

Supplementary Table 1: Description of the socio-ecological variables

VARIABLES	QUESTIONS, ANSWERS AND ITEMS*	COMPUTATION OF THE VARIABLE	CATEGORICAL VARIABLES' THRESHOLDS
<i>Perceived residential environment attributes</i>			
Availability of destination (<i>high vs. low</i>)	<u>Around your home you have access to: (multiple choice)</u> <input type="checkbox"/> A small supermarket <input type="checkbox"/> A grocery store <input type="checkbox"/> A bank <input type="checkbox"/> A post office <input type="checkbox"/> A school <input type="checkbox"/> A bakery <input type="checkbox"/> A restaurant <input type="checkbox"/> A cafe terrace <input type="checkbox"/> A pharmacy <input type="checkbox"/> None of the above	Sum of destinations ranking from 0 to 9.	Binary variable categorized at the median value (threshold=7).
Ease to walk on sidewalks (<i>high vs. low</i>)	<u>Among the following proposals, choose the one that best describes how you can walk around your home</u> a - You can walk on the sidewalks without being hindered by other pedestrians, cyclists or parked cars. b - You can walk on the sidewalks, but you are sometimes hindered by other pedestrians, cyclists or parked cars. c- On the sidewalks, you are often forced to walk around obstacles or to walk on the road. d - There are no sidewalks around my home e - You're not concerned	-	Binary variable categorized as high (a, b) versus low (c, d). The “e” answer has not been evaluated.
Presence of bicycle paths (<i>high vs. low</i>)	<u>Among the following proposals, choose the one that best describes how it is possible to move by bike around your home</u> a - There are bike lanes separated from the road b - There are bike lanes on roads c - You must take the road without bike lanes d - You don't know	-	Binary variable categorized as high (a, b) versus low (c). The “d” answer has not been evaluated.

Pollution (<i>high vs. low</i>)	<u>The neighborhood is polluted:</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree		Binary variable categorized as high (a, b) versus low (c, d, e).
Cleanliness of the neighborhood (<i>high vs. low</i>)	<u>The neighborhood is clean and well:</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree	-	Binary variable categorized as high (a, b) versus low (c, d, e).
Presence of trees (<i>high vs. low</i>)	<u>There are trees along the streets of the neighborhood:</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree	-	Binary variable categorized as high (a, b) versus low (c, d, e).
Presence of green spaces (<i>high vs. low</i>)	<u>There is one or more green spaces in the neighborhood:</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree	-	Binary variable categorized as high (a, b) versus low (c, d, e).
Aesthetics (<i>high vs. low</i>)	<u>There are a lot of poorly maintained, unoccupied or ugly buildings in the neighborhood:</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree	-	Binary variable categorized as high (d, e) versus low (a, b, c).
Traffic (<i>high vs. low</i>)	<u>Your home neighborhood is not safe to walk because of road traffic</u> a - Strongly agree b - Agree		Binary variable categorized as high (a, b) versus low (c, d, e).

	c - Neither agree nor disagree d - Disagree e - Strongly disagree		
Criminality <i>(high vs. low)</i>	<u>During the day, the neighborhood is not safe because of criminality</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree <u>At night, the neighborhood is not safe because of criminality</u> a - Strongly agree b - Agree c - Neither agree nor disagree d - Disagree e - Strongly disagree	Mean of the two item questions ranking from 1 (Strongly agree) to 5 (strongly disagree). (Cronbach's $\alpha=0.82$)	Binary variable categorized at the median value (threshold=0.2).
Positive representations of transportation modes			
Walking <i>(high vs. low)</i>	<u>Walking is:</u> <div> <input type="checkbox"/> Fast Very/Pretty/Not </div> <div> <input type="checkbox"/> Comfortable Very/Pretty/Not </div> <div> <input type="checkbox"/> Cheap Very/Pretty/Not </div> <div> <input type="checkbox"/> Safe, Secure Very/Pretty/Not </div> <div> <input type="checkbox"/> Convenient Very/Pretty/Not </div> <div> <input type="checkbox"/> Relaxing Very/Pretty/Not </div>	Each item was rated, ranking from 1 (very) to 3 (Not). A score was computed by calculating the average of the 6 items. (Cronbach's $\alpha=0.77$)	Binary variable categorized at the median value (threshold=0.53).
Cycling <i>(high vs. low)</i>	<u>Bike is:</u> <div> <input type="checkbox"/> Fast Very/Pretty/Not </div> <div> <input type="checkbox"/> Comfortable Very/Pretty/Not </div> <div> <input type="checkbox"/> Cheap Very/Pretty/Not </div> <div> <input type="checkbox"/> Safe, Secure Very/Pretty/Not </div> <div> <input type="checkbox"/> Convenient Very/Pretty/Not </div> <div> <input type="checkbox"/> Relaxing Very/Pretty/Not </div> <div> <input type="checkbox"/> Green Very/Pretty/Not </div>	Each item was rated, ranking from 1 (very) to 3 (Not). A score was computed by calculating the average of the 7 items. (Cronbach's $\alpha=0.77$)	Binary variable categorized at the median value (threshold=0.53).
Individual motorized	<u>Car is:</u>	Each item was rated, ranking	Binary variable categorized

<p>transportation modes (<i>high vs. low</i>)</p>	<div> <input type="checkbox"/> Fast <input type="checkbox"/> Comfortable <input type="checkbox"/> Cheap <input type="checkbox"/> Safe, Secure <input type="checkbox"/> Convenient <input type="checkbox"/> Relaxing <input type="checkbox"/> Green </div> <p>Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not</p> <p><u>Motorcycle is:</u></p> <div> <input type="checkbox"/> Fast <input type="checkbox"/> Comfortable <input type="checkbox"/> Cheap <input type="checkbox"/> Safe, Secure <input type="checkbox"/> Convenient <input type="checkbox"/> Relaxing <input type="checkbox"/> Green </div> <p>Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not</p>	<p>from 1 (very) to 3 (Not). A score was computed by calculating the average of the 14 items. (Cronbach's $\alpha=0.72$)</p>	<p>at the median value (threshold=0.71).</p>
<p>Public transport (<i>high vs. low</i>)</p>	<p><u>Tram/suburban train/subway is:</u></p> <div> <input type="checkbox"/> Fast <input type="checkbox"/> Comfortable <input type="checkbox"/> Cheap <input type="checkbox"/> Safe, Secure <input type="checkbox"/> Convenient <input type="checkbox"/> Relaxing <input type="checkbox"/> Green <input type="checkbox"/> Punctual </div> <p>Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not</p> <p><u>Bus is:</u></p> <div> <input type="checkbox"/> Fast <input type="checkbox"/> Comfortable <input type="checkbox"/> Cheap <input type="checkbox"/> Safe, Secure <input type="checkbox"/> Convenient <input type="checkbox"/> Relaxing <input type="checkbox"/> Green <input type="checkbox"/> Punctual </div> <p>Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not Very/Pretty/Not</p>	<p>Each item was rated, ranking from 1 (very) to 3 (Not). A score was computed by calculating the average of the 16 items. (Cronbach's $\alpha=0.87$)</p>	<p>Binary variable categorized at the median value (threshold=0.71).</p>

Relatives and friends' use of active transportation modes			
Family's use of walking/cycling for transportation (<i>high vs. low</i>)	<p><u>In your family, most of the adults use bike to reach their activities locations (work, study, shopping, visits, cinema, concert, bar, restaurant, ...):</u></p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p> <p><u>In your family, most of the adults walk to reach their activities locations (work, study, shopping, visits, cinema, concert, bar, restaurant, ...):</u></p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>	Mean of the two item questions ranking from 1 (Strongly agree) to 5 (strongly disagree). (Cronbach's $\alpha=0.58$)	Binary variable categorized at the median value (threshold=0.3).
Friends' use of walking/cycling for transportation (<i>high vs. low</i>)	<p><u>Most of your friends use bike to reach their activities locations (work, study, shopping, visits, cinema, concert, bar, restaurant, ...):</u></p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p> <p><u>Your friends walk to reach their activities locations (work, study, shopping, visits, cinema, concert, bar, restaurant, ...):</u></p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>	Mean of the two item questions ranking from 1 (Strongly agree) to 5 (strongly disagree). (Cronbach's $\alpha=0.76$)	Binary variable categorized at the median value (threshold=0.3).

Representation of physical activity			
Self-representation of an active person	Do you consider yourself as a physically active person: <input type="checkbox"/> Yes <input type="checkbox"/> No	-	Binary variable
Family representation of physical activity/sports	Did you grow up in a family how valued physical activity and more particularly sport and exercise <input type="checkbox"/> Yes, a lot <input type="checkbox"/> Yes a little bit <input type="checkbox"/> No	-	Binary variables categorized as high (Yes, a lot) versus low (else)

Supplementary Table 2: Unadjusted associations between perceived environmental, representation of transportation modes, physical activity and clusters of physical activity and sedentary behaviors. Results from multinomial logistic regression model using the cluster 5- active transportation as a reference. (N=23432)

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 6
	<i>Active occupation, low leisure time</i>	<i>Sedentary occupation, low leisure time</i>	<i>Sedentary transportation</i>	<i>Sedentary occupation, high sedentary leisure</i>	<i>Active leisure</i>
	OR (CI 99%)	OR (CI 99%)	OR (CI 99%)	OR (CI 99%)	OR (CI 99%)
Perception of the residential environment					
Availability of destination (<i>high vs low</i>)	0.46 (0.39 ; 0.54)	0.62 (0.53 ; 0.73)	0.43 (0.34 ; 0.54)	0.82 (0.68 ; 1.01)	0.60 (0.45 ; 0.79)
Ease to walk on sidewalks (<i>high vs low</i>)	0.52 (0.43 ; 0.63)	0.70 (0.58 ; 0.85)	0.47 (0.36 ; 0.61)	0.86 (0.68 ; 1.08)	0.45 (0.34 ; 0.62)
Presence of bicycle paths (<i>high vs low</i>)	0.45 (0.38 ; 0.53)	0.57 (0.49 ; 0.67)	0.44 (0.34 ; 0.57)	0.68 (0.56 ; 0.83)	0.49 (0.37 ; 0.66)
Perceived pollution (<i>high vs low</i>)	0.59 (0.50 ; 0.69)	0.69 (0.59 ; 0.81)	0.60 (0.46 ; 0.78)	0.88 (0.73 ; 1.07)	0.53 (0.39 ; 0.73)
Perceived cleanliness of the neighborhood (<i>high vs low</i>)	1.41 (1.18 ; 1.68)	1.39 (1.17 ; 1.64)	1.28 (0.98 ; 1.68)	1.18 (0.95 ; 1.45)	1.59 (1.14 ; 2.22)
Presence of trees (<i>high vs low</i>)	0.92 (0.78 ; 1.09)	0.95 (0.81 ; 1.12)	1.00 (0.80 ; 1.43)	0.92 (0.75 ; 1.12)	1.07 (0.80 ; 1.43)
Presence of green spaces (<i>high vs low</i>)	0.91 (0.75 ; 1.11)	0.96 (0.79 ; 1.16)	0.89 (0.66 ; 1.18)	0.84 (0.67 ; 1.05)	1.12 (0.78 ; 1.59)
Aesthetics (<i>high vs low</i>)	1.45 (1.22 ; 1.73)	1.40 (1.18 ; 1.65)	1.49 (1.13 ; 1.97)	1.06 (0.86 ; 1.30)	1.68 (1.20 ; 2.35)
Traffic (<i>high vs low</i>)	1.27 (0.97 ; 1.67)	1.07 (0.97 ; 1.67)	1.71 (1.18 ; 2.46)	0.96 (0.69 ; 1.34)	1.22 (0.77 ; 1.91)
Criminality (<i>high vs low</i>)	0.74 (0.63 ; 0.86)	0.83 (0.71 ; 0.96)	0.70 (0.56 ; 0.89)	1.04 (0.86 ; 1.25)	0.72 (0.55 ; 0.95)
Positive representations of transportation modes					
Walking (<i>high vs low</i>)	0.44 (0.37 ; 0.52)	0.48 (0.41 ; 0.57)	0.35 (0.26 ; 0.48)	0.50 (0.40 ; 0.62)	0.79 (0.58 ; 1.07)
BCycling (<i>high vs low</i>)	0.66 (0.56 ; 0.77)	0.61 (0.52 ; 0.72)	0.53 (0.42 ; 0.68)	0.54 (0.44 ; 0.65)	0.80 (0.60 ; 1.06)
Individual motorized transportation modes (<i>high vs low</i>)	1.41 (1.20 ; 1.66)	1.21 (1.04 ; 1.42)	1.19 (0.93 ; 1.52)	1.29 (1.07 ; 1.57)	1.59 (1.21 ; 2.09)
Public transport (<i>high vs low</i>)	0.74 (0.63 ; 0.86)	0.90 (0.77 ; 1.05)	0.58 (0.46 ; 0.73)	0.89 (0.74 ; 1.08)	0.75 (0.57 ; 0.99)
Relatives and friends' use of active transportation modes					
Family's use of walking/cycling for transportation (<i>high vs low</i>)	0.35 (0.29 ; 0.41)	0.41 (0.35 ; 0.49)	0.30 (0.24 ; 0.39)	0.45 (0.37 ; 0.55)	0.36 (0.27 ; 0.47)
Friends' use of walking/cycling for	0.43 (0.37 ; 0.51)	0.56 (0.47 ; 0.66)	0.37 (0.29 ; 0.47)	0.61 (0.50 ; 0.74)	0.43 (0.33 ; 0.58)

transportation (*high vs low*)

Representation of physical activity

Self-representation of an active person (yes vs. no)	0.64	(0.54 ; 0.76)	0.44	(0.37 ; 0.52)	0.53	(0.42 ; 0.68)	0.28	(0.23 ; 0.34)	1.18	(0.86 ; 1.60)
Family representation of physical activity/sports (high vs. low)	0.80	(0.64 ; 0.99)	0.85	(0.69 ; 1.04)	0.93	(0.67 ; 1.28)	0.84	(0.65 ; 1.08)	1.30	(0.92 ; 1.84)

CI: confidence interval, OR: odds ratio