

1 Does social capital benefit older adults' health and well-being?

2 The mediating role of physical activity

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23 *Running title: Social capital predicts older adults' health and well-being*
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61 **Abstract**

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63 Does social capital benefit older adults' health and well-being?

64 The mediating role of physical activity

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66 **Objectives:** To assess whether social capital benefits older adults' self-rated health and well-
67 being, and whether physical activity mediates this relation.

68 **Methods:** A survey study was conducted among members of a socio-cultural organization (age
69 ≥ 55 years), both cross-sectionally (baseline Time 1; $N = 959$) and longitudinally (3-year
70 follow-up Time 2; $N = 409$).

71 **Results:** Specific indicators of social capital were positively, though modestly, related to health
72 and well-being at Time 1 and Time 2. Experienced connectedness with age peers emerged as
73 the strongest predictor. Physical activity only mediated the relation with experienced safety in
74 society.

75 **Discussion:** The relative importance of elderly's experienced connectedness with their age
76 peers underlines the importance of internalized group membership as a determinant of their
77 health and well-being. Physical activity seems to play only a minor mediating role.

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80 *Keywords:* Social Capital, Physical Activity, Successful Aging, Health, Well-Being, Social
81 Support

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Introduction

84 The population in Global North societies is ageing rapidly. In the upcoming decades, an
85 increasing number of individuals are expected to pass the age of 60 and to live a substantial
86 part of their life as an older adult. The presence of older adults is projected to grow from 12%
87 in 2015 to 21% in 2050 (United Nations, 2015). In order to maintain a high quality of life at an
88 older age, it will be of utmost importance to prevent diseases and disability as long as possible.
89 Leading an active and healthy life will therefore become even more important. The promotion
90 of such ‘successful aging’ (Rowe & Kahn, 1997, 2015) has become a priority in public health
91 policy in the last decades. For example, the World Health Organization (2002) has since long
92 advocated to optimize the opportunities for older adults to achieve successful aging.

93 Social capital has been considered to be a key factor in the successful aging of older
94 adults (e.g., Berkman & Glass, 2000; Gilbert, Quinn, Goodman, Butler, & Wallace, 2013,
95 House, Landis, & Umberson, 1988). Although the social capital approach suffers from
96 conceptual ambiguity, it generally refers to the networks, norms of reciprocity, and trust among
97 members of a neighborhood or community that develop through social interaction and mutual
98 co-operation (Haslam et al., 2018). Regardless of the conceptualization, being ‘rich’ in social
99 capital has been shown to contribute to the successful aging of older adults, especially in terms
100 of health and well-being (e.g., Avlund, Lund, Holstein, & Due, 2004; Gilbert, Quinn, Goodman,
101 Butler, & Wallace, 2013; Holt-Lunstad, Smith, & Layton, 2010; Kim, Subramanian, &
102 Kawachi, 2010; Nyqvist, Forsman, Giuntoli, & Cattani, 2012; Nyqvist, Nygård, & Steenbeek,
103 2014; Nummela, Sulander, Karisto, & Uutela, 2009).

104 It has been shown that social capital benefits health and well-being in both a direct and
105 an indirect way (Berkman & Glass, 2000; Uchino, 2004). The ‘direct’ path implies that social
106 connectedness constitutes a prerequisite for receiving social support, which facilitates people’s
107 coping efficacy and eliminates the harmful physiological and psychological effects of the stress

108 that arises from the demands of life. For example, loneliness and social isolation have been
109 found to negatively affect older adults' health (e.g., Gale, Westbury, & Cooper, 2018; Holt-
110 Lunstad et al., 2015; Luo et al., 2012).

111 The 'indirect' path implies that social capital strengthens the motivation to live an active
112 life, and as such facilitates individuals to involve in healthy behaviors, such as physical activity.
113 In turn, physical activity would diminish individuals' risks for mortality and all-cause
114 morbidities, improve their physical and mental functioning, and enhance their well-being (e.g.,
115 Chodzko-Zajko et al., 2009; Nelson et al., 2007).

116 In support of this indirect path, previous studies have indeed shown that social capital
117 and social support promote physical activity in general (e.g., Legh-Jones & Moore, 2012;
118 Lindström, Hanson, & Ostergren, 2001), and also among older adults in particular (Fisher, Li,
119 Michael, & Cleveland, 2004; Reed, Crespo, Harvey, & Andersen, 2011). Therefore, social
120 capital is considered to be a determining factor in older adults' physical activity engagement
121 (e.g., McNeill, Kreuter, & Subramanian, 2006). Other studies have even suggested that physical
122 activity is the only health behavior that partially mediates the positive association that exists
123 between social capital and (the experience of) health and well-being (Mohnen, Volker, Flap, &
124 Groenewegen, 2012; Nieminen et al., 2013). However, this mediating role of physical activity
125 in the relation between social capital and health and well-being has not yet been examined
126 among older adults. The present study aims to fill this gap.

127 We decided to test the proposed mediation not only cross-sectionally, but also
128 longitudinally over a three-year period. This longitudinal perspective enabled us to determine
129 whether specific indicators of social capital predict – and therefore potentially contribute to –
130 future physical health and well-being among older adults. In addition, this longitudinal
131 perspective allows us to examine whether this relation between social capital and future
132 physical health and well-being is (at least) partially the result of the mediating role of physical

158 the reason for non-participation was registered and the profile-equivalent participant from the
159 first back up sample or – if needed – the second backup sample was contacted and invited to
160 participate in the study. The main reported reason for non-participation was a lack of interest.

161 The baseline survey at Time 1 was administered in peer-to-peer interviews.
162 Volunteering OKRA members were trained to assess the survey questionnaire. The random
163 sample of elderly was invited for this survey by means of a post-mailed letter. Three weeks
164 after, the peer interviewers contacted the interested participants to make an appointment for the
165 face-to-face survey assessment at the respondent's home. The peer interviewer administered
166 the survey in a guided interview. Three years later (Time 2), participants of the baseline survey
167 were invited to complete the follow-up survey online or on a paper copy within six weeks.
168 Halfway this period, the non-responders were contacted by phone to remind them about the
169 study. If they refused to participate in the study, their reason for non-participation was noted (if
170 provided). Table 1 provides an overview of participation in terms of age and gender for Time
171 1 ($n = 959$) and Time 2 ($n = 409$).

172 [insert Table 1 about here]

173 **Measures**

174 **Indicators of social capital.** As indicators of older adults' social capital, we decided to
175 include both measures of their actual interactions (e.g., their self-reported levels of participation
176 in various domains in society) as well their experienced connectedness with others at different
177 levels (e.g., with the community as a whole, with their age peers) and their perceived trust in
178 others (e.g., their experienced safety). In this way, we tried to cover different aspects that are
179 assumed to make up individuals' social capital.

180 In the baseline survey (at Time 1), the respondents completed measures on seven indicators of
181 their social capital (De Witte & Verté, 2008), namely: (1) experienced safety in society;
182 involvement in (2) social engagement, and (3) volunteer activity; (4) experienced

183 connectedness to their community, (5) experienced connectedness with OKRA, (6) experienced
184 connectedness with their age peers; and (7) experienced ageism.

185 *Safety.* The respondents reported their experienced safety in society by indicating their
186 agreement with eight statements (e.g., ‘Nowadays it is unsafe to go out in the evening’) on a
187 Likert-scale ranging from 1 (*do not agree at all*) to 5 (*agree completely*). During analysis, the
188 scores were inversed to facilitate the interpretation of the results: a higher score reflected a
189 higher level of experienced safety in society. Exploratory factor analysis indicated that the items
190 formed one scale of safety, explaining 47% of the variance. This scale had sufficient internal
191 reliability (*Cronbach’s $\alpha = .84$*).

192 *Social engagement.* The respondents indicated whether or not (yes/no) they had engaged
193 in the last year in a social activity in 20 domains of society (i.e., politics; vocation; religion;
194 culture; social; leisure; restaurant/bar/club; fandom; gender; family; youth; older adult;
195 community; councils; support/care; rescue/medical aid; self-help; NGO/charity; ecology; and
196 ‘other’). The number of domains for which they had indicated ‘yes’ was used as a measure of
197 their extent of social engagement.

198 *Volunteer engagement.* The survey respondents reported whether or not (yes/no) they
199 volunteered in 16 domains of society (i.e., politics; vocation; religion; culture; leisure; youth;
200 student; school; gender; community; support/care; rescue/medical; consultancy; NGO/charity;
201 ecology; and ‘other’). The number of domains for which they had indicated ‘yes’ was used as
202 a measure of their extent of volunteering.

203 *Connectedness with community.* The survey respondents indicated the extent to which
204 they experienced to be connected to their community: ‘To what degree do you feel connected
205 to (what happens in) your community?’ They marked their connectedness to the community on
206 a Likert-scale ranging from 1 (*not connected*) to 5 (*very connected*).

207 *Connectedness with OKRA.* The survey respondents reported their connectedness to

208 OKRA by marking their agreement with three statements ('I feel strongly connected to other
209 OKRA members'; 'I feel at home at OKRA'; 'Being an OKRA member is important in my
210 life') on a Likert-scale ranging from 1 (*do not agree at all*) to 5 (*agree completely*). Exploratory
211 factor analysis indicated that the items formed one scale of identification with OKRA, which
212 explained 88% of the variance. The scale had high internal reliability (*Cronbach's $\alpha = .93$*).

213 *Connectedness with age peers.* The survey respondents reported their experience of
214 (social) connectedness to age peers by indicating their agreement with the statement 'I feel
215 strongly connected to people of my age' on a Likert-scale that ranged from 1 (*do not agree at*
216 *all*) to 5 (*agree completely*).

217 *Ageism.* The respondents indicated the experience of ageism in society by marking the
218 extent to which they agreed with the statement 'In general people have a negative view on the
219 people of my age' on a Likert-scale ranging from 1 (*do not agree at all*) to 5 (*agree completely*).

220 **Physical activity.** In the baseline and follow-up surveys, the respondents indicated their
221 present physical activity involvement on an adapted version of the Godin Leisure-Time
222 Exercise Questionnaire (GLTEQ; Godin & Shephard, 1997). They reported the number of times
223 they had engaged in low-, moderate- and high-intensity physical activity for at least 20
224 continuous minutes, in a normal week (i.e., undisturbed by exceptional events) of the last four
225 weeks. The GLTEQ assigns a mean metabolic expenditure (or MET) value to each intensity
226 level. Using these MET-values, the GLTEQ total score was calculated: $GLTEQ\text{-total score} =$
227 $(\text{low intensity} * 3 \text{ MET}) + (\text{moderate intensity} * 5 \text{ MET}) + (\text{high intensity} * 9 \text{ MET})$.

228 **Physical health.** In the baseline survey, the survey respondents self-rated their health
229 on a Likert-scale that ranged from 1 (*very bad*) to 5 (*very good*). In the follow-up survey,
230 participants indicated their health by marking the degree they felt hindered by their health to
231 engage in four types of activity: moderate-intensity physical activity; high-intensity physical
232 activity; functional/self-care activity; social activity. They indicated the extent of experienced

233 hindrance on a Likert-scale ranging from 1 (*very much hindered*) to 5 (*not at all hindered*). An
234 exploratory factor analysis showed that the items formed one scale of self-rated health that
235 accounted for 68% of the variance. This scale had a sufficient internal reliability (Cronbach's
236 $\alpha = .82$).

237 **Physical well-being.** In the baseline and follow-up surveys, the respondents indicated
238 their physical well-being by responding to four statements (e.g., 'I feel well in my body') of the
239 Marcoen scale of physical well-being for older adults (Marcoen, Van Cotthem, Billiet, &
240 Beyers, 2002). They indicated how often they felt in line with the statements on a Likert-scale
241 ranging from 1 (*never*) to 5 (*always*) in the baseline survey (Time 1), and 1 (*never*) to 7 (*always*)
242 in the follow-up survey (Time 2). The four items formed an internally reliable scale of physical
243 well-being in the baseline (Cronbach's $\alpha = .85$) and follow-up surveys (Cronbach's
244 $\alpha = .92$).

245 **Data Analysis**

246 To test whether physical activity mediates the association of social capital with self-rated
247 physical health and well-being, the Preacher and Hayes' (2004; 2008) method was applied. In
248 a mediation model, the effect of variable X on Y can be partitioned into two parts: (1) the direct
249 effect, and (2) the indirect effect via the mediator. Combined, the direct and indirect effect of
250 X on Y is known as the total effect. Model 4 of Hayes' (2013) Process syntax for IBM SPSS
251 was used to perform these analyses with physical activity as mediator. Age and gender were
252 entered as covariates. The analyses were performed with the unstandardized (B) and
253 standardized measures (B(z)), using 5,000 bootstrap samples. Missing data were imputed with
254 the Expectation-Maximization Algorithm prior to analysis. The analyses were performed with
255 IBM SPSS 19.0.

256 **Results**

257 The means and standard deviations of social capital, physical activity, physical health and well-

258 being at Time 1 and Time 2 are presented in Table 2.

259 [insert Table 2 about here]

260 **Cross-Sectional Analyses**

261 **Physical health.** In line with Hypothesis 1a, four of the indicators of social capital (i.e.,
262 safety, volunteer engagement, connectedness with community, connectedness with age peers)
263 significantly explained self-rated physical health at Time 1 (Table 3 – Total). Each of these
264 indicators was directly related to health (Table 3 – Direct). In line with Hypothesis 2a, safety
265 and social engagement were indirectly related to health through physical activity (Table 3 –
266 Indirect).

267 [insert Table 3 about here]

268 It should be noted that safety and social engagement predicted only a small part of
269 physical activity. More specifically, the social capital indicators and the demographics
270 altogether accounted for 7% of physical activity (see Table 4).

271 [insert Table 4 about here]

272 Physical activity in turn predicted a limited part of self-rated health. To be more precise,
273 the social capital indicators, physical activity and demographics altogether explained 12% of
274 self-rated physical health; $F(10,948) = 11.45, p < .001$. Consequently, the physical activity-
275 indirect associations of safety and social engagement only accounted for a limited part of health.
276 More specifically, the physical exercise-indirect association explained 14% of the overall
277 positive association of safety with health. Even though social engagement was indirectly and
278 positively associated to health, the strength of this indirect association was too small to explain
279 health at Time 1 (Table 3 – Total).

280 **Physical well-being.** In line with Hypothesis 1b, it was found that four of the indicators
281 of social capital (i.e., safety, connectedness with community, connectedness with age peers,
282 ageism) significantly explained self-rated physical well-being at Time 1 (Table 3 – Total).

283 Three of these indicators explained physical well-being directly (Table 3 – Direct). In line with
284 Hypothesis 2b, both safety and social engagement explained physical well-being indirectly
285 through physical activity (Table 3 – Indirect).

286 It should be noted however that physical activity explained only a small part of self-
287 well-being. More specifically, the social capital indicators, physical activity and demographics
288 altogether accounted for 13% of self-rated physical well-being ($F(10,948) = 12.10, p < .001$).
289 Consequently, the physical activity-indirect associations of safety and social participation only
290 accounted for a limited part of well-being. To be more precise, the physical activity-indirect
291 association explained 27% of the overall positive association of safety with well-being. Even
292 though social engagement was indirectly positively associated with well-being, the strength of
293 this indirect association was too small to explain well-being at Time 1 (Table 3 – Total).

294 **Longitudinal Analyses**

295 **Physical health.** In line with Hypothesis 1a, two of the indicators of social capital (i.e.,
296 safety and connectedness with age peers) at Time 1 significantly predicted self-rated physical
297 health at Time 2 (Table 5 – Total). These indicators were directly associated with health at Time
298 2 (Table 5 – Direct). In line with Hypothesis 2a, safety also explained physical health indirectly
299 through physical activity (Table 5 – Indirect).

300 [insert Table 5 about here]

301 Again, it should be noted that safety predicted only a small part of physical activity
302 involvement at Time 2: the social capital indicators and demographics together accounted for
303 8% of physical activity (see Table 4). In turn, physical activity explained only a small part of
304 health at Time 2. More specifically, the social capital indicators, physical activity, and the
305 demographics explained 12% of self-rated physical health; $F(10,398) = 4.22, p <$
306 $.001$. Consequently, safety explained a small part of health at Time 2 by mediation of physical
307 activity at Time 2 (Table 5 – Indirect). This physical activity-indirect association explained

308 25% of the overall association of safety with health at Time 2.

309 **Physical well-being.** In line with Hypothesis 1b, one indicator of social capital (i.e.,
310 connectedness with age peers) significantly and positively predicted physical well-being at
311 Time 2 (Table 5 – Direct and Total). In line with Hypothesis 2b, safety and ageism were
312 significant indirect predictors of physical well-being at Time 2 (Table 5 – Indirect).

313 However, safety predicted only a limited part of physical activity at Time 2 (see Table
314 4), and physical activity in turn explained only a limited part of well-being at Time 2. More
315 specifically, the individual social capital indicators, physical activity and demographics
316 altogether explained 12% of physical well-being at Time 2 ($F(10,398) = 4.25, p < .001$).
317 Consequently, the strength of the physical activity-indirect associations of safety with well-
318 being was limited, and there were no overall associations of safety with self-rated physical well-
319 being at Time 2.

320

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Discussion

322 The aim of this study was twofold. First, we wanted to evaluate to what extent specific
323 indicators of older adults' social capital are related to their self-reported physical health and
324 well-being. Second, we wanted to assess whether these associations are mediated by the
325 elderly's levels of physical activity. To the best of our knowledge, the present study was the
326 first to evaluate this mediating role of older adults' physical activity. Moreover, this mediation
327 was not only assessed in a cross-sectional sample, but also in a three-year follow-up.

328 In line with the expectations, the results at Time 1 showed that specific indicators of
329 older adults' social capital were positively related with their health and well-being at Time 1.
330 More specifically, the more strongly older adults felt connected to their age peers and to their
331 community, the more they felt physically healthier and reported higher well-being. Moreover,
332 the more older adults volunteered, the more they felt physically healthier. In addition, the more

333 ageism older adults experienced, the less well-being they reported.

334 It should be noted, though, that most of these associations disappeared after a three-year
335 period. Nevertheless, both feeling safe in society and feeling connected to age peers were
336 significantly and positively associated with feeling physically healthier three years later. In
337 addition, feeling safe in society also positively predicted well-being in the long run. These
338 findings thus underscore that some aspects of older adults' social capital significantly predict
339 both their present and future experience of physical health and well-being, albeit only modestly.

340 With respect to the proposed mediation by physical activity, this mediation was only
341 confirmed for older adults' perceived safety in society. More specifically, older adults who felt
342 safer in society engaged more in physical activity, now and three years later; in turn, physical
343 activity predicted their experienced physical health and well-being. That is, the more
344 participants engaged in physical activity, the higher levels of physical health and well-being
345 they reported. It should be stressed, though, that this mediation explained only a small part of
346 the association between older adults' safety and their physical health and well-being. Safety
347 predominantly benefited older adults' experienced physical health and well-being in a direct
348 way. The only other evidence that was found for the mediation of physical activity concerned
349 the relation between social engagement and well-being at Time 1. However, this mediation was
350 quite small and disappeared after three year.

351 Our findings thus suggest that physical activity plays only a minor role in explaining the
352 positive relations between older adults' social capital and their subjective physical health and
353 well-being, namely for experienced safety in society. This mediation can be understood by
354 considering that perceptions of a safe society provide older adults with more opportunities to
355 be physically active. To be more precise, the more a society is perceived as safe, the more
356 locations (e.g., parks, streets, ...) and time-frames (e.g., evenings) seem to be available to
357 engage in physical activity. By engaging more in physical activity, older adults then experience

358 more physical health and well-being, in addition to the direct effects of perceived safety.

359 With respect to the direct effects, we like to point out that older adults' experienced
360 connectedness with their age peers emerged as the strongest predictor of both their self-rated
361 physical health and well-being. It is striking that this internalized attachment with people who
362 share their age categorization contributed more to participants' health and well-being than
363 actual social engagement and volunteering. In fact, experienced connectedness with their age
364 peers predicted health and well-being as strongly as physical activity.

365 This relative importance of experienced connectedness with age peers is in line with the
366 recent emphasis on the 'social cure' (Jetten, Haslam, & Haslam, 2012). According to the social
367 cure approach, identification with meaningful social groups constitutes a much underrated
368 determinant of both physical and mental health. Therefore, in their new psychology of health,
369 Haslam et al. (2018) suggest to further unlock this social cure by developing group interventions
370 that increase participants' sense of social identification (e.g., Groups 4 Health, see Haslam et
371 al., 2016). Inspired by this approach, future research might therefore focus on how physical
372 activity for the elderly can be organized so that it constitutes a setting to develop this sense of
373 social identification.

374 We acknowledge that the present study contains some limitations. First, a self-selection
375 bias might come into play, considering that all participants were members of the same socio-
376 cultural organization, namely OKRA. Therefore, caution is recommended in generalizing these
377 findings to the general population of older adults, even though the sample was constructed to
378 be representative for the Flemish population in terms of age, gender and region. For example,
379 OKRA members might be more socially oriented than older adults who are not a member of
380 this social organization and therefore report higher levels of social capital than more isolated
381 individuals.

382 Second, the measurement of all concepts relied on self-reports. Despite the fact that

383 these measurements referred to validated questionnaires, self-reports of especially physical
384 activity remain problematic. Future studies should therefore aim to include more objective
385 measures to assess physical activity, such as accelerometers.

386 Third, the selection and operationalization of the indicators of social capital can be
387 questioned. For example, we did not ask how many friends participants counted to estimate the
388 quality of their interactions. Moreover, in measuring volunteering and social engagement, we
389 focused on the breadth of their involvement (i.e., the number of domains) and not on the
390 intensity (e.g., frequency) of their involvement in each domain. Future studies should therefore
391 try to capture the quality and intensity of older adults' social capital.

392

393

Conclusion

394 Specific indicators of older adults' social capital seem to contribute (modestly) to older adults'
395 successful aging by enhancing their present and future experience of physical health and well-
396 being in a direct way. Physical activity mediates this relation only for perceived safety in
397 society, and only partially. Interestingly, the consistently strongest predictor of both health and
398 well-being was older adults' experienced connectedness with age peers. This finding suggest
399 that, in line with the social cure approach, we should pay more attention to developing older
400 adults' sense of social identification in order to facilitate successful aging. Physical activity and
401 exercise settings might constitute ideal avenues to facilitate social identification, assuming that
402 organizers realize that creating social connectedness takes more than simply moving together.
403 For example, in a walking intervention in the same socio-cultural organization as in this study
404 (Pelssers et al., 2013), we found that the communal coffee and cake that was organized after
405 the weekly group-walk was very important to motivate participants. In order words, physical
406 activity can be used as a means or an occasion to strengthen older adults' social identities and
407 hence further develop their social capital.

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Conflict of interest

None declared.

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546 Table 1.

547 *Participants as a function of age and gender*

Male	Time 1		Time 2	
	<i>n</i>	%	<i>n</i>	%
55-59	82	8.6	46	11.2
60-69	91	9.5	56	13.7
65-69	91	9.5	59	14.4
70-74	75	7.8	37	9.0
75-79	61	6.4	14	3.4
≥80	43	4.5	9	2.2
Total	443	46.2	221	54.0

Female	Time 1		Time 2	
	<i>n</i>	%	<i>n</i>	%
55-59	83	8.7	46	11.2
60-64	110	11.5	55	13.4
65-69	93	9.7	40	9.8
70-74	93	9.7	30	7.3
75-79	66	6.9	13	3.2
≥80	71	7.4	4	1.0
Total	516	53.8	188	46.0

Total	Time 1		Time 2	
	<i>n</i>	%	<i>n</i>	%
50-59	165	17.2	92	22.5
60-64	201	21.0	111	27.1
65-69	184	19.2	99	24.2
70-74	168	17.5	67	16.4
75-79	127	13.2	27	6.6
≥80	114	11.9	13	3.2
Total	959	100	409	100

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551 Table 2.

552 *Means and Standard Deviations*

	Participant Sample			
	Baseline Survey		Follow-up Survey	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Individual Social Capital (only Time 1)</i>				
Safety (range 1-5)	2.60	.85	2.74	.84
Social engagement (range 0-20)	2.23	1.90	2.58	2.00
Volunteer engagement (range 0-20)	.92	1.57	1.27	1.82
Connectedness with community (range 1-5)	3.59	1.15	3.65	1.10
Connectedness with OKRA (range 1-5)	3.89	1.14	3.79	1.16
Connectedness with age peers (range 1-5)	4.12	1.04	4.10	1.01
Ageism (range 1-5)	2.56	1.20	2.38	1.18
<i>Physical Activity (MET-value)</i>				
Time 1	8.64	12.4	11.80	13.40
Time 2			10.11	12.27
<i>Physical Health (range 1-5)</i>				
Time 1	3.74	.79	3.86*	.70
Time 2			4.25	.66
<i>Physical Well-Being</i>				
Time 1 (range 1-5)	4.16	.77	4.23*	.67
Time 2 (range 1-7)			5.03	1.14

553 * Baseline mean and SD of the participants who also participated in the follow-up survey

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556 Table 3.

557 *Associations of Individual Social Capital (Time 1) with Physical Health and Well-Being (Time*

558 *1)*

Physical Health	Direct			Physical Activity-Indirect				B
	B	B(z)	T	B	B CI 95	B(z)	B(z) CI 95	
<i>Indicators of Social Capital</i>								
Safety	.11	.11	3.36**	.02	[.00, .04]*	.02	[.00, .04]*	.12
Social engagement	-.02	-.04	-1.23	.01	[.00, .02]*	.02	[.01, .04]*	-.01
Volunteer engagement	.05	.09	2.70**	.00	[-.01, .01]	.01	[-.01, .03]	.05
Connectedness with community	.05	.07	2.01*	.00	[-.01, .01]	.00	[-.01, .02]	.05
Connectedness with OKRA	-.03	-.04	-1.11	.00	[-.01, .02]	.01	[-.01, .02]	-.03
Connectedness with age peers	.12	.16	4.34***	.00	[-.01, .01]	.00	[-.02, .02]	.13
Ageism	-.01	-.01	-.22	.01	[-.00, .02]	.01	[-.01, .02]	.00
<i>Demographics</i>								
Age	.00	-.04	-1.10	-.00	[-.01, -.00]*	-.03	[-.05, -.01]*	-.01
Gender	.02	.02	.33	.04	[.02, .06]*	.05	[.02, .08]*	.05
Physical Well-being								
<i>Indicators Social Capital</i>								
Safety	.05	.05	1.51	.02	[.00, .03]*	.02	[.00, .04]*	.06
Social engagement	-.00	-.01	-.18	.01	[.00, .02]*	.02	[.01, .04]*	.01
Volunteer engagement	.02	.05	1.53	.00	[-.01, .01]	.01	[-.01, .03]	.03
Connectedness with community	.05	.07	1.94 ^o	.00	[-.01, .01]	.00	[-.01, .02]	.05
Connectedness with OKRA	-.02	-.03	-.87	.00	[-.01, .02]	.01	[-.01, .02]	-.02
Connectedness with age peers	.15	.21	4.66***	.00	[-.01, .01]	.00	[-.01, .02]	.15
Ageism	-.05	-.08	-2.33*	.01	[-.01, .02]	.01	[-.01, .02]	-.05
<i>Demographics</i>								
Age	.01	.09	2.62**	-.00	[-.00, -.00]*	-.03	[-.05, -.02]*	.01
Gender	.13	.18	2.74**	.03	[.01, .06]*	.05	[.02, .08]*	.17

559 ^o $p = .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

560

561

562 Table 4.

563 *Associations of Individual Social Capital (Time 1) with Physical Activity (Time 1 and Time 2)*

	Physical Activity					
	Time 1			<i>F</i> (9,949)	<i>R</i> ²	B
	B	B(<i>z</i>)	<i>t</i>			
<i>Indicators of Social Capital</i>				8.45***	.07	
Safety	1.34	.09	2.48*			2.64
Social engagement	.64	.10	2.55*			.23
Volunteer engagement	.23	.03	.67			-.12
Connectedness with community	.08	.01	.21			-.59
Connectedness with OKRA	.27	.03	.60			-.25
Connectedness with age peers	.19	.02	.39			.92
Ageism	.39	.04	1.08			.92
<i>Demographics</i>						
Age	-.22	-.14	-4.36***			-.26
Gender	2.72	.22	3.31**			2.43

564 * *p* < .05; ** *p* < .01; *** *p* < .001

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567 Table 5.

568 *Associations of Individual Social Capital (Time 1) with Physical Health and Well-Being after*

569 *three year follow-up (Time 2)*

Physical Health	Direct			Physical Activity-Indirect				B
	B	B(z)	t	B	B CI 95	B(z)	B(z) CI 95	
<i>Indicators of Social Capital</i>								
Safety	.09	.11	2.02*	.03	[.02, .05]*	.04	[.02, .07]*	.11
Social engagement	-.01	-.02	-.25	.00	[-.00, .01]	.01	[-.01, .03]	-.00
Volunteer engagement	.02	.05	.94	-.00	[-.01, .01]	-.00	[-.03, .02]	.02
Connectedness with community	.04	.07	1.30	-.01	[-.02, .01]	-.01	[-.04, .01]	.04
Connectedness with OKRA	-.04	-.07	-1.14	-.00	[-.02, .01]	-.01	[-.04, .02]	-.04
Connectedness with age peers	.12	.18	2.37*	.01	[-.01, .03]	.02	[-.01, .04]	.13
Ageism	-.03	-.06	-1.21	.01	[.00, .03]*	.02	[-.00, .05]	-.02
<i>Demographics</i>								
Age	-.01	-.09	-1.53	-.00	[-.01, -.00]*	-.03	[-.05, -.01]*	-.01
Gender	-.02	-.03	-.30	.03	[.00, .06]*	.04	[.00, .09]*	.01
Physical Well-being								
	B	B(z)	t	B	B CI 95	B(z)	B(z) CI 95	B
<i>Indicators of Social Capital</i>								
Safety	.04	.03	.50	.05	[.02, .10]*	.04	[.02, .07]*	.09
Social engagement	-.07	-.11	-1.83	.01	[-.01, .02]	.01	[-.01, .04]	-.06
Volunteer engagement	.05	.08	1.17	-.00	[-.02, .01]	-.00	[-.03, .02]	.05
Connectedness with community	-.01	-.01	-.18	-.01	[-.04, .01]	-.01	[-.04, .01]	-.02
Connectedness with OKRA	-.01	-.01	-.14	-.01	[-.04, .02]	-.01	[-.04, .02]	-.01
Connectedness with age peers	.24	.22	3.47**	.02	[-.01, .05]	.02	[-.01, .05]	.26
Ageism	-.07	-.07	-1.37	.02	[.00, .05]*	.02	[.00, .05]*	-.05
<i>Demographics</i>								
Age	.01	.07	1.44	-.01	[-.01, -.00]*	-.03	[-.06, -.01]*	.01
Gender	.10	.09	.84	.05	[.01, .11]*	.04	[.01, .10]*	.15

570 * $p < .05$; ** $p < .01$; *** $p < .001$

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