

Article

Sustainable and Collaborative Health Promotion in Urban Communities: Practical Implementation and Outcomes Based on Community Capital

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Abstract: In the context of rapid urbanization, leveraging community capital for health promotion to achieve sustainable community development has become a critical issue. This study examines 60 communities in Taipei City through a resource inventory, application analysis, and impact assessment to explore the effects of community capital and community building on sustainable development. Key findings include: Resource Inventory: The 60 communities identified a total of 3407 resources, averaging 68.14 resources per community. These resources encompass social capital (e.g., community organizations and volunteers), human capital (e.g., professional skills and education), physical capital (e.g., facilities and venues), and financial capital (e.g., funding and grants). Resource Application: of 752 resources applied, 48.5% were for teacher matching, and 24.7% for venue borrowing, highlighting a high demand for these resources in health promotion. Regression Analysis: The results show that social capital ($\beta = 0.35, p < 0.01$) and human capital ($\beta = 0.29, p < 0.05$) significantly enhance community sustainability. Additionally, the frequency of community-building activities ($\beta = 0.31, p < 0.01$) positively correlates with sustainable development. Overall, the study confirms the importance of community capital and community building in fostering sustainable development, emphasizing the need to enhance social and human capital for community health and sustainability.

Keywords: urban communities; health promotion; community capital; community building; sustainable development; co-creation



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1. Introduction

As global urbanization accelerates, metropolitan communities face multiple health and environmental challenges. Rapid population growth, resource constraints, and modern lifestyles create significant barriers to effective health promotion and sustainable practices. Traditional health promotion models often rely on external resources and policy support, often ignoring the intrinsic value of local community assets. This neglect can lead to the underutilization of these resources, leading to inefficiencies and suboptimal health outcomes [1,2].

In recent years, there has been an increasing recognition of the importance of community capital, including social capital, human capital, physical capital, and financial resources, which have become critical in health promotion activities. Harnessing these forms of capital enables communities to improve their ability to self-regulate and promote sustainable development. For example, social capital fosters networks of trust and co-operation, which are critical for mobilizing community support and participation [3,4]. Human capital, including the skills and knowledge of community members, is critical for the effective design and implementation of health strategies [5,6]. Additionally, physical capital and financial resources provide the infrastructure needed to support health initiatives, increasing accessibility and impact [7,8]. Furthermore, contemporary sustainable development frameworks emphasize the need for long-term resource management and environmental protection. Focusing on community capital is consistent with these goals

as it ensures the protection of future resources by addressing current health needs [9,10]. Successful community building depends not only on policy formulation, but also on the effective organization and utilization of internal resources [11]. Successful health promotion efforts, therefore, rely not only on the development of sound policies, but also on the strategic mobilization of internal community resources.

Taipei City's reputation around the world is rising, especially in terms of sustainable urban development. According to multiple international rankings, Taipei City is considered one of the smartest and most sustainable cities in the world, especially in terms of its public transportation system, environmental protection, and social inclusion. These achievements demonstrate Taipei City's efforts and determination in promoting sustainable urban development. According to the "Global Urban Indicators Report" released by the United Nations in 2019, Taipei City's performance is generally considered to be a relatively good model city, with a good performance in public transportation, environmental management, urban greening, and social inclusion, which also allows Taipei City to occupy a place among the indicators of sustainable urban development.

This study aims to explore how leveraging the advantages of community capital can facilitate health promotion in metropolitan communities, achieving sustainable development and co-creation. We will investigate how community capital impacts health promotion practices and analyze its practical effects on community development. The core goal of this research is to reveal the role of community capital in health promotion, provide effective implementation strategies, and promote long-term community development and co-creation. By analyzing cases from Taipei City, we hope to identify effective models and strategies that can serve as references for other urban communities.

2. Literature Review

2.1. Community Capital and Health Promotion

Community capital significantly impacts health promotion and encompasses four key aspects: social capital, human capital, physical capital, and financial capital. Social capital refers to social networks and trust within a community, which are crucial for health. High levels of social capital improve residents' mental and physical health by providing emotional support, information, and social resources that foster healthy behaviors. For example, social capital encourages participation in fitness activities, adherence to healthy diets, and involvement in health promotion programs [12]. Human capital, including the education and skill training of community members, is also critical for enhancing health levels. Higher education and skills improve health knowledge, promote healthy behaviors, and reduce health risks. Moreover, well-educated residents are better at understanding and adopting health-promoting measures, closely linked to the effectiveness of community health policies [13,14]. Physical capital, such as health infrastructure and public spaces, directly impacts health. Communities with good facilities offer more health promotion opportunities, such as sports fields, parks, and gyms, encouraging outdoor activities and improving health [15,16]. Financial capital supports the implementation and sustainability of health promotion programs, improving public facilities, hosting health education activities, and providing health services [17,18]. Thus, the various dimensions of community capital profoundly influence health promotion, enhancing overall community health and quality of life.

2.2. Community-Building Strategies and Practices

The strategies and practices of community building aim to improve community health and promote community development, and mainly include three strategies: community participation, resource integration, and cooperation. First, community participation has been proven to significantly enhance the cohesion and sense of belonging of community members, thereby promoting the formation of healthy behaviors. Studies have pointed out that active community participation not only improves health awareness, but also promotes interaction and cooperation within the community, thereby helping to achieve

the goals of health promotion [19–21]. Second, the resource integration strategy emphasizes improving health outcomes by integrating resources from different sources. For example, combining government resources, non-profit organization resources, and internal community resources can lead to more the effective implementation of health promotion programs and improve the resource utilization efficiency [22,23]. This integration strategy can solve the problem of insufficient single resources and promote the comprehensive utilization of resources. Third, the cooperation and co-construction strategy emphasizes the importance of cross-departmental cooperation. Establishing partnerships to achieve resource sharing and knowledge exchange can help promote the implementation and sustainability of health programs [24]. This cooperation model not only strengthens the collaborative work of all parties, but also improves community health. The latest research points out that the effective implementation of these community building strategies can significantly improve the overall health of the community and promote sustainable community development [25].

2.3. Sustainable Development Practices and Challenges

Economic development impacts health in multiple ways, supporting health promotion, but also presenting challenges. Economic growth can provide more resources for health projects, but unequal resource distribution may exacerbate health disparities [26]. Therefore, balancing health and economic development is a significant challenge [27]. Economic growth offers opportunities to improve infrastructure and health services, but must be cautious of potential social inequality and resource distribution issues. Social equity is a key factor in promoting health. Research shows that advancing social equity can significantly improve overall health levels and promote health equity [28]. Social equity policies and enhanced social welfare are seen as important strategies for promoting health. Reducing social inequalities and strengthening social security can improve health outcomes and narrow health gaps [29]. This implies that health promotion efforts must consider social equity principles to benefit all community members. Environmental protection's impact on health cannot be overlooked. Studies indicate that environmental pollution and resource overexploitation negatively affect health. For example, air and water pollution are linked to various health problems. Promoting environmental protection and sustainable resource use is crucial for safeguarding health. This requires integrating environmental protection with economic development to achieve a win-win situation for health and the environment.

2.4. Asset-Based Community Development (ABCD) Model

Community development is a planned community work process, the purpose of which is to build assets that enhance the ability of community residents to improve their quality of life, thereby improving the overall quality of life of the community. In this regard, we propose establishing an "Asset-based community development model" or "asset accumulation community development point", which is a relatively modern and emerging capacity/asset path model, and advocates starting from exploring community capabilities and assets, and defines assets (Asset) as a talent, skill, and ability [30]. It is also a stored raw material that can be extended, constructed, or developed. Just like a resource, it can be shared and transferred from generation to generation. It belongs to individuals now and individuals in the future. Associations and institutions emphasize attaching importance to the community's own assets to identify strengths and resources. Through the concept of community assets, community workers in the past used a needs assessment of community problems and weaknesses as the starting point for community work, so as to facilitate the strategic planning process. In the initial stage, the main categories of community assets include: (1) community residents and their living areas; (2) equipment that can be used in the community; and (3) public and private departments and community organizations in the community. As for the implementation steps or processes, they include collecting successful cases, fully analyzing the combined effectiveness of assets, and seeking support from external organizations. Its working principles include: (1) paying attention to what the community has rather than what it lacks, that is, focusing on community assets rather

than community problems or needs; (2) believing that every person, organization, and community has assets, including tangible materials, cultural stories, relationship concepts, ideas, and enthusiasm; (3) building, repairing, or developing relationships through the use of personal assets; (4) relationships are the basis for promoting asset connections and asset play; and (5) the goals of community development are defined by the community. In the combined stimulation of asset connections, the community will inspire ideas and actions, act toward the goals defined by the community, and achieve community-recognized success. In urban community health promotion, the asset-based community development (ABCD) model and social network analysis methods are widely used to improve the effective use of community resources and enhance community cohesion. Social network analysis reveals the social relationships and resource flows within the community, helps to understand the interaction patterns between community members, and effectively promotes the implementation of health plans [31,32]. It is the best application of the ABCD model.

The research purposes of this study are fourfold:

1. Discuss the inventory and application of urban community assets.
2. Compare the community's asset application models and application differences.
3. Explore the relationship between community capital and community sustainability.
4. Provide thoughts on urban communities moving towards sustainable development communities.

3. Materials and Methods

This study uses case analysis and survey methods to examine urban community health promotion practices. A total of 60 communities were sampled from Taipei City's community units, mainly those that participated in Taipei City's Health and Sustainability Program in the past five years. Two copies were distributed to each community and were filled out by main leaders. A total of 112 copies of the questionnaire were collected. In addition, in the second survey, 10 communities were randomly selected from the 60 communities for comparison and discussion. The Asset-Based Community Development (ABCD) model is used to inventory community assets and investigate the current status of community construction and development. The implementation of the ABCD model involves three key steps: first, create a common vision and establish goals; second, conduct resource mapping to ensure a comprehensive understanding and optimal allocation of resources; and third, encourage effective mobilization of resources to implement health plans and achieve relevant indicators [33,34].

Study Subjects and Tools

1. **Community Asset Inventory Form:** A community asset inventory form was created for 50 community organizations in Taipei City. The process involved visits and briefings to help communities identify and define their specific strengths and assets. Community organizations conducted discussions and completed the asset inventory within two months. The inventory form covered six categories of community assets: (1) individual skills or talents, (2) organizational or group capacities, (3) private and non-profit organizations, (4) government departments, (5) other assets, and (6) potential resources (such as welfare and public investments).
2. **Survey on Social Capital, Community Building, and Community Development:** The research tools included a survey adapted from Huang Yuan-hsueh's scale on social capital, community building, and community development [35], and a "Community Sustainability Scale" revised based on Li Yong-zhan's criteria for urban sustainable communities [36]. The survey was divided into several sections: (1) respondent demographics, (2) community basic information, (3) organizational characteristics, (4) community capital (interaction), (5) community building and development, and (6) three dimensions of community sustainability. Community sustainability Scale is divided into three sub-aspects, namely economic, social, and environmental aspects.

There are 14 items in total, including 2 items on the economic side, 7 items on the social side, and 5 items on the environmental side. The overall scale had a Cronbach's alpha value of 0.82, indicating good reliability. The survey was reviewed and approved by the Chang Gung Medical Foundation's Institutional Review Board. A total of 120 questionnaires were distributed to community leaders, with 112 responses collected for analysis. Asset data and community building reports from 10 selected community organizations were analyzed.

3. **Community Asset Application Type Analysis:** In the study of "Community Asset Application Type Analysis", we can provide specific definitions for each application type to clarify their content and operation in the methodology section.

(1) **Resource Referral:** Resource referral refers to the sharing and introduction of resources between individuals and organizations within or outside the community. For example, community members can recommend services, items, or information that they can provide, aiming to enhance the efficiency and accessibility of resources.

(2) **Teacher Matching:** Teacher matching is the process of pairing suitable teachers with learners in need of guidance based on community needs and teacher expertise. This process typically relies on systematic analysis and matching of teachers' skills, teaching experience, and learners' requirements

(3) **Venue Borrowing:** Venue borrowing involves the arrangement of borrowing meeting rooms, event spaces, or other facilities between community members or organizations. This process usually includes registering available venues, scheduling borrowing times, and confirming usage conditions

(4) **Event Collaboration:** Event collaboration refers to the joint planning and execution of specific events by individuals or organizations within the community. This collaboration may include resource sharing, role division, and event promotion, aiming to enhance community cohesion and participation.

(5) **Human Resource Support:** Human resource support refers to the assistance provided by community members or organizations in the form of volunteers or professionals. This support can encompass various forms of help, such as professional consulting, skills training, or volunteer services, to meet specific community needs.

These definitions will provide a clear framework for analysis in the methodology section, helping to understand the specific content and implementation of each application type.

4. Results

4.1. Community Profile Analysis

Table 1 presents the basic information of the communities and respondents involved in the study. Out of the 112 valid samples, 46 (41%) were male and 66 (59%) were female, indicating a higher participation of women in community leadership roles. This trend may be attributed to a greater willingness of women to engage in community activities.

Table 1. Basic Information of Communities and Respondents ($n = 112$).

Gender	Number of People (%)	Number of Community Residents	Number of People (%)
Male	46 (41%)	●less than 1000	4 (4%)
Female	66 (59%)	●1000 to 5000	40 (3%)
Community Leader Jobs	Number of people (%)	●5000 to 10,000	60 (54%)
Chairperson	36 (32%)	More than 10,000	8 (7%)
Executive Director	15 (13%)	Community Establishment Time	Number of people (%)

Table 1. Cont.

Gender	Number of People (%)	Number of Community Residents	Number of People (%)
Board Member	16 (14%)	1 to 5 years	20 (18%)
Supervisor	7 (6%)	6 to 10 years	34 (30%)
Village Chief	3 (3%)	11 to 15 years	22 (20%)
Director	3 (3%)	16 to 20 years	18 (16%)
Team Leader	3 (3%)	More than 20 years	18 (16%)
Other	29 (26%)		

4.2. Analysis of Community Asset Inventory Results

A total of 50 community units were surveyed, resulting in the identification of 3407 asset items (see Table 2). These assets were categorized as follows: Personal Abilities or Talents: 607 items, Organizational or Association Capabilities: 364 items, Private and Non-Profit Organizations: 369 items, Government Departments: 660 items, Others: 189 items, and Developable Asset Blocks: 1218 items. The details of these assets are illustrated in Table 3. On average, each community unit identified 68.14 asset items. This demonstrates that communities possess a variety of applicable assets, including organizational, individual, governmental, and private resources. By focusing on community goals, establishing networks, and connecting individuals, organizations, and institutions, communities can move from consensus to practical implementation. This approach emphasizes the effective use of assets and the benefits derived from them, reflecting the most powerful and practical strategy for the long-term development of communities.

Table 2. Total Number of Community Assets Inventory.

Asset Category	Community Asset Content	Total Asset Count	Average Inventory of Assets per Community
Personal Abilities or Individual Talents	Volunteers and Individuals with Specialized Skills (e.g., doctors, pharmacists, nutritionists, artists, professors, dance teachers, occupational therapists, fitness instructors, horticulture teachers, etc.)	607	12.14
Organizational or Association Capabilities	Community Offices and Organizations (e.g., neighborhood watch teams, community development associations, farms, community care centers, research institutions, community planning teams, temples, and various community clubs and associations)	364	7.28
Private and Non-Profit Organizations	Hospitals, Health Service Centers, Association, Traffic Control Teams, Clinics, Rehabilitation Centers, Associations, and Elder Care Institutions	369	7.38
Government Departments	Schools at All Levels, Universities, District Offices, Markets, Activity Centers, Libraries, and Police Stations	660	13.2
Other	Department Stores, Businesses, MRT Underground Malls, Parks, and Community Open Spaces	189	3.78
Developable Resources (Various Welfare Programs and Public Investments)	Senior Service Centers, Community Care Points, Green Spaces, Museums, Education Centers, Commercial Districts, and Public Housing	1218	24.36
		3407	68.14

Table 3. Analysis of Community Asset Application Types.

	Resource Referral	Teacher Matching	Venue Borrowing	Event Collaboration	Human Resource Support	Total Community Resource Utilization
Total Community Resource Utilization	35	365	186	132	49	752
Percentage	4.7%	48.5%	24.7%	17.6%	6.5	100%

4.3. Analysis of Community Asset Application Types

The data show that out of a total of 752 community resource applications, teacher matching accounted for the largest proportion, with 365 instances, representing 48.5% of all resource applications. This indicates that teacher matching plays a crucial role in community health promotion, significantly surpassing other types of resource applications.

Venue borrowing followed, with 186 instances, making up 24.7% of the total. The high proportion of venue borrowing reflects the demand for available spaces for health promotion activities, closely related to the frequency and scale of such activities.

Event collaboration and resource referrals were less prevalent, with 132 and 35 instances, respectively, accounting for 17.6% and 4.7% of the total. This suggests that while these forms of support are necessary, their demand is lower compared to teacher matching and venue borrowing.

Manpower support was the least utilized, with only 49 instances, representing 6.5% of the total. This indicates that the allocation and utilization of human resources are relatively limited, possibly due to the challenges associated with acquiring and mobilizing manpower in practice.

Overall, the average number of resource applications per community was 13. The higher proportions of teacher matching and venue borrowing highlight their critical role in implementing health promotion programs. In contrast, the lower application numbers for manpower support suggest a need for strategic adjustments to better meet the comprehensive needs of community health promotion.

4.4. Analysis of Community Asset Application Content

To understand the practical application of community assets, this study selected 10 communities for a content analysis of their community asset inventory and health promotion outcomes, as shown in Table 4. The analysis of the community asset application content revealed several key areas of focus:

1. **Health Activities and Workshops:** Communities frequently collaborated with community organizations, private or non-profit entities, and government departments to conduct health activities, health seminars, and nutritional health courses. This demonstrates a strong emphasis on educational and participatory approaches to health promotion.
2. **Teacher Matching and Resource Collaboration:** Teacher matching and event collaboration were commonly used strategies. These collaborations involved bringing in expert trainers or facilitators for health-related activities, indicating the importance of leveraging external expertise and resources.
3. **Health Screening and Care Services:** Communities organized health screenings for cancer (four major types), provided regular exercise programs, and offered dementia care services. This reflects a focus on preventive health measures and support for specific health conditions, showing a commitment to comprehensive health care.
4. **Outdoor Activities and Referrals:** Outdoor sports activities and referrals for elderly care were also prevalent. This suggests an understanding of the importance of physical activity and proper care for the elderly in maintaining overall community health.

Table 4. Analysis of Community Asset Application Content.

Community Asset Attribute	Community Asset Application Content	Linked Community Asset Types
Personal Abilities or Individual Talents	1. Community Nutritionist Health Seminar (Community A)	-Resource Referral
	2. DIY Cooking Experience (Community F)	-Teacher Matching
	3. Health Seminars by Doctors/Nurses (Community G)	-Event Collaboration
	4. Elderly Mental Counseling (Community H)	-Human Resource Support
	5. Chair Exercises and Training (Community J)	
Organizational or Association Capabilities	1. Preventive Medicine Seminar (Community A)	
	2. Dementia Promotion (Community C)	-Resource Referral
	3. Healthy Eating for Children (Community C)	-Teacher Matching
	4. Healthy Breakfast Workshop (Community D)	-Venue Borrowing
	5. Dementia Awareness Seminars (Community D)	-Event Collaboration
	6. Elderly Achievement Event (Community G)	-Human Resource Support
	7. Neighborhood Office Venues (Community I)	
	8. Healthy Eating Seminars (Community I)	
Private and Non-Profit Organizations	1. Dementia Elders Referral (Community A)	
	2. My Silver Influence Program (Community B)	
	3. Joyful Living for Seniors (Community B)	-Resource Referral
	4. Walking Exercise Promotion (Community C)	-Teacher Matching
	5. Whole-Grain Courses (Community C)	-Venue Borrowing
	6. Health Seminars with Hospitals (Community D)	-Event Collaboration
	7. Community Activity Organization (Community E)	-Human Resource Support
	8. Online Dining Consultation (Community F)	
	9. Health Consultations (Community G)	
	10. Health Promotion Lectures (Community H)	
Government Departments	1. Activities at Mingmei Park (Community A)	
	2. Medical Lecturers Match (Community A)	
	3. Diabetes Care Network (Community A)	-Resource Referral
	4. Elderly Service Center Activities (Community A)	-Teacher Matching
	5. Dahu Park Fair (Community B)	-Venue Borrowing
	6. Community Marketing (Community E)	-Event Collaboration
	7. Dementia Seminars (Community F)	-Human Resource Support
	8. Regular Exercise Programs (Community G)	
	9. Elderly Consultation Services (Community G)	
	10. Health Screenings (Community H)	-Resource Referral
Other	1. Healthy Breakfast Workshop (Community D)	-Teacher Matching
	2. Family Health Eating Workshops (Community F)	-Venue Borrowing
	3. Senior Fitness Training Courses (Community F)	-Event Collaboration -Human Resource Support

4.5. Research Limitations

- Scope Limitation:** This study focused on communities in Taipei City. Due to limited resources, only 50 community organizations were included for asset inventory, and 10 units were selected for analysis, which is a limitation of this study.
- Data Collection Challenges:** Data collection required engagement with multiple community organizations or individuals, sometimes relying on data provided by community leaders to represent the entire community, which posed practical challenges.
- Subjectivity Issues:** The concept of community assets includes both subjective and objective aspects, with the survey focusing more on the subjective dimension. This introduces a limitation related to the subjective nature of the data collected.

The following are five important findings of this study.

- Diversified community assets:** the research and survey results found that the community has diverse assets, including personal talents, organizational capabilities and government resources, with a total of 3407 assets, showing that the community has sufficient development potential.
- Community resources are widely used:** This study found that in the resource application part of the community, teacher referral and venue borrowing are the most

common forms, accounting for 48.5% and 24.7% of the total applications, respectively. This suggests that the utilization of educational resources is critical for community health promotion programs.

3. Community cooperation and interaction help community development: the research has found that good interaction and cooperation within the community and with external organizations can positively enhance trust and participation among community members, and help enhance community cohesion.

4. Sustainable community development is supported by 55% of residents: more than half of the residents agree that the economy, society and environment are important measures for sustainable community development, showing residents' consensus and enthusiasm for environmental protection and community image building, laying the foundation for future resource utilization; a good foundation.

5. Open and transparent exchange of information in the community helps community participation: the residents generally believe that the community should provide a platform for information exchange, emphasizing the importance of transparency and participation, which will further promote community development and residents' happiness.

These conclusions highlight the importance of the efficient use of community resources and cooperation in promoting health and sustainable development.

5. Discussion

This study aims to explore how urban communities can utilize community capital for health promotion, achieving sustainability and co-creation. The results demonstrate that the effective application of community capital has a significant impact on improving community health and driving sustainable development. The following is a further analysis and discussion on the application content of community assets and the prediction capabilities of community assets and sustainable development in 10 communities.

5.1. Analysis of Community Asset Application Content

To gain a deeper understanding of the inventory and actual application of community assets, this study used radar charts to compare the distribution of available and utilized assets among the 10 communities. This revealed several key findings:

1. Distribution Patterns

This study drew a radar chart (such as Table 5) for these 10 communities to compare the differences between each project. Triangular Distribution: In 6 out of the 10 communities (A, D, E, G, H, and I), the distribution of available and utilized assets forms a triangular shape. This indicates that these communities predominantly utilize three types of asset attributes—personal abilities or talents, organizational or group capabilities, and private or non-profit organizations. The close alignment between the shapes of the available and utilized asset distributions suggests that these communities effectively leverage their identified assets.

Table 5. Comparative analysis of community resource inventory number and application number.

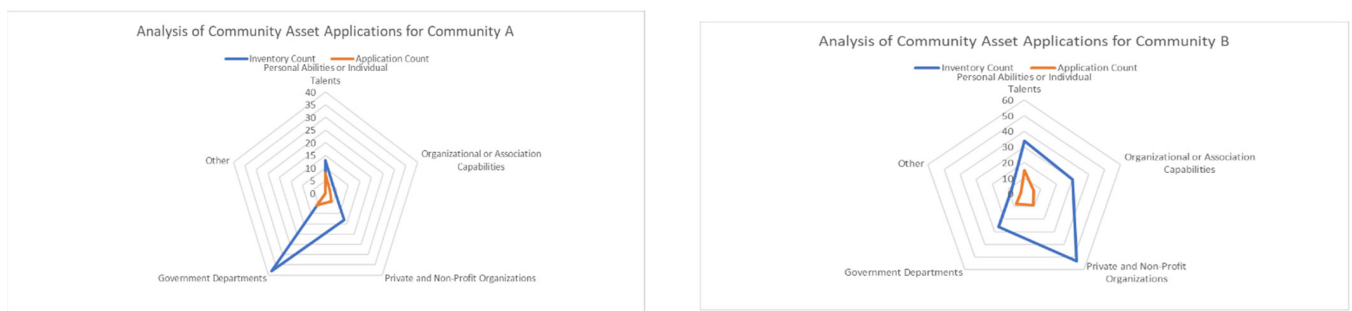
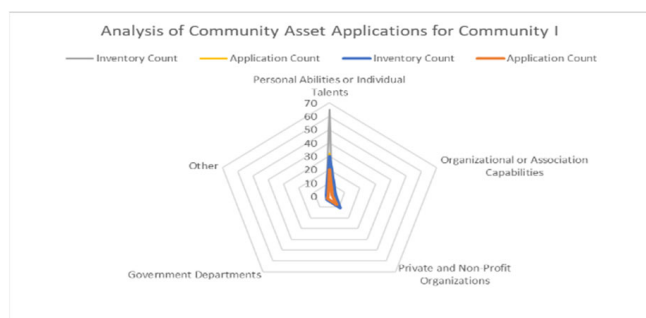
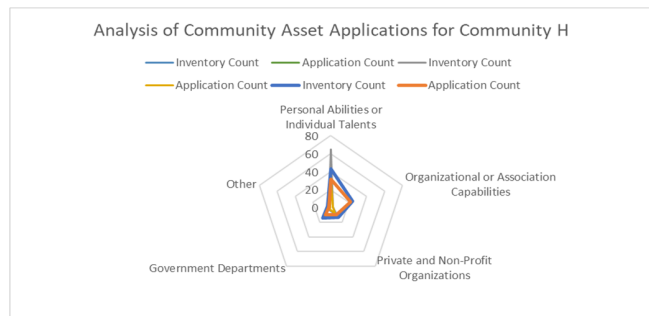
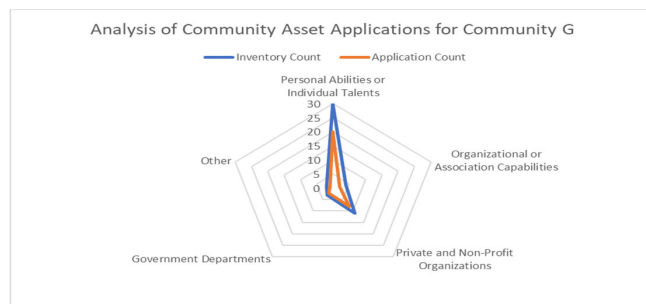
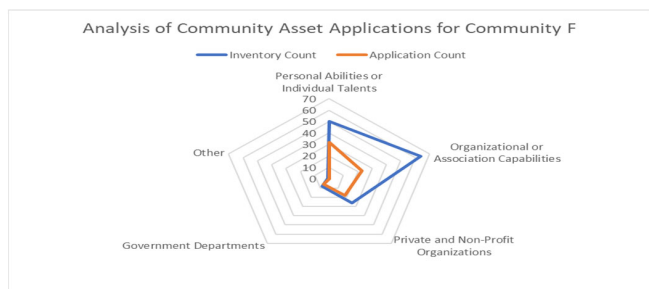
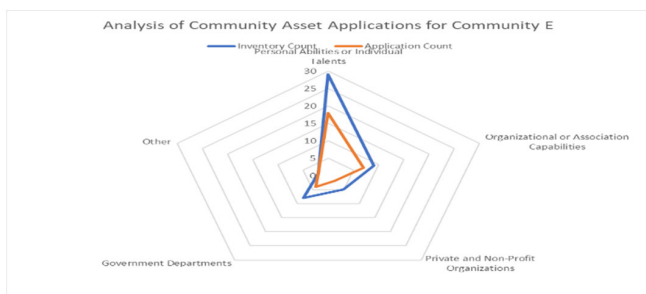
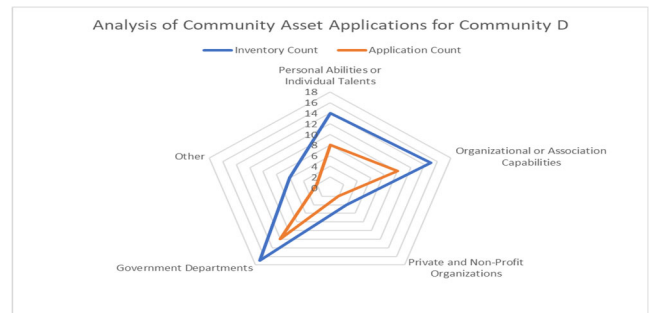
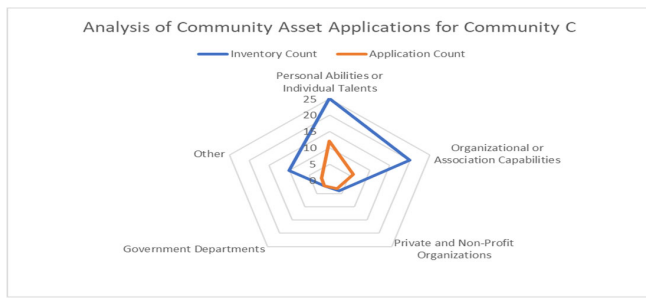


Table 5. Cont.



2. Asset Utilization Effectiveness

Near Coincidence: Community H is notable for having asset utilization figures that closely match its asset inventory numbers. This suggests that Community H is effectively applying its resources. However, it is recommended that Community H considers expanding its asset base to explore further development potential.

3. Opportunities for Improvement

Potential for Enhancement: Overall, the radar charts show that many communities have room for improvement in utilizing their available assets. It is suggested that com-

munities systematically consolidate asset building and implementation processes, linking experience and knowledge, and nurturing practical community capabilities.

5.2. Impact and Predictive Power Analysis of Community Capital and Community Building on Community Sustainability

This study utilized regression analysis to explore the impact of community capital and community building on community sustainability and to assess the predictive power of these factors. The model's fit statistics indicate an R-squared value of 0.818 and an adjusted R-squared value of 0.815, suggesting that the model explains 81.8% of the variance in community sustainability, demonstrating a strong predictive capability (the estimated standard error is 0.24408). The ANOVA results show an F-value of 307.202 with a significance level of <0.001 ($p < 0.001$), indicating that the model is highly significant in predicting community sustainability.

According to the results in Table 6, the specific coefficient analysis shows the following.

Table 6. Multiple Regression Analysis of Community Capital and Community Building on Community Sustainability.

Y = Community Sustainability	Non-Standardized Coefficient		Standardized Coefficient	T-Value	Significance
	B	Standard Error	Beta		
Intercept	−0.155	0.176		−0.878	0.382
Community Capital	0.418	0.078	0.369	5.355	<0.001
Community Building	0.625	0.075	0.570	8.286	<0.001

Overall Model

$$Y(\text{Community Sustainability}) = -0.155 + 0.418 \times 1(\text{Community Capital}) + 0.625 \times 2(\text{Community Building})$$

- **Community Capital:** The unstandardized coefficient is 0.418, the standardized coefficient is 0.369, and the t-value is 5.355 with a significance level of <0.001 ($p < 0.001$). This indicates that community capital has a significant positive impact on community sustainability, reflecting the important role of internal resources and social networks in enhancing community sustainability.
- **Community Building:** The unstandardized coefficient is 0.625, the standardized coefficient is 0.570, and the t-value is 8.286 with a significance level of <0.001 ($p < 0.001$). This shows that community building has an even more significant impact on community sustainability, suggesting that effective community building strategies and practices have a powerful role in enhancing community sustainability.

The following is an in-depth discussion of the research findings.

1. Application of Community Capital and Health Promotion.

This study finds that community capital plays a crucial role in health promotion. Specifically, the use of social capital, such as strengthening social networks and mutual trust within the community, significantly facilitates the formation of healthy behaviors. Kawachi and Berkman [37] point out that high levels of social capital can improve residents' mental and physical health, as robust social networks provide emotional support and information dissemination. In this study, the application of social capital is primarily reflected in teacher matching and event collaboration, indicating the importance of these social capital applications in health promotion. The high proportion of teacher matching (48.5%) suggests that sharing and utilizing professional knowledge within the community is essential for health promotion activities. This aligns with Giles-Corti et al. [38], who found that strong social networks promote residents' participation in health activities. Additionally, the enhancement of human capital, particularly through the education and skill training of community members, has a significant impact on health promotion.

2. Resource Integration and Sustainable Development.

The resource integration strategy in this study shows promising results, consistent with the findings by Brannan [33] and Walker et al. [34]. Integrating resources from different sources enhances the effectiveness of health promotion programs. The results from the resource inventory indicate that integrating internal and external resources (such as those from government departments and private groups) improves resource utilization efficiency and effectively supports health promotion activities. Resource integration not only improves resource efficiency, but also fosters internal collaboration and co-creation within the community, which is a key factor in driving sustainable community development. However, challenges remain, such as economic growth and unequal resource distribution. Although the data in this study show a positive impact of resource integration on health promotion, uneven resource distribution could still negatively affect community health. Therefore, future research should further explore how to balance economic growth with fair resource distribution to promote health equity [29].

3. Sustainable Development and Environmental Protection.

This study highlights the alignment between community capital and sustainable development, consistent with the United Nation's vision of sustainability. The effective use of community capital can meet current needs while protecting resources for future generations. Environmental protection, as part of sustainable development, is positively impacted by the use of green spaces and public areas within the community. However, challenges such as air and water pollution remain, requiring further policy support and community action to address these issues [39].

4. Compare with the experience of other foreign communities in promoting sustainable development.

Swedish urban communities such as Stockholm emphasize social inclusion and democratic participation. The formation of social capital mainly relies on government policy support, such as community participation programs and civic education, which promotes trust and cooperation among residents [25]. It not only enhances social cohesion, but also promotes sustainable environmental protection projects, such as urban greening and a circular economy [40]. Urban communities in Brazil, such as Sao Paulo, use social movements as the driving force to form a strong social capital network and emphasize grassroots participation. Social capital here is not only the establishment of interpersonal relationships, but also the power of collective action. Through cooperatives and community organizations, residents can jointly initiate sustainable development projects, such as community gardens and social housing, to improve quality of life and increase social resilience. Japanese urban communities such as Tokyo emphasize the combination of social responsibility and local culture. The formation of social capital is closely related to traditional culture and family values, and residents generally have a strong sense of community belonging. In Tokyo, the application of social capital is mainly reflected in community support systems, such as mutual aid societies and volunteer service organizations. These types of social capital not only promote the improvement of environmental awareness, but also provide support for the city's post-disaster recovery. The experience of these communities in promoting sustainable development tells us that social capital to promote sustainable development not only requires the establishment of a strong interpersonal network, but also requires targeted policy support and a cultural foundation to more effectively promote sustainable development.

5. This study highlights the critical role of community capital in improving the health and sustainability of urban areas.

An asset inventory and application comparison allow each community to understand areas that need to be strengthened, which can more effectively promote local development and leverage the collective strength of community organizations. The practical implications of these findings for Taipei are significant. Community units will benefit from the advancement of social capital, leading to increased community engagement. In addition, these research results can be used in policy planning to make effective efforts to develop

and connect community capital to support the practice of community sustainability. In the future, it is also expected to continue to actively improve Taipei City's health promotion plan to form a resilient community framework. This approach not only improves quality of life, but also enables communities to respond more effectively to future challenges.

6. Conclusions

This study shows that there is a strong connection between social capital, community creation, and sustainable development. In order to achieve comprehensive community development goals, community work needs to create favorable characteristics and focus on the accumulation of social capital. The following explains five suggestions: First, the community should position the core goals of sustainable development on a rolling basis. Research indicates that community capital and size have a significant impact on development. Therefore, community leaders should gather important people to have in-depth dialogues on environmental changes, continuously adjust development goals, and implement PDAC verification mechanisms to promote knowledge management.

Secondly, urban communities can explore the establishment of regional alliance operating models, and leverage the population concentration and ethnic diversity of urban communities to promote "bottom-up" self-decision making and strengthen community cohesion. Third, it is crucial to promote the construction of a healthy and sustainable health system. To improve community health by changing daily behaviors, relevant stakeholders need to work with policymakers to build a system that is conducive to health and sustainability. Fourth, communities should improve social capital and practical capabilities. Although urban communities have diverse social capital, there is still room for improvement in its application, and organizational and network capabilities need to be strengthened to promote the effective connection of resources. Finally, interprofessional integration can enhance community interaction. The sustainable development of the community involves all aspects of humanity, economy and society. Professional talents should be integrated to achieve coordinated development, create a "warm community" and support comprehensive development goals.

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References

1. Rosenfeld, J.; Berggren, R.; Frerichs, L. A Review of the Community Health Club Literature Describing Water, Sanitation, and Hygiene Outcomes. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1880. [[CrossRef](#)] [[PubMed](#)]
2. Yuan, M.; Lin, H.; Wu, H.; Yu, M.; Tu, J.; Lü, Y. Community engagement in public health: A bibliometric mapping of global research. *Arch. Public Health* **2021**, *79*, 6. [[CrossRef](#)] [[PubMed](#)] [[PubMed Central](#)]
3. Larnyo, E.; Tettegah, S.; Griffin, B.; Nutakor, J.A.; Preece, N.; Addai-Dansoh, S.; Dubon, N.; Liu, S. Effect of social capital, social support and social network formation on the quality of life of American adults during COVID-19. *Sci. Rep.* **2024**, *14*, 2647. [[CrossRef](#)] [[PubMed](#)]
4. Im, H.; Rosenberg, R. Building Social Capital Through a Peer-Led Community Health Workshop: A Pilot with the Bhutanese Refugee Community. *J. Community Health* **2016**, *41*, 509–517. [[CrossRef](#)] [[PubMed](#)]

5. Fergen, J.T.; Bergstrom, R.D.; Steinman, A.D.; Johnson, L.B.; Twiss, M.R. Community capacity and climate change in the Laurentian Great Lakes Region: The importance of social, human, and political capital for community responses to climate-driven disturbances. *J. Environ. Plan. Manag.* **2024**, *67*, 993–1012. [CrossRef]
6. Biggeri, M.; Ferrannini, A.; Arciprete, C. Local Communities and Capability Evolution: The Core of Human Development Processes. *J. Hum. Dev. Capab.* **2018**, *19*, 126–146. [CrossRef]
7. Kim, D.; Subramanian, S.; Kawachi, I. Social Capital and Physical Health. In *Social Capital and Health*; Kawachi, I., Subramanian, S., Kim, D., Eds.; Springer: New York, NY, USA, 2008. [CrossRef]
8. Moon, B. Financial Integration Scenario for Community Integrated Care: Focusing on the Case of Korea. *Int. J. Integr. Care (IJIC)* **2022**, *22*, 1–12. [CrossRef]
9. Gambhir, S.S.; Ge, T.J.; Vermesh, O.; Spitler, R.; Gold, G.E. Continuous health monitoring: An opportunity for precision health. *Sci. Transl. Med.* **2021**, *13*, eabe5383. [CrossRef]
10. Flores-Martin, D.; Rojo, J.; Moguel, E.; Berrocal, J.; Murillo, J.M.; Cai, Z. Smart nursing homes: Self-management architecture based on IoT and machine learning for rural areas. *Wirel. Commun. Mob. Comput.* **2021**, 8874988. [CrossRef]
11. Bodin, Ö.; Crona, B.; Ernstson, H. Social networks in natural resource management: What is there to learn from a structural perspective? *Ecol. Soc.* **2006**, *11*, r2. Available online: <http://www.ecologyandsociety.org/vol11/iss2/resp2/> (accessed on 8 September 2024). [CrossRef]
12. Eriksson, M. Social capital and health—Implications for health promotion. *Glob. Health Action* **2011**, *4*, 5611. [CrossRef] [PubMed]
13. Aliyas, Z. Social Capital and Physical Activity Level in an Urban Adult Population. *Am. J. Health Educ.* **2020**, *51*, 40–49. [CrossRef]
14. Nutbeam, D. Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promot. Int.* **2000**, *15*, 259–267. [CrossRef]
15. Li, H.; Jansen, R.E.V.; Sijuwade, C.; Macura, B.; Giusti, M.; Jørgensen, P.S. What evidence exists regarding the impact of biodiversity on human health and well-being? A systematic map protocol. *Environ. Evid.* **2024**, *13*, 11. [CrossRef] [PubMed]
16. Twohig-Bennett, C.; Jones, A. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environ. Res.* **2018**, *166*, 628–637. [CrossRef]
17. Donessouné, F.M.G.; Sossa, G.O.; Kouanda, S. Sustainability of community health programme using community-based organizations: A challenge for stakeholders. *BMC Health Serv. Res.* **2023**, *23*, 434. [CrossRef] [PubMed]
18. Bodkin, A.; Hakimi, S. Sustainable by design: A systematic review of factors for health promotion program sustainability. *BMC Public Health* **2020**, *20*, 964. [CrossRef] [PubMed] [PubMed Central]
19. Wallerstein, N.B.; Duran, B. Using community-based participatory research to address health disparities. *Health Promot. Pract.* **2006**, *7*, 312–323. [CrossRef]
20. Wallerstein, N.; Duran, B. Community-based participatory research contributions to intervention research: The intersection of science and practice to improve health equity. *Am. J. Public Health* **2010**, *100* (Suppl. S1), S40–S46. [CrossRef]
21. Scott, K.; Beckham, S.W.; Gross, M.; Pariyo, G.; Rao, K.D.; Cometto, G.; Perry, H.B. What do we know about community-based health worker programs? A systematic review of existing reviews on community health workers. *Hum. Resour. Health* **2018**, *16*, 39. [CrossRef]
22. Viswanath, K.; Steele, W.R.; Finnegan, J.R., Jr. Social Capital and Health: Civic Engagement, Community Size, and Recall of Health Messages. *Am. J. Public Health* **2006**, *96*, 1456–1461. [CrossRef] [PubMed]
23. Brannan, S. Integrating community resources to improve health outcomes. *Health Aff.* **2005**, *24*, 458–465.
24. Suarez, B.Y.; Francisco, V.T.; Rubén Chávez, N. Applying Community-Based Participatory Approaches to Addressing Health Disparities and Promoting Health Equity. *Am. J. Community Psychol.* **2020**, *66*, 217–221. [CrossRef] [PubMed]
25. Kania, J.; Kramer, M. Collective impact. *Stanf. Soc. Innov. Rev.* **2011**, *36*, 36–41.
26. Bhalotra, S.; Venkataramani, A. Health and Economic Development: A Review of the Evidence. *J. Econ. Surv.* **2018**, *32*, 911–932.
27. Marmot, M. Social determinants of health inequalities. *Lancet* **2005**, *365*, 1099–1104. [CrossRef]
28. Phelan, J.C.; Link, B.G.; Diez-Roux, A.V.; Kawachi, I.; Levin, B. ‘Fundamental causes’ of social inequalities in mortality: A test of the theory. *J. Health Soc. Behav.* **2004**, *45*, 265–285. [CrossRef]
29. World Health Organization. *Preventing Disease Through Healthy Environments: Towards an Estimate of the Environmental Burden of Disease*; WHO Press: Geneva, Switzerland, 2006.
30. Costanza, R.; d’Arge, R.; de Groot, R.; Farber, S.; Grasso, M.; Hannon, B.; Limburg, K.; Naeem, S.; O’Neill, R.V.; Paruelo, J.; et al. The value of the world’s ecosystem services and natural capital. *Nature* **1997**, *387*, 253–260. [CrossRef]
31. Kretzmann, J.P.; McKnight, J.K. *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community’s Assets*; Institute for Policy Research: Evanston, IL, USA, 1993.
32. Mathie, A.; Cunningham, G. From clients to citizens: Asset based community development as a strategy for community driven development. *Dev. Pract.* **2003**, *13*, 474–486. [CrossRef]
33. Brannan, M. Community health and social capital: A review of the literature. *Health Place* **2005**, *11*, 203–211.
34. Walker, J.E. Building from Strength: Asset-Based Community Development. *Communities and Banking*. 2006. Winter. pp. 25–27. Available online: https://www.researchgate.net/publication/5026869_Building_from_strength_asset-based_community_development (accessed on 8 September 2024).
35. Huang, Y.-H. *Toward Sustainable Communities: A Study of Social Capital, Community Building, and Community Development*; Grant Program (Project No.: NSC 96-2412-H-260-003-SS2); National Science Council, Executive Yuan: Taipei, Taiwan, 2009; Unpublished.

36. Lee, Y.-J. Guidelines for urban sustainable communities: A new trend in sustainable territorial development. *J. Appl. Ethical Res.* **2007**, *41*, 48–57.
37. Kawachi, I.; Berkman, L.F. Social cohesion, social capital, and health. *Soc. Sci. Med.* **2000**, *51*, 1001–1012.
38. Giles-Corti, B.; Broomhall, M.H.; Knuiiman, M.; Collins, C.; Douglas, K.; Ng, K.; Lange, A.; Donovan, R.J. Increasing walking: How important is distance to, attractiveness, and size of public open space? *Am. J. Prev. Med.* **2005**, *2005* (Suppl. 2), 169–176. [[CrossRef](#)] [[PubMed](#)]
39. Volland, J.; Voß, J.P. The role of community engagement in the transition towards sustainable urban environments: A case study of urban greening projects. *Sustainability* **2020**, *12*, 553. [[CrossRef](#)]
40. Alvarez, E.C.; Kawachi, I.; Romani, J.R. Family social capital and health—A systematic review and redirection. *Sociol. Health Illn.* **2017**, *39*, 5–29. [[CrossRef](#)] [[PubMed](#)]

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