

CASE STUDY OF IMPROVING OPERATIONAL EFFECTIVENESS OF CONGREGATE MEAL PROGRAM FOR ELDER IN CHIAYI COUNTY

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ABSTRACT

The issue of population aging in Taiwan is becoming increasingly severe, necessitating simple dining solutions such as senior cafeterias to facilitate social interaction among the elderly. These cafeterias aim to provide the elderly with basic care for their health, daily life, psychological and social well-being, and even leisure education. However, despite the efforts put into these programs, numerous challenges and areas for improvement persist. This research focus on the senior cafeterias in Chiayi County as a case study to investigate the current status of community-based congregate meal services for the elderly and explore ways to enhance their operations and benefits. The study begin with surveys and in-depth interviews with key stakeholders involved in the operation of these cafeterias. Following data analysis, recommendations are presented for improving the operation of senior cafeterias in Chiayi County. These recommendations encompass strategies for securing funding and personnel support, modifying meal service approaches, enhancing hygiene and safety measures, organizing cross-district activities, promoting food waste utilization, and providing transportation services.

Keywords: Operational effectiveness, Congregate meal program, Aging population.

1. INTRODUCTION

In April 2021, the Central Intelligence Agency [1] of the United States published a global fertility rate report on its website, highlighting the population dynamics in Taiwan. According to the report, among 227 countries and regions worldwide, Taiwan ranked last in terms of fertility rates. It was reported that on average, women aged 15 to 45 in Taiwan are expected to give birth to approximately 1.07 new-borns each, significantly lower than South Korea's 1.09 and Hong Kong's 1.22. Additionally, the latest population statistics from Taiwan's Ministry of the Interior for the year 2021 indicate that the cumulative number of births has been lower than the number of deaths in the first nine months of the year.

The aging rate in Chiayi County is 20.95%, and the crude death rate is 11.18 per thousand, both of which are higher than the national average in Taiwan. Chiayi County, being a traditionally agricultural region, has been affected by the trends of population aging and declining birth rates in modern society. Additionally, the limited employment opportunities in traditional agriculture have led to the outmigration of the working-age population.

In Taiwan, the establishment of community care and support service points is a collaborative effort involving village offices, community development associations, and non-governmental organizations, with their voluntary participation. These service points also engage enthusiastic members of the community as service volunteers. Each service point provides elderly care visits, telephone check-ins, and referral services. Furthermore, their offering based on the unique needs and characteristics of each local area, which may include meal provision services and health promotion activities.

The aim of these community care services is to promote localized care, enabling elderly individuals to lead joyful lives within their familiar environments. Additionally, these services seek to provide respite services that are friendly and suitable for family caregivers, help to prevent the deterioration of long-term care issues resulting from population aging. This approach leverages the self-help and mutual assistance functions of the community to the fullest extent.

Castro [2] research indicates that elderly individuals who dine alone are more prone to nutritional imbalances and digestive issues compared to those who dine in the company of others, significantly impacting their physical and mental well-being. Presently, the "Chiayi County Elderly Cafeteria" has established 57 sites across communities to provide meals for senior citizens. The primary aim is to allow the elderly to experience the joy of dining together in Chiayi, encouraging them to step out of their homes, maintain a certain level of physical activity, delay the aging of their bodily functions, and, at the same time, establish social connections. This initiative aims to prevent elderly individuals from being isolated at home.

To achieve this goal, the Chiayi County elderly cafeteria collaborates with community development associations and volunteers from various community care points to carefully design cultural and senior fitness activities for the elderly. These activities enable senior citizens to cultivate their interests, enrich their lives, and, ultimately, help them rediscover their self-worth, all contributing to the aspiration of "active aging."

Balanced diet and nutrition are crucial factors determining the health and quality of life of the elderly. They promote both the physical and mental well-being of older individuals, delaying the aging process. Furthermore, a healthy diet indirectly contributes to the prevention of chronic diseases in the elderly, enhancing their overall quality of life [3]. Since 1993, the Ministry of the Interior has been guiding local governments to primarily organize meal delivery services for the elderly at the community level to alleviate the inconvenience of cooking and shopping for them, while ensuring they receive nutritionally balanced meals [4]. In Taiwan, the provision of nutritional meals for the elderly was officially incorporated into the legal framework during the first amendment of the Elderly Welfare Act in 1997, establishing it as one of the essential community-based services under long-term care policies.

From 2002 to 2004, the government initiated the "Challenge 2008- New Hometown Community Development Program". In 2005, it introduced the "Taiwan Healthy Community Six-Star Program" and formulated the "Implementation Plan for Establishing Community Care Service Points", with the widespread establishment of "Community Care Service Points". In 2016, the Long-term Care 2.0 Ten-year Plan (2017-2026).was officially launched. Over the past two decades, these government policies have been dedicated to preparing Taiwan for its transition into an aging society, with a particular focus on elderly care. This has led to the emergence of various service models such as elderly catering services, meal delivery for the elderly, and communal dining for the elderly.

However, how to provide elderly catering services correctly and appropriately is a legitimate concern. Based on the aforementioned research background and motivation, this study will focus on the analysis of the benefits of elderly communal dining. It will use communities in Chiayi County as a research case. We hope that through this study, we can understand the following research questions, which can serve as references for the government in continually revising and formulating elderly welfare policies in the context of an aging society. Therefore, the objectives of this study are as follows:

- 1) What is the current implementation status and the effectiveness of the service functions of the "Chiayi County Elderly Cafeteria"?
- 2) Identify deficiencies and areas for improvement in the planning and environmental facilities of the meal service venues.
- 3) What is the significance of community elderly meal activities in providing elderly care and support within the community?
- 4) What motivates senior citizens in the community to participate in communal dining at care service points? How can the effectiveness of communal dining be enhanced?

Current Status of Elderly Community Communal Dining

Taiwan has entered an aging society, and the urgency and severity of elderly care needs have become important issues in current social policies. Among these needs, the demand for meal services is a policy area that the government has been actively promoting. However, there is a gap between policy and practical implementation. The government's welfare umbrella cannot cover all elderly individuals in need, and there is a greater demand for meal services in communities than there are service providers, resulting in an imbalance between supply and demand [5].

In 2016, the Ministry of Health and Welfare under the Executive Yuan introduced the long-term care 2.0 ten-year plan (2017-2026).for the effective provision of elderly care services. As part of this plan, various County and city governments have established a comprehensive community care service system were label as A-B-C. Within this framework, long-term care points (C-points), also known as lane long-term care stations, offer a range of services that formally include nutritional meal services (communal dining or meal delivery). While the nature of these services is similar to community care service points, lane long-term care stations offer a richer array of services and cater to a more diverse clientele, making them an enhanced version, often referred to as 2.0, of community care service points.



Figure 1. Long-term Care 2.0 Ten-year Plan [6]

The purpose of community meal service (elderly communal dining) is to collaborate with the community and volunteer groups to provide group meals on fixed days of the week. The primary focus is on fostering "friendly companionship" and "caring interaction." The aim is to encourage senior citizens in the community to step out of their homes and participate in communal dining and related activities. This can alleviate the physiological and psychological pressures of aging, reduce loneliness, and increase a sense of security and happiness.

Facing to the declining birth rates and an increasingly aging population, Chiayi County is experiencing a situation where there is one elderly person for every five residents. In the past, elderly meal services primarily focused on meal delivery to homes and targeted specific groups such as low-income households, those with disabilities, and elderly individuals living alone.

However, in order to encourage senior citizens to actively participate in community activities and promote their physical and mental well-being, community care service points have expanded their meal services to include communal dining for senior citizens. This service is open to all individuals aged 65 and above, regardless of specific eligibility criteria. The goal is to optimize the physical, psychological, and social aspects of health care policy in an aging society, extending preventive healthcare, promoting active aging, delay disability, enhancing the well-being of senior citizens, and improving their quality of life

Many elderly individuals are accustomed to living alone in their daily lives, and a significant portion of them may have irregular eating habits. They may purchase ingredients, prepare meals, and wash dishes by themselves. These activities can be burdensome for the elderly and can have a significant impact on their overall health. Nutritional issues among the elderly are not only related to the aging process but are also closely associated with their living environment, social and psychological factors, and physiological considerations [7].

Currently, elderly communal dining services are typically offered 1 to 3 times a week, with a few exceptions providing daily meals from Monday to Friday. These services primarily focus on providing lunch, and a smaller number also offer dinner. Regardless of the frequency, it is highly encouraged for elderly individuals to participate and step out of their homes. Some communal dining programs even include light exercise sessions before the meal and plan various activities afterward, which indirectly promotes physical well-being. The most valuable aspect of communal dining is the social interaction it fosters. Humans are inherently social beings, and communal dining aligns with this aspect of human nature. By participating in communal dining, individuals can connect with others, inquire about each other's well-being, and provide mutual support and encouragement.

Currently, there is a wide range of entities providing communal dining services. These include village offices, community development associations, elderly service centres, senior learning centres, senior residences, agricultural and fishery associations, police stations, district offices, religious organizations (churches, temples), community organizations, apartment building management committees, and medical universities [8].

Elderly Cafeterias in Chiayi County

Chiayi County has entered the realm of a super-aged society. According to the Chiayi County government's official website [9], the elderly population in the County has reached 100,000 people, accounting for 20% of the total population. To ensure the well-being of the County's senior citizens, the Chiayi County government has launched the "Aging Gracefully Campaign" that spans various departments. This campaign includes five major dimensions: "Eating with

Peace of Mind, Staying Healthy and Active, Enjoying Lifelong Learning, Facilitating Convenience, and Finding Joy in Activities." Each of these dimensions comprises different sub-projects, encompassing both existing critical policies and innovative new initiatives. These sub-projects which includes: (1). Eating with peace of mind: denture program for seniors, elderly cafeterias, healthy eating initiatives. (2). Staying healthy and active: long-term care c-point, active aging stations, community care and support centres, active and healthy exercise programs, gate ball sports. (3). Enjoying lifelong learning: lifelong learning academies, senior centres, computer classes for seniors, intergenerational learning. (4). Facilitating convenience: friendly accessibility promotion, respect for senior's card, accessible recreational areas and demonstrative sites. (5). Finding joy in activities: plans for expanding voluntary service areas.

Chiayi County Government is continuously strengthening its care services, promoting age-friendly communities, and implementing various care strategies such as local elderly care. They are actively creating an elderly-friendly environment and establishing community care centres. In total, there are 154 community care and support centres across the 18 townships and cities in Chiayi County. Among these, there are 42 community care and support centres, 214 long-term care C-Points, 73 elderly cafeterias, and 26 active aging stations. These centres provide health promotion, communal dining services, and programs for preventing and delaying disability. Excluding duplicate locations within the same village, the services are available in 232 villages, covering 65% of the County.

Chiayi County has consistently had the highest proportion of elderly residents in the country, with a population exceeding 20%. Due to the combined effects of an aging population and declining birth rates, the number and proportion of elderly residents continue to rise. The County government is committed to providing a comfortable living environment and healthcare for its elderly population while increasing opportunities for social participation and interpersonal interactions among seniors. Despite financial challenges, caring for the elderly remains a top priority for Chiayi County's government.

The Chiayi County Elderly Cafeteria program was initiated in 2016. It is established and operated with the guidance and support of the County government, as well as community organizations. The County government provides a maximum subsidy of NT\$150,000 for the setup of each cafeteria. The cost of ingredients for each meal is set at NT\$30 per person. Villages or communities interested in setting up these cafeterias are responsible for finding suitable locations, recruiting volunteers, and raising additional funds if needed. Starting from the 2019 fiscal year, the number of individuals receiving ingredient subsidies for the Elderly Cafeteria program was increased from 50 to 100 people per cafeteria. This expansion aims to encourage more elderly individuals to come out of their homes and enjoy communal meals together.

In addition to providing meals, some community development associations and long-term care, service points apply for grants to arrange programs that help delay cognitive and physical decline in the elderly. They offer health promotion services cantered around elderly individuals, aiming to reduce the risk of frailty. These services include activities such as exercise (muscle strength training, fall prevention, and cardiovascular fitness), nutrition education, cognitive stimulation, chronic disease management (including medication safety), fall prevention programs, and social engagement activities. The goal is to slow down the aging process and enhance the health literacy of the elderly.

According to Chiayi County's Elderly Welfare Division Chief, Chao-Liang Chang, the Elderly Cafeteria program goes beyond just providing a meal. It holds great significance as it encourages senior citizens to leave their homes, engage in outdoor activities, cook and dine together, chat, and exercise. It promotes a sense of community and belonging, emphasizing the idea that "cooking and eating together brings a sense of home." The current elderly care approach in Chia-Yi County is multifaceted, with various services provided through care points such as elderly care stations, long-term care centres, neighbourhood care stations, and elderly cafeterias, all dedicated to caring for the elderly in the community. The number of service days provided at these care points continues to increase, reflecting the commitment to serve the senior population.

2. RESEARCH METHOD

This study aims to comprehensively investigate the operation and perspectives of the key personnel or operators involved in the current operation of elderly cafeterias in Chiayi County through a questionnaire survey. The survey will cover various aspects of elderly cafeteria operation. Subsequently, in-depth interviews will be conducted with selected operators to delve into their insights and improvement directions regarding the operational benefits of elderly cafeterias. Interview outlines will be prepared for these in-depth interviews. Finally, the results of the questionnaire survey and interviews will be compared and summarized to provide recommendations for enhancing the operational benefits of elderly cafeterias in Chiayi.

In the questionnaire design phase, insights from a study by Lee [10] on the current status and reflections of communal dining in community care centers were considered. Li's study identified both intrinsic and extrinsic challenges in communal dining, which are summarized as follows: (1). Intrinsic challenges: (i). Inconsistent availability of volunteer manpower; (ii). Difficulty in managing nutrition; and (iii). Challenges in portion control. (2). Extrinsic challenges: (i). Financial resources and funding; (ii). Facility and equipment availability; and (iii). Sanitary conditions. These challenges will be taken into account when designing the questionnaire for this study.

Lee [10] also made recommendations and future prospects in her study. These recommendations included government actions such as: (1). Providing subsidies for cross-district communal dining centers. (2). Integrating diverse manpower, including nutritionists and nurses. (3). Utilizing unused space in elementary and junior high schools, as well as school lunch programs, to organize intergenerational communal dining. (4). Increasing the monthly subsidy for operational expenses by evaluating the scale of communal dining centers, rather than using a fixed amount. (5). Implementing a central kitchen distribution system to maintain hygiene, enhance safety, and reduce costs, among others. These recommendations provide valuable insights for improving communal dining services and can be considered in the context of this research. The suggestions related to communal care centers include: (1). Using "Line" groups to facilitate connections and communication among communal dining communities. (2). Promoting resource exchange and support between communal dining communities. (3). Conducting knowledge transfer of communal dining operational experiences. (4). Developing a nationwide, universally accessible community communal dining resource map app to enable information sharing across communities and counties. These suggestions aim to enhance communication, collaboration, and the sharing of resources and experiences among communal dining communities, which can contribute to the improvement of communal dining services.

The recommendations from Lin [11] research regarding communal dining include: (1). Organizing family day communal meals. (2). Designing communal dining spaces (e.g., round tables), in multipurpose activity centers with flexible layouts. (3). Encouraging leaders and volunteers to avoid multiple roles that may impact service quality. Promote the participatory concept of shared, symbiotic, and communal living among the elderly, including shared gardens, refrigerators, cooking, and food resources. (4). Collaborating with local resources to reduce dependence on the government for human resources, materials, and funding. (5). Expanding service capacity to allow more elderly individuals to participate in communal dining activities. These recommendations aim to enhance the communal dining experience, promote community engagement, and reduce reliance on government support by leveraging local resources and encouraging more elderly individuals to join communal dining programs. Based on the literature review mentioned above and discussions with a coordinator from a communal dining site and my academic advisor, the questionnaire is presented as Table 1. In addition to the basic questions, this questionnaire employs the Likert five-point scale for measurement.

Table 1. Questionnaire for Developing Communal Dining in Elderly Cafeterias

Basic Information
1. Name of the communal dining site.
2. Years of establishment of the communal dining site.
3. Approximate size of the communal dining site
4. Number of communal meals per week
5. Is there a fee for communal meals?
6. Your role
7. How long have you personally assisted in the communal dining at the elderly cafeteria?
8. Has this site already established a community care and support point?
9. Is this site willing to establish a community care and support point?
Internal Disadvantages
1. Insufficient volunteer manpower at our communal dining site.
2. Volunteer manpower at our communal dining site is unstable.
3. We actively recruit seniors from the community to serve other seniors.
4. Improvement is needed in the nutritional management at our communal dining site.
5. Difficulty in controlling the quantity of meals at our communal dining site.
External Disadvantages
1. Insufficient financial resources and funds at our communal dining site.
2. I believe that community dining should charge a fee.
3. Community members contribute to the financial resources of our communal dining site.
4. I believe that part of the communal dining site's financial resources and funds should be self-generated.
5. Inadequate facilities and equipment at our communal dining site
Government Policies
1. Our communal dining site needs subsidies for visits to cross-district communal dining sites.
2. Our communal dining site needs the presence of nutritionists and nurses.
3. I believe that utilizing idle spaces in primary and secondary schools for communal dining, along with school lunch programs, is worth promoting.
4. I believe that communal dining for the elderly can be combined with schoolchildren's lunches.
5. I believe that communal dining can use central kitchens for distribution to maintain hygiene, enhance safety, and reduce costs.
Base Management
1. I believe that using Line groups to connect and facilitate communication among managers of communal dining communities is a good idea.
2. I believe that resources between communal dining communities should be exchanged and mutually supported.
3. I believe that there should be an initiative to share and pass on operational experiences of communal dining sites.
4. I believe that communal dining sites can organize family communal dining events, inviting family members to participate together.

3. RESULTS AND DISCUSSIONS

Questionnaire Survey

This study focuses on the current elderly canteens in Chiayi County as the research subjects. First, a questionnaire was used to survey the main operators of the current 57 elderly canteen locations, investigating their views and suggestions on various aspects of running the elderly canteens. Each elderly canteen was approached with a principle of sending out three questionnaires. The questionnaires were distributed in the form of an online Google Form, and 52 responses were collected, originating from 31 elderly canteens

Questionnaire Results

The survey sample revealed that most of the communal dining locations had been established for over 3 years, had fewer than 50 diners, provided communal meals three or more times per week, and the majority offered meals free of charge. The combined findings from the questionnaire survey and interviews are summarized as follows:

The weaknesses identified within the elderly cafeterias include: (1). Insufficient volunteer manpower, affecting approximately 44% of the surveyed cafeterias. (2). Volunteer staffing instability, reported by around 28% of cafeterias. (3). A reliance on recruiting elderly community members to serve other elderly diners in approximately 73% of cases. (4). A need for improvement in nutritional management, identified by about 29% of cafeterias. (5). Challenges in controlling the quantity of food, reported by 10%. (6). Difficulty in accurately predicting and managing the number of diners, noted by 11%. (7). These challenges underscore the need for addressing volunteer recruitment, stability, nutritional management, portion control, and diner management to enhance the operations of elderly cafeterias.

The external challenges facing elderly cafeterias include: (1). Inadequate financial resources and funding shortages, affecting approximately 59% of the surveyed cafeterias. (2). The need to consider charging fees for communal meals, with about 48% facing this challenge. (3). Relying the belief that communal dining locations should partially self-fund, noted by around 31%. (4). Insufficient facilities and equipment at communal dining sites, a concern for 21%. (5). Inadequate hygiene conditions at communal dining locations, mentioned by 11%. (6). Addressing these external challenges, particularly financial constraints, fundraising strategies, and improving dining facilities, is essential for the sustainability and effectiveness of elderly cafeterias.

The government policy on canteens for the elderly: (1). 52% of cafeterias indicated a need for subsidies for cross-district communal dining site visits. (2). 49% expressed the need for the presence of nutritionists and nurses. (3). 50% found the utilization of idle spaces in junior high and elementary schools, along with school nutrition lunches, to be worth promoting. (4). 38% reported that communal dining for the elderly can be integrated with schoolchildren's lunch programs. (5). 57% believed that central kitchen distribution for communal dining can improve hygiene, enhance safety, and reduce costs. These insights regarding government policies shed light on areas where further support and collaboration can benefit elderly cafeterias.

The operation of elderly cafeterias: (1). 50% of respondents believe that communal dining activities should incorporate local resources to avoid overreliance on government resources in terms of materials, finances, manpower. (2). 69% consider using tools like "Line" groups to connect and facilitate communication among managers of communities with communal dining programs. (3). 71% believe that resources should be exchanged and mutual support should be

fostered among communal dining communities. (4). 75% suggest organizing experience-sharing sessions to pass on operational knowledge among communal dining locations. (5). 54% think that communal dining locations can host family days for communal dining, inviting the family members of diners to participate. These insights emphasize the importance of community collaboration, resource sharing, and knowledge exchange for the effective operation of elderly cafeterias.

Summarizing these positive agreements and negative disagreements, it is evident that there is a significant shortage of volunteer manpower and financial resources in elderly cafeterias in Chiayi County. Most cafeterias rely on donations and recruit elderly individuals to serve other elderly diners. The majority of cafeteria operators also believe that there is a need for cross-district visitation subsidies and fostering connections and communication among different communal dining communities. It is recommended that nutritionists and nurses be stationed regularly, and school nutrition programs can be considered as beneficial. On the other hand, the current communal dining locations generally have satisfactory equipment, hygiene conditions, and nutrition offerings, and managing the number of diners is not a major issue. However, self-funding of elderly cafeterias is not recommended, and there is no consensus on communal dining with schoolchildren.

4. CONCLUSIONS AND SUGGESTIONS

In conclusion, this study focused on the operation issues of elderly cafeterias in Chiayi County, Taiwan, in order to provide recommendations for future improvements. Initially, a literature review was conducted to identify five major areas of concern in the operation of elderly cafeterias. A questionnaire was designed and distributed through online groups to operators of 57 elderly cafeterias in Chiayi County, resulting in 52 responses from 31 cafeterias. Due to the limited sample size, only descriptive statistics were used to provide a basic analysis and understanding of the current situation.

Furthermore, to enhance the depth of the research, in-depth interviews were conducted with two cafeteria operators and two policy influencers in the field.

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