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┌─────────────────────────────────────────────────────────────────────┐
│                      11.747 participants                            │
│  that underwent RP o PSG in the Clinical Sleep Unit of Albacete     │
│                 between 24/4/1989 and 6/7/2021                       │
└─────────────────────────────────────────────────────────────────────┘
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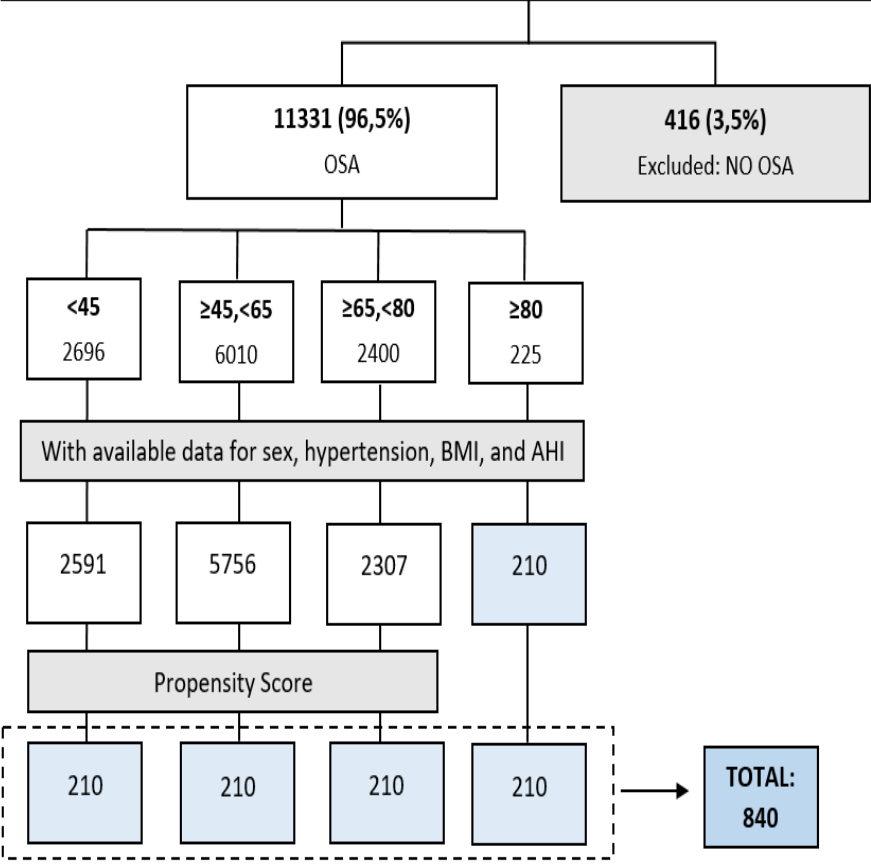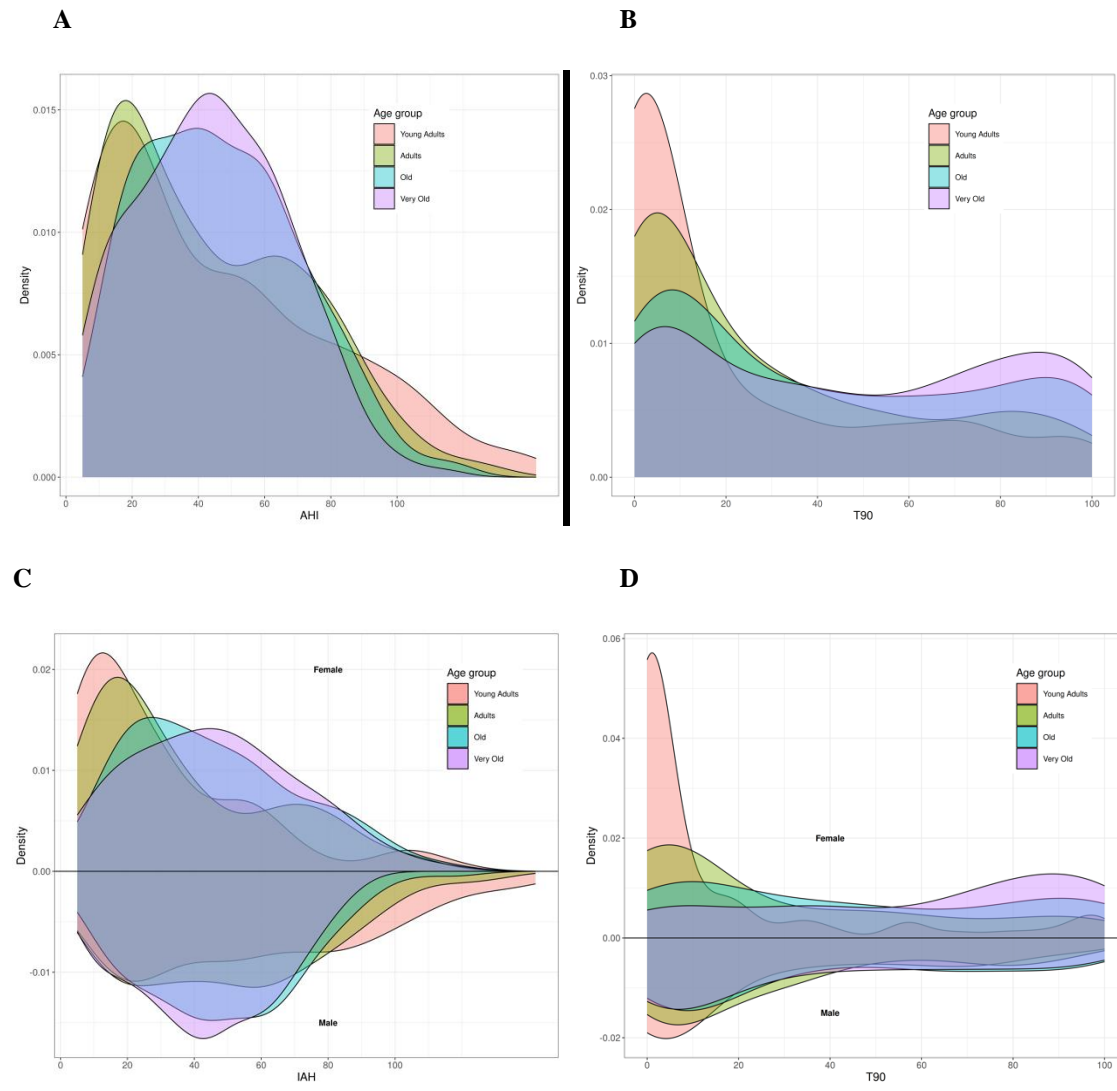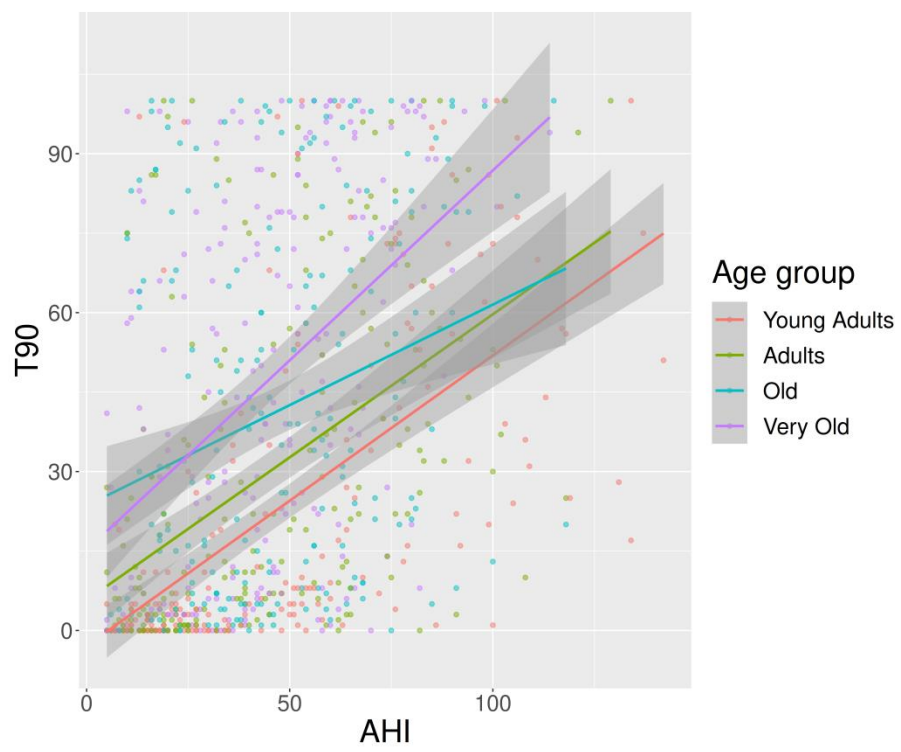
11331 (96,5%)
OSA

416 (3,5%)
Excluded: NO OSA

<45	**≥45,<65**	**≥65,<80**	**≥80**
2696	6010	2400	225

With available data for sex, hypertension, BMI, and AHI

2591	5756	2307	210

Propensity Score

210	210	210	210

**TOTAL:
840**

Supplementary Figure 1. Study flowchart and propensity score matching
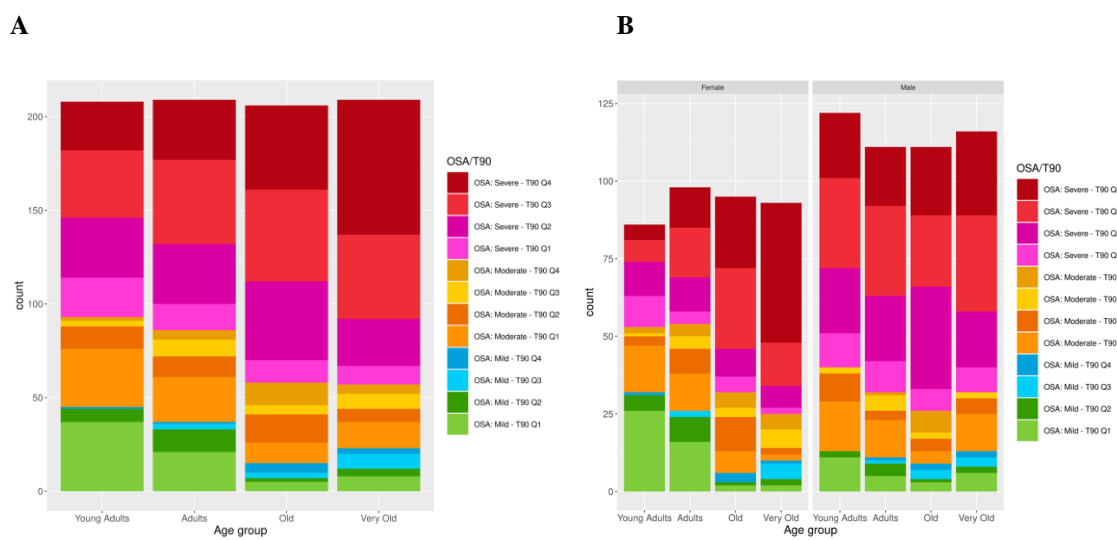
A

B

C

D

Supplementary Figure 2. Density plots showing the distribution of AHI (A) and T90 (B) per age group in the complete sample and by sex (C, D)

AHI: Apnea-hypopnea index; T90: Total sleep time spent with oxygen saturation < 90%. Q: Quartile

Supplementary Figure 3. Linear relationship between AHI and T90 per study group

AHI: Apnea-hypopnea index; T90: Total sleep time spent with oxygen saturation < 90%. Q: Quartile

A   **B**

Supplementary Figure 4. Stacked bar chart showing OSA severity and T90 quartiles per each age group. Each primary bar (OSA severity) is comprised of a number of sub-bars, each one corresponding to quartiles of T90. Complete sample (A) and by sex (B)

OSA: Obstructive sleep apnea; T90: Total sleep time spent with oxygen saturation < 90%. Q: Quartile

Supplementary Table 1. Characteristics of participants,comorbidities and oxygen parameters.

	Total			Match					
					Total Match	Young adults (< 45)	Adults ≥45, <65	Old ≥65, < 80	Very Old ≥80	p
n		11331			840	210	210	210	210	x
	n valid	value		n valid	value					
Age	11331	54 (45-64)		840	65 (44-80)	40 (37-42)	54 (51-60)	71 (68-74)	82 (80-83)	x
Gender	11 331			840						*p*=0.66
Male		8377 (73.9%)			467 (55.6%)	124 (59%)	112 (53%)	114 (54%)	117 (56%)	
Female		2954 (26.1%)			373 (44.4%)	86 (41%)	98 (47%)	96 (46%)	93 (44%)	
Hypertension	11246			840						*p* =0.228
Yes		4022 (35.8%)			503 (59.9%)	119 (56.7%)	121 (58%)	138 (66%)	125 (60%)	
No		7224 (64.2%)			337 (40.1%)	91 (43.3%)	89 (42%)	72 (34%)	85 (50%)	
Diabetes	11246			840						*p* <0.001
Yes		1234 (11%)			138 (16.4%)	13 (6.2%)	28 (13%)	57 (27%)	40 (19%)	
No		10012 (89%)			702 (83.6%)	197 (93.8%)	182 (87%)	153 (73%)	170 (81%)	
Dyslipidemia	11246			840						*p* =0.005
Yes		2424 (21.6%)			240 (28.6%)	44 (21%)	62 (30%)	77 (37%)	57 (27%)	
No		8822 (78.4%)			600 (71.4%)	166 (79%)	148 (70%)	133 (63%)	153 (73%)	
BMI	10865	31 (28-36)		840	32 (29-36)	31.1 (27-37)	31.6 (29-35)	32 (29-36)	31.4(29-35)	*p* =0.825
Ischemic heart disease	11657			839						*p* <0.001
Yes		7037 (6.0%)			84 (10%)	8 (3.8%)	8 (3.8%)	34 (16.2%)	34 (16.2%)	
No		10954 (94.0%)			775 (90%)	201 (96.2%)	202 (96.2%)	176 (83.8%)	176 (83.8%)	
Stroke	11657			839						*p* =0.006
Yes		546 (4.7%)			66 (7.3%)	3 (1.4%)	9 (4.3%)	24 (11.4%)	30 (14.3%)	
No		11111 (95.3%)			773 (92.1%)	206 (98.6%)	201 (95.7%)	186 (88.6%)	180 (85.7%)	
Epworth	10831	12 (8-15)		813	12 (8-15)	13 (8-15)	12(8-15)	12 (9-15)	12 (8-15)	*p* =0.089
AHI	11331	37 (19-62)		840	42 (21-64)	36 (17-70)	38 (19-65)	45 (26-63)	43 (27-60)	*p* =0.168
Baseline median SaO$_2$	10596	96 (94-96)		795	95 (93-96)	96 (95-97)	95 (94-96)	94 (92-96)	94 (91-95)	*p* <0.001
RP mean SaO$_2$	11198	92 (90-93)		833	91 (88-93)	93 (90-94)	92 (90-93)	90 (88-92)	89 (86-92)	*p* <0.001
RP minimum SaO$_2$	10602	78 (68-84)		796	76 (64-82)	79 (69-86)	78 (69-82)	72 (61-81)	75 (59-80)	*p* <0.001
T90 (%)	11176	12 (2-46)		832	22 (3-66)	5 (0-36)	15 (3-53)	34 (7-74)	44 (8-80)	*p* <0.001

All data are medians or number of participants(%).BMI:body mass index;RP:Respiratory polygraphy/polysomnography;AHI:Apnea-hypopnea index;sao2;Oxyen saturation(%);T90:total sleep time spent with sao2<90%