

Longitudinal Trajectories of Memory and Executive Function in Midlife and Older LGB+ Adults: Evidence from the Canadian Longitudinal Study on Aging

P4-11

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In lesbian, gay, and bisexual (LGB+) adults, memory declines steadily over three time points, while executive function holds steady until the later follow-up.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES												
Lesbian, gay, and bisexual (LGB+) adults face psychosocial stressors such as minority stress that may affect cognition.^{1,2} Memory and executive function can change at different rates with age. Combining them into one score can hide these differences. Objective: estimate within-person change in memory and executive function over three time points among LGB+ adults in the CLSA, and test whether depression symptoms and education relate to performance.	Sample: CLSA participants aged 45 to 85 at baseline who self-identified as LGB+ (n=1,276) and completed cognitive testing at three time points (Baseline, Follow-up 1, Follow-up 2).³ Outcomes: standardized composite scores for memory and executive function at each time point. Analysis: linear mixed-effects models with random intercepts estimated within-person change over time. Adjusted models included baseline age, sex, race, education, and depression symptoms. Predictive margins and pairwise contrasts described change at each time point.	Memory declined over time. In adjusted models, memory scores were lower at Follow-up 1 ($\beta=-1.07$, $p=.028$) and Follow-up 2 ($\beta=-1.59$, $p=.001$) than at baseline. Executive function followed a different pattern. It did not differ between Baseline and either Follow-up, but declined from Follow-up 1 to Follow-up 2 ($\beta=-0.92$, $p=.028$), suggesting later or nonlinear change. <table><caption>Adjusted Predictive Margins (standardized cognitive score)</caption><thead><tr><th>Time Point</th><th>Memory</th><th>Executive function</th></tr></thead><tbody><tr><td>Baseline</td><td>100.6</td><td>98.2</td></tr><tr><td>Follow-up 1</td><td>99.6</td><td>98.5</td></tr><tr><td>Follow-up 2</td><td>99.0</td><td>97.6</td></tr></tbody></table>	Time Point	Memory	Executive function	Baseline	100.6	98.2	Follow-up 1	99.6	98.5	Follow-up 2	99.0	97.6	Memory declined steadily across the three time points, while executive function stayed stable until the later follow-up. The two domains followed different time courses. Higher depression symptoms predicted poorer memory and executive function, which may be a modifiable target for intervention. LGB+ older adults are rarely included in longitudinal studies of cognition. These data help fill that gap and show that memory and executive function should be analyzed separately rather than combined.	1. Correro AN II, Nielson KA. A Review of Minority Stress as a Risk Factor for Cognitive Decline in Lesbian, Gay, Bisexual, and Transgender (LGBT) Elders. <i>J Gay Lesbian Ment Health</i>. 2020;24(1):2-19. 2. Flatt JD, Cicero EC, Kittle KR, et al. Subjective cognitive decline higher among sexual and gender minorities in the United States, 2015 to 2018. <i>Alzheimers Dement (N Y)</i>. 2021;7(1):e12197. 3. Raina P, Wolfson C, Kirkland S, et al. Cohort Profile: The Canadian Longitudinal Study on Aging (CLSA). <i>Int J Epidemiol</i>. 2019;48(6):1752-1753j.
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