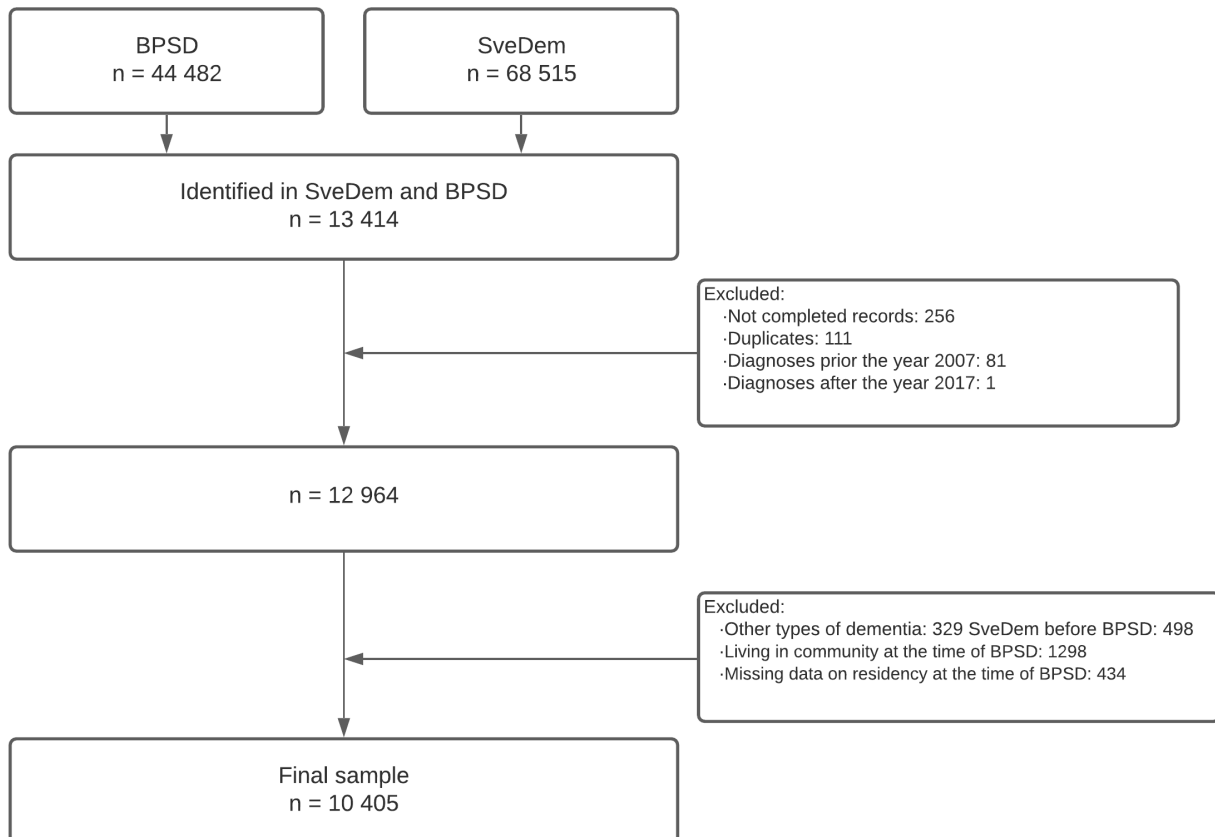


Supplementary Material

Behavioral and Psychological Symptoms of Dementia in Different Dementia Disorders: A Large-Scale Study of 10,000 Individuals

Supplementary Figure 1. Sample Size



Supplementary Table 1. Frequency of missing values in SveDem and BPSD registry

Variable	n (%)
MMSE at the time of dementia diagnosis	1,009 (8.3)
Sleep and night-time behavior changes	245 (2.0)
Irritability	241 (2)
Appetite and eating abnormalities	241 (2)
Euphoria/Elation	240 (2)
Disinhibition	237 (2)
Aberrant motor behavior	235 (1.9)
Apathy	234 (1.9)
Depression/Dysphoria	233 (1.9)
Anxiety	233 (1.9)
Agitation/Aggression	232 (1.9)
Hallucinations	231 (1.9)
Delusions	225 (1.9)
MMSE - Mini-Mental State Examination	

Supplementary Table 2A. Odds ratios (OR) AND 95% confidence intervals (CI) of the association between AD and BPSD compared to all other diagnoses

Reference	Dementia Diagnosis											
	Mixed		VaD		DLB		PDD		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	p	p	OR (95%CI)	p	OR (95%CI)	p
Delusion	1.1 (0.94-1.28)	0.234	1.05 (0.9-1.22)	0.542	0.58 (0.43-0.8)	0.001	0.74 (0.48-1.17)	0.185	2.28 (1.46-3.72)	<0.001	1.14 (1-1.31)	0.044
Hallucinations	1.06 (0.88-1.28)	0.54	1.2 (0.99-1.46)	0.066	0.17 (0.12-0.23)	<0.001	0.22 (0.14-0.35)	<0.001	2 (1.18-3.68)	0.016	0.99 (0.85-1.16)	0.93
Agitation/Aggression	0.99 (0.86-1.15)	0.905	1.18 (1.02-1.36)	0.029	1.19 (0.86-1.65)	0.291	2.17 (1.34-3.63)	0.002	1.03 (0.71-1.5)	0.871	1.18 (1.04-1.34)	0.011
Depression/Dysphoria	1.08 (0.92-1.26)	0.361	1.06 (0.91-1.24)	0.465	0.99 (0.69-1.44)	0.964	1.45 (0.86-2.56)	0.181	1.75 (1.18-2.65)	0.007	1.21 (1.05-1.38)	0.007
Elation/Euphoria	1.12 (0.86-1.48)	0.395	1.11 (0.85-1.46)	0.463	3.1 (1.4-8.82)	0.014	1.27 (0.59-3.3)	0.58	0.8 (0.49-1.39)	0.405	1.13 (0.9-1.42)	0.307
Anxiety	1.21 (1.04-1.41)	0.012	1.18 (1.02-1.37)	0.031	1.21 (0.86-1.72)	0.282	1.55 (0.94-2.69)	0.097	1.37 (0.94-2.03)	0.11	1.34 (1.17-1.52)	<0.001
Apathy	0.97 (0.82-1.14)	0.684	0.83 (0.7-0.98)	0.023	1.16 (0.79-1.74)	0.471	1.12 (0.67-1.99)	0.678	0.65 (0.45-0.95)	0.022	0.92 (0.8-1.06)	0.256
Disinhibition	0.98 (0.83-1.16)	0.816	0.97 (0.82-1.15)	0.714	1.41 (0.95-2.17)	0.097	2.5 (1.35-5.16)	0.007	0.66 (0.45-0.97)	0.03	1.03 (0.89-1.2)	0.683
Irritability	0.93 (0.8-1.07)	0.322	1.07 (0.92-1.24)	0.381	1.5 (1.08-2.12)	0.018	1.53 (0.96-2.5)	0.081	1.45 (1.02-2.09)	0.042	1.2 (1.06-1.36)	0.005
Aberrant motor behavior	1.33 (1.16-1.52)	<0.001	1.51 (1.31-1.72)	<0.001	1.34 (1-1.81)	0.053	0.9 (0.59-1.34)	0.594	1.21 (0.87-1.69)	0.257	1.38 (1.23-1.55)	<0.001
Sleep and night-time behavior changes	1.1 (0.93-1.3)	0.267	1.09 (0.92-1.29)	0.317	1.02 (0.71-1.49)	0.917	1.51 (0.89-2.71)	0.148	1.22 (0.79-1.95)	0.381	1.22 (1.05-1.41)	0.008
Appetite and eating abnormalities	0.98 (0.83-1.15)	0.809	0.92 (0.78-1.09)	0.33	1.09 (0.76-1.62)	0.649	1.6 (0.93-2.95)	0.109	0.54 (0.38-0.79)	0.001	1 (0.87-1.15)	0.998

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2B. Odds ratios (OR) and 95% confidence intervals (CI) of the association between mixed dementia and BPSD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		VaD		DLB		PDD		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p
Delusion	0.91 (0.78-1.06)	0.234	0.96 (0.8-1.14)	0.616	0.53 (0.39-0.74)	<0.001	0.67 (0.43-1.08)	0.091	2.08 (1.32-3.43)	0.003	1.04 (0.89-1.22)	0.593
Hallucinations	0.94 (0.78-1.13)	0.54	1.13 (0.91-1.42)	0.277	0.16 (0.11-0.22)	<0.001	0.21 (0.13-0.34)	<0.001	1.89 (1.09-3.51)	0.032	0.94 (0.77-1.14)	0.508
Agitation/Aggression	1.01 (0.87-1.17)	0.905	1.19 (1-1.41)	0.045	1.2 (0.86-1.68)	0.285	2.19 (1.34-3.69)	0.002	1.04 (0.71-1.53)	0.84	1.19 (1.02-1.38)	0.026
Depression/Dysphoria	0.93 (0.79-1.09)	0.361	0.99 (0.82-1.18)	0.88	0.92 (0.63-1.36)	0.676	1.35 (0.79-2.4)	0.29	1.62 (1.08-2.5)	0.023	1.12 (0.95-1.32)	0.176
Elation/Euphoria	0.89 (0.68-1.16)	0.395	0.98 (0.71-1.36)	0.926	2.76 (1.21-7.96)	0.03	1.13 (0.51-2.98)	0.783	0.71 (0.42-1.28)	0.236	1 (0.75-1.34)	0.981
Anxiety	0.82 (0.71-0.96)	0.012	0.97 (0.82-1.16)	0.765	1 (0.7-1.43)	0.984	1.28 (0.77-2.23)	0.358	1.13 (0.76-1.7)	0.553	1.1 (0.94-1.29)	0.233
Apathy	1.04 (0.88-1.22)	0.684	0.86 (0.71-1.04)	0.112	1.2 (0.81-1.82)	0.387	1.16 (0.68-2.08)	0.596	0.67 (0.46-1)	0.045	0.95 (0.8-1.13)	0.587
Disinhibition	1.02 (0.86-1.21)	0.816	0.99 (0.81-1.2)	0.906	1.44 (0.96-2.24)	0.089	2.55 (1.36-5.3)	0.006	0.67 (0.46-1)	0.049	1.05 (0.88-1.26)	0.573
Irritability	1.08 (0.93-1.24)	0.322	1.15 (0.97-1.36)	0.107	1.62 (1.15-2.31)	0.007	1.65 (1.02-2.71)	0.044	1.56 (1.08-2.28)	0.019	1.29 (1.11-1.5)	0.001
Aberrant motor behavior	0.75 (0.66-0.86)	<0.001	1.13 (0.97-1.33)	0.12	1.01 (0.74-1.38)	0.953	0.67 (0.44-1.02)	0.063	0.91 (0.65-1.29)	0.6	1.04 (0.9-1.19)	0.613
Sleep and night-time behavior changes	0.91 (0.77-1.07)	0.267	0.99 (0.82-1.2)	0.933	0.93 (0.64-1.37)	0.702	1.37 (0.8-2.49)	0.273	1.11 (0.71-1.8)	0.65	1.11 (0.93-1.32)	0.246
Appetite and eating abnormalities	1.02 (0.87-1.2)	0.809	0.94 (0.78-1.14)	0.526	1.11 (0.76-1.67)	0.589	1.63 (0.94-3.03)	0.1	0.55 (0.38-0.82)	0.003	1.02 (0.86-1.21)	0.815

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2C. Odds ratios (OR) and 95% confidence intervals (CI) of the association between VaD and BPSD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		Mixed		DLB		PDD		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	p	OR (95%CI)	p	OR (95%CI)	p	
Delusion	0.95 (0.82-1.11)	0.542	1.05 (0.88-1.25)	0.616	0.56 (0.4-0.77)	<0.001	0.7 (0.45-1.13)	0.133	2.18 (1.38-3.59)	0.001	1.09 (0.93-1.28)	0.274
Hallucinations	0.83 (0.69-1.01)	0.066	0.88 (0.71-1.1)	0.277	0.14 (0.1-0.2)	<0.001	0.19 (0.12-0.3)	<0.001	1.67 (0.96-3.11)	0.085	0.83 (0.68-1.01)	0.063
Agitation/Aggression	0.85 (0.73-0.98)	0.029	0.84 (0.71-1)	0.045	1.01 (0.72-1.42)	0.947	1.85 (1.13-3.11)	0.017	0.88 (0.6-1.29)	0.5	1 (0.86-1.16)	0.988
Depression/Dysphoria	0.94 (0.8-1.1)	0.465	1.01 (0.85-1.22)	0.88	0.94 (0.64-1.38)	0.729	1.37 (0.8-2.43)	0.268	1.65 (1.09-2.53)	0.019	1.14 (0.96-1.34)	0.128
Elation/Euphoria	0.9 (0.69-1.18)	0.463	1.02 (0.73-1.4)	0.926	2.8 (1.23-8.07)	0.028	1.15 (0.52-3.02)	0.757	0.72 (0.42-1.29)	0.256	1.02 (0.76-1.36)	0.899
Anxiety	0.85 (0.73-0.98)	0.031	1.03 (0.86-1.22)	0.765	1.02 (0.72-1.47)	0.899	1.32 (0.79-2.29)	0.308	1.16 (0.78-1.74)	0.468	1.13 (0.97-1.32)	0.126
Apathy	1.21 (1.03-1.42)	0.023	1.17 (0.96-1.41)	0.112	1.4 (0.94-2.12)	0.105	1.36 (0.8-2.42)	0.278	0.78 (0.54-1.16)	0.219	1.11 (0.94-1.32)	0.216
Disinhibition	1.03 (0.87-1.22)	0.714	1.01 (0.83-1.23)	0.906	1.46 (0.97-2.27)	0.079	2.58 (1.38-5.36)	0.006	0.68 (0.46-1.02)	0.055	1.07 (0.89-1.27)	0.487
Irritability	0.94 (0.81-1.08)	0.381	0.87 (0.74-1.03)	0.107	1.41 (1-2.01)	0.054	1.43 (0.89-2.36)	0.147	1.36 (0.94-1.98)	0.107	1.12 (0.96-1.31)	0.134
Aberrant motor behavior	0.66 (0.58-0.76)	<0.001	0.88 (0.75-1.03)	0.12	0.89 (0.66-1.22)	0.461	0.59 (0.39-0.9)	0.014	0.8 (0.57-1.14)	0.215	0.92 (0.79-1.05)	0.22
Sleep and night-time behavior changes	0.92 (0.78-1.08)	0.317	1.01 (0.83-1.22)	0.933	0.94 (0.65-1.38)	0.733	1.38 (0.81-2.51)	0.26	1.12 (0.72-1.81)	0.625	1.12 (0.94-1.33)	0.212
Appetite and eating abnormalities	1.08 (0.92-1.27)	0.33	1.06 (0.88-1.28)	0.526	1.18 (0.81-1.77)	0.398	1.73 (1-3.22)	0.064	0.59 (0.4-0.87)	0.007	1.08 (0.92-1.28)	0.346

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2D. Odds ratios (OR) and 95% confidence intervals (CI) of the association between DLB and BPSD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		Mixed		VaD		PDD		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p		p	OR (95%CI)	p	OR (95%CI)	p
Delusion	1.71 (1.25-2.33)	0.001	1.88 (1.35-2.6)	<0.001	1.8 (1.29-2.48)	<0.001	1.26 (0.75-2.17)	0.386	3.91 (2.3-6.86)	<0.001	1.96 (1.42-2.69)	<0.001
Hallucinations	5.94 (4.31-8.2)	<0.001	6.3 (4.48-8.86)	<0.001	7.13 (5.06-10.06)	<0.001	1.33 (0.79-2.25)	0.286	11.88(6.5 23.15)	<0.001	5.9 (4.26-8.18)	<0.001
Agitation/Aggression	0.84 (0.61-1.16)	0.291	0.83 (0.59-1.16)	0.285	0.99 (0.71-1.38)	0.947	1.83 (1.03-3.3)	0.042	0.87 (0.54-1.4)	0.555	0.99 (0.71-1.37)	0.951
Depression/Dysphoria	1.01 (0.69-1.45)	0.964	1.08 (0.74-1.58)	0.676	1.07 (0.73-1.56)	0.729	1.46 (0.78-2.83)	0.248	1.76 (1.04-3.01)	0.037	1.22 (0.83-1.75)	0.305
Elation/Euphoria	0.32 (0.11-0.71)	0.014	0.36 (0.13-0.82)	0.03	0.36 (0.12-0.81)	0.028	0.41 (0.11-1.39)	0.149	0.26 (0.08-0.67)	0.009	0.36 (0.13-0.81)	0.029
Anxiety	0.83 (0.58-1.16)	0.282	1 (0.7-1.42)	0.984	0.98 (0.68-1.39)	0.899	1.29 (0.71-2.41)	0.418	1.13 (0.69-1.87)	0.627	1.11 (0.77-1.56)	0.573
Apathy	0.87 (0.58-1.26)	0.471	0.84 (0.55-1.24)	0.387	0.72 (0.47-1.06)	0.105	0.97 (0.51-1.9)	0.928	0.56 (0.33-0.94)	0.03	0.8 (0.53-1.17)	0.262
Disinhibition	0.71 (0.46-1.05)	0.097	0.69 (0.45-1.04)	0.089	0.68 (0.44-1.03)	0.079	1.76 (0.84-3.97)	0.147	0.47 (0.27-0.79)	0.005	0.73 (0.47-1.09)	0.136
Irritability	0.67 (0.47-0.93)	0.018	0.62 (0.43-0.87)	0.007	0.71 (0.5-1)	0.054	1.02 (0.58-1.81)	0.952	0.97 (0.6-1.56)	0.887	0.8 (0.56-1.12)	0.197
Aberrant motor behavior	0.75 (0.55-1)	0.053	0.99 (0.73-1.35)	0.953	1.12 (0.82-1.53)	0.461	0.67 (0.41-1.09)	0.107	0.9 (0.59-1.39)	0.644	1.03 (0.76-1.39)	0.859
Sleep and night-time behavior changes	0.98 (0.67-1.4)	0.917	1.08 (0.73-1.56)	0.702	1.07 (0.72-1.55)	0.733	1.48 (0.78-2.89)	0.24	1.2 (0.69-2.12)	0.527	1.19 (0.81-1.71)	0.351
Appetite and eating abnormalities	0.92 (0.62-1.32)	0.649	0.9 (0.6-1.31)	0.589	0.84 (0.56-1.23)	0.398	1.46 (0.76-2.94)	0.268	0.5 (0.3-0.83)	0.007	0.92 (0.62-1.33)	0.654

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2E. Odds ratios (OR) and 95% confidence intervals (CI) of the association between PDD and BPSD in PDD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		Mixed		VaD		DLB		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	p	OR (95%CI)	p	OR (95%CI)	p	
Delusion	1.35 (0.85-2.1)	0.185	1.48 (0.93-2.33)	0.091	1.42 (0.89-2.22)	0.133	0.79 (0.46-1.34)	0.386	3.09 (1.65-5.86)	<0.001	1.55 (0.98-2.42)	0.057
Hallucinations	4.47 (2.86-6.95)	<0.001	4.74 (2.98-7.48)	<0.001	5.36 (3.37-8.48)	<0.001	0.75 (0.44-1.27)	0.286	8.94 (4.53-18.5)	<0.001	4.44 (2.82-6.93)	<0.001
Agitation/Aggression	0.46 (0.28-0.75)	0.002	0.46 (0.27-0.75)	0.002	0.54 (0.32-0.89)	0.017	0.55 (0.3-0.97)	0.042	0.47 (0.26-0.86)	0.016	0.54 (0.32-0.88)	0.016
Depression/Dysphoria	0.69 (0.39-1.16)	0.181	0.74 (0.42-1.26)	0.29	0.73 (0.41-1.25)	0.268	0.68 (0.35-1.29)	0.248	1.21 (0.61-2.32)	0.58	0.83 (0.47-1.41)	0.509
Elation/Euphoria	0.79 (0.3-1.69)	0.58	0.89 (0.34-1.94)	0.783	0.87 (0.33-1.91)	0.757	2.45 (0.72-8.72)	0.149	0.63 (0.22-1.58)	0.352	0.89 (0.34-1.92)	0.787
Anxiety	0.64 (0.37-1.06)	0.097	0.78 (0.45-1.3)	0.358	0.76 (0.44-1.26)	0.308	0.78 (0.41-1.42)	0.418	0.88 (0.46-1.64)	0.691	0.86 (0.5-1.42)	0.57
Apathy	0.89 (0.5-1.49)	0.678	0.86 (0.48-1.46)	0.596	0.74 (0.41-1.25)	0.278	1.03 (0.53-1.96)	0.928	0.58 (0.3-1.08)	0.094	0.82 (0.46-1.38)	0.478
Disinhibition	0.4 (0.19-0.74)	0.007	0.39 (0.19-0.73)	0.006	0.39 (0.19-0.72)	0.006	0.57 (0.25-1.19)	0.147	0.26 (0.12-0.54)	<0.001	0.41 (0.2-0.77)	0.009
Irritability	0.65 (0.4-1.04)	0.081	0.61 (0.37-0.98)	0.044	0.7 (0.42-1.12)	0.147	0.98 (0.55-1.73)	0.952	0.95 (0.53-1.69)	0.861	0.78 (0.48-1.26)	0.323
Aberrant motor behavior	1.12 (0.74-1.68)	0.594	1.48 (0.98-2.25)	0.063	1.68 (1.11-2.55)	0.014	1.5 (0.92-2.45)	0.107	1.35 (0.81-2.26)	0.247	1.54 (1.02-2.32)	0.039
Sleep and night-time behavior changes	0.66 (0.37-1.13)	0.148	0.73 (0.4-1.25)	0.273	0.72 (0.4-1.24)	0.26	0.68 (0.35-1.28)	0.24	0.81 (0.4-1.62)	0.558	0.81 (0.45-1.38)	0.455
Appetite and eating abnormalities	0.63 (0.34-1.07)	0.109	0.61 (0.33-1.06)	0.1	0.58 (0.31-1)	0.064	0.68 (0.34-1.31)	0.268	0.34 (0.17-0.65)	0.001	0.63 (0.34-1.08)	0.111

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2F. Odds ratios (OR) and 95% confidence intervals (CI) of the association between FTD and BPSD in FTD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		Mixed		VaD		DLB		PDD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p		p	OR (95%CI)	p	OR (95%CI)	p
Delusion	0.44 (0.27-0.68)	<0.001	0.48 (0.29-0.76)	0.003	0.46 (0.28-0.72)	0.001	0.26 (0.15-0.44)	<0.001	0.32 (0.17-0.61)	<0.001	0.5 (0.31-0.79)	0.004
Hallucinations	0.5 (0.27-0.85)	0.016	0.53 (0.28-0.92)	0.032	0.6 (0.32-1.04)	0.085	0.08 (0.04-0.15)	<0.001	0.11 (0.05-0.22)	<0.001	0.5 (0.27-0.85)	0.017
Agitation/Aggression	0.97 (0.67-1.41)	0.871	0.96 (0.65-1.41)	0.84	1.14 (0.78-1.68)	0.5	1.15 (0.72-1.86)	0.555	2.11 (1.16-3.91)	0.016	1.14 (0.78-1.67)	0.49
Depression/Dysphoria	0.57 (0.38-0.85)	0.007	0.62 (0.4-0.93)	0.023	0.61 (0.4-0.91)	0.019	0.57 (0.33-0.96)	0.037	0.83 (0.43-1.63)	0.58	0.69 (0.45-1.03)	0.077
Elation/Euphoria	1.25 (0.72-2.05)	0.405	1.4 (0.78-2.41)	0.236	1.38 (0.77-2.36)	0.256	3.87 (1.5-12)	0.009	1.58 (0.63-4.52)	0.352	1.41 (0.8-2.37)	0.217
Anxiety	0.73 (0.49-1.07)	0.11	0.89 (0.59-1.31)	0.553	0.86 (0.57-1.28)	0.468	0.88 (0.53-1.46)	0.627	1.14 (0.61-2.17)	0.691	0.98 (0.65-1.43)	0.905
Apathy	1.54 (1.06-2.22)	0.022	1.49 (1-2.19)	0.045	1.28 (0.86-1.87)	0.219	1.78 (1.06-3.02)	0.03	1.73 (0.92-3.35)	0.094	1.42 (0.96-2.06)	0.071
Disinhibition	1.52 (1.03-2.2)	0.03	1.49 (1-2.2)	0.049	1.47 (0.98-2.17)	0.055	2.15 (1.26-3.71)	0.005	3.79 (1.86-8.41)	<0.001	1.57 (1.06-2.29)	0.023
Irritability	0.69 (0.48-0.98)	0.042	0.64 (0.44-0.93)	0.019	0.74 (0.5-1.06)	0.107	1.04 (0.64-1.67)	0.887	1.05 (0.59-1.9)	0.861	0.83 (0.57-1.19)	0.311
Aberrant motor behavior	0.83 (0.59-1.15)	0.257	1.1 (0.78-1.55)	0.6	1.24 (0.88-1.75)	0.215	1.11 (0.72-1.7)	0.644	0.74 (0.44-1.23)	0.247	1.14 (0.81-1.59)	0.455
Sleep and night-time behavior changes	0.82 (0.51-1.26)	0.381	0.9 (0.56-1.41)	0.65	0.89 (0.55-1.39)	0.625	0.83 (0.47-1.45)	0.527	1.23 (0.62-2.52)	0.558	1 (0.62-1.55)	0.986
Appetite and eating abnormalities	1.84 (1.27-2.63)	0.001	1.8 (1.22-2.63)	0.003	1.7 (1.15-2.47)	0.007	2.01 (1.21-3.35)	0.007	2.93 (1.55-5.86)	0.001	1.84 (1.26-2.66)	0.001

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; UNS, Unspecified dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 2G. Odds ratios (OR) and 95% confidence intervals (CI) of the association between unspecified dementia and BPSD compared to all other diagnoses

Reference	Dementia Diagnosis											
	AD		Mixed		VaD		DLB		FTD		PDD	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p		p	OR (95%CI)	p	OR (95%CI)	p
Delusion	0.87 (0.77-1)	0.044	0.96 (0.82-1.12)	0.593	0.92 (0.78-1.07)	0.274	0.51 (0.37-0.7)	<0.001	1.99 (1.27-3.27)	0.004	0.64 (0.41-1.03)	0.057
Hallucinations	1.01 (0.86-1.18)	0.93	1.07 (0.88-1.3)	0.508	1.21 (0.99-1.48)	0.063	0.17 (0.12-0.23)	<0.001	2.01 (1.18-3.72)	0.017	0.23 (0.14-0.35)	<0.001
Agitation/Aggression	0.85 (0.75-0.96)	0.011	0.84 (0.72-0.98)	0.026	1 (0.86-1.16)	0.988	1.01 (0.73-1.41)	0.951	0.88 (0.6-1.28)	0.49	1.84 (1.13-3.09)	0.016
Depression/Dysphoria	0.83 (0.72-0.95)	0.007	0.89 (0.76-1.05)	0.176	0.88 (0.75-1.04)	0.128	0.82 (0.57-1.2)	0.305	1.45 (0.97-2.21)	0.077	1.2 (0.71-2.13)	0.509
Elation/Euphoria	0.89 (0.7-1.11)	0.307	1 (0.75-1.34)	0.981	0.98 (0.74-1.32)	0.899	2.75 (1.23-7.87)	0.029	0.71 (0.42-1.25)	0.217	1.12 (0.52-2.94)	0.787
Anxiety	0.75 (0.66-0.85)	<0.001	0.91 (0.77-1.06)	0.233	0.88 (0.75-1.04)	0.126	0.9 (0.64-1.29)	0.573	1.02 (0.7-1.53)	0.905	1.16 (0.7-2.02)	0.57
Apathy	1.09 (0.94-1.25)	0.256	1.05 (0.88-1.25)	0.587	0.9 (0.76-1.06)	0.216	1.25 (0.85-1.89)	0.262	0.7 (0.48-1.04)	0.071	1.22 (0.72-2.16)	0.478
Disinhibition	0.97 (0.83-1.12)	0.683	0.95 (0.8-1.14)	0.573	0.94 (0.79-1.12)	0.487	1.37 (0.92-2.12)	0.136	0.64 (0.44-0.95)	0.023	2.42 (1.3-5.02)	0.009
Irritability	0.83 (0.73-0.95)	0.005	0.77 (0.66-0.9)	0.001	0.89 (0.76-1.04)	0.134	1.25 (0.89-1.77)	0.197	1.21 (0.84-1.76)	0.311	1.27 (0.79-2.09)	0.323
Aberrant motor behavior	0.73 (0.65-0.82)	<0.001	0.96 (0.84-1.11)	0.613	1.09 (0.95-1.26)	0.22	0.97 (0.72-1.32)	0.859	0.88 (0.63-1.23)	0.455	0.65 (0.43-0.98)	0.039
Sleep and night-time behavior changes	0.82 (0.71-0.95)	0.008	0.9 (0.76-1.07)	0.246	0.9 (0.75-1.07)	0.212	0.84 (0.58-1.23)	0.351	1 (0.65-1.61)	0.986	1.24 (0.73-2.24)	0.455
Appetite and eating abnormalities	1 (0.87-1.15)	0.998	0.98 (0.83-1.16)	0.815	0.92 (0.78-1.09)	0.346	1.09 (0.75-1.62)	0.654	0.54 (0.38-0.8)	0.001	1.59 (0.93-2.95)	0.111

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry

Supplementary Table 3. Odds ratios (OR) and 95% confidence intervals (CI) of the association between dementia type and BPSD in AD with the reference to remaining diagnoses. Multiply imputed data.

Reference	Dementia Diagnosis											
	VAD		MIXED		DLB		PDD		FTD		Unspecified	
	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p	OR (95%CI)	p
Delusion	0.94 (0.82-1.09)	0.433	0.89 (0.77-1.03)	0.128	1.77 (1.31-2.39)	<0.001	1.54 (1.01-2.35)	0.047	0.42 (0.27-0.66)	<0.001	0.89 (0.79-1.01)	0.066
Hallucinations	0.86 (0.72-1.03)	0.106	0.93 (0.78-1.11)	0.422	5.76 (4.22-7.87)	<0.001	4.41 (2.87-6.78)	<0.001	0.43 (0.25-0.75)	0.003	1.01 (0.87-1.17)	0.879
Agitation/Aggression	0.9 (0.78-1.04)	0.149	1 (0.87-1.15)	0.99	0.84 (0.62-1.15)	0.287	0.47 (0.29-0.75)	0.002	1.04 (0.74-1.47)	0.823	0.86 (0.77-0.97)	0.017
Depression/Dysphoria	0.95 (0.82-1.11)	0.526	0.91 (0.78-1.06)	0.244	1.01 (0.71-1.44)	0.966	0.67 (0.39-1.13)	0.134	0.54 (0.37-0.79)	0.001	0.82 (0.72-0.93)	0.003
Elation/Euphoria	0.89 (0.69-1.15)	0.374	0.86 (0.66-1.12)	0.254	0.3 (0.12-0.73)	0.008	0.71 (0.31-1.64)	0.424	1.19 (0.73-1.95)	0.486	0.91 (0.73-1.13)	0.402
Anxiety	0.88 (0.76-1.01)	0.076	0.82 (0.71-0.94)	0.006	0.86 (0.62-1.19)	0.367	0.67 (0.41-1.1)	0.112	0.75 (0.53-1.06)	0.106	0.78 (0.69-0.89)	<0.001
Apathy	1.25 (1.07-1.46)	0.004	1.04 (0.89-1.22)	0.633	0.85 (0.58-1.24)	0.406	0.88 (0.52-1.49)	0.628	1.56 (1.11-2.19)	0.011	1.1 (0.97-1.26)	0.148
Disinhibition	1.06 (0.9-1.25)	0.457	1.02 (0.86-1.2)	0.829	0.67 (0.44-0.99)	0.047	0.41 (0.21-0.76)	0.005	1.48 (1.04-2.1)	0.028	0.99 (0.86-1.14)	0.907
Irritability	0.97 (0.84-1.11)	0.632	1.05 (0.91-1.21)	0.479	0.66 (0.48-0.91)	0.012	0.63 (0.39-1)	0.048	0.75 (0.54-1.04)	0.085	0.86 (0.76-0.97)	0.012
Aberrant motor behavior	0.69 (0.6-0.78)	<0.001	0.77 (0.67-0.87)	<0.001	0.78 (0.58-1.04)	0.088	1.19 (0.8-1.76)	0.386	0.86 (0.63-1.17)	0.328	0.76 (0.68-0.84)	<0.001
Sleep and night-time behavior changes	0.97 (0.83-1.13)	0.675	0.9 (0.77-1.06)	0.223	1.04 (0.73-1.47)	0.835	0.76 (0.45-1.27)	0.296	0.79 (0.52-1.19)	0.258	0.81 (0.71-0.93)	0.003
Appetite and eating abnormalities	1.08 (0.93-1.27)	0.313	0.99 (0.85-1.16)	0.932	0.94 (0.66-1.36)	0.753	0.58 (0.33-1.02)	0.06	1.81 (1.29-2.53)	0.001	1.01 (0.89-1.16)	0.847

AD, Alzheimer's disease; Mixed, Mixed dementia; VaD, vascular dementia; DLB, dementia with Lewy bodies; PDD, Parkinson's disease dementia; FTD, frontotemporal dementia; Model adjusted for age, sex, MMSE, and time between registration to SveDem and BPSD registry