

Supplementary Online Content

Angelina R. Sutin, Antonio Terracciano, Yuri Milaneschi, Yang An, Luigi Ferrucci, Alan B. Zonderman. The trajectory of depressive symptoms across the adult life span *JAMA Psychiatry*. Published online June 12, 2013. doi:10.1001/jamapsychiatry.2013.193.

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

Supplemental Text

Additional Information about the BLSA

Testing. The BLSA tries to follow all participants through their lifetime. Study visits are scheduled at several-year intervals, depending on the age of the participant. Prior to 2005, participants aged 20-39 years were examined every 5 years, those aged 40-59 years were examined every 3 years, those 60-79 years were examined every 2 years, and those 80 years old or older were examined every year. Starting January 2005, testing changed such that participants aged <60 years are tested approximately every 4 years, participants 60-80 are tested approximately every 2 years, and participants >80 years are tested approximately every year. Participants unable to come to the study clinic are offered a home visit and/or a telephone interview. The same time intervals are used regardless of whether the participant receives a regular visit, a home visit or a telephone interview.

The testing session includes a medical history and physical exam administered by a certified nurse-practitioner and tests and questionnaires administered by trained clinical staff. Participants receive a standardized physical exam and medical evaluation. A pre-structured interview is used to collect information on socio-demographics, medical history, symptoms, health status and psychological health, among other factors.

Attrition. As of 2011, 31.4% of participants were deceased and 14.8% of participants had dropped out of the study. Dropouts consisted of 6.6% lost to follow-up, 8% at least 1 year past their due date, and .2% who refused to be contacted again. At their first CES-D assessment, participants who subsequently died were older (72 vs. 51 years; $F(1,2318) = 1150.89, p < .01$), more likely to be male (67% vs. 33%, $\chi^2(1) = 80.54, p <$

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.01), White (93% vs. 6% Black and 1% other ethnicity, $\chi^2(2) = 196.80, p < .01$), slightly less educated (16.69 vs. 17.01; $F(1,2318) = 8.32, p < .01$), and entered the study earlier (1988 vs. 1995; $F(1,2318) = 757.14, p < .01$) than participants still living.

At their first CES-D assessment, participants who subsequently dropped out of the study were younger (49 vs. 59 years; $F(1,2318) = 106.89, p < .01$), more likely to be female (52% vs. 48%; $\chi^2(1) = 4.61, p < .05$), and entered the study later (1995 vs. 1993; $F(1,2318) = 53.10, p < .01$). The two groups did not differ in terms of ethnicity ($\chi^2(2) = 1.11, ns$) or education (16.89 vs. 16.91; $F(1,2318) = .88, ns$). After controlling for age, sex, ethnicity, and education, there were no differences in the total CES-D score or the subscales between participants who dropped out versus stayed in the study.

Additional Information about HLM

The equations for the models were:

$$\text{Level 1: CES-D} = \pi_0 + \pi_1 (\text{Age}) + \pi_2 (\text{Age}^2) + e$$

$$\text{Level 2: } \pi_0 = \beta_{00} + \beta_{01} (\text{Sex}) + \beta_{02} (\text{Ethnicity [Black]}) + \beta_{03} (\text{Ethnicity [Other]}) + \beta_{04} (\text{Education}) + r_0$$

$$\pi_1 = \beta_{10} + \beta_{11} (\text{Sex}) + \beta_{12} (\text{Ethnicity [Black]}) + \beta_{13} (\text{Ethnicity [Other]}) + \beta_{14} (\text{Education}) + r_1$$

$$\pi_2 = \beta_{20} + r_2$$

Antidepressant medication use, illness burden, and functional limitations were entered at Level 1 as time-varying covariates to test their effect on the trajectory of depressive symptoms.

Supplemental Table

eTable

Deviance Statistics for the Baseline Model and Models with Age (Linear Slope) and Age Squared (Quadratic Slope)

Scale	Model		
	Baseline	Age (Linear slope)	Age Squared (Quadratic slope)
CES-D	68768.91	68487.21*	68255.78*
Depressed Affect	48554.11	48226.33*	48050.16*
Somatic	52159.46	51887.73*	51628.96*
Interpersonal	20155.14	19828.70*	19772.34*
CESD-16 items	63857.13	63537.34*	63265.07*

Note. $N=2320$.

* Significant improvement in fit over previous model at $p < .001$

Supplemental Figure Captions

eFigure 1

Spaghetti plots of the raw data for the CES-D total scale score (A), depressed affect (B), somatic complaints (C), and interpersonal problems (D). Each bar represents two assessments, roughly 10 years apart (± 2 years), plotted by baseline age in decades. The solid line is the estimated regression line from the baseline CES-D assessment from all participants.

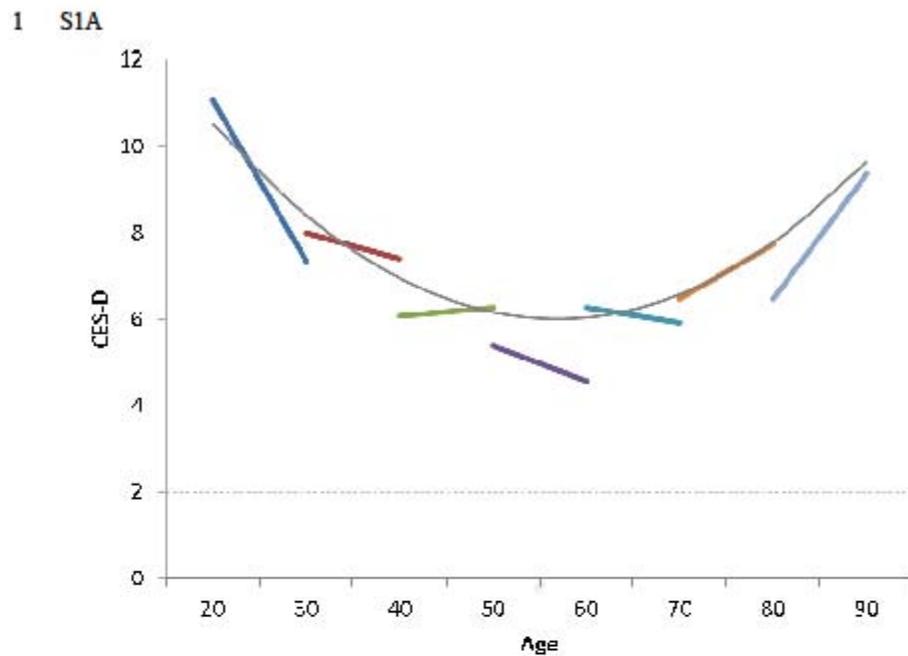
eFigure 2

Estimated Trajectory of the CES-D by Ever Experiencing Severe Depressive Symptoms (CES-D ≥ 16) During the Study Period

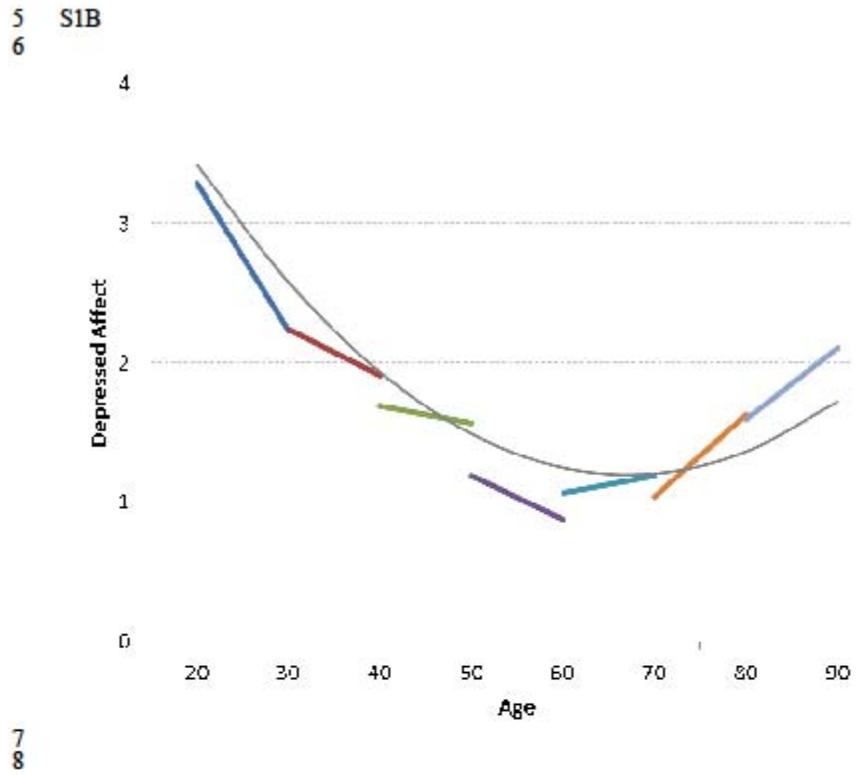
eFigure 3

Estimated trajectory of the CES-D by IADLs

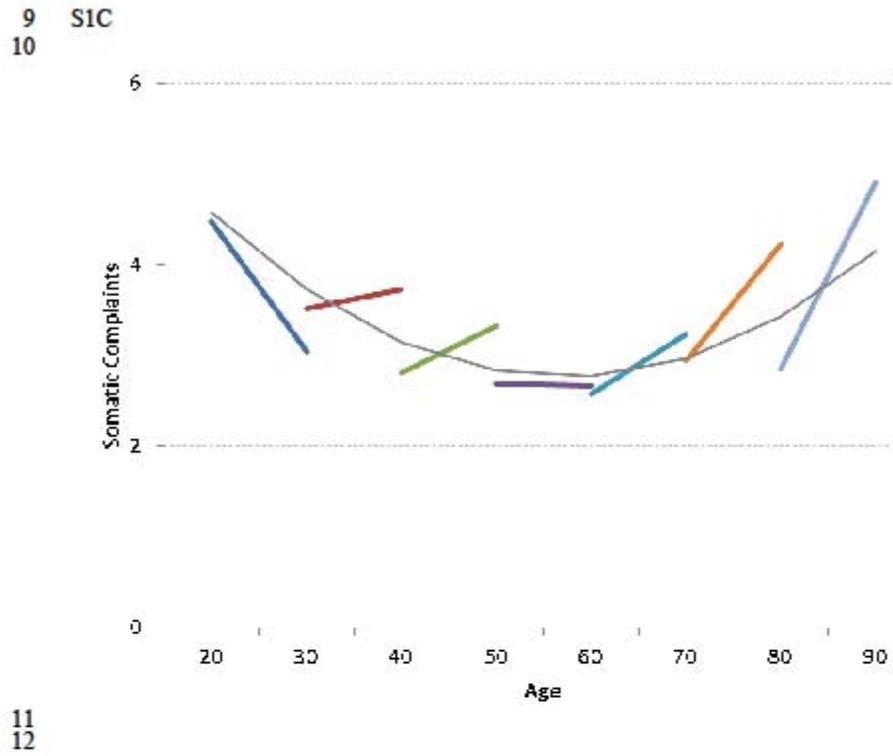
eFigure 1A



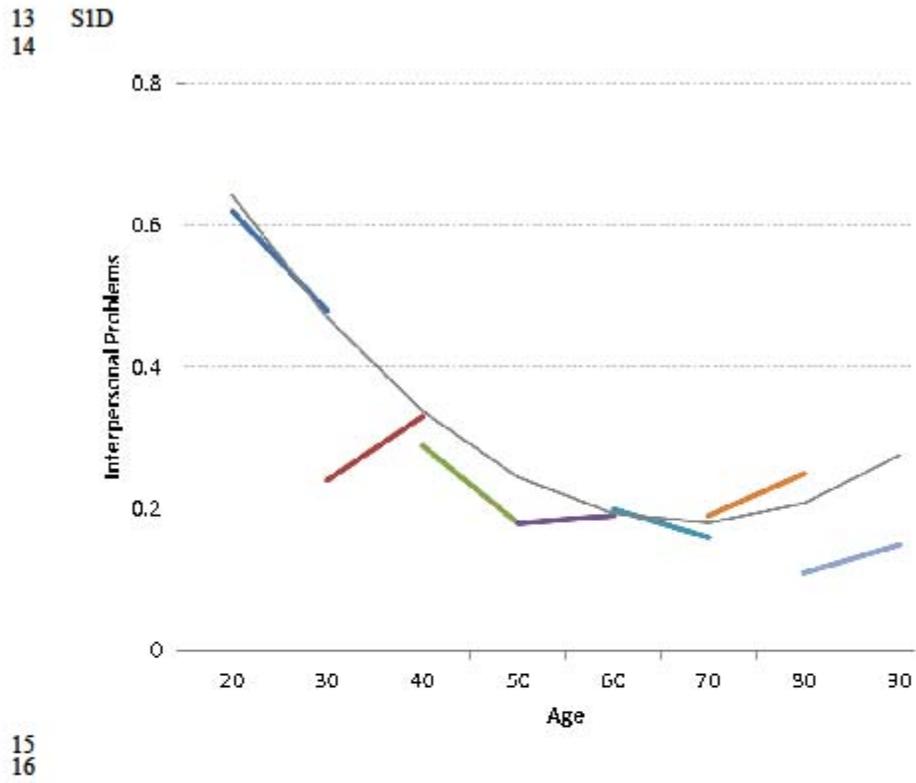
eFigure 1B



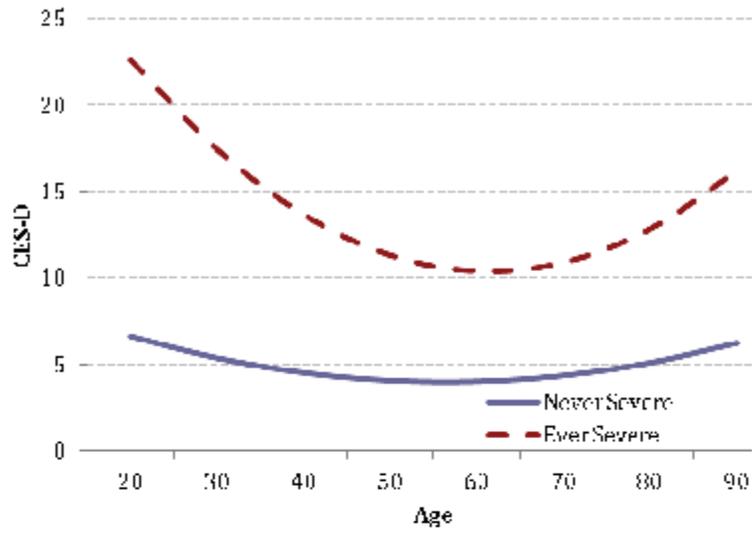
eFigure 1C



eFigure 1D

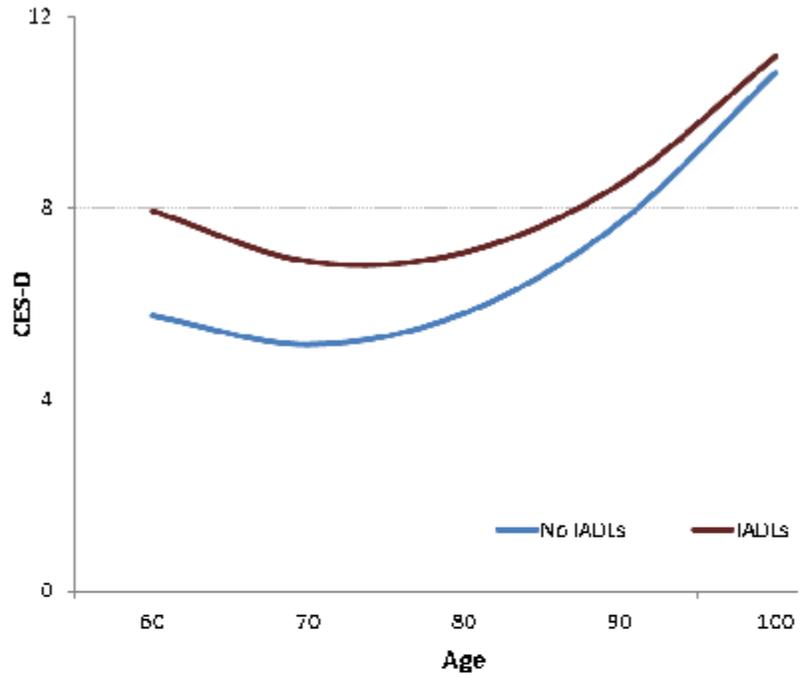


eFigure 2



1

eFigure 3



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2