

Supplementary material

Title:

Preventable risk factors for dementia: Population Attributable Fractions in a Brazilian population-based study.

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Supplementary Table 1. ELSI-Brazil variables collected for this study and their corresponding responses and definitions.

Variable	ELSI-Brazil code (Alphabetical order)	Question description	Possible answers	Variable definition
Family income	D28	<i>"When you sum all monthly income of all inhabitants of this house, which of the following options describe the total inhouse income?"</i>	17 options according to the number of minimum wage strata (1, 1 to 2, 2 to 3, and so on)	-
Ethnicity	E9	<i>"Which of the following options best describes your race?"</i>	White, Black, Brown, Yellow (Asian), Indigenous	-
Less education	E22	<i>"What was the highest grade in school that you completed?"</i>	Years of formal education	Less than 4 years
Physical inactivity	L5	<i>"In how many days of the last week did you walk for at least 10 continuous minutes, at home or at work, as a way of transportation to get from one place to another, for leisure, for pleasure or as a way of exercise?"</i>	Number of days a week	Less than 3 days a week of walking or any physical exercise
Alcohol consumption	L25	<i>"How many days a week do you usually drink alcohol?"</i>	Number of days a week	(Doses*day per week) in grams
	L26	<i>"In general, on the day you drink, how many doses do you take?"</i>	Number of doses a day	
Heavy drinking	L25, L26	-	-	Alcohol consumption above 21 units/week (equivalent to 168 grams of pure alcohol) ¹
Smoking	L30	<i>"Do you currently smoke?"</i>	Yes, daily; Yes, less than daily; No	Answering "Yes, daily" or "Yes, less than daily"
Obesity	MF22	<i>Average weight</i>	-	Body mass index: $(MF22/(MF13*MF13)) \geq 29$
	MF13	<i>Average height</i>	-	
Hearing aids	N15	Do you use a hearing device?	No, Yes	
Hearing loss	N16	<i>"How do you evaluate your hearing (even when using a hearing device)?"</i>	Very good, good, regular, bad, very bad	Answering "bad" or "very bad"
Hypertension	N28	<i>"Has any doctor ever told you that you have hypertension (high blood pressure)?"</i>	No, Yes	Answering "Yes"
Diabetes	N35	<i>"Has any doctor ever told you that you have diabetes ("high blood sugar")?"</i>	No, Yes	Answering "Yes"
Depression	N59	<i>"Has a doctor ever told you that you have depression?"</i>	No, Yes	Answering "Yes"

Illiteracy	Q2	<i>“Do you know how to read and write a note?”</i>	No, Yes	Answering "No"
Social isolation	S2	<i>“How often do you meet (in person) with any of your children, not counting the ones that live with you?”</i>	3 or more times a week, 1-2 times a week, 1-2 times a month, every 2-3 months, 1-2 times a year, Less than once a year or never	Less than once per month on S2 or S5 or S8
	S5	<i>“How often do you meet (in person) with any of your relatives, not counting the ones that live with you?”</i>		
	S8	<i>“How often do you meet (in person) with any of your friends, not counting the ones that live with you?”</i>		

Supplementary Panel 1. Formula to calculate weighted PAF.

$$\text{Individual unweighted PAF} = \text{Pe}(\text{RRe} - 1) / (1 + \text{Pe}[\text{RRe} - 1])$$

$$\text{Overall unweighted PAF} = 1 - [(1 - \text{PAF hypertension}) * (1 - \text{PAF diabetes}) * (1 - \text{PAF depression}) \dots]$$

$$\text{Weighted PAF} = (\text{individual PAF}) / \sum (\text{individual PAF}) * (\text{overall PAF})$$

Pe is the Prevalence of the exposure and RRe is the Relative Risk associated with that exposure. Prevalence of the exposure was estimated using the ELSI-Brazil cohort, while Relative Risk was presented by Livingston *et al.* 2020².

References

1. (WHO) World Health Organization. 2018. Global status report on alcohol and health 2018. Geneva. Website: <https://apps.who.int/iris/bitstream/handle/10665/274603/9789241565639-eng.pdf>. Accessed on February 6, 2022.
2. Livingston G, Huntley J, Sommerlad A, Ames D, Ballard C, Banerjee S, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *Lancet*. 2020 Aug 8;396(10248):413–46.