

Supplementary Table 1: Distribution of **gambling habit** before and during COVID-19 lockdown in 6003 Italian adults, by type of gambling (traditional, online or both) and according to sex, age and geographic area. Italy, 2020. Percentages and 95% confidence intervals (CI).

	Total	Sex		Age group (years)		
		Men	Women	18-34	35-54	55-74
N	6003	2962	3041	1557	2457	1989
Playing any gambling						
Pre-lockdown	16.3 (15.4-17.3)	22.9 (21.3-24.4)	10.0 (8.9-11.0)	20.2 (18.2-22.2)	17.4 (15.9-18.9)	12.0 (10.6-13.5)
During lockdown	9.7 (9.0-10.5)	13.6 (12.4-14.8)	5.9 (5.1-6.8)	13.4 (11.7-15.1)	10.4 (9.2-11.6)	6.1 (5.0-7.1)
Traditional gambling*						
Pre-lockdown	9.9 (9.1-10.6)	13.1 (11.9-14.3)	6.8 (5.9-7.6)	12.3 (10.7-13.9)	9.6 (8.4-10.8)	8.3 (7.1-9.5)
During lockdown	2.4 (2.1-2.8)	3.1 (2.4-3.7)	1.8 (1.4-2.3)	4.6 (3.6-5.6)	2.1 (1.5-2.7)	1.2 (0.7-1.7)
Online gambling*						
Pre-lockdown	9.9 (9.2-10.7)	15.2 (13.9-16.5)	4.8 (4.1-5.6)	12.2 (10.6-13.8)	11.4 (10.1-12.7)	6.3 (5.3-7.4)
During lockdown	8.0 (7.3-8.7)	11.7 (10.5-12.8)	4.5 (3.8-5.3)	10.1 (8.6-11.6)	8.9 (7.8-10.0)	5.4 (4.4-6.3)

*Percentages of traditional gambling include those who reported to be traditional only or both (traditional and online) gamblers; Percentages of online gambling include those who reported to be online only or both (traditional and online) gamblers

Supplementary Table 2: Distribution of 980 Italian baseline gamblers (before the COVID-19 lockdown) according to an **improvement in total gambling activity** (i.e., reduce or stop playing) during COVID-19 lockdown, overall and by **addictive behaviors**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	N	Stopping playing during lockdown		Reducing playing during lockdown	
		%	OR (95% CI)	%	OR (95% CI)
Total	980	46.2		25.5	
Smoking status					
Never	524	50.1	1 [^]	22.7	1 [^]
Former	87	51.8	1.03 (0.59-1.80)	23.2	1.02 (0.53-1.97)
Current	369	39.5	0.66 (0.48-0.92)	30.0	1.13 (0.79-1.62)
Electronic cigarette use					
Never	671	48.8	1 [^]	25.4	1 [^]
Past	199	44.5	0.73 (0.50-1.06)	21.2	0.63 (0.40-0.98)
Current	111	33.8	0.57 (0.34-0.93)	33.4	1.06 (0.64-1.77)
HTP use					
Never	797	49.8	1 [^]	24.9	1 [^]
Past	119	30.7	0.42 (0.26-0.67)	27.8	0.71 (0.43-1.16)
Current	65	31.5	0.43 (0.23-0.79)	28.4	0.77 (0.41-1.45)
Alcohol (AUDIT-C)					
Not at risk	562	57.1	1 [^]	20.7	1 [^]
At risk	418	31.7	0.33 (0.24-0.46)	31.9	0.95 (0.67-1.34)
Cannabis use					
No	764	56.5	1 [^]	22.4	1 [^]
Yes	216	10.1	0.06 (0.04-0.10)	36.3	0.60 (0.40-0.89)

AUDIT-C: alcohol use disorders identification test; HTP: heated tobacco products

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

[^] Reference category.

Supplementary Table 3: Distribution of 980 Italian baseline gamblers (before the COVID-19 lockdown) according to an **improvement in total gambling activity** (i.e., reduce or stop playing) during COVID-19 lockdown, overall and by **mental health indicators**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	N	Stopping playing during lockdown		Reducing playing during lockdown	
		%	OR (95% CI)	%	OR (95% CI)
Total	980	46.2		25.5	
Psychotropic drugs					
No	791	52.0	1 [^]	24.7	1 [^]
Yes	189	22.1	0.21 (0.14-0.32)	28.5	0.54 (0.36-0.81)
Quality of life					
High(score >5)	808	48.4	1 [^]	25.9	1 [^]
Low (score ≤5)	172	36.4	0.49 (0.33-0.72)	23.3	0.56 (0.36-0.86)
Sleep quantity					
High (≥ 7 hours/night)	625	48.8	1 [^]	27.9	1 [^]
Low (< 7 hours/night)	356	41.7	0.55 (0.40-0.75)	21.1	0.46 (0.32-0.66)
Sleep quality					
Good/Quite good	783	47.3	1 [^]	26.0	1 [^]
Bad/Quite bad	198	42.0	0.72 (0.50-1.04)	23.5	0.72 (0.47-1.11)
Depressive symptoms (PHQ-2)					
No (score <3)	780	50.8	1 [^]	24.5	1 [^]
Yes (score ≥3)	201	28.5	0.33 (0.23-0.49)	29.3	0.67 (0.45-1.00)
Anxiety symptoms GAD-2					
No (score<3)	731	52.4	1 [^]	23.6	1 [^]
Yes (≥3)	249	28.2	0.32 (0.22-0.46)	30.8	0.76 (0.52-1.11)

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

[^] Reference category.

Supplementary Table 4: Distribution of 6003 Italians according to their **gambling habit** and according to a **worsening in total gambling activity** (i.e., **start playing** for non-players or **increase playing more than 25% hours** per month for players compared to before lockdown) during COVID-19 lockdown, overall and by **socio-demographic characteristics**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	Overall population			Gambling non-players before lockdown			Gambling players before lockdown		
	N	Gambling before lockdown		N	Starting gambling during lockdown		N	Increasing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)		%	OR (95% CI)		%	OR (95% CI)
Total	6003	16.3		5023	1.1		980	17.7	
Sex									
Women	3041	10.0	1.00^	2737	0.9	1.00^	303	15.9	1.00^
Men	2962	22.9	2.68 (2.32-3.11)	2285	1.3	1.45 (0.85-2.47)	677	18.5	1.07 (0.74-1.56)
Age group									
18-34	1557	20.2	1.00^	1242	1.5	1.00^	314	23.3	1.00^
35-54	2457	17.4	0.84 (0.71-0.99)	2031	1.5	1.01 (0.56-1.82)	427	17.3	0.70 (0.48-1.01)
55-74	1989	12.0	0.55 (0.45-0.66)	1749	0.4	0.27 (0.11-0.65)	239	10.9	0.40 (0.25-0.66)
P for trend			<0.001			0.003			<0.001
Level of education									
Low	911	16.0	1.00^	765	1.1	1.00^	146	15.4	1.00^
Intermediate	3032	16.3	1.09 (0.89-1.34)	2539	1.0	0.90 (0.41-1.98)	494	17.3	1.11 (0.66-1.87)
High	2060	16.6	1.04 (0.84-1.30)	1719	1.2	1.02 (0.46-2.28)	341	19.1	1.22 (0.71-2.08)
P for trend			0.877			0.861			0.446
Geographic area									
Northern Italy	2764	14.9	1.00^	2354	1.2	1.00^	411	16.4	1.00^
Central Italy	1201	17.1	1.20 (0.99-1.45)	996	0.9	0.74 (0.34-1.61)	205	21.9	1.46 (0.95-2.24)
Southern Italy & Islands	2037	17.9	1.26 (1.07-1.47)	1673	1.2	1.01 (0.56-1.81)	365	16.7	1.00 (0.68-1.47)

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

^ Reference category.

Supplementary Table 5: Distribution of 6003 Italians according to their **gambling habit** and according to a **worsening in total gambling activity** (i.e., **start playing** for non-players or **increase playing more than 25% hours** per month for players compared to before lockdown) during COVID-19 lockdown, overall and by **addictive behaviors**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	Overall population			Gambling non-players before lockdown			Gambling players before lockdown		
	N	Gambling before lockdown		N	Starting playing during lockdown		N	Increasing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)		%	OR (95% CI)		%	OR (95% CI)
Total	6003	16.3		5023	1.1		980	17.7	
Smoking status									
Never	4053	12.9	1.00^	3529	1.2	1.00^	524	15.6	1.00^
Former	549	15.8	1.34 (1.04-1.73)	463	0.5	0.50 (0.13-1.96)	87	18.7	1.42 (0.78-2.58)
Current	1400	26.4	2.50 (2.14-2.92)	1031	1.0	0.82 (0.41-1.64)	369	20.3	1.47 (1.03-2.09)
Electronic - cigarette use									
Never	4676	14.3	1.00^	4006	1.1	1.00^	671	15.2	1.00^
Past	840	23.7	1.80 (1.49-2.16)	641	1.6	1.48 (0.74-2.94)	199	22.5	1.53 (1.03-2.29)
Current	487	22.7	1.74 (1.38-2.20)	376	0.7	0.69(0.20-2.33)	111	23.9	1.66 (1.01-2.71)
HTP use									
Never	5341	14.9	1.00^	4544	1.1	1.00^	797	15.5	1.00^
Past	422	28.1	2.12 (1.68-2.68)	303	0.9	0.68 (0.20-2.38)	119	28.6	1.94 (1.24-3.04)
Current	240	26.9	2.02 (1.49-2.73)	176	0.7	0.55 (0.09-3.36)	65	24.0	1.57 (0.86-2.90)
Alcohol (AUDIT-C)									
Not at risk	4417	12.7	1.00^	3854	1.0	1.00^	562	13.9	1.00^
At risk	1586	26.4	2.51 (2.17-2.91)	1168	1.5	1.52 (0.86-2.69)	418	22.8	1.85 (1.32-2.59)
Cannabis use									
No	5582	13.7	1.00^	4818	1.0	1.00^	764	11.8	1.00^
Yes	421	51.4	6.15 (4.96-7.63)	205	3.4	2.99 (1.33-6.73)	216	38.2	4.69 (3.21-6.85)

AUDIT-C: alcohol use disorders identification test; HTP: heated tobacco products

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

^ Reference category.

Supplementary Table 6: Distribution of 6003 Italians according to their **gambling habit** and according to a **worsening in total gambling activity** (i.e., **start playing** for non-players or **increase playing more than 25% hours** per month for players compared to before lockdown) during COVID-19 lockdown, overall and by **mental health indicators**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

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Characteristics before lockdown	Overall population			Gambling non-players before lockdown			Gambling players before lockdown		
	N	Gambling before lockdown		N	Starting playing during lockdown		N	Increasing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)		%	OR (95% CI)		%	OR (95% CI)
GAD-2									
No (score<3)	4915	14.9	1.00^	4183	1.1	1.00^	731	12.7	1.00^
Yes (≥3)	1088	22.9	1.87 (1.58-2.22)	839	1.3	1.21 (0.62-2.37)	249	32.4	3.29 (2.30-4.69)

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

^ Reference category

Supplementary Table 7: Distribution of 980 Italian baseline gamblers (before COVID-19 lockdown) according to an **improvement in total gambling activity** (i.e., stop playing or reduce intensity of gambling of **more than 25% hours** per month) during COVID-19 lockdown, overall and by **socio-demographic** characteristics. Corresponding odds ratios[°] (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	N	Gambling players at baseline			
		Stopping playing during lockdown		Reducing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)	%	OR (95% CI)
Total	980	46.2		22.7	
Sex					
Women	303	49.1	1 [^]	22.1	1 [^]
....Men	677	45.0	1.11 (0.80-1.53)	23.1	1.04 (0.71-1.53)
Age group					
18-34	314	39.6	1 [^]	24.9	1 [^]
35-54	427	47.5	1.34 (0.95-1.88)	21.7	1.00 (0.67-1.49)
55-74	239	52.7	1.86 (1.24-2.79)	21.7	1.21 (0.75-1.96)
P for trend			0.003		0.480
Level of education					
Low	146	42.8	1 [^]	27.4	1 [^]
Intermediate	494	47.3	1.10 (0.70-1.73)	22.6	0.81 (0.49-1.34)
High	341	46.2	1.02 (0.64-1.63)	21.1	0.71 (0.42-1.21)
P for trend			0.908		0.206
Geographic area					
Northern Italy	411	47.5	1 [^]	23.0	1 [^]
Central Italy	205	40.3	0.61 (0.42-0.90)	19.8	0.64 (0.40-1.02)
Southern Italy & Islands	365	48.2	1.07 (0.766-1.51)	24.1	1.15 (0.77-1.71)

[°] Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

[^] Reference category.

Supplementary Table 8: Distribution of 980 Italian baseline gamblers (before COVID-19 lockdown) according to an **improvement** in **total gambling activity** (i.e., stop playing or reduce intensity of gambling of **more than 25% hours** per month) during COVID-19 lockdown, overall and by **addictive behaviors**. Corresponding odds ratios° (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	N	Stopping playing during lockdown		Reducing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)	%	OR (95% CI)
Total	980	46.2		22.7	
Smoking status					
Never	524	50.1	1^	20.3	1^
Former	87	51.8	1.09 (0.63-1.89)	22.1	1.16 (0.60-2.25)
Current	369	39.5	0.65 (0.47-0.89)	26.4	1.09 (0.75-1.57)
Electronic cigarette use					
Never	671	48.8	1^	22.7	1^
Past	199	44.5	0.75 (0.52-1.09)	19.1	0.66 (0.42-1.03)
Current	111	33.8	0.55 (0.34-0.90)	29.4	1.03 (0.62-1.72)
HTP use					
Never	797	49.8	1^	22.1	1^
Past	119	30.7	0.45 (0.28-0.72)	26.6	0.82 (0.50-1.35)
Current	65	31.5	0.42 (0.23-0.77)	23.8	0.72 (0.37-1.39)
Alcohol (AUDIT-C)					
Not at risk	562	57.1	1^	18.0	1^
At risk	418	31.7	0.35 (0.25-0.47)	29.2	1.03 (0.73-1.46)
Cannabis use					
No	764	56.5	1^	19.9	1^
Yes	216	10.1	0.06 (0.04-0.11)	32.7	0.62 (0.42-0.92)

AUDIT-C: alcohol use disorders identification test; HTP: heated tobacco products

° Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

^ Reference category.

Supplementary Table 9: Distribution of 980 Italian baseline gamblers (before COVID-19 lockdown) according to an **improvement in total gambling activity** (i.e., stop playing or reduce intensity of gambling of **more than 25% hours** per month) during COVID-19 lockdown, overall and by **mental health indicators**. Corresponding odds ratios[°] (OR) and 95% confidence intervals (CI). Italy, 2020.

Characteristics before lockdown	N	Stopping playing during lockdown		Reducing intensity of gambling of more than 25% hours per month	
		%	OR (95% CI)	%	OR (95% CI)
Total	980	46.2		22.7	
Psychotropic drugs					
No	791	52.0	1 [^]	21.5	1 [^]
Yes	189	22.1	0.24 (0.16-0.36)	27.9	0.69 (0.46-1.03)
Quality of life					
High(score >5)	808	48.4	1 [^]	23.1	1 [^]
Low (score ≤5)	172	36.4	0.51 (0.35-0.74)	28.9	0.58 (0.37-0.91)
Sleep quantity					
High (≥ 7 hours/night)	625	48.8	1 [^]	25.4	1 [^]
Low (< 7 hours/night)	356	41.7	0.57 (0.42-0.77)	18.2	0.46 (0.32-0.66)
Sleep quality					
Good/Quite good	783	47.3	1 [^]	23.3	1 [^]
Bad/Quite bad	198	42.0	0.73 (0.51-1.04)	20.5	0.71 (0.46-1.10)
Depressive symptoms (PHQ-2)					
No (score <3)	780	50.8	1 [^]	21.7	1 [^]
Yes (score ≥3)	201	28.5	0.35 (0.24-0.51)	26.7	0.71 (0.47-1.07)
Anxiety symptoms GAD-2					
No (score<3)	731	52.4	1 [^]	20.3	1 [^]
Yes (≥3)	249	28.2	0.36 (0.25-0.51)	30.0	0.96 (0.66-1.39)

[°] Estimated by unconditional multiple logistic regression models after adjustment for sex, age, education level and geographic area; estimates in bold are those statistically significant at 0.05 level.

[^] Reference category.