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Examining Demographic, Psychological, and Behavioral Predictors of Aggression in Moroccan University Students

Examinando los predictores demográficos, psicológicos y conductuales de la agresión en estudiantes universitarios marroquíes

Hatim Ben Ayad[1]
Adil Najdi[2]
Meftaha Senhaji[2]

[1] Higher School of Health Sciences, Casablanca, Morocco
[2] Abdelmalek Essaâdi University, Tetouan, Morocco

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Autor de correspondencia: Hatim Ben Ayad

Abstract

Objective: This research explores the demographic and behavioral factors that contribute to aggressive behavior among university students in Morocco.. Understanding these determinants can inform targeted intervention and prevention strategies. Method: A total of 1,125 students (650 males, 475 females) aged 18 to 24 from Abdelmalek Essaâdi University participated in an on-site survey in 2020. Participants responded to a demographic survey along with the Arabic adaptation of the Life History of Aggression Scale. Results: Students who reported substance use—particularly tobacco, alcohol, and gambling—showed significantly higher levels of lifetime aggression. Males reported more frequent aggressive behavior compared to females. Additionally, students with a history of parental divorce or those using medication for mental health conditions (e.g., depression, anxiety, or sleep disorders) were more likely to exhibit elevated aggression scores. Conclusions: Male gender, substance use, mental health vulnerability, and family instability emerged as key predictors of aggression. These findings underscore the need for university-based prevention programs targeting at-risk groups, particularly male students and those facing psychological or familial stressors.

Keywords: life history of aggression, lha, externalizing problems, Moroccan college students.

Resumen

Objetivo: Esta investigación explora los factores demográficos y conductuales que contribuyen al comportamiento agresivo entre estudiantes universitarios en Marruecos. Comprender estos determinantes puede informar estrategias de intervención y prevención focalizadas. Método: Participaron un total de 1,125 estudiantes (650 hombres, 475 mujeres) de entre 18 y 24 años de la Universidad Abdelmalek Essaâdi, quienes respondieron a una encuesta presencial en 2020. Los participantes completaron un cuestionario demográfico junto con la adaptación árabe de la Escala de Historia de Vida de la Agresión. Resultados: Los estudiantes que reportaron consumo de sustancias —particularmente tabaco, alcohol y juego— mostraron niveles significativamente más altos de agresión a lo largo de la vida. Los hombres reportaron conductas agresivas con mayor frecuencia en comparación con las mujeres. Además, los estudiantes con antecedentes de divorcio parental o que usan medicación para condiciones de salud mental (por ejemplo, depresión, ansiedad o trastornos del sueño) tenían mayor probabilidad de presentar puntajes elevados de agresión. Conclusiones: El género masculino, el consumo de sustancias, la vulnerabilidad en salud mental y la inestabilidad familiar emergieron como predictores clave de la agresión. Estos hallazgos subrayan la necesidad de programas de prevención en el ámbito universitario dirigidos a grupos en riesgo, especialmente estudiantes varones y aquellos que enfrentan estrés psicológico o familiar.

Palabras clave: historia de vida de la agresión, LHA, problemas externalizantes, estudiantes universitarios marroquíes.

INTRODUCTION

Aggression is widely recognized as one of the most prevalent externalizing behaviors affecting individuals across the globe. It has become a particularly urgent issue among young adults (Krahé et al., 2014; Sharma & Marimuthu, 2014; Vanwesenbeeck, 2008), and is especially evident in academic environments (Barnes et al., 2014; Kumar et al., 2016). The consequences of aggressive behavior are far-reaching, extending well beyond immediate altercations. Notably, research has linked it to physical violence, tobacco use, psychological abuse in close relationships, diminished academic performance, and negative psychological and socioeconomic outcomes (Fontaine et al., 2008; Kokko et al., 2006; Odgers et al., 2008).

In the Moroccan context, emerging data point to a high prevalence of psychological distress and behavioral risks among university students. For instance, Benali and Chichou (2020) found that nearly two-thirds of a sample of 358 medical students reported significant levels of psychological distress. Likewise, Lemtiri Chelieh et al. (2019) reported that approximately 47% of 637 university students experienced comparable mental health difficulties. Concerning behavioral risk factors, a study by Essadi et al. (2024) found that 28.7% of 478 university students reported lifetime use of substances such as tobacco, alcohol, cannabis, sedatives, and stimulants. Taken together, these findings suggest that Moroccan university students are exposed to several psychosocial conditions—such as academic stress, mental health symptoms, and substance use—that are well-established correlates of aggressive behavior. Despite this, empirical studies explicitly focusing on aggression among Moroccan university students remain scarce.

Aggression refers to behaviors or intentions aimed at causing harm to others, whether through verbal or physical means (Berkowitz, 1993; Padgett & Tremblay, 2020). While violence represents its most severe and alarming form, not all aggression qualifies as violence, as the latter implies a deliberate intent to inflict serious harm (Anderson & Bushman, 2002).

To explain how aggression develops, Anderson and Bushman (2002) proposed five key theoretical perspectives. First, the Cognitive Neoassociation Theory suggests that negative experiences can trigger cognitive and emotional reactions that link aversive stimuli to aggressive responses (Bushman, 1996). Second, Social Learning Theory emphasizes that aggression is learned through observation of influential figures such as parents, peers, or media characters (Bandura, 1973). Third, the Script Theory argues that repeated exposure to violent content can lead individuals to internalize behavioral scripts that later guide real-life responses (Huesmann & Taylor, 2006). In addition, Excitation Transfer Theory proposes that arousal from one situation can intensify aggression in an unrelated context if misattributed (Zillmann, 1971). Finally, Social Interaction Theory views aggression as a strategic behavior aimed at achieving desired outcomes or reacting to perceived injustices (Anderson & Bushman, 2002).

Gender also appears to play a substantial role in patterns of aggression. Research consistently shows that males are more likely to perpetrate and experience aggressive behavior across various life stages. This disparity is often attributed to males' greater engagement in risk-oriented behaviors, which are strongly linked to aggression and violence. In contrast, females are typically more cautious in physically threatening situations (Padgett & Tremblay, 2020). Additionally, gender differences manifest in the expression of aggression: while males are more prone to overt forms such as physical or sexual violence, females more often engage in relational aggression, including rumor-spreading or damaging property (Denson et al., 2018; Padgett & Tremblay, 2020).

Beyond gender, mental health has been closely associated with aggressive behavior. A review by Thomas (2019) focusing on peer aggression in college settings identified a robust link between poor mental health and increased aggression. More precisely, symptoms of depression have been shown to impair emotional regulation, leading individuals to express frustration through aggression (Roberton et al., 2012; Garofalo et al., 2018). This tendency is further exacerbated by the intensification of anger often found in depressive states (Gresham et al., 2016). Moreover, both aggression and depression may share common

neurobiological roots, including imbalances in neurotransmitters such as serotonin and dopamine (Seo et al., 2008).

Anxiety is another mental health factor frequently associated with aggression (Chung et al., 2019; Hatfield & Dula, 2014). A meta-analysis by Andrew et al. (2019) revealed that various forms of aggression—reactive, relational, and physical—tend to be more common among individuals with anxiety, especially social anxiety. This may be due to heightened physiological arousal and biased cognitive interpretations of social cues. Zillmann's Excitation Transfer Theory (1988) helps explain how arousal triggered by anxiety can carry over into unrelated situations, increasing aggressive reactions. Furthermore, anxious individuals tend to fixate on threat-related stimuli (Bar-Haim et al., 2007), which may intensify perceived threats and lead to inappropriate aggression.

Sleep quality has also emerged as a significant contributor to aggression. A recent meta-analysis by Demichelis et al. (2022) found that poor sleep is strongly correlated with increased aggression and may even act as a causal factor. Insufficient sleep affects critical brain areas such as the prefrontal cortex and amygdala, both essential for emotional regulation (Palmer & Alfano, 2017; Gordon & Chen, 2014). Consequently, sleep-deprived individuals may exhibit lower tolerance for frustration and greater emotional reactivity, which can elevate aggressive behavior. Additionally, chronic sleep disturbances can increase stress sensitivity, with elevated cortisol levels further amplifying aggression risk (Vgontzas et al., 2014).

Demographic and behavioral variables further compound the risk. A growing body of research links aggression to habits such as alcohol consumption, smoking, and gambling (Adachi & Willoughby, 2013; Fontaine et al., 2008; Henriksen et al., 2021; Roberts et al., 2016). For example, Ali et al. (2013) found that among 646 undergraduates in the Washington DC area, alcohol use was significantly associated with heightened aggression. Alcohol impairs judgment and self-control, reducing individuals' ability to manage conflict (Giancola et al., 2011; Bushman & Cooper, 1990). Similarly, both smoking and gambling may serve as maladaptive coping mechanisms for stress, but paradoxically contribute to heightened irritability and aggression (Lawless et al., 2015; Dowling et al., 2016b).

Family background is another dimension worth considering. Studies have shown that parental marital conflict is a significant predictor of aggression in adolescents and young adults (Li et al., 2012; Schermerhorn et al., 2011). Exposure to unresolved parental disputes can create chronic emotional stress, undermining emotional regulation and increasing the risk of aggression (Margolin et al., 2016; Davies et al., 2006). Furthermore, inconsistent discipline or emotional unavailability from caregivers may foster feelings of rejection and resentment, both of which are associated with aggressive tendencies (Katz & Low, 2004).

Taken together, these findings underscore the complex interplay between mental health, behavioral risk factors, and demographic variables in shaping aggressive behavior. Accordingly, this study hypothesizes that aggression among Moroccan university students is influenced by multiple factors. First, certain demographic characteristics—such as gender, parental marital status, and employment status—are expected to significantly predict aggression. Second, mental health variables, including depression, anxiety, and sleep quality, are hypothesized to play a critical role in the emergence of aggressive behavior. Third, substance use behaviors—such as alcohol consumption, smoking, and gambling—are anticipated to be positively associated with increased aggression in this population.

METHOD

Participants

Participants (N = 1,147) were undergraduate and graduate students (ages 17–33) from Abdelmalek Essaâdi University. The sample was drawn from four cities, each hosting a university-affiliated school. Students were eligible if they were currently enrolled at the university, at either the undergraduate or graduate level. Of the 1,200 students approached, 1,147 completed questionnaires were retained after excluding incomplete responses. The final sample included 417 males and 655 females. In terms of academic level, the sample consisted of 339 first-year, 344 second-year, and 351 third-year undergraduate students, along with 18 first-year and 20 second-year graduate students.

Sampling strategy

A stratified cluster sampling method was used to select students from various cities and institutions with different enrollment policies (open versus regulated access). Sampling was stratified by city, institution type, and academic year. Sample sizes were calculated to ensure adequate representation and statistical power, targeting approximately 1,200 participants after accounting for non-response (see Appendix A for detailed sampling procedure).

Procedure

Data were gathered in Morocco's Northern province across eight institutions affiliated with Abdelmalek Essaâdi University during the 2019–2020 academic year, prior to the COVID-19 pandemic. Permissions to conduct the study were obtained from each institution. The sample comprised undergraduate and graduate students, randomly selected proportionally from each academic level according to the size of their respective institutions.

Participants who consented to take part completed questionnaires administered at the start of selected classes in lecture halls and theaters, as well as during breaks in the institutions' libraries. To ensure anonymity, completed questionnaires and consent forms were submitted via two sealed collection boxes.

Instruments

The Life History of Aggression (LHA) instrument is widely used in biological studies to evaluate aggressive and antisocial behaviors (Coccaro et al., 1997). It includes three distinct subscales:

Table 1

Structure and Scoring of the Life History of Aggression (LHA) Instrument

Subscale	Items	Description
Aggression Subscale	Items 1–5	Frequency of aggressive acts
Self-Directed Aggression	Items 6a–6b	Self-directed aggressive behaviors
Consequences/Antisocial Behavior Subscale	Items 7–10	Social repercussions or antisocial behaviors due to aggression

Response Scale:

Participants rate each item based on the number of events experienced, using a five-point scale:

- 1 = Single event
- 2 = Two or three events
- 3 = Four to nine events
- 4 = Ten or more events
- 5 = Countless events

The total LHA score is calculated by summing all item scores, while each subscale score is the sum of its respective items. A total score above 15 indicates a high lifetime level of aggression (Falk et al., 2016; Coccaro et al., 1997).

The Arabic version of the LHA, adapted by Zouini et al. (2019), showed good internal consistency (α = .74). In this study, reliability measured by Cronbach's alpha was also acceptable (α = .75).

Statistical analysis

Descriptive statistical methods were utilized to outline the features of the participants in the study. Due to the data's non-normal distribution (skewness = 1.23 and kurtosis = 1.57), group comparisons were performed with non-parametric methods, specifically the Mann-Whitney U and Kruskal-Wallis H tests. Furthermore, logistic regression analysis was applied to pinpoint possible risk factors.

All analyses were conducted using IBM SPSS Statistics, version 21.

Ethical considerations

This research adhered to the ethical guidelines outlined in the Declaration of Helsinki (World Medical Association, 2001). Participation was entirely voluntary, following a verbal briefing on the study's objectives. Participants were made aware that they could withdraw from the study at any point without providing justification. Written informed consent was secured from all participants who agreed to take part.

RESULTS

The analysis revealed significant gender differences in aggression scores on the LHA scale, with males exhibiting substantially higher aggression levels than females ($Z = -7.26$, $p < .001$). This indicates that male students tend to show more aggressive behaviors compared to female students. Additionally, students whose parents were married showed notably lower aggression scores than those whose parents were divorced ($Z = -2.94$, $p = .003$), suggesting family structure influences aggression levels.

Employment status also had a significant impact, as employed students were more likely to report higher aggression compared to their unemployed counterparts ($Z = -3.01$, $p = .003$). Regarding substance use, alcohol consumers demonstrated elevated aggression scores relative to non-consumers ($Z = -6.73$, $p < .001$), and smokers were nearly five times more likely to report high aggression levels than non-smokers ($Z = -8.54$, $p < .001$). Similarly, students who engaged in gambling behaviors exhibited significantly higher aggression scores compared to those who did not gamble ($Z = -4.98$, $p < .001$).

Mental health factors were also linked to aggression. Participants who had taken medication for depression in the previous month showed increased aggression levels compared to those not medicated ($Z = -2.91$, $p = .004$). Likewise, students using anxiety medication reported heightened aggression scores ($Z = -3.01$, $p = .003$), and those medicated for sleep disorders demonstrated significantly higher aggression than non-medicated peers ($Z = -2.27$, $p = .023$). These findings are summarized in detail in table 2.

Table 2

Lifetime aggression levels (LHA scores) by demographic and behavioral variables among Moroccan university students.

Variable	Category	LHA scores interpretation		Mean (SD)	Z	P
		High level of lifetime aggression N (%)	Low level of lifetime aggression N (%)			
Gender	Males	121 (27.8%)	315 (72.2%)	10.73 (7.40)	-7.26	.000
	Females	76 (11.1%)	610 (88.9%)	7.36 (5.68)		
Parents situation	Married	177 (17.1%)	860 (82.9%)	8.51 (6.53)	-2.94	.003
	Divorced	14 (29.2%)	34 (70.8%)	11.13 (7.25)		
Job	Yes	24 (27%)	65 (73%)	10.66 (7.26)	-3.01	.003
	No	163 (16.2%)	844 (83.8%)	8.47 (6.51)		
Alcohol consumption	Yes	46 (43.8%)	59 (56.2%)	14.54 (8.46)	-6.73	.000
	No	150 (14.8%)	862 (85.2%)	8.09 (6.11)		

Smoking	Yes	63 (43.2%)	83 (56.8%)	13.81 (7.5)	-8.54	.000
	No	130 (13.5%)	833 (86.5%)	7.93 (6.13)		
Gambling	Yes	30 (49.2%)	31 (50.8%)	14.21 (8.42)	-4.98	.000
	No	164 (15.6%)	887 (84.4%)	8.35 (6.36)		
Taking medication for depression in the past month	Yes	16 (38.1%)	26 (61.9%)	12.75 (10.25)	-2.91	.004
	No	168 (16.5%)	649 (83.5%)	8.49 (6.38)		
Taking medication for anxiety in the past month	Yes	26 (30.2%)	60 (69.8%)	12.01 (8.11)	-3.01	.003
	No	160 (16.3%)	820 (83.7%)	8.40 (6.41)		
Taking medication for sleep problems in the past month	Yes	17 (31.7%)	35 (67.3%)	11.34 (8.06)	-2.27	.023
	No	175 (16.8%)	866 (83.2%)	8.50 (6.48)		

Note. LHA = Lifetime History of Aggression scale. Values show the number and percentage of participants with high and low aggression levels, mean (SD) of LHA scores, Z-statistic and p-value from Mann-Whitney U tests comparing groups.
P is significant at the 5% level.

Binary logistic regression analysis indicated significant variations in the likelihood of exhibiting high lifetime aggression across several demographic and behavioral variables (Table 3). Male students were significantly more likely to report high levels of aggression compared to female students OR = 3.08, 95% CI [2.24, 4.23]), indicating that gender was a strong predictor of aggressive behavior. Students from divorced families also showed elevated aggression levels, with an odds ratio of 2.00 (95% CI [1.05, 3.80]) relative to those from intact family structures. Employment status was associated with increased aggression, as students who were employed had higher odds (OR = 1.91, 95% CI [1.16, 3.14]) of being categorized as aggressive compared to their unemployed counterparts. Substance use variables showed particularly strong associations. Alcohol consumers were over four times more likely to exhibit high aggression (OR = 4.48, 95% CI [2.96, 6.83]). Smokers had nearly five times the odds (OR = 4.86, 95% CI [3.34, 7.08]) of reporting high aggression compared to non-smokers. Similarly, students who reported gambling behavior demonstrated markedly higher odds of aggression (OR = 5.23, 95% CI [3.00, 8.82]). Mental health–related medication use also emerged as a significant factor. Students who had taken medication for depression in the past month were more than three times as likely to report high aggression (OR = 3.11, 95% CI [1.63, 5.92]). Those using anxiety medication showed a similar trend (OR = 2.21, 95% CI [1.36, 3.62]), and those who had taken any psychiatric medication during the past month had elevated odds of aggression (OR = 2.40, 95% CI [1.31, 4.38]).

Table 3
Findings from the binary logistic regression analysis

Predicting variables	OR	95% CI		P value
Males	3.08	2.24	4.23	.000
Divorced parents	2.00	1.05	3.80	.035
Having a job	1.91	1.16	3.14	.011
Alcohol consumption	4.48	2.96	6.83	.000
Smoking	4.86	3.34	7.08	.000
Gambling	5.23	3.08	8.82	.000
Taking medication for depression in the past month	3.11	1.63	5.92	.001
Taking medication for anxiety in the past month	2.21	1.36	3.62	.001
Taking medication for sleep problems in the past month	2.40	1.31	4.38	.004

Note. Note: Being male, substance use (alcohol, smoking, gambling), having divorced parents, employment status, and recent use of medications for depression, anxiety, or sleep problems significantly increase the odds of high aggression among students
P is significant at the 5% level.

DISCUSSION

The findings of this study offer important insights into the predictors of aggression among Moroccan university students, revealing a complex interplay of demographic, familial, psychological, and behavioral factors. These results not only extend the literature in a relatively under-researched cultural context but also highlight specific areas for targeted intervention within university settings.

Consistent with existing literature (Crick & Rose, 2014; Padgett & Tremblay, 2020; Zouini et al., 2019), male students scored significantly higher on the LHA scale, with regression analysis showing they were approximately 3.08 times more likely to report elevated lifetime aggression compared to females. This gender disparity may reflect culturally reinforced masculine norms that valorize dominance, risk-taking, and emotional suppression—factors which are known to increase aggressive responses, particularly under peer pressure or perceived threat to status. In contrast, female students often engage in more indirect forms of aggression and tend to avoid overt confrontation (Campbell, 2013; Denson et al., 2018). These differences suggest the need for gender-sensitive interventions, such as psychoeducational programs that challenge harmful gender norms and teach emotion regulation strategies adapted to students' social realities.

Family structure also emerged as a significant predictor of aggression. Students with divorced parents were twice as likely to exhibit high levels of aggression, echoing findings that link family instability with emotional dysregulation and externalizing behaviors (Li et al., 2012; Smokowski et al., 2017). Parental separation can lead to disrupted attachment relationships, decreased supervision, and increased exposure to conflict—all of which have been implicated in aggressive behavior (Dykas & Cassidy, 2011). Universities could integrate family history assessments into counseling services to better identify at-risk students and provide support groups or therapeutic spaces focused on navigating parental separation and improving emotional resilience.

A significant association was also found between student employment and aggression levels. Employed students were nearly twice as likely to report elevated aggression, aligning with literature that connects academic workload and job-related stress to heightened emotional

reactivity (Greiner & Leitner, 2017; Liu et al., 2019). Time constraints, social isolation, and exposure to workplace conflict can compound stress and reduce students' capacity for emotional self-regulation (Takahashi, 2022). These findings underline the importance of institutional policies that offer flexible academic schedules or mental health accommodations for working students. Moreover, workplace readiness programs within universities could include components on stress management and conflict resolution to help students build coping skills that mitigate the carryover of workplace aggression into academic settings.

Mental health indicators—including the use of medication for anxiety, depression, and sleep problems—were also strongly associated with increased aggression. Students who reported taking such medication within the last month were between 2.21 and 3.11 times more likely to display elevated lifetime aggression. While the directionality of this relationship remains debated (Blain-Arcaro & Vaillancourt, 2017; Gresham et al., 2016), the findings highlight a critical intersection between mental health vulnerabilities and aggressive tendencies. This underscores the need for integrated mental health services on campuses, where psychological screening tools can be used not only to assess internalizing symptoms but also to flag potential aggression risks.

Finally, students who reported engaging in substance use—specifically alcohol, tobacco, and gambling—had the highest aggression scores, with odds ratios ranging from 4.48 to 5.23. These behaviors are strongly associated with impaired impulse control and heightened anger reactivity (Clayton et al., 2019; Giancola, 2004). Given the neurobiological and behavioral mechanisms linking substance use and aggression, universities should develop comprehensive prevention strategies that integrate substance use education, anger management training, and peer-led interventions.

Taken together, these findings suggest that aggression among university students is a multidetermined phenomenon that calls for a multilevel institutional response. Universities in Morocco and comparable contexts should consider implementing evidence-based interventions that address the emotional, behavioral, and structural conditions fostering aggression. These might include: (a) on-campus workshops targeting emotional regulation and stress resilience; (b) embedded mental health counselors in academic units; (c) outreach programs for students from disrupted family environments; and (d) substance use harm reduction initiatives tailored to young adult populations.

Future Research Directions

This research paves the way for multiple future investigations into aggression among university students. In particular, longitudinal research is essential to clarify the cause-and-effect relationship between aggression and mental health conditions like depression, anxiety, and sleep disorders. Determining whether aggression precedes or results from these psychological issues would offer important understanding of how these factors influence one another over time.

Cultural comparisons would also be beneficial, particularly studies comparing aggression in Moroccan university students with those from other regions or countries. Such research could highlight cultural factors that may influence aggression, such as family structure and gender norms.

Future research should also focus on developing and testing interventions aimed at reducing aggression, especially those that address stress management, anger regulation, and sleep quality. Evaluating the effectiveness of these interventions in educational settings would help inform practical strategies for mitigating aggression.

Exploring the role of peer influence in aggression is another promising area. Research could investigate how peer pressure and group dynamics contribute to aggressive behaviors, particularly in environments where substance use and risky behaviors are prevalent.

Additional research is required to explore gender disparities in aggression, particularly emphasizing how females tend to exhibit indirect forms such as gossip and relational aggression, in contrast to the more direct aggression often observed in males. Examining the social and environmental influences that contribute to these gender-specific behaviors may provide valuable insights into the underlying mechanisms driving gender-related aggression.

Finally, family dynamics, particularly parental conflict and divorce, warrant further investigation as potential predictors of aggression. Understanding how interventions aimed at improving family relationships could mitigate aggressive behaviors in young adults could inform preventive strategies.

CONCLUSION

In summary, this study sheds light on the prevalence and predictors of aggression among Moroccan university students during the pre-COVID period. Key risk factors associated with elevated lifetime aggression include male gender, family disruption, employment instability, mental health symptoms, and substance use. These findings underscore the urgent need for university-based prevention programs specifically targeting high-risk groups—particularly male students and those experiencing psychological distress or unstable family environments. Interventions should be culturally and developmentally tailored to address gender-specific behavioral patterns, strengthen family and peer relationships, enhance coping strategies for academic stress, and expand access to integrated mental health services. Furthermore, community-based initiatives aimed at promoting healthier lifestyles and reducing substance use among students are critical for mitigating long-term aggression and its broader social consequences.

Limitacions

This study has several limitations that should be considered when interpreting the findings. First, its cross-sectional design limits causal inference and the ability to track changes in aggression levels across different academic or developmental stages. Second, the absence of key psychosocial mediators—such as anger intensity, perceived stress, or coping styles—restricted the depth of explanatory analysis. Third, although the sample was diverse, its demographic specificity limits the generalizability of the findings to other university populations or cultural contexts.

Additionally, the reliance on self-reported data may have introduced measurement biases, including social desirability effects and underreporting of stigmatized behaviors such as substance use or aggressive acts. While anonymity was emphasized to reduce these biases, the influence of impression management cannot be ruled out. Furthermore, data collection occurred prior to the COVID-19 pandemic, a period that preceded significant shifts in student mental health, academic stressors, and social dynamics. This pre-pandemic context may limit the relevance of the findings to post-COVID educational settings, where new stressors and behavioral norms have emerged.

Despite these limitations, the study contributes valuable insights into the demographic, behavioral, and psychological correlates of aggression among Moroccan university students. It lays the groundwork for future longitudinal and intervention-focused research, especially studies that incorporate mediating variables, objective behavioral measures, and evolving post-pandemic mental health concerns.

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