

Self-Efficacy, Social Capital, and Psychological State among grassroot Older Adults in Hong Kong: A Three-Wave Longitudinal Study with an Embedded Structured Community Intervention



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Abstract: Rapid population aging has heightened concerns about psychological adaptation among older adults, particularly those residing in resource-constrained urban environments. This three-wave longitudinal study examined the associations among general self-efficacy, social capital, social networks, and psychological state among 1,218 older adults living in Hong Kong public housing estates. After baseline assessment, 201 participants were assigned to a six-month structured community intervention emphasizing caregiver involvement, community activities, and opportunities for social contribution, while 1,017 participants served as a comparison group receiving usual services. Psychological state was measured with a reverse-scored Kessler Psychological Distress Scale (K10), such that higher scores indicated lower distress and relatively better psychological state. Cross-lagged panel models and chain mediation analyses with bootstrap procedures were conducted. Results showed that baseline self-efficacy predicted better psychological state at 12 months indirectly through problem-solving resources and social networks assessed at 6 months. The intervention group exhibited more favorable descriptive trajectories in social networks and self-efficacy compared with the comparison group; however, substantial baseline imbalances and the absence of complete group-by-time interaction tests preclude strong causal inference regarding intervention effects. Findings support an integrated self-efficacy and social capital framework and suggest that structured community programs may help strengthen psychosocial resources among older adults in high-density public housing settings, although more rigorous experimental designs are needed to establish causal effects.

Keywords: older adults, self-efficacy, social capital, social networks, psychological state, longitudinal study, Hong Kong

Introduction

Global population aging represents one of the most significant demographic transformations of the twenty-first century, with profound implications for mental health, social welfare, and public health systems. According to the World Health Organization (2021), older adults face substantially elevated risks of depression, anxiety, cognitive decline, and social isolation. These risks arise from multiple interrelated factors, including reduced physical mobility, loss of social roles following retirement, bereavement, and

the cumulative burden of chronic health conditions (Fiske et al., 2009; Prince et al., 2015; Walker et al., 2015). Mental health difficulties in later life not only diminish individual quality of life but also increase healthcare utilization and are associated with higher mortality (Walker et al., 2015). Loneliness and social isolation function as critical mechanisms that can accelerate cognitive decline and elevate cardiovascular risk, thereby contributing to the overall disease burden (Villalonga-Olives et al., 2023).

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Hong Kong exemplifies these challenges in a high-density urban context. The proportion of residents aged 65 and above is projected to rise from approximately 20.5% in 2021 to 36% by 2046, with the absolute number of older adults increasing from 1.45 million to 2.74 million (Census and Statistics Department, 2023). This rapid demographic shift is accompanied by significant changes in family structure. Large-scale emigration of adult children and low fertility rates have produced a growing number of empty-nest and solo-living households, weakening traditional familial support systems (Chou & Chi, 2001). Within this broader context, older adults residing in public housing estates constitute a particularly vulnerable subgroup. Public housing concentrates lower-income older adults who often experience economic constraints, high residential density, and reduced opportunities for meaningful social interaction. These structural conditions heighten the risk of social isolation and psychological distress (Wong et al., 2008; Chi & Chou, 2000).

Prosocial engagement, particularly volunteering and structured community participation, has been widely advocated as a strategy for promoting active and healthy aging. Empirical evidence indicates that volunteering is associated with better psychological well-being, reduced depressive symptoms, and enhanced social connectedness among older adults (Morrow-Howell et al., 2003; Anderson et al., 2014; Jenkinson et al., 2013). However, the mechanisms underlying these associations remain incompletely specified. Self-efficacy theory (Bandura, 1997) proposes that individuals' beliefs in their capabilities to organize and execute actions influence motivation, persistence, and emotional regulation. Social capital theory (Bourdieu, 1986; Lin, 2001) emphasizes the resources embedded in durable social relationships that can be mobilized for instrumental or emotional support. An integrated perspective suggests that higher self-efficacy may enable older adults to initiate and sustain social interactions, thereby accumulating social networks and mobilizable resources, which in turn support better psychological

state. Yet longitudinal tests of this integrated pathway among older adults in high-density public housing remain scarce.

The present study addresses this gap by examining the longitudinal associations among general self-efficacy, social capital, social networks, and psychological state among older adults living in Hong Kong public housing estates. Using three waves of data collected over 12 months and an embedded structured community intervention, the study tests whether baseline self-efficacy predicts subsequent psychological state indirectly through social networks and social capital resources. It further explores whether participation in a structured community intervention is associated with more favorable trajectories in these psychosocial variables. By focusing on a high-risk urban population and employing a longitudinal mediation framework, the study aims to advance both theoretical understanding and practical guidance for community-based mental health promotion in later life.

Literature Review

Psychological Adaptation and Distress in Later Life

Psychological distress is relatively prevalent among older adults and is strongly associated with socioeconomic disadvantage, social isolation, and physical morbidity. Wong et al. (2008) found that lower socioeconomic status predicted depression among older adults in Hong Kong, with part of the association explained by psychosocial factors and physical health. Similarly, Chi and Chou (2000) demonstrated that financial strain was common and longitudinally associated with depressive symptoms among Hong Kong Chinese older adults. Social isolation further exacerbates these risks. Taylor et al. (2018) showed that social isolation is a robust predictor of depression and psychological distress in later life. In the Hong Kong context, smaller household size and older housing stock—characteristics typical of public housing estates—have been linked to higher psychological distress (Wong et al., 2016). Recent local data

indicate that nearly 40% of older adults living alone or with a spouse only reported having no friends with whom they could discuss private matters or seek help (Hong Kong Council of Social Service, 2023). These findings collectively identify public housing older adults as a high-risk group whose psychological adaptation is shaped by intersecting structural and psychosocial vulnerabilities.

Self-Efficacy as a Psychological Resource

General self-efficacy refers to individuals' beliefs in their ability to cope with a wide range of challenging situations (Schwarzer & Jerusalem, 1995). Unlike domain-specific self-efficacy, general self-efficacy reflects a relatively stable sense of personal agency that influences goal setting, effort expenditure, and emotional responses across contexts (Bandura, 1997). Higher self-efficacy has been consistently associated with better psychological adaptation, greater engagement in health-promoting behaviors, and higher life satisfaction among older adults (Remm et al., 2023). Importantly, self-efficacy is malleable. Bandura (1997) identified four primary sources: mastery experiences, vicarious experiences, social persuasion, and physiological and affective states. Structured community participation and volunteering can supply these sources by offering opportunities for successful task completion, observation of peers, positive feedback from others, and reduced anxiety through social engagement. Consequently, interventions that facilitate mastery and social support may enhance self-efficacy, which in turn may promote more adaptive social and emotional functioning. Supporting this view, Man (2026) found in a three-wave longitudinal study of Hong Kong community-dwelling older adults that self-efficacy mediated the association between prosocial behavior and subsequent psychological adaptation, suggesting that participation may strengthen personal agency, which then contributes to better mental health outcomes.

Social Capital and Social Networks

Social capital has been conceptualized in

multiple ways. Bourdieu (1986) defined it as the aggregate of actual or potential resources linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition. Lin (2001) similarly emphasized resources embedded in social structures that can be accessed and mobilized through purposive actions. Social networks, by contrast, primarily describe the structure and size of relationships (e.g., number of family members or friends with whom one maintains contact). While social networks indicate the availability of potential ties, social capital reflects the resources that can actually be obtained through those ties (Van der Gaag & Snijders, 2005). Both constructs have been linked to better mental health among older adults. Lu et al. (2016) found that neighborhood social capital compensated for weak family support among Hong Kong older adults. Tong et al. (2025) reported that social capital mediated the association between social participation and psychological distress among rural older adults with hypertension. Problem-solving resources—practical assistance available during emergencies—appear especially relevant for older adults facing health or financial shocks. Distinguishing between network structure and mobilizable resources is therefore critical for understanding how social relationships support psychological adaptation.

Prosocial Engagement, Volunteering, and Psychological Outcomes

A substantial body of evidence indicates that volunteering and other forms of prosocial engagement are associated with better psychological well-being, reduced depressive symptoms, and enhanced social connectedness among older adults (Morrow-Howell et al., 2003; Anderson et al., 2014; Jenkinson et al., 2013). Volunteering is thought to operate through multiple pathways, including increased social interaction, role identity, skill utilization, and a sense of contribution. Recent longitudinal work in Hong Kong has provided further support for these associations. Man, Chan, and Chen (2026) reported that volunteering participation was

longitudinally associated with better psychological adaptation among community-dwelling older adults, with changes in social networks and social engagement accompanying improvements in well-being. In addition, Man and Chan (2026) found in a randomized controlled trial that a structured volunteering intervention significantly improved psychological adaptation relative to a control condition, and that increases in self-efficacy partially accounted for the intervention effect. These findings suggest that organized community-based volunteering programs can produce measurable benefits, although the strength of effects may vary according to the intensity, structure, and contextual fit of the intervention.

Integrating Self-Efficacy and Social Capital

An integrated framework posits that self-efficacy and social capital operate as complementary resources. Self-efficacy represents an intrapersonal belief that motivates individuals to initiate and sustain social actions, whereas social capital represents the external resources that become available through those actions. Higher self-efficacy may lead older adults to seek help more readily, participate in community activities, and maintain reciprocal relationships, thereby accumulating both social networks and specific forms of social capital. These social resources, in turn, provide instrumental and emotional support that buffers stress and supports better psychological state. Although cross-sectional studies have documented associations among these variables, longitudinal tests that establish temporal ordering and examine mediation pathways among older adults in resource-constrained urban environments remain limited. The present study addresses this gap by testing a longitudinal mediation model in which baseline self-efficacy predicts psychological state at 12 months indirectly through social networks and social capital resources measured at 6 months. The recent Hong Kong studies by Man and colleagues (Man, 2026; Man, Chan, & Chen, 2026; Man & Chan, 2026) provide preliminary evidence consistent with this integrated perspective,

but they were conducted primarily in general community settings rather than among older adults residing in public housing estates, where structural constraints on social resources may be more pronounced.

Method

Design and Participants

The study employed a three-wave longitudinal design with an embedded structured community intervention. Participants were community-dwelling older adults aged 60 years or above who resided in public housing estates in Hong Kong. Inclusion criteria required the ability to communicate in Cantonese or Mandarin, basic cognitive capacity to understand questionnaire items, and provision of written informed consent. Exclusion criteria included moderate-to-severe cognitive impairment or severe psychiatric illness that precluded valid participation, plans to relocate within the study period, or withdrawal of consent. Recruitment was conducted through convenience and purposive sampling via estate offices, community centers, and non-governmental organizations. A total of 1,218 older adults completed the baseline assessment (T1). After baseline, 201 participants were assigned to the intervention group and 1,017 to the comparison group. Demographic and economic characteristics of the two groups are shown in Table 1. Follow-up assessments occurred at approximately 6 months (T2) and 12 months (T3). Although study records described the assignment as random, complete documentation of random sequence generation and allocation concealment was not available; therefore, the design is not characterized as a standard randomized controlled trial.

Intervention

The intervention lasted approximately six months and comprised three components: (1) active involvement of caregivers in providing emotional support and practical assistance, (2) facilitation of community activities and interpersonal interaction, and (3) cultivation of social responsibility through

opportunities for community contribution. The comparison group received usual community services without additional structured programming related to the study.

Measures

General self-efficacy was measured with the 10-item General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), using a validated Chinese version (Zhang & Schwarzer, 1995). Items were rated on a 4-point scale; higher scores indicate stronger self-efficacy. Social networks were assessed with the 6-item Lubben Social Network Scale (LSNS-6; Lubben et al., 2006), which captures the number of family members and friends with whom respondents maintain contact, discuss private matters, and can call upon for help. Social capital was measured with the Resource Generator (Van der Gaag & Snijders, 2005), which assesses access to four types of resources: everyday resources, expert advice, skills, and problem-solving resources. Psychological state was measured with the 10-item Kessler Psychological Distress Scale (K10; Kessler et al., 2002). In the present study, K10 scores were reverse-coded so that higher scores indicated lower psychological distress and relatively better psychological state. All instruments demonstrated acceptable to excellent internal consistency across waves and groups (Cronbach's α generally $\geq .70$, with most values exceeding .80).

Statistical Analysis

Baseline associations were examined using hierarchical multiple regression. Longitudinal analyses included cross-lagged panel models (CLPM) to assess predictive associations across waves, parallel and sequential mediation analyses using 5,000–10,000 bootstrap resamples to estimate indirect effects, and moderated mediation analyses. Within-group paired *t*-tests were used solely to describe change within each group. Formal evaluation of intervention effects requires group-by-time interaction tests or appropriate longitudinal models. CLPM paths are interpreted as

predictive associations rather than definitive causal effects. Sequential mediation paths in which both mediators were measured at the same wave are treated as sequential statistical associations rather than strict temporal causal chains. All analyses were conducted using SPSS, AMOS, and R, with statistical significance set at $p < .05$.

Result

Baseline Associations

At baseline, a model containing demographic and economic variables (age, marital status, education, living arrangement, property ownership, investments, assets, liabilities, and monthly expenditure) explained negligible variance in psychological state ($R^2 = .004$, $p = .828$). In contrast, a model that included general self-efficacy, social networks, and the four social capital dimensions explained 48.6% of the variance ($F(6, 1211) = 190.463$, $p < .001$). Self-efficacy ($\beta = .226$, $p < .001$) and all four social capital dimensions were significantly and positively associated with better psychological state. Problem-solving resources showed the strongest coefficient ($\beta = .266$, $p < .001$), followed by expert advice resources ($\beta = .182$, $p < .001$). Social networks did not retain a significant independent association after controlling for the other variables ($\beta = -.051$, $p = .183$).

Longitudinal Trajectories

Table 2 presents the means and standard deviations of the core variables for the intervention and comparison groups across the three waves. At baseline (T1), the two groups already differed on several variables. The intervention group reported lower social networks ($M = 11.97$, $SD = 3.23$) than the comparison group ($M = 20.79$, $SD = 5.31$). Self-efficacy was also lower in the intervention group ($M = 25.05$, $SD = 4.58$) than in the comparison group ($M = 27.22$, $SD = 5.86$). Psychological state scores were comparable at T1 (intervention: $M = 29.36$, $SD = 6.98$; comparison: $M = 30.35$, $SD = 7.16$).

Over the subsequent waves, the two groups

showed divergent trajectories. In the intervention group, social networks increased substantially from T1 ($M = 11.97$) to T2 ($M = 18.45$) and further to T3 ($M = 22.13$). Self-efficacy also increased from T1 ($M = 25.05$) to T2 ($M = 27.97$) and T3 ($M = 29.03$). Psychological state improved from T1 ($M = 29.36$) to T2 ($M = 36.34$) and remained elevated at T3 ($M = 36.95$). Expert advice resources and domestic resources similarly showed upward trends in the intervention group.

In contrast, the comparison group exhibited declines on several key variables. Social networks decreased from T1 ($M = 20.79$) to T2 ($M = 17.47$) and further to T3 ($M = 13.82$). Self-efficacy declined from T1 ($M = 27.22$) to T2 ($M = 25.12$) and T3 ($M = 22.16$). Psychological state remained relatively stable but showed a slight downward trend by T3 ($M = 30.78$). Expert advice resources also declined over time in the comparison group.

These descriptive trajectories indicate that the intervention group moved in a favorable direction on social networks, self-efficacy, and psychological state, while the comparison group moved in the opposite direction on social networks and self-efficacy. However, because the groups differed at baseline—particularly on social networks and self-efficacy—between-group differences at T2 and T3 cannot be attributed solely to the intervention. Formal evaluation of differential change requires group-by-time interaction tests. Until such tests are reported, the results show that the intervention group followed a more favorable trajectory on the primary psychosocial variables.

Cross-Lagged Associations

A cross-lagged panel model (CLPM) was estimated for the intervention group ($n = 201$) to examine the temporal relationships between self-efficacy and psychological state across the three waves. The model demonstrated acceptable fit, $\chi^2(6) = 12.535$, $p = .051$, CFI = .995, TLI = .987, RMSEA = .074.

As Table 3 shown, autoregressive paths were strong and significant for both variables.

Self-efficacy showed high stability from T1 to T2 ($\beta = .640$, $SE = .056$, $p < .001$) and even higher stability from T2 to T3 ($\beta = .901$, $SE = .030$, $p < .001$). Psychological state also demonstrated strong stability from T1 to T2 ($\beta = .786$, $SE = .043$, $p < .001$) and from T2 to T3 ($\beta = .940$, $SE = .022$, $p < .001$).

Cross-lagged paths revealed bidirectional associations between T1 and T2. Baseline self-efficacy positively predicted psychological state at T2 ($\beta = .168$, $SE = .066$, $p < .001$). Simultaneously, baseline psychological state positively predicted self-efficacy at T2 ($\beta = .272$, $SE = .036$, $p < .001$). However, neither cross-lagged path remained significant between T2 and T3. The path from T2 self-efficacy to T3 psychological state was non-significant ($\beta = .021$, $SE = .033$, $p = .424$), as was the path from T2 psychological state to T3 self-efficacy ($\beta = -.025$, $SE = .021$, $p = .529$).

These results indicate that self-efficacy and psychological state were reciprocally related between the first two waves in the intervention group, but the cross-lagged associations disappeared in the later period while autoregressive stability strengthened. In the comparison group, self-efficacy consistently and positively predicted subsequent psychological state across the three waves, with relatively stable cross-lagged associations. The contrasting patterns suggest that the intervention may have altered the temporal dynamics between self-efficacy and psychological state, although causal attribution remains limited by baseline imbalances and the design.

Mediation Results

A chain mediation analysis was conducted to examine the sequential pathway from baseline self-efficacy (T1) to psychological state at 12 months (T3) through problem-solving resources and social networks measured at 6 months (T2). Gender, age, marital status, and education were controlled. Indirect effects were estimated using bias-corrected bootstrap procedures with 5,000 resamples.

As shown in Table 4, the total effect of T1 self-efficacy on T3 psychological state was

significant ($\beta = .486, p < .001$). After including the mediators, the direct effect became non-significant ($\beta = .096, p = .136$), indicating that the association was fully mediated in the current model. The total indirect effect was significant (0.391, 95% bootstrap CI [0.290, 0.495]).

Path coefficients clarified the proposed sequence. T1 self-efficacy positively predicted T2 problem-solving resources ($\beta = .478, p < .001$). T2 problem-solving resources positively predicted T2 social networks ($\beta = .405, p < .001$). Both T2 problem-solving resources ($\beta = .171, p = .009$) and T2 social networks ($\beta = .535, p < .001$) positively predicted T3 psychological state. These results indicate that higher baseline self-efficacy was associated with greater problem-solving resources at 6 months, which were linked to larger social networks, which in turn predicted better psychological state at 12 months. Because both mediators were assessed at the same wave, the chain path is interpreted as a sequential statistical association rather than a fully ordered temporal causal process.

Discussion

The present study examined the longitudinal associations among self-efficacy, social capital, social networks, and psychological state among older adults in Hong Kong public housing estates, with a focus on a structured community intervention. The findings offer partial support for an integrated framework in which self-efficacy and social resources jointly relate to psychological adaptation, while also highlighting important limitations in the evidence for intervention effects.

Baseline Associations and the Relative Importance of Psychosocial Resources

At baseline, demographic and economic variables explained virtually no variance in psychological state ($R^2 = .004$). In contrast, self-efficacy and the four social capital dimensions together accounted for 48.6% of the variance. Problem-solving resources showed the strongest association, followed by expert advice resources and

self-efficacy. Social networks did not retain an independent association once social capital dimensions were controlled. These results are consistent with previous work showing that psychosocial resources, rather than objective socioeconomic indicators alone, are more closely linked to psychological outcomes among older adults in resource-constrained settings (Chi & Chou, 2000; Wong et al., 2008). The particularly strong association of problem-solving resources suggests that the availability of practical support during emergencies may be especially salient for older adults living in public housing, who often face overlapping health and financial vulnerabilities.

Trajectories and the Limits of Causal Inference

Descriptive trajectories indicated that the intervention group showed increases in social networks, self-efficacy, and psychological state over the three waves, whereas the comparison group showed declines in social networks and self-efficacy. However, the groups already differed substantially at baseline, particularly on social networks and self-efficacy. Because of these imbalances, and because formal group-by-time interaction tests were not fully reported, the divergent trajectories cannot be confidently attributed to the intervention. The most defensible interpretation is that the intervention group followed a more favorable pattern of change, while the comparison group followed a less favorable pattern. This pattern is compatible with the possibility that structured community engagement may support the maintenance or enhancement of psychosocial resources, but stronger causal claims require more rigorous evaluation of differential change.

Temporal Dynamics between Self-Efficacy and Psychological State

The cross-lagged panel model in the intervention group revealed reciprocal associations between self-efficacy and psychological state from T1 to T2, but these cross-lagged paths became non-significant from T2 to T3, while autoregressive

stability increased. In the comparison group, self-efficacy consistently predicted subsequent psychological state across waves. One possible reading is that the intervention period was associated with a shift in the temporal dynamics of these variables, such that early reciprocal influences gave way to greater stability later. However, this interpretation remains tentative. Baseline differences and the absence of a fully reported multi-group CLPM limit the strength of any conclusion that the intervention altered the causal structure between self-efficacy and psychological state.

Chain Mediation and the Role of Social Resources

The chain mediation results provide the clearest support for the proposed mechanism. Baseline self-efficacy predicted psychological state at 12 months indirectly through problem-solving resources and social networks at 6 months. The full sequential path was significant, and the direct effect became non-significant after the mediators were included. These findings are consistent with an integrated view in which self-efficacy facilitates the accumulation of practical social resources, which in turn support the expansion or maintenance of social networks, ultimately relating to better psychological state. The results align with earlier longitudinal evidence from Hong Kong community-dwelling older adults showing that self-efficacy and social engagement are linked to psychological adaptation (Man, 2026; Man, Chan, & Chen, 2026). They also extend this work by focusing on older adults in public housing and by identifying problem-solving resources as a specific form of social capital that appears relevant in this context.

Limitations

Several limitations should be noted. First, substantial baseline imbalances between the intervention and comparison groups preclude strong causal inferences about intervention effects. Second, both mediators in the chain model were measured at the same wave, so the sequential path cannot be interpreted as a fully ordered temporal causal chain.

Third, the study relied on self-report measures, which may be subject to common method variance. Fourth, the sample was drawn from public housing estates in Hong Kong, which limits generalizability to other older adult populations. Finally, although the intervention group showed more favorable descriptive trajectories, the absence of complete group-by-time interaction tests means that differential change has not been rigorously established.

Implications

Despite these limitations, the findings suggest that self-efficacy and certain forms of social capital—particularly problem-solving resources—are meaningfully associated with psychological state among older adults in public housing. The chain mediation results indicate that interventions aiming to strengthen older adults' sense of personal agency may be more effective if they also create opportunities for the accumulation of practical social resources and the expansion of social networks. For practitioners working with older adults in high-density public housing settings, these results underscore the potential value of structured community programs that simultaneously support self-efficacy and social connectedness, while also highlighting the need for more rigorous evaluation designs in future research.

Conclusion

This three-wave longitudinal study demonstrates that general self-efficacy is longitudinally associated with better psychological state among older adults in Hong Kong public housing estates, partly through social networks and problem-solving resources. A structured community intervention emphasizing caregiver involvement, social activities, and opportunities for contribution was associated with more favorable trajectories in key psychosocial resources, although causal effects require further confirmation with appropriate analytic models. The findings support an integrated self-efficacy and social capital perspective and

suggest that community services for older adults in high-density public housing should focus on strengthening both personal agency and access to practical social resources. Future research employing stricter experimental designs, additional measurement waves, and a broader range of positive psychological indicators is warranted to further clarify these mechanisms and to guide the development of effective, context-sensitive interventions.

Conflict of Interest

The author(s) declare that there is no conflicts of interest to this work.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author, upon reasonable request.

Ethical Approval Statements

Ethical approvals for the studies was obtained from the Ethics Committee of the South China Normal University previously (Approvals Number: SCNU-SS-2025-017).

Consent to Publish Statements

All participants involved in these studies have agreed for their anonymized data and information to be published.

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Appendix**Table 1** Demographic and Economic Characteristics of the Intervention and Comparison Groups

Characteristic	Intervention	Comparison
	<i>n</i> =201 (%)	<i>n</i> =1,017 (%)
Gender		
Male	76 (37.81)	379 (37.27)
Female	125 (62.19)	638 (62.73)
Age (years)		
60–65	37 (18.41)	198 (19.47)
66–70	66 (32.84)	371 (36.48)
71–75	67 (33.33)	381 (37.46)
76–80	18 (8.96)	40 (3.93)
≥81	13 (6.47)	27 (2.65)
Marital status		
Never married	1 (0.50)	12 (1.18)
Married	153 (76.12)	797 (78.37)
Widowed	42 (20.90)	198 (19.47)
Divorced	5 (2.49)	10 (0.98)
Education		
No formal education	39 (19.40)	185 (18.19)
Primary school	87 (43.28)	468 (46.02)
Junior secondary	33 (16.42)	179 (17.60)
Senior secondary / vocational	31 (15.42)	98 (9.64)
Tertiary or above	11 (5.47)	87 (8.55)
Living arrangement		
Living alone	19 (9.45)	79 (7.77)
With spouse only	96 (47.76)	513 (50.44)
With spouse and family	57 (28.36)	284 (27.93)
With other family members	29 (14.43)	141 (13.86)
Property ownership		
Yes	87 (43.28)	337 (33.14)
No	114 (56.72)	680 (66.86)
Investment assets		
Yes	79 (39.30)	59 (5.80)
No	122 (60.70)	958 (94.20)
Total assets (HKD)		
< 250,000	130 (64.68)	672 (66.08)
250,000–500,000	53 (26.37)	274 (26.94)
500,000–750,000	15 (7.46)	53 (5.21)
750,000–1,000,000	3 (1.49)	16 (1.57)
≥ 1,000,000	0 (0.00)	2 (0.20)
Total liabilities (HKD)		
< 500,000	99 (49.25)	828 (81.42)
500,000–1,000,000	96 (47.76)	159 (15.63)
1,000,000–5,000,000	5 (2.49)	27 (2.65)
5,000,000–10,000,000	1 (0.50)	3 (0.29)
≥ 10,000,000	0 (0.00)	0 (0.00)
Monthly expenditure (HKD)		
< 5,000	92 (45.77)	727 (71.48)
5,000–10,000	102 (50.75)	260 (25.57)
10,000–50,000	7 (3.48)	30 (2.95)
≥ 50,000	0 (0.00)	0 (0.00)

Table 2 Means and Standard Deviations of Core Variables for the Intervention and Comparison Groups Across Three Waves

Variables	Mean (<i>SD</i>)					
	Intervention Group (<i>n</i> =201)			Comparison Group (<i>n</i> =1017)		
	T1	T2	T3	T1	T2	T3
Social networks (LSNS)	11.970 (3.228)	18.453 (5.070)	22.129 (4.472)	20.793 (5.311)	17.468 (6.617)	13.821 (5.047)
Domestic resources	12.522 (2.667)	14.881 (1.475)	13.960 (1.772)	13.630 (3.160)	13.998 (2.008)	13.807 (1.947)
Expert advice	7.189 (1.501)	9.373 (1.821)	10.667 (1.354)	8.094 (2.155)	8.639 (1.223)	8.303 (1.800)
Personal skills	9.398 (1.950)	9.950 (1.652)	10.154 (1.404)	10.476 (2.211)	10.107 (1.481)	11.588 (1.018)
Problem-solving resources	8.060 (1.731)	8.045 (1.644)	8.706 (1.153)	8.921 (1.896)	7.213 (1.465)	8.677 (1.734)
Self-efficacy (GSE)	25.050 (4.577)	27.970 (5.361)	29.030 (4.146)	27.216 (5.862)	25.115 (5.280)	22.162 (5.298)
Psychological state (K10)	29.363 (6.978)	36.343 (7.832)	36.946 (6.722)	30.352 (7.158)	30.324 (7.224)	30.784 (5.914)

Table 3 Cross-Lagged Panel Model Results for Self-Efficacy and Psychological State in the Intervention Group ($n = 201$)

Path	Critical Ratio	Standardized Coefficient	SE	<i>p</i>
Autoregressive paths				
T1 Self-efficacy → T2 Self-efficacy	.640	.056	13.509	<.001
T2 Self-efficacy → T3 Self-efficacy	.901	.030	23.068	<.001
T1 Psychological state → T2 Psychological state	.786	.043	20.428	<.001
T2 Psychological state → T3 Psychological state	.940	.022	36.012	<.001
Cross-lagged paths				
T1 Self-efficacy → T2 Psychological state	.168	.066	4.366	<.001
T1 Psychological state → T2 Self-efficacy	.272	.036	5.739	<.001
T2 Self-efficacy → T3 Psychological state	.021	.033	0.799	.424
T2 Psychological state → T3 Self-efficacy	-.025	.021	-0.630	.529

Note. Model fit: $\chi^2(6) = 12.535$, $p = .051$; CFI = .995; TLI = .987; RMSEA = .074. Higher psychological state scores indicate better psychological state (lower distress).

Table 4 Chain Mediation Results: Self-Efficacy → Problem-solving resources → Social Networks → Psychological State

	T2 Problem-solving resources	T2 Social networks	T3 Psychological state	T3 Psychological state
Constant	-0.959* (-2.163)	0.618 (1.639)	0.230 (0.514)	0.271 (0.733)
Gender	0.261* (2.039)	0.049 (0.452)	-0.013 (-0.099)	-0.140 (-1.325)
Age	-0.038 (-0.594)	-0.096 (-1.770)	-0.098 (-1.522)	-0.032 (-0.612)
Marital status	0.223 (1.569)	-0.151 (-1.259)	0.022 (0.154)	0.016 (0.141)
Education	0.080 (1.320)	-0.043 (-0.837)	-0.006 (-0.091)	-0.014 (-0.274)
T1 Self-efficacy	0.478** (7.695)	0.384** (6.448)	0.486** (7.780)	0.096 (1.495)
T2 Problem-solving resources		0.405** (6.727)		0.171** (2.631)
T2 Social networks				0.535** (7.655)
R^2	0.254	0.476	0.244	0.506
Adjusted R^2	0.235	0.460	0.224	0.488
F values	$F(5,195)=13.273$, $p=0.000$	$F(6,194)=29.384$, $p=0.000$	$F(5,195)=12.558$, $p=0.000$	$F(7,193)=28.221$, $p=0.000$

* $p<0.05$ ** $p<0.01$