



Problem Gambling Among Medical Students: An Overlooked Life-Threatening Factor

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EXCESSIVE GAMBLING: PROMOTING AND PROTECTING HEALTH IN A DIGITALISED WORLD

5th International Multidisciplinary Symposium

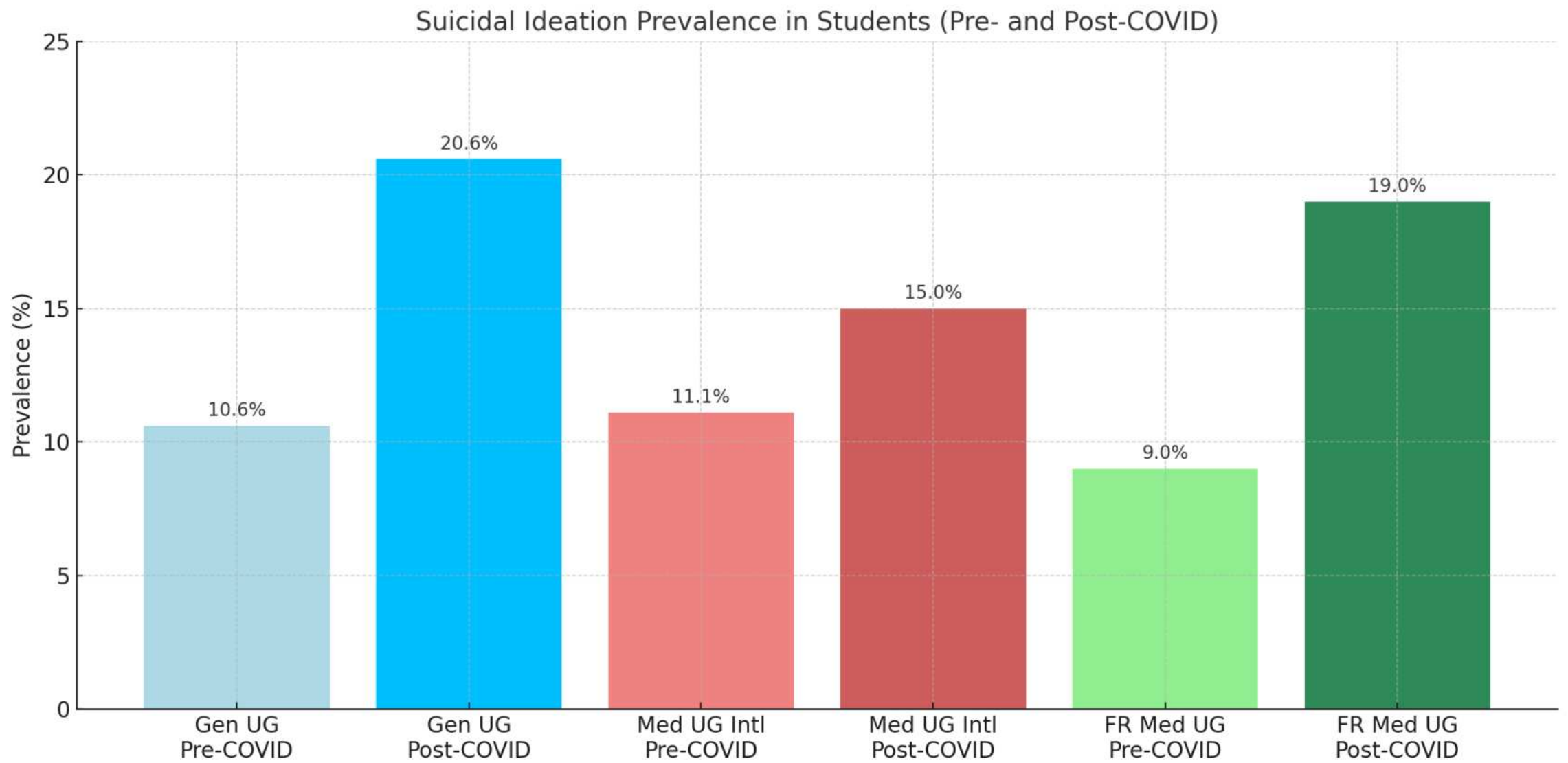
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Declaration of Financial Interests or Relationships

I have the following financial interest or relationship to disclose regarding the subject matter of this presentation:

Receipt of grants/research supports: Grant regulated by a public organism "French observatory of addictive behaviors- OFDT" constraining all French monopolistic gambling service providers to redistribute 0.002% of stakes on their platforms to academic research. The gambling service provider implied in that grant was the "Paris Mutuel Urbain" (PMU). Independency of the research with no constraint on the protocol, the analysis and the publication were guaranteed by a strict convention between universities, hospitals and the PMU. 2021 Campaign - Data sharing agreement for the "OSE" study, through an academic-private convention with the FDJ: Independency of the research with no constraint on the protocol, the analysis and the publication were guaranteed by a strict convention between the hospital and the FDJ, and no funding was part of the conventions (2021)



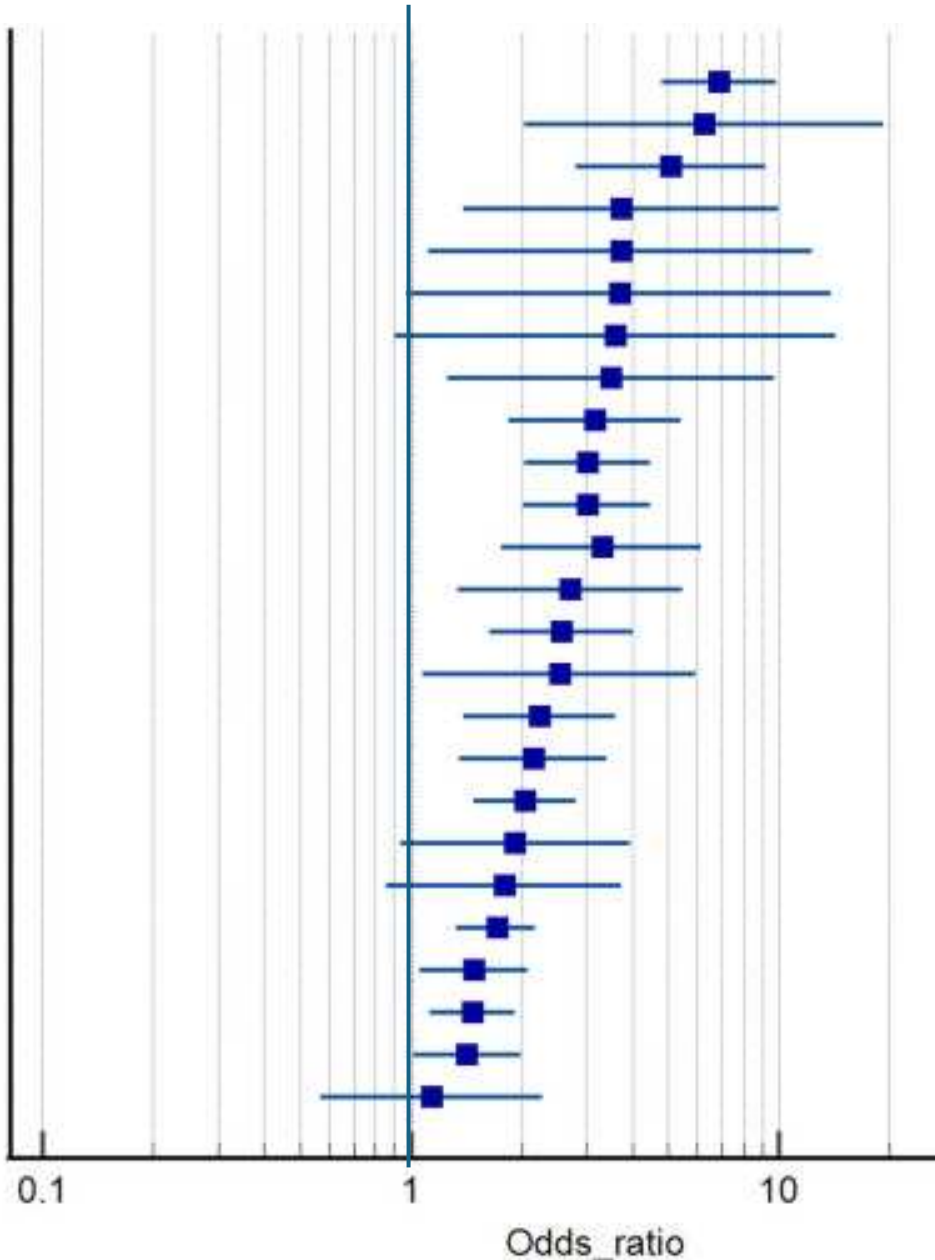
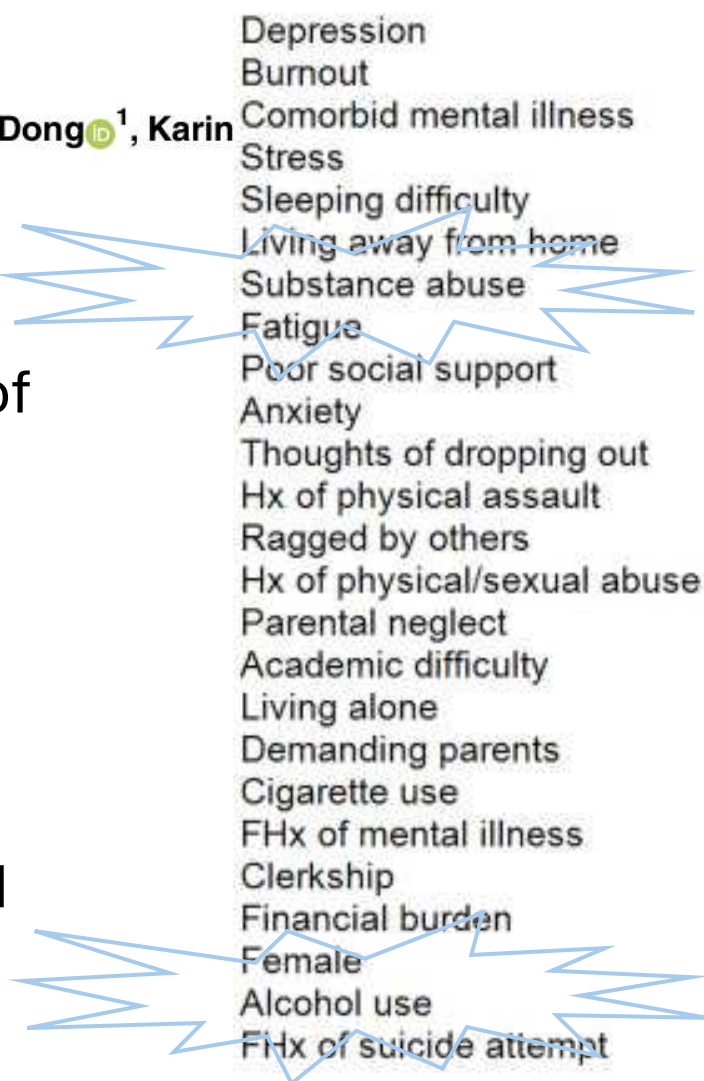
Sources: Rotenstein et al. (2016); Auerbach et al. (2018); Zhang et al. (2022); Frajerman et al. (2022), ANEMF 2021 Survey

Risk factors for suicidal ideation and suicide attempt among medical students: A meta-analysis

Chanhee Seo¹, Christina Di Carlo¹, Selina Xiangxu Dong¹, Karin Anne Haykal^{1*}

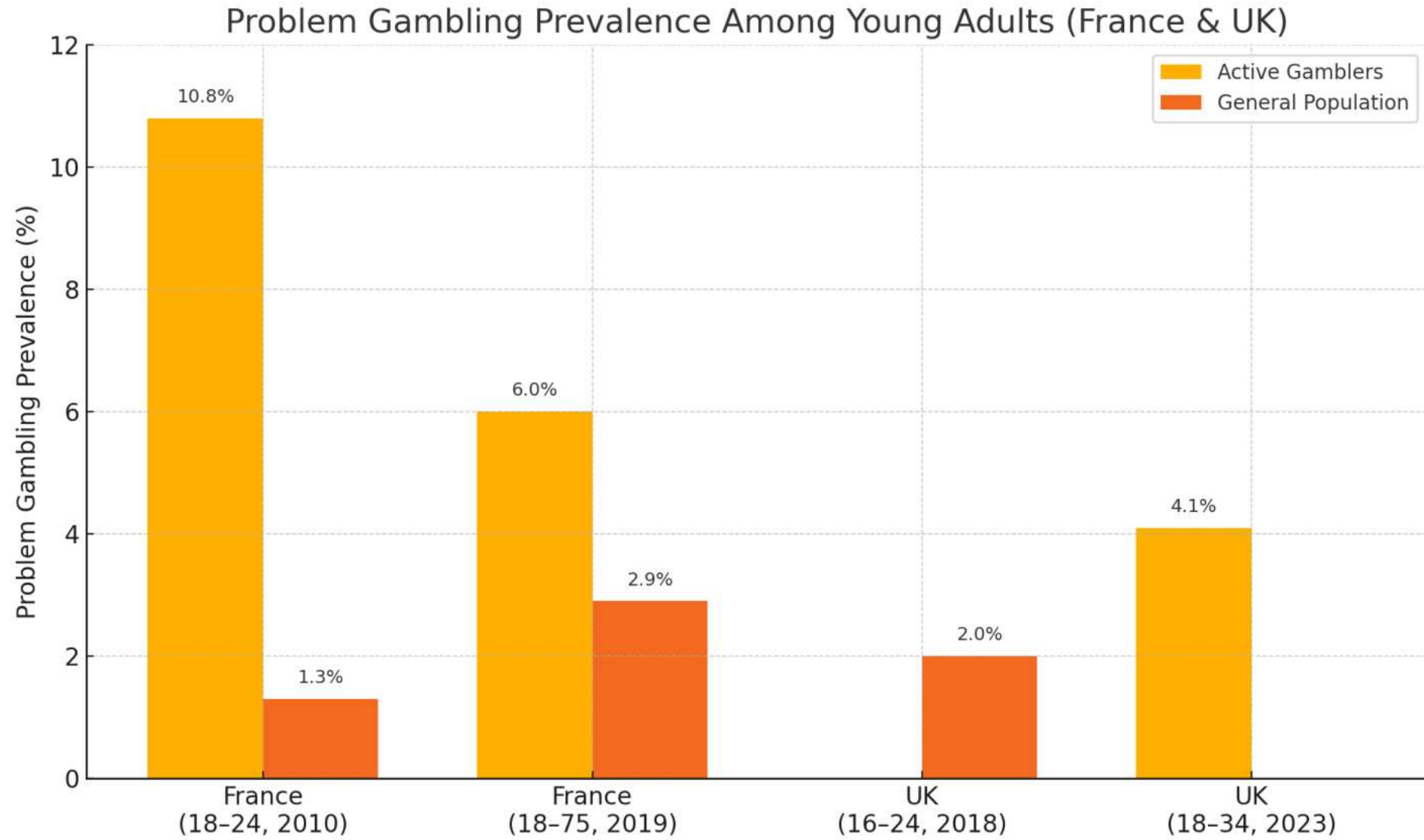
Pooled effect estimates of risk factors for Suicidal ideation among medical students

- Substance abuse : No
- Alcohol: limit
- Gambling not explored



11 o'clock a sunny Saturday Morning in Montpellier





Sources: Baromètre Santé 2010 (INPES); Santé publique France 2019; Health Survey for England & Scottish Health Survey (2018); Gambling Commission UK (2023)

Enquête

sur la qualité de vie étudiant

du 2 au 31 mars 201

« Comment va ma vie... avec l'alcool ? »

L'enquête BDmiE - Binge Drinking, qualité de vie et aspects identitaires en Milieu Étudiant - est anonyme. Elle étudie l'impact de la consommation d'alcool des étudiants sur leur qualité de vie.

Participez à cette enquête nationale via : <https://fr.surveymonkey.com/s/BDmiE> ou via le site web de votre établissement.

En participant à cette étude, vous contribuez à améliorer les connaissances scientifiques sur le sujet de l'alcool en milieu étudiant ainsi que les messages de prévention des risques liés à une consommation excessive. L'enquête nationale BDmiE est le Centre d'Imagerie et de Recherche en Santé des Populations de l'Université Paris-Saclay (CIRS-PS) et l'Unité 1173 de l'Inserm, avec le soutien de la Conférence des Présidents d'Université, la Conférence des Universités d'Île-de-France et la Conférence des Universités de la Région Île-de-France.

Drug and Alcohol Dependence 167 (2016) 42–48

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Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Full length article

Students worry about the impact of alcohol on quality of life: Roles of frequency of binge drinking and drinker self-concept

A. Luquiens^{a,b,*}, B. Falissard^{a,b}, H.J. Aubin^{a,b}



Students' characteristics.

	Non abstinent but No binge drinking episode in the month (n = 6457)	At least one binge drinking episode in the month (n = 8238)	p-value
Age (years) (mean, sd) (n = 6592)	21.1 (2.3)	21.1 (2.1)	0.3533
Gender (male) (n = 1673)	2431 (38%)	4368 (54%)	<2.2e−16*
Financial difficulties (none)	2673 (49%)	3025 (46%)	0.0021044*
Gambling (n = 1236/5468/6592)	441 (8%)	876 (13%)	<2.2e−16*

Table 3
Independent factor of increased impact of alcohol consumption on quality of life assessed with AQoLS.

	Estimate	p-value
(Intercept)	0.07	0.85
Binge drinking frequency	0.83	<2e−16*
Maximum alcohol consumed on 1 occasion	0.04	0.0076
AUDIT-C score	0.18	0.0002*
Gender (female)	−0.30	0.2302
Gender (female) X AUDIT-C SCORE interaction	0.14	0.0026*
Completed years after high school	−0.19	8.04e−08*
Chronic condition	0.78	4.94e−05*
French nationality	−1.56	3.49e−07*
Drinker self-concept score	0.33	<2e−16*
Financial difficulties (Likert scale)	0.64	<2e−16*
Other addictive behaviors (length since last consumption/practice)		
Tobacco	0.06	0.2981
Cannabis	0.26	0.0002*
Cocaine	0.23	0.2862
Heroine	−0.23	0.4531
Poppers	0.49	7.47e−06*
MDMA or other psychostimulant	0.65	0.0003*
Gambling	0.33	1.65e−06*

* Significant with Bonferroni's adjustment (α risk lowered to 0.0028456).

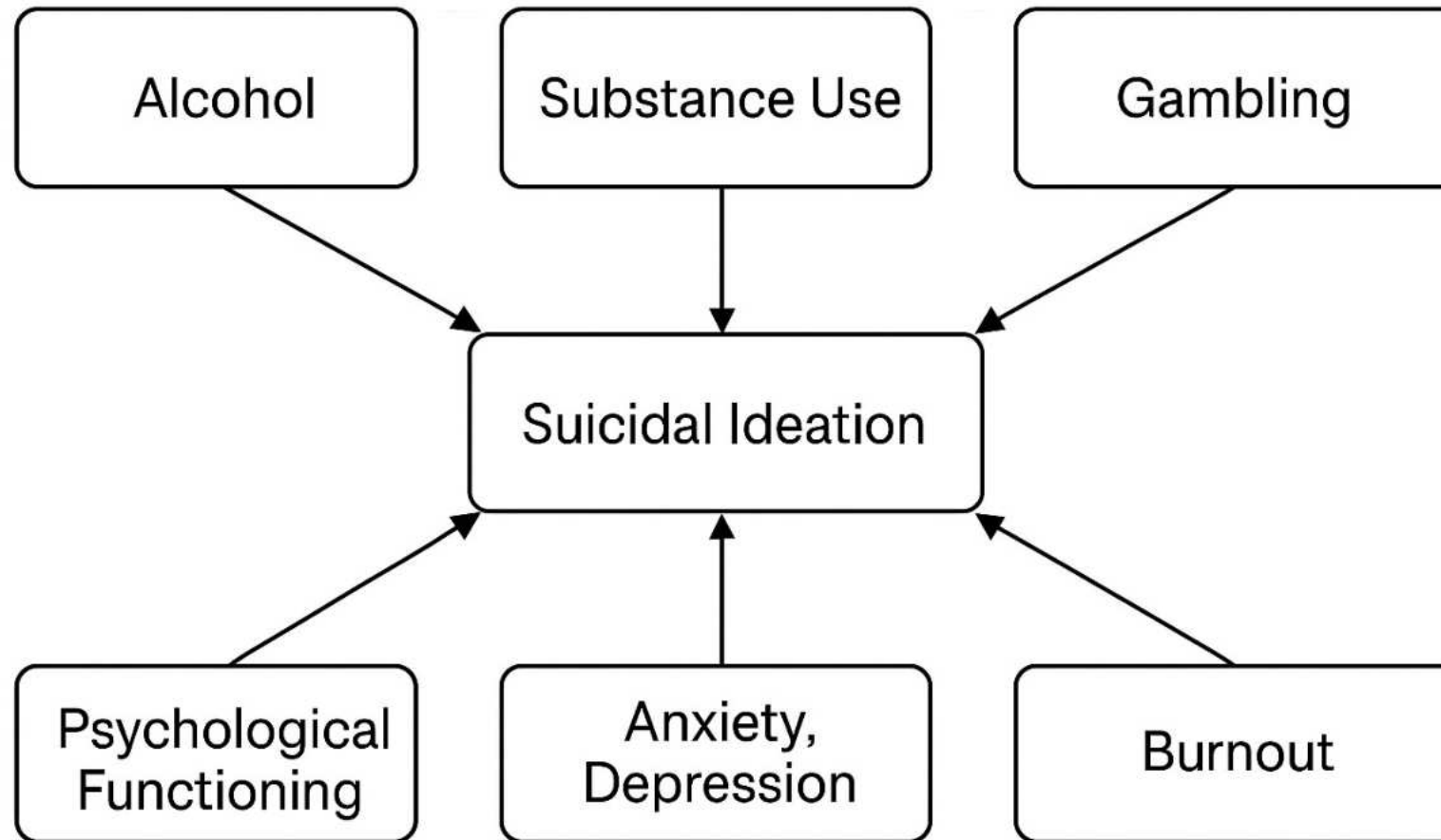
Gambling and mental health in youth

- Problem gambling in students : significantly associated with
 - male gender,
 - hazardous drinking,
 - suicidality (*Turner et al., 2020*).
- Primary focus on identifying factors associated with problem gambling
 - rather than elucidating the factors underlying suicidal ideation (*Cook et al., 2015; George et al., 2016; Jaisoorya et al., 2017; Langhinrichsen-Rohling, Rohde, Seeley, & Rohling, 2004; Rossen et al., 2016; Stuhldreher, Stuhldreher, & Forrest, 2007*).

Problem Gambling – An Overlooked Factor in students to explain suicidal ideation

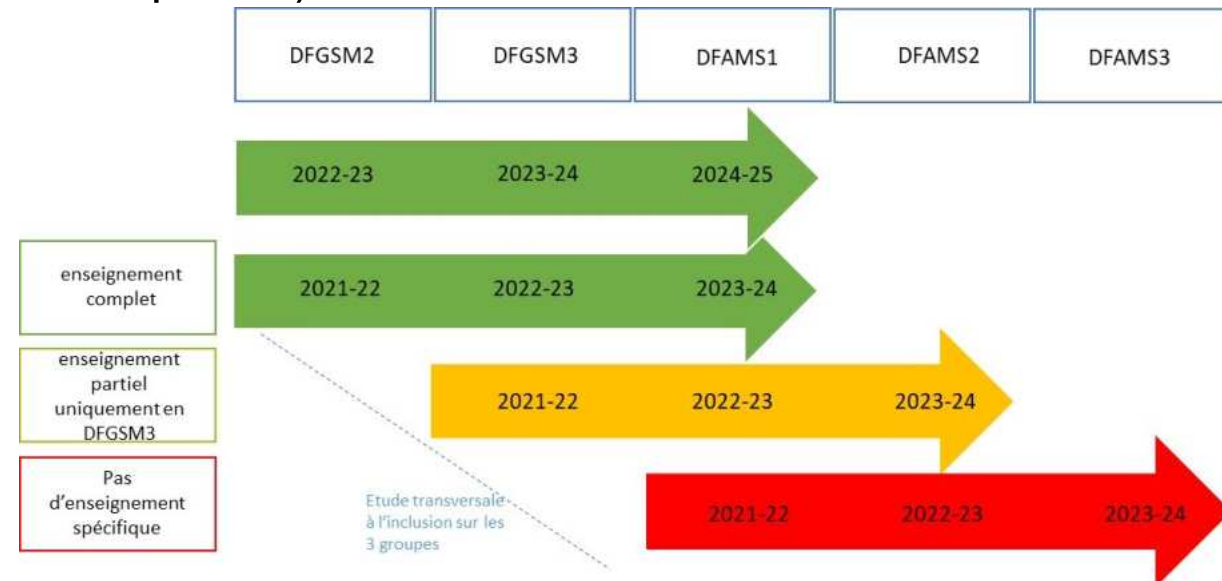
- Problem gambling:
 - Known risk factor for suicide in **general population**:
 - 31% report lifetime suicidal ideation (Armoon et al., 2023)
 - **Understudied in Students**/medical students
 - Little data exploring the role of problem gambling on suicidal ideation **adjusting on other addictive behaviors** (Alcohol++)

Aim: To identify **risk and protective factors** associated with suicidal ideation in the past 2 weeks among 2nd–4th year medical students.



Study Design & Population

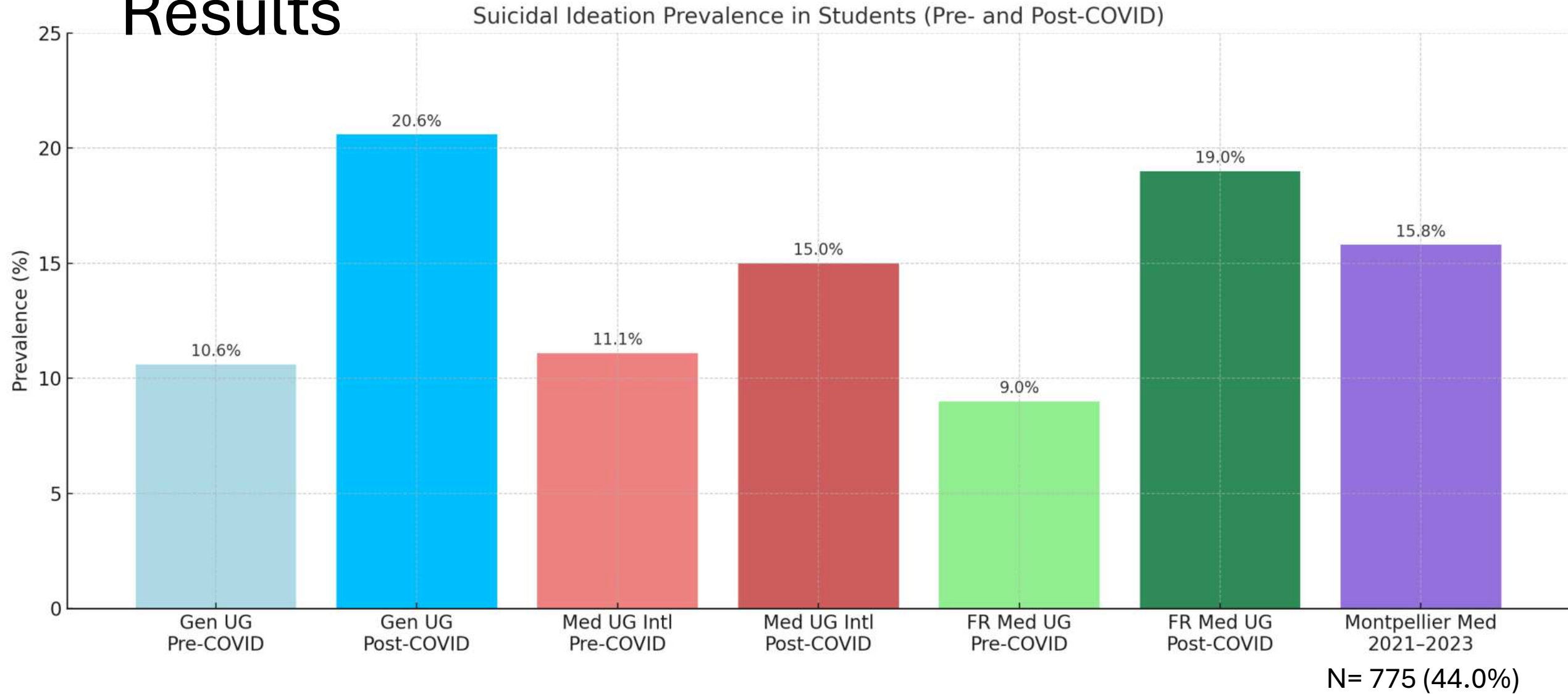
- **Study design**
- Prospective cohort study: “*debuter*” study
- Recruitment during new coursework sessions on psychosocial skills
- Promoted by faculty, student representatives, and associations
- Informed consent required; fully anonymous and voluntary participation
- **Population**
- Inclusion:
 - 2nd to 4th year medical students (University of Montpellier)
 - Participated in Dec 2021, 2022, or 2023
 - Completed PHQ-9 item 9 on suicidal ideation
- No exclusion criteria
- Baseline data only



Measures & Instruments

- **Addictive behaviors**
 - CRAFFT (alcohol/substance use disorder), CAST (cannabis use disorder)
 - **Lie-Bet** (problem gambling)
- **Other mental health disorders**
 - PHQ-9 (depression), → **item 9 for suicidal ideation in the last 2 weeks**
 - GAD-7 (anxiety),
 - MBI-SS (burnout)
- **Psychosocial functioning**
 - DERS (emotion regulation difficulties)
 - Curricular and psychosocial factors
 - JSPE-S (clinical empathy)
 - PPOS (patient-centered attitudes)
- Chronic illness, artistic activities, regular sports practice

Results



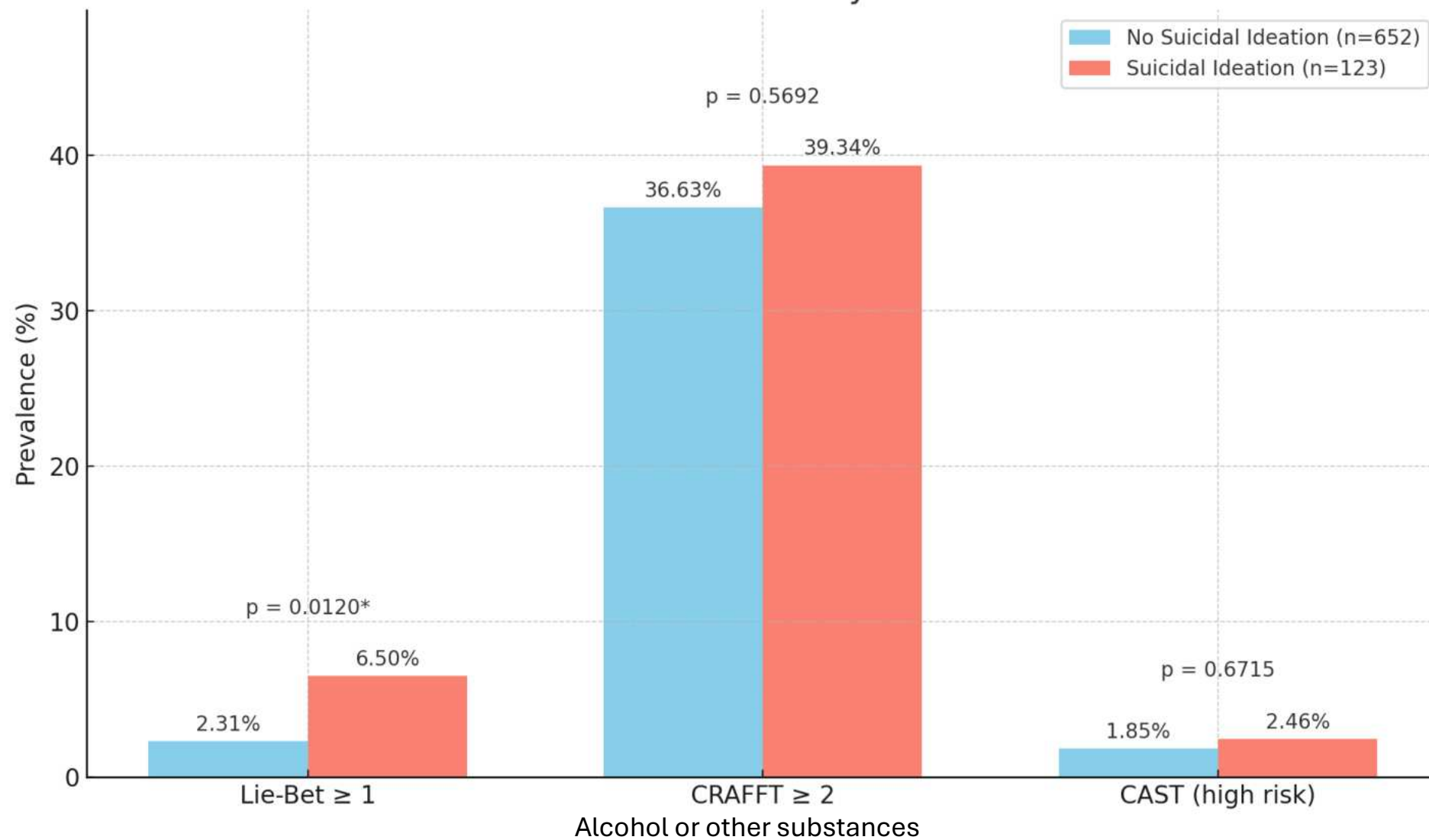
Sources: Rotenstein et al. (2016); Auerbach et al. (2018); Zhang et al. (2022); Frajerman et al. (2022); ANEMF 2021 Survey; Montpellier Medical Student Data (2021-2023)

		Suicidal ideation (no) n= 652	Suicidal ideation (yes) n= 123	p-value
Age		20.30 (2.15)	20.42 (1.69)	0.5718
Gender (women)		430 (67.08)	81 (66.39)	0.8821
Year of medical school				0.0875
	2 nd	428 (65.64)	68 (55.28)	
	3 rd	174 (26.69)	42 (34.15)	
	4 th	50 (7.67)	13 (10.57)	
Scholarship recipient (yes)		205 (31.59)	44 (35.77)	0.3626
High school track and primary focus medicine, access by a competitive entrance exam (yes)		542 (84.56)	103 (84.43)	0.9712
Has a partner (yes)		191 (39.54)	46 (46.00)	0.2316
Feeling of belonging to the student community (≥ 8 (median) on 10-point Likert scale)		351 (54.93)	35 (30.43)	<.0001*
Regular sports practice (yes)		537 (83.51)	90 (75.00)	0.0253*
Engagement in artistic activities (yes)		313 (48.98)	69 (57.02)	0.1047
Chronic disease or disability (yes)		25 (3.99)	11 (9.91)	0.0077*

	Suicidal ideation (no) n= 652	Suicidal ideation (yes) n= 123	p-value
PHQ-9 (≥ 20 severe)	12 (1.87)	25 (20.83)	<.0001*
GAD-7 (≥ 15 severe)	39 (6.12)	43 (35.25)	<.0001*
MBI-SS- emotional exhaustion (≥ 23 high)	47 (7.28)	36 (30.00)	<.0001*
MBI-SS- cynicism (≥ 18 high)	13 (2.03)	17 (14.17)	<.0001*
MBI-SS- academic efficacy (high = better)	210 (32.71)	12 (9.92)	<.0001*
JSPES	113.6 (10.34)	110.9 (13.06)	0.0104*
PPOS	4.3638 (0.43)	4.28 (0.55)	0.0572
DERS total score	18.17 (22.27)	46.53 (24.90)	<.0001*
DERS non acceptance	12.77 (5.73)	18.90 (6.70)	<.0001*
DERS goals	9.86 (5.25)	12.84 (4.93)	<.0001*
DERS impulse	4.79 (4.84)	10.82 (6.54)	<.0001*
DERS awareness	-20.20 (5.08)	-18.74 (5.69)	0.0045*
DERS strategies	11.92 (6.54)	19.64 (7.66)	<.0001*
DERS clarity	-0.99 (3.91)	3.13 (4.38)	<.0001*

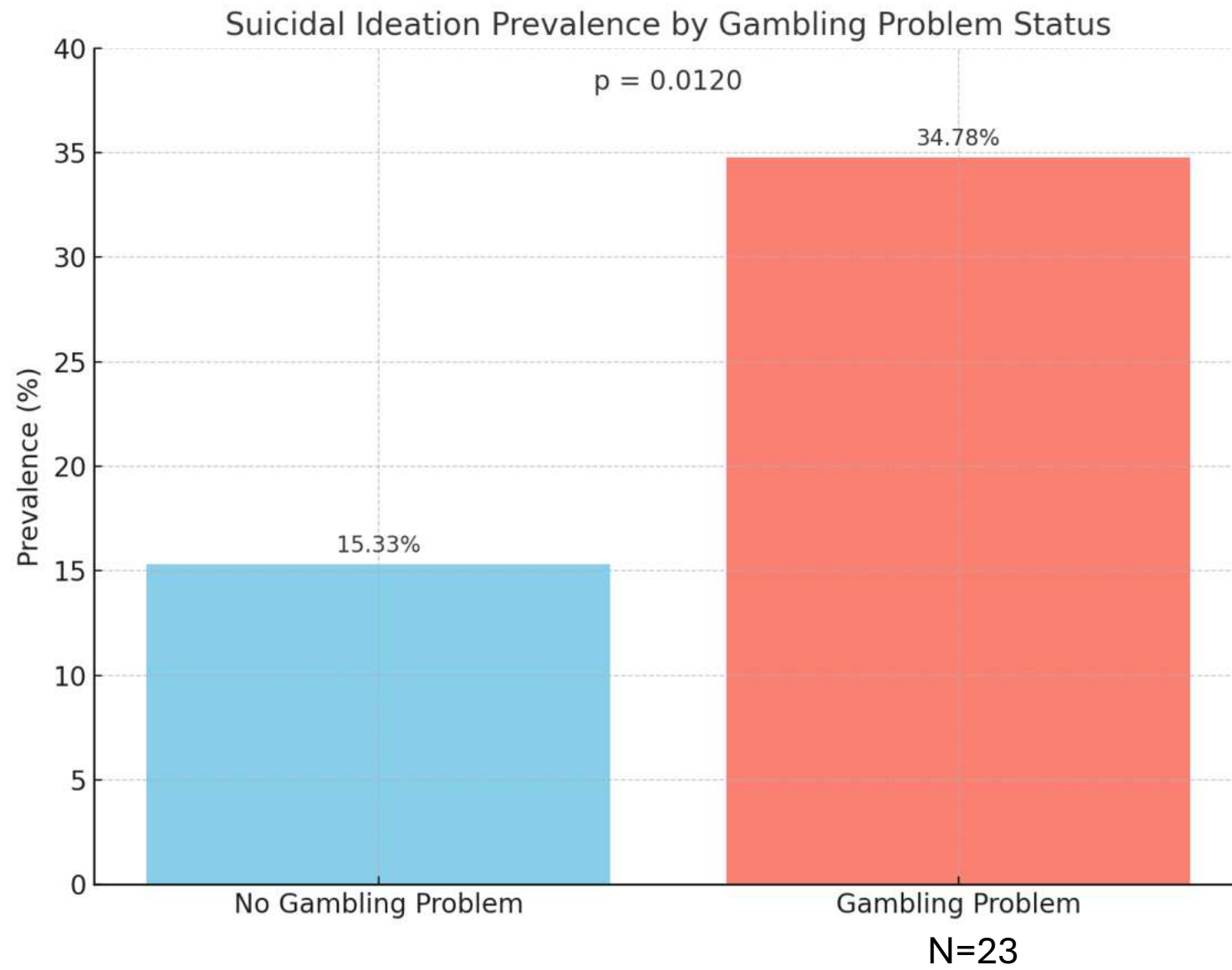
CRAFFT: Car, Relax, Alone, Forget, Friends, Trouble, CAST: Cannabis Abuse Screening Test, PHQ-9: Patient Health Questionnaire-9, GAD-7: Generalized Anxiety Disorder-7, MBI-SS: Maslach Burnout Inventory–Student Survey, JSPES: Jefferson Scale of Physician Empathy – Student Version, PPOS: Patient-Practitioner Orientation Scale, DERS: Difficulties in Emotion Regulation Scale.

Prevalence of Addictive Behaviors by Suicidal Ideation Status



Prevalence of Addictive Behaviors by Suicidal Ideation Status





Parameter	Estimation	Pr > Khi-2
Intercept	1.0687	0.4535
Year of medical school (2 nd vs 4 th)	0.1112	0.5976
Year of medical school (3 rd vs 4 th)	-0.1208	0.5803
Low feeling of belonging to the student community	0.0862	0.5494
Lie-Bet ≥ 1	0.8395	0.0103*
Chronic disease or disability	0.2847	0.2750
Engagement in artistic activities	0.1342	0.3293
Regular Sport practice	0.0764	0.6336
GAD-7 (≥ 15 severe)	0.7877	0.0058*
GAD-7 (≥ 10 and <15 moderate)	0.5222	0.0214*
GAD-7 (≥ 15 and <10 mild)	-0.3771	0.0836
MBI-SS- cynicism (high)	0.4810	0.1503
MBI-SS- cynicism (moderate)	0.0483	0.8242
MBI-SS- emotional exhaustion (high)	0.2660	0.3294
MBI-SS- emotional exhaustion (moderate)	-0.0966	0.6136
MBI-SS- academic efficacy (low)	0.1419	0.7034
MBI-SS- academic efficacy (moderate)	0.3127	0.1728
JSPES	-0.0192	0.1034
DERS total score	0.0223	0.0010*

Limits

- Cross-sectional (no causal effect)
- Half of students did not participate
- Unperfect screening tool for gambling disorder
- No characterisation of the gambling practice

Discussion and perspectives

- Prevalence of problem gambling : 3%
 - twice the expected prevalence for this age group
 - No impact of socio-economical status
- 3 independent factors associated with suicidal ideation in undergraduate medical students
 - Anxiety,
 - Emotion dysregulation
 - Problem gambling
- Importance of controlling for problem gambling in studies on students and suicidality
- Screening for gambling disorders remains infrequent in large epidemiological cohorts and in clinical practice
- High-stress curricula , such as medical studies, should be particularly targeted by screening and prevention



Thanks

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