



THE JOURNAL OF CLINICAL PSYCHIATRY

THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY OF CLINICAL PSYCHOPHARMACOLOGY

Supplementary Material

Article Title: Amyloid Burden and Depressive Symptoms Trajectories in Older Adults at Risk of Developing Cognitive Decline

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DOI Number: 10.4088/JCP.20m13410

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	Dimension 1	Dimension 2	Dimension 3
HIPPO	0.633		0.586
PONS		0.879	
CSO	0.582	0.551	
P_CING	0.830		
PREC	0.890		
FR_MOR	0.829		
FR_MOC	0.924		
FR_PAR	0.863		
TEMP	0.920		
A_CING	0.927		
PUTP_L	0.772	0.530	
PUTP_R	0.841		
PUTA_L	0.923		
PUTA_R	0.891		
CAU_L	0.719		0.619
CAU_R	0.736		0.598
G_MAT	0.965		

Supplementary table 1. Correlations between cerebral amyloid load in different brain regions and the three first components of the principal component analysis, representing 65.8%, 11.1%, and 8.2%, respectively, of the total inertia (Eigen value >1 for all).

CAU: caudate nucleus; CSO: centrum semi-ovale; FR_PAR: fronto-parietal cortex; Hippo: Hippocampus; P_Cing: posterior cingulate; Prec: precuneus; PUTP: posterior putamen; Temp: temporal cortex.

GDS items

	life satisfaction	Apathy	self-esteem	level of anxiety
Are you basically satisfied with your life?	0.75			
Have you dropped many of your activities and interests?		0.64		
Do you feel that your life is empty?	0.67			
Do you often get bored?	0.61			
Are you in good spirits most of the time?	0.55			
Are you afraid that something bad is going to happen to you?				0.97
Do you feel happy most of the time?	0.82			
Do you often feel helpless?				0.49
Do you prefer to stay at home, rather than going out and doing new things?		0.89		
Do you feel you have more problems with memory than most people?			0.53	
Do you think it is wonderful to be alive?				
Do you feel pretty worthless the way you are now?	0.3		0.39	
Do you feel full of energy?		0.51		
Do you feel that your situation is hopeless?	0.33		0.44	
Do you think that most people are better off than you are?			0.66	

Supplementary table 2. Correlations between the 15 Geriatric Depression Scale items and the identified factors after principal component analysis with promax rotation. The four components represent 18.6%, 11.4%, 9.4%, and 9.6%, respectively, (48.9%) of total inertia after rotation (Eigen value >1 for all before rotation).

Outcomes	Variables	Model 1		Model 2	
		M1 betas [95%IC]	M1 p-value (LRT)	M2 betas [95%IC]	M2 p-value (LRT)
log(Global GDS)	intercept	1.138[0.958;1.319]		1.484[0.681;2.287]	
	age z-scored	0.103[0.002;0.204]	0.04	0.101[0;0.202]	0.047
	gender	-0.065[-0.262;0.133]	0.36	-0.066[-0.263;0.131]	0.35
	education	-0.131[-0.325;0.063]	0.52	-0.126[-0.32;0.068]	0.62
	score MMSE			-0.012[-0.04;0.015]	0.22
	CDR status	0.103[-0.095;0.3]	0.14	0.096[-0.101;0.294]	0.17
	antiepileptic intake	-0.036[-0.687;0.616]	0.88	-0.031[-0.681;0.619]	0.89
	antidepressant intake	0.416[0.02;0.812]	0.03	0.412[0.017;0.807]	0.03
	AV45 status	0.008[-0.197;0.214]	0.91	0.002[-0.204;0.207]	0.98
	time	0.032[0.003;0.062]	0.02	0.032[0.002;0.062]	0.03
	Interaction Time x AV45	0.02[-0.044;0.083]	0.39	0.017[-0.047;0.081]	0.46
log(Life satisfaction)	intercept	2.587[2.52;2.653]		2.489[2.181;2.797]	
	age z-scored	-0.009[-0.046;0.028]	0.5	-0.008[-0.045;0.029]	0.54
	gender	0.008[-0.065;0.08]	0.76	0.008[-0.064;0.081]	0.75
	education	0.047[-0.024;0.118]	0.58	0.045[-0.026;0.117]	0.67
	score MMSE			0.003[-0.007;0.014]	0.37
	CDR status	-0.023[-0.096;0.049]	0.37	-0.021[-0.094;0.051]	0.41
	antiepileptic intake	0.044[-0.195;0.283]	0.61	0.042[-0.197;0.282]	0.62
	antidepressant intake	-0.095[-0.241;0.05]	0.59	-0.094[-0.239;0.051]	0.62
	AV45 status	0.011[-0.064;0.087]	0.68	0.013[-0.063;0.088]	0.63
	time	-0.01[-0.021;0.002]	0.16	-0.01[-0.021;0.002]	0.17
	Interaction Time x AV45	0.001[-0.024;0.025]	0.92	0.002[-0.023;0.026]	0.85
log(Apathy)	intercept	1.211[1.118;1.305]		1.5[0.971;2.029]	
	age z-scored	0.071[0.02;0.122]	0.001	0.069[0.018;0.121]	0.002

		Model 1		Model 2	
	gender	0.018[-0.083;0.118]	0.62	0.017[-0.084;0.117]	0.64
	education	-0.049[-0.148;0.049]	0.16	-0.045[-0.144;0.054]	0.2
	score MMSE			-0.01[-0.028;0.008]	0.13
	CDR status	-0.001[-0.101;0.099]	0.98	-0.006[-0.107;0.095]	0.86
	antiepileptic intake	-0.068[-0.399;0.263]	0.56	-0.064[-0.396;0.268]	0.59
	antidepressant intake	0.25[0.049;0.451]	0.005	0.246[0.045;0.447]	0.006
	AV45 status	0.007[-0.098;0.111]	0.86	0.001[-0.103;0.106]	0.97
	time	0.033[0.012;0.054]	<0.0001	0.032[0.012;0.053]	<0.0001
	Interaction Time x AV45	-0.005[-0.049;0.04]	0.77	-0.007[-0.052;0.037]	0.66
log(Self-esteem)	intercept	2.33[2.285;2.376]		1.998[1.734;2.261]	
	age z-scored	-0.012[-0.037;0.013]	0.17	-0.01[-0.034;0.015]	0.27
	gender	-0.032[-0.08;0.017]	0.6	-0.031[-0.078;0.017]	0.66
	education	0.039[-0.009;0.087]	0.21	0.034[-0.013;0.081]	0.41
	score MMSE			0.012[0.003;0.021]	0.003
	CDR status	-0.044[-0.093;0.005]	0.11	-0.038[-0.086;0.011]	0.26
	antiepileptic intake	0.07[-0.091;0.231]	0.22	0.066[-0.093;0.224]	0.24
	antidepressant intake	-0.121[-0.219;-0.024]	0.005	-0.117[-0.213;-0.021]	0.006
	AV45 status	-0.005[-0.056;0.046]	0.78	0.001[-0.049;0.051]	0.95
	time	-0.012[-0.022;-0.001]	0.02	-0.011[-0.022;-0.001]	0.03
	Interaction Time x AV45	-0.032[-0.054;-0.009]	0.0007	-0.029[-0.052;-0.007]	0.003
log(Anxiety)	intercept	1.305[1.227;1.383]		1.112[0.674;1.549]	
	age z-scored	0.017[-0.026;0.059]	0.28	0.018[-0.025;0.061]	0.24
	gender	-0.051[-0.134;0.033]	0.8	-0.05[-0.134;0.034]	0.85
	education	-0.004[-0.086;0.078]	0.89	-0.007[-0.09;0.076]	0.81
	score MMSE			0.007[-0.008;0.022]	0.22
	CDR status	0.08[-0.004;0.164]	0.07	0.084[0;0.168]	0.049
	antiepileptic intake	0.085[-0.191;0.361]	0.39	0.082[-0.195;0.359]	0.4
	antidepressant intake	0.027[-0.141;0.194]	0.65	0.029[-0.139;0.197]	0.63

	Model 1		Model 2	
AV45 status	0.014[-0.073;0.101]	0.66	0.017[-0.07;0.105]	0.58
time	0.005[-0.012;0.022]	0.44	0.005[-0.012;0.022]	0.41
Interaction Time x AV45	0.026[-0.011;0.062]	0.47	0.027[-0.009;0.064]	0.34

Supplementary table 3: Multivariate analysis of the relationships between log(GDS), log(GDS factors) and amyloid deposition (AV45 status) according to the two models: M1, adjusted for sex, age, educational level, medication and CDR status; M2, adjusted for sex, age, educational level, medication, onset CDR status and MMSE score.

The two adjusting models are:

M1, adjusted for Sex, Age, education, medication and CDR status;

M2, adjusted for Sex, Age, education, medication, onset CDR status and MMSE score;

The p-value presented are the p-values from likelihood ratio tests (LRTs).

Abbreviations: AV45: AV45 variable; GDS: Geriatric Depression scale -15 item.

Outcomes	Variables	Model 1		Model 2	
		M1 betas [95%IC]	M1 p-value (LRT)	M2 betas [95%IC]	M2 p-value (LRT)
Global GDS	intercept	1.174[0.851;1.496]		1.411[0.569;2.254]	
	age z-scored	0.094[-0.008;0.196]	0.09	0.092[-0.01;0.194]	0.1
	gender	-0.083[-0.29;0.124]	0.25	-0.084[-0.291;0.123]	0.25
	education	-0.112[-0.308;0.084]	0.1	-0.109[-0.305;0.087]	0.12
	CDR status	0.095[-0.102;0.292]	0.17	0.091[-0.107;0.288]	0.19
	antiepileptic	0.022[-0.634;0.678]	0.92	0.025[-0.631;0.68]	0.92
	antidepressant	0.406[0.003;0.809]	0.04	0.404[0.001;0.806]	0.042
	score MMSE			-0.008[-0.036;0.019]	0.39
	Time	0.033[0.003;0.062]	0.02	0.032[0.002;0.062]	0.02
	Medium tertile Dim 1	0.077[-0.17;0.323]	0.68	0.076[-0.171;0.322]	0.68
	Upper tertile Dim 1	0.04[-0.21;0.289]		0.036[-0.213;0.285]	
	Medium tertile Dim 2	-0.023[-0.261;0.215]	0.86	-0.021[-0.258;0.217]	0.88
	Upper tertile Dim 2	-0.046[-0.286;0.194]		-0.043[-0.283;0.196]	
	Medium tertile Dim 3	-0.232[-0.474;0.009]	0.23	-0.227[-0.469;0.014]	0.26
	Upper tertile Dim 3	-0.142[-0.386;0.102]		-0.139[-0.383;0.106]	
	Inter Time x Med ter Dim 1	-0.002[-0.077;0.073]	0.68	-0.058[-0.32;0.203]	0.39
	Inter Time x upp ter Dim 1	-0.021[-0.097;0.054]		-0.003[-0.078;0.072]	
	Inter Time x Med ter Dim 2	0.014[-0.059;0.087]	0.48	0.014[-0.059;0.087]	0.49
	Inter Time x upp ter Dim 2	-0.046[-0.119;0.026]		-0.046[-0.118;0.027]	
	Inter Time x Med ter Dim 3	-0.057[-0.13;0.016]	0.18	-0.055[-0.129;0.018]	0.23
	Inter Time x upp ter Dim 3	-0.07[-0.143;0.003]		-0.068[-0.141;0.005]	
life satisfaction (log)	intercept	2.639[2.519;2.759]		2.574[2.251;2.896]	
	age z-scored	-0.008[-0.046;0.03]	0.53	-0.008[-0.046;0.03]	0.56
	gender	0.006[-0.071;0.083]	0.82	0.006[-0.07;0.083]	0.82
	education	0.047[-0.026;0.119]	0.62	0.046[-0.027;0.118]	0.67
	CDR status	-0.021[-0.094;0.052]	0.42	-0.02[-0.093;0.053]	0.44

		Model 1		Model 2	
Apathy (log)	antiepileptic	0.045[-0.198;0.287]	0.6	0.044[-0.199;0.287]	0.61
	antidepressant	-0.089[-0.238;0.06]	0.82	-0.088[-0.238;0.061]	0.84
	score MMSE			0.002[-0.008;0.013]	0.54
	Time	-0.01[-0.021;0.002]	0.16	-0.01[-0.021;0.002]	0.17
	Medium tertile Dim 1	0.001[-0.09;0.092]	0.96	0.001[-0.09;0.093]	0.97
	Upper tertile Dim 1	-0.007[-0.099;0.085]		-0.006[-0.098;0.086]	
	Medium tertile Dim 2	-0.028[-0.116;0.06]	0.15	-0.029[-0.117;0.059]	0.15
	Upper tertile Dim 2	0.031[-0.058;0.12]		0.03[-0.058;0.119]	
	Medium tertile Dim 3	0.008[-0.082;0.097]	0.93	0.006[-0.083;0.096]	0.94
	Upper tertile Dim 3	-0.004[-0.094;0.087]		-0.005[-0.095;0.086]	
	Inter Time x Med ter Dim 1	0.004[-0.025;0.033]	0.57	0.005[-0.024;0.034]	0.54
	Inter Time x upp ter Dim 1	0.011[-0.018;0.04]		0.012[-0.018;0.041]	
	Inter Time x Med ter Dim 2	0.016[-0.013;0.044]	0.49	0.016[-0.013;0.044]	0.51
	Inter Time x upp ter Dim 2	0.024[-0.004;0.052]		0.024[-0.004;0.052]	
	Inter Time x Med ter Dim 3	0.026[-0.002;0.054]	0.06	0.026[-0.003;0.054]	0.08
	Inter Time x upp ter Dim 3	0.03[0.001;0.058]		0.029[0.001;0.057]	
Apathy (log)	intercept	1.21[1.038;1.382]		1.464[0.917;2.011]	
	age z-scored	0.066[0.014;0.118]	0.003	0.064[0.012;0.117]	0.005
	gender	-0.003[-0.109;0.102]	0.93	-0.004[-0.11;0.102]	0.91
	education	-0.036[-0.136;0.064]	0.31	-0.032[-0.133;0.068]	0.36
	CDR status	-0.003[-0.103;0.098]	0.94	-0.007[-0.109;0.094]	0.84
	antiepileptic	-0.04[-0.375;0.295]	0.73	-0.037[-0.373;0.298]	0.75
	antidepressant	0.24[0.035;0.446]	0.009	0.238[0.032;0.444]	0.01
	score MMSE			-0.009[-0.027;0.009]	0.18
	Time	0.033[0.012;0.054]	<0.0001	0.033[0.012;0.053]	<0.0001
	Medium tertile Dim 1	-0.01[-0.131;0.11]	0.92	-0.011[-0.132;0.11]	0.94
	Upper tertile Dim 1	0.007[-0.115;0.129]		0.003[-0.12;0.125]	
	Medium tertile Dim 2	0.007[-0.114;0.128]	0.92	0.01[-0.112;0.131]	0.92
	Upper tertile Dim 2	-0.01[-0.132;0.113]		-0.007[-0.129;0.116]	

		Model 1		Model 2	
	Medium tertile Dim 3	-0.079[-0.201;0.044]	0.52	-0.075[-0.198;0.049]	0.65
	Upper tertile Dim 3	-0.101[-0.225;0.023]		-0.098[-0.222;0.026]	
	Inter Time x Med ter Dim 1	-0.028[-0.08;0.025]	0.19	-0.029[-0.082;0.024]	0.16
	Inter Time x upp ter Dim 1	-0.032[-0.085;0.021]		-0.034[-0.087;0.019]	
	Inter Time x Med ter Dim 2	-0.015[-0.068;0.037]	0.62	-0.016[-0.068;0.037]	0.62
	Inter Time x upp ter Dim 2	-0.017[-0.069;0.036]		-0.017[-0.069;0.036]	
	Inter Time x Med ter Dim 3	-0.024[-0.075;0.028]	0.21	-0.022[-0.074;0.03]	0.26
	Inter Time x upp ter Dim 3	-0.032[-0.084;0.02]		-0.03[-0.082;0.022]	
Self-esteem (log)	intercept	2.348[2.264;2.432]		2.076[1.805;2.347]	
	age z-scored	-0.012[-0.037;0.014]	0.19	-0.01[-0.035;0.015]	0.28
	gender	-0.029[-0.08;0.022]	0.11	-0.028[-0.079;0.023]	0.12
	education	0.034[-0.014;0.083]	0.41	0.031[-0.018;0.079]	0.65
	CDR status	-0.041[-0.09;0.008]	0.16	-0.036[-0.085;0.012]	0.32
	antiepileptic	0.064[-0.099;0.226]	0.26	0.061[-0.1;0.222]	0.28
	antidepressant	-0.115[-0.214;-0.015]	0.01	-0.112[-0.211;-0.014]	0.01
	score MMSE			0.01[0;0.019]	0.03
	Time	-0.012[-0.022;-0.001]	0.02	-0.011[-0.022;-0.001]	0.03
	Medium tertile Dim 1	-0.029[-0.09;0.032]	0.35	-0.028[-0.088;0.033]	0.4
	Upper tertile Dim 1	-0.025[-0.086;0.037]		-0.02[-0.081;0.041]	
	Medium tertile Dim 2	0.004[-0.055;0.063]	0.53	0.001[-0.057;0.059]	0.58
	Upper tertile Dim 2	0.022[-0.037;0.081]		0.019[-0.04;0.078]	
	Medium tertile Dim 3	0.041[-0.019;0.101]	0.12	0.036[-0.023;0.095]	0.18
	Upper tertile Dim 3	0.036[-0.025;0.096]		0.032[-0.028;0.092]	
	Inter Time x Med ter Dim 1	0[-0.026;0.026]	0.46	0.001[-0.025;0.028]	0.56
	Inter Time x upp ter Dim 1	-0.01[-0.037;0.016]		-0.008[-0.035;0.018]	
	Inter Time x Med ter Dim 2	0.009[-0.016;0.035]	0.09	0.009[-0.016;0.035]	0.1
	Inter Time x upp ter Dim 2	0.028[0.002;0.053]		0.027[0.001;0.053]	
	Inter Time x Med ter Dim 3	0.033[0.007;0.059]	0.004	0.031[0.005;0.057]	0.01
	Inter Time x upp ter Dim 3	0.03[0.004;0.056]		0.028[0.002;0.054]	

		Model 1		Model 2	
level of anxiety (log)	intercept	1.385[1.241;1.528]		1.133[0.682;1.583]	
	age z-scored	0.014[-0.029;0.058]	0.36	0.016[-0.028;0.06]	0.3
	gender	-0.052[-0.141;0.036]	0.84	-0.051[-0.14;0.037]	0.9
	education	0.002[-0.082;0.085]	0.95	-0.002[-0.086;0.082]	0.95
	CDR status	0.076[-0.009;0.16]	0.1	0.08[-0.004;0.165]	0.07
	antiepileptic	0.103[-0.176;0.383]	0.29	0.101[-0.18;0.381]	0.31
	antidepressant	0.019[-0.153;0.191]	0.75	0.021[-0.151;0.193]	0.73
	score MMSE			0.009[-0.006;0.024]	0.1
	Time	0.005[-0.012;0.022]	0.44	0.005[-0.012;0.022]	0.41
	Medium tertile Dim 1	0.035[-0.08;0.13]	0.63	0.026[-0.08;0.131]	0.58
	Upper tertile Dim 1	0.035[-0.071;0.141]		0.038[-0.068;0.145]	
	Medium tertile Dim 2	-0.009[-0.114;0.096]	0.71	-0.01[-0.116;0.095]	0.69
	Upper tertile Dim 2	-0.03[-0.136;0.076]		-0.032[-0.138;0.075]	
	Medium tertile Dim 3	-0.079[-0.182;0.025]	0.88	-0.082[-0.186;0.022]	0.73
	Upper tertile Dim 3	-0.041[-0.146;0.063]		-0.044[-0.149;0.061]	
	Inter Time x Med ter Dim 1	0.037[-0.006;0.08]	0.45	0.038[-0.005;0.081]	0.38
	Inter Time x upp ter Dim 1	0.026[-0.017;0.069]		0.028[-0.016;0.071]	
	Inter Time x Med ter Dim 2	0.047[0.004;0.09]	0.006	0.047[0.004;0.091]	0.005
	Inter Time x upp ter Dim 2	-0.008[-0.051;0.035]		-0.008[-0.051;0.035]	
	Inter Time x Med ter Dim 3	-0.001[-0.043;0.042]	0.65	-0.002[-0.052;0.034]	0.59
	Inter Time x upp ter Dim 3	-0.012[-0.055;0.03]		-0.015[-0.045;0.04]	

Supplementary table 4: Multivariate analysis of the relationships between log(GD, log(GDS factors) and amyloid deposition (regional dimensions) according to the two models: M1, adjusted for sex, age, educational level, medication and CDR status; M2, adjusted for sex, age, educational level, medication, onset CDR status and MMSE score.

The two adjusting models are:

M1, adjusted for Sex, Age, education, medication and CDR status;

M2, adjusted for Sex, Age, education, medication, onset CDR status and MMSE score;

The p-value presented are the p-values from likelihood ratio test (LRT).

Abbreviations: GDS: Geriatric Depression scale -15 item; Dim 2: amyloid regional dimension 2 (pontine region); Dim 3: amyloid regional dimension 3 (hippocampus and bilateral caudate nuclei); med ter: medium tercile; upp ter: upper tercile;

Supplementary table 5:

Multivariate analysis of the relationships between GDS, GDS factors and amyloid deposition (AV45 status) according to the model adjusted for sex, age, education, medication, CDR status, MMSE score and treatment arms.

Outcomes	Variables	M3 betas [95%IC]	M3 p-value (LRT)
GDS	intercept	1.479[0.657;2.301]	
	age z-scored	0.101[-0.001;0.202]	0.047
	gender	-0.066[-0.265;0.132]	0.34
	education	-0.128[-0.324;0.068]	0.59
	score MMSE	-0.012[-0.039;0.016]	0.23
	arms omega3	-0.001[-0.283;0.28]	0.94
	arms IM	-0.041[-0.313;0.232]	
	arms ctrl	0.02[-0.25;0.291]	
	CDR status	0.103[-0.1;0.305]	0.15
	antiepileptic intake	-0.034[-0.691;0.622]	0.88
	antidepressant intake	0.411[0.01;0.813]	0.04
	AV45 status	-0.002[-0.212;0.207]	0.97
	time	0.032[0.002;0.062]	0.03
	Interaction Time x AV45	0.017[-0.046;0.081]	0.45
Life satisfaction	intercept	2.496[2.181;2.812]	
	age z-scored	-0.008[-0.045;0.029]	0.54
	gender	0.008[-0.065;0.081]	0.77
	education	0.046[-0.026;0.118]	0.65
	score MMSE	0.003[-0.007;0.014]	0.37
	arms omega3	-0.002[-0.106;0.102]	0.94
	arms IM	-0.02[-0.12;0.08]	
	arms ctrl	-0.011[-0.111;0.088]	
	CDR status	-0.019[-0.093;0.055]	0.47
	antiepileptic intake	0.04[-0.202;0.281]	0.64
	antidepressant intake	-0.096[-0.244;0.051]	0.59
	AV45 status	0.013[-0.064;0.091]	0.62
	time	-0.01[-0.021;0.002]	0.17
	Interaction Time x AV45	0.002[-0.023;0.026]	0.85
Apathy	intercept	1.494[0.955;2.034]	
	age z-scored	0.069[0.017;0.121]	0.002
	gender	0.016[-0.085;0.117]	0.65
	education	-0.045[-0.145;0.054]	0.2
	score MMSE	-0.01[-0.028;0.009]	0.14
	arms omega3	0.009[-0.134;0.153]	0.89
	arms IM	-0.026[-0.165;0.112]	
	arms ctrl	0.007[-0.131;0.145]	
	CDR status	-0.003[-0.106;0.1]	0.94
	antiepileptic intake	-0.069[-0.404;0.265]	0.56
	antidepressant intake	0.243[0.039;0.447]	0.008
	AV45 status	-0.001[-0.107;0.106]	0.99
	time	0.032[0.012;0.053]	0.0001
	Interaction Time x AV45	-0.007[-0.052;0.038]	0.66
Self-esteem	intercept	2.004[1.735;2.273]	
	age z-scored	-0.01[-0.034;0.015]	0.27
	gender	-0.031[-0.079;0.017]	0.64
	education	0.035[-0.013;0.082]	0.37
	score MMSE	0.012[0.002;0.021]	0.004
	arms omega3	0.003[-0.066;0.072]	0.94
	arms IM	-0.006[-0.072;0.06]	
	arms ctrl	-0.01[-0.076;0.055]	

Outcomes	Variables	M3 betas [95%IC]	M3 p-value (LRT)
Level of anxiety	CDR status	-0.037[-0.086;0.012]	0.3
	antiepileptic intake	0.064[-0.096;0.223]	0.26
	antidepressant intake	-0.119[-0.217;-0.022]	0.005
	AV45 status	0.002[-0.049;0.053]	0.92
	time	-0.011[-0.022;-0.001]	0.03
	Interaction Time x AV45	-0.029[-0.052;-0.007]	0.002
	intercept	1.115[0.669;1.561]	
	age z-scored	0.018[-0.025;0.061]	0.24
	gender	-0.05[-0.134;0.034]	0.83
	education	-0.006[-0.09;0.077]	0.83
	score MMSE	0.007[-0.008;0.022]	0.22
	arms omega3	0.003[-0.117;0.123]	0.99
	arms IM	-0.008[-0.124;0.107]	
	arms ctrl	-0.009[-0.124;0.106]	
	CDR status	0.085[-0.002;0.171]	0.05
	antiepileptic intake	0.08[-0.2;0.359]	0.42
	antidepressant intake	0.027[-0.144;0.197]	0.66
	AV45 status	0.018[-0.071;0.107]	0.57
	time	0.005[-0.012;0.022]	0.41
	Interaction Time x AV45	0.027[-0.009;0.064]	0.34

Abbreviations: AV45: AV45 variable; GDS: Geriatric Depression scale -15 item.

Supplementary table 6: Multivariate analysis of the relationships between GDS, GDS factors and amyloid deposition (regional dimensions) according to the model adjusted for sex, age, education, medication, CDR status, MMSE score and treatment arms.

Outcomes	Variables	M3 betas [95%IC]	M3 p-value (LRT)
GDS	intercept	1.431[0.569;2.293]	
	age z-scored	0.092[-0.011;0.195]	0.1
	gender	-0.085[-0.293;0.124]	0.24
	education	-0.11[-0.308;0.088]	0.11
	arms omega3	-0.042[-0.329;0.244]	0.89
	arms IM	-0.062[-0.338;0.215]	
	arms ctrl	0[-0.275;0.275]	
	CDR status	0.1[-0.102;0.302]	0.16
	antiepileptic	0.027[-0.635;0.689]	0.91
	antidepressant	0.412[0.004;0.82]	0.04
	score MMSE	-0.008[-0.036;0.02]	0.4
	Time	0.032[0.002;0.062]	0.02
	Medium tertile Dim 1	0.077[-0.173;0.326]	0.68
	Upper tertile Dim 1	0.031[-0.225;0.287]	
	Medium tertile Dim 2	-0.019[-0.259;0.221]	0.33
	Upper tertile Dim 2	-0.046[-0.291;0.198]	
	Medium tertile Dim 3	-0.231[-0.476;0.013]	0.24
	Upper tertile Dim 3	-0.138[-0.386;0.111]	
	Inter Time x Med ter Dim 1	-0.003[-0.078;0.072]	0.65
	Inter Time x upp ter Dim 1	-0.023[-0.099;0.053]	
	Inter Time x Med ter Dim 2	0.014[-0.059;0.087]	0.49
	Inter Time x upp ter Dim 2	-0.046[-0.118;0.027]	
	Inter Time x Med ter Dim 3	-0.056[-0.129;0.018]	0.22
	Inter Time x upp ter Dim 3	-0.068[-0.142;0.005]	
Life satisfaction	intercept	2.57[2.241;2.9]	
	age z-scored	-0.008[-0.046;0.03]	0.55
	gender	0.007[-0.07;0.084]	0.8
	education	0.045[-0.028;0.118]	0.72
	arms omega3	0.012[-0.094;0.119]	0.96
	arms IM	-0.008[-0.11;0.095]	
	arms ctrl	0.004[-0.098;0.106]	
	CDR status	-0.019[-0.094;0.056]	0.47
	antiepileptic	0.04[-0.205;0.285]	0.64
	antidepressant	-0.09[-0.242;0.061]	0.79
	score MMSE	0.002[-0.008;0.013]	0.52
	Time	-0.01[-0.021;0.002]	0.17
	Medium tertile Dim 1	0[-0.092;0.092]	0.95
	Upper tertile Dim 1	-0.009[-0.104;0.086]	
	Medium tertile Dim 2	-0.03[-0.119;0.059]	0.16
	Upper tertile Dim 2	0.03[-0.06;0.121]	
	Medium tertile Dim 3	0.007[-0.083;0.098]	0.95
	Upper tertile Dim 3	0.003[-0.094;0.1]	
	Inter Time x Med ter Dim 1	0.005[-0.024;0.034]	0.54
	Inter Time x upp ter Dim 1	0.012[-0.018;0.041]	
	Inter Time x Med ter Dim 2	0.016[-0.013;0.044]	0.51
	Inter Time x upp ter Dim 2	0.024[-0.003;0.054]	
	Inter Time x Med ter Dim 3	0.026[-0.003;0.054]	0.08
	Inter Time x upp ter Dim 3	0.029[0.001;0.057]	
Apathy	intercept	1.468[0.91;2.025]	
	age z-scored	0.064[0.011;0.117]	0.005
	gender	-0.004[-0.111;0.102]	0.91

Outcomes	Variables	M3 betas [95%IC]	M3 p-value (LRT)
	education	-0.033[-0.134;0.068]	0.35
	arms omega3	-0.008[-0.155;0.139]	0.94
	arms IM	-0.026[-0.167;0.116]	
	arms ctrl	0.002[-0.138;0.143]	
	CDR status	-0.004[-0.107;0.1]	0.92
	antiepileptic	-0.038[-0.378;0.301]	0.74
	antidepressant	0.24[0.031;0.449]	0.01
	score MMSE	-0.009[-0.027;0.01]	0.19
	Time	0.033[0.012;0.053]	0.02
	Medium tertile Dim 1	-0.012[-0.133;0.11]	0.95
	Upper tertile Dim 1	-0.001[-0.126;0.124]	
	Medium tertile Dim 2	0.01[-0.113;0.132]	0.91
	Upper tertile Dim 2	-0.008[-0.133;0.116]	
	Medium tertile Dim 3	-0.075[-0.2;0.049]	0.72
	Upper tertile Dim 3	-0.096[-0.223;0.03]	
	Inter Time x Med ter Dim 1	-0.029[-0.082;0.024]	0.16
	Inter Time x upp ter Dim 1	-0.034[-0.087;0.019]	
	Inter Time x Med ter Dim 2	-0.016[-0.068;0.037]	0.62
	Inter Time x upp ter Dim 2	-0.017[-0.069;0.036]	
	Inter Time x Med ter Dim 3	-0.022[-0.074;0.029]	0.25
	Inter Time x upp ter Dim 3	-0.03[-0.082;0.022]	
Self-esteem	intercept	2.074[1.798;2.35]	
	age z-scored	-0.01[-0.035;0.015]	0.27
	gender	-0.027[-0.078;0.024]	0.13
	education	0.03[-0.018;0.079]	0.66
	arms omega3	0.015[-0.055;0.085]	0.88
	arms IM	-0.001[-0.069;0.066]	
	arms ctrl	-0.003[-0.07;0.065]	
	CDR status	-0.036[-0.086;0.013]	0.33
	antiepileptic	0.056[-0.106;0.219]	0.32
	antidepressant	-0.116[-0.216;-0.016]	0.009
	score MMSE	0.01[0;0.019]	0.03
	Time	-0.011[-0.022;-0.001]	0.03
	Medium tertile Dim 1	-0.029[-0.089;0.032]	0.39
	Upper tertile Dim 1	-0.022[-0.084;0.041]	
	Medium tertile Dim 2	0[-0.059;0.059]	0.61
	Upper tertile Dim 2	0.018[-0.042;0.078]	
	Medium tertile Dim 3	0.037[-0.023;0.097]	0.16
	Upper tertile Dim 3	0.034[-0.026;0.095]	
	Inter Time x Med ter Dim 1	0.001[-0.025;0.028]	0.56
	Inter Time x upp ter Dim 1	-0.008[-0.035;0.018]	
	Inter Time x Med ter Dim 2	0.009[-0.016;0.035]	0.1
	Inter Time x upp ter Dim 2	0.027[0.001;0.053]	
	Inter Time x Med ter Dim 3	0.031[0.005;0.057]	0.01
	Inter Time x upp ter Dim 3	0.028[0.002;0.054]	
Level of anxiety	intercept	1.146[0.687;1.606]	
	age z-scored	0.016[-0.028;0.06]	0.29
	gender	-0.051[-0.14;0.038]	0.1
	education	-0.001[-0.086;0.084]	0.98
	arms omega3	-0.011[-0.134;0.111]	0.97
	arms IM	-0.017[-0.135;0.101]	
	arms ctrl	-0.018[-0.136;0.099]	
	CDR status	0.082[-0.004;0.169]	0.06
	antiepileptic	0.099[-0.184;0.383]	0.32
	antidepressant	0.021[-0.154;0.195]	0.73
	score MMSE	0.009[-0.006;0.024]	0.11
	Time	0.005[-0.012;0.022]	0.41
	Medium tertile Dim 1	0.027[-0.08;0.134]	0.57

Outcomes	Variables	M3 betas [95%IC]	M3 p-value (LRT)
	Upper tertile Dim 1	0.04[-0.069;0.149]	
	Medium tertile Dim 2	-0.01[-0.117;0.096]	0.65
	Upper tertile Dim 2	-0.035[-0.143;0.074]	
	Medium tertile Dim 3	-0.083[-0.188;0.022]	0.71
	Upper tertile Dim 3	-0.043[-0.15;0.064]	
	Inter Time x Med ter Dim 1	0.038[-0.005;0.081]	0.38
	Inter Time x upp ter Dim 1	0.028[-0.016;0.071]	
	Inter Time x Med ter Dim 2	0.047[0.004;0.091]	0.005
	Inter Time x upp ter Dim 2	-0.008[-0.051;0.035]	
	Inter Time x Med ter Dim 3	-0.002[-0.052;0.034]	0.59
	Inter Time x upp ter Dim 3	-0.015[-0.045;0.04]	

Abbreviations: GDS: Geriatric Depression scale -15 item; Dim 2: amyloid regional dimension 2 (pontine region); Dim 3: amyloid regional dimension 3 (hippocampus and bilateral caudate nuclei); med ter: medium tercile; upp ter: upper tercile