

Supplementary Table 1: Univariate associations between potential confounders and spherical equivalent and deseasonalised 25[OH]D using linear regression

	Spherical Equivalent		Deseasonalised 25[OH]D	
	Beta (95% CI)	p value	Beta (95% CI)	p value
Age	0.02 (0.01, 0.03)	<0.001	0.29 (0.16, 0.42)	<0.001
Sex				
Male	Reference		Reference	
Female	0.04 (-0.05, 0.14)	0.38	-6.94 (-8.44, -5.45)	<0.001
Highest Education*		<0.001		0.82
Secondary School or lower	Reference		Reference	
Other (e.g. TAFE [†])	-0.14 (-0.25, -0.03)	0.01	-0.23 (-1.96, 1.50)	0.80
University	-0.48 (-0.61, -0.35)	<0.001	-0.66 (-2.67, 1.36)	0.52
Longest Occupation*		0.004		<0.001
Mostly Indoor	Reference		Ref	
Mixed Indoor/Outdoor	0.14 (-0.06, 0.33)	0.18	3.15 (0.13, 6.17)	0.04
Mostly Outdoor	0.19 (0.07, 0.30)	0.001	5.95 (4.21, 7.69)	<0.001
BMI	-0.001 (-0.01, 0.01)	0.90	-1.21 (-1.36, -1.06)	<0.001
Physical activity (per 100 mins a week increase)	0.003 (-0.003, 0.01)	0.32	0.43 (0.34, 0.53)	<0.001
Hours sitting per day	-0.04 (-0.06, -0.02)	<0.001	-0.52 (-0.81, -0.22)	<0.001
Taking vitamin D supplement				
No	Reference		Reference	
Yes	-0.09 (-0.24, 0.06)	0.24	4.90 (2.55, 7.26)	<0.001
Retired				
No	Reference		Reference	
Yes	-0.10 (-0.28, 0.08)	0.29	5.21 (2.39, 8.04)	<0.001

p values <0.10 in bold

*p values from Type III F-test

†Vocational or technical tertiary education in Australia

Supplementary Table 2 Sensitivity analysis of the association between spherical equivalent and myopia and 25[OH]D groups according to different cut-offs after adjustment for age, education, sitting hours, retirement and occupational sun exposure

25[OH]D group	Median (nmol/L)	Spherical Equivalent*		Myopia†	
		Beta (95% CI)	p value	OR (95% CI)	p value
<40nmol/L	36.5	-0.06 (-0.47 - 0.34)	0.75	1.03 (0.61 - 1.74)	0.91
≥40 to <60nmol/L	53.2	0.10 (-0.07 - 0.27)	0.24	0.78 (0.62 - 0.98)	0.03
≥60 to <80nmol/L	70.3	0.15 (0.01 - 0.29)	0.04	0.78 (0.65 - 0.95)	0.01
80 to <100nmol/L	88.3	0.01 (-0.13 - 0.16)	0.85	0.86 (0.71 - 1.05)	0.13
≥100nmol/L	112.8	1 (Reference)		1 (Reference)	

*Multivariate linear regression

†Multivariate logistic regression