Additional file 3 Comparisons between non-participation and participation at Wave2 - Wave4 by predictors at baseline

| N = 6,182 | Wave 2 ( $\mathrm{N}=6,154$ ) |  |  | Wave 3 ( $\mathrm{N}=6,110$ ) |  |  | Wave 4 ( $\mathrm{N}=6,022$ ) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \hline \text { non-Part. } \\ & (\mathrm{n}=\mathbf{1 , 8 8 6}) \end{aligned}$ | $\begin{gathered} \text { Part. } \\ (\mathrm{n}=4,268) \end{gathered}$ | $p$-value | $\begin{aligned} & \text { non-Part. } \\ & (\mathrm{n}=\mathbf{2 , 6 8 6}) \end{aligned}$ | Part. $(\mathrm{n}=3,424)$ | $p$-value | $\begin{aligned} & \text { non-Part. } \\ & (\mathrm{n}=3,615) \end{aligned}$ | $\begin{gathered} \text { Part. } \\ (\mathrm{n}=2,407) \end{gathered}$ | $p$-value |
| Covariates | \%/Mean | \%/Mean |  | \%/Mean | \%/Mean |  | \%/Mean | \%/Mean |  |
| Gender |  |  |  |  |  |  |  |  |  |
| Female | 53.6\% | 55.4\% | 0.188 | 52.6\% | 56.4\% | 0.003 | 53.7\% | 56.3\% | 0.047 |
| Male | 46.4\% | 44.6\% |  | 47.4\% | 43.6\% |  | 46.3\% | 43.7\% |  |
| Age (years) | 54.99 | 52.82 | $<0.001$ | 54.75 | 52.46 | <0.001 | 54.00 | 52.68 | $<0.001$ |
| $30 \sim 64$ | 75.0\% | 82.5\% | $<0.001$ | 75.3\% | 84.1\% | $<0.001$ | 77.8\% | 83.9\% | <0.001 |
| $\geqq 65$ | 25.0\% | 17.5\% |  | 24.7\% | 15.9\% |  | 22.2\% | 16.1\% |  |
| Education (years) | 9.24 | 10.44 | $<0.001$ | 9.61 | 10.48 | $<0.001$ | 9.88 | 10.44 | $<0.001$ |
| No schooling | 13.1\% | 6.4\% | $<0.001$ | 11.4\% | 6.0\% | $<0.001$ | 10.2\% | 5.5\% | <0.001 |
| below Senior HS | 41.1\% | 38.0\% |  | 39.7\% | 38.1\% |  | 38.9\% | 38.5\% |  |
| Senior HS | 27.7\% | 32.1\% |  | 28.5\% | 32.7\% |  | 28.5\% | 34.6\% |  |
| above Senior HS | 18.1\% | 23.5\% |  | 20.5\% | 23.2\% |  | 22.4\% | 21.5\% |  |
| Marital status |  |  |  |  |  |  |  |  |  |
| Living with spouse | 85.7\% | 90.4\% | $<0.001$ | 86.9\% | 90.5\% | $<0.001$ | 87.4\% | 91.0\% | $<0.001$ |
| Single | 14.3\% | 9.6\% |  | 13.1\% | 9.5\% |  | 12.6\% | 9.0\% |  |
| Tobacco smoking (Yes) | 21.6\% | 16.4\% | $<0.001$ | 21.1\% | 15.5\% | $<0.001$ | 19.5\% | 15.6\% | $<0.001$ |
| Betel-nuts chewing (Yes) | 4.7\% | 2.5\% | <0.001 | 4.2\% | 2.4\% | <0.001 | 3.9\% | 2.1\% | <0.001 |
| Psychiatric status (by CHQ-12) | 3.05 | 2.95 | 0.040 | 2.98 | 2.99 | 0.825 | 2.97 | 3.00 | 0.462 |


| Normal | 70.4\% | 75.2\% | <0.001 | 73.3\% | 74.0\% | 0.563 | 73.4\% | 74.3\% | 0.421 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Psychiatric disorder ${ }^{*}$ | 29.6\% | 24.8\% |  | 26.7\% | 26.0\% |  | 26.6\% | 25.7\% |  |
| \# of 15 diseases ${ }^{\dagger}$ | 1.79 | 1.54 | <0.001 | 1.77 | 1.49 | <0.001 | 1.72 | 1.45 | <0.001 |
| \# of 4 Pills taken ${ }^{\text { }}$ | 0.09 | 0.10 | 0.669 | 0.10 | 0.10 | 0.669 | 0.10 | 0.09 | 0.667 |
| Regular exercise status |  |  |  |  |  |  |  |  |  |
| No exercise | 43.1\% | 34.3\% | <0.001 | 41.6\% | 33.3\% | $<0.001$ | 39.5\% | 33.0\% | $<0.001$ |
| Irregular exercise | 37.8\% | 40.9\% |  | 39.3\% | 40.6\% |  | 39.6\% | 40.7\% |  |
| $<150$ minutes | 8.2\% | 11.2\% |  | 8.9\% | 11.5\% |  | 9.0\% | 12.4\% |  |
| 150~299 minutes | 5.0\% | 6.1\% |  | 4.7\% | 6.6\% |  | 5.3\% | 6.4\% |  |
| $\geqq 300$ minutes | 5.8\% | 7.5\% |  | 5.6\% | 8.1\% |  | 6.6\% | 7.6\% |  |
| PCS score | 52.25 | 53.38 | <0.001 | 52.41 | 53.52 | $<0.001$ | 52.69 | 53.56 | <0.001 |
| MCS score | 49.52 | 49.70 | 0.492 | 49.67 | 49.64 | 0.920 | 49.45 | 50.00 | 0.024 |
| Attrition |  |  |  |  |  |  |  |  |  |
| Died |  |  |  |  |  |  |  |  |  |
| Lost to follow-up |  |  |  |  |  |  |  |  |  |

* CHQ-12 score $\geqq 4$
${ }^{\dagger} 15$ self-reported and/or diagnosed chronic diseases, including T2DM, hypertension, hyperlipidemia, kidney disease, cardiac disease, stroke, hepatic disease, gout, osteoporosis, asthma, psychiatric disease, nerve-related disease, intestinal disease, Tuberculosis, and metabolic syndrome
* 4 pills, including refreshing drugs, sleeping pills, sedative medicine, and painkiller

Abbreviations: PCS, physical component summary; MCS, mental component summary; T2DM, type 2 Diabetes mellitus; non-Part., non-Participation; Part., Participation

