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*Epidemiology of Mood Disorders II:
Analytic Epidemiology and
the Search for Etiologic Clues*

William W. Eaton, PhD
Johns Hopkins University

Epidemiology of Depression Risk Factors

Sex/gender and natural history

Diathesis/stress model

Life event stressors

Social supports

Epidemiology of Depression Risk Factors

Socioeconomic status (SES) and work life

SES, social supports, and life stage

Recency of birth



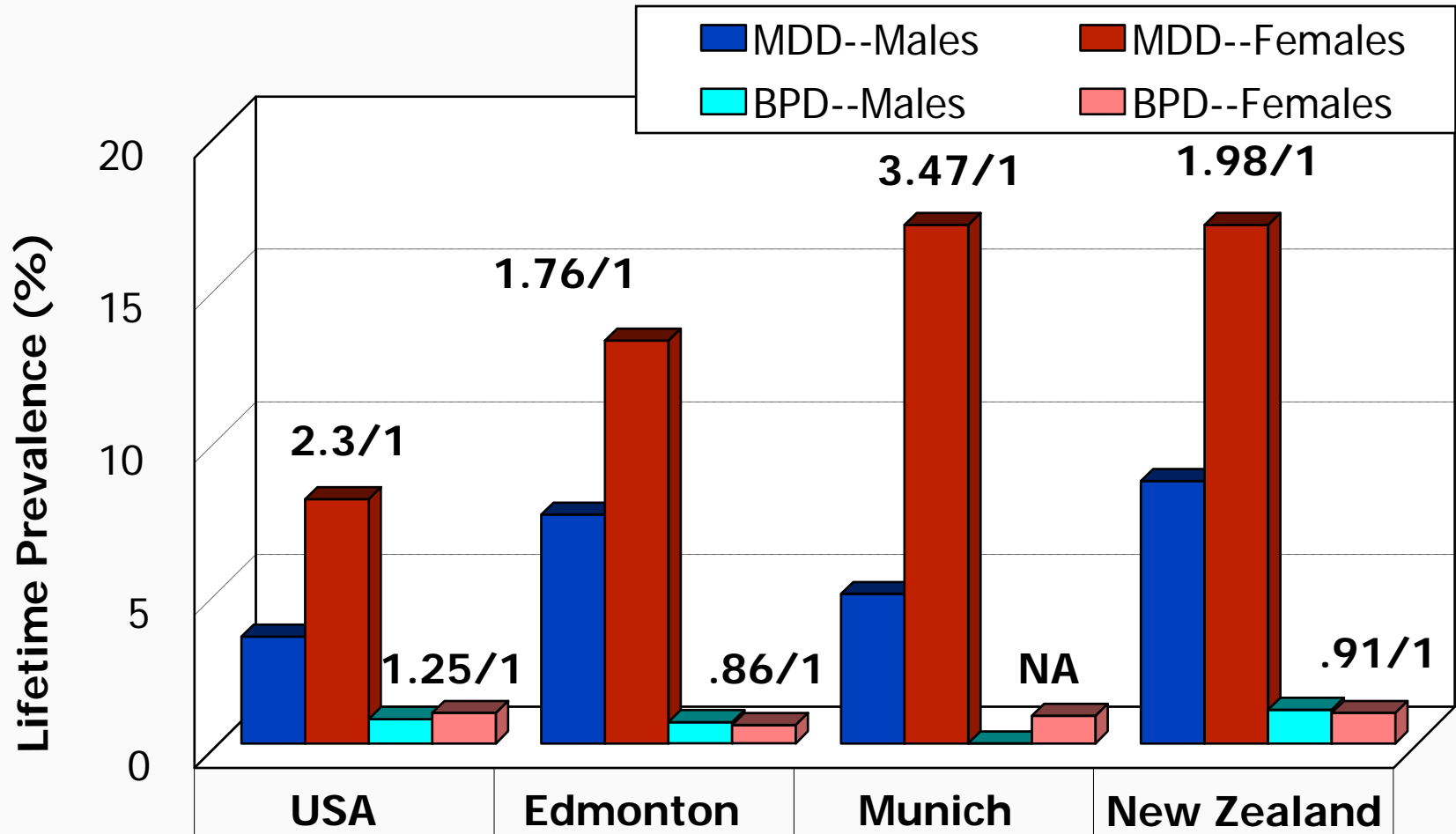
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Section A

Gender

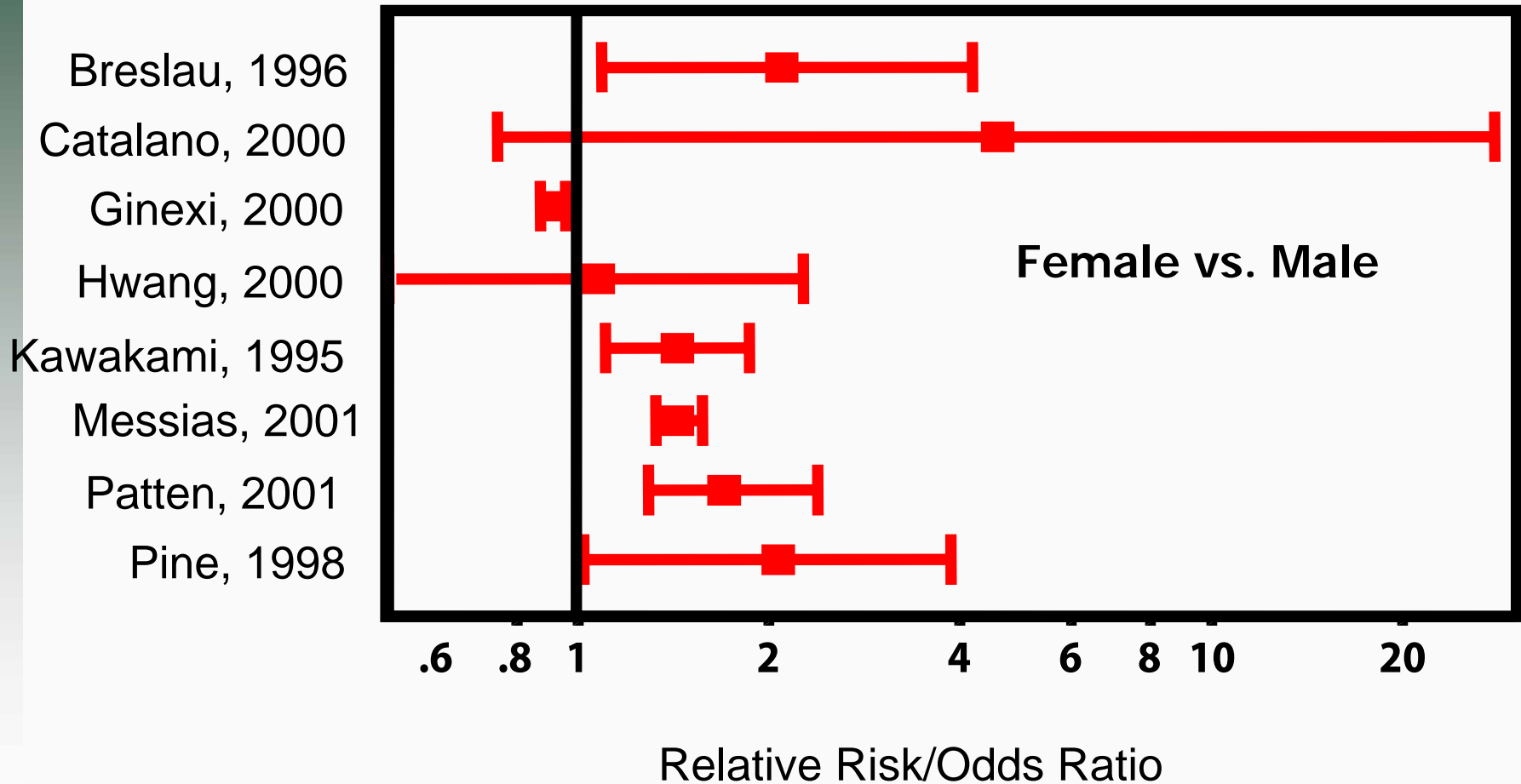
Gender and Mood Disorders in Four Surveys

Ages 26-64, Standardized to U.S. Age Distribution



Risk Factors for Adult MDE

Forest Plot



Incidence, Recurrence, and Duration by Age and Sex

Baltimore ECA Follow-Up

	Incidence RR	Recurrence RR	Duration in Weeks
Male	1	1	0
Female	1.98	0.95	4.23
18-29	1	1	0
30-44	0.64	0.75	7.98
45+	0.18	0.11	-0.23
Recurrence	***	***	-11.25

Prevalence of depression is higher in females than males

Caused by relationship of incidence of depression to gender

Gender operates only in the first episode

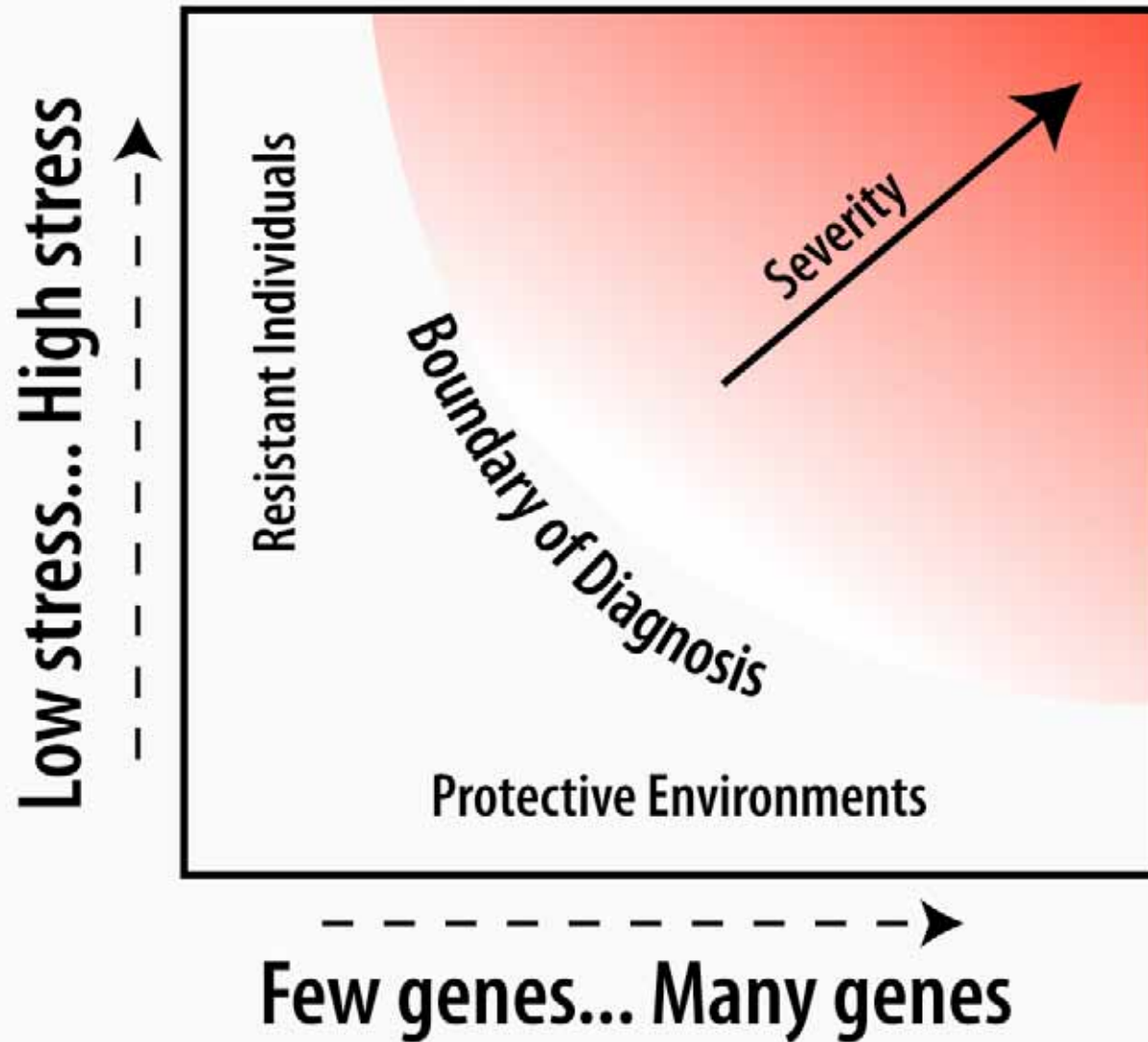


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Section B

Stress, Heredity, and Social Support

Diathesis Stress Model

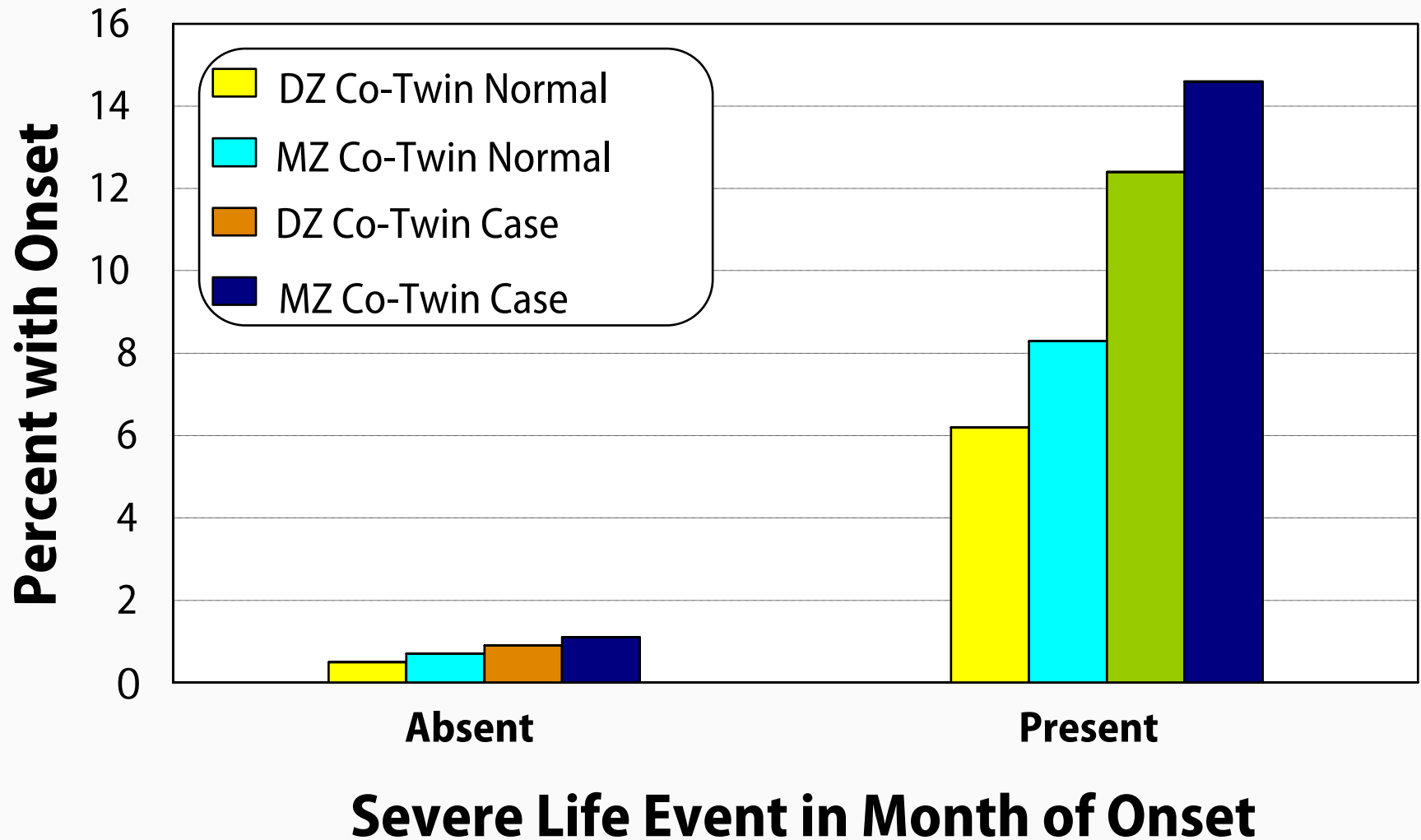


Percent with Severe Events Prior to Onset

	Cases (Patients)	Cases (Survey)	Controls (Survey)
One or More Severe Events	61%	68%	20%
No Severe Events	39%	32%	80%
Total Percent	100%	100%	100%
Number of Persons	114	76	382

Interaction of Life Events and Heredity

Onset of Major Depression in 2,164 Female Twins



Percent with Onset of Disorder	Confidant	No Confidant
No Recent Life Stress	1%	3%
Recent Life Stress	4%	38%

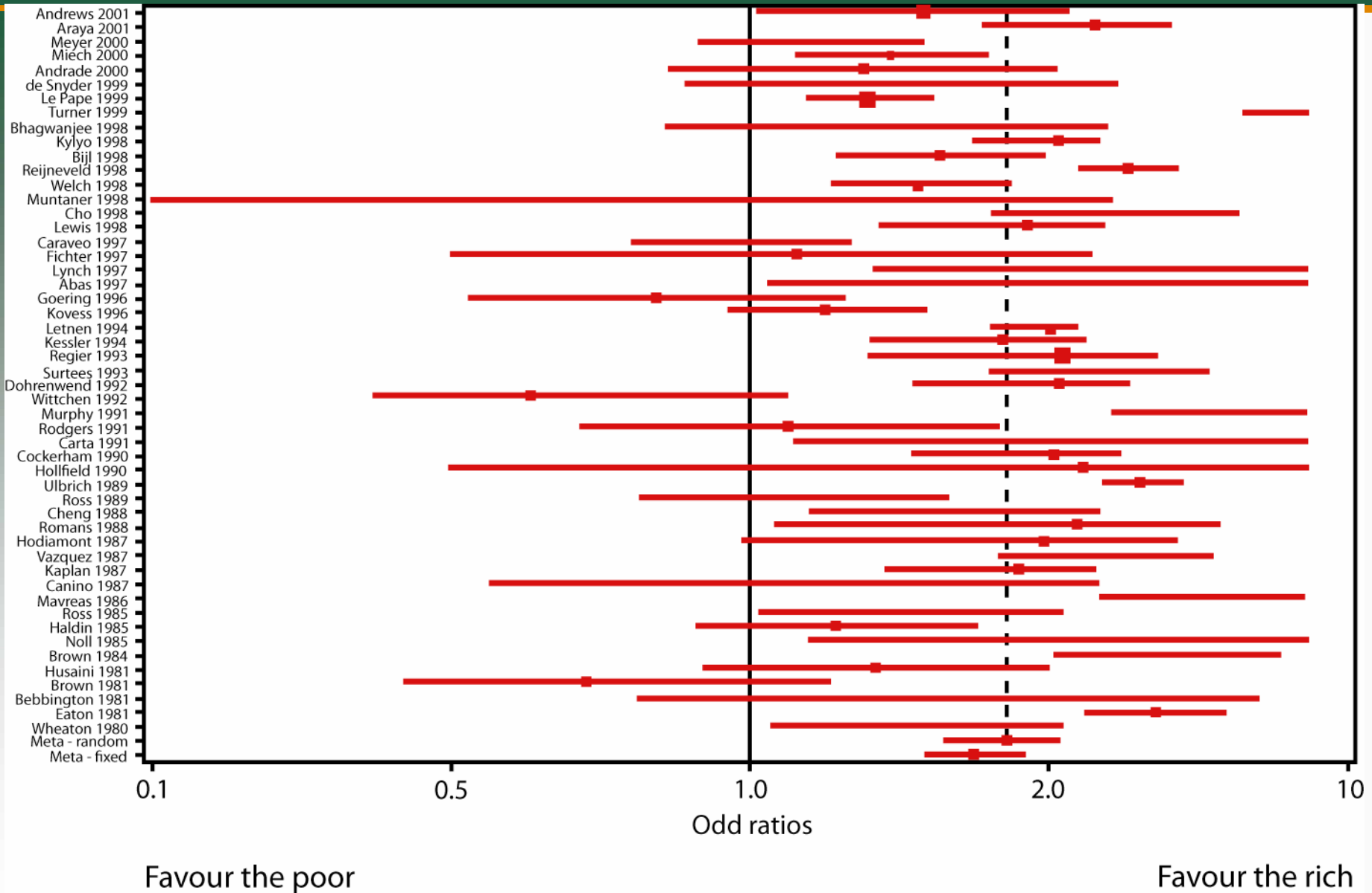


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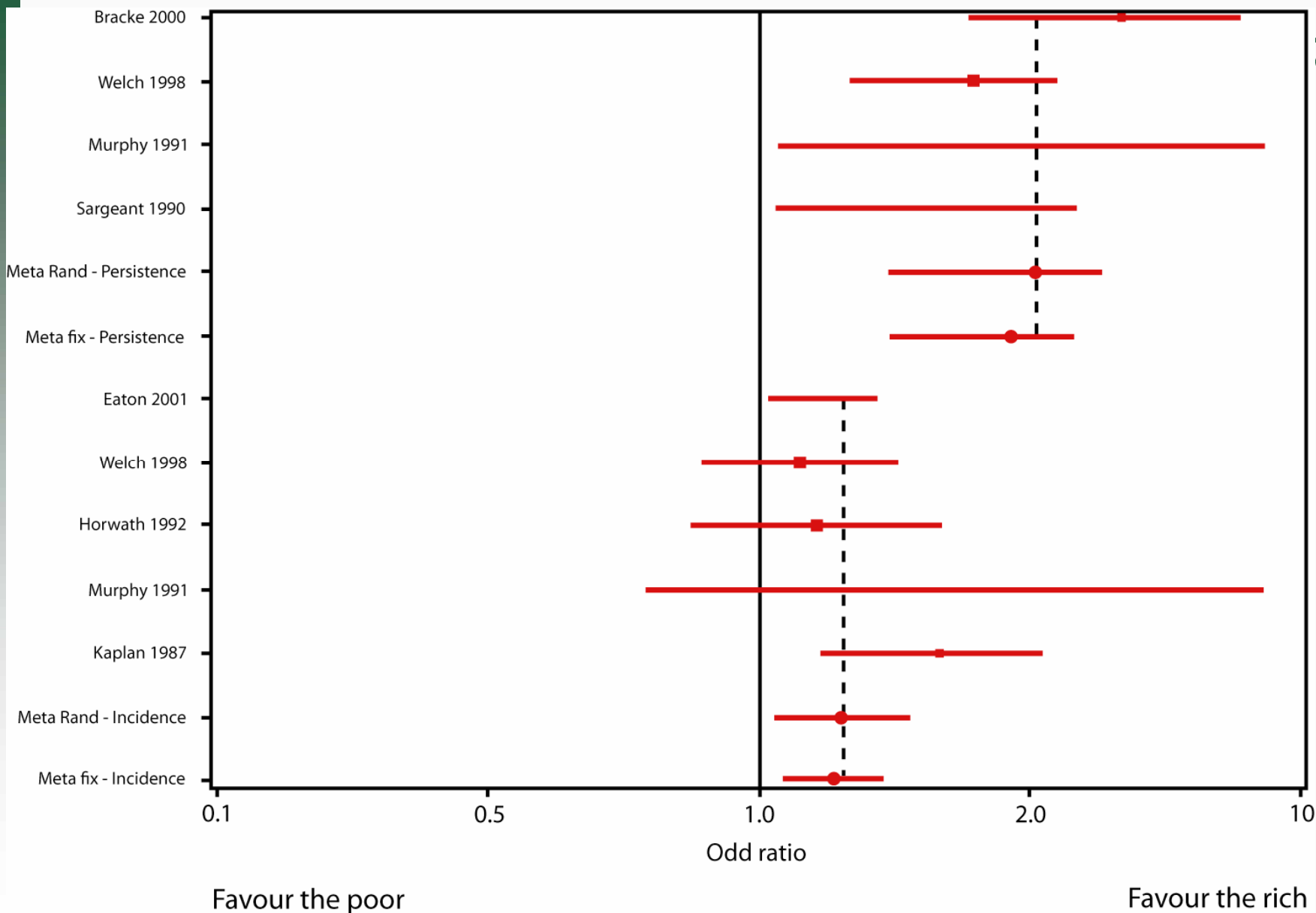
Section C

SES, Work, and Life Stage

Odds Ratios for Prevalence of Major Depression



Odds Ratios of Major Depression



Predictors of Episodes of Depression

	Baseline (1981)		Follow-Up (1993-96)	
	Background	Prevalence	Prevalence	Incidence
Family Background				
Father's job percentile	1.00	1.01		
Father's grade level	.99*	.99*		
Parental Depression	1.91+	1.77***	1.59**	1.76**
Highest grade, baseline	.90*	.91	.92	.89
Job percentile of first job	1.00	1.00		
Occupational Career				
Job percentile at baseline		1.00	1.00	1.00
Household income percentile, baseline		.99	1.00	1.00
Financial dependency at baseline		1.75	2.42***	2.46**
Job percentile at Follow-up			1.00	1.00
Household income percentile, follow-up			1.00	1.00
Other income, follow-up			.61	.89
Prior year life events		1.55*	1.59***	1.88+

* p < .1 ** p < .05 *** p < .01 + p < .005

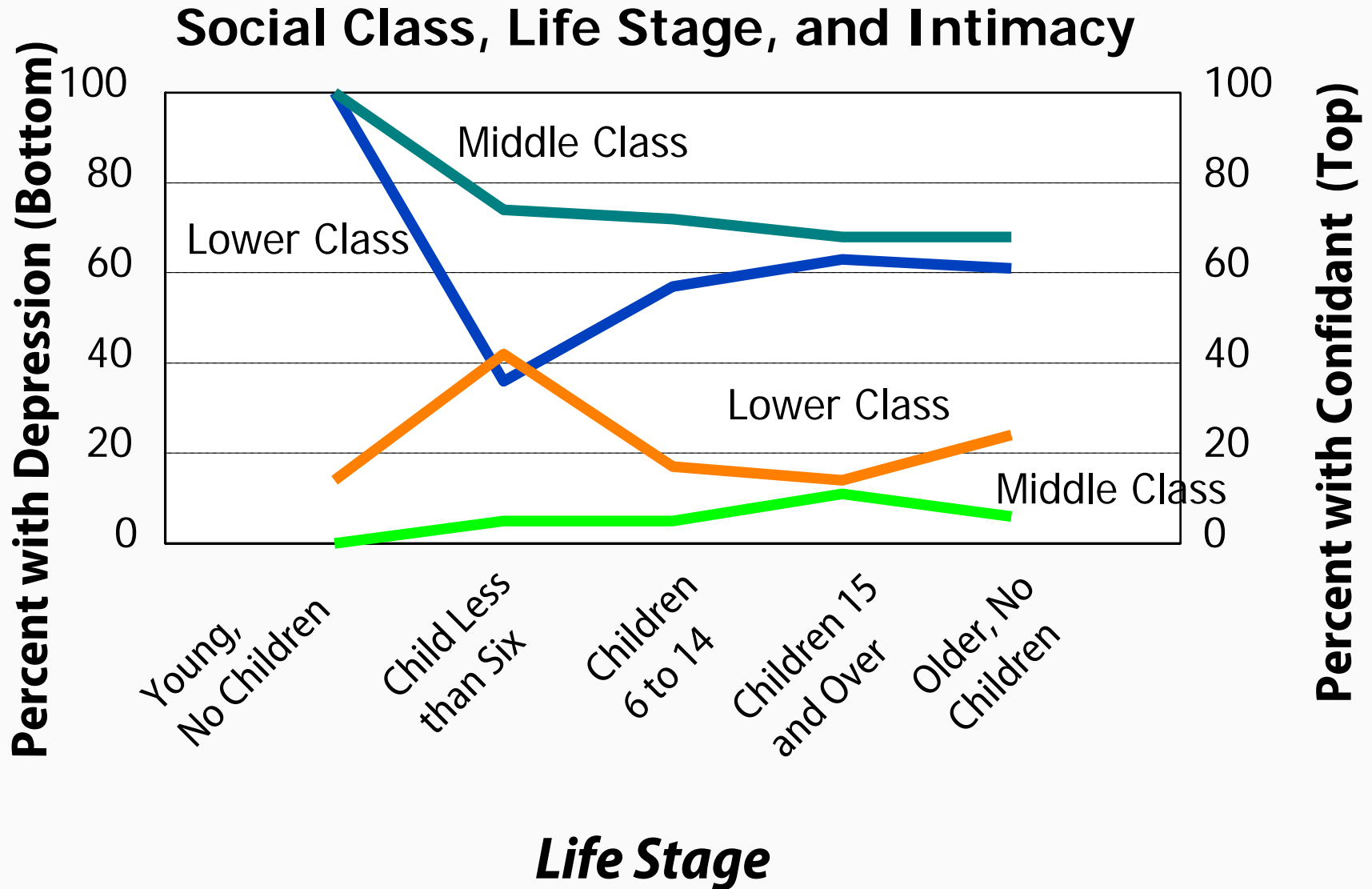
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Predictors of Episodes of Depression

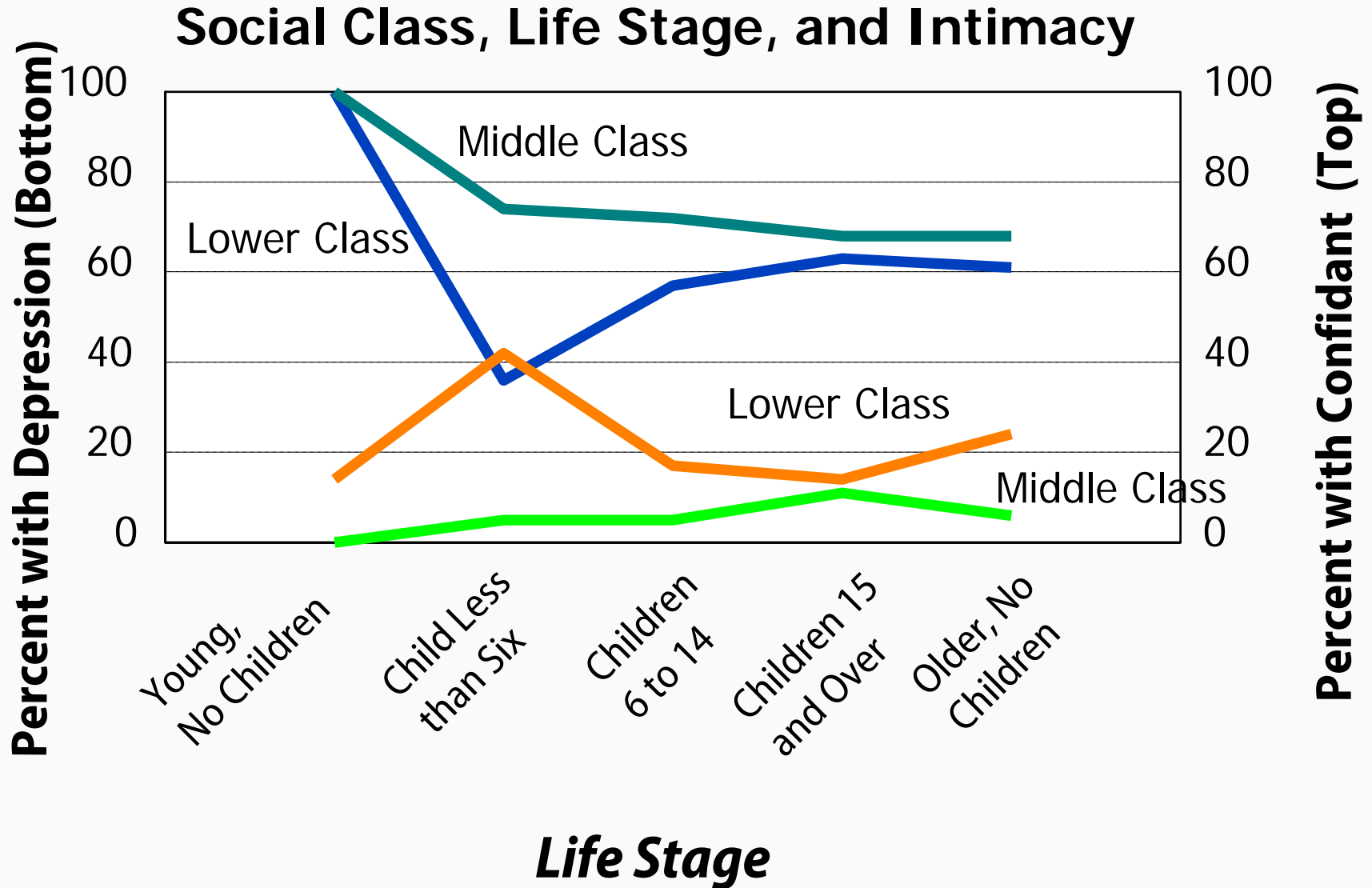
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Depression among Women in London



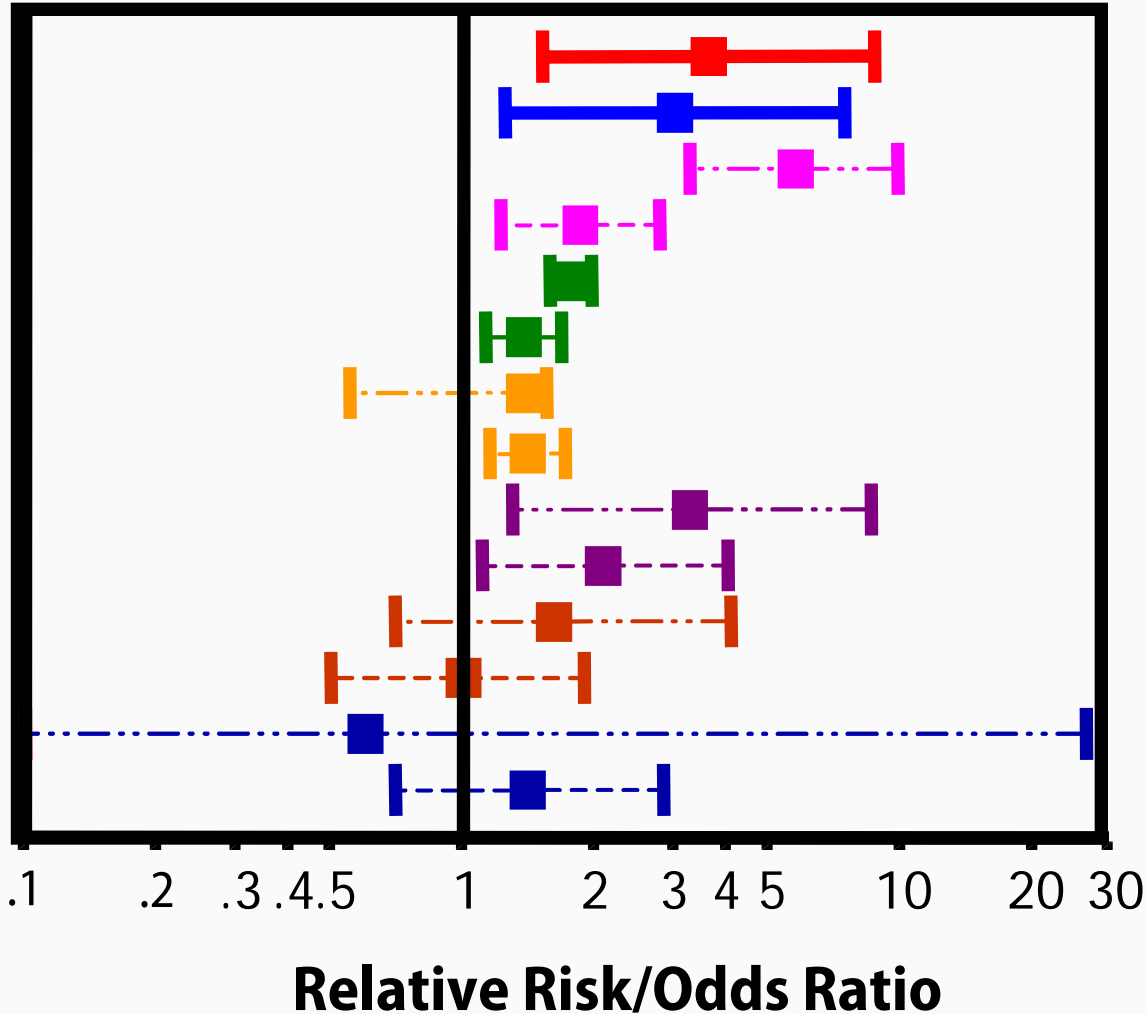
Depression among Women in London



Risk Factors for Adult MDE

Work Environment

- Job Overload a
- Job Unsuitability a
- Absenteeism from Work b
- Absenteeism from Work b
- High Psychological Demand b
- High Psychological Demand b
- Low Decision Latitude b
- Low Decision Latitude b
- High Job Strain c
- High Job Strain c
- High Job Insecurity c
- High Job Insecurity c
- Low Supervisor Support c
- Low Supervisor Support c



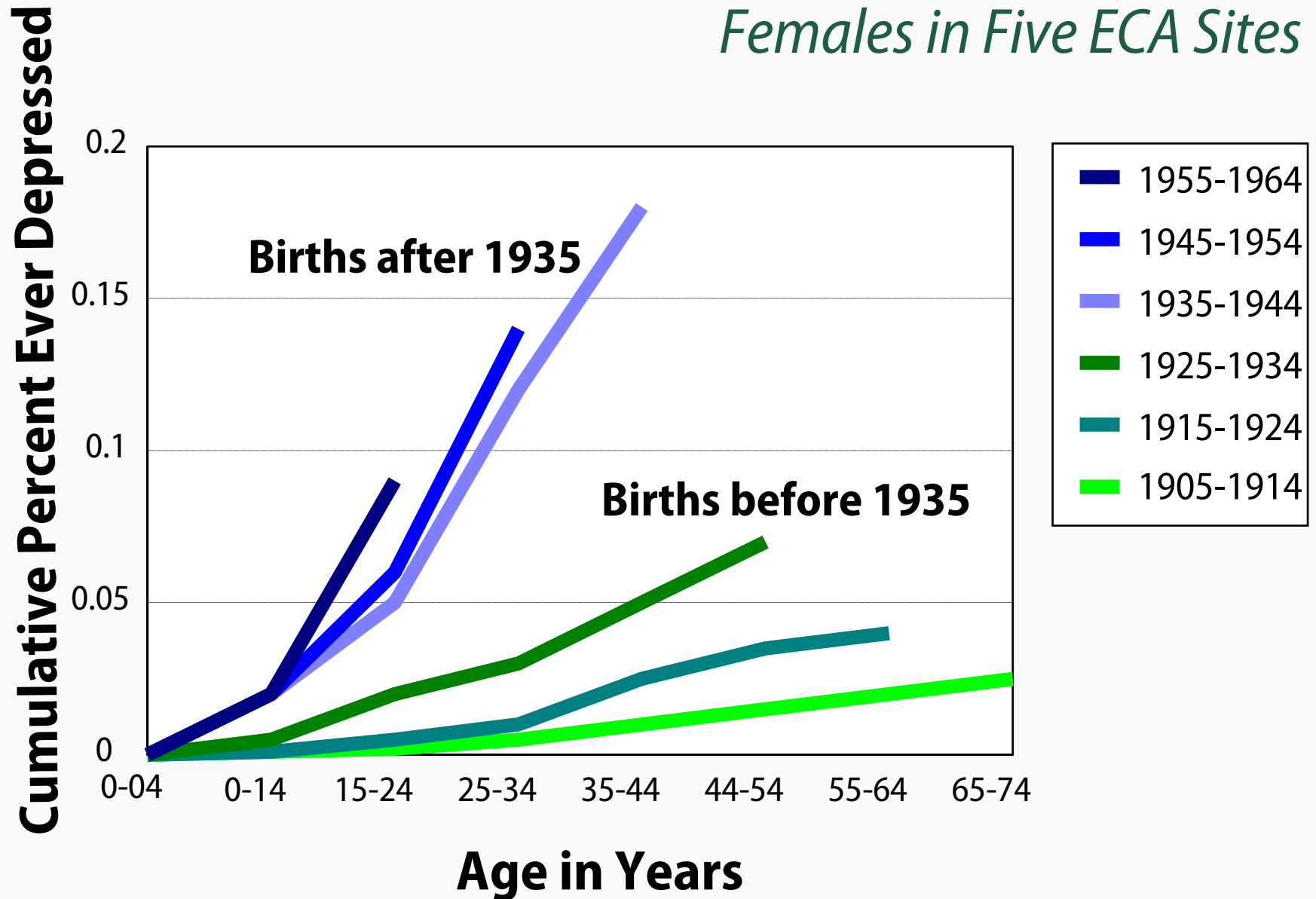


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Section D

Recency of Birth

Females in Five ECA Sites



Community Settings the Cohort Effect Has Appeared

Five urban areas in the
United States

Edmonton, Alberta

Puerto Rico

Munich Germany

Florence, Italy

Paris, France

Beirut, Lebanon

Christchurch, New Zealand

Taiwan

Possible Explanations for Cohort Effects

Older cohorts are less introspective

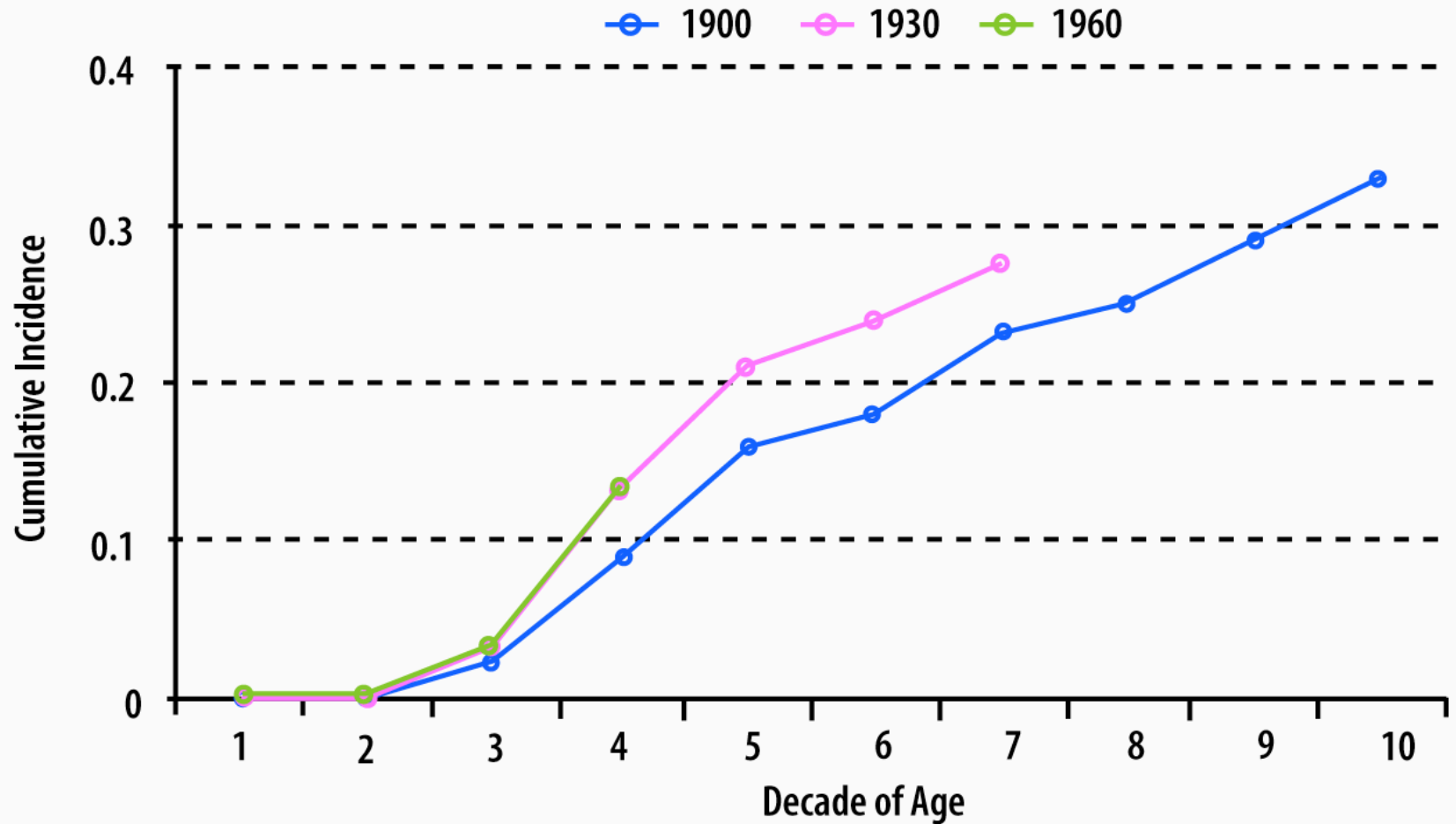
More treatment available leads to better recall

People with depression die sooner

Older subjects forget more distant episodes

Recall Simulation and Major Depression

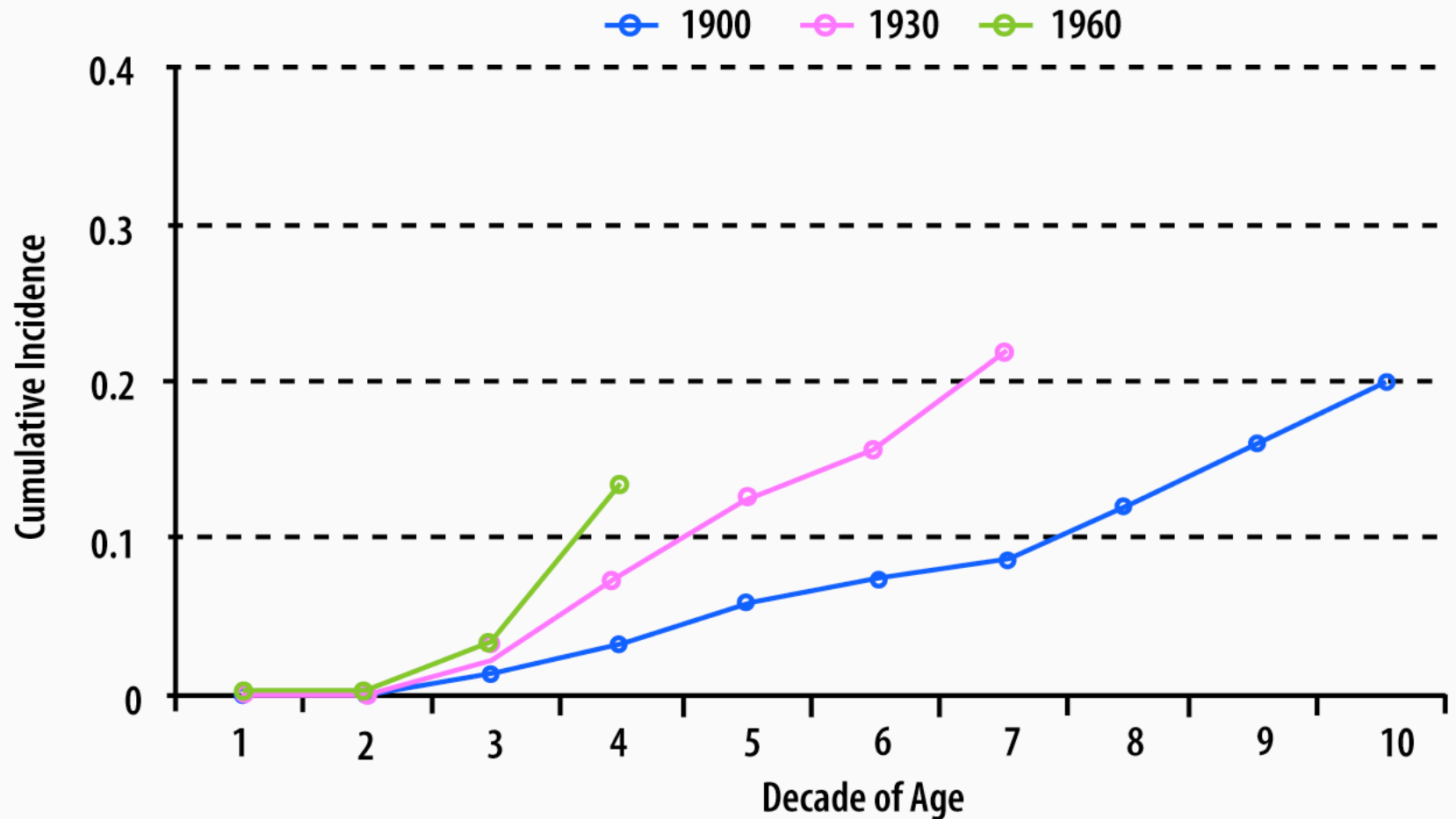
1% of Episodes Forgotten Each Year



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Recall Simulation and Major Depression

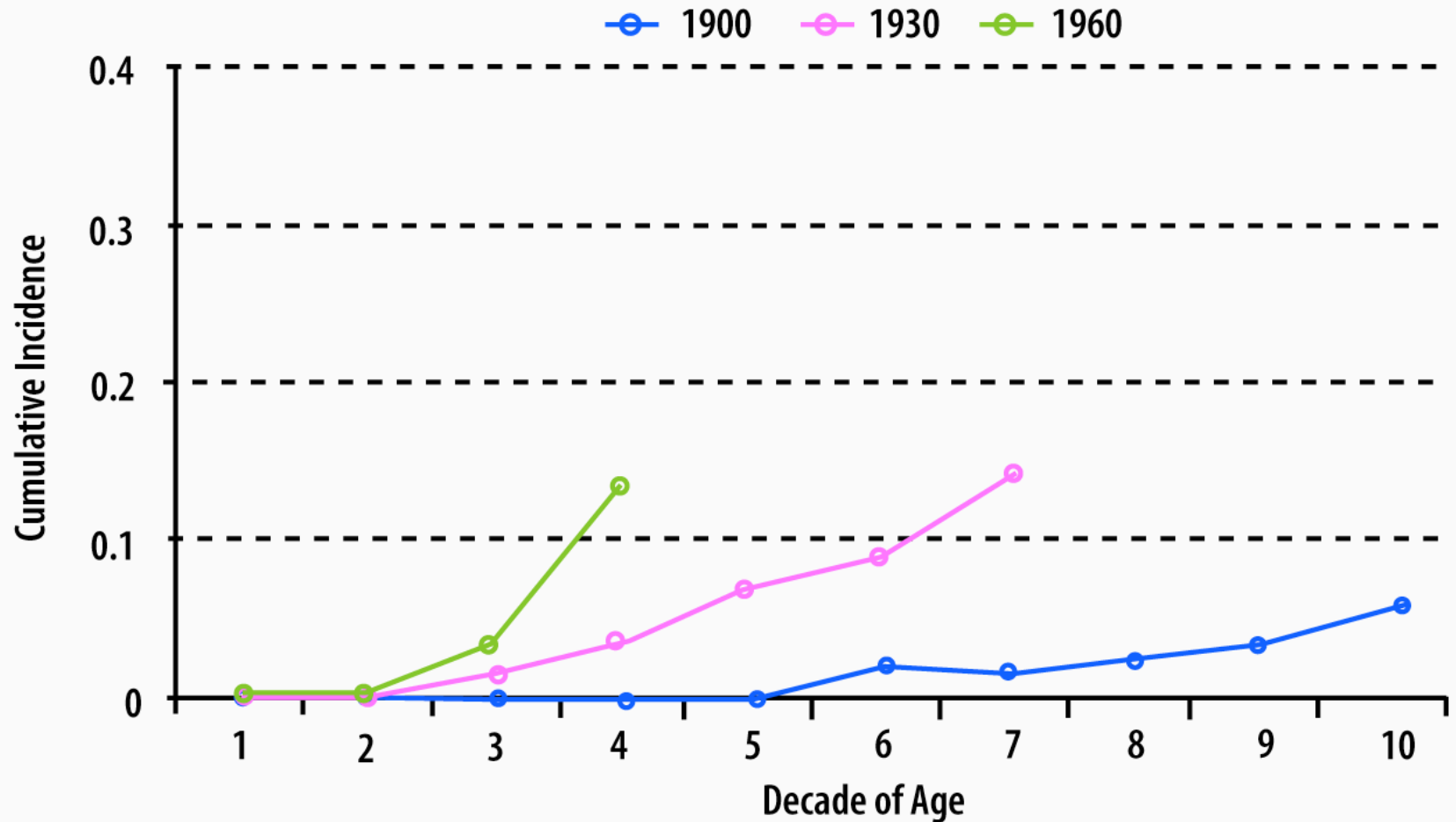
3% of Episodes Forgotten Each Year



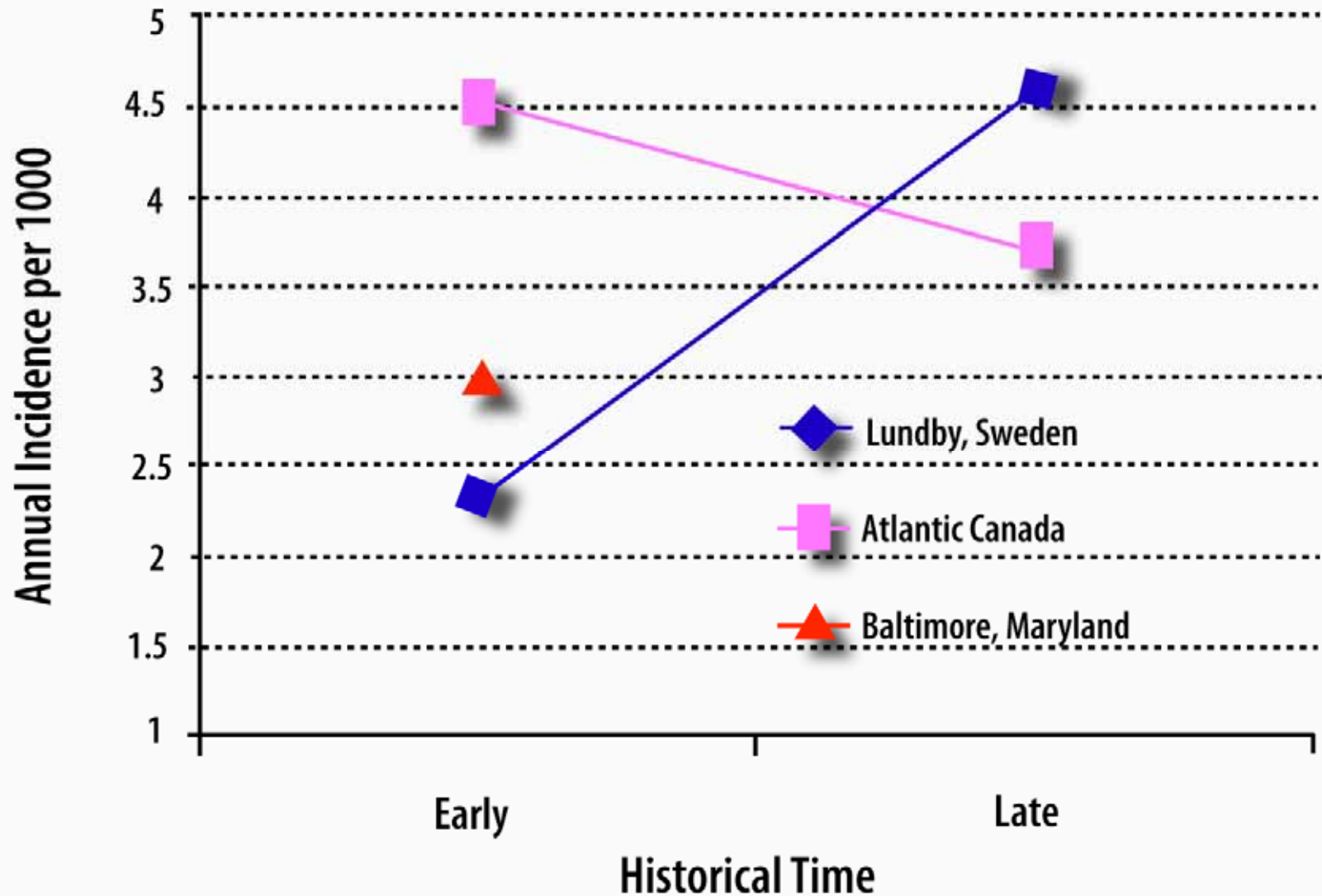
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Recall Simulation and Major Depression

*Forgetting Increases with Age Cohort:
1900, 10%; 1930, 5%; 1960, 1%*



Trends in Incidence of Depressive Disorder



Trend in Suicide among Youth

Rates per 100,000 Population

