesia, the number of victims who died had reached 142,560, while the number of recorded cases was 422,587. The incident number reached 1,384, and the coverage vaccinated was 53,993,753 people (World Health Organization, 2023). The second wave of the pandemic in India has frightened the world; on April 22, 2021, India reported an additional 273,810 cases per day, with a death toll of around 1,761; the government's occurred with lack of health

facilities and facilities for cremation, mainly carried out in the open field (Pandey, 2021).

The escalation of this situation begins with a public disregard for health protocols. Even though the government and non-governmental organizations have been working to prevent the Pandemic, these efforts failed to lower the curve, particularly in Indonesia. Many critics have shouted about Indonesia's postponement in response to this Pandemic (Lindsey and Mann, 2020). China's three-month experience controlling the virus has caught the attention of many experts worldwide. Some experts concluded the success was mainly due to Wuhan's complete lockdown and the state machinery's extreme power. The brilliant method to control the Pandemic is through a network of community-based organizations working with the state (Cheng *et al.*, 2020).

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The Chinese government's ability to trust experts and voluntary groups quickly restored public confidence after the initial outbreak of COVID-19 in Wuhan (Li, 2020).

There is a significant effort in flattening the epidemiologic curve, especially in avoiding crowds through social distancing programs that impacted economic activity. The program, which aims to reduce the frequency and social distancing among the community, is implemented by closing public places such as schools, entertainment places, and workplaces, limiting working hours in markets and other places where people gather (Lestari and Dewi, 2022). This regulation is carried out by restricting community groups such as schools and child care centers with a size of 2-5m² / child, offices with 18 m² / person, and houses of 35-44m² / person (Ebrahim *et al.*, 2020).

However, the restriction was only successful by limiting working hours, so the "Transitional Social Distancing" was implemented from April 10 to July 30, 2020. The evidence showed that the incidence of COVID-19 had increased compared to strictly social distancing by implementing a local lockdown program at the settlement or village level (Saputra and Salma, 2020). The Transitional Social Distancing program was eventually implemented throughout Indonesia, which resulted in uncontrolled morbidity and mortality. At the beginning of 2021, the Indonesian government started a vaccination program for 181 million people; the nation needed 426 million vaccine doses. The government already has a vaccine stock of 325 million doses, which will soon be distributed to the public (Fitria Chusna, 2021). Even though this program is implemented, the government should also consider supporting this program with promotive and preventive actions at the grassroots level.

Method

In November 2020, we conducted a cross-sectional household survey with a purposive method in South Tangerang. One hundred six trained public health university students distributed simple random method for online and offline questionnaires to be completed by a household member in 13 Public Health Service

(PHS) areas proportionally (5,326 households included in this study, with 350 to 420 sample households per Puskesmas). Cadres help students distribute the questionnaires to the households for offline questionnaires. Only one questionnaire per household was requested. The same surveys were identified and removed if the name, address, and phone number were identical. We built the questionnaire and used Green and Kreuter's (2005) theory, where we asked about the characteristics of respondents, predisposing, enabling, reinforcing, and Behaviour of the households about their behaviour in preventing Covid 19 in thirteen public health services (Puskesmas) areas (see Figure 1). We asked about 62 questions, and the average duration of filling out the questionnaire was 30 minutes.

Primary data was obtained from Google Forms and then analyzed with a statistical program. Before the questionnaire was applied, we examined the questionnaire outside of the district with 30 respondents to identify the validity and reliability and see if the respondents understood the question well. We also include data from observations in the field study. In this study, a systematic data analysis was undertaken utilizing univariate and bivariate methods, accompanied by the Chi-Square test, with a significance level set at $p < 0.05$ and a 95% confidence interval. These quantitative techniques provided a robust mechanism for deciphering patterns and relationships embedded within the dataset. To augment the robustness and comprehensiveness of our findings, we meticulously integrated qualitative insights derived from targeted field observations. This eclectic approach, harmonizing quantitative rigor with qualitative depth, offers a multifaceted perspective, engendering a richer, more nuanced understanding of the research problem.

Result and Discussion

The study offered an exhaustive examination of the respondents' adherence to prescribed health protocols. Upon meticulous analysis of the collated data, it was discernible that a significant proportion, albeit not monumental, of participants were compliant with the stipulated health guidelines: precisely,



Figure 1. Conceptual Framework, and the Question of Behavior in Implementing Health protocols in preventing COVID-19

79% were assiduous in donning masks, 74% were meticulous in observing hand hygiene, and a somewhat diminished 59% were diligent in upholding social distancing norms, as illustrated incisively in Figure 2. The scrutiny of adherence levels revealed tangible impediments to the efficacious enforcement of social distancing norms within the community. This situation is also observed in many other parts of the world (Gonzalez *et al.*, 2021; Sadjadi *et al.*, 2021). A salient exacerbator of this quandary emanated from the recurrent congregations associated with religious and cultural ceremonies. These assemblies intrinsically engender intimate social interactions, rendering the implementation of distancing protocols particularly intricate (Sisti *et al.*, 2023; Tan *et al.*, 2021).

Concurrently, 37% of respondents affirmed an unwavering adherence to systematic disinfection practices. This unveils a conspicuous lacuna in the populace's compliance with the stringent health directives promulgated by the government. Such a revelation accentuates the exigency for augmented public awareness initiatives, stringent enforcement mechanisms, and the inculcation of a pervasive culture of health consciousness and communal solidarity in combatting the pathogenic adversary (Hu *et al.*, 2020; Kaushik *et al.*, 2021).

The vital role of regular disinfection in mitigating COVID-19's impact cannot be overstated (Beggs and Avital, 2020; Wang *et al.*, 2020). Yet, a concerning gap exists in public adherence to this and other health protocols, despite ongoing governmental warnings. Local governments' strategies are pivotal in enhancing compliance, necessitating context-specific, adaptive, and responsive approaches (Ayouni *et al.*, 2021; S. Talabis *et al.*, 2021). The varied adherence patterns across communities point to the need for tailored interventions that consider sociocultural, economic, and demographic factors. In this intricate situation, reinforcing the healthcare system through collaboration among policymakers, public awareness campaigns, community engagement, and enforcement is pivotal for a comprehensive and effective response to the pandemic (Haldane *et al.*, 2021; Loewenson *et al.*, 2021). As an illustration, the decision by Chinese authorities to promptly impose a lockdown policy was found to be efficacious in managing the outbreak (Baloch *et al.*, 2020). In stark contrast, the Indonesian government's tactic centered on imposing broad-scale movement restrictions coupled with prioritized vaccinations in regions recording the peak incidences of the COVID-19 pandemic (Thorik, 2020).

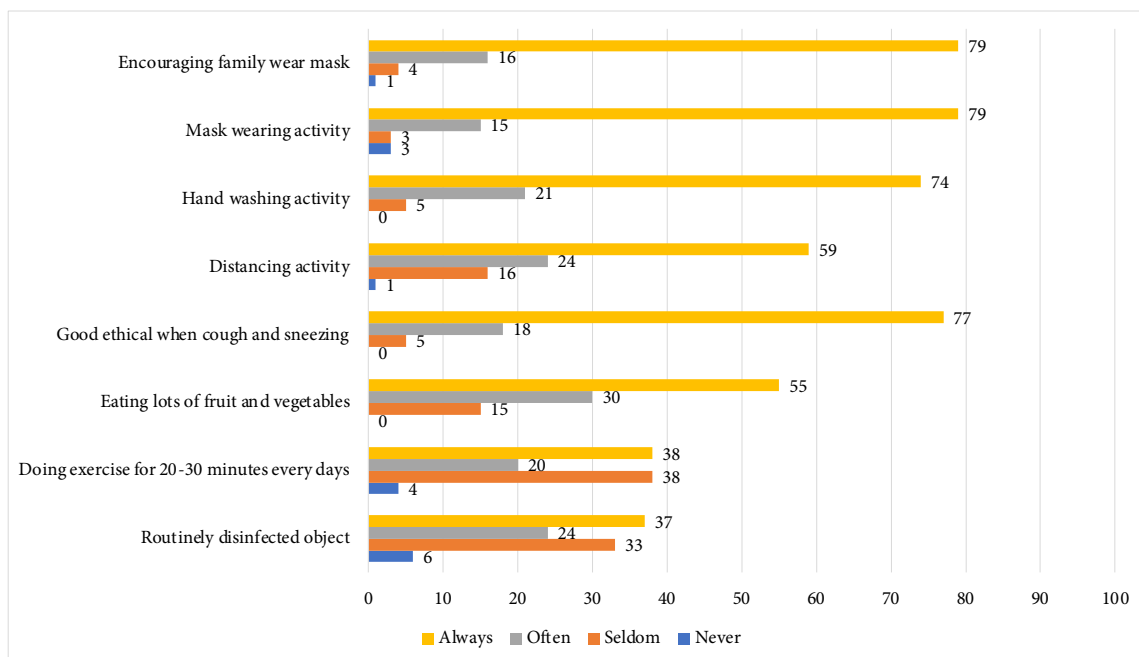


Figure 2. Percentage of Behavior Description of Health Protocols in South Tangerang (n = 5326 respondents)

One of the barriers to the weaknesses of Large-Scale Restrictions (PSBB) and their ineffectiveness is primarily attributed to the ongoing paradigm shift from treating the sick to improving overall health (Boyce *et al.*, 2022; Seale *et al.*, 2022). Given this ongoing paradigm shift, implementing preventive and promotive measures in the context of the pandemic has proven to be quite challenging. The active and engaged involvement of community guards (Linmas) and local village leaders (Lurah) within the COVID-19 Task Force has played a pivotal role in enhancing the management and coordination of local resources amidst a health crisis. Their participation is vital in not only streamlining the distribution and utilization of these resources but also in ensuring that critical information and directives are effectively communicated and implemented at the grassroots level. This collaborative approach is instrumental in fortifying the community's response to the pandemic, thereby significantly contributing to the overall efficiency and success of the health crisis management efforts (Haim *et al.*, 2021). Public disappointment with the success of health promotion becomes evident when a significant portion of the population not only ignores health protocols but also fails to participate in vaccination programs (Feleszko *et al.*, 2021; Islam *et al.*, 2021).

The current study underscores the influence of knowledge, attitude, enabling, and reinforcing factors on community adherence to health protocols. Nevertheless, the potency of these elements in driving the effective implementation of health protocols is relatively modest, increasing the likelihood by merely 2.0-3.5 times, with a statistically significant p-value of less than 0.05 (as delineated in Table 1). It aligns with multiple research endeavors identifying correlations between these variables and behavioral shifts toward adopting healthier practices (Lee *et al.*, 2021; Zhi-Hao Li *et al.*, 2020).

Enhancing the effectiveness of behavioral modifications necessitates strategic interventions at the community level, specifically through active community engagement in managing COVID-19 (Miao *et al.*, 2021). As exemplified by PARC-19 (Community-Based Fighting Initiatives COVID-19), community-based approaches have emerged as pivotal strategies, encompassing five primary functions in comprehensive and regional public health efforts. These functions, originally developed from the five-level prevention method by Leavell and Clark, include (1) health promotion, (2) specific protection, (3) early diagnosis and immediate treatment, (4) disability limitation, and (5) rehabilitation. In this context, these

Table 1. The relationship between Health Protocols Respondents and Knowledge, Attitude, and Reinforcing

Predisposing, Enabling & Reinforcing	Behavior Toward Health Protocols						P value	OR (95% CI)
	Not Good		Good		Total			
	n	%	n	%	n	%		
Respondent's knowledge about COVID-19								
Poor knowledge	1159	21,8	1233	23,1	2392	44,9	0,01	2,008 (1,796- 2,245)
Good knowledge	936	17,6	1886	37,5	2934	55,1		
Total	2095	39,4	3119	60,6	5326	100		
Respondent's attitude about COVID-19								
Poor attitudes	1448	27,2	944	17,1	2392	44,9	0,01	2,219 (1,988- 2,478)
Good attitudes	1067	20,2	1867	35,1	2934	55,1		
Total	2515	47,4	2811	52,8	5326	100		
Respondent's enabling about COVID-19								
Poor enabling	1412	26,5	980	18,4	2392	44,9	0,01	2,684 (2,401- 3,000)
Good enabling	1155	21,7	1778	33,4	2934	55,1		
Total	2567	48,2	2758	51,8	5326	100		
Respondent's reinforcing about COVID-19								
Poor reinforcing	1678	31,5	714	13,4	2392	44,9	0,01	2,917 (2,603- 3,269)
Good reinforcing	1308	24,6	1625	30,5	2934	55,1		
Total	2986	56,1	2339	43,9	5326	100		

Source: Primary Data, 2020

five functions are integrated into essential field interventions for COVID-19 mitigation, which entail (a) mobilizing volunteers for the identification and monitoring of COVID-19 patients and individuals closely associated with them, (b) collection of donations and essential supplies to help the patient or suspected COVID 19, and (c) providing critical community services to ensure that those in home-based confinement have access to life-sustaining resources (Siregar *et al.*, 2022). Such community health initiatives are pivotal in enhancing resilience during prolonged pandemics (Cheng *et al.*, 2020).

The emphasis on community-level health development by Community Health Centers (Puskesmas) necessitates strengthening through the involvement of the Pentahelix network, comprising Government, the Business World, Academics, Media, and Non-Governmental Organizations, in every public health intervention (Ardiansyah *et al.*, 2023; Upe *et al.*, 2021). This intervention should encompass the five levels of prevention or action, aligning with the Community Health Center framework, and adopting a systemic approach while emphasizing prevention strategies to address the challenges posed by the pandemic (Siregar *et al.*, 2022). An important advantage of this comprehensive approach is its potential to expedite community development efforts upstream (Schulz *et al.*, 2020). This achievement is realized through the enhancement of government institutions and related stakeholders' capacity to effectively respond to the pandemic situation (Djalante *et al.*, 2020).

The interventions carried out during field observations were found to be incomplete due to a lack of coordination between community health centers, sub-districts, and community leaders. This issue became particularly significant when COVID-19 cases were identified in sub-district areas. The unpreparedness of government officials to establish effective communication and community assistance exacerbated the situation. Consequently, the dissemination of information about COVID-19 became biased, and in certain instances, residents even refused to permit COVID-19 patients to reside in their neighborhoods out of fear of contracting

the virus. Additionally, there were instances of community groups refusing COVID-19 vaccination.

Therefore, strategic interventions to address the COVID-19 crisis should prioritize a community-level approach (Owoyemi *et al.*, 2021), particularly within the jurisdiction of the lowest government units, such as the Puskesmas area. Collaborative efforts involving various stakeholders, including the Police, Babinsa, and volunteers, have been initiated to trace and manage COVID-19 cases. Despite the ongoing efforts, coordination challenges remain a significant hurdle, underscoring the complexities and nuances inherent in multi-agency collaboration. This situation calls for a more nuanced understanding and strategic approach to ensure effective communication and synergy among the various involved parties (Abdeen *et al.*, 2021; Coccia and Robertson, 2009). Simultaneously, community-driven initiatives to assist COVID-19 patients in self-isolation at their residences have been commendable, characterized by generous donations that cater to the daily needs of those affected. However, these noble efforts appear to be geographically limited, with operations predominantly concentrated in specific pockets of the village (Isnainy *et al.*, 2022; Putri and Rahmah, 2020; Suwandi *et al.*, 2022).

Conclusion

Our research findings reveal a clear relationship between knowledge, attitudes, supporting factors, reinforcing elements, and community compliance with established health protocols. However, despite this correlation, it is evident that the influence of these factors in realizing the implementation of strict health protocols is moderately effective, resulting in an increase in compliance rates by only 2.0-3.5 times. These results highlight a concerning trend: people's commitment to health protocols falls short of expectations. Addressing this gap requires critical re-stratification and innovation in our approach. There is a need to prioritize localized strategies within the community environment, particularly within the purview of the Community Health Center. An integrated system involving PARC-19 and utilizing the Pentahelix network model,

which leverages synergies among Government, Business, Academia, Media, and Non-Governmental Organizations, along with a five-level prevention approach, is imperative. This collaborative effort presents a multifaceted and holistic strategy to tackle the challenges of the COVID-19 Pandemic. These community engagement or endeavor methods are designed to enhance community participation, cultivate an understanding of the significance of health protocols, and seamlessly integrate them into daily routines. The objective is to transition from a paradigm of illness to one of health, thereby equipping the community with the capacity to endure the prolonged pandemic, both in the present and future.

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