

Clinical and Sociodemographic factors associated with comorbid dementia in treatment-resistant late-life depression

Beatriz Pozuelo Moyano¹, Vasiliki Orgeta², Armin von Gunten¹, Pierre Vandel¹, Ruimin Ma³, Robert Stewart^{3,4}, and Christoph Mueller^{3,4}

¹ Service of Old Age Psychiatry, Department of Psychiatry, Lausanne University Hospital (CHUV) and University of Lausanne, Prilly, Switzerland; ² Division of Psychiatry, Faculty of Brain Sciences, University College London, London, UK; ³ King's College London, Institute of Psychiatry, Psychology and Neuroscience, London, UK, ⁴ South London and Maudsley NHS Foundation Trust, London, UK



- ✓ In patients with TRLLD, somatic multimorbidity — including hypertension, stroke, diabetes, and ischaemic heart disease — is strongly associated with comorbid dementia.
- ✓ A typical depressive phenotype (severe or psychotic depression, core ICD-10/11 depressive symptoms) is associated with lower odds of comorbid dementia, while neuropsychiatric features such as anxiety and cognitive problems are associated with higher odds.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES																																																																															
Treatment-resistant Late-life depression (TRLLD) is associated with dementia The demographic and clinical factors associated with dementia in people with TRLLD remain unknown. Aim: To identify demographic and clinical factors associated with dementia in TRLLD	A naturalistic cross-sectional cohort study Mental health records. 1st recorded diagnosis of a depressive episode ≥ 60 TRLLD: ≥2 antidepressants prescribed across the mental health record, or a natural language processing algorithm Diagnoses of dementia: any time in health records.	22.9% of patients with TRLLD had comorbid dementia (890 of 3,886) <table><tr><th colspan="3">Sociodemographic factors — adjusted logistic regression</th></tr><tr><th>Factor</th><th>aOR (95% CI)</th><th>Sig.</th></tr><tr><td>Older age (per year)</td><td>1.07 (1.06–1.08)</td><td>***</td></tr><tr><td>Female sex</td><td>1.24 (1.05–1.47)</td><td>**</td></tr><tr><td>Black ethnicity (vs White)</td><td>1.84 (1.44–2.35)</td><td>***</td></tr><tr><td>Asian ethnicity (vs White)</td><td>1.74 (1.29–2.38)</td><td>***</td></tr></table> <table><tr><th colspan="3">Physical comorbidities — adjusted odds ratios</th></tr><tr><td>MedCAT comorbidity score: aOR 1.20 (1.15–1.24) per additional condition → ~20% higher odds of dementia per additional comorbidity</td><td></td><td></td></tr><tr><td>Cerebrovascular accident</td><td>aOR 2.03</td><td></td></tr><tr><td>Hypertension</td><td>aOR 1.81</td><td></td></tr><tr><td>Ischaemic heart disease</td><td>aOR 1.59</td><td></td></tr><tr><td>Myocardial infarction</td><td>aOR 1.55</td><td></td></tr><tr><td>Diabetes mellitus</td><td>aOR 1.52</td><td></td></tr><tr><td>Chronic kidney disease</td><td>aOR 1.37</td><td></td></tr><tr><td>Arthritis</td><td>aOR 1.39</td><td></td></tr></table> <table><tr><th colspan="3">Depressive symptoms & dementia — key associations</th></tr><tr><th colspan="2">Higher odds of dementia ↑</th><th>Lower odds of dementia ↓</th></tr><tr><td>Anxiety</td><td>1.66 (1.36–2.02)</td><td>Depressed mood</td><td>0.65 (0.54–0.78)</td></tr><tr><td>Cognitive problems</td><td>3.71 (3.11–4.41)</td><td>Hopelessness</td><td>0.71 (0.60–0.83)</td></tr><tr><td>Apathy†</td><td>1.56 (1.23–1.98)</td><td>Suicidal ideation</td><td>0.73 (0.62–0.85)</td></tr><tr><td>ADL problems‡</td><td>1.30 (1.10–1.52)</td><td>Worthlessness</td><td>0.74 (0.59–0.94)</td></tr><tr><td></td><td></td><td>Guilt</td><td>0.76 (0.64–0.89)</td></tr><tr><td></td><td></td><td>Severe depression</td><td>0.66 (0.53–0.82)</td></tr><tr><td></td><td></td><td>Psychotic depression</td><td>0.68 (0.49–0.95)</td></tr></table> † Not significant when restricted to incident dementia (sensitivity analysis) All models adjusted for age, sex, ethnicity, marital status, deprivation *** p<0.001 ** p<0.01	Sociodemographic factors — adjusted logistic regression			Factor	aOR (95% CI)	Sig.	Older age (per year)	1.07 (1.06–1.08)	***	Female sex	1.24 (1.05–1.47)	**	Black ethnicity (vs White)	1.84 (1.44–2.35)	***	Asian ethnicity (vs White)	1.74 (1.29–2.38)	***	Physical comorbidities — adjusted odds ratios			MedCAT comorbidity score: aOR 1.20 (1.15–1.24) per additional condition → ~20% higher odds of dementia per additional comorbidity			Cerebrovascular accident	aOR 2.03		Hypertension	aOR 1.81		Ischaemic heart disease	aOR 1.59		Myocardial infarction	aOR 1.55		Diabetes mellitus	aOR 1.52		Chronic kidney disease	aOR 1.37		Arthritis	aOR 1.39		Depressive symptoms & dementia — key associations			Higher odds of dementia ↑		Lower odds of dementia ↓	Anxiety	1.66 (1.36–2.02)	Depressed mood	0.65 (0.54–0.78)	Cognitive problems	3.71 (3.11–4.41)	Hopelessness	0.71 (0.60–0.83)	Apathy†	1.56 (1.23–1.98)	Suicidal ideation	0.73 (0.62–0.85)	ADL problems‡	1.30 (1.10–1.52)	Worthlessness	0.74 (0.59–0.94)			Guilt	0.76 (0.64–0.89)			Severe depression	0.66 (0.53–0.82)			Psychotic depression	0.68 (0.49–0.95)	✓ Somatic multimorbidity was the strongest correlate of comorbid dementia in TRLLD ✓ A typical depressive phenotype was associated with <i>lower</i> odds of dementia; neuropsychiatric features with <i>higher</i> odds ✓ Women and Black and Asian individuals showed higher odds of comorbid dementia ✓ Comprehensive physical health assessment and cognitive monitoring are warranted in older adults with TRLLD	¹Alexopoulos, G.S., <i>Mechanisms and treatment of late-life depression</i>. Transl Psychiatry, 2019. 9(1): p. 188. Pozuelo Moyano, B., et al., <i>Late-life difficult-to-treat depression and dementia subtypes: a naturalistic cohort study using electronic health records</i>. Frontiers in Psychiatry, 2026. Volume 17 - 2026. Pozuelo Moyano, B., et al., <i>Late-life difficult-to-treat depression and dementia subtypes: a naturalistic cohort study using electronic health records</i>. Frontiers in Psychiatry, 2026. Volume 17 - 2026. Stewart, R., et al., <i>The South London and Maudsley NHS Foundation Trust Biomedical Research Centre (SLAM BRC) case register: development and descriptive data</i>. BMC Psychiatry, 2009. 9: p. 51. Cunningham, H., <i>GATE, a General Architecture for Text Engineering</i>. Computers and the Humanities, 2002. 36(2): p. 223–254. Beatriz Pozuelo Moyano Beatriz.Pozuelo-Moyano@chuv.ch ALZHEIMER'S ASSOCIATION AAIC 26
Sociodemographic factors — adjusted logistic regression																																																																																			
Factor	aOR (95% CI)	Sig.																																																																																	
Older age (per year)	1.07 (1.06–1.08)	***																																																																																	
Female sex	1.24 (1.05–1.47)	**																																																																																	
Black ethnicity (vs White)	1.84 (1.44–2.35)	***																																																																																	
Asian ethnicity (vs White)	1.74 (1.29–2.38)	***																																																																																	
Physical comorbidities — adjusted odds ratios																																																																																			
MedCAT comorbidity score: aOR 1.20 (1.15–1.24) per additional condition → ~20% higher odds of dementia per additional comorbidity																																																																																			
Cerebrovascular accident	aOR 2.03																																																																																		
Hypertension	aOR 1.81																																																																																		
Ischaemic heart disease	aOR 1.59																																																																																		
Myocardial infarction	aOR 1.55																																																																																		
Diabetes mellitus	aOR 1.52																																																																																		
Chronic kidney disease	aOR 1.37																																																																																		
Arthritis	aOR 1.39																																																																																		
Depressive symptoms & dementia — key associations																																																																																			
Higher odds of dementia ↑		Lower odds of dementia ↓																																																																																	
Anxiety	1.66 (1.36–2.02)	Depressed mood	0.65 (0.54–0.78)																																																																																
Cognitive problems	3.71 (3.11–4.41)	Hopelessness	0.71 (0.60–0.83)																																																																																
Apathy†	1.56 (1.23–1.98)	Suicidal ideation	0.73 (0.62–0.85)																																																																																
ADL problems‡	1.30 (1.10–1.52)	Worthlessness	0.74 (0.59–0.94)																																																																																
		Guilt	0.76 (0.64–0.89)																																																																																
		Severe depression	0.66 (0.53–0.82)																																																																																
		Psychotic depression	0.68 (0.49–0.95)																																																																																