Supplemental Tables

Supplemental Table 1. Distribution of potential correlates of changes in recreational walking after retirement

Correlate	Decrease ≤ -60 min/week	Maintain	Increase ≥ 60 min/week
Total	247 (31%)	151 (19%)	394 (50%)
Individual correlates			
Male gender	102 (41%)	72 (48%)	198 (50%)
Race / ethnicity			
Chinese American	22 (9%)	13 (9%)	56 (14%)
Non-Hispanic black	67 (27%)	31 (21%)	96 (24%)
Hispanic	53 (21%)	28 (19%)	65 (16%)
Non-Hispanic white	105 (43%)	79 (52%)	177 (45%)
Socioeconomic position [a]			
Low	73 (30%)	31 (21%)	117 (30%)
Moderate	97 (39%)	55 (36%)	143 (36%)
High	77 (31%)	65 (43%)	134 (34%)
Retirement age (years)	63 (59, 67)	63 (59, 69)	63 (59, 67)
MESA Site			
Forsyth Co., NC	42 (17%)	28 (19%)	82 (21%)
New York, NY	48 (19%)	18 (12%)	69 (18%)
Baltimore City and Co., MD	35 (14%)	21 (14%)	37 (9%)
St. Paul, MN	49 (20%)	33 (22%)	66 (17%)
Los Angeles Co., CA	25 (10%)	15 (10%)	50 (13%)
Chicago, IL	48 (19%)	36 (24%)	90 (23%)
Owned ≥1 car before retirement	205 (83%)	132 (87%)	332 (84%)
Change in self-rated health relative to others			
Health improved	40 (16%)	26 (17%)	63 (16%)
Health declined	52 (21%)	19 (13%)	59 (15%)
Always same/worse	65 (26%)	30 (20%)	94 (24%)
Always better	90 (36%)	76 (50%)	178 (45%)
Change in number of chronic conditions [b]			
Fewer after retirement	32 (13%)	19 (13%)	35 (9%)
More after retirement	71 (29%)	41 (27%)	126 (32%)
Always 1	35 (14%)	26 (17%)	82 (21%)
Always >1	36 (15%)	26 (17%)	49 (12%)
Always 0	73 (30%)	39 (26%)	102 (26%)
Change in BMI (kg/m^2)	0.29 (-0.66, 1.42)	0.31 (-0.83, 1.26)	0.20 (-0.65, 1.20)
Job type before retirement			
Part-time	46 (19%)	31 (21%)	75 (19%)
Other [c]	34 (14%)	20 (13%)	31 (8%)
Full-time	167 (68%)	100 (66%)	288 (73%)
Occupational physical activity (MET-hr/week)	67 (42, 96)	73 (48, 100)	75 (53, 103)
Interpersonal correlates			
Change in partnership status			
Never lived with partner	77 (31%)	45 (30%)	109 (28%)
Lived with partner before retirement	15 (6%)	9 (6%)	23 (6%)
Lived with partner after retirement	10 (4%)	5 (3%)	10 (3%)
Always lived with partner	145 (59%)	92 (61%)	252 (64%)
Change in caregiver status [d]			
Caregiver before retirement	29 (12%)	19 (13%)	42 (11%)
Caregiver after retirement	26 (11%)	20 (13%)	54 (14%)
Always a caregiver	25 (10%)	10 (7%)	41 (10%)
Never a caregiver	167 (68%)	102 (68%)	257 (65%)
Low emotional social support [e]	9 (4%)	5 (3%)	15 (4%)

Correlate	Decrease ≤ -60 min/week	Maintain	Increase ≥ 60 min/week
Community correlates			
Density of walking destinations (z-score)	-0.49 (-0.58, 0.20)	-0.48 (-0.59, -0.04)	-0.46 (-0.61, -0.03)
Density of parks (z-score) [f]	-0.26 (-0.68, 0.36)	-0.34 (-0.65, 0.24)	-0.36 (-0.68, 0.18)
Network ratio (z-score)	0.44 (0.28, 0.55)	0.42 (0.29, 0.52)	0.43 (0.27, 0.53)
There is a lot of trash on the street			
Agree	37 (15%)	26 (17%)	67 (17%)
Disagree	210 (85%)	125 (83%)	327 (83%)
There is a lot of noise in my neighborhood			
Agree	96 (39%)	55 (36%)	142 (36%)
Disagree	151 (61%)	96 (64%)	252 (64%)
My neighborhood is attractive			
Disagree	48 (19%)	15 (10%)	74 (19%)
Agree	199 (81%)	136 (90%)	320 (81%)
I feel safe walking day or night			
Disagree	59 (24%)	33 (22%)	96 (24%)
Agree	188 (76%)	118 (78%)	298 (76%)
Violence is a problem in my neighborhood			
Agree	64 (26%)	36 (24%)	97 (25%)
Disagree	183 (74%)	115 (76%)	297 (75%)
It is pleasant to walk in my neighborhood			
Disagree	34 (14%)	10 (7%)	51 (13%)
Agree	213 (86%)	141 (93%)	343 (87%)
It is easy to walk to places			
Disagree	60 (24%)	20 (13%)	80 (20%)
Agree	187 (76%)	131 (87%)	314 (80%)
I often see other people walking			
Disagree	28 (11%)	9 (6%)	43 (11%)
Agree	219 (89%)	142 (94%)	351 (89%)
I often see other people exercise			
Disagree	65 (26%)	20 (13%)	86 (22%)
Agree	182 (74%)	131 (87%)	308 (78%)
Neighborhood social cohesion			
Low	16 (6%)	8 (5%)	29 (7%)
Moderate	144 (58%)	80 (53%)	221 (56%)
High	87 (35%)	63 (42%)	144 (37%)
Population density (thousands/mi^2)	6.2 (2.9, 17.1)	5.9 (2.9, 14.6)	6.3 (2.6, 14.4)

Abbreviations: BMI body mass index; MESA Multi-Ethnic Study of Atherosclerosis; MET metabolic task equivalent

[a] Composite index of education, income, and four indicators of wealth (ownership of home, land/property, car, investments)

[b] Chronic conditions included asthma, emphysema, arthritis flare up in the past two weeks, high cholesterol, hypertension, diabetes, kidney disease, cancer, and cardiovascular disease.

[c] Includes homemaking, unemployment, and on-leave from work.

[d] Caregiver defined as reporting ≥150 min/week of caregiving physical activity for children or adults

[e] ENRICHD Social Support Inventory (6 items) measured prior to retirement, and dichotomized as low (score ≤12) vs. high (score > 12)

[f] Park data only available for N=718 participants

Notes: Potential individual-, interpersonal-, and community-level correlates by category of change in recreational walking after retirement (decreased (≤ -60 min/week); maintained (within 60 min/week); or increased (≥ 60 min/week)) among MESA participants reporting >0 min/week recreational walking before or after retirement (N=792). Values are N (%) or median (first quartile, third quartile). Correlates measured at MESA exams (2000 to 2012) or obtained from external sources (local and federal governments, Esri, and the National Establishment Time Series database), as indicated in Table 1.

Supplemental Table 2. Distribution of potential correlates of changes in transport walking after retirement

Correlate	Decrease ≤ -60 min/week	Maintain	Increase ≥ 60 min/week
Total	353 (40%)	172 (19%)	362 (41%)
Individual correlates			
Male gender	160 (45%)	81 (47%)	162 (45%)
Race / ethnicity			
Chinese American	32 (9%)	27 (16%)	36 (10%)
Non-Hispanic black	90 (25%)	50 (29%)	103 (28%)
Hispanic	71 (20%)	22 (13%)	66 (18%)
Non-Hispanic white	160 (45%)	73 (42%)	157 (43%)
Socioeconomic position [a]			
Low	96 (27%)	51 (30%)	105 (29%)
Moderate	149 (42%)	60 (35%)	135 (37%)
High	108 (31%)	61 (35%)	122 (34%)
Retirement age (years)	63 (59, 67)	63 (59, 68)	62 (58, 67)
MESA Site			
Forsyth Co., NC	70 (20%)	39 (23%)	61 (17%)
New York, NY	62 (18%)	13 (8%)	79 (22%)
Baltimore City and Co., MD	43 (12%)	22 (13%)	52 (14%)
St. Paul, MN	75 (21%)	27 (16%)	60 (17%)
Los Angeles Co., CA	29 (8%)	39 (23%)	33 (9%)
Chicago, IL	74 (21%)	32 (19%)	77 (21%)
Owned ≥1 car before retirement	300 (85%)	156 (91%)	297 (82%)
Change in self-rated health relative to others			
Health improved	48 (14%)	27 (16%)	64 (18%)
Health declined	60 (17%)	18 (10%)	67 (19%)
Always same/worse	89 (25%)	52 (30%)	77 (21%)
Always better	156 (44%)	75 (44%)	154 (43%)
Change in number of chronic conditions [b]			
Fewer after retirement	32 (9%)	20 (12%)	44 (12%)
More after retirement	105 (30%)	47 (27%)	110 (30%)
Always 1	72 (20%)	25 (15%)	75 (21%)
Always >1	47 (13%)	30 (17%)	50 (14%)
Always 0	97 (27%)	50 (29%)	83 (23%)
Change in BMI (kg/m^2)	0.16 (-0.65, 1.28)	0.21 (-0.76, 1.34)	0.29 (-0.78, 1.32)
Job type before retirement			
Part-time	71 (20%)	33 (19%)	59 (16%)
Other [c]	36 (10%)	21 (12%)	37 (10%)
Full-time	246 (70%)	118 (69%)	266 (73%)
Occupational physical activity (MET-hr/week)	75 (53, 102)	73 (43, 102)	75 (53, 100)
Interpersonal correlates			
Change in partnership status			
Never lived with partner	115 (33%)	51 (30%)	116 (32%)
Lived with partner before retirement	20 (6%)	5 (3%)	29 (8%)
Lived with partner after retirement	13 (4%)	5 (3%)	7 (2%)
Always lived with partner	205 (58%)	111 (65%)	210 (58%)
Change in caregiver status [d]			
Caregiver before retirement	44 (12%)	16 (9%)	49 (14%)
Caregiver after retirement	39 (11%)	31 (18%)	38 (10%)
Always a caregiver	44 (12%)	11 (6%)	31 (9%)
Never a caregiver	226 (64%)	114 (66%)	244 (67%)
Low emotional social support	14 (4%)	7 (4%)	12 (3%)

Correlate	Decrease ≤ -60 min/week	Maintain	Increase ≥ 60 min/week
Community correlates			
Density of walking destinations (z-score)	-0.49 (-0.61, -0.04)	-0.49 (-0.57, -0.24)	-0.41 (-0.59, 0.59)
Density of parks (z-score) [e]	-0.26 (-0.68, 0.32)	-0.41 (-0.67, -0.14)	-0.27 (-0.63, 0.39)
Network ratio (z-score)	0.43 (0.26, 0.54)	0.43 (0.27, 0.51)	0.43 (0.31, 0.53)
There is a lot of trash on the street			
Agree	66 (19%)	17 (10%)	64 (18%)
Disagree	287 (81%)	155 (90%)	298 (82%)
There is a lot of noise in my neighborhood			
Agree	140 (40%)	51 (30%)	138 (38%)
Disagree	213 (60%)	121 (70%)	224 (62%)
My neighborhood is attractive			
Disagree	62 (18%)	27 (16%)	71 (20%)
Agree	291 (82%)	145 (84%)	291 (80%)
I feel safe walking day or night			
Disagree	89 (25%)	41 (24%)	85 (23%)
Agree	264 (75%)	131 (76%)	277 (77%)
Violence is a problem in my neighborhood			
Agree	92 (26%)	37 (22%)	89 (25%)
Disagree	261 (74%)	135 (78%)	273 (75%)
It is pleasant to walk in my neighborhood			
Disagree	50 (14%)	21 (12%)	42 (12%)
Agree	303 (86%)	151 (88%)	320 (88%)
It is easy to walk to places			
Disagree	83 (24%)	37 (22%)	70 (19%)
Agree	270 (76%)	135 (78%)	292 (81%)
I often see other people walking			
Disagree	38 (11%)	24 (14%)	33 (9%)
Agree	315 (89%)	148 (86%)	329 (91%)
I often see other people exercise			
Disagree	80 (23%)	45 (26%)	78 (22%)
Agree	273 (77%)	127 (74%)	284 (78%)
Neighborhood social cohesion			
Low	24 (7%)	11 (6%)	28 (8%)
Moderate	196 (56%)	99 (58%)	208 (57%)
High	133 (38%)	62 (36%)	126 (35%)
Population density (thousands/mi^2)	5.9 (2.7, 14.8)	6.6 (2.6, 11.2)	6.7 (3.3, 19.6)

Abbreviations: BMI body mass index; MESA Multi-Ethnic Study of Atherosclerosis; MET metabolic task equivalent

[a] Composite index of education, income, and four indicators of wealth (ownership of home, land/property, car, investments)

[b] Chronic conditions included asthma, emphysema, arthritis flare up in the past two weeks, high cholesterol, hypertension, diabetes, kidney disease, cancer, and cardiovascular disease.

[c] Includes homemaking, unemployment, and on-leave from work.

[d] Caregiver defined as reporting ≥150 min/week of caregiving physical activity for children or adults

[e] ENRICHD Social Support Inventory (6 items) measured prior to retirement, and dichotomized as low (score ≤12) vs. high (score > 12)

[f] Park data only available for N=807 participants

Notes: Potential individual-, interpersonal-, and community-level correlates by category of change in transport walking after retirement (decreased (≤ -60 min/week); maintained (within 60 min/week); or increased (≥ 60 min/week)) among MESA participants reporting >0 min/week transport walking before or after retirement (N=887). Values are N (%) or median (first quartile, third quartile). Correlates measured at MESA exams (2000 to 2012) or obtained from external sources (local and federal governments, Esri, and the National Establishment Time Series database), as indicated in Table 1.

Supplemental Table 3. Correlates associated with change in recreational walking after retirement among participants who did not move

Correlate Level Correlate	**Decrease vs. maintain** OR (95% CI)	**Increase vs. maintain** OR (95% CI)
Core variables		
Gender		
Male	0.97 (0.52, 1.82)	0.93 (0.57, 1.52)
Female	1 (ref)	1 (ref)
Socioeconomic position [a]		
Low	**4.27 (1.70, 10.74)***	**2.57 (1.34, 4.91)***
Moderate	1.93 (0.92, 4.03)	**1.89 (1.07, 3.32)***
High	1 (ref)	1 (ref)
Race/ethnicity		
Chinese American	1.24 (0.40, 3.87)	0.86 (0.33, 2.25)
Non-Hispanic black	1.28 (0.62, 2.66)	0.98 (0.55, 1.74)
Hispanic	0.73 (0.34, 1.53)	0.49 (0.24, 1.03)
Non-Hispanic white	1 (ref)	1 (ref)
Retirement age (1-year increase)	0.98 (0.94, 1.03)	0.99 (0.95, 1.03)
Time between exams (1-year difference)	1.07 (0.93, 1.23)	1.08 (0.95, 1.22)
Season of pre-retirement exam		
Spring	1.33 (0.60, 2.97)	1.16 (0.61, 2.19)
Summer	1.33 (0.62, 2.85)	1.34 (0.72, 2.50)
Fall	0.72 (0.31, 1.65)	1.02 (0.53, 1.98)
Winter	1 (ref)	1 (ref)
Season of post-retirement exam		
Spring	**0.34 (0.16, 0.75)***	1.05 (0.51, 2.16)
Summer	0.62 (0.28, 1.39)	1.46 (0.67, 3.17)
Fall	0.58 (0.24, 1.40)	1.09 (0.56, 2.14)
Winter	1 (ref)	1 (ref)
MESA site		
Forsyth Co., NC	0.90 (0.35, 2.28)	0.80 (0.36, 1.78)
New York, NY	1.02 (0.33, 3.15)	0.64 (0.27, 1.51)
Baltimore City and Co., MD	1.37 (0.47, 4.05)	0.45 (0.17, 1.22)
St. Paul, MN	1.06 (0.37, 3.04)	0.41 (0.15, 1.10)
Los Angeles Co., CA	0.54 (0.13, 2.23)	0.70 (0.28, 1.74)
Chicago, IL	1 (ref)	1 (ref)
Pre-retirement recreational walking		
< 90 min/week	**0.07 (0.03, 0.16)***	**2.27 (1.14, 4.54)***
90 to 210 min/week	**0.41 (0.20, 0.84)***	**2.03 (1.07, 3.87)***
> 210 min/week	1 (ref)	1 (ref)
Individual level		
Self-rated health relative to others		
Improved after retirement	1.82 (0.76, 4.40)	
Declined after retirement	**2.98 (1.42, 6.25)***	
Always "same" / "worse"	**3.11 (1.27, 7.61)***	
Always “better”	1 (ref)	
Change in number of chronic conditions [b]		
Fewer after retirement		0.75 (0.32, 1.75)
More after retirement		0.96 (0.51, 1.77)
1 chronic condition		1.43 (0.64, 3.19)
>1 condition		0.53 (0.25, 1.15)
No chronic conditions		1 (ref)

Correlate Level Correlate	**Decrease vs. maintain** OR (95% CI)	**Increase vs. maintain** OR (95% CI)
Job type prior to retirement		
Part-time		0.75 (0.43, 1.33)
Other [c]		**0.44 (0.20, 0.98)***
Full-time		1 (ref)
Community level		
Aesthetic quality: there is a lot of trash on the street		
Disagree	1.87 (0.90, 3.85)	
Agree	1 (ref)	
Aesthetic quality: my neighborhood is attractive		
Agree		0.47 (0.21, 1.02)
Disagree		1 (ref)
Walking environment: it is easy to walk places		
Agree	0.47 (0.21, 1.07)	0.63 (0.33, 1.21)
Disagree	1 (ref)	1 (ref)
Walking environment: I see others exercise		
Agree	0.56 (0.24, 1.28)	
Disagree	1 (ref)	

Abbreviations: CI confidence interval; MESA Multi-Ethnic Study of Atherosclerosis; OR odds ratio
[a] Composite index of education, income, and four indicators of wealth (ownership of home, land/property, car, investments)
[b] Chronic conditions included asthma, emphysema, arthritis flare up in the past two weeks, high cholesterol, hypertension, diabetes, kidney disease, cancer, and cardiovascular disease.
[c] Includes homemaking, unemployment, and on-leave from work at the exam prior to retirement.
* p-value < 0.05

Notes: Individual-, interpersonal-, and community-level correlates associated with decreased (≤ -60 min/week; N=197) or increased (≥ 60 min/week; N=306) recreational walking after retirement compared to maintaining recreational walking after retirement (within 60 min/week; N=120) among MESA participants reporting >0 min/week recreational walking before or after retirement and who did not move residence between the pre- and post-retirement MESA exams (data collected 2000 to 2012). Odds ratios (95% CI) from separate multivariable logistic regression models comparing decreased vs. maintained and increased vs. maintained categories. Correlates selected based on models for the overall sample, as shown in Table 4. Final models estimated using generalized estimating equations with exchangeable correlation structure.

Supplemental Table 4. Correlates associated with change in transport walking after retirement among participants who did not move

Correlate Level Correlate	**Decrease vs. maintain** OR (95% CI)	**Increase vs. maintain** OR (95% CI)
Core variables		
Gender		
Male	1.42 (0.80, 2.53)	0.98 (0.59, 1.63)
Female	1 (ref)	1 (ref)
Socioeconomic position [a]		
Low	2.23 (0.92, 5.38)	0.81 (0.45, 1.45)
Moderate	1.87 (0.97, 3.60)	1.04 (0.62, 1.76)
High	1 (ref)	1 (ref)
Race/ethnicity		
Chinese American	1.63 (0.56, 4.79)	1.09 (0.50, 2.40)
Non-Hispanic black	0.78 (0.38, 1.57)	0.85 (0.48, 1.50)
Hispanic	1.12 (0.35, 3.56)	1.09 (0.50, 2.34)
Non-Hispanic white	1 (ref)	1 (ref)
Retirement age (1-year increase)	0.98 (0.93, 1.03)	0.97 (0.94, 1.01)
Time between exams (1-year difference)	1.05 (0.92, 1.20)	1.08 (0.97, 1.19)
Season of pre-retirement exam		
Spring	1.61 (0.71, 3.69)	1.68 (0.97, 2.93)
Summer	1.95 (0.83, 4.60)	1.54 (0.82, 2.92)
Fall	2.01 (0.86, 4.71)	1.56 (0.83, 2.93)
Winter	1 (ref)	1 (ref)
Season of post-retirement exam		
Spring	0.53 (0.24, 1.17)	0.97 (0.53, 1.78)
Summer	**0.30 (0.13, 0.68)***	0.78 (0.41, 1.49)
Fall	0.89 (0.35, 2.26)	1.32 (0.65, 2.67)
Winter	1 (ref)	1 (ref)
MESA site		
Forsyth Co., NC	0.97 (0.37, 2.52)	0.67 (0.34, 1.30)
New York, NY	**4.80 (1.20, 19.20)***	**2.76 (1.12, 6.78)***
Baltimore City and Co., MD	1.22 (0.41, 3.60)	1.08 (0.49, 2.41)
St. Paul, MN	2.33 (0.81, 6.69)	0.80 (0.42, 1.51)
Los Angeles Co., CA	0.62 (0.19, 2.02)	**0.32 (0.15, 0.69)***
Chicago, IL	1 (ref)	1 (ref)
Pre-retirement transport walking		
< 90 min/week	**0.01 (0.00, 0.02)***	0.97 (0.50, 1.89)
90 to 300 min/week	**0.14 (0.07, 0.28)***	1.00 (0.51, 1.96)
>300 min/week	1 (ref)	1 (ref)
Individual level		
Self-rated health relative to others		
Improved after retirement		1.39 (0.69, 2.80)
Declined after retirement		**2.18 (1.07, 4.42)***
Always "same" / "worse"		0.68 (0.37, 1.25)
Always “better”		1 (ref)
Interpersonal level		
Change in partnership status		
Never married/lived with partner	1.14 (0.60, 2.20)	1.00 (0.54, 1.83)
Married/lived with partner before retirement	2.08 (0.50, 8.62)	3.40 (0.84, 13.73)
Married/lived with partner after retirement	2.57 (0.66, 10.03)	1.12 (0.13, 9.40)
Always married/lived with partner	1 (ref)	1 (ref)

Correlate Level Correlate	Decrease vs. maintain OR (95% CI)	Increase vs. maintain OR (95% CI)
Change in caregiver status [b]		
Caregiver before retirement	0.55 (0.21, 1.43)	
Caregiver after retirement	**0.28 (0.12, 0.63)***	
Always a caregiver	2.44 (0.73, 8.16)	
Never a caregiver	1 (ref)	
Community level		
Density of walking destinations (1-SD unit increase)	**0.59 (0.38, 0.91)***	
Aesthetic quality: there is a lot of trash on the street		
Disagree	0.57 (0.25, 1.32)	
Agree	1 (ref)	
Aesthetic quality: my neighborhood is attractive		
Agree		0.73 (0.42, 1.26)
Disagree		1 (ref)
Safety: violence is a problem in my neighborhood		
Disagree	1.37 (0.68, 2.78)	
Agree	1 (ref)	
Walking environment: it is easy to walk places		
Agree	0.79 (0.34, 1.83)	
Disagree	1 (ref)	
Walking environment: I see others walking		
Agree	1.93 (0.69, 5.38)	1.19 (0.56, 2.51)
Disagree	1 (ref)	1 (ref)

Abbreviations: CI confidence interval; MESA Multi-Ethnic Study of Atherosclerosis; OR odds ratio; SD standard deviation

[a] Composite index of education, income, and four indicators of wealth (ownership of home, land/property, car, investments)

[b] Caregiver defined as reporting ≥150 min/week of caregiving physical activity to children or adults

* P-value < 0.05

Notes: Individual-, interpersonal-, and community-level correlates associated with decreased (≤ -60 min/week; N=278) or increased (≥ 60 min/week; N=287) transport walking after retirement compared to maintaining transport walking after retirement (within 60 min/week; N=139) among MESA participants reporting >0 min/week transport walking before or after retirement and who did not move residence between the pre- and post-retirement MESA exams (data collected 2000 to 2012). Odds ratios (95% CI) from separate multivariable logistic regression models comparing decreased vs. maintained and increased vs. maintained categories. Correlates selected based on models for the overall sample, as shown in Table 5. Final models estimated using generalized estimating equations with exchangeable correlation structure.