CLINICAL TRIAL

A community-based health social partnership programme to enhance self-care management amongst older adults: a cluster randomised controlled hybrid implementation-effectiveness study

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Abstract

Background: Service models employing health–social partnership is recognised as an important strategy to support ageing in place globally, but literature reported challenges in operational concerns.

Objective To evaluate the implementation and effectiveness of a community-based health–social partnership programme (C-HSPP) for community-dwelling older adults.

Methods: This was a cluster randomised controlled hybrid type-2 design. Implementation outcomes included reach, effectiveness, adoption, implementation and maintenance. Self-efficacy served as the primary effectiveness measure. The 12-week C-HSPP intervention involved nurse assessments and interventions supported by social workers. Data were collected at baseline (T1), post-intervention (T2) and follow-up (T3).

Results: Eight older adult centres were randomised into four matched pairs (intervention: 4, control: 4), with 755 older adults assigned to intervention ($n = 381$) and control ($n = 374$) groups. Implementation evaluation revealed high programme reach amongst both providers and users, citing facilitators such as coordinated communication and structured protocols for the C-HSPP adoption. Key implementation challenges included the need for further role clarity within the interprofessional teams, varied degree of acceptability of home visits by users due to privacy concerns and logistic constraints, and the need for resource support for a health–social team to sustain the service. Significant group-time interaction effect was detected in self-efficacy at T3 ($\beta = -0.928$, $P = .035$), instrumental activities of daily living (IADL) at both T2 ($\beta = -0.411$, $P = .032$) and T3 ($\beta = -0.437$, $P = .032$), and reduced unplanned health service use at T2 ($\beta = 0.493$, $P = .015$), with better outcomes found in the intervention group.

Conclusion: This study has provided a working framework to translate an evidence-based health–social partnership model in real-life settings, highlighting the essence of stakeholder engagement and interprofessional communication in aligning goals with service needs. Policy support for resource allocation is important to sustain the model in the community.

Keywords: community-dwelling older adults; health–social partnership; self-care; implementation-effectiveness; older people

Key Points

- A health–social partnership approach is effective at improving self-efficacy, instrumental activities of daily living and decreasing rates of health service usage.
- Engaging key stakeholders in the service and management team from the development to implementation phase is important to ensure the co-ownership in adopting the health–social partnership programme within mainstream community-based services.
- The hybrid implementation-effectiveness design supports the translation of evidence-based service model in real life context and its sustainability in day-to-day practice.

Introduction

Global ageing populations are projected to reach approximately 2 billion by 2050, urging calls to advance innovations and strengthen community support systems to promote healthy ageing and social connectivity [1]. A significant step in this direction is to strengthen self-care management to facilitate ageing in place [2]. Self-care refers to the ability of individuals to engage actively in health-promoting behaviours, manage symptoms emerging from existing chronic conditions, and navigate healthcare and social resources with or without assistance which helps to improve functional independence and quality of life [3].

Poor self-care engagement correlates with higher healthcare service utilisation and psychosocial issues [4]. Barriers such as limited health literacy and inadequate social support can hinder self-care [5]. Comorbidities such as depression and social factors may further compound these challenges [6]. Though family caregivers play key roles, they may not have the pre-requisite knowledge and skills to manage the complex issues experienced by older adults [7]. Given these issues, it becomes paramount to consider a combination of multifaceted interventions delivered by an interdisciplinary team that proactively identify and manage the needs of older adults holistically whilst equipping them with the skills and knowledge to participate in self-care activities. More so for older adults, such complex interventions need to emphasise resolving health and social needs considering these can exist independently or co-exist to adversely impact on their self-care capacity, overall health and quality of life [8].

Complex interventions, as defined by the Medical Research Council, refers to those interventions that involve a combination of varying interacting aspects or packages of components [9]. These interventions which are often multifaceted, integrating care coordination, health education, social support and ongoing resolution of emerging needs have been theorised to address existing gaps by ensuring the availability of both health and social support [5]. The efficacy of these complex health–social care intervention in enhancing self-care, reducing hospitalisations and improving mental health have been reported [10]. Programmes combining home visits, caregiver support and holistic assessments have been reported to boost self-efficacy and reduce falls [7]. Complex interventions involving health–social partnerships between nurses and social workers (SWs) show promise in a recent study leading to improved self-care and reduced

healthcare service utilisation [5]. Yet, fragmented healthcare systems and siloed services impede scalability.

Another concern regarding scalability relates to the high priority given to effectiveness outcomes over the implementation strategies which leads to paying limited attention to contextual barriers such as staff training gaps and stakeholder disengagement [11]. Unclear operational guidelines further exacerbate these issues, leading to deviations from original intervention designs and failure to achieve intended outcomes [5]. Consequently, rigorous evaluation of such programmes must extend beyond measuring effects to also assess implementation process, fidelity, sustainability and maintenance. Moreover, working towards scalability and population level health impact will require implementations strategies such as attention to multi-level, multi-sector approaches, robust collaborative partnerships, continuous stakeholder engagement and structured progression through defined implementation phases to sustain and maintain the programme's implementation. An implementation–effectiveness hybrid approach offers the advantage of obtaining information regarding the programme's effects, as well as the implementation process, fidelity, maintenance and sustainability. To address the identified gaps, this study aimed to evaluate the implementation outcomes of community-based health–social partnership programme (C-HSPP) including the dimensions of reach, adoption, implementation and maintenance; and to ascertain the effectiveness of the C-HSPP in improving self-efficacy and other health outcomes using a cluster randomised controlled trial.

Methods

Study design

A Type 2 implementation-effectiveness hybrid design was employed [12]. The Standards for Reporting Implementation Studies was followed in reporting this study [13]. The implementation strategies employed in this study were structured in three phases (pre-implementation, implementation and post-implementation) aligned to respective actions based on the expert recommendations for implementing change (ERIC) framework (see Appendix S1 in the Supplementary Data). Central to the implementation process is the early engagement of senior staff from the older adult service division to build stakeholder buy-in, tailor the intervention to local workflows, and support the adaptation of centre-based operations to accommodate the

role of the nurse case manager (NCM). A team comprising of researchers, service managers, health and social care providers overlooked the delivery. The study was ethically approved by the Human Subjects Ethics Application Committee of the Hong Kong Polytechnic University (No. HSEARS20210401002) and complied with the Declaration of Helsinki. The trial was also registered on Clinical Trials registry (NCT05621720). The commencement date of the trial was 6 June 2022 and the end date was 30 June 2025.

Setting and participants

This study was undertaken in the Hong Kong Special Administrative Region in collaboration with the Hong Kong Lutheran Social Services. The inclusion criteria were: (i) Persons aged 60 or above; (ii) living within the service areas of respective community centres; (iii) cognitively competent with Hong Kong version of Montreal Cognitive Assessment (HK-MoCA) score $\geq$ 22 [14]. The cut-off of $\geq$22 was selected based on a local validation study and a pilot study comprising educational and self-management components requiring participants to comprehend, retain and applying information. This is to ensure that participants could effectively engage in self-management interventions [5]. Exclusion criteria were: (i) not communicable; (ii) unreachable by phone; (iii) not living at home; (iv) bed bound; (v) with serious mental illness requiring hospitalisation in recent 6 months; (vi) already engaged in similar interventions; (vii) will not stay in Hong Kong for the current three months. All participants were recruited via the collaborating community centres.

Randomisation, allocation concealment and masking

For effectiveness, the centres were randomised into the intervention and control arm. After pair matching, four comparable cluster pairs were prepared for allocation to either intervention or control arms. For each pair, a computer-generated randomisation procedure was used to assign anonymised labels to the centres. In the presence of research and service team representatives, the first randomly drawn label determined the intervention centre, while the remaining centre was designated as the control. This randomisation procedure was applied consistently across all matched pairs. Research assistants responsible for data collection and statistician were blinded to group assignments.

Intervention: the community-based health–social partnership programme

A full description of the nature of the C-HSPP has been published [15] and can be found in Appendix S2 in the Supplementary Data. Briefly, the C-HSPP comprised of a 12-week health–social care program, previously developed, empirically tested by our health research team [5, 7],, and shown to be effective in improving self-efficacy, instrumental activities of daily living (IADL), and quality of life. The C-HSPP was delivered by an NCM, supported by SWs and community workers (CWs). Participants in the intervention arm received three home visits and five telephone calls over the course of the intervention period. Also, the intervention involved focused assessment of needs, collaboration between the health–social team to resolve these needs guided by the Omaha System, referrals and evaluation of care. The Omaha System comprises of four domains: environmental, psychosocial, physiological and health-related behaviour with 42 problems [16]. During the initial assessment, the NCM identified health and social issues across the four domains. The problems, in consultation with the health–social team, were classified as health-focused, social-focused or health–social-focused. For problems falling in the health-focused domain, the NCM provided interventions in accordance to the four intervention schemes. The social-focused problems were handled by the SW whereas the health–social focused problems were handled collaboratively by the health and social care team. The older adults worked collaboratively with the health–social team to establish self-care goals and an individualised plan of care. Participants received three home visits and five telephone calls over the intervention period for comprehensive assessment of social needs and the related intervention to support self-care management. In the first month, there was one home visit, one nurse-initiated telephone call and two follow calls by the CW (see Appendix S3 in the Supplementary Data). In the second and third months, there was one home visit and one telephone call initiated by the CW.

Control group

Participants in the control group received the usual services provided at their respective centres. These services included community social activities and occasional health-related events, such as health talks arranged irregularly by the service centres. To account for potential social effects, control group participants received monthly social calls from trained assistants.

Outcomes

The reach, effectiveness, adoption, implementation and maintenance (RE-AIM) framework guided the implementation outcomes for this study [17]. 'Reach' was conceptualised as the number and representativeness of older adults who were willing to participate and actually completed the programme [18]. The measured constructs were the number and characteristics of participants and non-participants, enrolment routes, retention and attrition rates, and reasons for exclusion or non-participation. 'Effectiveness' was evaluated as the impact of the C-HSPP on primary and secondary outcomes. 'Adoption' emphasised the extent to which C-HSPP is perceived as appropriate and acceptable [19]. The measured constructs evaluated include the characteristics of the service team that delivered the programme, intention to adopt the programme, and early experiences associated with the C-HSPP. 'Implementation'

focused on the extent to which the C-HSPP was delivered as designed, feasibility to address the complex needs, and satisfaction [19]. The constructs assessed include fidelity measures, management of the health–social concerns, the number of referrals and associated reasons. 'Maintenance' focused on the long-term sustainability of C-HSPP and its scalability [19].

For the effectiveness component, self-efficacy was the primary outcome and evaluated using the General Self-efficacy scale [20]. Secondary outcomes were quality of life (12-item Short Form Health Survey version 2 Chinese version) [21], IADL (Lawton Instrumental Activities of Daily Living Scale) [22], health service utilisation (based on subjective reports and confirmed with medical and attendance certificates) [23], and satisfaction (12-item Satisfaction Questionnaire) [24].

Sample size

For implementation, data saturation guided the qualitative strand whereas for the quantitative strand, we aimed to include all available records and survey results. As a priori sample size determination for the qualitative strand, approximately 10 interviews with NCMs, SWs and centre staff and 16 focus groups with 3–5 participants per group were deemed potentially adequate to achieve saturation. The sample size for the effectiveness phase was estimated using guidelines from Hemming, Girling [25] for studies with a fixed number of clusters to detect a minimum detectable difference. A powered sample size of 732 participants (366 per arm) was obtained using the GSE as the primary outcome measure, effect size of 0.3 for self-efficacy based on a previous study [26], 0.8 power, alpha level of 0.05 and 15% potential attrition rate.

Data collection

Data for the implementation stage were collected along the process and collated at the end of the effectiveness phase. Implementation data included those obtained from administrative records, participant logs, surveys and focus group interviews. Topic/interview guide for the interviews/discussions were designed based on the constructs of the RE-AIM framework (see Appendix S4 in the Supplementary Data). For example, questions about 'Reach' included: how do you recruit older adult participants? What barriers do you encounter? Data collection for the effectiveness phase occurred at three timepoints: baseline (T1), completion of the 3-month intervention (T2) and 3-months post-intervention (T3).

Data analysis

For implementation data, quantitative data were analysed using descriptive statistics and qualitative data analysed using content analysis was guided by the RE-AIM constructs. For effectiveness data, descriptive statistics were used to summarise baseline demographic and clinical characteristics. We employed the generalised estimating equations to examine the group, time and interaction effects of the intervention. Multiple imputation methods under the assumption that data are missing at random was employed in SAS 9.4. All analyses were performed using SAS 9.4 analytics software at the 0.05 level of significance. Outcomes were analysed at the individual participant level. To account for clustering effects, we used multilevel mixed-effects models (GEE) with random intercepts for clusters.

Results

Participants' characteristics

Eight centres for older adults operated by the HKLSS were randomised into 4 pairs. Across these centres, a total of 950 older adults were screened following initial agreement to participate in the study which resulted in recruiting 755 participants from the participating centres who were subsequently assigned to either intervention group ($n = 381$) or control group ($n = 374$) based on the centre randomisation. See Figure 1 for details regarding the participant flow throughout the study. For the cluster trial, baseline demographic characteristics were balanced across the two groups (see Table 1). More females (control 84.2%, intervention 78.5%) than males participated in the study. Mean ages for the intervention and control groups were respectively 72.5 (SD = 6.959) and 73.89 (SD = 6.838). Most of subjects (control 50%, intervention 54.6%) were married. With the remaining largely widowed (control 35%, intervention 28.4%) and the remaining single or divorced. Approximately 95% of the subjects had at least primary education. Over 95% of the subjects have retired. Hip/knee pain (56%) and high blood pressure (52%) emerged as the two commonly reported chronic issues. Only less than 12% reported that they did not have sufficient finance for living. For the implementation stage, there were 8 centre staff members and 4 NCMs, and 7 focus groups yielding a total sample of 26 participants comprising 4 males and 22 females. Each focus group comprised of 3–5 older adults recruited from the intervention arm with ages ranging from 60–82 years (mean = 68.3 years).

Implementation outcomes

Reach

Initially, 485 older adults in the intervention arm expressed interest in participating and were screened for eligibility (Figure 1). Following the application of inclusion criteria, 104 individuals were excluded due to not meeting the cognitive cut-off score (MoCA $\geq$22) (76.0%), or declining participation after receiving further study information (22.1%). Ultimately, 381 participants were enrolled in the intervention arm over a 95-week period. Recruitment was through centre meetings (26.2%), monthly newsletter outreach (23.7%), outreach calls (23.1%), community staff referral (16.9%) and peer referral (10.1%) (see Table 2). The

Table 1. Socio-demographic characteristics of participants.

	Intervention group $N = 381$	Control group $n = 374$
Gender (%)	Frequency (percent)	Frequency (percent)
Male	81 (21.3)	59 (15.8)
Female	299 (78.5)	315 (84.2)
Age (Years)		
Mean (SD)	72.54 (6.959)	73.89 (6.838)
Median (range)	72 (60–95)	73 (60–96)
Marital status (%)		
Single	25 (6.6)	27 (7.2)
Married	208 (54.6)	187 (50)
Divorced	39 (10.2)	29 (7.8)
Widowed	108 (28.4)	131 (35)
Education level		
No formal education	14 (3.7)	19 (5.1)
Primary	146 (38.4)	158 (42.2)
Secondary	164 (43.2)	176 (47.1)
Tertiary or above	56 (14.7)	21 (5.6)
Occupation		
Full-time	2 (0.5)	7 (1.9)
Part-time	11 (2.9)	9 (2.4)
Unemployed	2 (0.5)	0 (0)
Retired	365 (96.1)	358 (95.7)
Types of housing		
Public housing estate	152 (40)	192 (51.3)
Home ownership scheme housing	52 (13.7)	141 (37.7)
private housing, include village houses	170 (44.7)	38 (10.2)
Temporary shelters/urban Hostels for single Persons/shared units	2 (0.5)	3 (0.8)
Squatter	4 (1.1)	0 (0)
Living with		
Alone	128 (33.7)	121 (32.4)
Spouse	136 (35.8)	105 (28.1)
Family and significant other	116 (30.5)	148 (39.6)
Financial status		
More than sufficient	96 (25.3)	56 (15)
Barely sufficient	241 (63.4)	275 (73.5)
Not sufficient	32 (8.4)	40 (10.7)
Far from sufficient	11 (2.9)	3 (0.8)
Primary source of income		
Wage	4 (1.1)	7 (1.9)
Family	87 (22.9)	103 (27.5)
Saving	109 (28.7)	72 (19.3)
Pension	41 (10.8)	28 (7.5)
CSSA	18 (4.7)	22 (5.9)
Old age allowance	49 (12.9)	56 (15)
Disability allowance	2 (0.5)	2 (0.5)
Higher disability allowance	1 (0.3)	1 (0.3)
Old age living allowance	69 (18.2)	83 (22.2)
Frequency of care		
Always	175 (46.1)	169 (45.2)
Sometimes	94 (24.7)	78 (20.9)
Only at night	18 (4.7)	22 (5.9)
no help from others	93 (24.5)	105 (28.1)
B. Chronic conditions		
Hip/knee pain	204 (53.7)	219 (58.6)
COPD/asthma	15 (3.9)	22 (5.9)
HBP	207 (54.5)	186 (49.7)
DM	74 (19.5)	68 (18.2)
CHD	39 (10.3)	25 (6.7)
Stroke	28 (7.4)	23 (6.1)
Cancer	55 (14.5)	40 (10.7)
Mild cognitive impairment	2 (0.6)	0 (0)
Depression	32 (8.4)	48 (12.8)
Fracture	40 (10.5)	49 (13.1)
Cataract	152 (40)	156 (41.7)
Arthritis	104 (27.4)	103 (27.5)
Genital disorder	56 (14.7)	35 (9.4)

Abbreviations: CSSA = comprehensive social security assistance, COPD = chronic obstructive pulmonary disease, HBP = high blood pressure, DM = diabetes mellitus, CHD = coronary health disease.
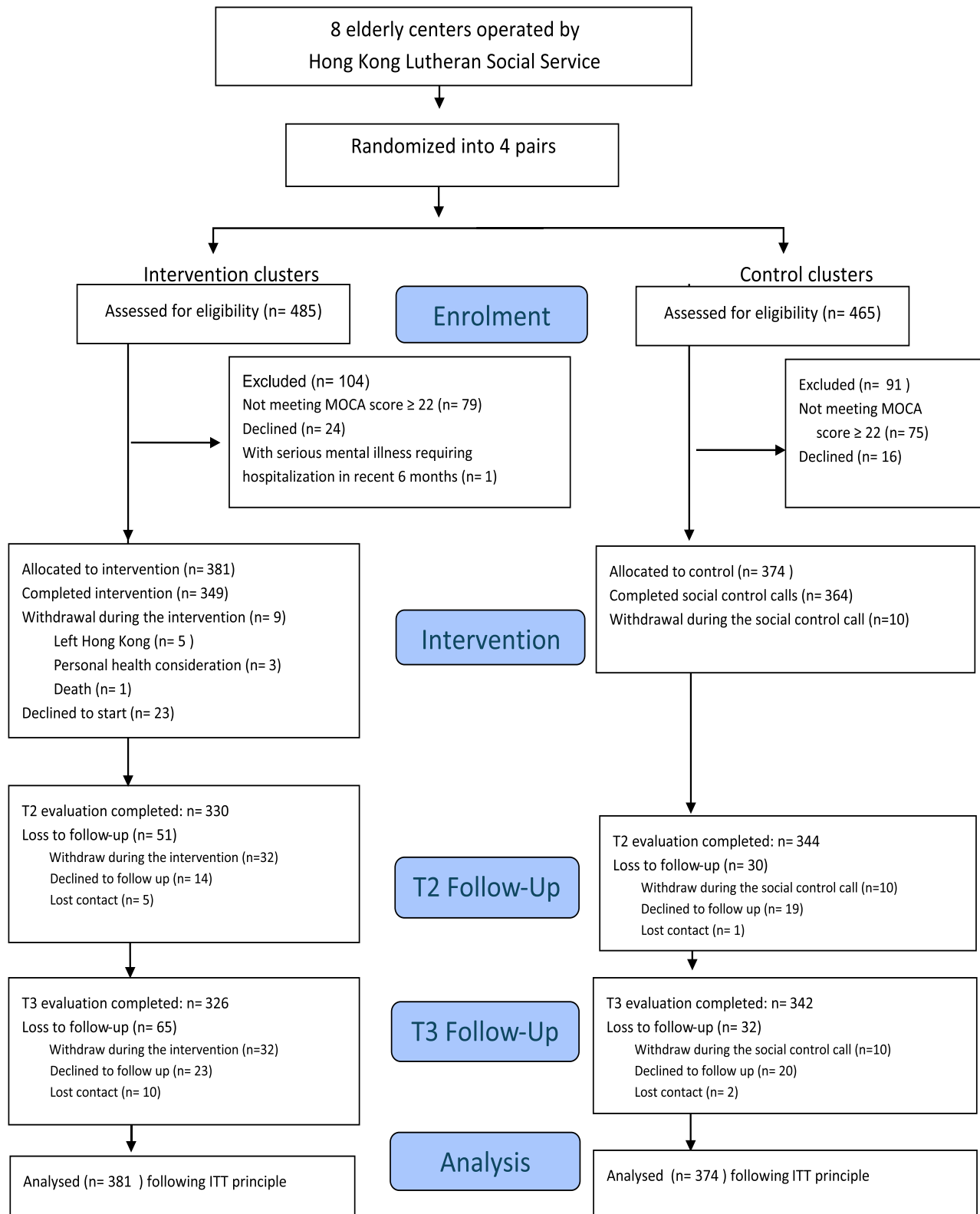
Figure 1. Study flow of the 3-month health social partnership program.

qualitative data obtained regarding reach offer more insight to the reasons for attaining this level of reach ('motivations for participation' and 'contextual factors that enhanced reach'), reasons for declining to participate ('barriers to participation'), and for leaving the study at follow-up ('reasons for attrition').

Table 2. Summary table regarding implementation outcomes (reach and implementation).

Reach	n = 485[a]	%
R1. Enrolment route		
Centre meeting	127	26.2%
Monthly newsletter outreach	115	23.7%
Outreach calls	112	23.1%
Community staff referral	82	16.9%
Peer referral	49	10.1%
Total	485	100%
R2. Declined to start	n = 381[b]	%
Conflicts with personal schedule	8	2.1%
Time commitment concerns	6	1.6%
Declined home visits	4	1.0%
Did not see a service need	2	0.5%
Cannot be contacted	2	0.5%
Admitted to nursing home	1	0.3%
Total	23	6.0%
R3. Discontinued during intervention	n = 381[b]	%
Conflicts with personal schedule	8	0.8%
Did not see a service need	4	1.0%
Fear of changes	1	0.3%
Death	1	0.3%
Total	9	2.4%
R4. Lost to follow-up @ T2	n = 381[b]	%
Conflicts with personal schedule	22	5.8%
Left Hong Kong for travel	12	3.1%
Caring for sick family	6	1.6%
Cannot be contacted	5	1.3%
Overlooked/forgotten	4	1.0%
Death/nursing home placement	2	0.5%
Total	51	13.4%
R5. Lost to follow-up @ T3	n = 381[b]	%
Conflicts with personal schedule	26	6.8%
Left Hong Kong for travel	18	4.7%
Cannot be contacted	10	2.6%
Caring for sick family	7	1.8%
Overlooked/forgotten	2	0.5%
Death/nursing home placement	2	0.5%
Total	65	17.1%
Implementation		
I1. Compliance with scheduled sessions[c]	no. of time n = 358[d]	%
Compliance to 1st visit	358	100%
Compliance to 2nd visit	323	90.2%
Compliance to 3rd visit	318	88.5%
Compliance to 2 NCM calls	547	80.4%
Compliance to 3 CW calls	507	47.2%
Overall Intervention compliance rate ($\geq$ 70% sessions)[d]	290	81.0%
I2. Session length (minutes)	Mean	Range
Length of 1st visit	79	40–135
Length of 2nd visit	61	22–119
Length of 3rd visit	59	26–113
Length of NCMs call	13	2–50
Length of CWs call	9	2–26
I3. The Omaha problem identification	Mean	Range
No. of total problems	5.9	1–17
No of problem for environmental	0.1	0–3
No of problem for psychosocial	1.1	0–5
No of problem for physiological	2.5	0–8
No of problem for health-related behaviour	1.7	0–5
I4. Number of referrals and reasons	n = 358[c]	
Medical referral	Frequency	%
Cardiovascular system	12	3.4
Musculoskeletal system	7	2.0

Table 2. Continued.

Reach	$n = 485^a$	%
Neurological system	4	1.1
Gastrointestinal system	3	0.8
Endocrine system	2	0.6
Psychiatry problem	2	0.6
Urological system	2	0.6
Hepatobiliary system	1	0.3
Respiratory system	1	0.3
Total	34	9.5
Social referral	Frequency	%
Community resource		
Financial assistance	11	3.1
Carer support	9	2.5
Cognitive training	7	2
Day care service	4	1.1
Personal emergency link	3	0.8
Walking aid lending	3	0.8
Home support		
Home environment modification	4	1.1
Daily living assistance	3	0.8
Psychosocial support		
Mood/depressive/grief issues	11	3.1
Community engagement	9	2.5
Family issues	6	1.7
Carer stress	5	1.4
Total	76	21.2
Simultaneous referrals to medical and community services	8	2.2

[a]Total older adults ($n = 485$) who were recruited for eligibility screening. [b]Total enrolled participants ($n = 381$). [c]Compliance refers to participation in the scheduled sessions. [d]The overall intervention compliance rate reflects the proportion of participants who completed at least 70% of the prescribed sessions. [e]Total participants started interventions ($n = 358$).

Motivations for participation

Common motivations for participation included older adults' desire to enhance health knowledge, maintain independence at home and expand social networks. Several participants considered the C-HSPP as an opportunity to forge new connections, access psychological support and learn to self-manage their health to reduce strain on existing public services. Staff noted the incentive of three-month nurse consultations further drove engagement.

Barriers to participation

Barriers to participation reported across all participants included COVID-19 pandemic-related safety concerns, privacy reservations, perceived lack of need and lengthy follow-ups. Some eligible older adults were excluded due to existing enrolment in other interventions. Also, the centre staff participants highlighted that the MoCA cut-off score was overly restrictive, limiting recruitment, while others declined due to self-perceived good health.

Contextual factors that enhanced reach

The participants mentioned some factors that enhanced the reach of the programme. Emerging key factors highlighted by participants included the centre's accessible location, inclusive design (accommodating adults with mobility issues), and no cost associated with the C-HSPP.

Trust between providers and participants, staff dedication and pre-existing health concerns also motivated engagement.

Reasons for attrition

Participants who completed the intervention but did not participate in the follow-up phase underscored the protracted follow-up period which led to dropping out of the study entirely. Also, some older adults found the bundle of questionnaires too lengthy, difficult to understand and burdensome. Other older adults also noted that they felt they were in good condition and as such, felt no need to continue to remain in the programme. The need for home visiting was also considered uncomfortable by some older adults which led to dropping out of the study entirely.

Adoption

Organisational issues and expertise

Recent updates to service agreements from funding body, Social Welfare Department, have prompted the centres to incorporate more health-focused activities, such as active ageing, pre-retirement preparation and gerontechnology. While these additions reflect both policy-level expectations and local needs, centre staff noted a gap in health expertise. SWs often relied on external service providers to deliver health-related services.

Providers' and users' intention to adopt

Service providers praised nurse-led community programs for aligning with ageing-in-place goals and organisational values. Centre staff valued nurses' medical expertise to off-set resource gaps, while NCMs emphasised preventive care and empowerment. Older adults prioritised accessible health consultations and personalised care over traditional services. Despite workload concerns, providers were motivated by the programme's societal benefits, interdisciplinary collaboration and potential to reduce institutional reliance.

Initial uptake and early experiences

Staff and NCMs highlighted the programme's structured, collaborative approach aided early implementation. Coordination amongst teams was praised for addressing older adults' needs despite time pressures. However, initial hesitations arose over workload increases and misconceptions. Centre staff initially hesitated due to perceived workload, while NCMs faced adaptation challenges but valued training and follow-up support. Ongoing collaboration and care improvements later boosted staff confidence and participation. Nurses' expertise and teamwork drove gradual C-HSPP uptake. Early recruitment hurdles included strict eligibility criteria and older adults' anxiety about unknown callers:

Implementation

A summary of fidelity issues is provided in Table 2 including compliance rates, session length and the Omaha problem identification and reasons for medical and social referrals. With the use of the Omaha System, the top eight problems identified were: nutrition ($n = 274$), pain ($n = 213$), physical activity ($n = 211$), neuro-musculoskeletal function ($n = 192$), circulation ($n = 187$), role change ($n = 123$), social contact ($n = 123$) and interpersonal relationship ($n = 83$) (see Appendix S5 in the Supplementary Data). These issues reflect the dominance of physiological and psychosocial concerns in older adults' self-care needs.

Project logistics and implementation process

Participants viewed the programme's implementation as smooth, specifying efficient coordination, tailored services and strong communication between teams. Collaboration with NCMs and streamlined logistics (transport, scheduling) were key strengths. Recruitment initially struggled but improved when trusted service providers replaced student helpers in outreach. Retention challenges arose from lengthy 3-month follow-ups and questionnaires. COVID-19 adaptations reduced face-to-face contact, though some older adults preferred home visits.

Process of health–social team collaboration

Collaborative coordination between nurses and SWs was highlighted as vital for holistic care. Nurses focused on health assessments/education, while SWs addressed psychosocial needs. Clear role definitions (recruitment, delivery) and real-time WhatsApp communication streamlined teamwork. Regular case meetings and a referral system ensured structured, needs-based care. A project coordinator and dedicated SW oversaw logistics. Notable challenges included professional boundaries: centre staff preferred nurses to handle health issues, while NCMs faced role ambiguity in community settings due to their hospital-centric backgrounds.

Implementation facilitators

Personalised approach driven by the interdisciplinary team helped participants feel heard, distinguishing the programme from standard interactions. The use of structured protocols to guide care also emerged as a facilitator. Trust developed gradually, particularly for resistant individuals, with nurses leveraging consistent communication and emotional intelligence to navigate complex dynamics. A supportive organisational climate, clear guidelines and regular case conferencing streamlined implementation. Nurses valued orientation sessions and resource tools to transition into community roles, while centre staff highlighted the importance of dedicated coordination and research team collaboration. Multiple channels ensured aligned follow-ups and timely support.

Implementation barriers

Financial and social care referrals and tracking nurse-participant appointments posed challenges, with NCMs lacking post-assessment referral expertise. While telephone follow-ups were valued for updates, participants found them impersonal without visual cues, and staff struggled to coordinate call logistics. Home visits, though occasionally uncomfortable for elders, allowed critical environmental insights and fostered open dialogue compared to centre-based interactions. Staff shortages and high demand strained case management efficiency. NCMs praised the research team's scheduling support to minimise travel time but faced learning curves with documentation systems like the Omaha System. Communication gaps between medical and social teams led to conflicts, particularly around institutional care eligibility. Operational hurdles including last-minute changes further hindered engagement and referral management.

Maintenance

Sustainability and programme continuation

Stakeholders urged expanding the programme to under-served older adults (e.g. those with disabilities) and institutionalising it to ensure sustainability, as the 3-month timeframe limited lasting impact. Scalability barriers include rigid grants, staffing shortages and wage gaps between NGO and government roles. Solutions proposed nurse-sharing across centres and integrated health–social services. Demonstrating community impact to secure long-term funding remains critical but competes with existing initiatives.

Competitive salaries are vital to retain nurses deterred by pay disparities.

Programme improvement

Stakeholders proposed programme refinements to enhance reach and impact, including prioritising vulnerable older adults in recruitment, expanding educational content and integrating mental health specialists into care teams. An information-sharing platform for nurses and SWs could streamline coordination, while addressing workspace shortages would alleviate infrastructure barriers. Though the 3-month duration was deemed adequate for the purpose of this study, more frequent in-person sessions and revised eligibility criteria were suggested to better serve high-need groups. Home visit challenges (e.g. logistics, suitability for mobile seniors) prompted debates about their necessity. All illustrative quotes regarding the implementation outcomes are presented in Table 3.

Effectiveness of the community-based health–social partnership programme

Based on the GEE analysis, the results (see Table 4) demonstrated a statistically significant interaction effect regarding self-efficacy at T3 ($\beta = -0.928$ [95% CI: -1.790 to -0.066], $P = .035$). Regarding quality of life, no statistically significant effects were observed regarding the MCS and PCS at both T2 and T3. Statistically significant within-group time differences favouring the intervention group were observed for the PCS at T2 ($\beta = 1.61$ [95% CI: 0.627 to 2.583], $P = .001$) and T3 ($\beta = 2.83$ [95% CI: 1.856 to 3.797], $P < .001$). For the MCS aspect, a statistically significant within-group time difference was observed at T2 ($\beta = 1.217$ [95% CI: 0.154 to 2.279], $P = .025$), but not at T3 ($P = .061$). Significant within-group improvements in IADL were observed in the intervention group at both T2 ($\beta = 0.272$ [95% CI: 0.015 to 0.529], $P = .038$) and T3 ($\beta = 0.309$ [95% CI: 0.034 to 0.585], $P = .028$), with significant interactions at both T2 ($\beta = -0.411$ [95% CI: -0.787 to -0.035], $P = .032$) and T3 ($\beta = -0.437$ [95% CI: -0.837 to -0.038], $P = .032$), indicating greater improvements in the intervention group compared to the control group. For health service utilisation, a significant interaction effect was observed at T2 ($\beta = 0.493$ [95% CI: 0.094 to 0.892], $P = .015$), but not at T3 ($P = .132$), suggesting that the intervention group had a greater reduction in health service use at 3 months compared to the control group. The satisfaction scores demonstrated significantly higher scores in the intervention group (M = 4.06, SD = 0.70) compared to the control group (M = 3.46, SD = 0.86), t (66) = 3.79, $P < .001$.

Discussion

The study demonstrates that the C-HSPP is effective at improving capacity for self-care and the implementation findings remain crucial in sustaining the programme to support older adults. This study achieved strong recruitment, meeting its sample target despite strict MoCA cognitive criteria. Trust was pivotal in overcoming recruitment barriers, aligning with evidence that familiarity with promoters enhances enrolment [5]. Participant motivations centred on health maintenance and social connection, while providers were driven by alignment with government well-being initiatives. These factors underscore the programme's success in addressing local needs through a health–social partnership model. Regarding adoption, the early engagement with the social service staff and nurses helped to elicit their insights to feed into the development and implementation process creating a sense of co-ownership.

The implementation process of the C-HSPP revealed several insights regarding facilitators and barriers. Facilitators included strong interdisciplinary collaboration, structured protocols and leadership support which bolstered the programme's success. Though regular case discussions and the use of communication platforms facilitated timely updates and coordinated care, challenges in nurse-SW communication, particularly regarding complex psychological or family-related concerns which required the expertise of both team members may indicate a need for enhanced coordination mechanisms. Home visits were double-edged: while useful for engagement, they posed privacy concerns. Additional retention challenges stemmed from lengthy follow-ups/questionnaires, which caused participant fatigue. Streamlining evaluations, simplifying surveys and tailoring methods to diverse education levels could potentially improve engagement [27]. Staffing constraints and poor coordination, exacerbated by SWs' dual roles, underscore the need for role clarity [28].

The integration of health and social services improved the programme's delivery, providing a holistic care model. This collaboration has been described as an 'allied' relationship, emphasising trust and cooperation [29]. However, differences in decision-making processes between health and social work teams occasionally led to conflicting judgements, underscoring the need for aligned assessment criteria and shared decision-making frameworks. A recurring theme was the desire for the programme's integration in mainstream community support services to ensure its long-term sustainability highlighting the potential impact of the programme. Indeed, interprofessional teams providing health and social support can help to optimise outcomes for older adults [30]. This may be related to the fact that teams confer the benefit of resolving complex needs while mitigating barriers to health maintenance [30]. Service models employing health–social partnership is recognised as a key measure to support ageing in place globally [1], but literature reported challenges in operational concerns [5]. This study involved an implementation science approach to engage the health–social stakeholders in the design and delivery of the C-HSPP, facilitating interprofessional communication and establishing structures to delineate roles and streamlining collaboration. The processes facilitated shared decision-making and defining goals that aligned with service and user

Table 3. Illustrative quotes of reach, adoption, implementation and maintenance.

RE-AIM component (categories)	Subcategories	Illustrative quotes
Reach	Motivations for participation	'The main reason I joined this program is. . . I feel it really suits people at our stage of life.' (Participant 1F, Male, Age 65) 'I recently found out that my heart isn't doing well and was told I need heart surgery. . . but there's a waiting list. . . they said the surgery costs over 70,000 dollars. . . I'm hoping to see if this program can help. I was really shocked when I heard my heart condition wasn't good.' (Participant 2B, Female, Age 66)
	Barriers to participation	'Sometimes we feel certain individuals are actually more in need, but they can't join the program because their MoCA scores don't meet the threshold. I think the MoCA score is quite a significant limitation.' (Centre Staff 6, Social Worker, Male) "I prefer home visits when possible—you notice much more. One old man lived alone in a cluttered, rundown flat. He felt embarrassed, but I acted naturally and carried on with the visit to make him feel comfortable. "(Nurse Case Manager 1, Female)
	Contextual factors that enhanced reach	'Since I live nearby, it was convenient to just walk over and join.' (Participant 3B, Female, Age 68) 'Older adults are more familiar with the centre. They know the way here, so if there's a nurse station or consultation point, and they have concerns, they'll feel comfortable dropping by to ask.' (Centre Staff 4, Centre-in-Charge, Female)
	Reasons for attrition	'If you're talking about home visits, the pandemic is probably a reason—they don't want people coming into their homes.' (Centre Staff 2, Program Worker, Female) 'Some felt they were already in good health and didn't need follow-up. Others thought the follow-up duration was too long, the benefits unclear, or they were simply too busy.' (Centre Staff 6, Social Worker, Male)
Adoption	Organisational issues and expertise	'Last October they (Social Welfare Department) added three items in service agreement. The first was active ageing and health; second, we have to run several pre-retirement activities. . . They insisted it's not just for the old-old, but for younger seniors too. The third item was gerontechnology—we'd never had to cover that before, but now we must.' (Centre Staff 7, Assistant Service Director, Female) 'Actually, for health promotion, our centre alone might not fully meet the needs. We mostly rely on partnerships with other organizations to organize those types of health-related programs.' (Centre Staff 1, Program Worker, Male)
	Providers' intention to adopt	'I agree, because interprofessional collaboration and complementarity really benefit the elderly. Opportunities like this are rare, so this program is something our centre's members truly benefit from.' (Centre Staff 5, Social Worker, Female) 'Of course. If older adults can enjoy their later years at home without constantly going to the hospital, that's ideal. I wouldn't have joined if I didn't agree with the goal.' (Nurse Case Manager 1, Female)
	Initial uptake and early experiences	'Honestly, I didn't want to join at first—it meant more work. But after we saw some elders improve physically, we realized the program actually helps. Looking back, it's a good thing. It was hard to accept at first, but the outcomes convinced us.' (Centre Staff 3, Social Worker, Male) 'Research team's on-the-job guidance helped, especially with assessments. But since I wasn't familiar with this evaluation tool, it took time to adapt. More detailed and structured forms would improve referral quality and boost nurses' confidence in determining the right follow-up—whether to a doctor or physiotherapist.' (Nurse Case Manager 2, Female)
Implementation	Project logistics and implementation process	'I didn't know the area well, but the research team helped arrange visit schedules efficiently. Sometimes I needed to visit homes, and having grouped appointments in the same area helped reduce transport time, allowing me to see more cases.' (Nurse Case Manager 3, Female, 37) 'Service team gave us clear, practical guidelines and stayed closely involved throughout. Their support—from staffing to task details—made the whole implementation much smoother.' (Centre Staff 1, Program Worker, Male)
	Process of health–social team collaboration	Interprofessional coordination process 'Nurses understand the health side, while we understand their daily lives and emotional state. Through mutual communication, we can better support and refer older adults to suitable resources.'(Centre Staff 6, Social Worker, Male,8) Interprofessional coordination—challenges 'In hospitals, everyone's role is clear. But in the community, when I found issues—like a client with severe foot deformity or at high fall risk—I didn't know who to refer to. I wasn't sure what resources were even available out there.' (Nurse Case Manager 3, Female) 'Nurses might notice an issue, but if they don't communicate with social workers, it's hard to follow up on non-medical problems.'(Centre Staff 3, Social Worker, Male)

(continued)

Table 3. Continued.

RE-AIM component (categories)	Subcategories	Illustrative quotes
	Implementation facilitators	Attributes of service providers 'The nurse was very thoughtful . . . he noticed small details during the home visit, like checking my fridge and gently reminding me about proper food storage. . . and food selection. I wasn't expecting such detailed observations.' (Participant 4D, Female, Age 74) 'Nurses were perceived as attentive, empathetic, and highly committed to their roles. Their strong communication traits—including listening, patience, and responsiveness—were seen as key to the program's success.' (Centre Staff 1, Program Worker, Male) Training and prepared materials 'The professional gap was big. . . but the orientation helped me understand community settings and resources.' (Nurse Case Manager 3, Female) Supportive supervision from the research team 'A dedicated centre staff helped coordinate and support the implementation.' (Centre Staff 1, Program Worker, Male) 'The research team was always present—supporting us closely in both clinical service and admin tasks. That sense of being supported really mattered.' (Nurse Case Manager 2, Female) Trust in therapeutic relationship 'At first, she didn't say much. . . but by the second and third visits, she opened up about unresolved grief over her sister's passing. That connection built through our sessions made it easier for her to talk and accept support.' (Nurse Case Manager 2, Female) 'When we [social workers] visit, some elders are guarded. They think we're there because their family wants to send them to a care home. But they're more relaxed with nurses, who do regular check-ups or home visits for exercise. They talk more openly to nurses—about their feelings and health. If nurses share those insights with us, we can coordinate support more smoothly.' (Centre Staff 6, Social Worker, Male) Communication 'We have a WhatsApp group. The nurses are great—they update us whenever there's something to follow up after each visit.' (Centre Staff 5, Social Worker, Female) "We had a meeting with the research team, nurses, and center staff to discuss case progress and areas for improvement. Everyone contributed from their role, and it made me realize how much we could still refine. These meetings helped enhance the vision and quality of future visits.(Nurse Case Manager 3, Female) Standardised service protocol 'I've never done this kind of activity with a nurse before. Usually, it's just a health talk with many people—this program the first time I've had an individualised nursing consultation for health education.' (Participant 4D, Female, Age 74) 'This program had several home visits and phone follow-ups, which really helped motivate older adults and reminded them to stay on top of their health issues. That's a big difference from past programs that only had one or two contacts.' (Centre Staff 1, Program Worker, Male)
	Implementation barriers	Limited Practicality of Health and Social Advice 'I couldn't follow everything she said. She asked me to do some stretches—my legs were fine, but when I stretched my arms, it hurt. I have a serious case of tennis elbow. . .' (Participant 4D, Female, Age 74) 'The nurse suggested applying for a social security assistance scheme to support the financial needs, but the elderly person was already on another subsidy. . . After looking into it, we found complications with bank accounts and insurance policies. We had to explain everything again to manage expectations.' (Centre Staff 5, Social Worker, Female) Mixed perceptions of home visits 'Home visits need to avoid the time when my husband is at home. . . It's troublesome to keep rescheduling.' (Participant 6C, Female, Age 60) 'Home visits let us observe things we can't see at the center—like potential risks in the home or lifestyle habits—so we can give tailored advice and support.' (Centre Staff 1, Program Worker, Male) Caseload and resource constraints 'Staff shortages created time pressure for center staff managing multiple cases' (Centre Staff 1, Program Worker, Male). 'Support from the research team in coordinating visit routes and aligning schedules significantly reduced travel time and improved overall efficiency, enabling us to serve more participants effectively within limited time' (Nurse Case Manager 3, Female) Intervention complexity 'Although the Omaha System provided a comprehensive structure for assessments and documentation, being new and unfamiliar with the tool needed additional time to adapt. It required practice to apply it accurately across domains and complete documentation effectively' (Nurse Case Manager 2, Female).

(continued)

Table 3. Continued.

RE-AIM component (categories)	Subcategories	Illustrative quotes
Maintenance	Sustainability and programme continuation	Reaching broader population 'The program can be implemented in the center, but it should target those with more urgent needs to maximise reach, as current participants are relatively healthy.'(Centre Staff 6, Social Worker, Male) I know many elderly people who are very closed off, not going to community centers or engaging with others. . . There are really a lot of elderly people who are very isolated." (Participant 4B, Female, Age 69) Lengthening program duration 'supports institutionalising the program, as short-term implementation yields limited impact; extending it to one year would yield better results and provide a clearer picture of elderly participants' health changes.'(Centre Staff 6, Social Worker, Male) Alignment with ageing-in-place needs 'in terms of sustainability, we are addressing the issue of population ageing. I believe the solution lies in enhancing elderly individuals' self-care abilities and focusing on ageing-in-place. This, to me, is the only viable policy solution for now.' (Centre Staff 1, Program Worker, Male) Service expansion 'I believe it would be beneficial to have a shared information platform or database where both nurses and social workers can access the most up-to-date information about a participant's status. This would improve coordination and ensure that the care provided is comprehensive, with both parties staying informed and aligned in their approach.' (Centre Staff 5, Social Worker, Female) The Social Welfare Department may perceive the addition of nurses to community centres as a non-urgent need, given that elderly individuals can access primary healthcare services through existing channels such as DH or DHCs. (Centre Staff 4, Centre-in-charge, Female) 'We really need to see whether the government will allocate funding for us to hire nurses. If not, and our centre has to cover the cost, that would be difficult.' (Centre Staff 3, Social Worker, Male)
	Programme improvement	'Expanding the program to reach more socially withdrawn or "hard-to-reach" older adults would require significantly more resources and dedicated outreach teams' (Participant 4B, Female, Age 69) 'You might feel confident now, but after few years. . . things will be different, because people inevitably deteriorate.' (Participant 6D, Female, Age 60)

needs. This study provides insights and a working framework to translate evidence-based service model into real-life settings.

The fragmented nature of conventional healthcare systems, often perpetuating siloed care delivery, underscores the value of implementing the innovative C-HSPP within the social care setting. Current integrated care programmes concentrate specifically on facilitating the hospital-community transition for older adults, with the goal of strengthening their intrinsic capacity post-discharge [29]. Although these programmes report benefits in physical and psychological well-being [29], their design limits participation to hospitalised individuals. Also, hospital-based transitional care programmes have a defined timeframe confined to the immediate post-discharge period. Consequently, community-dwelling older adults who need self-care support without an acute hospitalisation episode are excluded. Our study addresses this critical service gap by providing professional, ongoing support directly to the community-based older adult population. Unlike the hospital setting where significant emphasis is placed on medical issues, the social care context focuses on enhancing personal care, social support, independence and overall well-being [29]. By co-locating health and social care services, this centralised model successfully connected older adults to broader community resources and hospital systems,

functioning as a one-stop hub to access tailored services as needed, while establishing streamlined referral pathways. This integrated strategy not only enabled comprehensive needs assessments and personalised care planning but also reduces service duplication which remains a common source of confusion for older adults navigating fragmented care systems. The tailored approach to addressing individual needs is particularly significant given the diverse health profiles of community-dwelling older adults, who often require varying levels of support [7]. While this study identified participants with multiple chronic conditions, others did not report active ailments, underscoring the heterogeneity of this population. To maximise inclusivity and reach, future studies should prioritise flexibility in programme delivery, ensuring alignment with a person-centred care philosophy. Resource constraints, staffing and funding limitations remain critical issues that can adversely impact its adoption and sustainability. Thus, a more sustainable form of funding which may be obtained through fundraising and governmental policies is greatly needed.

Regarding effectiveness, the C-HSPP significantly improved IADL through proactive, Omaha System-guided care. SWs supported ongoing assessments to address biopsychosocial-environmental barriers, while home visits and follow-ups enabled personalised interventions [5]. That is, the study

Table 4. Effects of the C-HSPP.

GEE comparison of the key outcome variables by groups over three time points (baseline, 3 months and 6 months)

	T1		T2		T3		Between-group effect	Within-group time effect	Group* time interaction effect
	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)	B (Wald χ^2) [95% CI] (*P*-value)	T2 vs T1 B (Wald χ^2) [95% CI] (*P*-value) T3 vs T1 B (Wald χ^2) [95% CI] (*P*-value)	Group*T2vsT1 B (Wald χ^2) [95% CI] (*P*-value) Group*T3vsT1 B (Wald χ^2) [95% CI] (*P*-value)
Self-efficacy (scale, 10–40) (mean, SD)							−0.133 (0.074) [−1.097, 0.831] (0.786)	0.745 (5.41) [0.117, 1.373] (0.02*)	−0.193 (0.187) [−1.068, 0.68] (0.665)
Intervention	380	23.75 (6.86)	330	24.42 (6.62)	326	24.88 (7.17)		1.136 (12.607) [0.509, 1.763] (<0.001**)	−0.928 (4.451) [−1.790, −0.066] (0.035*)
Control	374	23.61 (6.67)	344	24.02 (6.7)	342	23.79 (6.86)			
Quality of life SF-12 PCS (scale, 0–100) (mean, SD)							0.273 (0.11) [−1.343, 1.888] (0.741)	1.61 (10.34) [0.627, 2.583] (0.001**)	−0.77 (1.22) [−2.135, 0.597] (0.27)
Intervention	380	40.91 (11.65)	330	42.88 (10.35)	326	44.15 (10.65)		2.83 (32.57) [1.856, 3.797] (<0.001**)	−1.26 (3.22) [−2.627, 0.116] (0.073)
Control	374	41.19 (11.01)	344	41.89 (11.08)	342	42.81 (10.28)			
MCS (scale, 0–100) (mean, SD)							0.389 (0.243) [−1.159, 1.937] (0.622)	1.217 (5.036) [0.154, 2.279] (0.025*)	−1.253 (2.57) [−2.785, 0.279] (0.109)
Intervention	380	51.24 (10.73)	330	52.43 (10.12)	326	52.38 (10.24)		1.06 (3.522) [−0.047, 2.167] (0.061)	−1.06 (1.819) [−2.601, 0.480] (0.177)
Control	374	51.63 (10.98)	344	51.69 (10.80)	342	51.75 (10.32)			
IADL (scale, 0–27) (Mean, SD)							0.27 (1.516) [−0.160, 0.700] (0.218)	0.272 (4.307) [0.015, 0.529] (0.038*)	−0.411 (4.583) [−0.787, −0.035] (0.032*)
Intervention	380	24.33 (3.33)	330	24.71 (3.13)	326	24.75 (3.13)		0.309 (4.858) [0.034, 0.585] (0.028*)	−0.437 (4.607) [−0.837, −0.038] (0.032*)
Control	374	24.6 (2.67)	344	24.44 (3.17)	342	24.48 (3.17)			
Total health attendance (OPD + GP + ED) (mean, SD)							−0.292 (2.224) [−0.676, 0.092] (0.136)	−0.944 (48.848) [−1.209, −0.68] (<.001**)	0.493 (5.874) [0.094, 0.892] (0.015*)
Intervention	380	1.91 (2.89)	330	0.96 (1.68)	326	0.89 (1.56)		−1.005 (46.202) [−1.294, −0.715] (<.001**)	0.319 (2.269) [−0.096, 0.733] (0.132)
Control	374	1.61 (2.48)	344	1.16 (2.23)	342	0.92 (1.75)			

Note: $P < .05$ (*), $P < .01$ (**), T1 = baseline, T2 = 3-month follow-up, T3 = 6-month follow-up, CI = confidence interval, PCS = physical component summary, MCS = mental component summary, OPD = out-patient department, GP = general practitioner, ED = emergency department

did not adopt a one-size-fit-all approach but a flexible approach to proactively meet their needs as highlighted in existing studies [31]. Participants reported heightened health awareness and self-care behaviours, potentially explaining the intervention group's lower healthcare service utilisation. Data regarding implementation outcomes revealed that the structured protocols empowered older adults to manage their health proactively, reinforcing the value of individualised, community-based models in enhancing IADL. While IADL improved significantly at 3 and 6 months, self-efficacy showed improvement only at 6 months. This contrasts with the pilot study, where self-efficacy gains occurred

earlier [5]. A potential explanation may be derived from the inclusion of older adults with depression and mild cognitive impairment in the current study, as depression is linked to lower self-efficacy and slower progress [5]. The observed non-significance in quality of life outcomes might be attributable to the considerable heterogeneity within the study sample, as participants exhibited a range of coexisting chronic conditions including pain, diabetes and depression. These conditions may affect quality of life domains in varying levels. For example, arthritis impacts physical function, depression affects emotional well-being and heart condition may cause fatigue. Despite the

non-significant results regarding quality of life, participants in the intervention group expressed better emotional well-being, felt happier, less anxious and improved confidence in managing their own health.

In conclusion, the C-HSPP demonstrated effectiveness in enhancing self-efficacy, reducing health service use and improving instrumental daily living activities amongst older adults, supporting ageing in place. Implementation feasibility is supported by strong service providers and user buy-in, trust-building and structured protocols, though operational barriers must be addressed. Sustaining the programme hinges on securing stable funding. The study's strength includes the use of a hybrid design to obtain evidence regarding implementation and effectiveness which offer insights into what may work and a critical step regarding evidence into community-based care. Despite this, some limitations are noteworthy. The study was undertaken in a unique context and the service model cannot be directly transferred for use without adaptation. However, the guiding principles of operation learned in this study offer insights for other settings when adopting health–social partnership service models. Another limitation is the use of a strict MoCA threshold (≥ 22) as an eligibility criterion, while necessary to ensure participants could fully engage with the educational and self-care components, may have excluded a proportion of older adults with mild to moderate cognitive impairment. Thus, the findings may not be applicable to all community-dwelling older adults, particularly those with lower cognitive functioning. Future adaptations of the intervention could consider tailored support for these populations.

Supplementary Data: Supplementary data is available at *Age and Ageing* online.

Declaration of Conflicts of Interest: None declared.

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