AFRICAN JOURNAL of Social & Behavioural Sciences

Volume 16, Number 8 (2026)
Print ISSN: 2141-209X
ISSN-L: 2141-209X
Double-blind peer reviewed

Research Article
DOI: https://doi.org/10.68442/ajsbs/2026/v16i8.011

Narcissism, Generative Artificial Intelligence Use Orientation, and Academic Dishonesty among Undergraduates at a Nigerian University

Bamikole Emmanuel Agesin[1*] & Sunus Oluwadamilola Adam[1]

[1]*Department of Psychology, Faculty of Social Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria*

*Corresponding author: agesin.be@unilorin.edu.ng

Received: 15 September 2026 • **Accepted:** 10 October 2026 • **Published:** 17 October 2026

ABSTRACT

Generative artificial intelligence (GAI) has changed how academic dishonesty is enacted, yet little is known about whether narcissism relates to dishonesty through GAI use. This cross-sectional study examined whether GAI use orientation statistically accounts for part of the association between narcissism and academic dishonesty among University of Ilorin students. A total of 401 second- to fourth-year students (aged 18–33 years, M = 20.64), were recruited from six faculties through quota and convenience sampling. Participants completed the Brief Pathological Narcissism Inventory, a researcher-developed Generative AI Use Scale, and an adapted McCabe/ICAI Academic Misconduct Inventory with five added AI-specific items. In a hierarchical regression controlling for ethical AI training, narcissism (β =.316, p <.001) and GAI use orientation (β =.154, p =.002) each uniquely predicted dishonesty, explaining 15.1% of the variance. In an exploratory model with the two subscales, vulnerable narcissism (β =.248, p =.001) but not grandiose narcissism (β =.090, p =.210) was a unique predictor, although the two coefficients did not differ significantly (p =.174). The bootstrapped indirect effect of narcissism through GAI use orientation was small but significant for the full outcome (ab = 0.025, 95% CI [0.010, 0.044]; 12% of the total effect) and non-significant once the AI-specific items were removed (ab = 0.006, 95% CI [−0.004, 0.019]), suggesting overlap in content between mediator and outcome. Narcissism remained directly related to dishonesty under both scorings. Longitudinal designs and non-overlapping measures are needed.

Keywords: Narcissism, Generative Artificial Intelligence, Academic Dishonesty, Mediation, Vulnerable Narcissism, Nigerian Undergraduates

Cite this article: Agesin, B. E., & Adam, S. O. (2026). Narcissism, generative artificial intelligence use orientation, and academic dishonesty among undergraduates at a Nigerian university. *African Journal of Social and Behavioural Sciences, 16*(8), 122–134. https://doi.org/10.68442/ajsbs/2026/v16i8.011

Introduction

Academic dishonesty, including plagiarism, unauthorised collaboration, fabrication, and, increasingly, AI-assisted cheating, threatens the credibility of higher education. Many students admit to at least some form of misconduct, although estimates vary with the instrument and context (Christensen Hughes & Eaton, 2022; Rettinger et al., 2024). Generative artificial intelligence (GAI) tools such as ChatGPT and Gemini are now part of many students' daily academic routines, making some types of misconduct easier to commit and harder to detect (Cotton et al., 2024; Lim et al., 2023). Balalle and Pannilage (2025) noted that GAI advances legitimate learning while opening routes to new forms of misconduct that integrity policies were not designed to address, and Sharma and Panja (2025) similarly identified technological, institutional, and individual-level contributors to AI-related misconduct.

Among individual-level factors, narcissism is of particular interest. It is a trait characterised by entitlement, grandiosity, and a fragile sense of self that depends on the admiration from others. Early behavioural studies linked cheating and plagiarism to the Dark Triad, with psychopathy as the strongest correlate and low academic preparedness an additional predictor (Nathanson et al., 2006; Williams et al., 2010). Later work has examined narcissism in greater detail. Brunell et al. (2011) found that the

exhibitionism dimension of narcissism predicted academic dishonesty through reduced guilt, and Curtis et al. (2022), in a sample of 387 students, found that the externalised-responsibility facet of academic entitlement mediated the association between Dark Triad traits, including narcissism, and misconduct. The association is different across facets, however. In a preregistered study (N = 353), Rao and Kay (2026) found that narcissistic antagonism was positively related to academic entitlement and to attitudes accepting academic dishonesty, whereas agentic extraversion was related to entitlement but not dishonesty, and narcissistic neuroticism to neither. Because these studies used different instruments and, in some cases, measured attitudes rather than behaviour, it remains unclear whether grandiose or vulnerable forms of narcissism are more relevant to dishonest conduct.

Evidence on narcissism and GAI-related misconduct is newer and mixed. A number of studies have linked dark personality traits with misconduct aided by GAI. Greitemeyer and Kastenmüller (2023) found narcissism, Machiavellianism, and psychopathy, were each positively related to an individual's intention to submit chatbot-generated text as one's work. Sun et al. (2025) reported that narcissism, psychopathy, and sadism were associated with GAI-related misconduct among Taiwanese university students. With a sample of 864 students, Liang and Reiss (2026) revealed a different direction of relationship: no single trait sufficient to explain GAI misconduct. High misconduct arose from low Honesty–Humility and Conscientiousness combined with high Machiavellianism or psychopathy. Song and Liu (2025) also tested a model among 504 Chinese art students in which dark traits, including narcissism, were associated with misconduct, anxiety, and procrastination, which in turn were associated with frustration, negative thinking, and heavier GAI use; GAI use was thus a downstream outcome, not a mediator. Tindle et al. (2023), in a preprint, surveyed 442 undergraduates and found that students with past misconduct intentions or behaviours were more likely to consider using GAI for assessments, although past misconduct behaviour showed only a non-significant increase in current GAI use. These results are consistent with GAI being a tool adopted by students already inclined to cheat rather than a cause of dishonesty.

A competing account, which motivates the present study, is that students high in narcissism, and especially those whose self-esteem is fragile and threat-sensitive, turn to GAI as a low-cost way of protecting a threatened self-image, so that GAI use carries part of the association between narcissism and misconduct. This account draws on the Narcissistic Admiration and Rivalry Concept (Back et al., 2013) and on evidence that anxiety and frustration accompany heavier GAI use among students with dark traits (Song & Liu, 2025); we are not aware of direct evidence for it. Because the account points to threat-sensitive narcissism, it was tested with the composite score and, separately, with vulnerable narcissism. As a known limitation of cross-sectional research, we cannot separate the competing accounts, but a mediation model can show whether the associations fit the self-protection account and how large the indirect component is.

There is limited local evidence. A review by Guadu et al. (2026) examining African higher education identified policy gaps and uneven digital literacy as factors that worsen the risk of AI-assisted plagiarism. In another study, 205 undergraduates from the University of Ibadan were surveyed, 200 of whom gave valid responses; the study reported a strong positive correlation between AI-tool use and academic dishonesty (Ojedeji, 2026). A targeted search of the literature, which was not a systematic review, found no Nigerian or wider African study of narcissism in relation to academic dishonesty or GAI use. The present study therefore examined, among University of Ilorin undergraduates, whether narcissism correlates with academic dishonesty, whether GAI use orientation correlates with dishonesty beyond narcissism, whether GAI use orientation statistically accounts for part of the narcissism–dishonesty association, and, in exploratory analyses, whether grandiose and vulnerable narcissism differ in their unique associations with dishonesty.

Theoretical Framework

The Narcissistic Admiration and Rivalry Concept

The Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013) describes two strategies by which grandiose people maintain a favourable view of self: admiration, pursued through self-promotion and charm, and rivalry, pursued through devaluing others and defending against perceived threats to the

self. Rivalry has been placed empirically between admiration and vulnerable narcissism on the narcissism spectrum (Rogoza et al., 2018). From this perspective, threat-sensitive narcissism may heighten the appeal of reaching desired goals by any available means, including submitting AI-generated work as one's own. NARC is used here as a heuristic for why facets of narcissism might differ in their links with dishonesty and why GAI use might serve a self-protective function. Because the study measured pathological narcissism (grandiose and vulnerable facets) rather than admiration and rivalry, NARC processes were not measured directly.

The Technology Acceptance Model

The Technology Acceptance Model (Davis, 1989) holds that perceived usefulness and perceived ease of use shape the adoption of technology. Its constructs guided the item-writing phase of the Generative AI Use Scale, so the scale indexes students' orientation towards using GAI, which combines use with perceived utility, rather than the frequency of use alone. The model was not used to derive hypotheses.

Hypotheses and Research Questions

H1: Narcissism (composite) will positively correlate with academic dishonesty after controlling for ethical AI training. Ethical AI training was controlled because exposure to such training might reduce misconduct.

H2: GAI use orientation will positively associated with academic dishonesty over and above narcissism.

H3a: Narcissism will be positively associated with GAI use orientation.

H3b: GAI use orientation will carry a positive indirect effect of narcissism on academic dishonesty. Because five outcome items describe AI misuse, *H3b* was also tested with the 17 conventional items alone.

RQ1 (exploratory): Do grandiose and vulnerable narcissism differ in their unique associations with academic dishonesty when GAI use orientation is controlled?

RQ2 (exploratory): Does GAI use orientation carry an indirect effect of vulnerable narcissism on academic dishonesty when grandiose narcissism is controlled?

Method

Design, Setting, and Participants

A cross-sectional survey design was used. Data were collected from 401 undergraduates at the University of Ilorin, Nigeria, and were recruited through quota sampling across six faculties (Engineering, Arts, Social Sciences, Life Sciences, Communication and Information Sciences [CIS], and Education), with convenience recruitment within faculties. Quotas were not proportional to faculty enrolment (Table 1). The target sample size was calculated with the Yamane (1967) formula, assuming an undergraduate population of about 50,000 and a 5% margin of error (n = 397). Because the formula addresses estimation precision rather than the power of regression tests, a sensitivity analysis was also conducted: with about 399 valid cases, a one-degree-of-freedom increment in a regression model with three predictors could be detected with 80% power (α =.05) if it corresponded to $f^2 \geq .02$, a small effect (Cohen, 1988). Eligible respondents had completed at least one academic year. First-year (100-level) students were excluded because of their limited exposure to the university's assessment regime, which restricts generalisation to students in their second to final year.

Participants were aged 18 to 33 years (M = 20.64, SD = 2.16). Of the 401 respondents, 194 (48.4%) were male, and 207 (51.6%) were female. By year of study, 187 (46.6%) were in year two, 96 (23.9%) in year three, and 118 (29.4%) in year four. Prior formal ethical AI training was reported by 76 (19.0%) of the 400 respondents who answered this item. Of the 401 respondents, 399 had complete data on all study variables and were included in the regression and mediation analyses (listwise deletion). Descriptive statistics, correlations, and the group comparison used all available cases (n = 399–401); the n for each analysis is given in the tables.

Measures

Narcissism. Narcissism was measured with the 28-item Brief Pathological Narcissism Inventory (B-PNI; Schoenleber et al., 2015), a short form of the Pathological Narcissism Inventory (Pincus et al., 2009) that retains all seven facet scales and yields grandiosity and vulnerability scores. Items are rated on a 6-point scale (0 = *not at all like me* to 5 = *very much like me*). The grandiosity score is based on 12 items (three facets) and the vulnerability score on 16 items (four facets). The composite is the sum of the two scores, and higher scores indicate greater pathological narcissism. Because the grandiose score has the larger variance, it accounts for about 54% of the variance of the composite and the vulnerable score for about 46%; the composite correlates.947 with grandiosity and.928 with vulnerability. Internal consistency was good in this sample (grandiose α =.833; vulnerable α =.803; composite α =.896). The B-PNI indexes pathological narcissism, so its grandiosity scale differs from measures of confident, agentic grandiosity.

GAI use orientation. GAI use orientation was measured with the researcher-developed Generative AI Use Scale (GAUS), whose items were derived from constructs of the Technology Acceptance Model (Davis, 1989). An initial 11-item version was reduced to 10 items after one item (perceived AI factual inaccuracy, conceptually tangential to use) was removed following exploratory factor analysis because of a weak corrected item–total correlation (r =.239). Items were rated on a 5-point Likert scale (total range 10–50). Exploratory factor analysis of the 10 items indicated two factors (academic application; perceived utility and frequency) explaining 57.7% of the variance (KMO =.903; Bartlett's $\chi^2(45) = 1{,}492.73$, p <.001), and internal consistency was good (α =.869). A total score was used in all analyses. Because one factor reflects perceived utility as well as frequency, the total score is best read as an index of orientation towards GAI use rather than a count of use, and it is labelled accordingly.

Academic dishonesty. Academic dishonesty was measured with a 22-item inventory comprising the 17-item version of the McCabe/ICAI Academic Misconduct Inventory (MIAMI; Rettinger et al., 2024) and five researcher-developed items describing AI-specific misconduct. Items were rated on a 5-point frequency scale and scored 1 to 5 (total range 22–110), with higher totals indicating more frequent misconduct. The "not applicable" option of the original MIAMI was not included, so respondents without the opportunity to engage in a behaviour were expected to respond "never". Internal consistency was good for the full scale (α =.85) and acceptable for the five-item AI subscale (α =.762). Sampling adequacy was satisfactory (KMO =.870; Bartlett's $\chi^2(231) = 2{,}035.13$, p <.001), and the five AI items loaded on a single factor. Because these items describe misuse of the tools that the GAUS assesses, the outcome and the mediator overlap in content; this overlap is examined in the Results.

Other variables. Respondents reported their familiarity with named GAI tools (e.g., ChatGPT, Gemini) and whether they had received formal ethical AI training (1 = trained, 0 = not trained), which was entered as a control variable.

Procedure and Ethical Considerations

The survey was administered on paper at the target faculties (n = 350) and online through WhatsApp (n = 51) between November 2025 and May 2026. Before participation, respondents read an informed consent form describing the purpose of the study, anonymity, the absence of personally identifiable information, voluntary participation, the right to withdraw without penalty, and the approximate completion time (10–20 minutes). Only fully consenting responses were analysed. The study was approved by the Department of Psychology research ethics committee, University of Ilorin (approval no. UI/PSY/EC/2026/03, dated 12TH May, 2026). Participants gave informed consent as described in the Method section. Consent was recorded for online respondents via mandatory checkbox before survey; duplicates were prevented by limiting one response per email. All analyses were conducted in IBM SPSS Statistics version 27.

Analytical Strategy

Prior to the main analysis, the data distributions were inspected using skewness and kurtosis, and multicollinearity using tolerance and variance inflation factors (VIF). Pearson correlations described bivariate associations. To test H1 and H2, a two-block hierarchical multiple regression entered ethical AI training in Block 1 and narcissism (composite) and GAI use orientation in Block 2. Squared semipartial

correlations (sr^2), adjusted R^2, and f^2 are reported as effect sizes. For RQ1, an exploratory model replaced the composite with the grandiose and vulnerable scores. The unique associations of the two subscales were compared by regressing dishonesty on the sum and the difference of the two subscale scores, in which the coefficient of the difference term tests whether the two coefficients are equal.

For H3, the indirect effect of narcissism on dishonesty through GAI use orientation ($a \times b$) was estimated with the product-of-coefficients approach. Path a was estimated from the simple regression of GAI use orientation on narcissism, path c (total effect) from the simple regression of dishonesty on narcissism, and paths b and c' (direct effect) from the Block 2 model. Inference was based on percentile bootstrap confidence intervals from 5,000 resamples obtained with the PROCESS macro (Model 4; Hayes, 2022; Preacher & Hayes, 2008); Monte Carlo intervals were used only for the standardised indirect effect (Preacher & Selig, 2012). The Sobel (1982) test, which assumes normality for the typically skewed product $a \times b$ and has lower power (MacKinnon et al., 2002), is reported for comparison only. An indirect effect was considered significant if its 95% confidence interval excluded zero, and the proportion mediated was computed as ab/c. Following Zhao et al. (2010), mediation was classified by the signs and significance of the direct and indirect effects rather than by the causal-steps criteria. Two-tailed tests with $\alpha = .05$ were used.

Regression assumptions were examined with the histogram and normal probability (P–P) plot of the standardised residuals and a scatterplot of standardised residuals against standardised predicted values; influential cases were identified with Cook's D. Three sensitivity analyses were also conducted: (i) the model was re-estimated after removing the five AI-specific dishonesty items; (ii) vulnerable narcissism was entered as the predictor, with grandiose narcissism and ethical AI training as covariates (RQ2); and (iii) gender, age, year of study, and faculty were added as covariates. Ethical AI training was retained as a control in every model.

Results

Participant Characteristics

Table 1 presents the sociodemographic profile of the sample. Most respondents were aged 18–21 years (72.3%) and were in their second year of study (46.6%); the Faculty of Social Sciences was the largest contributor (21.7%).

Table 1. Sociodemographic Characteristics of Participants

Variable	Category	*n*	%
***Gender* (N = *401*)**			
	Male	194	48.4
	Female	207	51.6
***Age in years* (n = *400*)**			
	18–21	289	72.3
	22–25	105	26.3
	26–29	3	0.8
	30–33	3	0.8
***Year of study* (N = *401*)**			
	Year 2 (200 level)	187	46.6
	Year 3 (300 level)	96	23.9
	Year 4 (400 level)	118	29.4
***Faculty* (N = *401*)**			
	Arts	61	15.2
	CIS	59	14.7

Variable	Category	*n*	%
	Education	79	19.7
	Engineering	65	16.2
	Life Sciences	50	12.5
	Social Sciences	87	21.7
Ethical AI training* (n = *400)			
	Trained	76	19.0
	Not trained	324	81.0

Note. Age: *M* = 20.64, *SD* = 2.16. Percentages are based on the valid *n* for each variable and may not sum to 100 because of rounding. CIS = Communication and Information Sciences.

Preliminary Analyses and Descriptive Statistics

Skewness and kurtosis values for all variables were within ±1 (Table 2), indicating no serious departure from normality. In the model reported in Table 4, tolerance values ranged from.919 to.999 and VIF values from 1.001 to 1.089. In the exploratory subscale model (Table 5), the two narcissism subscales overlapped substantially (VIF = 2.40 and 2.37; tolerance =.417 and.421), which is below conventional cut-offs but calls for caution in interpreting their separate coefficients.

GAI use orientation was moderately high (*M* = 38.17 on a 10–50 scale, a mean item score of 3.82) and negatively skewed, which suggests a ceiling effect that may have restricted its correlations with other variables. Academic dishonesty was positively skewed (skewness = 0.61; mean item score 2.29), indicating that most respondents reported comparatively low levels of misconduct while a minority reported markedly higher levels. Nearly all respondents (99.5%) reported familiarity with ChatGPT and 71.6% with Gemini.

Table 2. Reliability and Descriptive Statistics for Study Variables

Variable	α	*M*	*SD*	Skewness	Kurtosis
Grandiose narcissism	.833	32.53	14.16	−0.02	−0.56
Vulnerable narcissism	.803	26.00	12.18	0.27	−0.14
Narcissism (composite)	.896	58.49	24.70	0.09	−0.28
GAI use orientation (GAUS)	.869	38.17	8.10	−0.83	0.66
Academic dishonesty (MIAMI, adapted)	.85	50.30	14.15	0.61	0.50

Note. N = 399–401. GAI = generative artificial intelligence; GAUS = Generative AI Use Scale; MIAMI = McCabe/ICAI Academic Misconduct Inventory. Higher scores indicate higher levels of each construct.

Residuals from the model in Table 4 were approximately normally distributed, and the plot of standardised residuals against predicted values showed no funnel pattern, indicating no marked heteroscedasticity (Figure 1). No case was unduly influential (maximum Cook's *D* =.047).

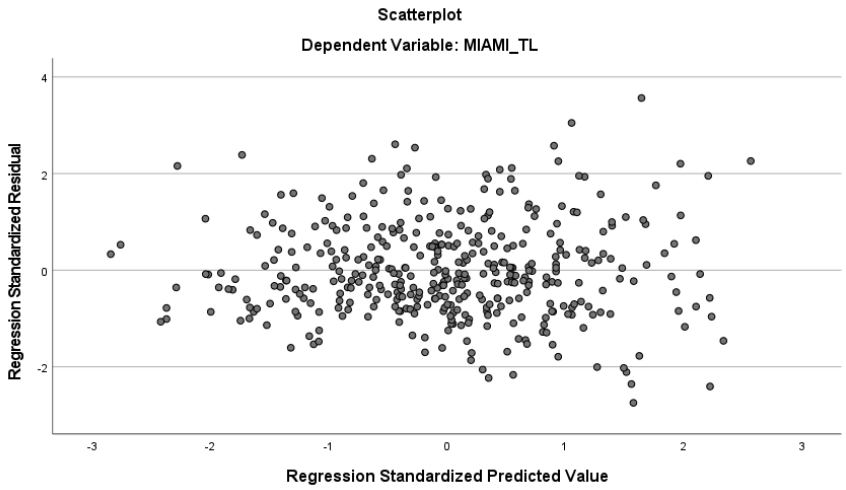


Figure 1. Standardised Residuals Plotted Against Standardised Predicted Values

Note. N = 399.

Bivariate Relationships

All narcissism and GAI use orientation scores correlated positively and significantly with academic dishonesty (Table 3). The composite narcissism score showed the strongest association (r =.358), followed by vulnerable narcissism (r =.356), grandiose narcissism (r =.322), and GAI use orientation (r =.242); these relationships imply that the more individuals score on Narcissism(composite) or its facets, then the higher the tendency to commit dishonesty. Narcissism was also positively correlated with GAI use orientation (r =.286). The two narcissism subscales were highly correlated (r =.759), and correlations between the composite and its subscales are inflated by part–whole overlap. Ethical AI training was unrelated to dishonesty (r <.01).

Table 3. Pearson Correlations Among Study Variables

Variable	1	2	3	4	5
1. Grandiose narcissism	—				
2. Vulnerable narcissism	.759**	—			
3. Narcissism (composite)	.947**	.928**	—		
4. GAI use orientation (GAUS)	.276**	.258**	.286**	—	
5. Academic dishonesty	.322**	.356**	.358**	.242**	—

Note. N = 399–401. ** p <.01 (two-tailed).

Hierarchical Regression: Joint Prediction of Academic Dishonesty (H1 and H2)

In this model, Ethical AI training did not predict academic dishonesty in Block 1 (R^2 =.000, p =.968) and remained non-significant when narcissism and GAI use orientation were added (Table 4). Adding the two predictors produced a significant increment in explained variance (ΔR^2 =.151, $\Delta F(2, 395) = 35.13$, p <.001). The final model explained 15.1% of the variance in dishonesty (adjusted R^2 =.145; f^2 =.178). Narcissism (β =.316, p <.001) and GAI use orientation (β =.154, p =.002) were each significant unique predictors of academic dishonesty. Narcissism uniquely accounted for about 9.1% of the variance and GAI use orientation for about 2.1%; the remaining 3.9 percentage points were shared between the two predictors. H1 and H2 were supported. About 85% of the variance remained unexplained by factors or variables not included in this study.

Table 4. Hierarchical Multiple Regression Predicting Academic Dishonesty

Predictor	*B*	*SE B*	95% CI	β	*t*	*p*	sr^2
Block 1							
Ethical AI training	0.072	1.807	[−3.48, 3.62]	.002	0.04	.968	.000
Block 2							
Ethical AI training	−0.244	1.670	[−3.53, 3.04]	−.007	−0.15	.884	.000
Narcissism (composite)	0.181	0.028	[0.126, 0.236]	.316	6.53	< .001	.091
GAI use orientation (GAUS)	0.268	0.084	[0.103, 0.433]	.154	3.17	.002	.021

Note. N = 399. Block 1: R^2 =.000, $F(1, 397) = 0.00$, p =.968. Block 2: ΔR^2 =.151, $\Delta F(2, 395) = 35.13$, p <.001; final R^2 =.151, adjusted R^2 =.145, $F(3, 395) = 23.42$, p <.001. Ethical AI training: 1 = trained, 0 = not trained. sr^2 = squared semipartial correlation.

Exploratory Analysis: Narcissism Subscales (RQ1)

In this analysis, the composite was replaced by the two subscales (Table 5), vulnerable narcissism significantly and positively predicted dishonesty (β =.248, t = 3.47, p =.001), whereas grandiose narcissism did not (β =.090, t = 1.26, p =.210). GAI use orientation remained a significant unique predictor (β =.155, p =.001). The model explained 15.5% of the variance, essentially the same as the composite model (15.1%). Because grandiose narcissism correlated positively with dishonesty (r =.322) and overlapped strongly with vulnerable narcissism (r =.759), its non-significant coefficient shows only that it added no unique prediction once vulnerable narcissism was controlled, not that it is unrelated to dishonesty.

A formal test showed that the two coefficients did not differ reliably. In the model with the sum and the difference of the subscale scores, the difference term, which equals half of the raw gap between the vulnerable and grandiose coefficients, was not significant (B = 0.099, SE = 0.072, β =.065, t = 1.36, p =.174), whereas the sum term was (B = 0.189, SE = 0.028, β =.330, t = 6.68, p <.001). A comparison of the standardised coefficients, calculated from the correlations in Table 3, gave the same result (difference = 0.15, SE ≈ 0.13, p ≈.25). The data therefore establish a difference in statistical significance, not a difference in size.

Table 5. Regression of Academic Dishonesty on Narcissism Subscales and GAI Use Orientation

Predictor	*B*	*SE B*	95% CI	β	*t*	*p*	VIF
Grandiose narcissism	0.090	0.072	[−0.052, 0.232]	.090	1.26	.210	2.40
Vulnerable narcissism	0.288	0.083	[0.125, 0.451]	.248	3.47	.001	2.37
GAI use orientation (GAUS)	0.270	0.084	[0.104, 0.436]	.155	3.20	.001	1.09
Ethical AI training	−0.054	1.674	[−3.35, 3.24]	−.002	−0.03	.974	—

Note. N = 399. Model R^2 =.155 (ΔR^2 over Block 1 =.155), $F(4, 395) = 18.07$, p <.001. The B and β of grandiose narcissism are both.090 because the standard deviations of grandiose narcissism (14.16) and academic dishonesty (14.15) are almost identical. Ethical AI training: 1 = trained, 0 = not trained. VIF = variance inflation factor.

Indirect Effect of Narcissism Through GAI Use Orientation (H3)

Narcissism was positively associated with GAI use orientation (path a: B = 0.094, SE = 0.016, β =.286, p <.001), so H3a was supported. GAI use orientation predicted dishonesty when narcissism was controlled (path b: B = 0.268, SE = 0.084, β =.154, p =.002; Table 6). The indirect effect was small (ab = 0.025, 95% bootstrap CI [0.010, 0.044]; standardised =.044, 95% Monte Carlo CI [.015,.078]), and the Sobel test gave a consistent result (z = 2.81, p = .005). It represented about 12% of the total effect (ab/c =.12). The direct effect of narcissism remained significant (c': β =.316, p <.001) and was only modestly smaller than the total effect (c: β =.358). Because the direct and indirect effects were both positive and significant, the pattern corresponds to complementary (partial) mediation in the statistical sense (Zhao et al., 2010), and *H3b* was supported for the full 22-item outcome. This supports only the consistency of the data with the proposed pathway, not its causal ordering.

Table 6. Indirect Effect of Narcissism on Academic Dishonesty Through GAI Use Orientation

Path	*B*	*SE*	95% CI	β	*p*
a: Narcissism → GAUS	.094	.016	[0.063, 0.125]	.286	< .001
b: GAUS → Dishonesty (controlling for narcissism)	.268	.084	[0.103, 0.433]	.154	.002
c: Narcissism → Dishonesty (total effect)	.205	.027	[0.152, 0.258]	.358	< .001
c′: Narcissism → Dishonesty (direct effect)	.181	.028	[0.126, 0.236]	.316	< .001
Indirect effect (*a* × *b*)	.025	.009	[0.010, 0.044]	.044	—

Note. Paths *a* and *c* were estimated from simple regressions; paths *b* and *c′* were estimated from the Block 2 model, which included ethical AI training as a control (n = 399). Confidence intervals for paths *a*, *b*, *c*, and *c′* are Wald intervals ($B \pm 1.96\ SE$); the interval for $a \times b$ is a percentile bootstrap interval (5,000 resamples), and the interval for the standardised indirect effect is a Monte Carlo interval [.015,.078]. Sobel $z = 2.81$, p =.005. Proportion mediated (ab/c) =.12. GAUS = Generative AI Use Scale.

Overlap Between GAI Use Orientation and the AI-Specific Items

Because five outcome items describe misuse of AI tools, these items were summed and correlated with the GAUS total. The AI-specific items correlated moderately with GAI use orientation (r =.370, p <.01), whereas the 17 conventional misconduct items correlated more weakly (r =.145, p <.01; all 22 items: r =.242). The association between GAI use orientation and the full dishonesty score therefore reflects, in large part, the shared content of the AI-specific items.

The mediation model was then re-estimated with only the 17 conventional items as the outcome (Table 7). Path *a* was unchanged. Path *b* fell from B = 0.268 (p =.002) to B = 0.069 (p =.300), and the bootstrapped indirect effect, which was significant for the 22-item outcome, was not significant for the 17-item outcome (ab = 0.006, 95% CI [−0.004, 0.019]; about 4% of the total effect, compared with 12%). The direct effect of narcissism remained significant in both models ($c′$ = 0.181 and 0.150, both p <.001). The indirect effect through GAI use orientation was thus detectable only when the AI-specific items were included in the outcome, so *H3b* was not supported for conventional misconduct.

Table 7. Indirect Effect of Narcissism on Academic Dishonesty Through GAI Use Orientation, With and Without the AI-Specific Items

	Full outcome (22 items)			Without AI items (17 items)		
Path	***B***	***SE***	**95% CI**	***B***	***SE***	**95% CI**
a: Narcissism → GAUS	0.094	0.016	[0.063, 0.125]	0.094	0.016	[0.063, 0.125]
b: GAUS → Dishonesty	0.268	0.084	[0.102, 0.434]	0.069	0.066	[−0.061, 0.199]
c′: Narcissism → Dishonesty (direct)	0.181	0.028	[0.127, 0.236]	0.150	0.022	[0.107, 0.193]
Indirect effect (*a* × *b*)	0.025	0.009	[0.010, 0.044]	0.006	0.006	[−0.004, 0.019]
Proportion mediated (*ab*/*c*)	.12			.04		

Note. N = 399. All models included ethical AI training as a control. Intervals for the indirect effect are percentile bootstrap intervals (5,000 resamples); other intervals are *t*-based and therefore differ slightly from those in Table 6. Path *a* is identical in both columns because it does not involve the outcome. Model R^2 =.151 (22 items) and .127 (17 items). GAUS = Generative AI Use Scale.

Indirect Effect of Vulnerable Narcissism (RQ2)

The rationale for this model, with Vulnerable narcissism estimated as a predictor and the Grandiose facet introduced as a covariate, is built on the self-protective motive of using AI to protect their self-image. To test this more directly, the mediation model was re-estimated controlling grandiose and ethical AI training (Table 10). Vulnerable narcissism did not significantly predict GAI use (path a: *B = 0.077, p* =.123), whereas grandiose narcissism did (*B = 0.108, p* =.012). Since path a was not significant, the indirect effect through GAI use was also not significant, for both the 22-item outcome (*ab = 0,021*, 95% CI [-0.006, 0.051]) and the 17-item outcome (ab = 0.005, 95% CI [-0.006, 0.019]). However, Vulnerable narcissism remained directly related to dishonesty in both models (*B = 0.288 and 0.220, p* <.001).

Table 8. Indirect Effect of Vulnerable Narcissism Through GAI Use Orientation, Controlling for Grandiose Narcissism

	Full outcome (22 items)			Without AI items (17 items)		
Path	***B***	***SE***	**95% CI**	***B***	***SE***	**95% CI**
a: Vulnerable → GAUS	0.077	0.049	[−0.021, 0.174]	0.077	0.049	[−0.021, 0.174]
Grandiose → GAUS (covariate)	0.108	0.043	[0.024, 0.192]	0.108	0.043	[0.024, 0.192]
b: GAUS → Dishonesty	0.270	0.084	[0.104, 0.436]	0.070	0.066	[−0.060, 0.200]
c′: Vulnerable → Dishonesty (direct)	0.288	0.083	[0.125, 0.451]	0.220	0.065	[0.092, 0.348]
Indirect effect (*a* × *b*)	0.021	0.014	[−0.006, 0.051]	0.005	0.006	[−0.006, 0.019]

Note. N = 399. All models included ethical AI training as a control. Intervals for the indirect effect are percentile bootstrap intervals (5,000 resamples). The GAUS model had R^2 =.082; the dishonesty models had R^2 =.155 (22 items) and.130 (17 items). GAUS = Generative AI Use Scale.

Adjustment for Demographic Covariates

While we already established a significant result, even after controlling for Ethical AI training, we considered whether including the demographic variables as covariates may change the pattern we observed, and so Gender, Age, Year of Study and Faculty were added to the original mediation. The results remained unchanged: the indirect effect through GAI use remained significant (*ab* =.025, 95% CI [0.010, 0.045]), likewise the direct effect of narcissism (c' = 0.188, p <.001). However, Male students reported more dishonesty than female students (*B = 3.06, p* =.027), even when there were more females than males in this study. Students in Life Sciences reported marginally less dishonesty than those in Social Sciences (*B* = −4.83, p =.050). No other covariate showed a significant association with dishonesty.

Table 9. Mediation Model With Demographic Covariates (Outcome: Academic Dishonesty, 22 Items)

Predictor	***B***	***SE B***	**95% CI**	***t***	***p***
Narcissism (direct effect, *c′*)	0.188	0.028	[0.133, 0.242]	6.79	< .001
GAI use orientation (path *b*)	0.268	0.084	[0.104, 0.432]	3.21	.002
Ethical AI training	−0.465	1.663	[−3.736, 2.806]	−0.28	.780
Age	−0.311	0.345	[−0.989, 0.367]	−0.90	.368
Year of study	0.012	0.010	[−0.007, 0.031]	1.21	.227
Gender (1 = female, 2 = male)	3.059	1.376	[0.354, 5.765]	2.22	.027
Faculty (reference: Social Sciences)					
Arts	0.581	2.319	[−3.980, 5.141]	0.25	.803
CIS	4.384	2.325	[−0.186, 8.955]	1.89	.060
Education	−2.017	2.194	[−6.331, 2.297]	−0.92	.359
Engineering	0.692	2.555	[−4.332, 5.716]	0.27	.787
Life Sciences	−4.827	2.451	[−9.646, −0.009]	−1.97	.050
Indirect effect (*a* × *b*)	0.025	0.009	[0.010, 0.045]	—	—

Note. N = 398. Narcissism is the composite score. R^2 =.204, $F(11, 386)$ = 8.99, p <.001. The interval for the indirect effect is a percentile bootstrap interval (5,000 resamples). CIS = Communication and Information Sciences.

Ethical AI Training and Academic Dishonesty

Students who reported formal ethical AI training (M = 50.33, SD = 15.95, n = 76) did not differ in dishonesty from those without training (M = 50.31, SD = 13.74, n = 324), $t(398)$ = 0.01, p =.992; mean difference = 0.02, 95% CI [−3.53, 3.57], which corresponds to about ±0.25 standard deviations (Levene's F = 1.712, p =.191; equal variances assumed). A non-significant difference is not evidence of equivalence: the data are compatible with no effect and with small effects in either direction, and the training variable was a single self-reported item that did not capture content, duration, or timing.

Table 10. Independent-Samples t Test for Ethical AI Training Differences in Academic Dishonesty

Group	*n*	*M*	*SD*	*t*	*df*	*p*
Ethics trained	76	50.33	15.95	0.01	398	.992
Not ethics trained	324	50.31	13.74			

Discussion

The purpose of this study was to examine whether GAI use orientation statistically accounts for part of the association between narcissism and academic dishonesty among Nigerian undergraduates. Narcissism was the stronger predictor of dishonesty, in line with earlier work linking narcissism and other dark traits to academic misconduct (Brunell et al., 2011; Curtis et al., 2022; Nathanson et al., 2006; Williams et al., 2010) and to GAI-related misconduct (Greitemeyer & Kastenmüller, 2023; Sun et al., 2025). GAI use orientation added a small unique contribution (about 2% of the variance). The indirect effect through GAI use orientation was significant for the full outcome (about 12% of the total effect) but disappeared when the five AI-specific items were removed, whereas the direct effect of narcissism remained significant under both scorings. The data therefore do not support GAI use orientation as a mediator of the link between narcissism and conventional academic misconduct.

Content overlap is the most likely reason. GAI use orientation correlated about 2.5 times more strongly with the five AI-specific items (r =.370) than with the 17 conventional items (r =.145), so much of its association with the full dishonesty score reflects items describing misuse of the very tools the GAUS asks about. The strong correlation between AI-tool use and dishonesty at the University of Ibadan (Ojedeji, 2026) calls for the same caution: that study's dishonesty composite included items on unauthorised AI-assisted assignments and on presenting AI-generated work as original, and its author listed unreliable measures of dishonesty among the limitations. The GAUS also partly reflects perceived usefulness, and its negative skew suggests a ceiling effect that may have restricted correlations.

Three further limits constrain causal interpretation. First, the temporal order is unknown: in the model of Song and Liu (2025), GAI use was a downstream outcome, and Tindle et al. (2023) found that past misconduct intentions and behaviours predicted willingness to consider GAI use, although past misconduct behaviour was not significantly related to current use. Reverse or reciprocal ordering cannot be excluded with cross-sectional data (Maxwell & Cole, 2007). Second, common causes such as academic pressure, low self-control, or weak commitment to integrity could produce both GAI use and misconduct. Third, the outcome overlaps in content with the mediator.

In the exploratory analysis, vulnerable narcissism, but not grandiose narcissism, uniquely associated with dishonesty. However, the subscales were strongly correlated, grandiose narcissism was positively associated with dishonesty at the bivariate level, the subscale model explained virtually the same variance as the composite model, and a formal test found no reliable difference between the two coefficients. The results therefore do not show that vulnerable narcissism is the more important component, nor that grandiose narcissism is unrelated to dishonesty. The pattern also differs from earlier findings in which grandiose-type facets, exhibitionism (Brunell et al., 2011) and antagonism (Rao & Kay, 2026), were related to dishonesty whereas narcissistic neuroticism, the closest analogue of vulnerability, was not. Differences in instruments, in outcomes (behaviour versus attitudes), and in cultural context may all contribute. The results for RQ2 were also at odds with the self-protection account: vulnerable narcissism did not predict GAI use orientation, whereas grandiose narcissism did. This could fit an enhancement motive of the kind NARC describes as admiration (Back et al., 2013; Rogoza et al., 2018), but admiration and rivalry were not measured, so it remains an interpretation to be tested.

Two further frameworks bear on the findings only by analogy. Wolfe and Hermanson's (2004) Fraud Diamond, developed for occupational fraud, would treat the availability of GAI as opportunity and narcissistic confidence as capability, and moral disengagement (Bandura, 1986, 2002), a strong correlate of misconduct in the MIAMI validation sample (Rettinger et al., 2024), could describe how students reconcile AI-assisted misconduct with their self-image. Neither was measured here, and the sizeable direct

effect of narcissism suggests that access to GAI alone does not account for the narcissism–dishonesty association.

The absence of a difference between trained and untrained students should not be read as evidence that ethics training cannot work, because the single self-reported item did not describe what any training contained and the confidence interval does not exclude small effects in either direction. The result does not test the AI-literacy programmes recommended for Nigerian universities (Ojedeji, 2026); it indicates only that self-reported exposure to unspecified training was unrelated to misconduct. It is also compatible with the argument that policy gaps, and not literacy alone, drive AI-related misconduct in African higher education (Guadu et al., 2026), although these data cannot test that argument.

Practical Suggestions

These suggestions go beyond the variables measured here and are offered for evaluation, not as implications of the findings. Counselling services could address shame, fear of failure, and contingent self-esteem alongside integrity education, given the direct association of narcissism with misconduct, although the study could not show which component matters more. Assessment could be redesigned into staged, lower-stakes checkpoints, and universities could adopt specific, transparent AI-use policies rather than blanket prohibitions; neither assessment design nor institutional policy was assessed here.

Limitations and Future Research

Several limitations should be noted.

1 The cross-sectional design cannot establish the ordering of narcissism, GAI use, and misconduct, and a cross-sectional mediation estimate can be biased relative to the longitudinal process (Maxwell & Cole, 2007).
2 All variables were self-reported by the same respondents at one-time point, so common-method variance and social desirability may have inflated or deflated associations (Podsakoff et al., 2003); self-reported misconduct is probably underestimated even though participants were assured of anonymity.
3 The GAUS is a new instrument validated only through exploratory analysis in the same sample, a two-factor structure was found although a total score was used, and the scale partly measures perceived utility. Confirmatory validation in an independent sample is needed.
4 The outcome contains five researcher-developed AI items that overlap with the mediator. The "not applicable" option was removed, which may depress scores for behaviours some students had no opportunity to perform. Only a total score was analysed, and the factor structure of the 22-item combination and item-level prevalence were not examined.
5 The B-PNI measures pathological narcissism, so the results may not generalise to non-pathological, agentic grandiosity, and the high correlation between its subscales limits the interpretation of their unique effects.
6 Non-probability quota and convenience sampling at a single institution, the exclusion of first-year students, non-proportional quotas, and the pooling of paper and online responses without a test of mode differences limit generalisation; the response rate and the timing of data collection relative to examinations were not examined.
7 Ethical AI training was measured with one item, and plausible confounders such as academic pressure, grade point average, and self-control were not controlled.
8 Effects were small, and no adjustment was made for multiple tests.

Future studies should use longitudinal or experience-sampling designs, measure admiration and rivalry directly, include moral disengagement and academic entitlement, use mediator and outcome measures that do not share content, and test reciprocal models of GAI use and misconduct.

Conclusion

Among University of Ilorin undergraduates, narcissism was positively and directly associated with self-reported academic dishonesty, and GAI use orientation added a small unique contribution. The indirect effect of narcissism through GAI use orientation, about 12% of the total effect, was detectable only when

AI-specific items were included in the outcome, so it is better read as a product of content overlap than as evidence of a pathway from narcissism through GAI use to conventional misconduct. Vulnerable and grandiose narcissism could not be reliably separated, and self-reported ethical AI training was unrelated to dishonesty, although the single-item measure limits what this shows. The study provides first Nigerian data on these variables; longitudinal designs and non-overlapping measures are needed to establish whether GAI use is a route, a tool, or a bystander in the link between narcissism and misconduct.

Declarations

Ethics approval and consent to participate: The study was approved by the Department of Psychology Research ethics committee, University of Ilorin (approval no. UI/PSY/EC/2026/03, dated 12th May, 2026). Participants gave informed consent as described in the Method section.

Data availability: The dataset analysed during the study is available from the corresponding author on reasonable request.

Funding: No funding

Competing interests: No competing interest

Use of AI tools: (None.)

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