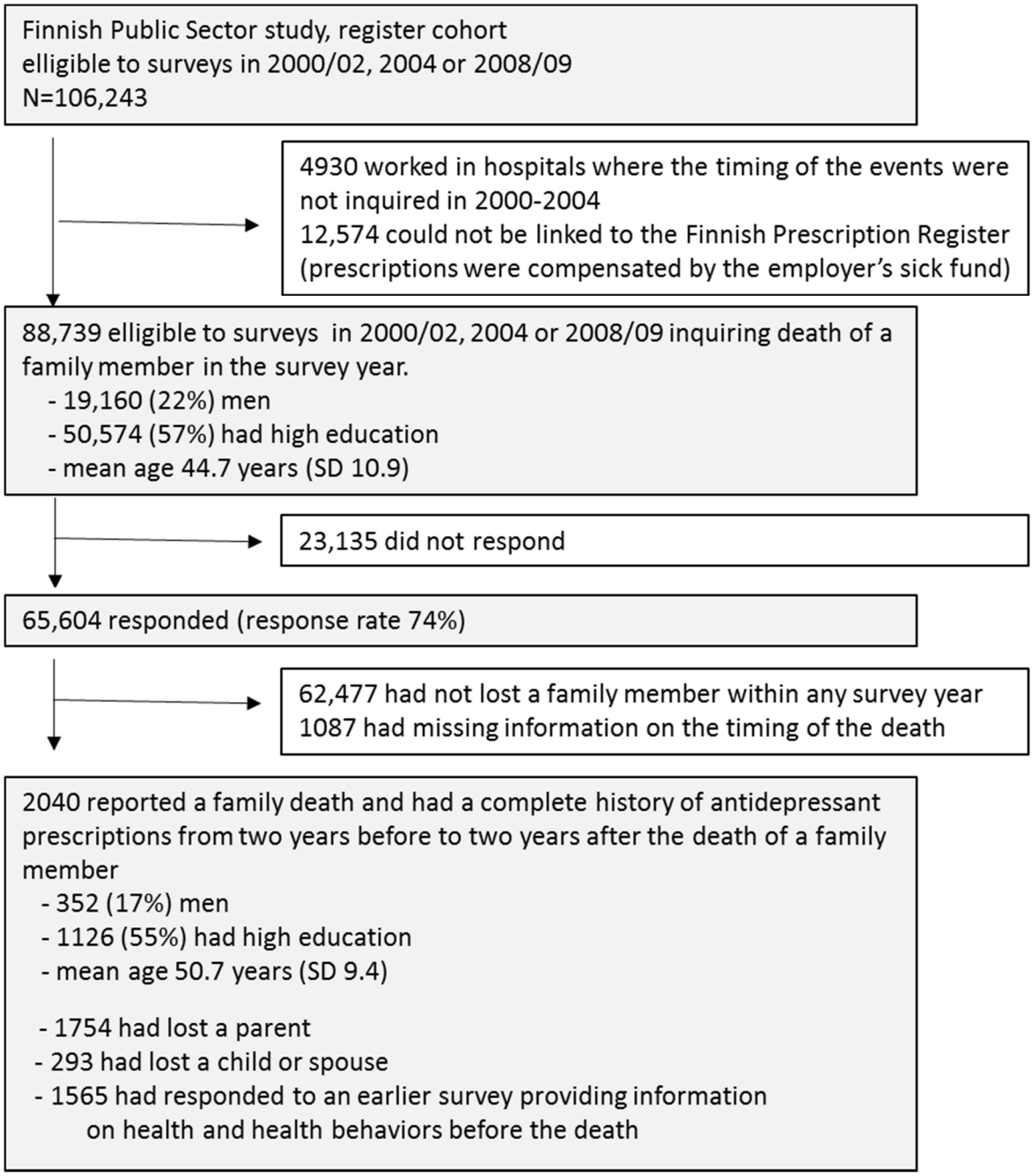
Supplementary Material to "Antidepressant use before and after death of a family member: a cohort study"



Supplementary Figure S1. Study participant flow chart

Supplementary Table S1. Characteristics of parentally bereaved subjects (n=1754) before loss, categorised according to antidepressant use trajectories* around subsequent death

	n (%)	Low use (n=1455) %	Increasing use (n=172) %	High use (n=127) %	p value[a]
Age					0.25
<50 yrs	733 (41.8)	83.4	10.5	6.1	
≥50 yrs	1021 (58.2)	82.7	9.3	8.0	
Sex					0.23
Women	1441 (82.2)	82.2	10.2	7.6	
Men	313 (17.8)	86.3	8.0	5.8	
High education					0.61
Yes	993 (56.6)	82.7	9.6	7.8	
No	761 (43.4)	83.3	10.1	6.6	
Self-rated health					<.0001
Optimal	947 (70.2)	86.6	8.9	4.5	
Suboptimal	402 (29.8)	74.9	10.0	15.2	
Chronic conditions[b]					0.07
No	1582 (90.2)	83.6	9.4	7.0	
Yes	172 (9.8)	76.7	13.4	9.9	
Heavy alcohol use[c]					0.002
No	1234 (90.9)	84.1	8.5	7.4	
Yes	124 (9.1)	71.8	16.9	11.3	
Low physical activity[d]					0.02
No	1028 (76.0)	84.2	9.2	6.5	
Yes	324 (24.0)	79.9	9.0	11.1	
Current smoking					0.49
No	1121 (83.8)	82.9	8.9	8.2	
Yes	216 (16.2)	83.8	10.2	6.0	
High distress[e]					<.0001
No	1011 (74.7)	86.7	7.8	5.4	
Yes	342 (25.3)	72.5	13.7	13.7	
High anxiety					<.0001
No	999 (74.7)	87.5	8.0	4.5	
Yes	339 (25.3)	71.1	12.7	16.2	
Sleeping problems					<.0001
No	661 (49.9)	88.7	6.7	4.7	
Yes	663 (50.1)	77.5	11.6	10.9	

[*] row percentages
[a] differences between the three trajectories of AD use
[b] includes information on diabetes, rheumatoid arthritis, asthma, coronary heart disease, cancer
[c] heavy alcohol use defined as weekly consumption of absolute ethanol exceeding 192g in women and 288g in men
[d] low physical activity defined as < 2 metabolic equivalent (MET) hours/day
[e] GHQ-12 score >3

Supplementary Table S2. Characteristics of child/spousally bereaved subjects (n=293) before loss, categorised according to antidepressant use trajectories* around subsequent death

	n (%)	Low use (n=242) %	Increasing use (n=33) %	High use (n=18) %	p value[a]
Age					0.34
<50 yrs	100 (34.1)	87.0	9.0	4.0	
≥50 yrs	193 (65.9)	80.3	12.4	7.3	
Sex					0.43
Women	252 (86.0)	82.5	11.9	5.6	
Men	41 (14.0)	82.9	7.3	9.8	
High education					0.41
Yes	136 (46.4)	80.1	11.8	8.1	
No	157 (53.6)	84.7	10.8	4.5	
Self-rated health					0.007
Optimal	129 (63.2)	89.1	7.0	3.9	
Suboptimal	75 (36.8)	72.0	16.0	12.0	
Chronic conditions[b]					0.58
No	260 (88.7)	82.7	10.8	6.5	
Yes	33 (11.3)	81.8	15.2	3.0	
Heavy alcohol use[c]					0.06
No	184 (89.3)	84.8	9.8	5.4	
Yes	22 (10.7)	68.2	13.6	18.2	
Low physical activity[d]					0.04
No	140 (68.3)	87.1	8.6	4.3	
Yes	65 (31.7)	73.8	13.8	12.3	
Current smoking					NA
No	168 (82.4)	81.5	12.5	6.0	
Yes	36 (17.6)	88.9	0	11.1	
High distress[e]					0.05
No	144 (69.6)	86.8	9.0	4.2	
Yes	63 (30.4)	74.6	12.7	12.7	
High anxiety					<.0001
No	132 (67.0)	91.7	6.1	2.3	
Yes	65 (33.0)	66.2	16.9	16.9	
Sleeping problems					0.002
No	81 (44.0)	93.8	4.9	1.2	
Yes	103 (56.0)	73.8	14.6	11.7	

*row percentages

[a] differences between the three trajectories of AD use

[b] includes information on diabetes, rheumatoid arthritis, asthma, coronary heart disease, cancer

[c] heavy alcohol use defined as weekly consumption of absolute ethanol exceeding 192g in women and 288g in men

[d] low physical activity defined as < 2 metabolic equivalent (MET) hours/day

[e] GHQ-12 score >3

Supplementary Table S3. Model fit statistics of the trajectory analysis models with different one to five latent trajectories

		Number of latent classes				
Event	Fit statistic	1	2	3	4	5
Death of spouse or child	Log-likelihood:	-1476.7	-752.5	-634.9	-634.9	-6890.0
	AIC:	2959.3	1518.9	1291.9	1291.9	13802.1
	BIC:	2978.7	1564.1	**1362.8**	1362.8	13873.1
Death of parent	Log-likelihood:	-8639.9	-4127.2	-3583.6	-93785.6	-4500.7
	AIC:	17285.7	8268.3	7189.2	187577.2	9031.4
	BIC:	17310.5	8326.0	**7279.8**	187601.9	9155.0

Supplementary Table S4. Predictors of antidepressant (AD) use trajectories around death in the family: Odds ratios (OR) with 95% confidence intervals (CI), **adjusted for age, sex, education and chronic conditions,** estimated from multinomial logistic regression models using the trajectory of low AD use as a reference group

	Low use	Increasing use			High use		
	OR	OR	95% CI		OR	95% CI	
Death of parent (n=1754)							
Age (≥50 vs <50 yrs)	1	0.87	0.63	to 1.20	1.31	0.89	to 1.92
Sex (women vs men)	1	1.30	0.83	to 2.03	1.51	0.88	to 2.59
Education (low vs high)	1	1.07	0.77	to 1.47	0.82	0.56	to 1.20
Self-rated health (poor vs good)	1	1.30	0.85	to 1.98	4.11	2.66	to 6.36
Chronic conditions (yes vs no)[a]	1	1.57	0.97	to 2.53	1.50	0.86	to 2.59
Heavy alcohol use (yes vs no)[b]	1	2.45	1.45	to 4.15	1.82	0.98	to 3.37
Low physical activity (yes vs no)[c]	1	1.02	0.65	to 1.60	1.81	1.17	to 2.81
Current smoking (yes vs no)	1	1.13	0.68	to 1.88	0.75	0.41	to 1.40
High distress (yes vs no)[d]	1	2.05	1.38	to 3.04	3.03	1.99	to 4.62
High anxiety (yes vs no)	1	1.91	1.28	to 2.86	4.38	2.87	to 6.70
Sleeping problems (yes vs no)	1	1.98	1.33	to 2.94	2.64	1.69	to 4.11
Death of child or spouse (n=293)							
Age (≥50 vs <50 yrs)	1	1.51	0.67	to 3.43	2.19	0.69	to 6.96
Sex (women vs men)	1	1.65	0.48	to 5.75	0.60	0.18	to 1.96
Education (low vs high)	1	0.84	0.40	to 1.75	0.50	0.18	to 1.34
Self-rated health (poor vs good)	1	2.95	1.12	to 7.74	4.01	1.23	to 13.09
Chronic conditions (yes vs no)[a]	1	1.36	0.48	to 3.85	0.48	0.06	to 3.76
Heavy alcohol use (yes vs no)[b]	1	1.48	0.38	to 5.84	3.62	0.97	to 13.54
Low physical activity (yes vs no)[c]	1	1.92	0.75	to 4.93	3.39	1.10	to 10.47
Current smoking (yes vs no)[e]	1	-			1.72	0.49	to 6.00
High distress (yes vs no)[d]	1	1.51	0.58	to 3.93	3.56	1.15	to 11.08
High anxiety (yes vs no)	1	3.79	1.41	to 10.21	10.20	2.66	to 39.13
Sleeping problems (yes vs no)	1	4.02	1.24	to 13.04	14.41	1.79	to 116.2

[a] includes information on diabetes, rheumatoid arthritis, asthma, coronary heart disease, cancer
[b] heavy alcohol use defined as weekly consumption of absolute ethanol exceeding 192g in women and 288g in men
[c] low physical activity defined as < 2 metabolic equivalent (MET) hours/day
[d] GHQ-12 score >3
[e] too few observations for execution of trajectory analysis for increasing use