

## Supplementary Online Content

Erlangsen A, Runeson B, Bolton JM, et al. Association between spousal suicide and mental, physical, and social health outcomes: a longitudinal and nationwide register-based study. *JAMA Psychiatry*. Published online March 22, 2017. doi:10.1001/jamapsychiatry.2017.0226

**eFigure.** Kaplan Meier Curves of the Probability of Examined Outcomes Depending on Exposure Status Among Bereaved by Suicide, Bereaved by Other Manners of Death, and Those Not Bereaved

**eTable 1.** List of Examined Outcomes

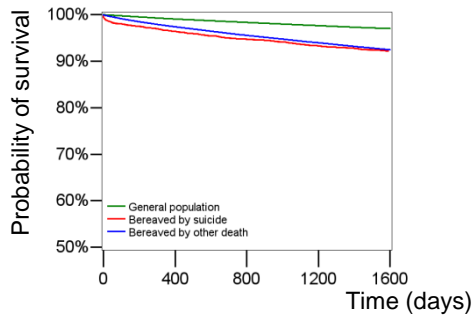
**eTable 2.** Characteristic and Distribution of the Study Population

This supplementary material has been provided by the authors to give readers additional information about their work.

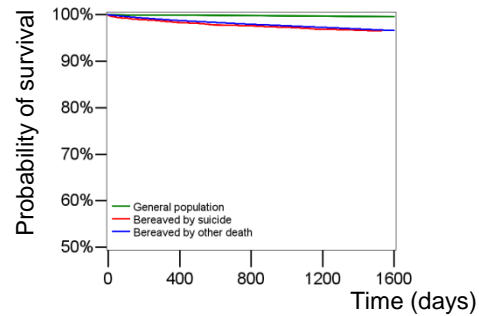
**eFigure 1.** Kaplan Meier curves of the probability of examined outcomes depending on exposure status among bereaved by suicide, bereaved by other manners of death, and those not bereaved.<sup>a</sup>

**MEN<sup>b</sup>**

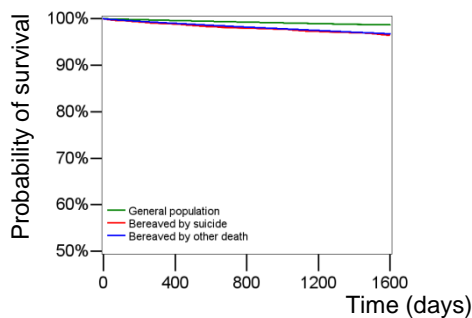
**A Any psychiatric diagnose**



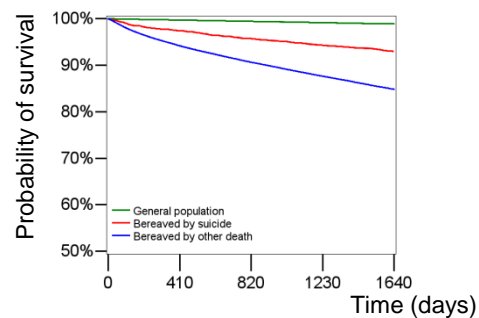
**B Mood disorders**



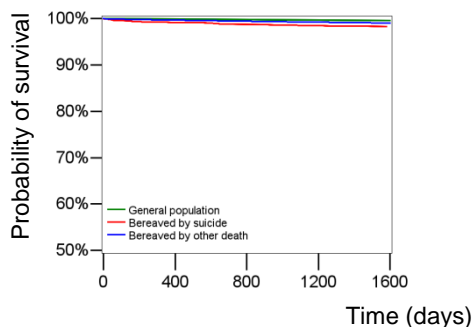
**C Alcohol use disorder**



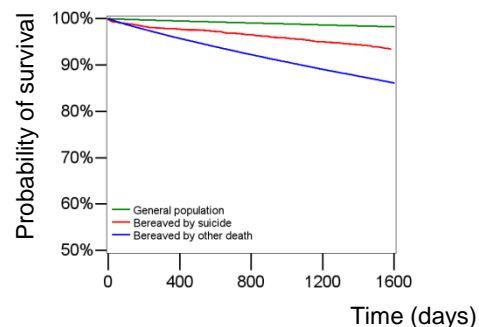
**D Prescribed antidepressants**



**E Deliberate self-harm**



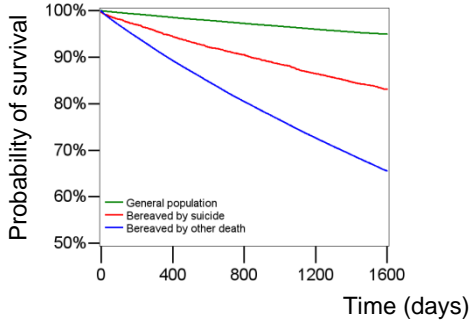
**F Cancer**



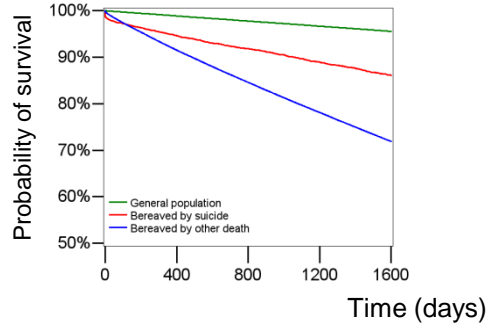
<sup>a</sup> The Kaplan Meier survival curves present the probability of survival, i.e. of not experiencing the examined outcome. Onset for people bereaved by partner's suicide or other manner of death was date of bereavement. Onset for the general population was date of entry into study. Probability estimates are unadjusted; differences between these estimates and those of the adjusted analyses are related to differences between the compared groups, such as age.

<sup>b</sup> Significance test of difference between groups: A. Any psychiatric disorder. Log rank test(2)=3,172.3, p<0.0001; B. Mood disorders. Log rank test(2)=14,721.9, p<0.0001; C. Alcohol use disorder. Log rank test(2)=587.5, p<0.0001; D. Prescribed antidepressants. Log rank test(2)=602,397.0, p<0.0001; E. Deliberate self-harm. Log rank test(2)=76.2, p<0.0001; F. Cancer. Log rank test(2)=62,830.4, p<0.0001; G. Cardiovascular diseases. Log rank test(2)=136,340.6, p<0.0001; H. Any death. Log rank test(2)=203,655.6, p<0.0001; I. Death by suicide. Log rank test(2)=1,888.8, p<0.0001; J. Sick leave. Log rank test(2)=4,831.0, p<0.0001; K. Unemployed. Log rank test(2)=116,637.4, p<0.0001; L. Somatic hospitalization. Log rank test(2)=1,440,150.1, p<0.0001; M. Psychiatric hospitalization. Log rank test(2)=599.4, p<0.0001; N. General practitioner contact. Log rank test(2)=289,112.4, p<0.0001.

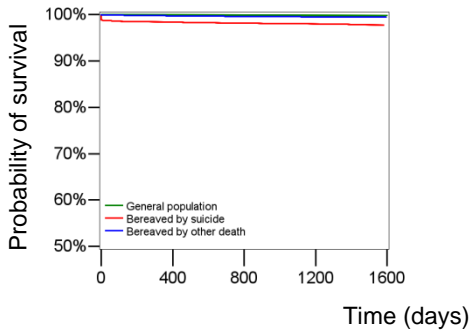
**G Cardiovascular diseases**



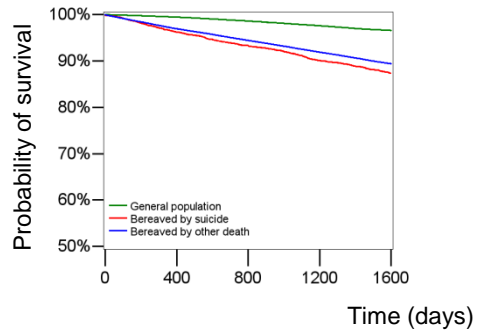
**H Any death**



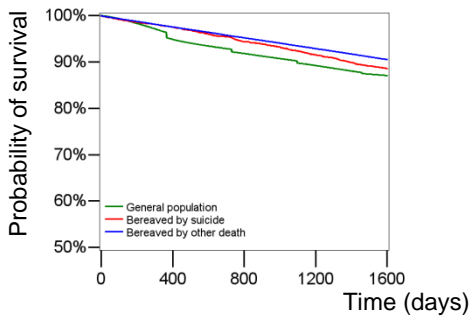
**I Death by suicide**



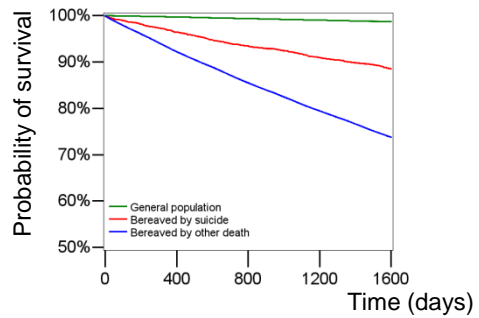
**J Sick leave**



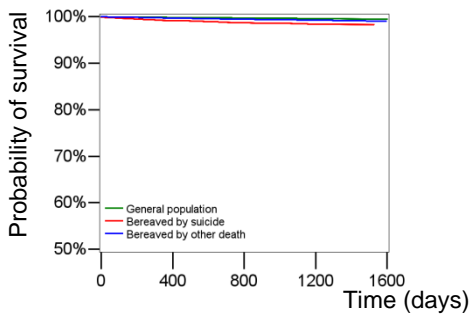
**K Unemployed**



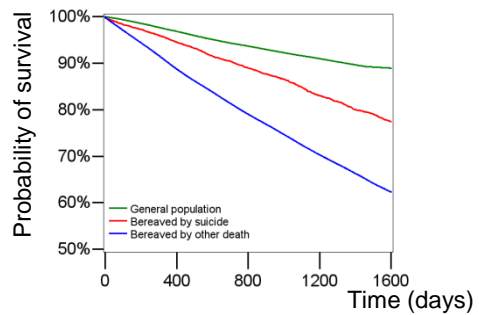
**L Somatic hospitalization**



**M Psychiatric hospitalization**

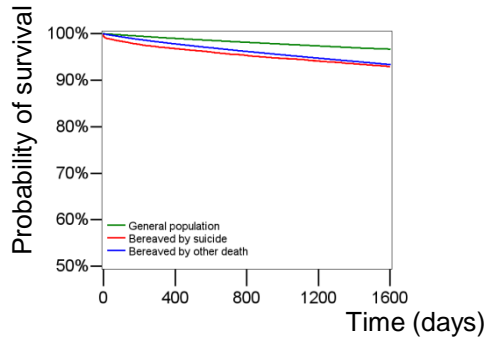


**N General practitioner contact**

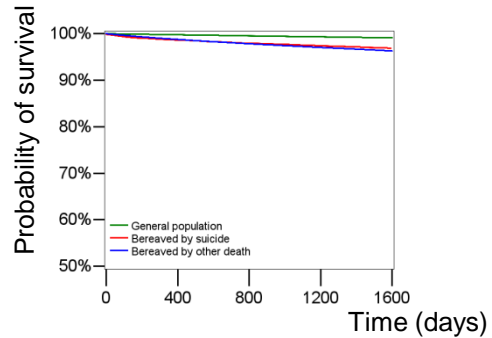


## WOMEN<sup>c</sup>

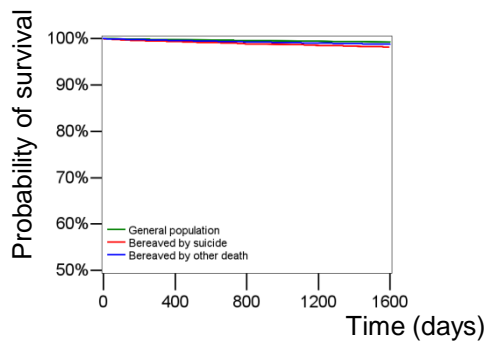
**A** Any psychiatric diagnose



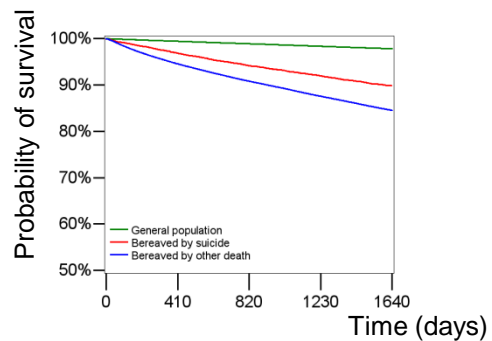
**B** Mood disorders



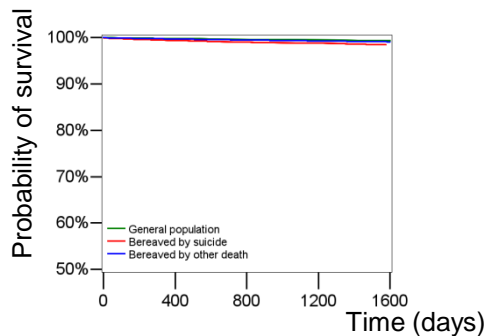
**C** Alcohol use disorder



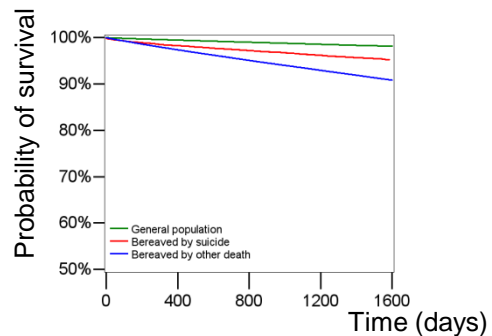
**D** Prescribed antidepressants



**E** Deliberate self-harm

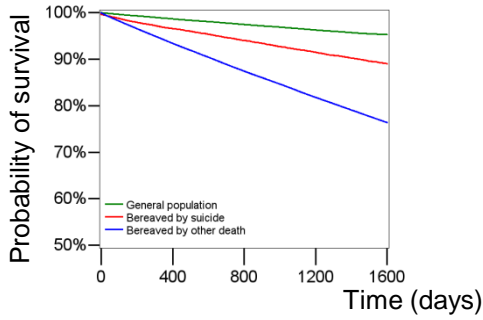


**F** Cancer

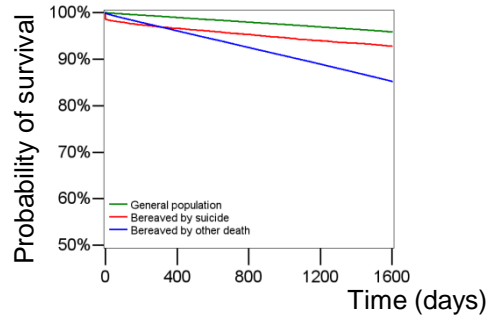


<sup>c</sup> Significance test of difference between groups: A. Any psychiatric disorder. Log rank test(2)=2,050.3,  $p < 0.0001$ ; B. Mood disorders. Log rank test(2)=11,856.5,  $p < 0.0001$ ; C. Alcohol use disorder. Log rank test(2)=97.1,  $p < 0.0001$ ; D. Prescribed antidepressants. Log rank test(2)=103,721.3,  $p < 0.0001$ ; E. Deliberate self-harm. Log rank test(2)=131.8,  $p < 0.0001$ ; F. Cancer. Log rank test(2)=41,311.6,  $p < 0.0001$ ; G. Cardiovascular diseases. Log rank test(2)=126,122.4,  $p < 0.0001$ ; H. Any death. Log rank test(2)=101,133.2,  $p < 0.0001$ ; I. Death by suicide. Log rank test(2)=982.6,  $p < 0.0001$ ; J. Sick leave. Log rank test(2)=4,880.6,  $p < 0.0001$ ; K. Unemployed. Log rank test(2)=43,122.4,  $p < 0.0001$ ; L. Somatic hospitalization. Log rank test(2)=243,702.2,  $p < 0.0001$ ; M. Psychiatric hospitalization. Log rank test(2)=233.1,  $p < 0.0001$ ; N. General practitioner contact. Log rank test(2)=29,945.3,  $p < 0.0001$ .

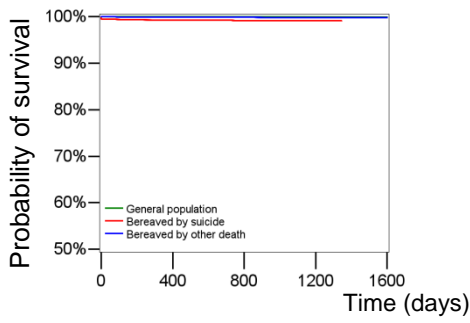
**G Cardiovascular diseases**



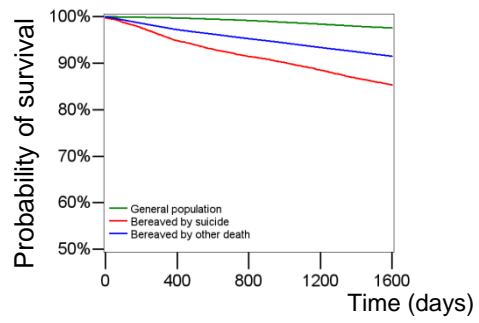
**H Any death**



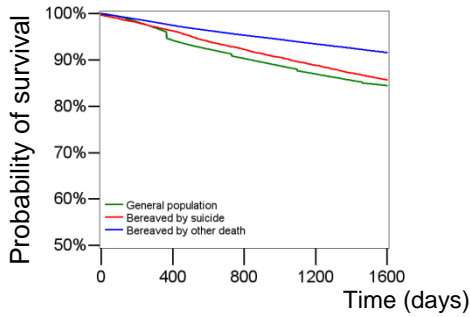
**I Death by suicide**



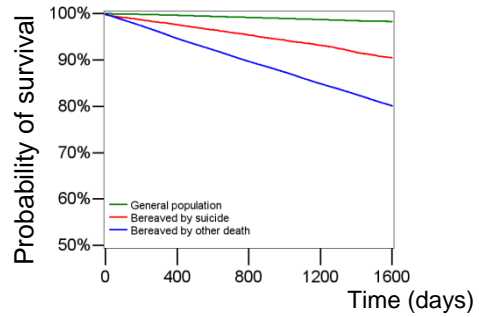
**J Sick leave**



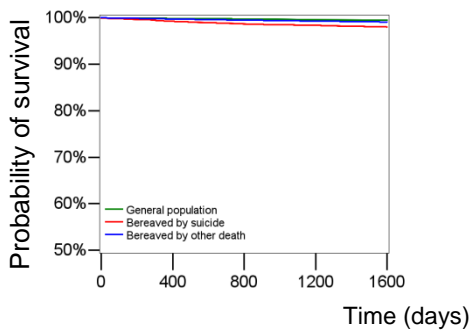
**K Unemployed**



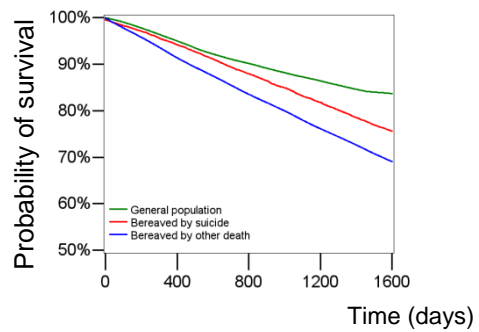
**L Somatic hospitalization**



**M Psychiatric hospitalization**



**N General practitioner contact**



**eTable 1. List of Examined Outcomes.**

<b>Examined outcomes</b>	<b>Measured as/ ICD-codes</b>
Any psychiatric diagnosis	Any diagnosis of a mental disorder made during hospital contact; ICD-8: 290-315; ICD-10: F 00-99.
Mood disorders	ICD-8: 296, 298.09, 298.19, 300.49, 301.19; ICD-10: F30-39.
PTSD	ICD-10: F43.
Anxiety disorders	ICD-8: 300; ICD-10: F40-42.
Alcohol use disorder	ICD-8: 291, 303; ICD-10: F10.
Drug use disorder	ICD-8: 304; ICD-10: F11-F19.
Prescribed antidepressants	A new treatment with antidepressants (N06A) commenced after 1995 as recorded in the Danish Prescription Register.
Deliberate self-harm	ICD-8: 950-950; ICD-10: X60-X84 or when data on 'reason for contact' was listed as self-harm.
Cancer	ICD-8: 140-209 (except 172-173); ICD-10: C00-C97 (except C43-44).
Diabetes	ICD-8: 249- 250; ICD-10: E10, E11, E12, E13, E14, O240, O241, O242, O243.
Sleep disorder	ICD-8: 306.4, 780.6; ICD-10: F51, G47.
Cardiovascular diseases	ICD-8: 390-459; ICD-10: I00-I99.
Chronic lower respiratory diseases (incl. cold and chronic bronchitis)	ICD-8: 490-4933; ICD-10: J40-47.
Liver cirrhosis	ICD-8: 571; ICD-10: K70, K73, K74.
Spinal disc herniation	ICD-8: 725; ICD-10: M50-M51.
Any death	Deaths as recorded in the Register of Causes of Death.
Natural death	ICD-8: 000-796; ICD-10: A00-T98.
Accident	ICD-8: E980-E949; ICD-10: V00-X59. Deaths due to undetermined causes (ICD-8: E980-E989; ICD-10:Y10-Y34) were merged with accidents due to few observations and similarity of trends.
Suicide	ICD-8: E950-E959; ICD-10: X60-X84 or where manner of death was recorded as 'suicide'.
Homicide	ICD-8: E960-E969; ICD-10: X85-Y09 or where manner of death was recorded as 'homicide'.
Divorce	A record of a divorce or a dissolved partnership in the Civil Registration System.
Children placed outside the home	A record of at least one child placed outside the home by the authorities in the Register of Outplaced Children and Youth (BOA).
Municipal family support	A record of having received municipal services related to social family support, such as counselling, temporary placement outside home of child, or other supportive interventions (not including financial transfer payments). Data derived from the Register over Municipal Support to Children and Youth (BUFO).

Sick leave from work	A record of more than 15 working days of sick leave within one calendar year in the Register on Combined Social Statistics of Statistics Denmark since 1984.
Unemployment	A record of more than 25% of yearly income paid out as unemployment benefits or having received 90 days of unemployment benefits within a calendar year in the Income Statistics Register and the Combined Social Statistics of Statistics Denmark.
Disability pension	A record of more than 180 days on disability pension within a calendar year as registered in the Register on Combined Social Statistics and the Register over Social Pensions of Statistics Denmark since 1984.
Somatic hospitalization	A record of having been hospitalized as an inpatient for somatic disorders for more than 10 days during calendar year.
Psychiatric hospitalization	A record of having been hospitalized as an inpatient for psychiatric disorders for more than 10 days during calendar year.
GP contact	A record of having had three or more contacts to general practitioner within a calendar year as recorded in the National Health Service Register during the period of 1990-2006 with the following codes: 8001, 8104, 8105, 8106, 8201, 8204, 8301, 8304, 8401, 8404.
Psychological/psychiatric therapy session	A record of having received supplement payments for psychologist or psychiatric therapy in the National Health Service Register during the period of 1990-2006 with the following codes: 2401, 2402, 24021-24029.

**eTable 2. Characteristic and Distribution of the Study Population.**

	Bereaved by suicide		General population		Bereaved by other manners of death	
	Person-years	%	Person-years	%	Person-years	%
<b>MEN</b>	75,683	100.0	76,764,451	100.0	2,285,907	100.0
<b>Country of birth:</b>						
Denmark	72,353	95.6	65,399,560	85.2	2,220,955	97.2
Elsewhere	3,304	4.4	8,321,040	10.8	64,076	2.8
Missing	26	0.0	3,043,852	4.0	876	0.0
<b>Age group:</b>						
18-39	4,517	6.0	33,688,888	43.9	29,943	1.3
40-49	11,101	14.7	14,633,199	19.1	93,145	4.1
50-59	18,626	24.6	12,010,677	15.6	245,238	10.7
60-69	21,018	27.8	9,154,626	11.9	505,173	22.1
70-79	14,686	19.4	5,301,650	6.9	720,614	31.5
80-89	5,194	6.9	1,778,474	2.3	570,836	25.0
90+	542	0.7	196,937	0.3	120,958	5.3
<b>Household income level:</b>						
< 25%	14,877	19.7	15,597,531	20.3	756,719	33.1
≥ 25%	60,566	80.0	55,090,005	71.8	1,522,141	66.6
Missing	239	0.3	6,076,915	7.9	7,047	0.3
<b>Physical disorders:</b>						
yes	1,295	1.7	1,278,539	1.7	57,761	2.5
no	74,388	98.3	75,485,912	98.3	2,228,146	97.5
<b>History of psychiatric diagnosis:</b>						
yes	1,833	2.4	1,404,840	1.8	27,785	1.2
no	73,850	97.6	75,359,611	98.2	2,258,121	98.8
<b>History of deliberate self-harm:</b>						
yes	414	0.5	200,261	0.3	4,606	0.2
no	75,269	99.5	76,564,191	99.7	2,281,301	99.8
<b>WOMEN</b>	184,863	100.0	74,637,221	100.0	6,396,101	100.0
<b>Country of birth:</b>						
Denmark	177,006	95.7	64,062,006	85.8	6,144,810	96.1
Elsewhere	7,708	4.2	7,998,785	10.7	248,663	3.9
Missing	149	0.1	2,576,430	3.5	2,629	0.0
<b>Age group:</b>						
18-39	21,167	11.5	32,252,965	43.2	83,403	1.3
40-49	35,331	19.1	13,799,791	18.5	216,024	3.4
50-59	45,921	24.8	11,395,864	15.3	596,583	9.3
60-69	41,848	22.6	8,774,622	11.8	1,376,881	21.5



70-79	27,092	14.7	5,429,160	7.3	2,122,218	33.2
80-89	11,863	6.4	2,473,338	3.3	1,656,119	25.9
90+	1,642	0.9	511,481	0.7	344,872	5.4
<b>Household income level:</b>						
< 25%	20,640	11.2	15,011,750	20.1	1,324,453	20.7
≥ 25%	163,705	88.6	53,861,672	72.2	5,054,250	79.0
Missing	518	0.3	5,763,799	7.7	17,399	0.3
<b>Physical disorders:</b>						
yes	184,860	100.0	1,081,697	1.4	6,396,066	100.0
no	3	0.0	73,555,524	98.6	36	0.0
<b>History of psychiatric diagnosis:</b>						
yes	4,401	2.4	1,472,626	2.0	107,346	1.7
no	180,462	97.6	73,164,595	98.0	6,288,755	98.3
<b>History of deliberate self-harm:</b>						
yes	1,588	0.9	355,126	0.5	22,034	0.3
no	183,275	99.1	74,282,095	99.5	6,374,067	99.7

---