

APPENDIX A.

List of Excluded Studies

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Baujat B, Mahe C, Pignon JP, et al. A graphical method for exploring heterogeneity in meta-analyses: application to a meta-analysis of 65 trials. *Stat Med.* 2002;21(18):2641-52. PMID:12228882

Cook KF, Teal CR, Bjorner JB, et al. IRT health outcomes data analysis project: an overview and summary. *Qual Life Res.* 2007;16 Suppl 1:121-32. PMID:17351824

Kaplan RF, Trevino RP, Johnson GM, et al. Cognitive function in post-treatment Lyme disease: do additional antibiotics help? *Neurology.* 2003;60(12):1916-22. PMID:12821733

Koopman L, van der Heijden GJ, Glasziou PP, et al. A systematic review of analytical methods used to study subgroups in (individual patient data) meta-analyses. *J Clin Epidemiol.* 2007;60(10):1002-9. PMID:17884593

Koopman L, van der Heijden GJ, Hoes AW, et al. Empirical comparison of subgroup effects in conventional and individual patient data meta-analyses. *Int J Technol Assess Health Care.* 2008;24(3):358-61. PMID:18601805

Marston L, Carpenter JR, Walters KR, et al. Issues in multiple imputation of missing data for large general practice clinical databases. *Pharmacoepidemiol Drug Saf.* 2010;19(6):618-26. PMID:20306452

Riley RD, Simmonds MC, Look MP. Evidence synthesis combining individual patient data and aggregate data: a systematic review identified current practice and possible methods. *J Clin Epidemiol.* 2007;60(5):431-9. PMID:17419953

Riley RD. Commentary: like it and lump it? Meta-analysis using individual participant data. *Int J Epidemiol.* 2010;39(5):1359-61. PMID:20660642

Thompson S, Kaptoge S, White I, et al. Statistical methods for the time-to-event analysis of individual participant data from multiple epidemiological studies. *Int J Epidemiol.* 2010;39(5):1345-59. PMID:20439481

Zucker DR, Ruthazer R, Schmid CH. Individual (N-of-1) trials can be combined to give population comparative treatment effect estimates: methodologic considerations. *J Clin Epidemiol.* 2010;63(12):1312-23. PMID:20863658

APPENDIX B.

Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Age	Participant's age at recruitment self-reported by the participant.		1. Birthday Day__ Month__ Year__	ANDB_Q01 What is [respondent name]'s age? __Age in years (MIN:0) (MAX:130) (DK, RF are not allowed)	When were you born? Date: year__ month__ day__
Sex	Gender of the participant.	Male Female	2. Sex Male_ Female_	SEX_Q01 Interviewer: Enter [respondent name]'s sex. If necessary, ask: (Is [respondent name] male or female?) 1. Male 2. Female (DK, RF are not allowed)	Socio-demographic data Response: Male__ Female__
Highest Level of Education	Highest level of education completed by the participant.	None Primary High School Post-Secondary Prefer Not to Answer Don't Know	5. How many years of education did you complete? EDUYEAR Years 88 DK So that means that you .. (completed primary school, completed part of high school, all of high school some university)? (Select a suitable category) 1 No formal schooling 2 Some primary school 3 Finished primary school 4 Some secondary or high school 5 Completed secondary or high school 6 Some community or technical college, CEGEP, or nursing program 7 Completed community college, technical college, CEGEP, or nursing program 8 Some University 9 Bachelor's degree 10 Master's degree 11 PhD 12 Other 88 DK 99 Didn't Ask EDULEVEL	ED_Q01 What is the highest grade of elementary or high school [respondent name] ever EDU_1 completed? 1 Grade 8 or lower (Québec: Secondary II or lower) (Go to EDU_Q03) 2 Grade 9 – 10 (Québec: Secondary III or IV, Newfoundland and Labrador: 1st year of secondary) (Go to EDU_Q03) 3 Grade 11 – 13 (Québec: Secondary V, Newfoundland and Labrador: 2nd to 4th year of secondary) DK, RF (Go to EDU_Q03) ED_Q02 Did [respondent name] graduate from high school (secondary school)? EDU_2 1 Yes 2 No DK, RF ED_Q03 Has [respondent name] received any other education that could be counted towards EDU_3 a degree, certificate or diploma from an educational institution? 1 Yes 2 No (Go to EDU_END)	Impossible

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Highest Level of Education (cont'd)				DK, RF (Go to EDU_END) ED_Q04 What is the highest degree, certificate or diploma [respondent name] has obtained? EDU_4 01 No post-secondary degree, certificate or diploma 02 Trade certificate or diploma from a vocational school or apprenticeship training 03 Non-university certificate or diploma from a community college, CEGEP, school of nursing, etc. 04 University certificate below bachelor's level 05 Bachelor's degree 06 University degree or certificate above bachelor's degree DK, RF	
Number of Years Education	Number of years of education		5. How many years of education did you complete? EDUYEAR Years 88 DK	Impossible	35 SCOLART1 Nb années de scolarité T1 How many years of education have you completed: _____

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Household Income	Average current annual income, before taxes, of the participant's entire household.		Partial	<p>INC_Q03A IN2_03A What is your best estimate of the total household income received by all household members, from all sources, before taxes and deductions, in the past 12 months? _ _ _ _ _ _ _ Income (MIN: 0) (MAX: 500,000) DK, RF (Go to INC_D03B)</p> <p>INC_Q03B IN2_03B INTERVIEWER: Read categories to respondent. What is your best estimate of the total household income received by all household members, from all sources, before taxes and deductions, in the past 12 months? Was it: 1 ... less than \$50,000 (include income loss)? 2 ... \$50,000 and more? (Go to INC_Q03H) DK, RF (Go to INC_C07)</p> <p>INC_Q03C IN2_03C INTERVIEWER: Read categories to respondent. Go to INC_C04 Please stop me when I have read the category which applies to ^YOUR1 household. 1 Less than \$5,000 2 \$5,000 or more but less than \$10,000 3 \$10,000 or more but less than \$15,000 4 \$15,000 or more but less than</p>	<p>41 REVACT1 Accepte de donner revenu familial T1 0: non 1: oui 42 REVFAM1 Revenus familial sur échelle de 0 à 100 000\$ T1</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Household Income (cont'd)				\$20,000 5 \$20,000 or more but less than \$30,000 6 \$30,000 or more but less than \$40,000 7 \$40,000 or more but less than \$50,000 DK, RF INC_Q03H IN2_03H INTERVIEWER: Read categories to respondent. Please stop me when I have read the category which applies to ^YOUR1 household. 1 \$50,000 or more but less than \$60,000 2 \$60,000 or more but less than \$70,000 3 \$70,000 or more but less than \$80,000 4 \$80,000 or more but less than \$90,000 5 \$90,000 or more but less than \$100,000 6 \$100,000 or more but less than \$150,000 7 \$150,000 and over DK, RF	

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Household Income Categorical	Average current annual income, before taxes, of the participant's entire household <u>based on CSHA categories.</u>	>\$10k \$10k to \$14,999 \$15k to \$19,999 \$20k to \$24,999 \$25k to \$29,999 \$30k to \$34,999 \$35k to \$39,999 \$40k to \$44,999 \$45k to \$49,999 \$50k to \$59,999 \$60k to \$69,999 \$70k and more Prefer not to answer Don't know	Complete	Complete	Complete
Country of Birth	Country where the participant was born.		24. Where were you born? Town Province (or country)	SDC_Q1 SDC_1 Go to SDC_Q2 In what country ^WERE ^YOU2 born? 01 Canada (Go to SDC_Q4) 02 China 03 France Plus a list of other countries.	12 pays Pays de naissance T1 13 autpays Si né à l'extérieur du pays, nb années vécues à l'étranger T1
Ever Smoked Cigarettes	Indicator of whether the participant has ever smoked cigarettes.	Never smoked cigarettes Ever smoked cigarettes Prefer not to answer Don't know	Has he/she ever smoked cigarettes regularly (nearly every day)? __Yes for how many years? ___years SMOKE, SMOKEYR On average, how many per day? ___ SMOKEDAY __Less than 1 pack __One pack __More than 1 pack __No __Don't know Please go to the next question.	SMK_Q201B SMK_01B ^HAVE_C ^YOU1 ever smoked a whole cigarette? 1 Yes (Go to SMK_Q201C) 2 No (Go to SMK_Q202) DK (Go to SMK_Q202) RF SMK_Q201A SMK_01A In ^YOUR1 lifetime, ^HAVE ^YOU2 smoked a total of 100 or more cigarettes (about 4 packs)? 1 Yes (Go to SMK_Q201C) 2 No DK, RF	Impossible

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Current Cigarette Smoker	Indicator of whether the participant currently smokes cigarettes.	Non-cigarette smoker Cigarette smoker Prefer not to answer Don't know	Impossible	SMK_Q202 SMK_202 Note: Daily smoker (current) At the present time, ^DOVERB ^YOU2 smoke cigarettes daily, occasionally or not at all? 1 Daily 2 Occasionally (Go to SMK_Q205B) 3 Not at all (Go to SMK_C205D) DK, RF (Go to SMK_END)	44 FUMERT1 Fumez-vous actuellement? T1 0: Non 1: Oui, occasionnellement 2: Oui, régulièrement 3: Non mais j'ai déjà fumé 45 NBFUMET1 Nb/jour cigarettes ou tabac T1
Current Quantity of Cigarettes Smoked	Current average number of cigarettes smoked per week.		Impossible	SMK_Q204 SMK_204 How many cigarettes ^DOVERB ^YOU1 smoke each day now? _ Cigarettes (MIN: 1) (MAX: 99 Warning after 60) DK, RF Go to SMK_END Note: Occasional smoker (current) SMK_Q205B SMK_05B On the days that ^YOU2 ^DOVERB smoke, how many cigarettes ^DOVERB ^YOU1 usually smoke? _ Cigarettes DK, RF (MIN: 1) (MAX: 99; warning after 60) SMK_Q205C SMK_05C In the past month, on how many days ^HAVE ^YOU1 smoked 1 or more cigarettes? _ Days (MIN: 0) (MAX: 30) DK, RF Note: Occasional smoker or non-smoker (current)	44 FUMERT1 Fumez-vous actuellement? T1 0: Non 1: Oui, occasionnellement 2: Oui, régulièrement 3: Non mais j'ai déjà fumé 45 NBFUMET1 Nb/jour cigarettes ou tabac T1

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Ever Alcohol Consumption	Indicator of whether the participant has ever consumed alcohol.	Never consumed alcohol Ever consumed alcohol Prefer not to answer Don't know	<p>39. Has he/she ever been a regular beer drinker? (at least once a week) __Yes for how many years? BEER, BEERYR __No __Don't know Please go to the next question.</p> <p>40. Has he/she ever been a regular wine drinker? (at least once a week) __Yes for how many years? ___years WINE, WINEYR __No __Don't know Please go to the next question.</p>	<p>ALC_Q01 ALC_1 During the past 12 months, that is, from ^YEARAGO to yesterday, ^HAVE ^YOU2 had a drink of beer, wine, liquor or any other alcoholic beverage? 1 Yes 2 No (Go to ALC_Q05B) DK, RF (Go to ALC_END)</p> <p>ALC_Q05B ALC_5B ^HAVE_C ^YOU1 ever had a drink? 1 Yes 2 No DK, RF</p>	Impossible
Current Use Alcohol	Indicator of whether the participant currently consumes alcohol	Does not consume alcohol Consumes alcohol Prefer not to answer Don't know	Impossible	<p>ALC_Q01 ALC_1 During the past 12 months, that is, from ^YEARAGO to yesterday, ^HAVE ^YOU2 had a drink of beer, wine, liquor or any other alcoholic beverage? 1 Yes 2 No (Go to ALC_Q05B) DK, RF (Go to ALC_END)</p>	<p>When you had beer or ale(in the last month), how many cans or bottles did you usually have at one times? 1 or lees 2 3-3+ Not answered</p> <p>Have you had any wine in the past year? Yes No Not answered</p> <p>Have you had any wine in the past month? Yes No Not answered</p> <p>Over the past months hoe often have you had wine? 01-29 30-30+ Not answered</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Current Use Alcohol (cont'd)					<p>When you had wine (in the last month), how many glasses did you usually have at one times? 1 or lees 2 3-3+ Not answered</p> <p>Have you had any liquor in the past month? Yes No Not answered</p> <p>Over the past months hoe often have you had beer or ale? 01-29 30-30+ Not answered</p> <p>When you had beer or ale(in the last month), how many cans or bottles did you usually have at one times? 1 or lees 2 3-3+ Not answered</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Standing Height	The vertical measurement or distance from the foot to the head of the participant when he/she is standing.		From doctor 1: Height HEIGHT _____m, _____ft. Continuous 888 Don't know 999 Missing	HWT_2 How tall ^ARE ^YOU2 without shoes on? .. 4 4'0" to 4'11" / 48" to 59" (120.7 to 151.0 cm.) (Go to HWT_N2D) 5 5'0" to 5'11" (151.1 to 181.5 cm.) (Go to HWT_N2E) 6 6'0" to 6'11" (181.6 to 212.0 cm.) (Go to HWT_N2F) 7 7'0" and over (212.1 cm. and over) (Go to HWT_Q3) HWT_N2D HWT_2D INTERVIEWER: Select the exact height. Go to HWT_Q3 00 4'0" / 48" (120.7 to 123.1 cm.) 01 4'1" / 49" (123.2 to 125.6 cm.) 02 4'2" / 50" (125.7 to 128.2 cm.) 03 4'3" / 51" (128.3 to 130.7 cm.) 04 4'4" / 52" (130.8 to 133.3 cm.) 05 4'5" / 53" (133.4 to 135.8 cm.) 06 4'6" / 54" (135.9 to 138.3 cm.) 07 4'7" / 55" (138.4 to 140.9 cm.) 08 4'8" / 56" (141.0 to 143.4 cm.) 09 4'9" / 57" (143.5 to 146.0 cm.) 10 4'10" / 58" (146.1 to 148.5 cm.) 11 4'11" / 59" (148.6 to 151.0 cm.) DK, RF	469 TAIMEST1 Taille mesurée (m)

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Weight	Weight of the participant.		From doctor 1: Weight WEIGHT _____kg, _____lbs. Continuous 888 Don't know 999 Missing	HWT_Q3 HWT_3 How much ^DOVERB ^YOU1 weigh? INTERVIEWER Enter amount only. (MIN: 1) (MAX: 575) _ _ Weight DK, RF (Go to HWT_END) HWT_N4 INTERVIEWER Was that in pounds or kilograms? 1 Pounds 2 Kilograms (DK, RF are not allowed)	470 POIMEMT1 poids mémoire (lbs) T1 471 POIMEST1 poids mesuré (kg) T1
Body Mass Index	Weight (in kg) divided by height (in m) squared. Body mass index = (Weight) / (Standing height * 0.01)^2		Complete	Complete	Complete
Hip Circumference	Measured distance around hips.		Impossible	Impossible	481 CIRCHAT1 circonférence hanche (cm) T1
Waist Circumference	Measured distance around waist.		Impossible	Impossible	480 CIRCTAT1 circonférence taille (cm) T1
Heart Rate at Rest	Number of heart beats per minute measured at rest.		Impossible	Impossible	621 RYTHMET1 Rythme cardiaque T1
Diastolic Blood Pressure at Rest	Diastolic blood pressure measured at rest.		DBPSUPIN Continuous 777 Skipped 888 Don't know 999 Missing 6666 NA/Skipped	Impossible	617 TAMINT1 Tension artérielle diastolique (assis) T1
Systolic Blood Pressure at Rest	Systolic blood pressure measured at rest.		SBPSUPIN Continuous 777 Skipped 888 Don't know 999 Missing 6666 NA/Skipped	Impossible	616 TAMAXT1 Tension artérielle systolique (assis) T1

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Occurrence of High Blood Pressure	Occurrence of high blood pressure at any point during the life of the participant.	Never had high blood pressure Ever had high blood pressure Prefer not to answer Don't know	<p>symptoms lasted into the past year, check "yes". Do not read the examples in parentheses unless the respondent asks for clarification.) Yes No a) High blood pressure (whether controlled 1 2 HBP by medication or not)</p> <p>From proxy 1:</p> <p>21a) Has he/she suffered from any of the following health problems? Health problem or condition No Don't know Yes How long Has he/she had this condition?</p> <p>High blood pressure PROXHBP HBPYR</p> <p>1 Yes 2 No / chart slashed 8 Don't know 9 Missing</p> <p>From doctor1</p> <p>Rate as 1 = yes, describe and indicate duration 2 = questionable 3 = no 4 = not relevant, describe why 5 = subject does not know 6 = subject could not answer 9 = not asked 28. Arterial hypertension (H) 1 2 3 4 5 6 9 ARTERIAL</p>	<p>We are interested in "long-term conditions" which are expected to last, or have already lasted, 6 months or more and that have been diagnosed by a health professional.</p> <p>CCC_071 (^DOVERB_C ^YOU2 have:) .. high blood pressure? 1 Yes (Go to CCC_Q073) 2 No DK, RF CCC_Q072 CCC_072 ^HAVE_C ^YOU2 ever been diagnosed with high blood pressure? 1 Yes 2 No (Go to CCC_Q081) DK, RF (Go to CCC_Q081) CCC_Q073 CCC_073 In the past month, ^HAVE ^YOU2 taken any medication for high blood pressure? 1 Yes 2 No DK, RF CCC_C073A If RESPGENDER = 2, go to CCC_Q073A. Otherwise, go to CCC_Q081. CCC_Q073A CCC_073A ^WERE_C ^YOU2 pregnant when ^YOU1 ^WERE diagnosed with high blood pressure? 1 Yes 2 No (Go to CCC_Q081) DK, RF (Go to CCC_Q081) CCC_Q073B CCC_073B Other than when ^YOU1 ^WERE</p>	<p>93 HTEPRET1 Haute pression T1 "Do you have .. At the present time" 0: non 1: oui, n'empêche pas du tout 2: oui, empêche un peu 3: oui, empêche beaucoup</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Occurrence of High Blood Pressure (cont'd)			From Nurse1: Variable: C295 Label: CAMDEX 295. High BP? Value labels 0 No 1 Yes 8 Don't know 9 Missing	pregnant, was there any other time when ^YOU1 ^WERE diagnosed with high blood pressure? 1 Yes 2 No DK, RF	
Current Treatment for High Blood Pressure	Indicator of whether the participant is currently treated for high blood pressure.	Not currently under treatment for high blood pressure Currently under treatment for high blood pressure Prefer not to answer Don't know	From Proxy: Please list all medication he/she is currently taking for any of the above conditions. Don't Know Name of the medication How long .. From Doctor Ant-hypertensive (Yes, No, can't tell, Missing)	CCC_R001 INTERVIEWER: Press <Enter> to continue. Now I'd like to ask about certain chronic health conditions which ^YOU2 may have. We are interested in "long-term conditions" which are expected to last, or have already lasted, 6 months or more and that have been diagnosed by a health professional. CCC_071 (^DOVERB_C ^YOU2 have:) .. high blood pressure? 1 Yes (Go to CCC_Q073) 2 No DK, RF CCC_Q072 CCC_072 ^HAVE_C ^YOU2 ever been diagnosed with high blood pressure? 1 Yes 2 No (Go to CCC_Q081) DK, RF (Go to CCC_Q081) CCC_Q073 CCC_073 In the past month, ^HAVE ^YOU2 taken any medication for high blood pressure? 1 Yes 2 No DK, RF	Impossible

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Current Treatment for High Blood Pressure (cont'd)				CCC_C073A If RESPGENDER = 2, go to CCC_Q073A. Otherwise, go to CCC_Q081. CCC_Q073A CCC_073A ^WERE_C ^YOU2 pregnant when ^YOU1 ^WERE diagnosed with high blood pressure? 1 Yes 2 No (Go to CCC_Q081) DK, RF (Go to CCC_Q081) CCC_Q073B CCC_073B Other than when ^YOU1 ^WERE pregnant, was there any other time when ^YOU1 ^WERE diagnosed with high blood pressure? 1 Yes 2 No DK, RF	

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Occurrence of Stroke	Occurrence of stroke at any point during the life of the participant.	Never had stroke Ever had stroke Prefer not to answer Don't know	<p>1 Yes 8 Don't know 9 Missing</p> <p>From doctor1 "Did the subject or does the subject have.." 17. history of stroke (H) 1 2 3 4 5 6 9 HXSTROKE</p> <p>From proxy1 21a) Has he/she suffered from any of the following health problems? Health problem or condition No Don't know Yes How long Has he/she had this condition?</p> <p>Stroke PRSTROKE STRYR 1 Yes 2 No / chart slashed 8 Don't know 9 Missing</p> <p>From screen1 27. Now, I will read a list of health problems that people often have. For each problem that I read, please tell me if you have had it in the past year. You can just answer Yes or No. (Note to Interviewer: if the problem began longer ago and symptoms lasted into the past year, check "yes". Do not read the examples in parentheses unless the respondent asks for clarification.) c) Stroke, or effects of stroke 1 2 STROKE</p>	<p>CCC_R001 INTERVIEWER: Press <Enter> to continue. Now I'd like to ask about certain chronic health conditions which ^YOU2 may have. We are interested in "long-term conditions" which are expected to last, or have already lasted, 6 months or more and that have been diagnosed by a health professional.</p> <p>CCC_Q151 CCC_151 ^DOVERB_C ^YOU2 suffer from the effects of a stroke? 1 Yes 2 No DK, RF</p>	<p>103 ACVT1 Thrombose, hémorragie cérébrale, avc T1 "Do you have .. At the present time" 0: non 1: oui, n'empêche pas du tout 2: oui, empêche un peu 3: oui, empêche beaucoup</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Occurrence of Diabetes	Occurrence of diabetes at any point during the life of the participant.	Never had diabetes Ever had diabetes Prefer not to answer Don't know	<p>Variable: C297 Label: CAMDEX 297. Diabetic?</p> <p>0 No 1 Yes 8 Don't know 9 Missing</p> <p>From doctor1 Did the subject or does the subject have.. 36. History of diabetes mellitus 1 2 3 4 5 6 9</p> <p>From proxy1 21a) Has he/she suffered from any of the following health problems? Health problem or condition No Don't know Yes How long Has he/she had this condition?</p> <p>Diabetes PROXDIAB DIAYR 1 Yes 2 No / chart slashed 8 Don't know 9 Missing</p> <p>From screen1 27. Now, I will read a list of health problems that people often have. For each problem that I read, please tell me if you have had it in the past year. You can just answer Yes or No. n) Diabetes 1 2 DIABETES</p>	<p>CCC_R001 INTERVIEWER: Press <Enter> to continue. Now I'd like to ask about certain chronic health conditions which ^YOU2 may have. We are interested in "long-term conditions" which are expected to last, or have already lasted, 6 months or more and that have been diagnosed by a health professional.</p> <p>CCC_Q101 CCC_101 (^DOVERB_C ^YOU2 have:) .. diabetes? 1 Yes 2 No DK, RF</p>	<p>96 DIABETT1 Diabète T1. "Do you have .. At the present time" 0: non 1: oui, n'empêche pas du tout 2: oui, empêche un peu 3: oui, empêche beaucoup</p>

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Occurrence of Myocardial Infarction	Occurrence of myocardial infarction at any point during the life of the participant	Never had myocardial infarction Ever had myocardial infarction Prefer not to answer Don't know	From nurse1: Variable: C296 Label: CAMDEX 296. Heart attack? Value labels 0 No 1 One 2 More than one 8 Don't Know 9 Missing	CCC_Q120 CCC_120 ^HAVE_C ^YOU1 ever had a heart attack? 1 Yes 2 No DK, RF CCC_C121 If CCC_Q119 = 1 or CCC_Q120 = 1, go to CCC_Q131. Otherwise, go to CCC_Q121. CCC_Q121 CCC_121 INTERVIEWER Include congestive heart failure. At the time of data processing, if the respondent reported having either angina (CCC_Q119 = 1) or a heart attack (CCC_Q120 = 1), then the variable for heart disease will be set to "Yes" (CCC_Q121 = 1).	108 AUTRMAT1 Autres maladies T1 0: non 1: oui, n'empêche pas du tout 2: oui, empêche un peu 3: oui, empêche beaucoup 109 TYPMALT1 Type maladie autre T1
Family History of High Blood Pressure	Occurrence of high blood pressure amongst members of the biological family of the participant (mother, father, siblings and children).	No family history of high blood pressure Family history of high blood pressure Prefer not to answer Don't know	Impossible	Impossible	Impossible
Family History of Stroke	Occurrence of stroke amongst members of the biological family of the participant (mother, father, siblings and children).	No family history of stroke Family history of stroke Prefer not to answer Don't know	Impossible	Impossible	Impossible

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Family History of Diabetes	Occurrence of diabetes amongst members of the biological family of the participant (mother, father, siblings and children).	No family history of diabetes Family history of diabetes Prefer not to answer Don't know	Impossible	Impossible	Impossible
Family History of Myocardial Infarction	Occurrence of myocardial infarction amongst members of the biological family of the participant (mother, father, siblings and children).	No family history of myocardial infarction Family history of myocardial infarction Prefer not to answer Don't know	Impossible	Impossible	Impossible
Level of Physical Activity	Categorical indicator of the participant's level of physical activity. Based on IPAQ scoring protocol (https://sites.google.com/site/theipaq/scoring-protocol).	Low level of physical activity Moderate level of physical activity High level of physical activity Not applicable	Impossible	SAPE (Physical Activity Scale for the Elderly)	SAPE (Physical Activity Scale for the Elderly)
Total physical activity	Quantitative indicator of global physical activity in metabolic equivalent (MET)-minutes per week. Based on IPAQ scoring protocol (https://sites.google.com/site/theipaq/scoring-protocol).		Impossible	SAPE (Physical Activity Scale for the Elderly)	SAPE (Physical Activity Scale for the Elderly)

Appendix B. Variable Description and Categories for the studies CSHA, CCHS-CLSA, and NuAge (cont'd)

Candidate Variable	Variable Description	Categories	CSHA Variable Format	CCHS-CLSA Variable Format	NuAge Variable Format
Level of Physical Activity (CSHA-based - ordinal)	Categorical indicator of the participant's level of physical activity using CSHA categories (ordinal; 3 categories)	Never [0] Low level of physical activity [1] Moderate level of physical activity [2] High level of physical activity [3] Prefer not to answer [8] Don't know [9]	Complete	Complete	Complete
Level of Physical Activity (CSHA-based - binary)	Categorical indicator of the participant's level of physical activity using CSHA categories (binary)	Never [0] Low level of physical activity [1] Moderate or High level of physical activity [2] Prefer not to answer [8] Don't know [9]	Complete	Complete	Complete

Abbreviations: CCHS = Canadian Community Health Survey; CLSA = Canadian Longitudinal Study on Aging; cm = centimeters; CSHA = Canadian Study of Health and Aging; DK = don't know; ft. = feet; HBP = high blood pressure; IPAQ = International Physical Activity Questionnaire; kgs. = kilograms; lbs = pounds; m = meters; MAX = maximum; MET = metabolic equivalent; MIN = minimum; NA = not applicable; nb = number; NuAge = Quebec Longitudinal Study on Nutrition and Aging; RF = refused; SAPE = Physical Activity Scale for the Elderly

APPENDIX C.

**Distribution of Age, Sex, and Education Level for
CCHS-CLSA, CSHA, and NuAge**

Appendix C. Table 1. Age, Sex and Education Level Distribution of CCHS-CLSA, CSHA and NuAge Studies

Age group	Sex	Education level	CCHS-CLSA		CSHA		NuAge	
			Freq	Pct	Freq	Pct	Freq	Pct
65-69	Male	Low (0-8)	144	0.79	43	0.23	1	0.01
65-69	Male	Medium (9-13)	377	2.06	30	0.16	19	0.1
65-69	Male	High (14+)	578	3.15	5	0.03	22	0.12
65-69	Female	Low (0-8)	153	0.83	55	0.3	9	0.05
65-69	Female	Medium (9-13)	467	2.55	23	0.13	19	0.1
65-69	Female	High (14+)	658	3.59	7	0.04	15	0.08
70-74	Male	Low (0-8)	152	0.83	45	0.25	11	0.06
70-74	Male	Medium (9-13)	292	1.59	30	0.16	33	0.18
70-74	Male	High (14+)	353	1.93	9	0.05	49	0.27
70-74	Female	Low (0-8)	167	0.91	56	0.31	14	0.08
70-74	Female	Medium (9-13)	388	2.12	52	0.28	48	0.26
70-74	Female	High (14+)	402	2.19	10	0.05	25	0.14
75-79	Male	Low (0-8)	151	0.82	91	0.5	8	0.04
75-79	Male	Medium (9-13)	239	1.3	84	0.46	19	0.1
75-79	Male	High (14+)	259	1.41	30	0.16	21	0.11
75-79	Female	Low (0-8)	231	1.26	127	0.69	19	0.1
75-79	Female	Medium (9-13)	381	2.08	111	0.61	41	0.22
75-79	Female	High (14+)	368	2.01	35	0.19	21	0.11
80-84	Male	Low (0-8)	104	0.57	78	0.43	3	0.02
80-84	Male	Medium (9-13)	153	0.83	37	0.2	7	0.04
80-84	Male	High (14+)	121	0.66	13	0.07	7	0.04
80-84	Female	Low (0-8)	198	1.08	115	0.63	1	0.01
80-84	Female	Medium (9-13)	304	1.66	119	0.65	11	0.06
80-84	Female	High (14+)	260	1.42	31	0.17	9	0.05
85-89	Male	Low (0-8)	10	0.05	79	0.43		
85-89	Male	Medium (9-13)	21	0.11	32	0.17		
85-89	Male	High (14+)	24	0.13	13	0.07		
85-89	Female	Low (0-8)	32	0.17	99	0.54		
85-89	Female	Medium (9-13)	42	0.23	112	0.61		
85-89	Female	High (14+)	32	0.17	28	0.15		
90-94	Male	Low (0-8)			13	0.07		
90-94	Male	Medium (9-13)			6	0.03		
90-94	Male	High (14+)			4	0.02		
90-94	Female	Low (0-8)			32	0.17		
90-94	Female	Medium (9-13)			41	0.22		
90-94	Female	High (14+)			5	0.03		

Appendix C. Table 1. Age, Sex and Education Level Distribution of CCHS-CLSA, CSHA and NuAge Studies (cont'd)

Age group	Sex	Education level	CCHS-CLSA		CSHA		NuAge	
			Freq	Pct	Freq	Pct	Freq	Pct
95-99	Male	Low (0-8)			1	0.01		
95-99	Male	High (14+)			1	0.01		
95-99	Female	Low (0-8)			6	0.03		
95-99	Female	Medium (9-13)			7	0.04		
95-99	Female	High (14+)			3	0.02		
100-104	Female	Low (0-8)			1	0.01		

Appendix C Table 2. Standard Deviations of Cognitive Measures for Females Aged 70-74 and 75-79 with 9-13 Years of Education in CCHS-CLSA, CSHA and NuAge Studies

Study	Cognitive Measure	Standard Deviation 70-74	Standard Deviation 75-79	Min	Group
CCHS-CLSA	Rey	1.85	1.78	1.78	75-79
CSHA	Rey	1.94	2.05	1.94	70-74
	Buschke	2.76	2.78	2.76	70-74
	Buschke Total	2.16	1.72	1.72	75-79
NuAge	Buschke	2.23	2.59	2.23	70-74
	Buschke Total	1.37	2.18	1.37	70-74

APPENDIX D.

Meta-Analysis Results Weighted Mean Difference Analysis

Appendix D. Table 1. Summary of Traditional Meta-Analysis Results for Rey from CCHS and CSHA and Buschke Free from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q [*]	p-value
Raw Data – Using Hedge's G	Unadjusted	0.16 (0.01, 0.30)	0.78	8.96	0.01
	Unadjusted (Including Participants with Complete Data for Covariates)	0.16 (0.01, 0.30)	0.75	7.84	0.02
	Study-Specific Statistically Significant Covariates	0.11 (-0.02, 0.24)	0.72	7.18	0.03
	Common Set of Covariates	0.11 (-0.02, 0.23)	0.66	5.81	0.06
T-Score – Weighted Mean Difference	Unadjusted [†]	1.18 (0.05, 2.32)	0.64	5.45	0.06
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.19 (0.11, 2.27)	0.55	4.47	0.11
	Common Set of Covariates	1.09 (-0.20, 2.39)	0.67	5.98	0.05
C-Score – Weighted Mean Difference	Unadjusted	0.16 (0.03, 0.29)	0.73	7.46	0.02
	Unadjusted (Including Participants with Complete Data for Covariates)	0.17 (0.04, 0.30)	0.70	6.69	0.04
	Common Set of Covariates	0.11 (-0.01, 0.22)	0.63	5.33	0.07

*All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 2. Summary of Traditional Meta-Analysis Results for Rey from CCHS and CSHA and Buschke Total from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.13 (-0.04, 0.30)	0.84	12.20	0.002
	Unadjusted (Including Participants with Complete Data for Covariates)	0.13 (-0.04, 0.30)	0.82	10.99	0.004
	Study-Specific Statistically Significant Covariates	0.10 (-0.04, 0.24)	0.75	8.14	0.02
	Common Set of Covariates	0.10 (-0.04, 0.23)	0.72	7.06	0.03
T-Score – Weighted Mean Difference	Unadjusted [†]	0.89 (-0.55, 2.34)	0.78	9.10	0.01
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	0.89 (-0.55, 2.33)	0.75	7.86	0.02
	Common Set of Covariates	0.98 (-0.45, 2.41)	0.72	7.21	0.03
C-Score – Weighted Mean Difference	Unadjusted	0.15 (-0.001, 0.30)	0.78	9.10	0.01
	Unadjusted (Including Participants with Complete Data for Covariates)	0.15 (-0.002, 0.31)	0.76	8.18	0.02
	Common Set of Covariates	0.12 (0.001, 0.23)	0.60	4.95	0.08

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 3. Summary of Traditional Meta-Analysis Results for Rey from CCHS and Buschke Free from CSHA and NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.18 (-0.01, 0.36)	0.88	16.46	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.18 (0.0001, 0.36)	0.85	13.37	0.001
	Study-Specific Statistically Significant Covariates	0.12 (-0.04, 0.29)	0.85	13.0	0.002
	Common Set of Covariates	0.13 (-0.05, 0.31)	0.85	12.9	0.002
T-Score – Weighted Mean Difference	Unadjusted [†]	1.40 (-0.33, 3.13)	0.85	13.51	0.001
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.44 (-0.25, 3.13)	0.83	11.56	0.003
	Common Set of Covariates	1.38 (-0.53, 3.28)	0.85	13.43	0.001
C-Score – Weighted Mean Difference	Unadjusted	0.18 (0.01, 0.36)	0.86	14.45	0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.19 (0.03, 0.35)	0.83	11.5	0.003
	Common Set of Covariates	0.13 (-0.04, 0.30)	0.84	12.22	0.002

* All Q Statistics have 2 degrees of freedom

† T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 4. Summary of Traditional Meta-Analysis Results for Rey from CCHS, Buschke Free from CSHA and Buschke Total from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.16 (-0.04, 0.35)	0.90	20.32	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.16 (-0.04, 0.36)	0.88	16.67	<0.001
	Study-Specific Statistically Significant Covariates	0.12 (-0.06, 0.29)	0.86	13.98	0.001
	Common Set of Covariates	0.12 (-0.06, 0.31)	0.86	14.29	0.001
T-Score – Weighted Mean Difference	Unadjusted [†]	1.14 (-0.79, 3.06)	0.89	17.42	<0.001
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.18 (-0.72, 3.08)	0.87	15.26	<0.001
	Common Set of Covariates	1.28 (-0.72, 3.27)	0.86	14.74	0.001
C-Score – Weighted Mean Difference	Unadjusted	0.17 (-0.02, 0.36)	0.87	15.90	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.18 (-0.007, 0.36)	0.84	12.85	0.002
	Common Set of Covariates	0.14 (-0.04, 0.31)	0.83	11.56	0.002

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 5. Summary of Traditional Meta-Analysis Results for Rey from CCHS, Buschke Total from CSHA and Buschke Free from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.15 (0.02, 0.27)	0.73	7.35	0.03
	Unadjusted (Including Participants with Complete Data for Covariates)	0.15 (0.02, 0.28)	0.71	6.80	0.03
	Study-Specific Statistically Significant Covariates	0.09 (-0.01, 0.20)	0.63	5.47	0.07
	Common Set of Covariates	0.10 (-0.008, 0.21)	0.61	5.18	0.08
T-Score – Weighted Mean Difference	Unadjusted [†]	1.08 (0.27, 1.88)	0.43	3.48	0.18
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.12 (0.31, 1.94)	0.41	3.37	0.19
	Common Set of Covariates	1.06 (-0.12, 2.23)	0.65	5.35	0.07
C-Score – Weighted Mean Difference	Unadjusted	0.15 (0.05, 0.26)	0.70	6.61	0.04
	Unadjusted (Including Participants with Complete Data for Covariates)	0.16 (0.05, 0.27)	0.68	6.27	0.04
	Common Set of Covariates	0.10 (0.006, 0.20)	0.57	4.68	0.10

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 6. Summary of Traditional Meta-Analysis Results for Rey from CCHS and Buschke Total from CSHA and NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.12 (-0.03, 0.27)	0.81	10.51	0.005
	Unadjusted (Including Participants with Complete Data for Covariates)	0.12 (-0.03, 0.28)	0.80	9.89	0.007
	Study-Specific Statistically Significant Covariates	0.09 (-0.03, 0.20)	0.69	6.39	0.04
	Common Set of Covariates	0.09 (-0.03, 0.22)	0.69	6.42	0.04
T-Score – Weighted Mean Difference	Unadjusted [†]	0.77 (-0.42, 1.95)	0.71	6.93	0.03
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	0.81 (-0.39, 2.01)	0.70	6.67	0.04
	Common Set of Covariates	0.94 (-0.37, 2.26)	0.70	6.57	0.04
C-Score – Weighted Mean Difference	Unadjusted	0.14 (0.02, 0.27)	0.76	8.31	0.02
	Unadjusted (Including Participants with Complete Data for Covariates)	0.15 (0.02, 0.27)	0.75	7.83	0.02
	Common Set of Covariates	0.11 (0.01, 0.21)	0.54	4.35	0.11

* All Q Statistics have 2 degrees of freedom

† T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 7. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA, Rey from CSHA and Buschke Free from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.13 (-0.02, 0.28)	0.80	9.86	0.007
	Unadjusted (Including Participants with Complete Data for Covariates)	0.13 (-0.02, 0.27)	0.75	8.10	0.02
	Study-Specific Statistically Significant Covariates	0.09 (-0.04, 0.22)	0.74	7.58	0.02
	Common Set of Covariates	0.09 (-0.03, 0.22)	0.66	5.83	0.054
T-Score – Weighted Mean Difference	Unadjusted [†]	1.07 (-0.11, 2.26)	0.66	5.9	0.053
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.05 (-0.06, 2.16)	0.57	4.61	0.10
	Common Set of Covariates	0.95 (-0.35, 2.25)	0.67	6.02	0.049
C-Score – Weighted Mean Difference	Unadjusted	0.13 (-0.002, 0.27)	0.75	7.95	0.02
	Unadjusted (Including Participants with Complete Data for Covariates)	0.13 (0.002, 0.27)	0.70	6.64	0.04
	Common Set of Covariates	0.10 (-0.02, 0.21)	0.62	5.30	0.07

* All Q Statistics have 2 degrees of freedom

[†]T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 8. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA, Rey from CSHA and Buschke Total from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.11 (-0.06, 0.28)	0.84	12.67	0.002
	Unadjusted (Including Participants with Complete Data for Covariates)	0.11 (-0.06, 0.28)	0.81	10.77	0.005
	Study-Specific Statistically Significant Covariates	0.08 (-0.06, 0.22)	0.77	8.61	0.01
	Common Set of Covariates	0.08 (-0.05, 0.22)	0.71	6.98	0.03
T-Score – Weighted Mean Difference	Unadjusted [†]	0.80 (-0.67, 2.27)	0.78	9.21	0.01
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	0.80 (-0.65, 2.22)	0.74	7.66	0.02
	Common Set of Covariates	0.85 (-0.58, 2.27)	0.72	7.14	0.03
C-Score – Weighted Mean Difference	Unadjusted	0.12 (-0.04, 0.28)	0.80	9.84	0.007
	Unadjusted (Including Participants with Complete Data for Covariates)	0.12 (-0.04, 0.28)	0.76	8.39	0.02
	Common Set of Covariates	0.11 (-0.02, 0.22)	0.61	5.10	0.08

* All Q Statistics have 2 degrees of freedom

[†]T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 9. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA and Buschke Free from CSHA and NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.15 (-0.06, 0.36)	0.90	20.62	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.15 (-0.05, 0.35)	0.88	16.54	<0.001
	Study-Specific Statistically Significant Covariates	0.11 (-0.08, 0.30)	0.88	16.56	<0.001
	Common Set of Covariates	0.12 (-0.07, 0.31)	0.86	14.53	0.001
T-Score – Weighted Mean Difference	Unadjusted [†]	1.30 (-0.52, 3.12)	0.87	14.85	0.001
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.32 (-0.48, 3.11)	0.85	12.91	0.002
	Common Set of Covariates	1.24 (-0.77, 3.25)	0.87	14.96	0.001
C-Score – Weighted Mean Difference	Unadjusted	0.15 (-0.04, 0.35)	0.89	18.70	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.15 (-0.03, 0.34)	0.87	14.88	0.001
	Common Set of Covariates	0.12 (-0.06, 0.30)	0.85	13.10	0.001

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 10. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA, Buschke Free from CSHA and Buschke Total from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.13 (-0.09, 0.35)	0.92	23.61	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.13 (-0.09, 0.35)	0.90	19.36	<0.001
	Study-Specific Statistically Significant Covariates	0.11 (-0.09, 0.30)	0.89	17.66	<0.001
	Common Set of Covariates	0.11 (-0.09, 0.31)	0.87	15.77	<0.001
T-Score – Weighted Mean Difference	Unadjusted [†]	1.05 (-0.95, 3.04)	0.89	18.51	<0.001
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	1.07 (-0.91, 3.05)	0.88	16.28	<0.001
	Common Set of Covariates	1.14 (-0.95, 3.23)	0.88	16.17	<0.001
C-Score – Weighted Mean Difference	Unadjusted	0.13 (-0.09, 0.35)	0.90	20.44	<0.001
	Unadjusted (Including Participants with Complete Data for Covariates)	0.14 (-0.07, 0.34)	0.88	16.53	<0.001
	Common Set of Covariates	0.12 (-0.07, 0.31)	0.84	12.59	0.002

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 11. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA, Buschke Total from CSHA and Buschke Free from NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.12 (-0.004, 0.24)	0.72	7.01	0.03
	Unadjusted (Including Participants with Complete Data for Covariates)	0.12 (-0.001, 0.24)	0.70	6.04	0.049
	Study-Specific Statistically Significant Covariates	0.09 (-0.03, 0.21)	0.68	6.30	0.04
	Common Set of Covariates	0.09 (-0.02, 0.20)	0.60	4.97	0.08
T-Score – Weighted Mean Difference	Unadjusted [†]	0.97 (0.18, 1.76)	0.40	3.32	0.19
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	0.99 (0.21, 1.77)	0.36	3.11	0.21
	Common Set of Covariates	0.91 (-0.24, 2.07)	0.61	5.18	0.08
C-Score – Weighted Mean Difference	Unadjusted	0.13 (0.03, 0.23)	0.66	5.81	0.06
	Unadjusted (Including Participants with Complete Data for Covariates)	0.13 (0.03, 0.23)	0.59	4.85	0.088
	Common Set of Covariates	0.09 (-0.002, 0.19)	0.55	4.43	0.11

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

Appendix D. Table 12. Summary of Traditional Meta-Analysis Results for HUI Cognition from CCHS-CLSA and Buschke Total from CSHA and NuAge

Method of Statistical Harmonization	Adjustment	Summary Effect Estimate (95% CI)	I ²	Q	p-value
Raw Data – Using Hedge’s G	Unadjusted	0.10 (-0.05, 0.24)	0.80	9.76	0.008
	Unadjusted (Including Participants with Complete Data for Covariates)	0.10 (-0.05, 0.24)	0.77	8.65	0.01
	Study-Specific Statistically Significant Covariates	0.08 (-0.05, 0.21)	0.73	7.32	0.03
	Common Set of Covariates	0.08 (-0.04, 0.20)	0.67	6.10	0.047
T-Score – Weighted Mean Difference	Unadjusted [†]	0.69 (-0.47, 1.84)	0.69	6.49	0.04
	Unadjusted [†] (Including Participants with Complete Data for Covariates)	0.71 (-0.44, 1.87)	0.67	6.07	0.048
	Common Set of Covariates	0.81 (-0.48, 2.10)	0.68	6.30	0.04
C-Score – Weighted Mean Difference	Unadjusted	0.12 (-0.006, 0.24)	0.74	7.73	0.02
	Unadjusted (Including Participants with Complete Data for Covariates)	0.12 (0.0001, 0.24)	0.70	6.62	0.04
	Common Set of Covariates	0.10 (0.001, 0.20)	0.53	4.28	0.12

* All Q Statistics have 2 degrees of freedom

†T-Scores minimally adjusted for age, sex and education level

APPENDIX E.

Additional Regression Results

Appendix E. Table 1. Summary of Relationship of T Scores for Cognitive Measures with Variables of Interest

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_Age	Age in years (N)	7060	7058	1488	1488	1488	432	432
	Intercept	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
	Beta	0.0000	0.0000	-0.0000	-0.0000	0.0000	0.0000	0.0000
	R-square	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	p-value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
G_129	Gender (N)	7060	7058	1488	1488	1488	432	432
	Intercept	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000	50.0000
	Beta (Ref: male)	-0.0000	-0.0000	0.0000	0.0000	0.0000	-0.0000	-0.00000
	R-square	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	p-value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
G_161_C	Highest level of education (N)	7060	7060	1488	1488	1488	432	432
	Intercept	50.0000	50.0000	49.9816	50.0795	49.9984	50.0940	50.2683
	Beta (Ref: Low (0-8)							
	Moderate (9-13)	0.0000	0.0000	0.0588	-0.2545	0.0053	-0.1570	-0.4481
	High (14+)	0.0000	0.0000	-0.0548	0.2372	-0.0049	-0.0573	-0.1635
	R-square	0.0000	0.0000	0.0000	0.0003	0.0000	0.0000	0.0003
p-value	1.0000	1.0000	0.9892	0.8153	0.9999	0.9921	0.9375	
G_297	Country of birth (N)	7058	7056	1488	1488	1488	432	432
	Intercept	48.7473	49.6602	49.0965	49.8638	49.5637	50.8868	51.1381
	Beta (Ref: other country)	1.5457	0.4194	1.3566	0.2045	0.6551	-0.9899	-1.2705
	R-square	0.0036	0.0003	0.0041	0.0001	0.0010	0.0009	0.0015
	p-value	< 0.0001	0.1697	0.0135	0.7100	0.2334	0.5303	0.4205
G_940	Ever/current smoked cigarettes (N)	7058	7056	1301*	1301*	1301	432	432
	Intercept	49.9776	50.4173	50.5273	50.5487	50.2103	49.7371	49.7214
	Beta (Ref: never)	0.0308	-0.6094	-0.7712	-0.9033	-0.2868	0.5824	0.6171
	R-square	0.000002	0.0008	0.0015	0.0020	0.0002	0.0008	0.0009
	p-value	0.9039	0.0170	0.1657	0.1071	0.6029	0.5475	0.5239
G_2526	Ever/current alcohol consumption (N)	7060	7058	1289	1289	1289	432	432
	Intercept	48.2874	50.3179	50.2092	50.5104	50.3687	44.1332	47.9754
	Beta (Ref: never)	1.8590	-0.3451	0.2516	-1.1290	-1.1986	6.1665	2.1281
	R-square	0.0025	0.00009	0.0001	0.0022	0.0025	0.0176	0.0021
	p-value	<0.0001	0.4349	0.7083	0.0911	0.0726	0.0057	0.3421
G_355	Standing height in centimeter (N)	7024	7022	1377	1377	1377	432	432
	Intercept	47.3332	50.5118	46.5496	47.9305	53.4555	41.2094	34.9620
	Beta	0.0161	-0.0031	0.0223	0.0136	-0.0204	0.0544	0.0931
	R-square	0.0002	0.00001	0.0005	0.0002	0.0004	0.0025	0.0074
	p-value	0.1895	0.8024	0.4151	0.6181	0.4534	0.2973	0.0742

Appendix E. Table 1. Summary of Relationship of T Scores for Cognitive Measures with Variables of Interest (cont'd)

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_217	Weight in Kg	6956	6954	1420	1420	1420	432	432
	Intercept	49.1409	50.2085	49.2215	46.6716	49.0394	52.5501	47.3578
	Beta	0.0118	-0.0026	0.0123	0.0526	0.0158	-0.0351	0.0363
	R-square	0.0003	0.00002	0.0003	0.0053	0.0005	0.0026	0.0028
	p-value	0.1220	0.7346	0.5177	0.0058	0.4100	0.2907	0.2736
G_162	Body mass index (N)	6924	6922	1357	1357	1357	432	432
	Intercept	49.5068	50.3061	50.3508	46.5906	48.8816	55.4833	49.9240
	Beta	0.0200	-0.0108	-0.0061	0.1481	0.0520	-0.1973	0.0027
	R-square	0.00009	0.00003	0.0000	0.0046	0.0006	0.0082	0.0000
	p-value	0.4228	0.6637	0.9186	0.0127	0.3816	0.0603	0.9793
G_326	Occurrence of high blood pressure(N)	7058	7055	1349	1349	1349	432	432
	Intercept	50.1377	49.99	50.2537	49.7083	49.6610	50.429	49.7764
	Beta (Ref: never)	-0.2403	0.0318	-0.5059	1.0007	1.1146	-0.8869	0.4690
	R-square	0.0001	0.000002	0.0006	0.0024	0.0031	0.0020	0.0006
	p-value	0.3166	0.8945	0.3655	0.0734	0.0406	0.3578	0.6269
G_290	Occurrence of diabetes (N)	7058	7056	1455	1455	1455	432	432
	Intercept	50.2658	50.1048	50.0894	49.9876	49.8359	49.8600	49.7602
	Beta (Ref: never)	-1.5012	-0.5819	-0.8708	0.1272	0.9099	1.5125	2.5900
	R-square	0.0033	0.0005	0.0009	0.0000	0.0009	0.0019	0.0056
	p-value	<0.0001	0.0621	0.2621	0.8702	0.2451	0.3628	0.1188
G_388	Occurrence of myocardial infarction (N)	7046	7043	1431	1431	1431	424	424
	Intercept	50.1058	50.1037	50.1462	50.0846	49.9405	49.8041	50.0110
	Beta (Ref: never)	-0.7705	-0.7546	-0.6850	0.3375	1.3464	1.5824	-0.0490
	R-square	0.0006	0.0006	0.0006	0.0002	0.0026	0.0029	0.0000
	p-value	0.0333	0.0370	0.3447	0.6382	0.0543	0.2690	0.9725
G_245_CB	Categorical indicator of the participants level of physical activity using CSHA categories (3 categories) (N)	7060	7058	1271	1271	1271	432	432
	Intercept	48.9042	49.5623	49.2264	48.5627	49.1926	51.6882	51.1951
	Beta (Ref: none)							
	Low level	0.4616	-0.7936	1.5737	2.3309	1.7180	-1.9179	0.2914
	Moderate or high level	1.4369	0.7204	2.4643	3.6444	1.8030	-1.8856	-1.5525
	R-square	0.0032	0.0025	0.0127	0.0279	0.0077	0.0034	0.0048
p-value	< 0.0001	0.0001	0.0003	< 0.0001	0.0074	0.4811	0.3531	

Appendix E. Table 1. Summary of Relationship of T Scores for Cognitive Measures with Variables of Interest (cont'd)

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_245_CO	Categorical indicator of the participants level of physical activity using CSHA categories (4 categories) (N)	7060	7058	1271	1271	1271	432	432
	Intercept	48.9042	49.5623	49.2264	48.5627	49.1926	51.6882	51.1951
	Beta (Ref: none)							
	Low level	0.4616	-0.7936	1.5737	2.3309	1.7180	-1.9179	0.2914
	Moderate level	1.2255	0.6285	2.2189	3.3708	1.5214	-1.3698	-1.4205
	High level	2.1000	1.0085	3.2841	4.5582	2.7435	-2.8115	-1.7894
	R-square	0.0043	0.0027	0.0134	0.0288	0.0086	0.0072	0.0051
p-value	< 0.0001	0.0002	0.0007	< 0.0001	0.0118	0.3781	0.5346	

Appendix E. Table 2. Summary of Relationship of Centered Scores for Cognitive Measures with Variables of Interest

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_Age	Age in years (N)	7106	7103	1497	1730	1730	432	432
	Intercept	3.6550	1.086	1.6300	2.5670	2.0236	2.3318	2.7491
	Beta	-0.0531	-0.0155	-0.0239	-0.0340	-0.0251	-0.0368	-0.0423
	R-square	0.0869	0.0073	0.0332	0.0615	0.0391	0.0184	0.0113
	p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0048	0.0269
G_129	Gender (N)	7106	7104	1497	1730	1730	432	432
	Intercept	-0.4398	-0.0477	-0.3303	-0.1055	0.1260	-0.6811	-0.6629
	Beta (Ref: male)	0.3522	-0.0092	0.0967	-0.0590	-0.1701	0.5660	0.5537
	R-square	0.0272	0.00002	0.0027	0.0009	0.0087	0.0693	0.0310
	p-value	<0.0001	0.7203	0.0442	0.2133	0.0001	<0.0001	0.0002
G_161_C	Highest level of education (N)	7060	7058	1488	1719	1719	432	432
	Intercept	-0.7151	-0.1701	-0.4317	-0.1169	0.0177	-0.5738	-0.6508
	Beta (Ref: Low (0-8)							
	Moderate (9-13)	0.4248	0.0912	0.2440	-0.0541	-0.0007	0.1798	0.2251
	High (14+)	0.7367	0.1883	0.4610	-0.0057	0.0342	0.2931	0.4668
	R-square	0.0660	0.0044	0.0313	0.0007	0.0002	0.0084	0.0110
	p-value	<0.0001	<0.0001	<0.0001	0.5271	0.8773	0.1632	0.0939
G_297	Country of birth (N)	7104	7102	1497	1730	1730	432	432
	Intercept	-0.3347	-0.0770	-0.3763	-0.1980	-0.0388	-0.3535	-0.2498
	Beta (Ref: other country)	0.1211	0.0297	0.1596	0.0824	0.0863	-0.0264	-0.1292
	R-square	0.0020	0.00012	0.0070	0.0016	0.0021	0.0001	0.0006
	p-value	0.0002	0.3598	0.0012	0.0922	0.0571	0.8759	0.6018
G_94 0	Ever/current smoked cigarettes (N)	7104	7102	1309*	1521*	1521*	432	432
	Intercept	-0.2212	-0.0226	-0.2327	-0.1505	-0.0302	-0.2887	-0.2912
	Beta (Ref: never)	-0.0227	-0.0441	-0.0421	0.0427	0.1244	-0.1960	-0.1649
	R-square	0.0001	0.0004	0.0005	0.0005	0.0050	0.0083	0.0027
	p-value	0.3987	0.1034	0.4024	0.3902	0.0059	0.0589	0.2779
G_2526	Ever/current alcohol consumption (N)	7106	7104	1297	1507	1507	432	432
	Intercept	-0.4540	-0.0589	-0.2543	-0.1232	0.0145	-0.9818	-0.7094
	Beta (Ref: never)	0.2360	0.0065	0.0331	0.0020	0.0564	0.6356	0.3614
	R-square	0.0036	0.000003	0.0002	0.0000	0.0007	0.0162	0.0025
	p-value	<0.0001	0.8907	0.5853	0.9736	0.2982	0.0080	0.3041
G_355	Standing height in centimeter (N)	7070	7068	1386	1600	1600	432	432
	Intercept	0.9935	-0.2234	-0.5207	-0.9502	-0.9520	1.7744	0.2221
	Beta	-0.0074	0.0010	0.0017	0.0051	0.0061	-0.0133	-0.0036
	R-square	0.0046	0.00009	0.0003	0.0028	0.0048	0.0131	0.0005
	p-value	<0.0001	0.4292	0.4994	0.0341	0.0055	0.0172	0.6574

Appendix E. Table 2. Summary of Relationship of Centered Scores for Cognitive Measures with Variables of Interest (cont'd)

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_217	Weight in Kg	7000	6998	1428	1654	1654	432	432
	Intercept	-0.1766	-0.1044	-0.3992	-0.6849	-0.4315	0.4269	-0.2449
	Beta	-0.0008	0.0007	0.0020	0.0085	0.0070	-0.0111	-0.0017
	R-square	0.0001	0.0001	0.0010	0.0154	0.0121	0.0224	0.0002
	p-value	0.3389	0.3780	0.2332	<0.0001	<0.0001	0.0018	0.7502
G_162	Body mass index (N)	6968	6966	1365	1576	1576	432	432
	Intercept	-0.3991	-0.0702	-0.3295	-0.6260	-0.2715	0.2293	-0.3264
	Beta	0.0063	0.0007	0.0032	0.0208	0.0127	-0.0218	-0.0014
	R-square	0.0008	0.00001	0.0003	0.0101	0.0044	0.0087	0.0000
	p-value	0.0165	0.7784	0.5477	<0.0001	0.0081	0.0529	0.9320
G_326	Occurrence of high blood pressure(N)	7104	7102	1358	1561	1561	432	432
	Intercept	-0.1928	-0.0414	-0.2530	-0.1601	0.0055	-0.3125	-0.3702
	Beta (Ref: never)	-0.0773	-0.0197	-0.0290	0.0616	0.0556	-0.1355	0.0096
	R-square	0.0013	0.00008	0.0002	0.0010	0.0010	0.0040	0.0000
	p-value	0.0022	0.4397	0.5650	0.2144	0.2168	0.1905	0.9494
G_290	Occurrence of diabetes (N)	7104	7102	1464	1691	1691	432	432
	Intercept	-0.1962	-0.0391	-0.2633	-0.1452	0.0026	-0.3818	-0.3905
	Beta (Ref: never)	-0.2258	-0.0769	-0.0590	0.0118	0.0918	0.0508	0.2686
	R-square	0.0067	0.0008	0.0005	0.0000	0.0012	0.0002	0.0025
	p-value	<0.0001	0.0202	0.3994	0.8624	0.1484	0.7758	0.3032
G_388	Occurrence of myocardial infarction (N)	7092	7090	1440	1665	1665	424	424
	Intercept	-0.1993	-0.0374	-0.2535	-0.1390	0.0116	-0.4033	-0.3721
	Beta (Ref: never)	-0.2927	-0.1172	-0.0768	0.0456	0.1173	0.2247	0.0787
	R-square	0.0083	0.0013	0.0010	0.0003	0.0025	0.0051	0.0003
	p-value	<0.0001	0.0023	0.2391	0.4740	0.0434	0.1436	0.7234
G_245_CB	Categorical indicator of the participants level of physical activity using CSHA categories (3 categories) (N)	7106	7104	1279	1484	1484	432	432
	Intercept	-0.4286	-0.1310	-0.3772	-0.2937	-0.0717	-0.2695	-0.2689
	Beta (Ref: never)							0.2790
	Low level	0.1079	-0.0670	0.2251	0.2348	0.1629	-0.0041	-0.1593
	Moderate or high level	0.2480	0.1174	0.2946	0.3989	0.2256	-0.1358	
	R-square	0.0082	0.0039	0.0231	0.0357	0.0141	0.0026	0.0076
	p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.5737	0.1928

Appendix E. Table 2. Summary of Relationship of Centered Scores for Cognitive Measures with Variables of Interest (cont'd)

Variable	Description	CCHS		CSHA n=1730			NuAge	
		REY	HUI	REY	BUSC1	BUSC_T	BUSC1	BUSC_T
G_245_CO	Categorical indicator of the participants level of physical activity using CSHA categories (4 categories) (N)	7106	7104	1279	1484	1484	432	432
	Intercept	-0.4286	-0.1310	-0.3772	-0.2937	-0.0717	-0.2695	-0.2689
	Beta (Ref: none)							
	Low level	0.1079	-0.0670	0.2251	0.2348	0.1629	-0.0041	0.2790
	Moderate level	0.2077	0.1005	0.2619	0.3530	0.1810	-0.0728	-0.1338
	High level	0.3742	0.1706	0.4044	0.5512	0.3736	-0.2487	-0.2051
R-square	0.0115	0.0045	0.0246	0.0382	0.0169	0.0075	0.0080	
p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.3602	0.3274	