Results

Participant Flow
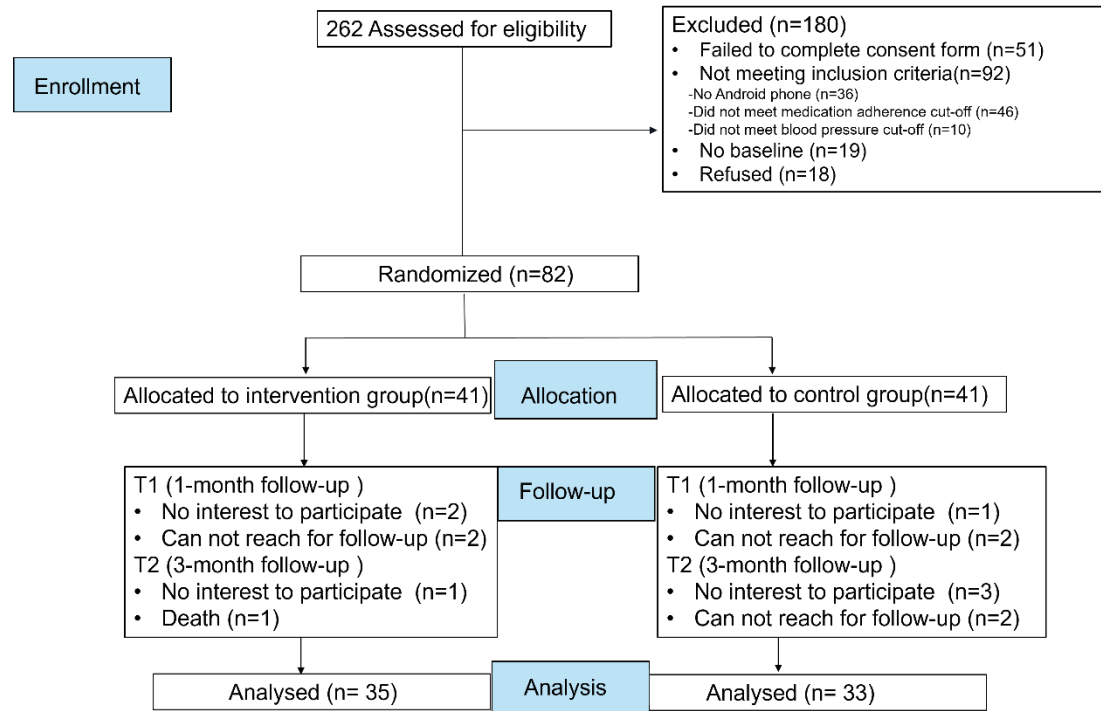
The study flowchart is shown in Figure 1.

Figure 1 Participant flowchart throughout the intervention study according to CONSORT flow diagram

Baseline Characteristics

Table 1 displays the baseline characteristics of the participants in the study. The mean age (SD), was 72.40 (5.53) years for the intervention group and 72.76 (6.36) years for the control group.

No significant differences were evident in the intervention and control groups' demographic characteristics, BP, medication adherence, BMQ score, and health literacy.

Table 1   Sociodemographic characteristics between two groups

Characteristics	Control group (n=33) n (%)	Intervention group (n=35) n (%)	χ2/t	*p*-value
Age	72.76±6.36*	72.40±5.53*	-0.248	0.373 [a]
Gender				
Male	17(51.5%)	25(71.4%)	2.852	0.091 [b]
Female	16(48.5%)	10(28.6%)		
Marital status				
Married	26(78.8%)	25(71.4%)	1.962	0.375 [b]
Unmarried	1(3.0%)	0(0%)		
Divorced or widowed	6(18.2%)	10(28.6%)		
Education				
Primary school and below	17(51.5%)	14(40.0%)	-	0.756 [c]
Junior school	7(21.2%)	11(31.4%)		
Senior Secondary Junior college	7(21.2%)	8(22.9%)		
Bachelor degree or above	2(6.1%)	2(5.7%)		
Duration of disease (Month)	52.03±48.52*	49.77±43.08*	-0.203	0.470 [a]
Living arrangements				
Living alone	4(12.1%)	5(14.3%)	2.245	0.523 [b]
Living with others	29(87.9%)	30(85.7%)		
Membership in ethnic groups				
Han ethnicity	28(84.8%)	30(88.2%)	-	0.684 [c]
Others	5(15.2%)	4(11.8%)		
Per-capita monthly household income (¥)			4.069	0.254 [b]
≤1000	13(39.4%)	7(20.0%)		
1001～3000	15(45.5%)	22(62.9%)		
3001-4999	5(15.2%)	5(14.3%)		
≥5000	0(0.0%)	1(2.9%)		

Table 1 Continued

Characteristics	Control group (N=33) n (%)	Intervention group (N=35) n (%)	χ2	p-value
Residence			0.929	0.629 [b]
Rural areas	10(30.3%)	13(37.1%)		
City	12(36.4%)	9(25.7%)		
Town and county	11(33.3%)	13(37.1%)		
Occupation status			1.029	0.598 [b]
Employed	3(9.1%)	3(8.6%)		
Retired	6(18.2%)	10(28.6%)		
Unemployed	24(72.7%)	22(62.9%)		
Insurance type			1.757	0.415 [b]
Medical insurance for urban residents	7(21.2%)	9(25.7%)		
Rural cooperative medical insurance	21(63.6%)	17(48.6%)		
Urban employee basic medical insurance	5(15.2%)	9(25.7%)		
Comorbidity			-	0.310 [c]
No	5(15.2%)	2(5.7%)		
Yes	28(84.8%)	33(94.3%)		
Total prescription medications per day	4.45±1.42*	4.31±1.81*	-0.354	0.076 [a]
Frequency of daily doses of medications	2.00±0.94*	1.83±0.82*	-0.804	0.470 [a]
Stroke subtype			0.652	0.419 [b]
Ischemic stroke	28(84.8%)	27(77.1%)		
Hemorrhagic stroke	5(15.2%)	8(22.9%)		
Medication adherence score	16.97±4.54*	17.89±3.89*	0.896	0.142 [a]
SBP	150.61±11.44*	151.34±13.31*	-0.244	0.434 [a]
DBP	88.27±7.20*	89.86±9.58*	0.767	0.139 [a]
Health literacy score	60.97±8.96*	60.69±7.88*	-0.139	0.367 [a]
BMQ Necessity score	15.58±3.36*	15.17±3.91*	-0.456	0.250 [a]
BMQ Concern score	15.33±3.27*	14.29±3.59*	-1.257	0.384 [a]

[a] Independent T-test
[b] Chi-square test
[c] Fisher Exact test
*Mean SD

Primary Outcomes

The primary outcomes, including medication adherence and blood pressure, are presented in Table 2, Table 3 and Table 4.

Table 2 Comparison of medication adherence between the intervention and control groups

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline) [c]	Month 1 Adjusted Mean (95% CI) [a]	ES (month 1) [b]	Change from Baseline to Month 1 [b]	p value[d]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3)	Change from Baseline to Month 3 [b]	p value[d]
Intervention group	17.92 (16.42,19.42)	+0.218	19.87 (18.30,21.45)	+0.77	-1.95 (-3.85,-0.06)	0.043	21.93 (20.70,23.15)	+1.75	-4.01 (-5.63,-2.38)	<0.001
Control group	16.94 (15.39,18.49)		16.68 (15.06,18.31)		0.25 (-1.70,2.21)	0.796	15.68 (14.42,16.95)		1.25 (-0.42,2.93)	0.140

Note. [a] RM ANCOVA group-time interaction analysis was applied followed by a pairwise comparison with confidence interval adjustment.
[b] RM ANCOVA within-group analysis was applied, followed by a pairwise comparison with confidence interval adjustment.
[c] Standardised ES statistic based on Cohen's (d) value.
[d] p-value from within-group analysis of RM ANCOVA
 Covariates (age, educational level, total prescription medications per day, health literacy score, BMQ specific-necessity score, BMQ specific-concerns score , per capita monthly household income, insurance type, and duration of disease) were controlled using RM ANCOVA.
Within-group: $F_{(2,109)} =0.93$, $p=0.397$
Group-time interaction: $F_{(2,109)} =8.86$, $p <0.001$

Table 3 Comparison of SBP between the intervention and control groups

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline)[c]	Month 1 Adjusted Mean (95% CI) [a]	ES (month 1) [c]	Change from Baseline to Month 1 [b]	p value[d]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3)	Change from Baseline to Month 3 [b]	p value[d]
Intervention group	151.43 (147.07,155.79)	+0.059	148.49 (145.11,151.87)	-0.26	2.94 (0.67,5.20))	0.012	143.59 (141.20,145.99)	-1.067	7.84 (4.55,11.12)	<0.001
Control group	150.52 (146.03,155.01)		150.42 (146.94,153.90)		0.10 (-2.24,2.43)	0.933	150.31 (147.85,152.78)		0.20 (-3.19,3.59)	0.905

Note. [a] RM ANCOVA group-time interaction analysis was applied, followed by a pairwise comparison with confidence interval adjustment.
[b] RM ANCOVA within-group analysis was applied, followed by a pairwise comparison with confidence interval adjustment.
[c] Standardised ES statistic based on Cohen's (d) value.
 [d] p-value from within-group analysis of RM ANCOVA
Covariates (age, gender, per capita monthly household income) were controlled using RM ANCOVA.
Within-group: $F_{(2,62)} =0.451$, $p=0.639$
Group-time interaction: $F_{(2,62)} =5.140$, $p=0.009$

Table 4 Comparison of DBP between the intervention and control groups

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline) [c]	Month 1 Adjusted Mean (95% CI) [a]	ES (month 1) [c]	Change from Baseline to Month 1 [b]	p value[d]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3) [c]	Change from Baseline to Month 3 [b]	p value[d]
Intervention group	90.25 (87.33,93.17)	+0.188	89.70 (87.47,91.93)	+0.333	0.55 (-1.46,2.56)	0.585	89.55 (87.33,91.77)	+0.387	0.70 (-1.67,3.06)	0.557
Control group	87.86 (84.85,90.87)		86.65 (84.35,88.96)		1.20 (-0.86,3.27)	0.249	86.08 (83.80,88.37)		1.77 (-0.66,4.21)	0.151

Note. [a] RM ANCOVA group-time interaction analysis was applied followed by a pairwise comparison with confidence interval adjustment.

[b] RM ANCOVA within-group analysis was applied followed by a pairwise comparison with confidence interval adjustment.

[c] Standardised ES statistic based on Cohen's (d) value.

[d] p-value from within-group analysis of RM ANCOVA

Covariates (age, gender, per capita monthly household income) were controlled using RM ANCOVA.

Within-group: F (2,62) =0.090, p = 0.914

Group-time interaction: F (2,62) =0.249, p= 0.780

1   **Secondary Outcomes**

2   The secondary outcomes consisting of medicine beliefs and health literacy were demonstrated in Table 5, Table 6 and Table 7.

3   **Table 5 Comparison of BMQ necessity score between the intervention and control groups**
4

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline) [c]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3) [c]	Change from Baseline to Month 3 [b]	p value[d]
Intervention group	15.24 (13.96,16.52)	-0.109	19.88 (18.74,21.03)	+1.4	-4.65 (-6.59, -2.71)	<0.001
Control group	15.50 (14.19,16.82)		15.49 (14.31,16.67)		0.02 (-1.98,2.02)	0.986

5   **Note.** [a] RM ANCOVA group-time interaction analysis was applied, followed by a pairwise comparison with confidence interval adjustment.
6   [b] RM ANCOVA within-group analysis was applied, followed by a pairwise comparison with confidence interval adjustment.
7   [c] Standardised ES statistic based on Cohen's (d) value.
8   [d] p-value from within-group analysis of RM ANCOVA
9   Covariates (gender, age, educational level, duration of disease, and total prescription medications per day) were controlled using RM ANCOVA.
10   Within-group: $F_{(1,61)} = 0.007$, $p = 0.932$
11   Group-time interaction: $F_{(1,61)} = 10.954$, $p = 0.002$
12   **Table 6 Comparison of BMQ concern score between the intervention and control groups**
13

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline)[c]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3) [c]	Change from Baseline to Month 3 [b]	p value[d]
Intervention group	14.25 (13.06,15.43)	-0.303	13.81 (12.67,14.94)	-0.454	0.44 (-0.94, 1.82)	0.527
Control group	15.37 (14.15,16.60)		15.33 (14.16,16.50)		0.49 (-1.38,1.47)	0.946

14   **Note.** [a] RM ANCOVA group-time interaction analysis was applied followed by a pairwise comparison with confidence interval adjustment.
15   [b] RM ANCOVA within-group analysis was applied followed by a pairwise comparison with confidence interval adjustment.
16   [c] Standardised ES statistic based on Cohen's (d) value.
17   [d] p-value from within-group analysis of RM ANCOVA
18   Covariates (gender, age, educational level, duration of disease, and total prescription medications per day) were controlled using RM ANCOVA.
19   Within-group: $F_{(1,61)} = 0.367$, $p = 0.547$
20   Group-time interaction: $F_{(1,61)} = 0.152$, $p = 0.698$

Table 7 Comparison of health literacy between the intervention and control groups

Group Comparison	Baseline Adjusted Mean (95% CI) [a]	ES (baseline)[c]	Month 3 Adjusted Mean (95% CI) [a]	ES (month 3) [c]	Change from Baseline to Month 3 [b]	*p* value[d]
Intervention group	60.99 (58.24,63.74)		66.92 (64.73,69.10)		-5.93 (-9.16, -2.69)	0.001
Control group	60.65 (57.81,63.48)	-0.033	61.18 (58.93,63.43)	+0.802	-0.53 (-3.86,2.80)	0.751

Note. [a] RM ANCOVA group-time interaction analysis was applied, followed by a pairwise comparison with confidence interval adjustment.

[b] RM ANCOVA within-group analysis was applied, followed by a pairwise comparison with confidence interval adjustment.

[c] Standardised ES statistic based on Cohen's (d) value.

[d] *p*-value from within-group analysis of RM ANCOVA

Covariates (age, education level, residence, and insurance type) were controlled using RM ANCOVA.

Within-group: $F_{(1,62)} = 1.132$, $p = 0.292$

Group-time interaction: $F_{(1,62)} = 5.316$, $p = 0.024$

1   **Adverse Events**

2   Throughout the study, no adverse events were reported.