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Table 1

Sample characteristics from Brisbane, Australia (May-July 2007).

Categorical variables	Non-cyclists (n=7991)		Recreation-only cyclists (n=1844)		Utility cyclists (n=388)		Total sample (N=10,223)	
	n	%	n	%	n	%	N	%
Socio-demographic variables								
Age (years)								
40-44	1382	17.3	574	31.1	146	37.6	2102	20.6
45-49	1678	21.0	464	25.2	99	25.5	2241	21.9
50-54	1713	21.4	361	19.6	70	18.0	2144	21.0
55-65	3218	40.3	445	24.1	73	18.8	3736	36.5
Sex								
Male	3259	40.8	992	53.8	288	74.2	4539	44.4
Female	4732	59.2	852	46.2	100	25.8	5684	55.6
Household composition								
Couple, with children	3282	41.1	964	52.3	187	48.2	4433	43.4
Couple, without children	2245	28.1	425	23.0	80	20.6	2750	26.9
Single, living alone or with others	2464	30.8	455	24.7	121	31.2	3040	29.7
Vehicle access								
Yes, always	7164	89.7	1719	93.2	309	79.6	9192	89.9
Yes, sometimes	379	4.7	86	4.7	54	13.9	519	5.1
No	448	5.6	39	2.1	25	6.4	512	5.0
Household income								
$130,000+	1235	15.5	453	24.6	111	28.6	1799	17.6
$72,800-129,999	2027	25.4	539	29.2	105	27.1	2671	26.1
$41,600-72,799	1831	22.9	381	20.7	78	20.1	2290	22.4
$0-41,599	1716	21.5	249	13.5	62	16.0	2027	19.8
Missing[a]	1182	14.8	222	12.0	32	8.2	1436	14.0
Employment status								
Full-time employed	4068	50.9	1168	63.3	252	64.9	5488	53.7
Part-time/casually	1882	23.6	392	21.3	81	20.9	2355	23.0

employed

Perceptions of the neighborhood environment

Traffic volume[b]

Not in the labor force	2041	25.5	284	15.4	55	14.2	2380	23.3
Traffic volume[b]								
Tertile 1 (least)	3070	38.5	784	42.5	149	38.4	4003	39.2
Tertile 2	2483	31.1	568	30.8	119	30.7	3170	31.0
Tertile 3 (most)	2429	30.4	492	26.7	120	30.9	3041	29.8
Aesthetics								
Tertile 1 (least greenery)	3105	38.9	632	34.3	155	39.9	3892	38.1
Tertile 2	3241	40.6	774	42.0	147	37.9	4162	40.7
Tertile 3 (most greenery)	1645	20.6	438	23.8	86	22.2	2169	21.2
Crime								
Tertile 1 (least)	3156	39.5	846	45.9	213	54.9	4215	41.2
Tertile 2	2309	28.9	513	27.8	99	25.5	2921	28.6
Tertile 3 (most)	2526	31.6	485	26.3	76	19.6	3087	30.2
Many traffic calming devices[b]								
Don't agree/neutral	4939	61.9	1158	62.8	257	66.6	6354	62.3
Agree	3036	38.1	685	37.2	129	33.4	3850	37.7
Many streets are hilly[b]								
Don't agree/neutral	2747	34.6	587	32.0	121	31.3	3455	34.0
Agree	5199	65.4	1249	68.0	265	68.7	6713	66.0
Many cul-de-sacs								
Don't agree/neutral	4722	59.1	1109	60.1	277	71.4	6108	59.7
Agree	3269	40.9	735	39.9	111	28.6	4115	40.3
Many 4-way intersections[b]								
Don't agree/neutral	4479	56.2	1042	56.7	188	48.5	5709	56.0
Agree	3486	43.8	796	43.3	200	51.5	4482	44.0

Psychological factors

Self-efficacy towards PA

Tertile 1 (lowest)	3469	43.4	543	29.4	103	26.5	4115	40.3
Tertile 2	2202	27.6	521	28.3	111	28.6	2834	27.7
Tertile 3 (highest)	2320	29.0	780	42.3	174	44.8	3274	32.0

Affective attitude towards PA								
Tertile 1 (most negative)	3540	44.3	480	26.0	97	25.0	4117	40.3
Tertile 2	2091	26.2	528	28.6	100	25.8	2719	26.6
Tertile 3 (most positive)	2360	29.5	836	45.3	191	49.2	3387	33.1
Instrumental attitude towards PA								
Tertile 1 (most negative)	4689	58.7	863	46.8	193	49.7	5745	56.2
Tertile 2	1368	17.1	360	19.5	95	24.5	1823	17.8
Tertile 3 (most positive)	1934	24.2	621	33.7	100	25.8	2655	26.0
Social support for PA								
Tertile 1 (least)	3268	40.9	499	27.1	108	27.8	3875	37.9
Tertile 2	2558	32.0	636	34.5	144	37.1	3338	32.7
Tertile 3 (most)	2165	27.1	709	38.4	136	35.1	3010	29.4
PA habit								
Tertile 1 (Not a habit)	3776	47.3	471	25.5	77	19.8	4324	42.3
Tertile 2	2623	32.8	685	37.1	143	36.9	3451	33.8
Tertile 3 (Strong habit)	1592	19.9	688	37.3	168	43.3	2448	23.9
Continuous perceived environment variables	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Number of recreational facilities within 5 min drive[c]	4.11	2.45	4.50	2.40	4.93	2.56	4.21	2.45
Number of transport destinations within 20 min walk[c]	13.15	4.47	13.53	4.43	14.41	3.91	13.27	4.45

Utility cyclists= participants who cycled to get to and from places in the previous week, most of whom also cycled for recreation; PA = physical activity.

[a]A missing category was included in all modelling due to the high number of missing values for this variable.

[b]Total numbers of participants is reduced by 2 due to missing values for these variables that were not included in the final (Model 4) analysis.

[c]Examples of recreational facilities are a bike path, a public park, a public swimming pool, an

oval, a sports field, and a river. Examples of transport destinations are a supermarket, a post office, a bus top, a cafe/restaurant, and a train station.

Table 2

Modeling separately associations between socio-economic characteristics, neighborhood environment perceptions and psychological disposition factors with cycling behavior (estimated odds ratios and 95% confidence intervals) from a Brisbane, Australia sample sample of adults aged 40 to 65 years (May-July 2007).

| | Cycling status [a] | | | | |
| | No Cycling | Recreation-only Cycling | | Utility Cycling | |
		OR	95%CI	OR	95%CI
MODEL OF SOCIO-ECONOMIC CHARACTERISTICS					
Vehicle access					
Yes, always	1.00				
Yes, sometimes	1.00	1.03	0.80,1.33	3.98	2.93,5.40
No	1.00	0.51	0.35,0.73	1.91	1.15,3.17
Household income[b]					
$130,000+	1.00				
$72,800-129,999	1.00	0.75	0.65,0.86	0.54	0.41,0.72
$41,600-72,799	1.00	0.66	0.56,0.76	0.46	0.33,0.66
$0-41,599	1.00	0.58	0.49,0.70	0.42	0.29,0.61
Employment status					
Full-time employed	1.00				
Part-time/casually employed	1.00	0.92	0.79,1.07	1.40	1.08,1.82
Not in the labor force	1.00	0.78	0.67,0.90	0.91	0.64,1.28
MODEL OF NEIGHBORHOOD ENVIRONMENT PERCEPTIONS					
Traffic volume					
Tertile 1 (least)	1.00				
Tertile 2	1.00	0.95	0.83,1.08	1.03	0.79,1.35
Tertile 3 (most)	1.00	0.90	0.78,1.04	1.17	0.90,1.54
Aesthetics					
Tertile 1 (least greenery)	1.00				

Tertile 2	1.00	1.11	0.98,1.26	0.84	0.66,1.06
Tertile 3 (most greenery)	1.00	1.22	1.05,1.43	0.99	0.73,1.35
Crime					
Tertile 1 (least)	1.00	1			
Tertile 2	1.00	0.90	0.80,1.03	0.70	0.55,0.90
Tertile 3 (most)	1.00	0.88	0.76,1.02	0.53	0.39,0.71
Presence of many traffic calming devices	1.00				
Don't agree/neutral	1.00				
Agree	1.00	1.00	0.89,1.13	0.92	0.72,1.19
Many streets are hilly					
Don't agree/neutral	1.00				
Agree	1.00	1.11	0.88,1.39	1.13	0.89,1.43
Many cul-de-sacs					
Don't agree/neutral	1.00				
Agree	1.00	0.93	0.82,1.04	0.67	0.50,0.88
Many 4-way intersections					
Don't agree/neutral	1.00				
Agree	1.00	0.99	0.89,1.10	1.15	0.92,1.44
Number of recreational facilities within 5 min drive[c]	1.00	1.03	1.01,1.05	1.07	1.02,1.13
Number of transport destinations within 20 min walk[c]	1.00	1.01	1.00,1.03	1.05	1.01,1.08

MODEL OF PSYCHOLOGICAL DISPOSITION

Self-efficacy towards
PA

Tertile 1 (lowest)	1.00				
Tertile 2	1.00	1.17	1.01,1.35	1.22	0.92,1.61

Tertile 3 (highest)	1.00	1.28	1.11,1.47	1.40	1.06,1.85
Affective attitude towards PA					
Tertile 1 (most negative)	1.00				
Tertile 2	1.00	1.36	1.19,1.56	1.14	0.85,1.52
Tertile 3 (most positive)	1.00	1.55	1.35,1.79	1.47	1.12,1.94
Instrumental attitude towards PA					
Tertile 1 (most negative)	1.00				
Tertile 2	1.00	1.15	1.00,1.34	1.36	1.04,1.78
Tertile 3 (most positive attitude)	1.00	1.34	1.17,1.53	1.01	0.76,1.35
Social support for physical activity					
Tertile 1 (least)	1.00				
Tertile 2	1.00	1.39	1.21,1.59	1.49	1.14,1.93
Tertile 3 (most)	1.00	1.59	1.38,1.84	1.55	1.17,2.06
PA habit					
Tertile 1 (not a habit)	1.00				
Tertile 2	1.00	1.69	1.45,1.96	2.15	1.59,2.90
Tertile 3 (strong habit)	1.00	2.28	1.92,2.71	3.61	2.73,4.76

Utility cyclists= participants who cycled to get to and from places in the previous week, most of whom also cycled for recreation; OR = odds ratio; CI = confidence interval; PA = physical activity.

[a] All factors in a model were in one multinomial model, with adjustment for age, gender, and household composition and for clustering within the 200 neighborhoods (CCDs).

[b] The 'Missing' income category (see Table 1) was retained in the analysis but the results are not presented in the table.

[c] Continuous variables. Examples of recreational facilities are a bike path, a public park, a public swimming pool, an oval, a sports field, and a river. Examples of transport destinations are a supermarket, a post office, a cafe/restaurant, a bus stop, a ferry terminal and a train

station.

Table 3

Fully-adjusted modelling of associations between socio-economic characteristics, neighborhood environment perceptions and psychological disposition with cycling behavior (estimated odds ratios and 95% confidence intervals) from a Brisbane, Australia sample of adults aged 40 to 65 years (May-July 2007).

	Cycling status [a]				
	No Cycling	Recreation-only Cycling		Utility Cycling	
		OR	95%CI	OR	95%CI
Vehicle access					
Yes, always	1.00				
Yes, sometimes	1.00	1.06	0.81,1.38	3.95	2.88,5.41
No	1.00	0.60	0.41,0.87	2.22	1.32,3.71
Household income [b]					
$130,000+	1.00				
$72,800-129,999	1.00	0.85	0.74,0.99	0.63	0.48,0.84
$41,600-72,799	1.00	0.80	0.68,0.95	0.60	0.42,0.86
$0-41,599	1.00	0.79	0.65,0.96	0.63	0.43,0.92
Employment status					
Full-time employed	1.00				
Part-time/casually employed	1.00	0.89	0.77,1.03	1.38	1.07,1.79
Not in the labor force	1.00	0.78	0.67,0.91	0.99	0.69,1.42
Aesthetics					
Tertile 1 (least greenery)	1.00				
Tertile 2	1.00	1.05	0.92,1.20	0.77	0.60,0.99
Tertile 3 (most greenery)	1.00	1.05	0.90,1.23	0.80	0.58,1.09
Crime					
Tertile 1 (least)	1.00				
Tertile 2	1.00	0.96	0.84,1.09	0.78	0.60,1.01
Tertile 3 (most)	1.00	0.97	0.83,1.13	0.64	0.47,0.88
Many cul-de-sacs					
Don't agree/neutral	1.00				

Agree	1.00	0.96	0.84,1.09	0.64	0.48,0.86
Number of recreational facilities within 5 min drive[c]	1.00	1.01	0.98,1.03	1.06	1.01,1.11
Number of transport destinations within 20 min walk[c]	1.00	1.00	0.99,1.02	1.03	1.00,1.07
Self-efficacy towards PA					
Tertile 1 (lowest)	1.00				
Tertile 2	1.00	1.16	1.00,1.34	1.15	0.86,1.54
Tertile 3 (highest)	1.00	1.26	1.09,1.45	1.35	1.01,1.81
Affective attitude towards PA					
Tertile 1 (most negative)	1.00				
Tertile 2	1.00	1.33	1.16,1.52	1.10	0.81,1.48
Tertile 3 (most positive)	1.00	1.49	1.30,1.72	1.37	1.04,1.82
Instrumental attitude towards PA					
Tertile 1 (most negative)	1.00				
Tertile 2	1.00	1.14	0.99,1.32	1.37	1.04,1.81
Tertile 3 (most positive)	1.00	1.32	1.15,1.52	1.03	0.77,1.38
Social support for PA					
Tertile 1 (least)	1.00				
Tertile 2	1.00	1.37	1.19,1.56	1.49	1.13,1.95
Tertile 3 (most)	1.00	1.55	1.35,1.78	1.51	1.13,2.01
PA habit					
Tertile 1 (not a habit)	1.00				
Tertile 2	1.00	1.70	1.46,1.97	2.23	1.65,3.01
Tertile 3 (strong habit)	1.00	2.26	1.90,2.68	3.60	2.70,4.78

Utility cyclists= participants who cycled to get to and from places in the previous week, most of whom also cycled for recreation; OR = odds ratio; CI = confidence interval; PA = physical activity.

[a] All factors were in one multinomial model, with adjustment for age, gender, and household composition and for clustering within the 200 neighborhoods (CCDs). This final model includes all variables found to be significant in modelling shown in Table 2, at p<0.10.

[b] The 'Missing' income category (see Table 1) was retained in the analysis but the results are not presented in the table.

[c] Continuous variables. Examples of recreational facilities are a bike path, a public park, a

public swimming pool, an oval, a sports field, and a river. Examples of transport destinations are a supermarket, a post office, a cafe/restaurant, a bus stop, a ferry terminal and a train station.