

Data supplement

Table DS1 Participant characteristics (n= 21981)

Characteristic	Number	%
Demographics		
Age		
18-30	3470	15.8
31-50	6876	31.3
51-70	7756	35.3
71+	3879	17.6
Sex: Male	10312	46.9
Employment		
Company employee	5033	24.2
Civil servant	687	3.3
Own business	969	4.7
Part-time employee	1676	8.1
Housewife	1042	5.0
Student	719	3.5
Unemployed	8241	39.7
Hospital or welfare worker	747	3.6
Farmer	161	0.8
Fisherman or seaman	379	1.8
Location (Prefecture)		
Northern Miyagi	14700	66.9
Central/ Southern Miyagi	6132	27.9
Fukushima	935	4.3
Previously had serious disease	4541	21.5
Disaster experiences		
Family member death	2614	12.8
Family death - by region		
Northern Miyagi	1938	14.3
Central /Southern Miyagi	611	10.5
Fukushima	43	4.8
Home complete collapse – by region		
Northern Miyagi	12800	87.1
Central /Southern Miyagi	4687	76.0
Fukushima	72	7.7
Salary as main household income	14217	70.3
Seeking treatment for disease		
Diabetes	1334	6.1
High blood pressure	4457	20.3
Cancer	351	1.6
Cardiac disease	730	3.3
Cerebrovascular disease	322	1.5
Respiratory disorder	543	2.5
Dialysis	107	0.5
Moderate mental illness (K6)	3739	18.2
Severe mental illness (K6)	1888	9.2
Sleeplessness	3906	18.3
No appetite	724	3.4
Lethargy	2321	10.9
Alcohol in morning	257	1.2
Changes in physical activity		
Decreased since 3.11	10111	49.9
As before	9079	44.8
Increased	1085	5.4

House visitor	17891	87.9
Visitor is relative	16168	79.4
Visitor is child	3163	15.5
Visitor is sibling	4527	22.2
Visitor is daughter-in-law	552	2.7
Support from		
Spouse	5141	26.5
Father	609	3.1
Mother	1205	6.2
Grandparent	33	0.2
Child	1558	8.0
Grandchild	33	0.2
Sibling	1385	23.8
Friend	4617	20.6

Table DS2 Composition of Northern and Southern Miyagi (where > 10 respondents)

Area and towns	Sample population
Northern Miyagi	
Kesenuma-Motoyoshi:	
Kesenuma Shi	2819
Minamisanriku-Cho	819
Ishinomaki:	
Ishinomaki Shi	8003
Onagawa-Cho	651
Higashi-Matsushima Shi	1759
Tome and Kurihara:	
Tome Shi	36
Kurihara Shi	14
Osaki:	
Osaki Shi	417
Kami-Machi	11
Wakuya-Cho	19
Misato-Machi	80
Southern and Central Miyagi	
Northern Sendai:	
Shiogama Shi	337
Tagajo Shi	1199
Matsushima-Machi	92
Shichigahama-Machi	392
Rifu-Cho	73
Central and Southern Coast:	
Sendai Shi	317
Natori Shi	1002
Watari-Cho	1156
Yamamoto-Cho	982
Iwanuma-Shi	413
Sennan, Southern Sendai:	
Shiroishi Shi	131
Kakuta Shi	19
Shibata-Machi	11

Table DS3 Regional differences in dysfunctional behaviours

	Sleeplessness (N, %)	No appetite (N, %)	Lethargy (N, %)	Alcohol in mornings (N, %)
Northern Miyagi	2537 (17.8)	438 (3.1)	1504 (10.6)	149 (1.0)
Southern Miyagi	1171 (19.5)	248 (4.1)	689 (11.5)	90 (1.5)
Fukushima	170 (18.2)	32 (3.4)	110 (11.8)	12 (1.3)
χ^2 (2)	7.53*	14.05***	4.14	7.34*

Notes:

*p < 0.05, **p<0.01, ***p<0.001

South Miyagi > North Miyagi for all significant differences in dysfunctional behaviours. There were no significant differences between Southern Miyagi or Northern Miyagi and Fukushima.

Table DS4 Bivariate associations between potential demographic/disaster-related factors and dysfunction

	Sleeplessness OR (95%CI)	No appetite OR (95%CI)	Lethargy OR (95%CI)	Alcohol in mornings OR (95%CI)
Age	1.02 (1.02-1.03)	1.02 (1.01-1.02)	1.01 (1.01-1.01)	1.00 (1.00-1.01)
Sex (female)	1.63 (1.52-1.75)	1.24 (1.07-1.44)	1.64 (1.50-1.79)	0.18 (0.13-0.25)
Unemployed	1.83 (1.69-1.97)	1.83 (1.56-2.14)	1.52 (1.38-1.66)	1.16 (0.88-1.52)
Post-disaster experiences				
House collapse	1.01 (0.93-1.10)	0.83 (0.69-0.99)	0.93 (0.84-1.04)	0.76 (0.57-1.01)
Family lost in disaster	1.04 (0.94-1.16)	1.11 (0.89-1.38)	1.40 (1.24-1.59)	1.27 (0.89-1.81)
Disease history	2.02 (1.87-2.19)	2.40 (2.05-2.80)	1.81 (1.65-1.99)	1.46 (1.10-1.92)
Disease treatment	2.50 (2.33-2.68)	2.33 (2.00-2.70)	1.95 (1.79-2.13)	1.21 (0.95-1.55)
Change in activity	0.45 (0.42-0.48)	0.42 (0.36-0.49)	0.29 (0.26-0.32)	0.65 (0.52-0.82)
House visitor				
Relative	0.77 (0.69-0.85)	0.54 (0.44-0.65)	0.52 (0.42-0.58)	0.36 (0.27-0.48)
Child	0.82*** (0.76-0.90)	0.60*** (0.51-0.71)	0.61 (0.55-0.67)	0.46*** (0.35-0.60)
Sibling	1.30*** (1.18-1.43)	1.14 (0.93-1.40)	0.99 (0.87-1.12)	1.04 (0.73-1.48)
daughter-in-law	1.03 (0.95-1.30)	0.91 (0.75-1.10)	0.84** (0.75-0.94)	0.84 (0.61-1.16)
	1.35** (1.10-1.65)	1.31 (0.86-2.00)	0.96 (0.72-1.27)	2.68 (1.60-4.48)
Support from				
Spouse	0.81 (0.75-0.89)	0.56 (0.46-0.69)	0.61 (0.54-0.68)	0.76 (0.56-1.04)
Father	0.35 (0.26-0.42)	0.71 (0.43-1.20)	0.45 (0.34-0.68)	0.13 (0.02-0.93)
Mother	0.45 (0.37-0.55)	0.72 (0.50-1.04)	0.66 (0.53-0.81)	0.19 (0.06-0.60)
Child	1.57 (1.39-1.77)	1.65 (1.30-2.10)	1.17 (1.00-1.37)	0.45 (0.23-0.89)
Sibling	1.28 (1.12-1.46)	0.95 (0.70-1.30)	0.90 (0.75-1.08)	0.95 (0.57-1.58)
Friend	0.67 (0.61-0.73)	0.58 (0.47-0.72)	0.65 (0.58-0.73)	0.63 (0.45-0.89)

Note:

*p < 0.05, **p<0.01, ***p<0.001