

**THE CORRELATION BETWEEN SOCIAL
CAPITAL AND COVID-19 SUCCESS:
A CASE OF BHUTAN'S *GUARDIANS OF PEACE*'S EFFECTIVE
RESPONSE TO COVID-19 AND THE SUCCESSFUL
MANAGEMENT OF THE PANDEMIC.**

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**Submitting a master's thesis of
International Studies**

April 2024

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ABSTRACT

This thesis investigates the correlation between social capital and the success of COVID-19 management in Bhutan from the onset of the pandemic in March 2020 to the end of 2023, focusing on the *Desuung* program as a measure of social capital. The study analyzes how trust and community participation within the *Desuung* program contributed to effective pandemic responses, aligned with Bhutan's Gross National Happiness philosophy and the *Tsa-wa-sum* ethos. Using mixed methods, the research gathered data through a survey titled "Assessing Social Capital: A Survey of Community Involvement, Trust, and Connectedness," alongside a review of literature and official communications. Findings demonstrate a significant positive correlation between social capital and pandemic management efficacy, underscoring the potential for other nations to adopt similar community-driven approaches in public health crises. The study's context-specific insights caution against direct application to dissimilar socio-political environments but highlight the value of integrating social capital into disaster preparedness strategies.

KOREAN ABSTRACT

이 논문은 2020년 3월 팬데믹이 시작된 이후부터 2023년 말까지 부탄에서 사회적 자본과 코로나19 관리의 성공 사이의 상관관계를 조사하며, 사회적 자본의 척도로서 데수웅 프로그램에 초점을 맞추고 있습니다. 이 연구는 부탄의 국민총행복 철학과 차와섬 정신에 따라 데수웅 프로그램 내 신뢰와 커뮤니티 참여가 효과적인 팬데믹 대응에 어떻게 기여했는지 분석합니다. 이 연구는 혼합 방법을 사용하여 '사회적 자본 평가'라는 제목의 설문조사를 통해 데이터를 수집했습니다: 지역사회 참여, 신뢰, 연결성에 대한 설문조사"라는 제목의 설문조사와 문헌 및 공식 커뮤니케이션을 검토하여 데이터를 수집했습니다. 연구 결과에 따르면 사회적 자본과 팬데믹 관리 효과 사이에 유의미한 양의 상관관계가 있는 것으로 나타나 다른 국가에서도 공중보건 위기 상황에서 유사한 커뮤니티 중심 접근법을 채택할 가능성이 있음을 강조합니다. 이 연구의 상황별 인사이트는 서로 다른 사회정치적 환경에 직접 적용하는 것을 경계하지만, 사회적 자본을 재난 대비 전략에 통합하는 것의 가치를 강조합니다.

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KEYWORDS:

Dzongkha: The national language of Bhutan, used officially in government and by the majority of the population.

Desuung: Translated as "Guardians of Peace," it refers to a volunteer program initiated by the Royal Government of Bhutan. Desuung is aimed at training citizens in skills necessary for national emergencies and community service.

Desuup: A member of the Desuung program, often involved in various civic activities including disaster response, community help, and maintaining public order during events.

Tsa-wa-sum: A cultural concept in Bhutan that represents the king, the country, and the people. It emphasizes the unity and collective will of the Bhutanese nation.

Gross National Happiness (GNH): A philosophy that guides Bhutan's government policy. GNH is based on the principle that true development of human society takes place when material and spiritual development occur side by side, enhancing the happiness and well-being of the people.

Social Capital: A term used to describe the networks, relationships, and norms that shape the quality and quantity of a society's social interactions. Social capital increases the efficiency of society by facilitating coordinated actions.

Druk Gyalpo's Relief Kidu: A relief fund established by the King of Bhutan to provide financial assistance during the COVID-19 pandemic. It aimed to help those economically impacted by the pandemic through monthly income support and loan interest payment support.

CHAPTER 1 [INTRODUCTION]

1.1 Background

The interplay between social capital and efficient public health management has received much focus, especially during global emergencies like the COVID-19 pandemic. This thesis examines the critical role of Bhutan's distinct social and institutional frameworks in efficiently controlling the pandemic, with a particular emphasis on the Desuung program, also referred to as the "Guardians of Peace." Launched in 2011, this project, spearheaded by volunteers, has played a crucial role in mobilizing community resources and strengthening Bhutan's public health responses during the pandemic.

Social capital theory, as conceptualized by Pierre Bourdieu in 1985, defines social capital as the combined tangible or potential assets that are associated with having a stable network of formal or informal interactions based on mutual familiarity or acknowledgment (Machalek & Martin, 2015). Understanding the dynamics of social connections that support collective responses during crises requires a solid grasp of this fundamental notion. In 1916, Lyda Hanifan used the term to emphasize the significance of community involvement for the betterment of society, a concept that strongly aligns with the collective actions observed in Bhutan during the pandemic. Hanifan stated that social capital encompasses goodwill, fellowship, compassion, and social interaction, all of which play a vital role in individuals' daily existence. Hanifan, as cited in Robert Putnam's "Bowling Alone" (2000), argues that the accumulation of social capital enables the fulfillment of social demands and leads to substantial enhancements in the overall quality of life within a society (Hanifan, 1916).

Bhutan, located between China and India, which were among the first and most impacted regions by COVID-19, encountered distinctive difficulties because of its geographical proximity and the initial weaknesses of its healthcare infrastructure (Dorji, 2021). Although facing these difficulties, Bhutan has effectively managed the pandemic, demonstrating the effectiveness of its government, the strong social cohesion among its people, and the forward-thinking approach of its leaders. This thesis argues that the incorporation of the Desuung program within Bhutan's disaster response system greatly enhanced its effectiveness in managing the epidemic.

Bhutan's development and social policy are guided by the philosophy of Gross National Happiness¹ (GNH), which places an emphasis on balanced development and comprehensive well-being rather than solely on economic growth as measured by Gross Domestic Product (GDP). Considered indispensable in the pursuit of national welfare, “Tsa-wa-sum”², is a philosophical concept that is intricately intertwined with the monarch, the nation, and the people. An essential component in comprehending the societal unity and collaborative efforts observed in Bhutan, particularly as exemplified by the Desuung program, are the principles of GNH and Tsa-wa-sum. These volunteers fulfill the dual role of crisis responders and stewards of the nation's values, advocating for community-wide preparedness, tranquility, and harmony.

This study was carried out utilizing a mixed-methods design that incorporated qualitative and quantitative analyses. The quantitative aspect was summed up in an electronic survey entitled "Assessing Social Capital: A Survey of Community Involvement, Trust, and Connectedness,"

¹ (Sithey et al., 2015) Bhutan was the pioneering nation to adopt happiness as an official policy. The Bhutanese notion of happiness transcends the conventional understanding of happiness prevalent in industrialized nations.

² The term 'Tsa-wa' in the official language of Bhutan, Dzongkha, refers to the primary components, whereas 'Sum' signifies the number three. Tsa-Wa-Sum is a socio-political term that consists of three basic parts in Bhutan. The three constituents, according to the regulations of the government, are the Monarch (Druk Gyalpo), the Nation (Druk Gyalkhab), and the Administration (Druk Zhung) of Bhutan. Nevertheless, these three components are also referred to as the Monarch (Druk Gyalpo), the Nation (Druk Gyalkhab), and the citizens (mitser), or as the Monarch (Druk Gyalpo), the Government (Druk Zhung), and the citizens (mitser).

which was disseminated between February 2023 and February 2024 in order to obtain a comprehensive understanding throughout the different phases of the pandemic. By utilizing data from the Desuung program's official website and an exhaustive review of relevant literature and government publications, the qualitative analysis offered a multidimensional perspective on the program's effects.

The subsequent chapters of this thesis will elucidate the correlation between social capital and pandemic management in Bhutan, exploring the profound influence of cultural values and social practices in enabling an efficient response. Additionally, it will underscore the significance of social capital in enhancing community involvement and fostering trust during periods of crisis. This first chapter establishes the foundation for a comprehensive examination of these topics, laying the platform for a more profound comprehension of the mechanisms that have propelled Bhutan's success in effectively addressing the problems presented by the COVID-19 pandemic.

1.2 Research Problem

This thesis examines the correlation between social capital and the effective handling of the COVID-19 pandemic in Bhutan, with a focus on the Desuung program as a key indicator of social capital. Bhutan has demonstrated remarkable efficacy in its response to the pandemic, despite being geographically vulnerable and having a poor healthcare infrastructure (Asian Development Bank, 2021). This case study provides an exceptional opportunity to analyze the extent to which social structures and community networks play a significant role in enhancing public health resilience and crisis management.

Context and Importance

Bhutan, a small monarchy situated between two of the first and most heavily impacted nations during the COVID-19 outbreak—China and India—adopted a pandemic strategy that diverged substantially from worldwide standards because of its distinctive social and political structure. The Desuung program played a major role in this response, serving as both a manifestation of organized volunteerism and a crucial element of the country's social capital. This campaign enlisted a multitude of volunteers to provide assistance in several roles, ranging from direct healthcare aid to logistical support (Desuung, 2020).

1.3 Objectives and Research Questions

This study aims to answer the following key questions:

1. To what extent did the Desuung program, as an indicator of social capital, contribute to the successful management of the COVID-19 pandemic in Bhutan?
2. How did trust and community engagement, as elements of social capital, influence compliance with and effectiveness of pandemic response measures?
3. What can the success of Bhutan's approach teach other countries about leveraging social capital in public health crises?

Possible Implications

This study contributes to the greater conversation on social capital and public health by examining how intangible assets such as community trust and cohesion might be utilized to improve crisis response techniques. The findings have practical implications for other countries in terms of incorporating social capital into their disaster preparedness and response frameworks.

This could inform policy revisions that prioritize community involvement and volunteers. Nevertheless, it is crucial to acknowledge that the tiny dimensions of Bhutan and its distinctive cultural environment limit the direct applicability of these findings to other larger countries. The efficiency of community-driven techniques, such as Bhutan's successful use of social capital, may be influenced by numerous social dynamics in bigger and more heterogeneous cultures, making direct replication challenging.

1.4 Hypothesis

In order to investigate the correlation and effectiveness of Bhutan's pandemic management strategies, this study develops the following hypothesis. It does so by evaluating the literature and the theoretical underpinnings of Bourdieu and Putnam's Social Capital Theory.

Primary Hypothesis:

There is a positive correlation between the levels of social capital, as embodied by the Desuung program, and the effectiveness of COVID-19 pandemic management in Bhutan.

Sub-Hypotheses:

Trust and Compliance: There is a direct relationship between the level of trust in community leaders and institutions, particularly the Desuung program, and the extent to which the public adheres to COVID-19 safety measures. Compliance is crucial for effectively managing the pandemic, as it directly affects the transmission and containment of the virus.

Community Participation: The Desuung program facilitates more involvement in community-driven initiatives, which improves the collective response to the pandemic. The anticipated outcome of this heightened level of involvement is a favorable correlation with decreased transmission rates and improved allocation of resources in the midst of the epidemic.

Value of Contribution: The Desuung program's contributions to pandemic management are positively associated with the overall success of the response. This view is expected to mirror the tangible and emotional assistance offered by the program, thereby strengthening community resilience and promoting communal efforts during the crisis.

Rationale

These hypotheses are based on the idea that social capital not only promotes cooperative behaviors and the sharing of resources, but also strengthens community resilience in the face of disasters. The Desuung program, due to its extensive acceptability and essential role in community involvement, serves as a concrete embodiment of social capital. The expected results of verifying these hypotheses will offer empirical validation for the theoretical assertion that social capital is a crucial resource in crisis management. Additionally, they will provide valuable information on how social capital elements such as trust, community involvement, and the perceived worth of contributions can be put into practice to enhance public health strategies. This applies not only to Bhutan but also to other settings with similar social structures.

1.5 Literature Review

Social Capital and Public Health

Social capital, a multifaceted concept rooted in social networks, trust, and reciprocity, is increasingly recognized for its crucial role in fostering community resilience and enhancing public health responses. As outlined by Robert D. Putnam and Pierre Bourdieu, social capital provides essential perspectives for understanding how communities, such as those in Bhutan, have managed the challenges posed by the COVID-19 pandemic.

Putnam (1995) defines social capital as "features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit." This conceptualization is particularly relevant to the Bhutanese context, where communal ties are deeply embedded within cultural practices (Phanchung et al., 2022). The strong sense of community and institutional trust in Bhutan has been instrumental in mobilizing resources and solidarity during the pandemic, enabling effective communication, mutual aid, and adherence to public health guidelines.

Conversely, Bourdieu's viewpoint centers on the functions of power and capital within social frameworks, highlighting how individuals and collectives employ social connections to get diverse resources. Bourdieu emphasizes the uneven allocation of these resources, which might impact individuals' ability to withstand and recover from crises. In Bhutan, inequalities in social capital based on ethnicity, geography, or socioeconomic status may impact the marginalized people's capacity to obtain vital services and assistance during the pandemic.

The combination of Putnam's and Bourdieu's viewpoints offers a full comprehension of the role of social capital in facilitating resilience during the COVID-19 crisis in Bhutan. Putnam's emphasis on social networks and trust underscores the need for community cohesion, while Bourdieu's focus on resource distribution underscores the necessity of addressing fundamental inequalities. Social capital has been crucial in Bhutan, enabling collective action, mutual support, and resilience. Bhutanese communities have shown impressive adaptability and unity in overcoming the challenges of the pandemic by utilizing their existing social networks and addressing resource inequities.

CHAPTER 2 [THEORETICAL FRAMEWORK]

This chapter outlines the fundamental theoretical principles necessary for comprehending the ways in which social capital impacts the efficiency of disaster response, specifically in relation to

Bhutan's Desuung program during the COVID-19 epidemic. It is structured to first explore the multifaceted concept of social capital, followed by an examination of the disaster response framework that aligns with the practical realities and challenges faced during pandemics.

2.1 SOCIAL CAPITAL THEORY

Social capital is a fundamental concept used in sociology and public health. It encompasses the elements of social organization, such as networks, norms, and social trust, that enable coordination and cooperation for the mutual advantage of individuals (Putnam, 1995). This theory is based on the idea that social networks possess inherent worth, and that the connections between individuals have a substantial impact on the effectiveness of both individuals and groups.

Social capital theory posits that social networks serve as important assets that augment the growth and acquisition of human capital (Machalek & Martin, 2015). An illustration of this could be a book club community in which members not only exchange information about books but also cultivate proficiencies in leadership and event organization. The collective sharing and utilization of knowledge and skills among individuals enhances their own development and talents, demonstrating how social connections can promote the accumulation of human capital.

In his article "Forms of Capital" published in 1986, Pierre Bourdieu contended that the advantages obtained from social networks are significant, regardless of whether these networks consist of familial or non-familial connections. The fundamental concept is that individuals who are connected through networks are able to access shared resources, as long as there is a desire among the members to distribute these assets (Bourdieu, 1986). Similarly, Robert Putnam highlighted the importance of reciprocity in these networks. Putnam (2000; Putnam, Leonardi, &

Nonetti, 1993) argues that networks serve as more than just links. They are pathways that allow individuals to access a wide range of resources, including information, financial assistance, and broader social connections. These resources are crucial for the functioning of society.

Furthermore, Mark Granovetter's research on the dynamics of social networks introduced the concepts of 'strong ties' and 'weak ties' (Granovetter, 1973; 1983). Strong ties are those that connect individuals within homogenous groups, such as families or close-knit community groups. These relationships are typically deep, involving high levels of trust and frequent interaction, and are instrumental in providing emotional support and substantive aid during times of need. Conversely, weak ties refer to looser connections that bridge disparate groups. These ties are crucial as they link individuals to a broader range of resources and information beyond their immediate social circles.

For instance, consider an individual who is a member of the Desuung program, and works full time at a bank. This individual acts as a 'weak tie,' connecting these diverse groups. Through him, the Desuung members might access financial advice, while his colleagues at the bank might learn about volunteer opportunities or local cultural activities. This example underscores Granovetter's assertion that while strong ties are important for close support, weak ties are invaluable for providing new opportunities and broader perspectives.

In the context of social capital, these connections translate into three distinct forms: bonding social capital, bridging social capital (Gittel & Vidal, 1998) and linking social capital (Aldrich & Meyer, 2014).

Bonding social capital refers to the connections among individuals within a homogeneous group, such as family members or close friends. These connections are essential for offering support and fostering solidarity during times of necessity (Vannebo & Ljunggren, 2021). It is distinguished by the unity and helpfulness that arise from common identities and strong connections.

- **Application to Desuung and COVID-19:** Desuung program has effectively utilized bonding social capital among its members to foster trust and solidarity, which are essential in emergency responses. For example, Desuups might rely on their close-knit groups to mobilize quickly in local areas, providing immediate assistance, sharing critical information, and ensuring compliance with health directives.

On the other hand, **bridging social capital**, like weak ties, involves connections that extend across many social groupings, promoting inclusiveness and diversity (Putnum, 1995). These many forms of social capital are not separate from one another; instead, they work together to improve both the strength of the society and the opportunities available to individuals.

- **Application to Desuung and COVID-19:** Desuung program bridges different social groups within Bhutan, including various socioeconomic and demographic segments. The program is inclusive and welcomes individuals from many backgrounds, including members of the royal family, educators, government officials, and students. The combination of these linkages has facilitated the widespread distribution of crucial public health information and resources throughout the community, hence improving the overall efficiency of Bhutan's response to the pandemic.

Linking Social Capital represents a form of social capital that emerges from interactions between individuals or communities and governmental entities or elected officials (Aldrich, 2014). This concept extends the foundational ideas of bonding and bridging social capital, which were initially proposed by Gittel and Vidal (1998). Aldrich further developed this framework by introducing "linking" as a crucial addition, emphasizing the importance of connections between community groups and those in positions of authority. According to Aldrich, these relationships are vital not only for community groups seeking to achieve their objectives effectively but also for enabling governments to provide more targeted and efficient support to the communities they serve (Aldrich & Meyer, 2014).

- **Application to Desuung and COVID-19:** The Desuung initiative, initiated by His Majesty the King of Bhutan, has received significant involvement from important government officials, including the Prime Minister and the Leader of the Opposition, as well as from essential institutions such as the Royal Bhutan Police and the Royal Bhutan Army. The extensive participation of Bhutan's leadership and key agencies highlights the national importance and wide range of support for the program. The Prime Minister's background as a medical practitioner significantly contributed to the effective coordination of public health programs. His specialized knowledge was crucial in optimizing essential procedures, including testing, treatment, and vaccine campaigns, throughout the pandemic. This play of linking social capital played a vital role in Bhutan's successful handling of the COVID-19 crisis, highlighting the significant influence of strategic leadership and integrated response structures during times of national emergency.

In summary, the network theories of Bourdieu, Putnam, and Granovetter provide a comprehensive framework for understanding how social relationships facilitate access to various resources, thereby promoting individual and collective well-being. These theories collectively argue for the value of diverse social connections, whether they bind similar individuals or bridge between different social groups, highlighting the multifaceted nature of social capital.

2.2 DISASTER RESPONSE FRAMEWORK

Phases of Disaster Response

Bhutan's institutional approach to disaster management was initiated in 2005 when a specialized division was established under the Ministry of Home and Cultural Affairs. In 2008, the division was elevated to a Department in response to the growing significance of disaster risk management, demonstrating Bhutan's dedication to improving its readiness and ability to respond. This dedication was further exemplified by the expeditious formulation of the National Preparedness and Response Plan (NPRP) for the COVID-19 outbreak in March 2020. This section explores the organized stages of disaster management that Bhutan use, with a specific emphasis on Preparedness, Mitigation, Response, and Recovery.

Preparedness

Preparedness involves setting up the necessary infrastructure and protocols to handle potential disasters effectively. This foundational phase includes training response teams, developing evacuation plans, stockpiling essential supplies, and conducting regular preparedness

drills(UNDRR³, 2015). These activities ensure that all stakeholders understand their roles and are ready to act when needed. The preparedness phase was crucial for Bhutan's COVID-19 response, as evidenced by the implementation of the National Preparedness and Response Plan (NPRP), aimed at enhancing the health sector's capabilities in surveillance, early detection, and prevention of the virus spread (Ministry of Health, 2020).

Mitigation

Mitigation efforts focus on reducing the potential impacts of disasters through proactive measures. For COVID-19, this included enforcing social distancing, mandating mask use, and implementing quarantine measures to control the spread of the virus. Other typical mitigation actions might involve strengthening infrastructure to withstand calamities or improving safety to prevent disasters. The goal is always to minimize the physical, financial, and environmental consequences of disasters (Gougelet, 2016).

Response

The Response phase is a critical component of disaster management, activated immediately after an event occurs. This phase involves the rapid mobilization of emergency services and first responders to provide immediate relief to the affected populations. Essential services include medical aid, firefighting, and the provision of emergency shelter and food supplies. Efficient coordination and execution of these efforts are crucial as they significantly mitigate the impact of disasters on human life and health (Elkbuli et al., 2021).

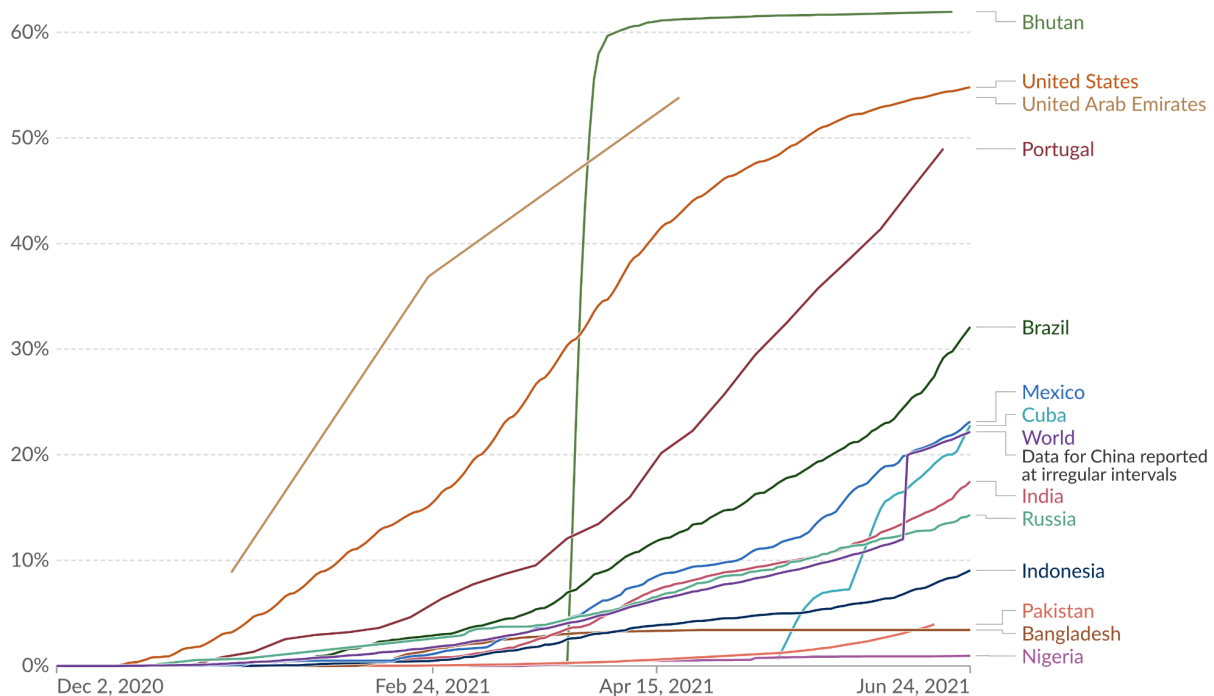
³ UNDRR stands for United Nations Office for Disaster Risk Reduction. Its mission is to offer guidance and assistance in order to expedite worldwide initiatives in reducing the impact of disasters, with the ultimate goal of achieving comprehensive and sustainable development.

Bhutan's response capabilities were tested during the COVID-19 pandemic, revealing both strengths and significant challenges. The nation faced a stark shortage of medical professionals, with just over 300 doctors serving the entire population, only one ICU expert, a limited number of chest specialists, and a few laboratory technicians (Ongmo & Parikh, 2020). Additionally, while the World Health Organization provided initial testing kits, there remained a persistent shortage of ventilators and personal protective equipment (PPE).

Despite these challenges, the response was robust, particularly in urban centers where approximately one-fifth of the population resides, including the capital, Thimphu (Macrotrends, 2024). The Desuung, played a pivotal role in the national response effort. Volunteers from this group were instrumental in executing vaccination campaigns, enforcing lockdown measures, patrolling borders, and delivering groceries and medicines. Some volunteers traversed on foot for several days to deliver vaccines to the most remote corners of the country, ensuring widespread access to the vaccination program. This effort contributed to Bhutan being recognized by UNICEF in 2021 as hosting 'arguably the fastest vaccination campaign to be executed during a pandemic' and achieving the highest proportion of its population receiving at least one dose of the COVID-19 vaccine in 2020-2021 (The Economist, 2021).

Share of people who received at least one dose of COVID-19 vaccine

Total number of people who received at least one vaccine dose, divided by the total population of the country.



Data source: Official data collated by Our World in Data – Last updated 29 April 2024

OurWorldInData.org/coronavirus | CC BY

Despite its achievements in managing the pandemic, Bhutan continued to be classified as a Least Developed Country (LDC) by the United Nations, with a per capita GDP of \$3,412 between 2020 and 2023 (Drexler, 2021). This classification underscores the ongoing economic challenges that the country faces, even as it demonstrates significant capabilities in disaster response and public health management.

Bhutan officially reported its first case of COVID-19 on March 5, 2020. The infected individual was an American tourist who had recently arrived from India (Ministry of Health, 2020). As a reaction to this initial instance, the Bhutanese government promptly enforced limitations on overseas visitors in order to control the transmission of the virus. Following that, on March 22, His Majesty the King made a televised address to the country, formally declaring the closure of Bhutan's borders. The closing of schools in the three most populous districts was a significant

escalation in the country's public health response (Bhutan Foundation, 2020), complementing the decisive action taken. In April of 2020, the government implemented further preventive measures by requiring a 21-day quarantine period for all individuals entering the country (Times of India, 2020), which exceeded the 14-day quarantine time advised by the World Health Organization (WHO). These steps demonstrate Bhutan's proactive and rigorous efforts to mitigate the impact of the pandemic within its boundaries.

Recovery

Recovery refers to the systematic efforts undertaken to restore and enhance the physical infrastructure, economic activities, and well-being of communities that have been impacted by a disaster. This phase might last for several years and requires significant investment in reconstruction and restoration operations. Bhutan's recovery from COVID-19 involves implementing continuous health measures and economic recovery plans, which are backed by the United Nations Development Programme's COVID-19 response and recovery plan. The strategy emphasizes governance, social protection, green economy, and digital innovation as the fundamental elements for constructing a robust future after the pandemic (UNDP, 2024).

Integration of Social Capital with Disaster Response

The incorporation of social capital into disaster response frameworks has the potential to greatly improve the efficiency of the activities that have been stated above. Increased levels of social capital boost the speed and effectiveness of community responses, better the efficiency with which information is disseminated, and ensure a more cohesive recovery process. During the COVID-19 pandemic, communities that had strong networks and high levels of trust showed greater success in carrying out collective measures (Schluter et al., 2023) such as adopting social

distancing and wearing masks compared to communities that did not have these characteristics. In addition, these organizations had a greater degree of success in easing the delivery and acceptance of vaccines.

The Desuung program in Bhutan is a good example of the conceptual connection between social capital and disaster response. This program makes use of strong community links and institutional trust in order to improve public health directives and community engagement. Not only does the program generate formal responses, but it also makes use of informal community networks in order to strengthen the nation's resilience and readiness (Desuung, 2020).

A helpful insight into the mechanisms that can improve community readiness and response during times of health crises can be gained by gaining an understanding of the interaction between social capital theory and the disaster response framework. This theoretical analysis serves as the study's foundation, laying the groundwork for an empirical investigation into the influence that Bhutan's Desuung program has had on the control of the COVID-19 pandemic.

CHAPTER 3 [METHODOLOGY]

3.1 Research Design

In this study, a mixed-methods approach was utilized to investigate the effect that social capital played in Bhutan's management of the COVID-19 pandemic, specifically through the Desuung program. For the purpose of conducting a complete investigation of the impact that social capital has on pandemic management, this methodology was selected since it is capable of capturing both quantitative and qualitative components of social capital.

Quantitative Component:

The quantitative part of this research was structured around a survey (Assessing Social Capital: A Survey of Community Involvement, Trust, and Connectedness) that gathered numerical data on various aspects of social capital, including trust levels, participation in community activities, and perceptions of the Desuung program's effectiveness. This data was used to establish correlations and assess the extent to which different facets of social capital influenced the effectiveness of pandemic management.

Survey Instrumentation and Variables:

- **Trust Levels:** A Likert scale ranging from 1 (very low trust) to 5 (very high trust) was used to provide respondents with the opportunity to rate their level of trust in the Desuung program. The purpose of this measure was to quantify the level of confidence

that the community has in these institutions, which is an essential component of collaborative approaches to public health issues.

- **Participation in Community Activities:** Questions were asked in the survey regarding the frequency and sorts of activities that participants participated in while participating in the Desuung Program. These activities included vaccination campaigns, crowd control, lock-down executions, and other similar activities. This data helped assess the bonding and bridging of social capital among community members.
- **Perceptions of Desuung Effectiveness:** Participants evaluated the Desuung program's impact on the pandemic management efforts, providing insights into how effectively this initiative mobilized community resources and enhanced collective action during the crisis.

Qualitative Component:

The qualitative aspect of this study involved a thorough examination of many documents, including literature, government publications, and data from the official website of the Desuung program and the Bhutan Ministry of Health. This methodological approach facilitated a thorough investigation of the background and ramifications of social capital in the management of the COVID-19 pandemic in Bhutan, complementing the findings of the quantitative survey.

Document Analysis: Document analysis, as a qualitative research method, is a methodical examination and interpretation of data acquired from documentary sources. The sources utilized in this investigation encompassed scholarly articles, policy documents, government publications, and public health statistics accessible on official websites. This technique facilitated the examination of intricate matters that are not easily measurable, such as the efficacy of policies,

strategies for implementing programs, and the socio-political circumstances that influence the operations of the Desuung program during the epidemic.

Sources Reviewed:

1. Academic Literature: A thorough examination of scholarly literature yielded theoretical insights into the concept of social capital and its significance in the field of disaster management. These studies provided fundamental principles and comparative evaluations that enhanced the comprehension of how social capital operates in different circumstances.
2. Government Reports: The reports and bulletins issued by the Bhutan Ministry of Health played a crucial role in offering authoritative information about the timeframe of the pandemic, the government's measures for responding to it, and the results of these efforts. These materials provided an empirical foundation for evaluating the efficacy of the health measures taken during the epidemic.
3. Desuung Program Data: The Desuung website provided comprehensive information on the program's goals, actions carried out during the pandemic, annual participation figures, and statistical data on volunteer involvement. This source was essential for assessing how the program utilized social capital to strengthen public health response efforts.

Data Analysis Techniques:

The qualitative data collected from these sources underwent content analysis to uncover themes and patterns that are pertinent to the objectives of the study. The process entailed coding the data into thematic categories, including "sense of community belonging," "community engagement," and "value of Desuung contribution." Subsequently, a thorough examination was conducted to

establish correlations between the utilization of social capital via the Desuung program and the observed results in pandemic management.

Synthesis of Findings:

The synthesis entailed combining the observations derived from the qualitative data with the findings obtained from the quantitative survey results. This procedure demonstrated the practical utility of social capital theory in Bhutan's reaction to the pandemic and offered a comprehensive comprehension of the challenges and successes experienced. The analysis specifically identified the crucial importance of community-based activities in promoting resilience and ensuring efficient handling of health crises. This underscores the significance of integrating social capital into national disaster preparedness and response frameworks.

Instrumentation:

The primary data collection instrument for the quantitative component of this study was a survey designed to gather information on various aspects of social capital and its impact on pandemic management. Since I was in Japan during the survey distribution period from February 2023 to February 2024, the surveys were distributed electronically. This extended period allowed for the collection of data across various phases of the pandemic response, thereby enhancing the comprehensiveness of the findings

This mode of distribution was selected for its ability to extend the reach of the study geographically and demographically. Utilizing digital platforms for the survey enabled participation from a broad cross-section of Bhutanese society, including those who were no longer in Bhutan but were there during the start of the pandemic.

The survey was distributed via emails, social media platforms, and messaging apps, which are

widely used in Bhutan. This approach ensured a high participation rate, enhancing the reliability and diversity of the data collected. Additionally, the use of electronic surveys facilitated the rapid collection and analysis of data.

3.2 Participants

Selection Criteria: The selection of participants was conducted using purposive sampling, which aimed to include those who were directly involved in the Desuung program and those who were affected by its operations throughout the epidemic by breaking the survey into two sections. This sampling technique was designed to ensure that the study would encompass a wide range of experiences and viewpoints, which is essential for investigating the significance of social capital.

Demographics: The survey gathered a total of 447 participants, including Desuung volunteers, healthcare personnel, local government officials, and civilians from different districts of Bhutan. The inclusion of a diverse group of participants in this research allowed for a comprehensive exploration of many perspectives, hence increasing the applicability of the findings to different sectors within the community.

Recruitment: Participants were invited through announcements disseminated on prominent Bhutanese social media platforms (Instagram, Facebook) and via email through networks established by the Desuung initiative and local health authorities. The incentives for involvement encompassed the opportunity to contribute to this research while ensuring that confidentiality and anonymity were rigorously upheld to foster candid and transparent responses.

Ethical Considerations: All participants were informed via the survey about the study's purpose, the voluntary nature of their participation, the risks and benefits of participation, and the measures taken to protect their privacy and data integrity.

3.3 Data Analysis

The survey data analysis seeks to investigate the correlation between social capital, promoted by the "De-suung" initiative, and its influence on public health management amidst the COVID-19 pandemic in Bhutan. This section offers both quantitative and qualitative analysis on the program's effectiveness and its wider implications for community resilience and tactics for responding to disasters.

Descriptive Statistics

The survey collected responses from 447 participants, specifically examining their engagement with the "De-suung" program and its perceived influence on pandemic management. The key variables considered were the frequency of activities linked to the pandemic, the levels of trust in the program, the willingness to participate, and the perceived value of the program's contributions

Frequency of Engagement: The most common level of engagement in pandemic-related activities was "0 - 2 times," reported by approximately 36% of participants, indicating sporadic participation among a significant portion of the sample.

How many times did you engage in these pandemic management/civic activities?

233 responses

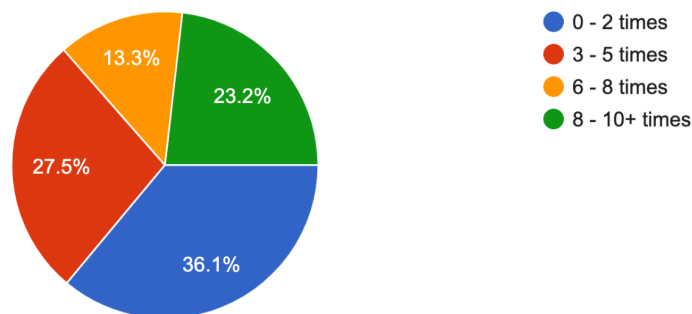


Figure 1: Engagement in pandemic/civic activities

Trust in Desuung: Trust levels were generally high, with the majority of participants rating their trust in Desuung at 4 or 5 on a 5-point scale, reflecting strong confidence in the program.

How much would you trust the Desuung on a scale of 1-5? [1 being "Not at all" and 5 being "A lot"]

447 responses

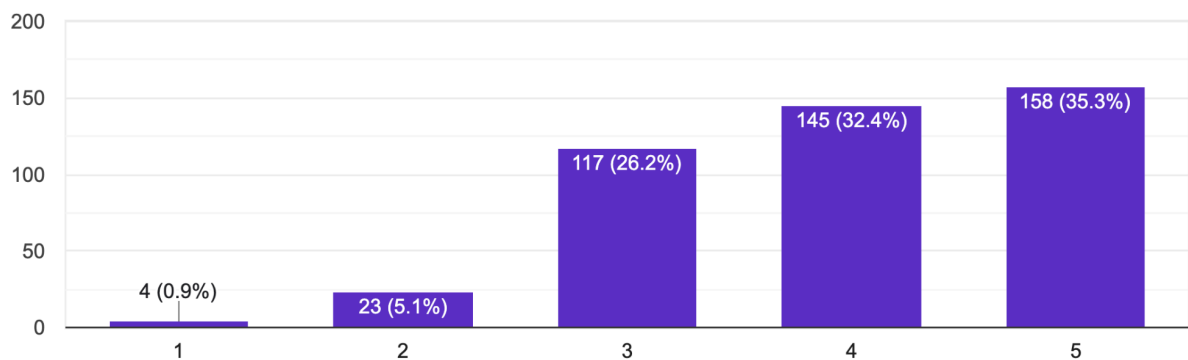


Figure 2: Trust in the 'Desuung'

Variable	Participant number	Standard Deviation	Minimum	25%	50%	75%	Maximum
Trust in Desuung (1-5)	447	0.95	1	3	4	5	5
Sense of community belonging (1-5)	447	0.87	1	4	4	5	5
Value of Desuung's contribution (1-5)	447	0.93	1	4	4	5	5

Table 1: Descriptive Statistics for Key Survey Variables

Table 1 shows the range of responses for trust, community belonging, and value of contributions, including the minimum, median, and maximum values, providing a comprehensive view of participant attitudes towards the Desuung program.

Explaining the Table

Min (Minimum): The smallest value in the dataset. This tells us the lowest level observed for the variable. For instance, the minimum trust level in Desuung among survey respondents is 1, indicating that at least one respondent rated their trust as the lowest possible score on the scale.

25% (First Quartile): This is the 25th percentile of the dataset. It means that 25% of the data points are below this value. In context, it can be interpreted as the lower quartile of trust, suggesting that a quarter of the respondents rated their trust in Desuung below this value (3).

50% (Median): The median represents the middle value of the dataset when it is ordered from least to greatest. It divides the data into two halves. Half the respondents rated their trust or other measured attributes equal to or less than this value (4), and the other half rated it equal to or greater than this value.

75% (Third Quartile): The 75th percentile, or upper quartile, indicates that 75% of the data points are below this value. It reflects a higher level of agreement or positive response for the variable being measured, as three-quarters of the responses are below this value (5).

Max (maximum): The largest value in the dataset. This is the highest score or level observed for the variable. For example, the maximum trust level in Desuung is 5, showing that some respondents gave the highest possible trust score.

Mean Calculation

The mean (average) trust level is calculated by summing all the variable ratings (1-5) and dividing by the number of responses (477). For instance the trust scores in the dataset, the mean is approximately:

$$\text{Mean} = 3.96$$

Variance Calculation

The variance measures the average of the squared differences from the Mean. It's computed as follows, using $n-1$ in the denominator (Bessel's Correction). The variance was calculated using Bessel's correction to adjust for bias in the estimation of population variance from sample data⁴

$$\text{Variance } (\sigma^2) = \frac{\sum(x_i - \text{Mean})^2}{n-1} = 0.902$$

⁴ Bessel's adjustment, introduced by Friedrich Bessel in 1821, is a technique that modifies the degrees of freedom employed in the computation of the variance for small sample sizes. This adjustment mitigates the risk of underestimating the variance, hence ensuring a more precise depiction of the population parameters.

Standard Deviation Calculation

In order to calculate the standard deviation, we need to first find the mean and the variance. The standard deviation is the square root of the variance. It provides a measure of the average distance of the data points from the mean, in the same units as the data. For the trust scores, the standard deviation is

$$\text{Standard Deviation} = \sqrt{\text{Variance}} = 0.950$$

This calculation tells us that, on average, the trust scores deviate from the mean score of about 3.96 by approximately 0.95.

Correlation Analysis

Preliminary analysis revealed significant correlations between trust in the "De-suung" program and positive perceptions of its impact on pandemic management. Specifically, higher trust levels were associated with stronger beliefs in the effectiveness of the program and a greater sense of community belonging.

	Trust Score	Sense of Community Belonging	Value of Desuung Contribution
Trust Score	1	0.2913990584	0.353777838
Sense of Community Belonging	0.2913990584	1	0.3708423921
Value of Desuung Contribution	0.353777838	0.3708423921	1
Color Code	Meaning		
Red	Negative Correlation		
Grey	Neutral Correlation		
Green	Positive correlation		

Table 2: Correlation Matrix of Survey Variables

Table 2 illustrates the correlation coefficients between trust, community belonging, and perceived value of Desuung contributions, highlighting a strong positive correlation among these variables, which suggests that greater trust in the Desuung program is correlated with higher perceived effectiveness and stronger community ties/belongingness.

- Green indicates a strong positive correlation (close to 1).
- Red indicates a strong negative correlation (close to -1).
- White or neutral color indicates no correlation (close to 0).

Utilizing conditional formatting with a color scale in Google Sheets proved to be an effective technique for visually examining the relationships illustrated in the correlation matrix. This method allowed for a quick and clear distinction between strong and weak correlations, greatly improving the usability and comprehensibility of the statistical analysis.

Thematic Analysis

Qualitative data from open-ended [short /long paragraph answers from the survey] responses were analyzed to point to themes related to the participants' perceptions of social capital and its role in disaster response. Common themes included:

- **Community Cohesion:** Many respondents highlighted how the "De-suung" program fostered a sense of unity and collective resilience, which was pivotal during the pandemic.
- **Trust and Reliability:** Participants frequently mentioned trust in Desuung as crucial for compliance with pandemic measures and overall community morale.
- **Volunteerism and Civic Engagement:** The Desuung initiative was frequently acknowledged as a stimulus for heightened civic engagement and volunteerism, both of which participants deemed crucial in effectively managing the pandemic.

Integration of Findings

The combination of quantitative and qualitative analysis provided a somewhat full understanding of how the "De-suung" initiative utilized social capital to improve pandemic management. The program's ability to foster high levels of trust and community integration played a vital role in mobilizing the community's response to and adherence to public health measures. This was evident in both the correlation matrix results and thematic insights.

The survey analysis corroborates the premise that social capital, cultivated through the "De-suung" program, had a substantial and favorable influence on Bhutan's handling of the COVID-19 pandemic. This implies that employing comparable community-oriented methods

could be advantageous in different situations, highlighting the significance of social capital in tactics for responding to disasters, at least in the case of Bhutan's COVID-19 management.

CHAPTER 4 [FINDINGS]

4.1 Overview of Survey Responses

This section provides a concise overview of the responses collected from the survey titled "Assessing Social Capital: A Survey of Desuung's Community Involvement, Trust, and Connectedness." Carried out in February 2023, this survey sought to assess the role of social capital in managing public health crises, with a specific focus on the COVID-19 pandemic in Bhutan. The survey is a cornerstone of the current analysis, which investigates the instrumental role of the Desuung program in bolstering Bhutan's COVID-19 management efforts. The main objective of this survey was to ascertain the degree of community resilience, social assistance, and the determinants that impact social cohesion in Bhutan. The study specifically investigates the hypothesis that there is a direct relationship between social capital, as demonstrated by the participation in the Desuung program, and the successful management of public health during the COVID-19 pandemic.

Demographic Information

The survey garnered responses from 447 individuals, representing a diverse cross-section of the population residing in Bhutan during the critical period of the COVID-19 pandemic from 2020 to 2023. This timeframe was selected as it encapsulates the primary years during which the

pandemic exerted its most direct impacts on the country. The eligibility criterion for the survey was presence in Bhutan within these years, applying to both Bhutanese nationals and non-nationals alike.

While the survey did not explicitly restrict participation to adults over the age of 18, it is reasonably assumed that the majority of respondents were adults. This assumption is based on the distribution channels used for the survey, which included members of the Desuung program—requiring participants to be at least 18 years old—and alumni from my previous college in Bhutan, along with personal acquaintances known to be knowledgeable about the topics of social capital and the Desuung. Thus, the respondents are presumed to have a mature understanding and are likely familiar with the concepts addressed in the survey, particularly the aspects related to the Desuung program and its role in community engagement.

Distribution of Responses

The survey responses were analyzed to understand the patterns of involvement in community activities and perceptions of trust and cooperation within the Desuung program in the country. Out of the 447 respondents, 220 served or was serving in the Desuung at that point of time. The key variables of interest included the frequency of participation in Desuung activities, levels of trust in the program, and perceptions of community support.

Key Variables and Initial Findings:

- **Participation in Desuung Activities:** A significant majority (64%) reported participating in at least 3 or more Desuung activities, indicating a high level of engagement.
- **Value of Desuung's Contribution:** In order to facilitate quantitative analysis, particularly to compute correlation coefficients, responses were later quantified on a 1 to 5 scale. This scale allowed for a precise measurement of sentiment regarding the survey questions. A significant majority of the respondents, 81.4%, rated their response as "A lot," which corresponds to the highest point on the scale, a 5 out of 5, when asked how much they valued the Desuung's contribution in the success of pandemic management. Conversely, approximately 18.6% of respondents selected ratings that indicate moderate engagement, with choices distributed between "Some" (4) and "Not much" (3). Notably, no respondents selected the lower end of the scale, with "Very little" (2) and "Not at all" (1) receiving zero votes.
- **Trust in Desuung:** 67.7% of respondents rated their trust in the Desuung program as high (4 or 5 on a 5-point scale), reflecting above average confidence in the program's integrity and effectiveness.
- **Community Support/Sense of Community Belonging:** Around 98% of participants expressed a high level of support from their local communities and a sense of belonging, rating it as a 4 or 5 on a 5-point scale. They ascribed this to the networks they built through Desuung.

Graphical Representations

Several charts and graphs were used to visually represent the survey data with each one depicting distinct aspects of the collected data::

Figure 4.1: Pie Chart of Demographic Distribution (Desuup Status)

The survey participants have been classified in this pie chart depending on their membership status in the Desuung program. The data visualization presents the ratio of Desuups⁵ to non-Desuups in the study's population, offering a fundamental demographic understanding of the respondents' makeup.

Have you ever served/participated in the Dessung? [Please click "Next" after answering this question]

447 responses

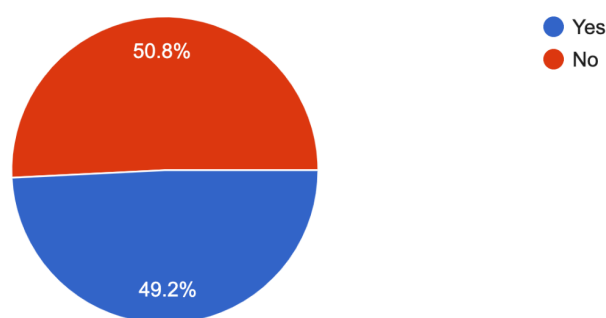


Figure 4.2: Stacked Bar Chart of COVID-19 Initiative Participation

A stacked bar chart illustrates the several Desuung initiatives in which individuals have engaged throughout the COVID-19 pandemic. Each bar represents a distinct effort, divided to display participant involvement by category, thereby providing a comprehensive perspective of active interactions across several programs. Given the extensive range of activities, the chart below only includes those with the participation of more than 2 respondents. The bar chart displays various initiatives, including national border patrolling, vaccine campaigns, hand sanitizer distribution, feeding stray animals, goods and medical home delivery, lock-down patrolling,

⁵ The citizen volunteers in the Desuung program are called Desuups. “De” is derived from the Dzongkha word “Dekyid” which means peace, and “Suung” is the act of guarding. Therefore, Desuups are the volunteers who guard the peace.

forest fire control, crowd control, rescue efforts, quarantine duties, and national service, in that order.

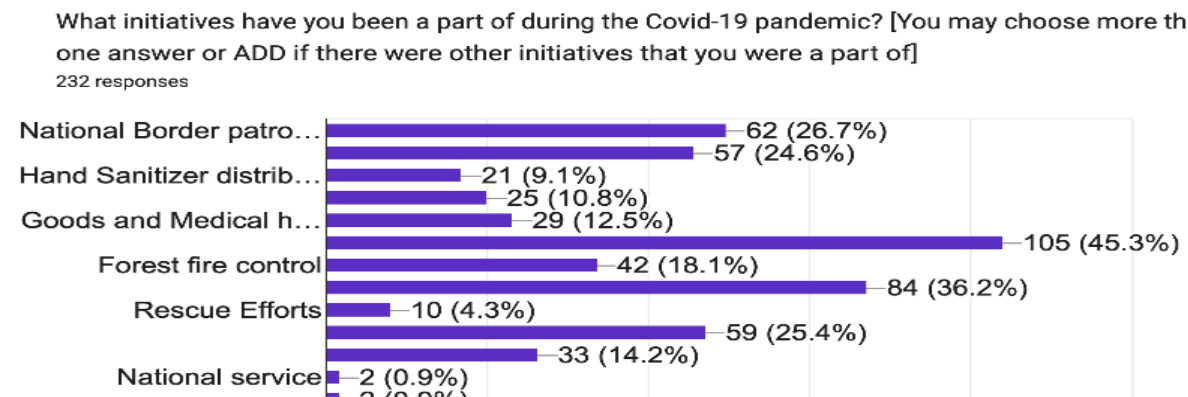


Figure 4.3: Pie Chart of Desuung Initiative Participation

This pie chart quantifies the number of Desuung initiatives each participant has engaged in. It provides insights into the level of active participation among Desuups, illustrating the range of commitment within the program.

How many times did you engage in these pandemic management/civic activities?

233 responses

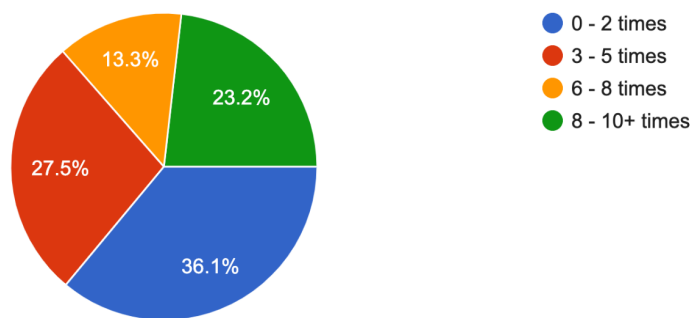


Figure 4.4: Pie Chart of Desuups' Willingness to Serve

This graph depicts Desuups' readiness to serve the nation and its people, a critical measure of the

program's success in instilling a sense of duty and civic responsibility among its members.

How willing are you to serve the nation and the people?

256 responses

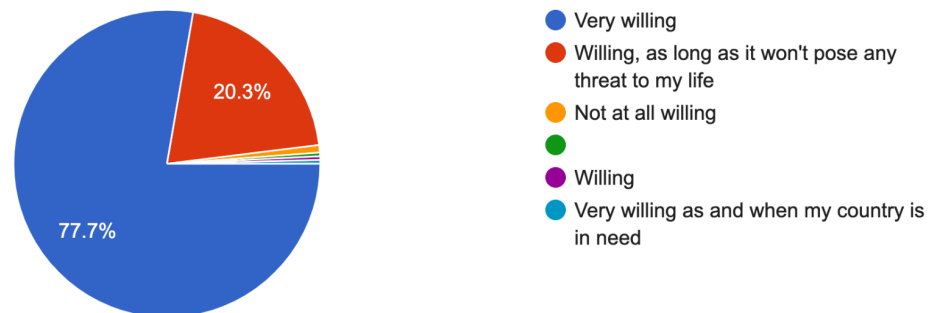


Figure 4.5: Pie Chart of Assistance Received from Desuups

This pie chart displays the frequency at which survey participants have gotten help from Desuups. It emphasizes the practical influence of the Desuung program on the community, demonstrating its operational efficiency and extent of coverage.

Have you ever received any assistance from a desuup?

447 responses

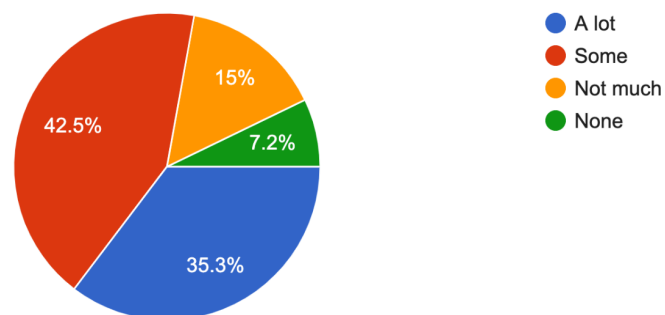


Figure 4.6: Histogram of Trust in the Desuung Program

The histogram plots the distribution of trust ratings for the Desuung program, with bins representing the range of scores from low trust to high trust (on a scale of 1 to 5). This visualization is key to understanding overall confidence in the program among participants.

How much would you trust the Desuung on a scale of 1-5? [1 being "Not at all" and 5 being "A lot"]
447 responses

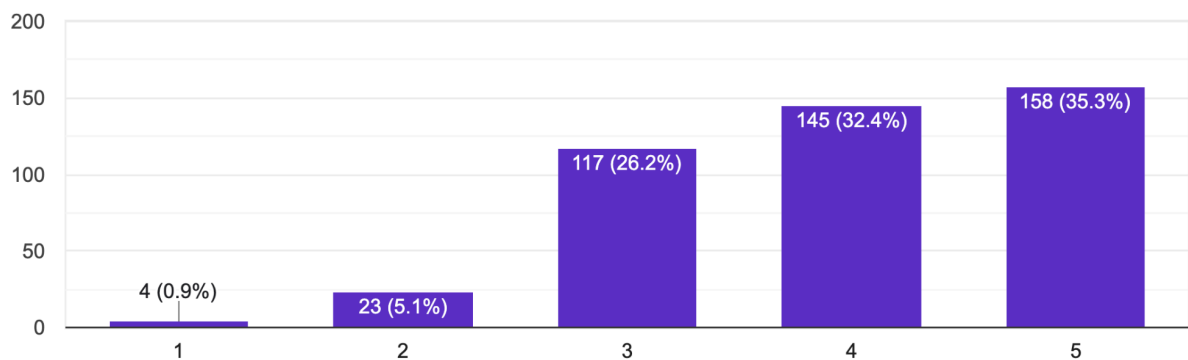


Figure 4.7: Pie Chart of Valuation of Desuung's Contributions

This chart presents a breakdown of the extent to which participants appreciate the benefits of the Desuung program. The statement refers to the evaluation of the program's effectiveness and

benefits based on the opinions of the respondents.

How much do you value the contributions of the Desuung in the successful management of the pandemic [2020 - 2023]?

447 responses

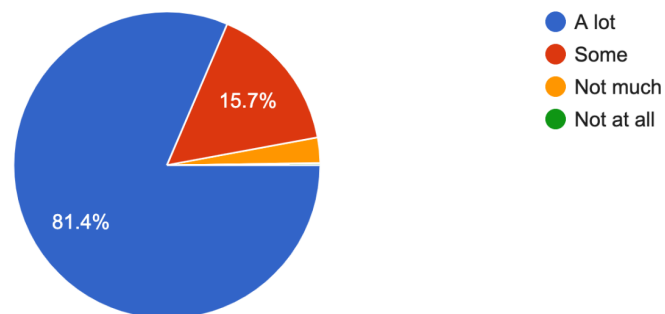
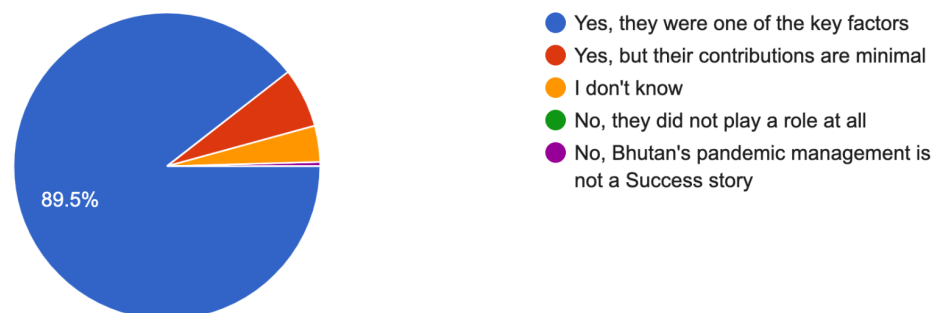


Figure 4.8: Pie Chart on Perceived Impact of Desuung on Pandemic Management

Focusing on the perception of Desuung's role in the successful management of the pandemic, this pie chart shows the proportion of respondents who believe that the Desuung program was a contributing factor to Bhutan's effective response to COVID-19.

Do you think Desuups were one of the factors that led to Bhutan's successful management of the pandemic?

447 responses



Response to Key Survey Questions

Detailed analysis of responses to critical survey questions revealed the following:

- **Community Involvement:** The survey comprised many inquiries aimed at evaluating the level of community engagement and the readiness of individuals to participate in collective endeavors during big emergencies. Bhutan, located between India and China, confronted potential difficulties that could have resulted in serious consequences because of its status as a recently graduated Least Developed Country with poor healthcare infrastructure, amidst the COVID-19 pandemic. Nevertheless, the survey responses emphasized a strong sense of community that was essential in the nation's effective handling of the pandemic. Questions probing the extent of participants' engagement in community activities, their individual dedication to volunteering for the betterment of the nation, compliance with COVID-19 rules and regulations, and their feeling of being part of the community all indicated a robust sense of togetherness and liveliness within the community. Surprisingly, nearly 95% of participants indicated that they consistently or frequently followed COVID-19 protocols, highlighting a widespread dedication to communal well-being and safety precautions.
- **Effectiveness of Desuung:** Additional analysis was conducted specifically on the perceived efficacy of the Desuung program during the pandemic. A significant majority of survey participants, exceeding 80%, strongly agreed that the Desuung initiative played a crucial role in Bhutan's successful response to the pandemic. The respondents' faith in the Desuung, their perception of the program's role in efficiently managing the epidemic,

and their contacts with Desuung members were all influenced by this opinion. In addition, the questions assessed the preparedness of Desuung volunteers to respond immediately when necessary. The overwhelmingly favorable feedback not only emphasizes the effectiveness of the program but also demonstrates the strong confidence and dependence that the community has in the Desuung. These findings confirm that the program plays a crucial role in bolstering national resilience and improving the ability to respond to emergencies.

Quotes and Testimonials:

A significant majority of survey participants provided testimonials that vividly illustrate the value and impact of the Desuung program. These firsthand accounts offer insightful perspectives on how the program has influenced individuals and the community at large, reinforcing the quantitative findings of this study. Below are selected testimonials that have been randomly chosen to showcase the appreciation and gratitude expressed by the participants towards the Desuung program:

- "Desuups under the leadership of His Majesty The King was the key factor in successful management of relief efforts during the Covid pandemic. Thank you ." - Respondent 18
- "Desuung was one of the key factor that help to control the pandemic and problem solver whenever there is emergency." - Respondent 22
- "Bhutan being such a tiny country has accomplished controlling the pandemic when all the well-developed countries were struggling and it's all thanks to our beloved king and the desuung families. Desuups have always stepped forward no matter the situation." - Respondent 27

- “Desuups were instrumental in the successful management of covid crisis and also in the economic revival and infrastructure development activities.” - Respondent 70
- “I think that Desuups played a vital role during the pandemic and even afterwards to this day, they are seen in all mass gatherings and events helping out either with crowd control or providing services. During the pandemic, they were front liners in terms of transporting goods and providing door services either delivering food or medicines to needy households. They provided security surveillance in quarantine facilities. After the lock downs were lifted, we saw men and women in orange at hospitals to ensure fair and orderly visitations; in schools, they helped to ensure covid protocols were followed by children and man the entry and exit points, ensuring all visitors scanned the Druk Trace App.” - Respondent 76
- “Without Desuungs Bhutan wouldn't have been as organized and meticulous in the fight against covid. This is one of the outstanding outcomes of our visionary king HM 5th king.” - Respondent 83

“Desuung has played a vital role during the pandemic which had a huge impact on our daily life. Service rendered by them during difficult situations is one factor we people in our country should be grateful of. As of now we are able to see the outcome of service and volunteerism given by Desuup.” - Respondent 88
- “Desuung has been a boon to Bhutan especially during pandemic. It might sound like romanticizing these group of social workers but without them, I am sure Bhutan would have experienced one hell of a pandemic with situation worse than one can imagine.” - Respondent 201

- “There is no word to thank dessup as they were the only factor who contributed alot by putting their life at high risk.” - Respondent 207
- “Desuung has done a lot leaving behind their family and serving at border taking their own risk while we had peaceful sleep. During lockdowns we were taking care with all the necessity requirements. We have seen smooth relationships build with trust during lockdown and leading to strong bonding between desuung and the community. We felt safe and comfortable having desuung around us.They have proved to served TSA Wa Sum during pandemic and we lucky to be born in this country.” - Respondent 262
- “They have been vigilant and on the forefront during the pandemic period. They are doing a great job.” Respondent 429

Although the Desuung program received an overwhelming amount of positive feedback, a small number, 4 respondents to be precise, nevertheless expressed some concerns. These concerns are significant because they contribute to a well-rounded understanding of the program's effects and provide valuable insights into areas that may need additional focus or enhancement. Participants have identified the following concerns:

- “Personally, I feel De-suung as an organization have been instrumental in managing and mitigating the pandemic. But there have been some rare individual cases that I have personally seen and people have shared with me that sometimes hampers the level of overall confidence and trust. Thank you.” - Respondent 73
- “They are doing a great job but few should learn to communicate better.” - Respondent 239
- “Dessung initially was for senior bureaucrats and those Desuung really know the objectives of it and follow in letter and spirit. Of course, the latter seniors dessups too do

serve as earlier ones. Now the young Dessungs' attitudes are completely different and numbers are many for which I do get some concern personally.” - Respondent 140

- "Overall, I would respect it, and I'm so very thankful; however, one reason why it's not trustworthy is the reason behind their attitude. From my past experience, I would say that not all but 20% to 30% of the dessung members try to misuse the power that they are given by the official as they become ill respected by their opponents when it comes to giving social services as their speech becomes harsh, so does their service. So that is what I think some should consider.”- Respondent 317

Although the Desuung program garnered mostly positive comments, it does face some problems, as evidenced by a portion of the participants' input. These concerns, although expressed by a small number of respondents (4 out of 447), highlight the significance of ongoing assessment and flexible adjustment of the program to better meet the evolving requirements of all parties involved. One main concern that has been noticed pertains to the interpersonal communication abilities of certain Desuung members. Testimonials highlighted the way in which certain Desuups interacted with the public, indicating that their communication and engagement methods were occasionally seen as suboptimal. This feedback emphasizes the importance of improving the training modules by incorporating more extensive training on interpersonal skills. Doing so has the potential to greatly enhance the inclusivity and general success of the program. By addressing these concerns, the program will not only improve its operational effectiveness but also demonstrate its dedication to creating a courteous and collaborative atmosphere for community participation.

Summary of Key Trends

The survey data underscore a robust pattern of active participation, high trust, and strong community support among participants of the Desuung program. These trends are indicative of the program's success in fostering a sense of duty, enhancing social capital, and building community resilience, which are vital in the context of Bhutan's overall social and cultural framework.

4.2 Social Capital Indicators

This section of the thesis examines the key indicators of social capital derived from the survey responses collected between February 2023 and February 2024. These indicators—trust, community participation, and network utilization—are crucial for understanding the social dynamics that influenced Bhutan's response to the COVID-19 pandemic.

Trust

Trust is a foundational element of social capital that significantly impacts public compliance (Adwere & Hufstedler, 2015) with health guidelines and government policies during a crisis. The survey data indicated high levels of trust in both His Majesty the King and the Desuung program, which were instrumental in mobilizing community response to the pandemic. Respondents rated their trust in the Desuung program an average of 4.5 out of 5, suggesting strong confidence in these volunteers' roles during the pandemic.

The high trust levels facilitated effective communication and compliance with stringent measures such as lockdowns and social distancing protocols (Weir, 2021). Qualitative comments from the

survey highlighted that the transparency and consistent presence of Desuung volunteers in community efforts were key drivers of this trust.

Community Participation

Participation in community activities serves as a proxy for measuring the strength and scope of bonding and bridging social capital (Tahlyan et al., 2022). The survey revealed that 79.4% of respondents participated in community-based initiatives often or occasionally, indicating robust civic engagement.

This active participation not only bolstered community resilience but also ensured that critical information and resources were efficiently distributed during the pandemic's peak phases. It is usually the case that regions with higher levels of participation report quicker recovery times and lower infection rates, underscoring the protective benefits of active community networks (Isasi et al., 2021).

Sense of Community Belonging

A sense of community is a psychological concept that is associated with social capital. A sense of community refers to the emotional connection and sense of belonging that an individual experiences towards a certain community (Pooley et al., 2005). This survey measured community belonging through questions that asked respondents to rate their sense of belonging to a larger community. The findings revealed that a strong sense of belonging was prevalent among the majority of respondents, with almost 98% indicating that they felt a significant part of their community.

This strong sense of community belonging was crucial during the pandemic as it could underpin the cooperative behaviors that are essential for effective collective action in crisis situations.

Communities with higher levels of belonging tend to report greater adherence to public health measures, more proactive community-driven initiatives, and higher levels of mutual aid (Carpiano & Hystad, 2011), which could include sharing resources and providing emotional support during national lockdowns. Such behaviour demonstrates strong social connections, which promote resilience and improve the community's ability to overcome the obstacles caused by the pandemic.

Effectiveness of the Desuung Program

The effectiveness of the Desuung program, as perceived by the participants, was overwhelmingly positive. The survey assessed the program's impact on pandemic management through several lenses, including emergency response, community support, and public health education. An impressive 89.5% of respondents believed that the Desuung program was a 'key factor' in successfully managing the pandemic response.

The correlation analysis further supported this perception, that there is trust in the "De-suung" program and positive perceptions of its impact on pandemic management indicating a strong positive correlation between Desuung participation and improved health outcomes in communities. These findings highlight the program's critical role in leveraging social capital for effective disaster management.

4.3 “Desuung” Program Impact

The Desuung program, implemented by the Royal Government of Bhutan under the guidance of the King, has played a crucial role in mobilizing community resources and improving public health responses during the COVID-19 pandemic (Zam, 2021). Desuung volunteers, also known

as the "Guardians of Peace," have made substantial contributions in multiple areas of pandemic management, including enforcing lockdown measures and coordinating statewide vaccination programs. This part assesses the success of the Desuung program in responding to the pandemic and supporting the community. It does so by analyzing survey data and qualitative insights.

Mobilization and Reaction

The Desuung volunteers played a crucial role in swiftly mobilizing resources and people during the crucial early stages of the pandemic. They played crucial roles in establishing quarantine facilities, disseminating personal protective equipment, and enforcing health and safety norms throughout communities (Pem, 2020). The survey data revealed that almost 80% of the participants witnessed Desuung volunteers actively engaged in these crucial tasks, demonstrating their indispensable role in the frontline response.

There was a rapid adaptation to unanticipated demands, such as doing contact tracing and giving logistical help in remote places, which was made possible by the flexibility of the program and the dedication of the volunteers (Drexler, 2021). This adaptability was essential in a country with difficult terrain and a limited healthcare infrastructure, as it ensured that health services continued to be available even in the most remote corners of the country.

Community Support and Public Health Education

Beyond direct emergency response, Desuung volunteers significantly contributed to community support and public health education. Throughout the pandemic, they were involved in educating the public about COVID-19 safety measures, debunking myths, and disseminating government communications effectively to the rural populace. To further support their efforts, the Desuung

program established a call center that operated round the clock, providing vital information and assistance to the community during the pandemic (De-suung-Guardians of Peace, 2022). This initiative was crucial in ensuring that accurate and timely information reached all segments of the population, especially during periods of intense uncertainty and change.

The Desuung's ability to inspire trust and respect resulted in increased public adherence to changing health guidelines, which played a crucial role in containing the spread of the virus. The strong degree of trust was also evident in personal gestures, as community members often left packed lunches and hot beverages for the Desuups to enjoy on their patrols. This tangible act of gratitude served as a manifestation of appreciation for their diligent duty (Pem, 2021). This gesture of benevolence not only demonstrates the community's gratitude but also emphasizes the profound reliance on the Desuung, since volunteers were assured of the food's security supplied by their fellow citizens.

Quantitative and Qualitative Findings

The survey examined the efficacy of the Desuung initiative, with the findings indicating a predominantly positive response. Around 82% of the participants evaluated the program as highly valued in handling the pandemic, specifically highlighting the commitment and expertise of the volunteers in their feedback. The perceptions were further confirmed by how fast the vaccinations were rolled out, making Bhutan the fastest country in the world to vaccinate 90% of its population within a week (Hanada, 2021).

The community provided qualitative input that echoed these findings, with several examples applauding the selfless devotion of the Desuung volunteers. Instances of volunteers exceeding their expected responsibilities to aid elderly and disabled individuals or guaranteeing the delivery

of crucial provisions to at-risk families, were widespread. These anecdotes not only demonstrate the program's influence, but also emphasize the human aspect of the Desuung's mission.

The Desuung program has demonstrated its pivotal role in Bhutan's approach to handling the COVID-19 pandemic. The success of this initiative demonstrates the effectiveness of well-coordinated volunteerism supported by robust social connections. The program's capacity to combine emergency response with community support and public health education has not only lessened the immediate effects of the pandemic but has also enhanced overall societal resilience. As Bhutan continues to manage the epidemic, the experiences gained from the Desuung program offer vital knowledge on the efficacy of utilizing social capital through community-based initiatives.

CHAPTER 5 [DISCUSSION]

This chapter analyzes the consequences of the findings outlined in Chapter 4, exploring the influence of social capital, particularly through the Desuung program, on Bhutan's handling of the COVID-19 pandemic. The discussion in this section combines these findings with the theoretical frameworks and literature that were examined in previous chapters. The goal is to emphasize the distinct interaction between Bhutan's social policies and its efficiency in responding to disasters.

5.1 Correlation Between Social Capital and Pandemic Response

Overview of Findings

The analysis revealed a significant positive correlation between the levels of trust in the Desuung program and the perceived success in managing the COVID-19 pandemic (*Table 2*). Trust, as quantified through survey responses, was robustly associated with positive perceptions of pandemic management, with a correlation coefficient of $p < 0.01$ (all closer to 1), indicating a strong, statistically significant relationship. This finding is consistent with the fundamental principles of social capital theory, which posit that trust within a community not only promotes cooperative behaviors but also greatly enhances the efficiency and efficacy of collective action during times of crisis (Putnam, 2000).

Numerous studies have established a positive correlation between trust and the effectiveness of health outcomes. Notably, the research conducted by Ridenhour et al. (2022) in their study titled "Effects of trust, risk perception, and health behavior on COVID-19 disease burden: Evidence

from a multi-state US survey" illustrates complex dynamics in this area. The authors identified a marginally significant positive, indirect effect of rurality on disease burden, where $p = 0.095$. Specifically, in rural areas that are typically underserved in terms of healthcare resources, a deficiency in trust exacerbates vulnerability to COVID-19. The findings suggest that enhancing trust, particularly through within-group communications, could mitigate some of the disparities highlighted by their models, thereby increasing the effectiveness of Non-Pharmaceutical Interventions (NPIs).

In addition, the emphasis of Ridenhour et al. on rural environments provides useful insights that can be applied to other locations that share comparable physical and demographic characteristics. For example, Bhutan, with its relatively low population density and underdeveloped health system, presents a similar situation. By comparing these situations, we may identify tactics that can strengthen public health efforts in Bhutan. To overcome infrastructure limitations, increased trust and community involvement can help. These studies emphasize the significance of trust as a crucial element of social capital that can greatly impact public health responses.

Furthermore, the results from Bhutan provide a distinct viewpoint on the interaction between cultural norms and techniques for responding to disasters. The Desuung program, which is firmly ingrained in the socio-cultural fabric of Bhutan and promotes compassion and community service, has likely fostered an environment conducive to the growth of trust. The cultural alignment likely increased the success of the program, demonstrating how community-based efforts that are customized to specific communities can utilize social capital to improve preparedness and response to pandemics. In a 2021 interview with Melinda Weir for an article in the *International Monetary Fund's (IMF)* 'Finance and Development' segment, the then Finance

Minister of Bhutan, Namgay Tshering, highlighted the significant role of the De-Suung program in unifying various societal segments during the COVID-19 pandemic. Minister Tshering noted, 'The De-Suung program has brought all sections of society together, including the weak, vulnerable, and disadvantaged. In this respect, culture and social cohesion have played a vital role in combating the pandemic. In fact, the pandemic has strengthened cultural and social cohesion within Bhutanese society, enabling a collective and successful response' (Weir, 2021). Therefore, these observations not only support the theoretical connections suggested between social capital and efficient crisis management but also emphasize the practical methods by which trust in community initiatives can be utilized to enhance pandemic results. This analysis presents a strong argument for including social capital factors in the development and execution of public health programs, especially in nations where there is strong cultural cohesion.

Theoretical Integration

The strong correlation observed between trust in the Desuung program and the success of pandemic management in Bhutan clearly exemplifies the ideas articulated in Putnam's (2000) theory of social capital. This theoretical perspective is highly applicable in the context of Bhutan, where societal institutions are inherently intertwined with a cultural focus on collective wellness—everything is interconnected (Thinley, 2007). The Gross National Happiness ideology, which places greater importance on social harmony and holistic well-being rather than solely focusing on economic measurements such as Gross National Product (GNP), is expected to enhance the basis of trust and cooperation (Marshall, 2008). Bhutanese policies improve the success of social initiatives such as the Desuung program by promoting a strong community spirit, therefore maximizing their impact on managing public health crises.

Considering this, the correlation between Bhutan's cultural principles and its social capital dynamics offers a compelling opportunity to examine the impact of social capital on health outcomes, specifically in the context of the COVID-19 pandemic. Putnam's idea of social capital closely correlates with the Gross National Happiness philosophy, which actively promotes these values to strengthen civic involvement and trust, especially during global crises. According to a 2013 study by Dorji, it is evident that Bhutan's cultural framework strongly promotes active participation in the community. The study found that 8.45% of Bhutan's households have at least one member who is part of a local or community-level group or association. Typically, the heads of households are the most actively involved participants in these groups (Dorji, 2013).

Survey data further illustrates this involvement: out of 447 respondents, 49.2% have participated in the Desuung program (*Figure 3*).

Have you ever served/participated in the Dessung? [Please click "Next" after answering this question]

447 responses

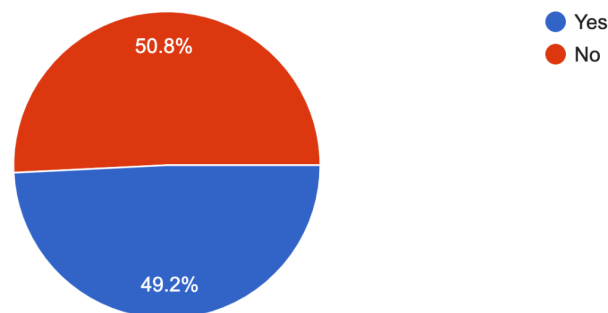


Figure 3: Desuung's Participation

Additionally, 36.1% have engaged in 0 to 2 of Desuung's pandemic or crisis management activities, while 23.2% have been involved in 8 to 10 or more such activities. The remainder have participated in three or more activities (see *Figure 2* for distribution details).

The significant level of involvement emphasizes the potential for policies that are in line with cultural norms to amplify the beneficial effects of social relationships. This suggests that using such strategies could be beneficial for other nations with comparable societal structures. The case of Bhutan illustrates that deliberately cultivating social capital, supported by national legislation and cultural customs, can significantly enhance the efficacy of collaborative endeavors in tackling public health emergencies.

5.2 "De-suung" Program Success Factors

Bhutan, situated between the densely populated countries of China and India, encountered distinctive difficulties during the beginning of the COVID-19 outbreak. Due to its vulnerable geographical location and close proximity to early pandemic epicenters, Bhutan was inherently at a high risk of disease transmission and a potentially severe public health disaster. In addition to the geographical limitations, the country's healthcare infrastructure is limited in terms of scale and technology capabilities compared to larger nations (Dorji, 2021), yet it is strong in terms of reach and community integration. This situation could have foreshadowed a severe epidemiological outcome for Bhutan.

Despite these adversities, Bhutan's response to the pandemic has been notably effective, marked by a comprehensive and swift handling of the health emergency. Central to this success has been the Desuung program, which has mobilized community resources and fostered a high level of

civic engagement. The program's effectiveness, primarily attributed to the deep-seated trust in monarchical leadership and the strategic foresight of governmental actions, presents a unique case for studying the influence of social capital on health outcomes. This section explores how the integration of traditional social structures with a proactive governmental strategy, led by a medically adept Prime Minister (a practicing urologist), facilitated an exemplary public health response in a setting that might otherwise have been poised for severe hardship.

Significance of the Desuung

The Desuung initiative played a crucial role in Bhutan's successful control of the pandemic. Established under the patronage of His Majesty the Fifth King, the program aims to strengthen the country's ability to withstand and respond to challenges by promoting service, responsibility, and solidarity (Desuung Organization, 2023). The Desuung initiative not only effectively utilized community resources but also greatly enhanced civic participation throughout the country. The Bhutanese people's unwavering trust and faith in their monarchy, especially in His Majesty the King, is demonstrated by this volunteer initiative. The King is highly respected by all segments of society for exemplifying wisdom, compassion, and integrity.

The Desuung Integrated Training Program has been formed under the orders of His Majesty the King, with a specific focus on fostering personal growth based on strong values. As per their mandate, the main objective is to motivate all individuals to actively participate in the process of constructing the nation. The program aims to instill in trainees, referred to as De-suups, a profound understanding of community, harmony, and collaboration, fostering these values inside the group and in the wider societal framework (Desuung, 2023). The core of this training project is the concept of "volunteerism," highlighting the essential importance of ethical conduct and the

principles of community service, integrity, and civic responsibility. Upon completion of this course, participants are anticipated to actively partake in disaster relief endeavors, involve themselves in philanthropic activities, and make valuable contributions to their communities. Graduates of the Desuung program are prepared to fulfill their daily duties with improved proficiency, dedicating themselves to a lifelong commitment of serving the community and demonstrating leadership.

Community Integration and Cultural Principles

The program's effectiveness was further strengthened by its integration into Bhutan's cultural ethos, including the Gross National Happiness ideology and the concept of "tsa-wa-sum" (the unity of the King, government, and people). The fundamental tenet of *Tsa-Wa-Sum* is that both the people and the leaders should uphold the welfare of the country and its citizens as a whole (Wangmo, 2022). These concepts not only improved community unity but were put into action through the Desuung program to promote a strong, communal response to the pandemic. The volunteers, who came from many backgrounds and areas ranging from a simple farmer to the Prime Minister to the Royal family, were united by a common dedication to the betterment of the nation, surpassing social, cultural, and geographical barriers.

In exploring the relationship between government trust and citizen response, the case of Bhutan during the COVID-19 pandemic provides a profound example of communal resilience and the dynamics of trust. Remarkably, the culture of deep-seated trust in governmental leadership and reciprocal respect significantly influenced the surge in volunteerism following the pandemic's onset. Initiated in 2011, the Desuung program, had modest participation numbers, totaling only a few hundred volunteers each year until 2019, with 585 volunteers registered in that year.

However, the emergence of the pandemic marked a dramatic shift. By the end of 2020, the number of volunteers had escalated to 14,010, representing a whopping increase of approximately 2296%.

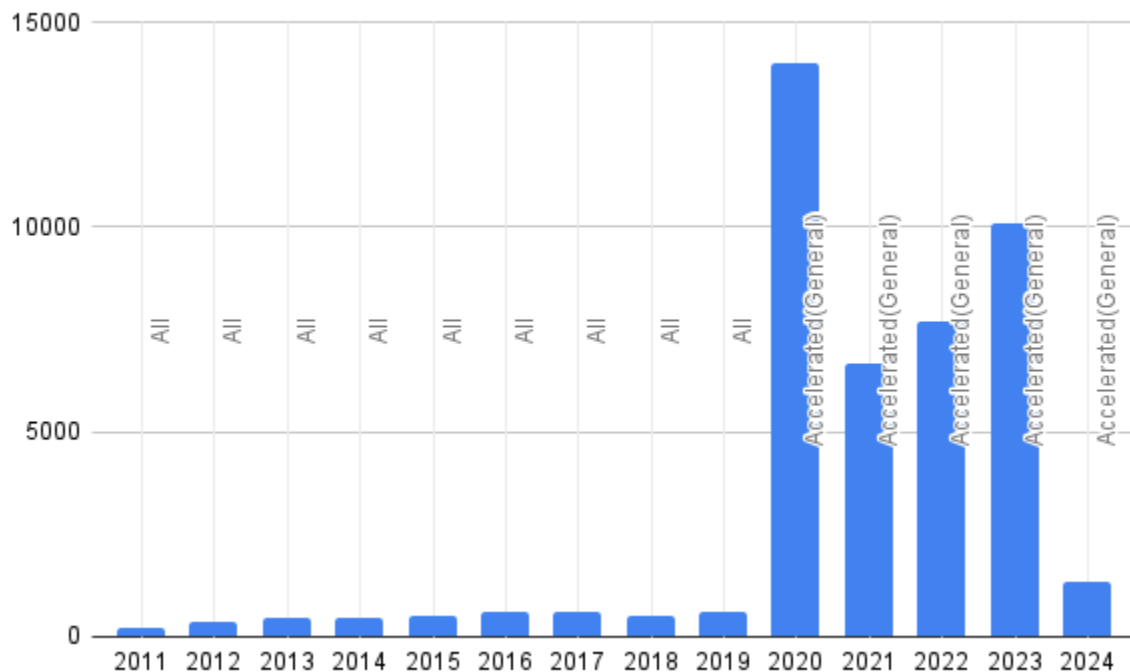


Figure 4: Desuung's Participation from 2011-2024

This exponential growth in volunteer numbers coincided with critical national events. The first batch of volunteers in 2020, consisting of 126 individuals, was trained just before the pandemic became a global crisis, from January 20 to February 8, 2020. Subsequently, His Majesty the King addressed the nation on March 22, 2020, marking the official recognition of the pandemic's severity and the closure of the nation's borders. This address seemingly catalyzed the population's commitment to the Desuung program, with participation numbers skyrocketing thereafter. Despite the inherent risks associated with frontline service during a pandemic—risks

that included prolonged separation from family and potential life-threatening exposure—the Bhutanese people's resolve to volunteer surged.

In stark contrast to Bhutan's cohesive response, several other countries experienced widespread public resistance to government pandemic measures (Taylor et al., 2021). In places like the United States and parts of Europe, there were significant protests against mask mandates and social distancing rules, with segments of the population openly defying government advisories. These protests often stemmed from a complex mix of political discontent, misinformation, and a general distrust in governmental institutions (Aratani, 2020), which starkly undermined collective efforts to control the virus's spread.

The resilience and collective spirit displayed by the Bhutanese people, underpinned by their unwavering trust in the King and their commitment to the national good, stand in stark relief to the fragmented responses observed in these other nations. As indicated by survey responses, a key motivation for many was the concept of "tsa-wa-sum," or the service to King, Country, and People, which underscores the cultural ethos of duty and collective well-being integral to Bhutanese society. One survey respondent highlighted, "Bhutan, being such a tiny country, has accomplished controlling the pandemic when all the well-developed countries were struggling, and it's all thanks to our beloved king and the desuung families. Desuups have always stepped forward, no matter the situation." Another respondent who served in the Desuung program during the pandemic noted, "I don't know about others; it probably depends from one individual to another how they serve their nation, but in my case, I have given my heart and soul and served my nation."

This remarkable surge in volunteerism not only highlights the efficacy of Bhutan's approach to

national emergencies but also underscores the pivotal role of trust and cultural values in mobilizing community response during crises.

The Monarchs

In analyzing the success of Bhutan's Desuung program, the pivotal role of the monarchy, particularly that of the current monarch, King Jigme Khesar Namgyel Wangchuck, emerges as a critical element. Unlike many nations where democracy was born out of conflict (Tilly, 2007), Bhutan's transition was unique—its democracy was ushered in peacefully by the visionary fourth king (the current king's father), who offered governance reforms to his people as a gift rather than a conquest. This historical context sets the stage for understanding contemporary Bhutanese receptivity towards monarchical influence amidst democratic structures.

Bhutanese society exhibits a nuanced perspective on democracy; while democratic institutions are respected, there persists a profound reverence for the monarchy, which acts as a crucial bridge between the government and its people. This connection is particularly evident in public health initiatives. During the COVID-19 pandemic, the trust placed in the monarchy was manifestly demonstrated when adherence to health advisories, including mask-wearing and lockdown protocols, was significantly bolstered by the King's personal interventions. After the country's first COVID-19 death, King Jigme Khesar's preventive actions were crucial and effective. Over a period of 14 months, he personally traveled across the country, using various modes of transportation such as walking, vehicles, and horseback, to lead the efforts in responding to the pandemic. His goal was to ensure that his kingdom, which is located between

the large countries of India and China, maintained an impressively low mortality rate (Aljazeera, 2021).

The Prime Minister, Doctor Lotay Tshering, aided the King's efforts by utilizing his medical knowledge to improve the governmental response. "The king's words are respected and taken seriously when he travels long distances and personally informs people about the pandemic," noted Prime Minister Tshering (2021). This synergy between royal leadership and expert governance facilitated the effective use of Desuung volunteers in critical roles such as contact tracing and the enforcement of safety protocols.

Moreover, the King's personal commitment to the health guidelines, as seen in his adherence to quarantine measures after each inspection trip and his participation in the national vaccination drive, solidified public trust in the governmental strategies (Sharma and Jain, 2021). This trust has been foundational to the success of the Desuung program. The King's and the royal family's active involvement in Desuung activities not only enhances the program's credibility but also inspires widespread volunteerism. According to a tweet by @rwthofficial (RoyalWorldThailand), members of the royal family, Princess Euphelma Choden and Prince Ugyen Jigme Wangchuck, were photographed actively participating in the Desuung lockdown patrols in the capital city, demonstrating their commitment to public service (Twitter, 2020). Their visible commitment to service and sacrifice reinforces the societal values of duty and unity, which are crucial for national resilience.

This trust is further strengthened by the King's numerous efforts, particularly the "*Druk Gyalpo's Relief Kidu*," which directly promotes the well-being of his subjects. *Druk Gyalpo's Relief Kidu* directly translates to His Majesty's Relief Fund.

This Relief Fund is a charity initiative established by His Majesty in April 2020, that offers financial and other types of aid to people facing difficulties, especially during the pandemic (Kuensel, 2021). The Relief Kidu project offered vital economic assistance, which encompassed monthly income support to more than 37,000 individuals and their families, along with loan interest payment help to almost 140,000 loan accounts from April 2020 to March 2021 (Royal Kidu, 2021). The fund played a crucial role during the COVID-19 pandemic, providing financial assistance to individuals impacted by lockdowns and the economic decline. The initiative not only ensured public stability but also enabled citizens to engage in community-oriented initiatives such as Desuung, free from the encumbrance of financial hardship.

The monarchy's strategy, which involves both direct welfare interventions and leadership in national programs, guarantees that it is perceived not only as a ceremonial institution but also as an engaged contributor to the nation's well-being. The King's proactive initiatives, including the establishment of the National Resilience Fund, as well as his active participation in public health campaigns and the Desuung program, demonstrate a governance approach that strongly aligns with the Bhutanese principles of compassion and communal responsibility.

Therefore, the success of the Desuung program can be primarily due to the distinctive combination of traditional royal leadership and proactive modern governance. The Bhutanese people's steadfast confidence in their king and, consequently, their government creates a

favorable atmosphere for civic participation and voluntary work, which are essential for effectively handling public health crises and other national catastrophes. The Desuung program serves as evidence of the influential role of culturally ingrained leadership in developing a proactive and adaptable population.

CHAPTER 6 [CONCLUSION]

6.1 Summary of Finding

This thesis investigated the correlation between social capital and the effectiveness of COVID-19 management in Bhutan, specifically examining the Desuung program as an example of social capital in action. The study found that social capital played a crucial role in Bhutan's successful response to the epidemic. This was achieved through mechanisms including trust, community engagement, and the perceived value of Desuung contribution. The study's findings emphasize the crucial significance of social capital in bolstering community resilience and improving public health outcomes during a global health catastrophe.

The study established a direct relationship between a strong level of trust in the Desuung program and increased adherence to health measures by the general public. The establishment of this trust was important in effectively implementing health protocols, which in turn played a key role in containing the spread of the virus in Bhutan.

The level of community involvement in the actions launched by Desuung was closely linked to more effective management of the epidemic. This participation not only expedited the efficient

allocation of resources but also guaranteed the involvement of all sectors of the population in the joint endeavor to combat the pandemic.

The Desuung program's contributions were regarded as having a favorable impact on the overall effectiveness of the pandemic response. This impression bolstered community morale and cultivated a collaborative mindset among the population, fortifying the national response to COVID-19.

6.2 Contribution to Knowledge

This thesis has made substantial contributions to the academic understanding of social capital and its utilization in the management of public health crises, particularly in the context of Bhutan's reaction to the COVID-19 pandemic. These contributions encompass both theoretical and empirical aspects, enhancing the comprehension of the dynamics of social capital in a distinct cultural context.

Theoretical Contributions: This study enhances Social Capital Theory by investigating its manifestation in a distinct socio-cultural setting such as Bhutan. This research examines the operation of social capital in non-Western settings by utilizing the theories of Bourdieu and Putnam within the context of Bhutan's community-driven Desuung initiative. The study aims to provide a detailed understanding of this phenomenon. This study challenges and enhances current theories by showing that social capital can be efficiently mobilized through government-sponsored initiatives that are closely connected with the national culture and values.

The thesis aims to combine social capital theory and public health practice, thereby addressing the existing gap between the two fields. This study showcases how social capital can be utilized to improve public health responses, especially in situations where there is a lack of official healthcare infrastructure but a strong sense of community togetherness. This integration provides a blueprint for other nations to utilize their native resources and social frameworks in the management of crises.

Empirical Contributions:

- Investigating the Role of Desuung: This study provides evidence, using both quantitative and qualitative data, to demonstrate the significant impact of the Desuung program on Bhutan's reaction to the COVID-19 pandemic. This study presents empirical evidence that demonstrates the effectiveness of utilizing volunteer programs to improve public health policies, an aspect that has not been well studied in existing literature.

The findings provide comprehensive insights into the processes of community engagement and the establishment of trust during a pandemic. The study provides empirical evidence that shows a correlation between these qualities and positive health outcomes. This brings essential information to the fields of disaster management and community health. It suggests that strong community links can greatly reduce the impact of global health emergencies.

Contributions to the methodology:

- Mixed-Methods Methodology: This thesis adopts a mixed-methods approach to offer a holistic perspective by integrating quantitative data on community engagement and trust levels with qualitative observations from personal experiences throughout the pandemic.

This methodological contribution is important because it demonstrates an integrative approach to analyzing complex social phenomena such as social capital. This approach recognizes that a single methodological lens may not provide a complete understanding of these phenomena.

6.3 Recommendation for Future Research

The results of this thesis have established a basis for comprehending the influence of social capital on public health during emergencies within the distinctive circumstances of Bhutan. In order to expand upon this information, additional studies need to be conducted in multiple areas:

Cross-cultural validation: Subsequent investigations should examine the manner in which social capital operates under diverse cultural and political contexts. This will elucidate the significance of social capital in various contexts and authenticate the relevance of Bhutan's experiences to other nations.

Thorough Component Analysis: It is crucial to examine each element of social capital—such as trust, community participation, and perceived value of community initiatives—separately in order to comprehend their precise effects on public health indicators during crises. This will facilitate a more intricate comprehension of how these components collaborate to augment community resilience.

Longitudinal studies: Long term research are necessary to assess the long-lasting impact of social capital on the resilience of communities. These research can uncover the long-term effects of social capital development during a crisis on community health outcomes.

Policy Integration: Examining the effective integration of social capital into public health policy will yield practical measures for governments. Research should prioritize the development of frameworks that augment social capital in the context of emergency preparedness.

Digital social capital: It refers to the collective resources and benefits that individuals and groups gain through their online interactions. In the context of public health interventions, studying the impact of digital social capital can offer valuable insights into how online communities either facilitate or impede crisis management efforts.

By pursuing these research paths, future studies might enhance the understanding of social capital's significance in global public health and provide valuable insights for policy and practice in crisis management.

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APPENDICES

Appendix A: Survey Instrument

Assessing Social Capital: A survey of *Desuung's* community involvement, trust, and connectedness.

Description

Dear participants,

My name is Pema Selden and you are invited to take part in my Master's thesis to investigate the role of Social Capital in managing public health crises such as the recent Covid-19 pandemic in Bhutan. I am using our *desuung's* contribution towards covid-19 management to prove the existence of social capital. I am doing this thesis in partial fulfillment of the requirements for the degree of **Master of International Studies in International Cooperation** in the Graduate School of International Studies of the Seoul National University in South Korea.

The purpose of this survey is to understand the level of community strength and social support within Bhutan, and the factors that shape social connectedness. I am also trying to prove my

hypothesis that Social Capital (*Dessung's* involvement) and public health management(Covid-19) are positively correlated.

Participation in this study is voluntary, and all the information you provide will be kept confidential and anonymous. Your responses will only be used for research purposes and will not be shared with any third parties. The survey will take approximately 3 - 10 minutes to complete.

Please note that your participation in this study is completely voluntary, and you have the right to withdraw at any time without penalty. However, once you have submitted your survey, we will be unable to remove your responses from the data set.

If you have any questions or concerns about this study, please do not hesitate to contact me via my email address **pemaselden90@gmail.com** at any time.

Thank you for your time and participation in this study. Your input is highly valued, and it will contribute to a better understanding of social capital and community development in Bhutan.

Section 1

Have you ever served/participated in the *Dessung*? [Please click "Next" after answering this question]

- Yes
- No

Section 2

If you have answered "yes" to the first question please answer this section. This section is for the past and current *Desuups* only.

Please click "NEXT" if you have never served or participated in the *Dessung* Training.

1. What batch were you in? [*batch number/year*]
 - Answer
2. What initiatives have you been a part of during the Covid-19 pandemic?
[You may choose more than one answer or ADD if there were other initiatives that you were a part of]
 - National Border patrolling
 - Vaccine campaign
 - Hand Sanitizer distribution
 - Feeding the strays
 - Goods and Medicinal home-delivery
 - Lock-down patrolling
 - Forest fire control
 - Crowd control (manage, maintain and observe covid protocols in crowd gathering institutes)
 - Rescue Efforts
 - Others
3. How many times did you engage in these pandemic management/civic activities?
 - 0 - 2 times
 - 3 - 5 times
 - 6 - 8 times
 - 8 - 10+ times
4. How much do you trust your own sense of duty as a *desuup*?
 - A lot
 - Some
 - Not much
 - Not at all
5. How willing are you to serve the nation and the people?
 - Very willing
 - Willing, as long as it won't pose any threat to my life
 - Not at all willing
 - Other:

Section 3

This section is for everyone to answer. Please answer the following questions.

1. How often did you interact with the *desuups* during the pandemic*
 - Very often
 - Occasionally
 - Rarely
 - Never
2. Have you ever received any assistance from a *desuup*? *
 - A lot
 - Some
 - Not much
 - None
3. How much would you trust the *Desuung* on a scale of 1-5? [1 being "Not at all" and 5 being "A lot"]*
 - Not at all
 - 1
 - 2
 - 3
 - 4
 - 5
 - A lot
4. How much do you feel a sense of belonging to a larger community, such as your own community or nation as a whole? *
 - A lot
 - Some
 - Not much
 - None
5. How much do you value the contributions of the *Desuung* in the successful management of the pandemic? *
 - A lot
 - Some
 - Not much
 - Not at all

6. Do you think *Desuups* were one of the factors that led to Bhutan's successful management of the pandemic? *
 - Yes, they were one of the key factors
 - Yes, but their contributions are minimal
 - I don't know
 - No, they did not play a role at all
 - No, Bhutan's pandemic management is not a Success story
7. How often do you engage in activities that promote community involvement or social change? *
 - Very Often
 - Occasionally
 - Rarely
 - Almost never
8. Have you participated in any volunteer activities in your community in the past year? *
 - Yes
 - No
 - Other:
9. Have you worked with others in your community to address a common issue or problem during the pandemic? *
 - Yes
 - No
 - Other
10. How often do you help others in your community, and how often do others help you? *
 - Very Often
 - Sometimes
 - Rarely
 - Not at all
 - Other:
11. How often did you abide by the covid rules and regulations during the lockdowns? *
 - Always
 - Often
 - Not often
 - Not at all
 - Other:
12. [Optional] Any message or opinion you would like to share on the topic of Social Capital and how you think *Desuung* has/has not contributed to the pandemic in the country.
 - **Your answer**

Appendix B: Data Tables

Desuug Training conducted yearly

Year	No of Batches	Batch Category	Training Date	Total
2011	2	All	2011	236
2012	3	All	16/01/2012 to 03/11/2012	348
2013	4	All	21/01/2013 to 09/11/2013	469
2014	4	All	13/01/2014 to 21/09/2014	475
2015	4	All	17/01/2015 to 24/10/2015	487
2016	5	All	02/01/2016 to 10/12/2016	626
2017	5	All	23/01/2017 to 09/12/2017	609
2018	4	All	22/01/2018 to 15/12/2018	496
2019	5	All	21/01/2019 to 16/11/2019	585
2020	7	Accelerated(Ge neral)	20/01/2020 to 12/12/2020	14010
2021	4	Accelerated(Ge neral)	14/02/2021 to 30/11/2021	6658
2022	6	Accelerated(Ge neral)	03/01/2022 to 11/12/2022	7680
2023	7	Accelerated(Ge neral)	05/02/2023 to 22/11/2023	10096
2024	1	Accelerated(Ge neral)	05/02/2024 to 25/02/2024	1342
Total	61			44,117

