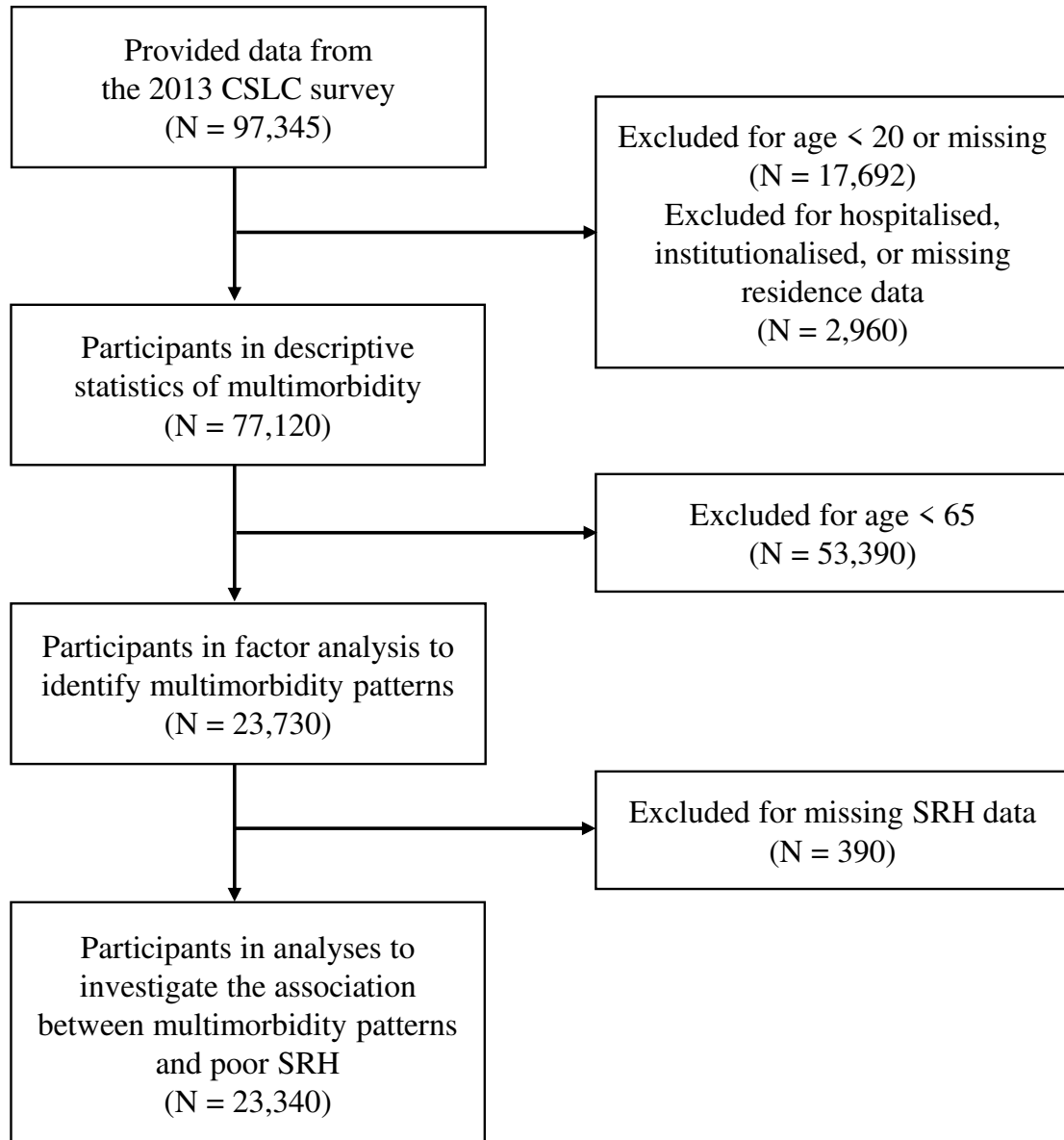


Supplemental Figure 1. Participant flow chart.



CSLC, the Comprehensive Survey of Living Conditions; SRH, self-rated health

Supplemental Table 1. Associations between multimorbidity pattern scores and poor SRH. Modified Poisson regression analyses without K6.

	Malignant/digestive/urologic/haematologic pattern				Degenerative/mental health pattern*				Cardiovascular/metabolic pattern			
	Complete case analysis (N = 19,930)		Multiple imputation (N = 23,340)		Complete case analysis (N = 19,930)		Multiple imputation (N = 23,340)		Complete case analysis (N = 19,930)		Multiple imputation (N = 23,340)	
	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value
Multimorbidity pattern score†	1.68 (1.62-1.75)	<0.001	1.69 (1.63-1.75)	<0.001	1.65 (1.60-1.69)	<0.001	1.65 (1.61-1.69)	<0.001	1.30 (1.25-1.34)	<0.001	1.29 (1.26-1.34)	<0.001
Age (years)												
65-69	ref		ref		ref		ref		ref		ref	
70-74	1.18 (1.09-1.28)	<0.001	1.19 (1.10-1.28)	<0.001	1.14 (1.06-1.24)	0.001	1.15 (1.07-1.23)	<0.001	1.19 (1.10-1.29)	<0.001	1.19 (1.11-1.28)	<0.001
75-79	1.53 (1.41-1.65)	<0.001	1.49 (1.39-1.60)	<0.001	1.41 (1.30-1.52)	<0.001	1.38 (1.29-1.49)	<0.001	1.55 (1.43-1.67)	<0.001	1.51 (1.41-1.63)	<0.001
80-84	1.83 (1.69-1.98)	<0.001	1.82 (1.69-1.96)	<0.001	1.69 (1.56-1.83)	<0.001	1.69 (1.57-1.82)	<0.001	1.90 (1.75-2.06)	<0.001	1.89 (1.75-2.04)	<0.001
85-89	2.05 (1.87-2.24)	<0.001	2.06 (1.90-2.24)	<0.001	1.90 (1.74-2.08)	<0.001	1.92 (1.77-2.09)	<0.001	2.13 (1.95-2.33)	<0.001	2.13 (1.96-2.32)	<0.001
≥90	2.08 (1.85-2.33)	<0.001	2.00 (1.79-2.24)	<0.001	2.01 (1.79-2.26)	<0.001	1.95 (1.74-2.17)	<0.001	2.16 (1.92-2.42)	<0.001	2.08 (1.87-2.33)	<0.001
Female sex	1.13 (1.08-1.19)	<0.001	1.13 (1.08-1.19)	<0.001	0.96 (0.92-1.01)	0.15	0.96 (0.92-1.01)	0.12	1.03 (0.98-1.09)	0.21	1.03 (0.98-1.08)	0.21
Educational level												
Less than high school	ref		ref		ref		ref		ref		ref	
High school	0.91 (0.86-0.96)	<0.001	0.91 (0.86-0.96)	<0.001	0.91 (0.87-0.96)	<0.001	0.91 (0.87-0.96)	<0.001	0.91 (0.87-0.96)	<0.001	0.91 (0.87-0.96)	<0.001
More than high school	0.83 (0.77-0.89)	<0.001	0.83 (0.77-0.90)	<0.001	0.85 (0.78-0.91)	<0.001	0.85 (0.79-0.92)	<0.001	0.84 (0.78-0.91)	<0.001	0.85 (0.79-0.92)	<0.001

SRH, self-rated health; K6, Kessler 6; aRR, adjusted risk ratio; CI, confidence interval

Adjusted for age, sex, and educational level.

*Degenerative/mental health pattern consisted of ear, eye, and musculoskeletal system diseases and mental disorders.

†Multimorbidity pattern scores corresponded to the number of affected body system-dependent clusters in each pattern.

Each pattern score was individually included in the model, adjusted for age, sex, and educational level.

Supplemental Table 2. Associations between multimorbidity pattern scores and poor SRH. Modified Poisson regression analyses with K6.

	Malignant/digestive/urologic/haematologic pattern				Degenerative/mental health pattern*				Cardiovascular/metabolic pattern			
	Complete case analysis (N = 18,534)		Multiple imputation (N = 23,340)		Complete case analysis (N = 18,534)		Multiple imputation (N = 23,340)		Complete case analysis (N = 18,534)		Multiple imputation (N = 23,340)	
	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value	Poor SRH (aRR (95% CI))	P value
Multimorbidity pattern score†	1.49 (1.44-1.56)	<0.001	1.49 (1.44-1.54)	<0.001	1.47 (1.43-1.51)	<0.001	1.46 (1.42-1.50)	<0.001	1.24 (1.20-1.29)	<0.001	1.24 (1.20-1.28)	<0.001
Age (years)												
65-69	ref		ref		ref		ref		ref		ref	
70-74	1.15 (1.06-1.25)	<0.001	1.17 (1.09-1.25)	<0.001	1.12 (1.04-1.21)	0.005	1.14 (1.06-1.22)	<0.001	1.16 (1.07-1.25)	<0.001	1.17 (1.09-1.25)	<0.001
75-79	1.51 (1.40-1.63)	<0.001	1.46 (1.37-1.57)	<0.001	1.41 (1.31-1.53)	<0.001	1.38 (1.29-1.48)	<0.001	1.52 (1.40-1.64)	<0.001	1.48 (1.38-1.58)	<0.001
80-84	1.75 (1.61-1.90)	<0.001	1.71 (1.59-1.84)	<0.001	1.64 (1.51-1.78)	<0.001	1.61 (1.50-1.73)	<0.001	1.78 (1.64-1.93)	<0.001	1.74 (1.63-1.87)	<0.001
85-89	1.86 (1.69-2.04)	<0.001	1.85 (1.71-2.01)	<0.001	1.76 (1.61-1.93)	<0.001	1.77 (1.63-1.92)	<0.001	1.89 (1.73-2.07)	<0.001	1.89 (1.74-2.05)	<0.001
≥90	1.82 (1.62-2.05)	<0.001	1.73 (1.56-1.92)	<0.001	1.81 (1.61-2.04)	<0.001	1.72 (1.54-1.91)	<0.001	1.87 (1.66-2.10)	<0.001	1.76 (1.59-1.96)	<0.001
Female sex	1.06 (1.01-1.12)	0.031	1.05 (1.00-1.10)	0.039	0.93 (0.88-0.98)	0.005	0.92 (0.88-0.97)	<0.001	0.98 (0.93-1.03)	0.45	0.97 (0.93-1.02)	0.25
Educational level												
Less than high school	ref		ref		ref		ref		ref		ref	
High school	0.93 (0.88-0.98)	0.009	0.94 (0.89-0.98)	0.009	0.93 (0.88-0.99)	0.012	0.94 (0.89-0.99)	0.011	0.94 (0.89-0.99)	0.018	0.94 (0.90-0.99)	0.023
More than high school	0.89 (0.83-0.97)	0.004	0.89 (0.83-0.96)	0.002	0.91 (0.84-0.98)	0.016	0.91 (0.85-0.98)	0.009	0.91 (0.84-0.98)	0.014	0.91 (0.85-0.98)	0.012
K6 score												
0-4 (normal)	ref		ref		ref		ref		ref		ref	
5-12 (psychological distress)	2.57 (2.44-2.71)	<0.001	2.61 (2.48-2.74)	<0.001	2.47 (2.34-2.61)	<0.001	2.50 (2.38-2.63)	<0.001	2.64 (2.50-2.78)	<0.001	2.66 (2.53-2.79)	<0.001
13-24 (severe mental illness)	4.31 (4.04-4.60)	<0.001	4.29 (4.05-4.55)	<0.001	3.98 (3.71-4.26)	<0.001	3.97 (3.72-4.23)	<0.001	4.57 (4.29-4.86)	<0.001	4.56 (4.31-4.83)	<0.001

SRH, self-rated health; K6, Kessler 6; aRR, adjusted risk ratio; CI, confidence interval

Adjusted for age, sex, educational level, and K6.

*Degenerative/mental health pattern consisted of ear, eye, and musculoskeletal system diseases and mental disorders.

†Multimorbidity pattern scores corresponded to the number of affected body system-dependent clusters in each pattern.

Each pattern score was individually included in the model, adjusted for age, sex, educational level, and K6 score.