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Impact of the Community-Based Health and Social Care programme on at-risk older adults' psychosocial wellbeing

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Impact of the Community-Based Health and Social Care programme on at-risk older adults' psychosocial wellbeing

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Key Findings:

- Ministry of Health, Singapore piloted the Community-Based Health and Social care programme (hereafter, CBCP) in 2014 to provide health and social care support for older adults staying in public rental flats. Using a mixed-method (i.e. qualitative and quantitative) evaluation design, we assessed the effectiveness of CBCP in improving the psychosocial wellbeing of older adults.

- In the qualitative study, we found 4 factors that enabled participants' service utilization and influenced their satisfaction:
    i. The belief that CBCP can address their health and social needs
    ii. Convenient access to support
    iii. Trust and familiarity with CBCP staff
    iv. Immediate guarantee of support provided

- CBCP made a difference in terms of satisfying participants' need for regular social interaction rather than addressing their health and functional needs. Yet participants who expressed this were relatively more independent and/or ambulant, had well-controlled chronic conditions and required minimal support from CBCP. In contrast, those who were indifferent to CBCP or expressed dissatisfaction with CBCP had higher levels of functional impairment or disabilities, limited mobility, lacked social interactions and expressed higher levels of distrust towards neighbours.

- In the quantitative study, changes in psychosocial wellbeing outcomes – social engagement, loneliness, social network, depressive symptoms, and quality of life – across time were similar for those enrolled and not enrolled into CBCP.

Key Findings:

- Findings from CBCP's process data, such as, frequency and duration of services provision:
  i. Majority of CBCP's clients did not require services for activities of daily living (e.g. bathing and feeding) or instrumental activities of daily living (e.g. shopping and handling medications), despite such services being a core element of CBCP
  ii. There was misalignment between clients' needs and types or dosage of services provided
  iii. The overall dosage of psychosocial services provided was low

- A community care model like CBCP aims to plug current gaps in coordinating home, health, and social care by leveraging on accessibility to services located within older persons' immediate vicinity. However, structural issues – such as a fragmented care ecosystem, and operational challenges – such as manpower resource constraints, affect the quality of care delivery that should have been optimised through proximity. To cope with high caseloads, CBCP's scope of care was primarily on basic health monitoring, which some clients felt was duplicative of services they were already receiving from other community-based service providers, and/or something they could manage on their own, without CBCP.

- The success of future iterations of community care models like CBCP, in terms of contributing to older persons' psychosocial wellbeing, should be measured in terms that are more than just about proximity and convenience to services. First, in terms of policy and funding directives, the Key Performance Indicators (KPIs) set by funding agencies should account for the diverse needs of older persons in the community, including measuring psychosocial outcomes. Second, care in the community involves building deeper and richer forms of engagement within the neighbourhood. The exact forms of this engagement (activities/programmes) need to be linked to psychosocial outcomes.

- Our findings suggest that due to inadequate manpower resources, CBCP teams were able to support clients with well-controlled chronic conditions, but the needs of clients who require more complex care or assistance with activities of daily living – the intended users of CBCP, remains a challenge for CBCP.

- Afternote: MOH acknowledges findings from CARE's evaluation of CBCP. MOH will be transiting CBCP to a new eldercare centre service model in phases from May 2021 to 2024. The eldercare centres will provide a common suite of services, comprising active ageing programmes for the well, befriending or buddying for those with poorer social support, and information and referrals to care services for frail seniors. In addition to this set of common services, centres may also provide additional care services, such as day care or community rehabilitation to cater to seniors who are frailer.

1. INTRODUCTION

Ageing in place refers to "the ability to live in one's own home and community safely and independently as one ages[1]," as opposed to living in residential care. Many older adults wish to age in place due to a sense of attachment and feelings of security in relation to both their homes and community[2]. It is also related to a sense of identity through independence and autonomy[2]. From the healthcare system perspective, ageing in place relieves demands on healthcare resources through the prevention or delay of institutionalization[3]. Therefore, developing community-based resources to support older adults to age in place can benefit both the individual and the society.

Higher health and social needs among socioeconomically vulnerable older adults

Delivering health and social care services to socioeconomically vulnerable older adults living in the community remains an important need but is particularly challenging. In Singapore, older adults living in public rental housing tend to be more vulnerable, evident by the lack of social support, and higher prevalence of adverse physical and mental health conditions, such as depression, compared to the general older population[4, 5]. We compared the profile of older adults residing in a rental housing region in Singapore with older adults from the general population and found that a higher proportion of socioeconomically vulnerable older adults were separated/divorced (19% versus 4%) or never married (32% versus 8%) and had lower number of children (Mean=1.5 versus 3.5). A higher proportion of these older adults also had difficulty in 1 to 2 activities of daily living (15% versus 4%) and had rated their health as "poor" (21% versus 8%)[6].

The Community-Based Health And Social Care (CBCP) Programme

In 2014, the Ministry of Health (MOH), Singapore piloted the Community-Based Health and Social Care programme (hereafter, CBCP) to provide health and social care for older adults with limited social support staying in public rental flats. CBCP aimed to complement the pre-existing healthcare network, which focuses largely on the biomedical needs of older adults. CBCP provided a comprehensive suite of free health, social, and personal care services for older adults enrolled in the programme **(Figure 1)**. CBCP teams may be co-located or deployed from Senior Activity Centres (SACs) and comprised of:

- Five or six healthcare assistants (HCAs) who provide custodial care and basic health monitoring and health education for the clients;
- A case or nurse manager who supervises and trains the HCAs as well as coordinate care through making appropriate referrals to services and;
- A programme coordinator who provides administrative support and planning, such as visit scheduling.

In January 2018, MOH commissioned the Centre for Research Ageing and Education (CARE) to evaluate CBCP.

Figure 1: Programme elements of CBCP

Home Personal Care

- Personal Hygiene
- Assistance with Activities of Daily Living
- Simple errands, such as, buying grocery and food, escourting clients to clinic, polyclinic, and nearby supermarket

Nursing Services

- Blood Pressure monitoring
- Blood glucose monitoring
- Apply medication cream, nail cutting, medication serving, medication packing
- Monitoring of weight, temperature taking
- Home safety assessment

Other services

- Medication reminders
- Medical appointment reminders
- Mind stimulating
- Simple maintenance exercise
- Befriending
- Outings

Objective of the Evaluation Study

To evaluate the effectiveness of CBCP in improving the psychosocial wellbeing of older adults. Specifically, the evaluation study addressed the following research questions:

1. Did older adults enrolled into CBCP show greater improvement in psychosocial wellbeing - loneliness, social networks, depressive symptoms, and quality of life - compared to older adults not enrolled in CBCP?
2. Did CBCP address clients' unmet needs?
3. What were the barriers and facilitators to meeting clients' needs?

2. METHODOLOGY

The evaluation study employed a mixed-method design, consisting of a qualitative exploratory study and a quasi-experimental quantitative study.

Qualitative Exploratory Study

Qualitative fieldwork was conducted from June to September 2018. Recruitment was conducted at 3 different SACs where CBCP services were co-located. CBCP staff at each site assisted in shortlisting eligible clients (n= 20 for each site) who had consented to having a researcher present during home visits. Over the course of two to three days at each site, the assigned researcher shadowed CBCP staff during routine home visits to gain rapport with potential participants, as well as observe and jot down the care process and interactions between CBCP staff and clients in their fieldnotes.

During these home visits, the assigned researcher explained to the shortlisted CBCP clients about the evaluation study and sought their consent to participate in the study. Clients who indicated consent to participate in the qualitative study provided their contact numbers to the assigned researcher.

Although CBCP staff had shortlisted eligible clients for recruitment, the final inclusion of selected participants was eventually decided by the research team after home visits and site observations were completed. This process was done to (i) minimize selection bias and to (ii) ensure diversity in clientele representation. This strategy mitigated the likelihood of CBCP teams to recommend "model" clients, for example those are more sociable, demonstrate medical compliance, and more self-motivated– as this can bias the study results. If two individuals, or a couple living in the same household were receiving CBCP services, they were considered as one household unit, but two unique CBCP users (see **Appendix D** for qualitative data analysis methods). A total of 34 clients and 6 CBCP staff were recruited for the study.

Quasi-Experimental (Difference-in-Difference) Quantitative Study

CARE had conducted a survey of 928 older adults (aged 60 years and above) residing in public rental flats in one neighbourhood in Singapore from December 2016 to March 2017 to understand their social and medical needs. The older adults were assessed for their health status, physical abilities, and psychosocial wellbeing, including social engagement, loneliness, social networks, depressive symptoms, and quality of life. The participants in the survey resided in blocks with CBCP services and without CBCP services. Thus, it provided the context for a natural experiment to evaluate the impact of CBCP. A follow-up survey was conducted between June 2019 and August 2019 among participants of the older survey. Additional process data from the CBCP registry maintained by the SAC-based CBCP provider in the neighbourhood were also extracted and analysed to triangulate with survey results.

The advantage of using data from a previous survey as 'baseline' was that it allowed for a two and a half years interval between baseline and follow-up assessment (mean=28.6±0.84 months). According to a preliminary conversation with providers, this duration would provide sufficient time for rapport building and maturation of services (mean duration since enrolment into CBCP at follow-up assessment=30.4±13.9 months; minimum=6 months; maximum=58 months). However, our study design also had its limitations. First, the results were based on one site and might not be generalisable to other CBCP sites. Second, more than half of the participants recruited who were enrolled into CBCP were enrolled before the baseline interview in December 2016. However, in sensitivity analyses, removal of these participants from the analyses did not affect the results.

Out of 825 participants from the older survey who consented to be re-contacted, 379 older adults (46%) were recruited for the follow-up study. Out of these participants, 125 participants were enrolled into CBCP and 254 were not enrolled into CBCP. The flowchart of the recruitment process, details on main outcome measures and statistical analysis methods can be found in **Appendix A**, **B** and **C** respectively.

3. QUALITATIVE STUDY FINDINGS - UNDERSTANDING CBCP CLIENTS' NEEDS

Profile of participants

The research team purposively interviewed 34 CBCP clients from different backgrounds. **Table 1** details their background.

Table 1: Participant's demographic profile (n=34)

Characteristics	Categories	No. of Participants	
Gender	Female	21	62%
	Male	13	38%
Age Group (years)	55-64	9	26%
	65-74	8	24%
	75-84	11	32%
	85 and above	6	18%
Marital Status	Never Married	8	24%
	Divorced	4	12%
	Widowed	9	26%
	Married	13	38%
Race	Chinese	21	62%
	Malay	8	24%
	Indian	4	12%
	Others	1	3%
Living Arrangement	Living alone	13	38%
	Living with spouse/ domestic partner	9	26%
	Living with children	7	21%
	Living with sibling	2	6%
	Living with non-related others (e.g. domestic worker, tenant)	3	9%
Education	No formal education	18	53%
	Completed primary school	12	35%
	Completed secondary school	1	3%
	Vocational education	2	6%
	University education	1	3%

Characteristics	Categories	No. of Participants	
Employment Status	Never been employed (Homemaker)	3	9%
	Retired	29	85%
	Part-time work	1	3%
	Full-time work	1	3%
Source of Income **Individual can have more than one source of income*	Central Provident Fund (CPF) savings (including Medisave)	10	27%
	Financial assistance:		53%
	- Government support: Silver support Scheme, Pioneer Generation Disability Assistance Scheme (DAS), Community Health Assist Scheme (CHAS), ComCare	17	
	- Social Service Agencies (SSA)	1	
	- Community Development Council	4	
	- Silver Circle	1	
	- Ethnic-based self-help groups (e.g. MUIS)	2	
	- Local mosques	2	
	Children	13	25%
	Income from work	1	2%
Income adequacy	Much difficulty to meet expenses	13	38%
	Some difficulty to meet expenses	10	29%
	Just enough with no difficulty	11	33%
No. of years in current rental housing	< 10 years	17	50%
	> 10 - 20 years	12	35%
	> 20 – 30 years	3	9%
	> 30 years	2	6%

Note: Percentages may not add up to 100% due to rounding up

Participants' Backgrounds

Half of the qualitative study participants were 75 years and above (50%) and just over a half had limited or no formal education (53%). More than half of the participants were female (62%); Chinese (62%) and/or never married, divorced, or widowed (62%). More than a third were living alone (38%). Majority of participants (85%) were retired. About two-thirds of participants (67%) expressed having much or some difficulty meeting daily expenses, which corroborates with their needs for financial assistance, but only slightly more than half reported receiving some form of public assistance. Those receiving monetary support from children tended to describe the sporadic nature of the receipt of cash and it was more common for children to pay directly for rental, utility or medical bills or groceries. Half of the participants were living in their current rental housing for less than 10 years, suggesting experiences with downward mobility in old age, or recent relocation in the past decade.

Identifying Participants' Needs

Before proceeding with questions about their experiences with CBCP, we asked the qualitative study participants what their needs were and how these needs were addressed or managed. This section summarizes common experiences in terms of physical, financial, and social needs.

a. Physical: Managing pain and functional impairment

Majority of the participants had diabetes or hypertension or both. Difficulties in managing metabolic issues, such as blood pressure, sugar levels and cholesterol were commonly expressed among participants. This was followed by pain in lower limbs and respiratory issues (e.g. breathlessness) resulting in mobility limitations and contributing to poor self-reported health status. **Table 2** below lists the health conditions experienced by the participants.

Table 2: List of health conditions experienced by the participants

Diabetes	Hypertension	High cholesterol	Heart disease
Lung cancer	Chronic kidney disease	Asthma	Urinary tract disorders
Gastrointestinal disorder	Gout	Elephantiasis	Pain and swelling resulting from falls
Arthritis	Osteoporosis	Diabetic amputation	Depression
Sleep disorders	Schizophrenia	Vision impairment	Hearing impairment

b. Financial: Income adequacy

During the interview sessions, most of the topics related to participants' health and wellbeing revolved around money and the lack thereof. Reliance on financial assistance and occasional supplements from Social Service Agencies (SSA) and ethnic-based self-help groups allayed participants' financial deprivation to a certain extent, for example in terms of food and housing provisions. However, having to constantly seek renewal for financial assistance to secure basic needs such as housing and allowance to pay utilities was a source of insecurity and anxiety for some. Financial cost of healthcare was a recurrent theme across the three sites, especially for those with multiple chronic illnesses.

Participants cited difficulties in:

- making out-of-pocket payments for increasing healthcare needs despite receiving multiple subsidies due to their low socioeconomic status
- going for appointments or taking necessary medications because they could not afford the out-of-pocket costs
- managing costs as their healthcare needs increases and doctors' visits became more frequent, or when subsidies did not fully cover blood tests and X-Rays

Those who expressed such difficulties described having to miss appointments, forego recommended treatments (including medication and detailed investigations such as MRI or X-Rays) and having to borrow funds from friends and family members. As healthcare needs intensify, borrowing money from others became a source of shame and was no longer a sustainable option. Participants who reported financial deprivation also prioritized their basic needs such as food and housing (e.g. paying rent and utility bills) over healthcare needs.

c. Reliable social network and more engaging activities (social)

Relationship with family

Although CBCP was designed to meet the needs of older people with little to no social support, about 50 per cent of participants mentioned receiving some form of support from immediate family members **(Table 3)**.

Table 3: Types of existing household support transfers

Type	Types of support received, n=13 (from family)	Types of support provided, n=10 (to family)
Medical/ Health	Accompanying participant for doctors' appointment, arranging doctors' visits, medication packing, accompany for exercise	Accompany spouse to appointments, managing dietary restrictions, health monitoring of spouse/partner, accompany for exercise
Financial	Paying for groceries, utilities, rent, health care costs, manage household budget	Supplement grandchildren's pocket money, paying bills, lending money to children
Emotional/ Social	Companionship, bringing participants out for meals and bonding activities	Being a confidant, offer encouragement to children/ grandchildren, bring for walks around neighbourhood, accompany for outings
Food and housekeeping	Cooking meals, cleaning the house, minor home maintenance, do household chores together	Cooking meals and light housekeeping, buying groceries, doing laundry
Caregiving	Taking care of participant	Taking care of grandchildren, co-tenant, spouse/ partner

Reports on the quality of ties with family members varied between households. A minority described being close to children, grandchildren and/or siblings while most described infrequent contact or visits from children and other family members. There were also older participants who described losing contact with extended family members when siblings passed away.

Generally, participants acknowledged that their family members were also struggling to make ends meet and were cautious to add to their burden. Despite experiencing loneliness, some were hesitant to make demands on their children's time, fearing that this might lead to fallout and abandonment. Hence, they had to rely on public/ external sources of support.

Although participants tended to report close ties with children during their interviews, we discovered, upon data triangulation with CBCP staff, that relationships with children were more likely to be estranged than intimate.

Relationship with neighbours and friends

Other sources of social support included neighbours, old friends and newly made friends from faith-based groups. Participants defined neighbours as either those who were living along the same corridor, within the block or in the same estate. Among the participants who were living either alone or away from other family members, good relationships with neighbours were described as important as they are the participants' first source of help in emergencies. Those who experienced conflicts with neighbours reported having social anxiety and feeling isolated compared to their counterparts who have close relationships with neighbours and regard them as 'family'. Some forms of neighbourly support include checking in on their neighbours from time to time, spending time in each other's homes for a chat or exchanging gifts or food. The relationship was often described as reciprocal and more commonly expressed among minority Malay and Indian Muslim participants and/or married couples.

Social participation at the SAC and beyond

A strong design element of CBCP is its operations through the SACs, which as participants' narratives described, is the locus of both formal and informal social activities in the neighbourhood. Some participants, particularly those who were living alone, mentioned being involved in activities organized by the SAC, such as group exercises and games. Exercises at the SAC were part of a daily morning routine for some of the participants.

Participants' Care Expectations

In programme evaluation studies, the success of a programme depends largely on its ability to meet and satisfy clients' needs as well as their care expectations[7]. During the interviews, we asked participants to elaborate on the types of community-based care that they required to address their existing unmet needs. Their care expectations are outlined in **Table 4** below.

Table 4: Participants' unmet needs and underlying expectations

Type	Unmet needs	Expectations
Physical	• Pain • Unable to perform some daily activities • Limited mobility	• Support for Activities of Daily Living (ADLs) • Support for pain management
Financial	• Income insecurity • Anxieties over healthcare costs, housing, utility bills	• Affordable and accessible health and social care services
Social	• Infrequent engagement with family and friends • Unreliable social networks	• Meaningful and regular social interactions and services • Predictable and reliable forms of support

Unpacking Meanings of "Community-Based Health and Social Care programme"

The convenience that CBCP offered to participants in the community was evident in terms of their geographical imaginations of care, "downstairs" and "upstairs". To most participants, care, community and social life was associated with "downstairs" where people go to do things or go places. In contrast "upstairs" was associated with home, privacy, isolation, vulnerability ("alone upstairs"), fraught with risks ("falls") and frailty ("can't go out because of pain"). CBCP staff were also addressed as "downstairs people" who brings care "upstairs". Descriptions of CBCP staff on constant going ups and downs and "running around" blocks conveyed speed, locality, and immediacy.

Participants welcomed the convenience of having healthcare workers "downstairs" as it gave them the peace of mind that there was someone in the neighbourhood who they could call on for assistance or help with some of their needs. In this regard, CBCP fulfilled participants' emotional needs about their health – they described feeling less anxious about their health conditions and less confused about navigating the healthcare system because someone was there to help them understand their different medical appointments and medication needs.

4. QUALITATIVE STUDY FINDINGS - DOES HAVING A COMMUNITY-BASED HEALTH AND SOCIAL CARE PROGRAMME MAKE A DIFFERENCE? HOW AND FOR WHOM?

"CBCP made a difference"

The presence of unmet needs affects programme impact and satisfaction. The majority of the qualitative study participants (80%) who claimed that CBCP made a difference to their lives were also among those who felt that their social and health needs have been adequately met. Having CBCP available provided additional benefits to these participants in terms of making them feel supported like "family", comforted, secure, and assured ("peace of mind"), providing personal services that is traditionally out of the purview of the acute healthcare system and better knowledge and awareness in managing their health conditions.

Participants who expressed that CBCP made a difference to them generally felt that they could trust CBCP staff to:

- Prioritise and anticipate their needs
- Relay health information to healthcare professionals and other service providers
- Respond to their queries without judgment
- Speak on their behalf, to advocate for them and solve issues
- Proactive about making their needs are met

The relational trust established between CBCP staff and the participant facilitated meaningful engagement that contributed to addressing their health and social needs. For example, participants felt comfortable to be forthcoming about their abilities and limitations to CBCP staff, because they trusted the competencies of the staff to support their needs without being judged. In addition to trust, "satisfied" participants shared that being in CBCP allowed them to feel more confident about themselves as well as managing their conditions.

"At least now I don't have to keep going to the doctor or polyclinic because I am unsure about my health condition. With [CBCP], they help me keep track of my health. So I know that I am ok, don't need to worry. Otherwise last time, I would want to go for frequent check-ups at the polyclinic to be really sure I am on the right track. In a way, they really help me—I am less anxious about my health. They make it very convenient – save the time for me to go to polyclinic. I feel more confident about myself. I feel that my health is guaranteed and assured."

– Mdm B., 75

People's reception towards community-based programmes depends primarily on trust and comfort. CBCP services can incorporate health activation components to promote self-efficacy among participants who are able and capable, such as prescribing social activities around health maintenance. This was especially evident in CBCP – most participants who reported as "satisfied" reported higher levels of independence and ambulance and required minimal support from CBCP.

"CBCP made no difference"

20% of the participants expressed dissatisfaction with CBCP and did not feel like they benefited from CBCP. Hence, CBCP made no difference to their lives or neighbourhood (20%). Participants who felt that CBCP was not useful gave poor feedback about CBCP services. Low service satisfaction was more prevalent among participants who assessed the value of CBCP based on the poor interactions they had with specific care staff. Reasons for dissatisfaction were primarily attributed to a lack of trust or rapport with a specific CBCP staff and inability of the programme to support their needs. Other factors included: perceived higher levels of ADL/IADL needs than what has been evaluated by CBCP staff, limited mobility, and lack of reliable and meaningful social support and distrust towards neighbours.

Participants who were not satisfied with CBCP's services felt that they were unable to trust or depend on CBCP staff to meet their expectations in terms of:
- ADL support and pain management
- Alleviating financial deprivation
- Predictability and consistency in home visits

These mismatched expectations were due to:

- Communication issues
- Lack of contact time or client engagement
- Clients having unmet needs which require more than just support from CBCP

A participant from one site shared his experience with the lead CBCP staff:

> ***Because I know she's very busy, so as much as possible, I try not to trouble her. Sometimes she's here, then need to go for meeting, then got other older people look for her. Once, I actually wanted to tell her something –even though the [other CBCP staff] came to see me, there was the language barrier, so I want to look for her. Before I could finish my sentence, her phone rang, and she had an emergency to attend to. Sometimes she would be in the office, then she has to rush to another place. If you have any emergency issues, she will definitely help you. But you try your best not to trouble her. She is really very busy, one person handle everything. Now also they added more blocks [i.e. increase service boundary] so she's even busier.***
>
> *– Mr K., 80*

The intent of CBCP defeats its purpose when participants avoided seeking help fearing that they were "troubling" the CBCP team. Some started doubting the validity of their needs when informed that there were other clients with emergencies or needs that were more urgent than theirs. Others also felt that some CBCP staff might have overpromised on service delivery based on what was conveyed during outreach. The sentiment among a few participants in one particular site was that CBCP was "good" before the service expanded to serve older residents in other blocks. As interactions with their preferred care staff decreased significantly, those participants claimed to have reduced their care expectations of the CBCP team and made comments such as having to manage on their own and not being dependent on CBCP.

BARRIERS TO CLIENT SATISFACTION

1. Operational barriers

Lack of manpower after CBCP expansion

The greatest source of participants' dissatisfaction was related to inadequacies in terms of manpower to cope with their needs. Some of the participants who had been in the CBCP programme since its inception felt that the service quality had been compromised when CBCP expanded to other areas in the neighbourhood. Participants spoke about reduced home visits, inconsistency of home visits (e.g. "Sometimes come, sometimes don't come", "Promised to come in the morning, but came in the afternoon") and how some home visits ended abruptly because CBCP staff had to rush to other places. This led to a sense of abandonment and neglect, leading to loss of trust.

Poor service delivery due to limited manpower supply and competences

Participants found it difficult to place their trust in the programme if CBCP staff were not consistent in their performance. Areas of poor service tended to be concentrated in housekeeping duties. Many participants felt that HCAs seemed to be rushing the job, and standards were questionable. Another area that required improvement was keeping to appointment times. Several participants mentioned how home visits were not consistent or changed without prior notice. Others spoke about how home visits were inconvenient. Some participants had to put other plans on hold to wait for CBCP staff to arrive, only for them to leave very shortly after.

2. Communication barriers

Language barriers and preferences

Difficulties in communicating with CBCP staff who were not competent in dialects, Mandarin or Malay were commonly expressed by participants across all three sites. As a result, majority of the participants tended to rely heavily on the CBCP staff who were competent in the language they were familiar with. If that staff was not able to attend to them, or had left the team, it would affect participants' satisfaction with the CBCP.

Differences in perceived versus evaluated needs largely due to poor communication

Satisfaction with CBCP services was influenced by whether participants' perceived needs were aligned with what the CBCP team assessed as a need. Trust is built upon good communication practices between CBCP staff and participants, for example, the need to explain to participants how their service dosage corresponds with their needs and justify why a high or low frequency was necessary. Participants needed to know why they were visited so frequently (for those who perceived their health to be in better status than their evaluations) or why their visits had gradually tapered or why their neighbours were receiving more visits than they did (for those who perceived themselves to be in poorer health than their assessments). In contrast, the lack of communication made participants feel that they lacked autonomy, had been abandoned or treated as unimportant.

3. Unmet Needs

Both operational and communication challenges hindered the ability of CBCP providers to address participants' varied care needs. The participants who were dissatisfied with the care provided by CBCP were those with highly complex health & social needs. Based on our interviews, these needs included:

- Severe disability (e.g. ADL/IADL needs)
- Depression/ suicide ideation
- Housing insecurity
- Financial issues affecting medication needs
- Severe loneliness
- Isolation
- Family conflict

Participants' responses highlighted service gaps in terms of client engagement and health empowerment, while the providers' perspective **(Section 5)** will explain why these gaps were evident. To participants, any health or personal care service without meaningful engagement was a form of surveillance and intrusion in their private lives. On the other hand, CBCP teams did not have the capacity and resources to focus on client engagement due to high caseloads. Staff burnout, particularly among Healthcare Aides and Nursing Aides was evident – remarks about exhaustion, a demanding workload, job stress with limited remuneration and career growth were common.

5. QUALITATIVE STUDY FINDINGS - CHALLENGES IN PROVIDING A SERVICE MODEL LIKE CBCP

The research team interviewed 6 CBCP staff from 3 sites. We interviewed a nursing manager and a Nursing Aid or Healthcare Assistant for each site. Below are common barriers to providing community-based care from the perspective of CBCP staff.

1. Operational challenges

Inadequate manpower supply:

- High caseloads and fewer support staff ratio limits time spent per client
- High attrition among staff due to low wages, high caseloads and negative experiences with clients
- Demanding workload such as an inflexible schedule/ roster to accommodate for "emergency" cases

Lack of competency in complex case management, basic nursing, and counselling:

- Taking on roles that one is not qualified for or competent in to meet shortage in manpower
- Tedious documentation processes which affect overall productivity of the team due to poor English and digital/ computer literacy and language constraints

Fragmented care ecosystem:

- Lack of data integration and transparency across community service providers hinders efficient case management between service providers
- Poor care coordination among different community service providers leading to service duplication

2. Communication challenges

Language and cultural barriers:

- Cultural competencies, such as understanding diversity and knowing how to manage social relations as a skillset is seldom incorporated into care protocols
- Inability of CBCP staff to have a meaningful conversation with CBCP clients may be a major factor contributing to the lack of psychosocial impact of the intervention

Lack of transparency results in mismatched or mismanaged expectations:

- Without transparent communication, some participants may perceive CBCP staff paying closer attention to other clients, which could result in bitterness, distrust and dissatisfaction towards the CBCP team.

3. Clients' unmet needs

- Participants whose needs continue to be unmet despite assistance provided felt that CBCP's support was irrelevant in addressing their needs. For example, participants with high levels of functional impairment, or disabilities, expressed frustrations over their limited mobility when their motorized wheelchairs were faulty and social service agencies were slow to respond.
- Other unmet needs include financial inadequacy, housing needs, and medication dispensing or collection. While CBCP's presence in the community helped alleviate social isolation to some extent, the lack of bandwidth for deeper and sustained social interaction limited the effect of reducing loneliness among clients.

NO PSYCHOSOCIAL IMPACT DUE TO UNMET NEEDS AND POOR CLIENT SATISFACTION

Based on assessment information provided by CBCP staff on participants' needs, those with higher levels of disability/ADL limitations tended to underreport (i) their ADL needs and (ii) assistance for personal needs, such as basic housekeeping, food provision and showering. First, it is possible that participants felt ashamed to divulge such information during in-depth interviews, preferring to present themselves to researchers as relatively independent and not a burden to others. Second, participants who require more intensive support for ADL limitations may have other areas of unmet needs, which requires targeted psychosocial support (e.g. counselling, active befriending).

We found that higher levels of disability were associated with more unmet needs – the greater the needs for assistance, the less likely they were to be completely met. This corresponds to our experiences during interviews: interviewers had to continually prompt participants with higher levels of ADL needs to respond to questions about the support they received from CBCP. Participants had difficulty recalling how they their needs were supported through CBCP since the assistance they received may not have been adequate.

CBCP's assistance in terms of personal needs such as basic housekeeping, toileting, showering, medication management, running errands and food delivery, did not address other types of ADL needs, such as mobility within and outside the house. The presence of these unmet needs, and the misalignment with their care expectations may explain why the psychosocial impact of CBCP was also limited as described in the next section of the quantitative study. Similar findings in the qualitative research reinforces observations in the quantitative study.

The qualitative study findings demonstrate that any impact in terms of psychosocial outcomes were limited to participants who were already socially engaged, had other sources of support and in better health status (pre-frail and well-controlled chronic conditions). In public rental housing contexts however, more older persons are likely to have complex health and social needs.

The needs of older persons, particularly those related to income, pain, mobility and social isolation cannot be addressed through the CBCP programme alone, yet they affect the outcomes of CBCP in terms of psychosocial and quality of life measure.

Moving forward, client engagement – especially for older persons who portray learned helplessness, require social interventions that are control-related to enhance their sense of autonomy. The current CBCP service model is more directive and nursing-centric – it derives its rationale from telling participants, predominantly those with less complex needs, what services they require and what they constantly need to do to manage their health rather than facilitating independence through collaborative and gradual goal setting.

6. QUANTITATIVE STUDY FINDINGS

BASELINE SOCIODEMOGRAPHIC, HEALTH AND SOCIAL CHARACTERISTICS

At baseline, participants enrolled into CBCP and not enrolled into CBCP differed in age, marital status, education, work status, number of people living in the household and number of surviving children. Participants enrolled into CBCP tended to be older, less likely be married, without formal education, be a homemaker, retired, or not working, living alone, and did not have any surviving children compared to those not enrolled into CBCP **(Table 5)**.

Table 5: Baseline demographic, health and social characteristics of participants enrolled into CBCP and not enrolled into CBCP

Characteristic	Enrolled into CBCP		Not enrolled into CBCP		Total	
	N	Mean (SD)/ Column%	N	Mean (SD)/ Column %	N	Mean (SD)/ Column %
Age***						
	125	73.4 (6.9)	254	69.5 (6.7)	379	70.8 (7.0)
Gender						
Men	76	60.8	157	61.8	233	61.5
Women	49	39.2	97	38.2	146	38.5
Race						
Chinese	116	92.8	219	86.2	335	88.4
Malay	5	4.0	16	6.3	21	5.5
Indian	3	2.4	17	6.7	20	5.3
Others	1	0.8	2	0.8	3	0.8
Marital status**						
Married	28	22.4	101	39.8	129	34.0
Widowed	20	16.0	38	15.0	58	15.3
Separated /Divorce	21	16.8	47	18.5	68	17.9
Never married	56	44.8	68	26.8	124	32.7
Education**						
No formal education	69	55.2	101	39.8	170	44.9
Primary	47	37.6	114	44.9	161	42.5
Secondary and above	9	7.2	39	15.4	48	12.7
Work status**						
Working full time	15	12.0	46	18.1	61	16.1
Working part time	17	13.6	71	28.0	88	23.2
Retired / not working / home maker	93	74.4	127	53.9	230	60.7
Number of people living in the household**						
1	65	52.0	86	33.9	151	39.8
2	54	43.2	137	53.9	191	50.4
>=3	6	4.8	31	12.2	37	9.8
Number of surviving children **						
0	74	59.2	110	43.3	184	48.6
1	10	8.0	34	13.4	44	11.6
2	14	11.2	56	22.1	70	18.5
>=3	27	21.6	54	21.3	81	21.4
Number of Activities of Daily Living (ADL) limitations						
0	109	87.2	196	77.2	305	80.5
1-2	11	8.8	45	17.7	56	14.8
>=3	5	4.0	13	5.1	18	4.8

Characteristic	Enrolled into CBCP		Not enrolled into CBCP		Total	
	N	Mean (SD)/ Column%	N	Mean (SD)/ Column %	N	Mean (SD)/ Column %
Number of Instrumental Activities of Daily Living (IADL) limitations						
0	88	70.4	188	74.0	276	72.8
1-2	31	24.8	54	21.3	85	22.4
>=3	6	4.8	12	4.7	18	4.8
Number of illness						
0	19	15.2	38	15.0	57	15.0
1	20	16.0	34	13.4	54	14.3
2	21	16.8	47	18.5	68	17.9
>=3	65	52.0	135	53.2	200	52.8

Note: **p<0.01; *** p<0.001, based on either student's t-test or chi-square for continuous and categorical variables, respectively.
Abbreviation: SD= Standard Deviation.

DID CBCP IMPROVE THE PSYCHOSOCIAL WELLBEING OF AT-RISK OLDER ADULTS?

No impact of CBCP on psychosocial outcomes

Based on the difference-in-difference analyses, there was no difference in changes in loneliness, size of social network, depressive symptoms, social engagement, and quality of life scores between baseline and follow-up between participants enrolled into CBCP and not enrolled into CBCP **(Table 6)**. Details of the analysis can be found in **Appendix C**.

Table 6: Descriptive of baseline, follow-up, difference by treatment group and difference-in-difference estimates.

Outcome variables	Enrolled into CBCP			Not In CBCP			DID Coefficient, Unadjusted models (95%CI)	DID Coefficient, Adjusted models^ (95%CI)
	Baseline Mean (95%CI)	Follow-up Mean (95%CI)	Difference Mean (95%CI)	Baseline Mean (95%CI)	Follow-up Mean (95%CI)	Difference Mean (95%CI)		
Loneliness	3.59 (3.35, 3.83)	3.72 (3.45, 3.98)	0.13 (-0.19, 0.44)	3.77 (3.60, 3.94)	3.67 (3.49, 3.84)	-0.10 (-0.30, 0.09)	0.26 (-0.17, 0.68)	0.25 (-0.17, 0.67)
Social Network	17.26 (15.18, 19.33)	17.16 (14.99, 19.33)	-0.10 (-2.38, 2.19)	18.72 (17.21, 20.24)	17.25 (15.77, 18.72)	-1.48 (-2.98, 0.03)	0.94 (-2.59, 4.47)	1.30 (-1.98, 4.58)
Depressive Symptoms	0.61 (0.38, 0.84)	0.56 (0.36, 0.76)	-0.05 (-0.24, 0.14)	0.76 (0.58, 0.95)	0.51 (0.37, 0.65)	-0.25* (-0.46, -0.05)	0.23 (-0.16, 0.62)	0.22 (-0.16, 0.61)
Social Engagement	8.15 (7.60, 8.70)	8.49 (7.92, 9.06)	0.34 (-0.29, 0.96)	7.90 (7.56, 8.23)	7.79 (7.36, 8.21)	-0.11 (-0.53, 0.31)	0.45 (-0.50, 1.39)	0.45 (-0.50, 1.39)
Quality of life	0.84 (0.80, 0.89)	0.86 (0.82, 0.90)	0.02 (-0.02, 0.05)	0.82 (0.79, 0.85)	0.87 (0.84, 0.90)	0.05* (0.01, 0.08)	-0.02 (-0.10, 0.05)	-0.02 (-0.10, 0.05)

Note: Abbreviations: CI= Confidence intervals; DID= Difference-in-difference.
^ Covariates included into the model: age, working status, education level, marital status, number of people in household, number of children alive.
* Statistically significant p<0.05, based on Paired Sample T-test.

FINDINGS FROM CBCP PROCESS DATA

1. Majority of clients did not require assistance for Activities of daily living (ADL) and Instrumental Activities of Daily Living (IADL) limitations

The provision of ADL and IADL services were a core element of CBCP programme, but the number of CBCP clients who needed and received most of these services were low. About 20 percent of CBCP clients reported 1 or more ADL limitations and 30 percent of clients reported 1 or more IADL limitations in the survey. This was triangulated with CBCP registry, which showed that 13 clients (10%) had received assistance in personal hygiene (bathing, dressing, and toileting) and 10 clients (8%) had received assistance for mobility, transferring or feeding in a quarter. In terms of IADLs, 22 clients (18%) had received assistance for simple errands in a quarter. All participants received services for light housekeeping, however, the total time for light housekeeping in a quarter ranged from 5 minutes to 30 minutes.

2. There was misalignment between clients' needs and types or dosage of services provided

a. Under provision of ADL and IADL services

Among clients who self-reported ADL limitations in the survey, several clients had reported that no one had assisted them with their ADLs in the last 6 months **(Figure 2)**. ADL needs, such as bathing, feeding, and mobility, require services with high dosage (i.e. daily, or more). Data from the CBCP registry showed that among the 13 clients who had received personal hygiene services (i.e. bathing, dressing, and toileting), majority (69%) received it once per week **(Figure 3)**. Among clients who received transferring, mobility and feeding services, only 1 client received it daily **(Figure 3)**. The insufficient frequency of services may also be a reason some clients reported that no one had assisted them with their IADLs, such as ability to use telephone, food preparation and housekeeping **(Figure 4)**.

Figure 2: Self-reported ADL limitations and source of help received in the last 6 months among CBCP clients at follow-up (N=125)

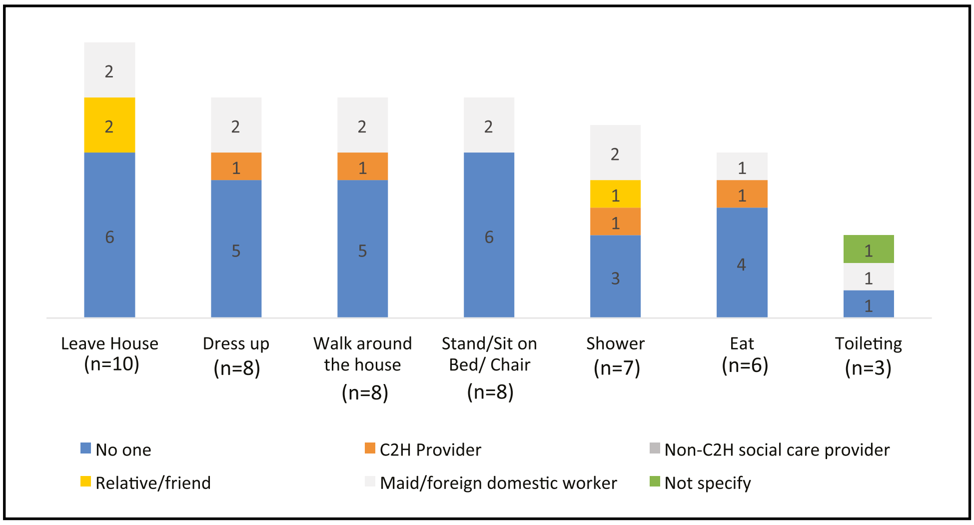


Figure 3: **Number of clients receiving ADL services in a quarter by frequency of CBCP services**

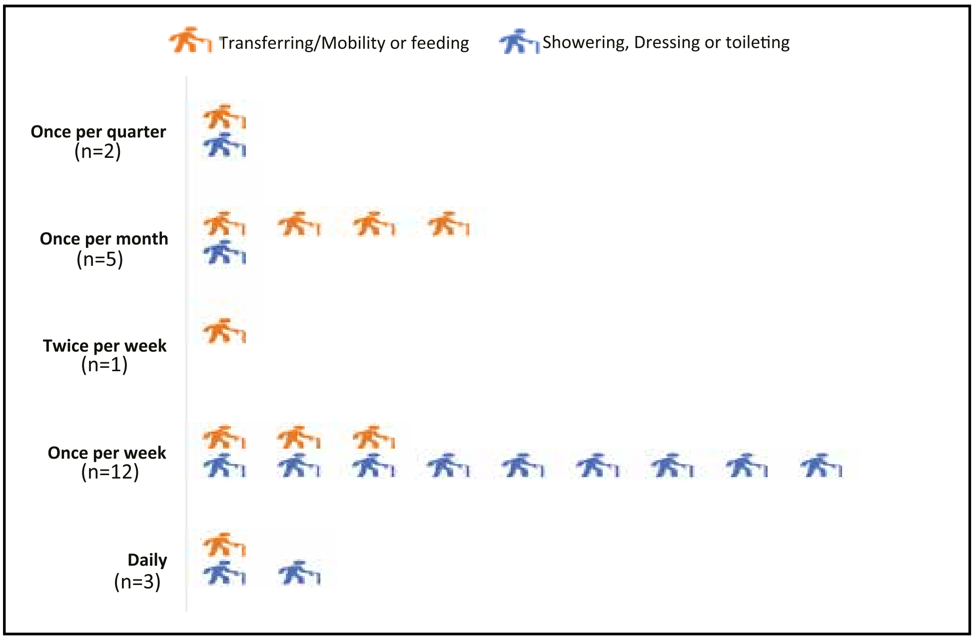
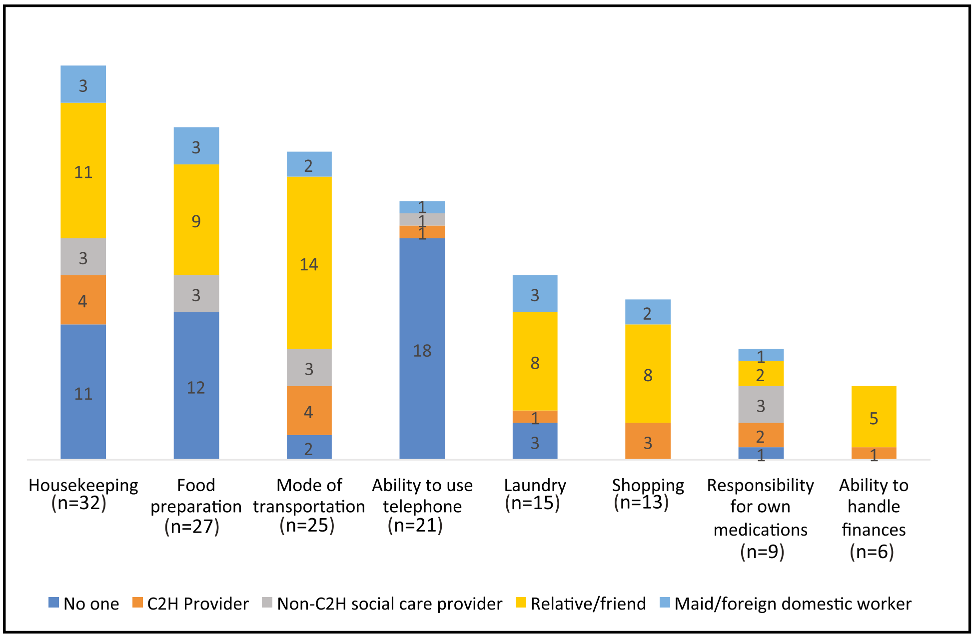


Figure 4: **Self-reported IADL limitations and source of help received in the last 6 months among CBCP clients at follow-up (N=125)**



b. Overprovision of services could be reallocated to service clients with higher needs

For other services, such as medication reminders, light housekeeping and blood pressure monitoring, there might have been an overprovision. For example, 9 participants reported that they required assistance in medication in the survey.

Medication reminder, however, was provided to all clients (N=125) at least once per week according to CBCP registry. Similarly, 98 percent of clients received blood pressure monitoring at least once per week, even though only 62 percent of participants reported they were diagnosed by a medical profession with hypertension. While overprovision of services may not cause harm to clients, it generates wastage and does not contribute to the improvement in intervention outcomes. The manpower resources allocated to these services can be redistributed to services that may result in higher impact.

3. The overall dosage of psychosocial services provided was low

Data from the CBCP registry reported that CBCP clients received mind stimulating activities at least once a week. The activities were diverse and included activities, such as conversation, medical advice, recall tasks and mediating family issues. The duration of each session for most participants (97%) was about 2.5 minutes.

7. CONCLUSION

While the quantitative study did not show greater improvement in psychosocial wellbeing among participants enrolled into CBCP than those not enrolled in CBCP, the qualitative study findings demonstrated that psychosocial gains were only limited to participants who were already socially engaged, had other sources of support and in better health status (pre-frail and well-controlled chronic conditions).

This study highlights the importance of furthering research to understand how living in deprivation and perceived marginalization of being old, poor, and sick contribute to beliefs about not having control over the events of one's life, including one's health and wellbeing. While not the focus of this evaluation, we noted how some participants had difficulties identifying and understanding their own health, or what being healthy should look and feel like. If they did have health issues, they were not able to strategize areas of possible support because they were anxious that asking for help costs money, which they lacked. When they did receive support, they struggled to communicate their needs to healthcare workers because they lacked the language or vocabulary. More importantly, they doubted that someone would listen and address their needs. "So, why bother?" Learning from the experiences of the qualitative study participants who felt that CBCP 'made no difference' helped us understand the context of our evaluation findings.

From the participants' perspective, CBCP's strongest unique selling point is being a touchpoint for health (mainly), and social support (to a certain extent) in the community. CBCP's assistance in managing referrals and liaising with other institutions and social service agencies helped restore participants' trust in the healthcare system. There was someone participants could trust to advocate for their needs. To put it simply, CBCP puts a friendly interface to what seems to be a nebulous and intimidating healthcare system. Health services that were previously less accessible are now within reach in the community. Health support is conveniently "downstairs" or will "come upstairs" and thereby raises expectations for services to be immediate.

8. KEY LESSONS LEARNED

We identified 4 enabling factors that influenced participants' service utilization and satisfaction:

1. The belief that CBCP can address their health and social needs
2. Convenient access to support
3. Trust and familiarity with CBCP staff
4. Immediate guarantee of support provided

In the community care setting, participants evaluated healthcare workers' competencies not just in terms of meeting their needs but more importantly, how CBCP staff engage them 'like family', as individuals equally deserving of respect, dignity, worth and love. The impact of CBCP, particularly among clients with less complex needs, was largely dependent on how CBCP staff had built rapport and sustained trust through client engagement. Trust is the key currency to building relational-oriented care, positive interactions, and better therapeutic relationships in the community.

Findings from the qualitative study showed that CBCP made a difference for clients with less complex needs in terms of satisfying their need for regular social interaction more than addressing their health and functional needs. The majority of the qualitative study participants expressed that CBCP has made a difference in their lives and those around them. These participants were also more likely to characterize their relationship with CBCP staff as one of friendship and/or like "family". Participants illustrated programme impact in terms of having a peace of mind, better health awareness and being more confident to seek healthcare and informational support. Satisfied participants tend to be older persons who are pre-frail, ambulant, have some form of social support and well-controlled chronic conditions. In contrast, participants with more extensive health and functional needs felt indifferent towards the CBCP programme.

Our findings suggest that due to inadequate manpower resources, CBCP's capabilities are limited to health monitoring rather than providing services that caters more to older persons who require more intensive assistance with activities of daily living in the community. A community care model like CBCP aims to plug current gaps in coordinating home, health, and social care by leveraging on accessibility to services located within older persons' immediate vicinity. However, structural issues – such as a fragmented care ecosystem, and operational challenges – such as manpower resource constraints, affect the quality of care that should have been optimised through proximity in the community. To cope with high caseloads, CBCP's scope of care was primarily on basic health monitoring, which some clients felt was duplicative of services they were already receiving from other community-based service providers, and/or something they could manage on their own, without CBCP.

The success of future iterations of community care models like CBCP, in terms of contributing to older persons' quality of life, is more than just about proximity and convenience. In terms of policy and funding directives, the KPIs set by funding agencies should account for the diverse needs of older persons in the community. Additionally, care in the community needs to go beyond basic health monitoring and can be enhanced through investing in deeper and richer forms of meaningful engagement (e.g. interactive activities that can be conducted at home rather than SACs for those with limited mobility) within the neighbourhood. A successful community care model thrives on regular and long-term client engagement that promotes trust and rapport in the community while having adequate and competent manpower resources ensures the needs of the more at-risk clients can be met within an integrated eldercare ecosystem.

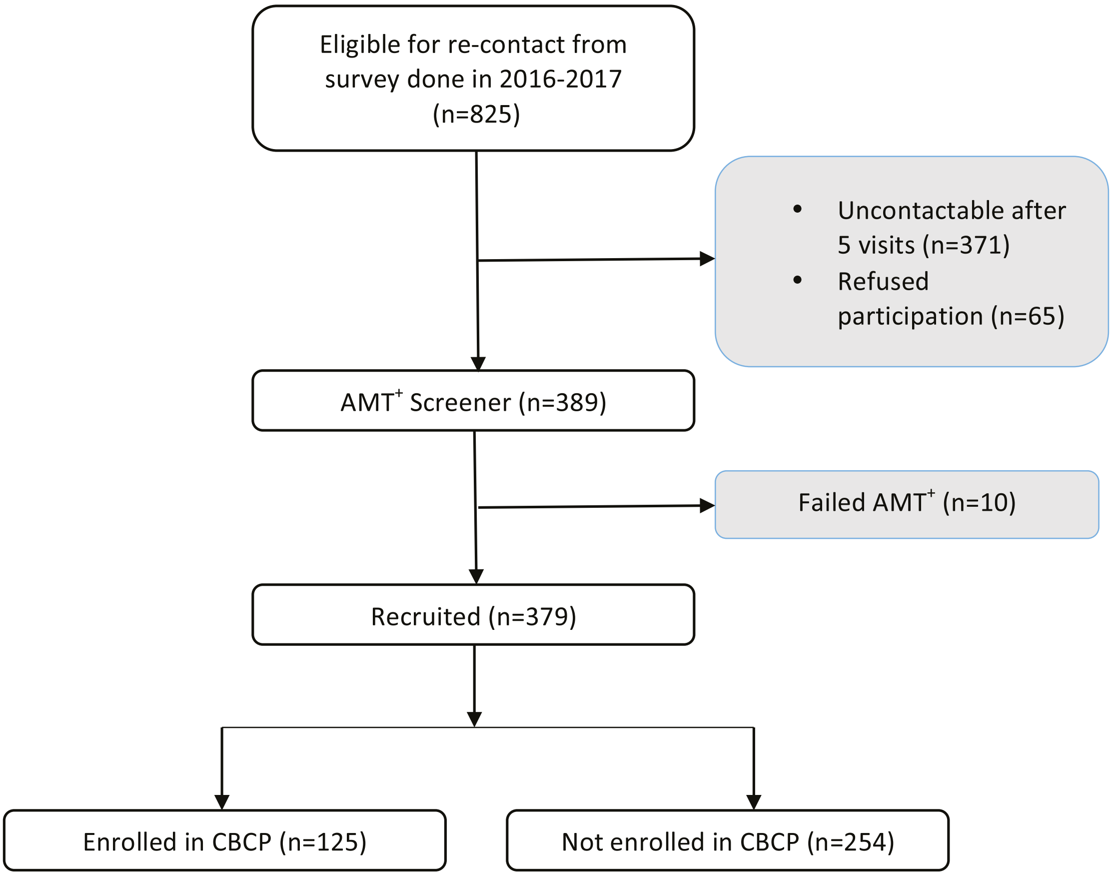
9. AFTERNOTE (from Ministry of Health)

MOH acknowledges the findings from CARE's evaluation of CBCP. We note that one of the key strengths of CBCP is the accessibility of services. In our visits to some CBCP sites, we had also received feedback from some seniors that they enjoyed the regular visits from CBCP staff. At the same time, we also acknowledge the areas of improvement, such as the need for programmes to better cater to a broad range of seniors' needs.

In view of the above findings and to scale up the services to all seniors in the community, MOH will be transiting CBCP to a new eldercare centre service model to better address seniors' care needs. Under the new model, which will be rolled out progressively at eldercare centres in phases from May 2021 to 2024, all eldercare centres will provide a common suite of services, comprising active ageing programmes for the well, befriending or buddying for those with poorer social support, and information and referrals to care services for frail seniors. On top of this set of common services, centres may provide additional care services, such as day care or community rehabilitation to cater to seniors who are frailer.

As part of the transition, MOH will work with seniors, their caregivers, CBCP and eldercare centre providers to transit clients smoothly to the relevant services. For example, seniors requiring greater social support will receive befriending and buddying services, while those with higher care needs and require assistance with their activities of daily living will be referred to the appropriate care services such as home personal care. With this transition, we hope to better enable our seniors to age-in-place within the community.

Appendix A: Recruitment Process



$^+$ Note: AMT-Abbreviated Mental Test

Appendix B:

Outcome Measure	Description
Loneliness	Loneliness was assessed using The Three-Item Loneliness scale[8]. Participants were asked (i) "How often do you feel that you lack companionship"; (ii) "How often do you feel left out?" and (iii) "How often do you feel isolated from others?". Each item was structured for response on a Likert scale, with responses of "Hardly ever", "Some of the time" and "Often" and were scored from 1 to 3, where a higher score indicates higher level of loneliness.
Social Network Outside The Household	Lubben's revised social network scale was modified to assess the social network of participant's outside the household[9]. The scale consists of 12 items. Six each for social network with friends and with relatives outside of household. The items assess the size of network, frequency of contact, closeness and perception of support from friends and relatives outside of household. Each item was scored on a six-point scale from 0 to 5. The score ranged from 0 to 60, where a higher score indicates stronger social network.
Depressive Symptoms	The Patient Health Questionnaire-2 10 was used to assessed depressive symptoms. Participants were asked "Over the last 2 weeks, how often have you been bothered by the following problems?" The two items in the scale covered the following the following symptoms: (i) little interest or pleasure in doing things" and (ii) "Feeling down, depressed or hopeless". Response choices included "Not at all" (scored as 0); "Several days" (1); "More than half the days" (2) and "Nearly every day" (3). The score ranged from 0 to 6, where a higher score indicates higher depressive symptoms.
Social Engagement	Social engagement was assessed by asking the participants the frequency of attending the following activities: (i) Residents' Committee (RC)/ Neighbourhood Committee (NC) / Community Club (CC) / Community Development Council (CDC) / neighbourhood event; (ii) Senior Activity Centre; (iii) Go out with family members or friends and (iv) church, mosque or other place of worship. Response choices were: "Every day" (scored as 5); "Every week" (4); "Every month" (3); "Less than once a month" (2) and "Not at all" (1). The scores from the 4 items were summed and it ranged from 5 to 20, where a higher score indicates better social engagement.
Quality of life	The EQ-5D-5L was used to measured health-related quality of life[11]. The EQ-5D-5L consists of two components: (i) the descriptive system assessing five domains (mobility, self-care, usual activities, pain/discomfort and anxiety/depression) from which an index score can be calculated and (ii) the EQ visual analog scale (EQ VAS). For this evaluation, index score from the EQ-5D health states were computed using Singapore preference weights[12]. The score ranged from -0.769 to 1.00, where a higher score indicates a better state of health.

Appendix C: Quantitative Data Analysis Method

Descriptive statistics (i.e. mean and percentages) were presented for baseline sociodemographic, health and social engagement differences between those enrolled into CBCP and those not in CBCP. We assessed the statistical significance of baseline differences between the groups using student's t-test and chi-square for continuous and categorical variables respectively.

Paired Sample T-Tests were used to assess difference in psychosocial outcome measures at baseline and follow-up. In order to mimic an experimental research design by comparing the change in the outcome over time in the treatment group versus control group, we conducted a difference-in-difference (DID) analysis. This statistical method controls for unobservable and time invariant characteristics and observable characteristics. The method assumes that the differences between groups would have remained constant under no treatment. A DID estimator is the interaction term of treatment group (i.e. in CBCP versus not in CBCP) and time period (baseline versus follow-up). Two regression models were used for each psychosocial outcome. The first model without baseline covariates and the second with baseline covariates that were found to be statistically different between those enrolled into CBCP and those not in CBCP.

Appendix D: Qualitative Data Analysis Method

Go-Along interviews with CBCP staff

During the Go-along interviews, the research team observed and documented provider-client interactions and ask CBCP providers about their perception of CBCP and its clients, the activities they do with clients, the challenges they encounter and how they overcome them. Go-Along interview is a method of participant observation where the researchers shadow participants (CBCP staff) around as they go about their daily activities and asking questions along the way. Questions asked will be related to what the researcher observes during the sessions. This method allows researchers to familiarize themselves with the content, procedures and context of the CBCP programme. Our aim was to understand how providers perceive clients and providers' experiences of caring in the community. This gave the research team deeper insights to evaluate CBCP processes and outcomes, especially in terms of the scope of intervention on-the-ground. Particularly, how CBCP staff builds effective relationships, trust and rapport with the vulnerable elderly and the barriers and facilitators of service delivery.

Semi-structured in-depth interviews with CBCP staff

We interviewed staff members who are key to the implementation delivery and whose views could inform planners and policymakers how to make improvements to current home personal care models. We interviewed 2 CBCP staff from each site - a supervisor (Nursing Manager), and an assistant (Nursing Aid or Healthcare Assistant). We selected one assistant from each of the 3 CBCP sites (n=3) based on the frequency of shadowing visits we had with them.

Semi-structured in-depth interviews with CBCP clients

The research team asked participants to share their experiences receiving care from CBCP. Participants will also share their life history, so researchers are able to contextualize their social positions vis-à-vis being a care recipient. Our aim was to understand the complexity of their life situations and how it may impact their satisfaction with home personal care services and examine if their needs have been met adequately through the CBCP service. For the purpose of building comprehensive understanding of the contexts and mechanisms of the CBCP program for effective evaluation, the CBCP team shared client case logs and summaries for the research team to obtain a better picture of CBCP client-participants. The sharing of data is PDPA compliant as the CBCP team operates through MOH and AIC, both of which have endorsed the research team as a collaborative research partner on PDPA forms signed by CBCP clients.

Data analysis

Written notes were used to document 'Go-along' interviews due to the long duration of such sessions and difficulty in capturing speech. All in-depth interviews with key CBCP staff and CBCP client-participants were audiotaped, transcribed. All type-written documents were then uploaded onto qualitative software database NVivo. Responses were then coded into analysis for emergent themes and triangulated with interviews as well as case summaries from CBCP staff.

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Publisher

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CARE's vision is an ageing population that is healthy, socially included and enjoys a high quality of life.

CARE's mission is to:

- Provide an environment that enables interdisciplinary research and education on ageing
- Implement and evaluate best practices to improve health and function of older adults
- Inform policy and practice agenda on ageing

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