Research Article

The association between perceived rule-oriented school ethical climate and university students' unethical behavior

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ABSTRACT

In recent years, the influence of school contexts on university students' behaviour has become an important topic in educational research. As one of the key factors, the perception of a rule-oriented school ethical climate may play a role in shaping students' values and behavioural tendencies. In particular, students' unethical behaviour is considered to be closely associated with their perception of the school's ethical climate, which makes it a topic worthy of further examination. This study aims to investigate the association between students' perceptions of a rule-oriented school ethical climate and their unethical behaviour. A two-wave survey was conducted with a sample of 525 university students from three institutions in Henan Province, China. Participants completed self-reported questionnaires in class, including measures of rule-oriented school ethical climate and unethical behaviour. All descriptive statistics, correlation analyses, and regression analyses were performed using SPSS software. Regression analyses revealed a significant association between students' perceptions of a rule-oriented school ethical climate and their unethical behaviour. These findings are discussed in detail in the results section. Overall, the study underscores the importance of strengthening students' perceptions of a rule-oriented school ethical climate for the well-being of the broader university community.

Keywords: rule-oriented ethical climate; school ethical climate; unethical behaviour; undergraduates; social learning theory

1. Introduction

In the field of organizational behaviour, the concept of ethical climate was first systematically proposed by Victor and Cullen[1] to explain how organizations influence members' moral judgments and behavioural choices through institutions, policies, and culture. They defined ethical climate as the shared perceptions of organizational members regarding the policies, practices, and procedures for addressing ethical issues within the organization. This definition and the guiding role of ethical climate in ethical decision-making have been empirically supported in a cross-cultural study of universities in China, Pakistan, and Saudi Arabia[2]. These collective perceptions delineate which behaviours are considered "right" and how moral dilemmas should be handled. Consequently, ethical climate is regarded as a group-level social regulatory mechanism that relies

on institutionalized rules and value orientations to shape members' cognitive frameworks, thereby guiding them to make behaviour choices consistent with expectations in specific contexts[3].

In business management research, ethical climate has been shown to exert a significant influence on employees' professional conduct, decision-making, and organizational commitment[4, 5], while also playing a critical role in preventing misconduct and reinforcing a culture of compliance. As the research has expanded, scholars have increasingly recognized that the theoretical connotation of ethical climate is not limited to corporate contexts but is equally applicable to other institutionalized organizations, particularly educational institutions. Recent research has further empirically extended the organisational ethical climate framework into the school context, demonstrating that shared ethical norms within schools significantly shape students' identification, well-being, academic performance, and even dropout intentions[6]. Although educational organizations differ from businesses in terms of structure and operational mechanisms, both rely on systems of rules, cultural values, and role modelling to shape members' behaviour. However, unlike corporations that primarily emphasise efficiency and compliance, educational institutions bear the core mission of cultivating young people's values and ethical awareness. Accordingly, the meaning of ethical climate in educational contexts is more fundamental and far-reaching: it not only regulates students' daily behaviour but also subtly influences their ethical judgment and character development. On this basis, scholars have introduced the concept of "school ethical climate" to describe the overall perception of how institutional rules and value orientations within schools shape the behaviours of teachers and students[7, 8].

School ethical climate can be understood from multiple perspectives, including caring-oriented, instrumental-oriented, rule-oriented, and professionalism-oriented dimensions[9, 10]. Among these, the rule-oriented school ethical climate is considered central in educational contexts, referring to students' general perception that rules, codes of conduct, and formal policies constitute the primary basis for behavioural judgment, and that any deviation from rules will be explicitly constrained or punished[11, 12]. Such a climate provides students with stable behavioural boundaries through institutional arrangements and reward–punishment mechanisms, exerting profound influence at multiple levels. In terms of academic integrity, it reduces misconduct such as cheating and plagiarism, fostering greater emphasis on honesty and responsibility[13, 14]; For example, Yusuf et al.[15] found that ambiguous rules are a key factor contributing to academic misconduct involving generative artificial intelligence (e.g., AI-assisted plagiarism), whereas clearly defined, rule-oriented policies with transparent enforcement mechanisms can significantly reduce such unethical behaviors—an effect particularly pronounced in high uncertainty-avoidance and collectivist cultures such as China. With respect to classroom and campus order, it guides students to develop sound learning habits and a sense of public discipline, thereby cultivating an orderly academic environment[12]; and at the level of values and socialization, it not only imposes external constraints but also facilitates the internalization of rule compliance into ethical identification and responsibility-taking, which may subsequently influence their professional ethics and social responsibility[10, 16]. Moreover, institutional fairness and transparency enhance students' psychological safety and sense of belonging, reducing uncertainty and anxiety caused by ambiguous rules, and strengthening trust in the university and group identification[17, 18]. Hence, the rule-oriented school ethical climate not only shapes students' value orientations through rules and norms but also largely determines their ethical behavioural expressions.

Previous research has demonstrated that school ethical climate plays a critical role in shaping university students' ethical behaviour. When students perceive a positive and clearly defined school ethical climate, they are more likely to comply with rules and display ethically appropriate behaviour[8]. At the same time, school ethical climate reinforces students' identification with responsibility and integrity through explicit behavioural expectations and group modelling, thereby fostering higher levels of ethical conduct in their

daily learning and collaboration[19, 20]. However, not all students necessarily demonstrate normative behaviour within such a climate. Some may still engage in negative practices, such as unethical behaviour. Therefore, clarifying the connotation of unethical behaviour becomes a necessary prerequisite for exploring the mechanisms through which school ethical climate exerts its influence.

In educational settings, unethical behaviour refers to students' actions in the domains of study, daily life, and interpersonal interaction that deviate from institutional norms, ethical values, or social expectations[11, 21]. Such behaviour often stems from impulsivity, neglect of rules, or self-serving motives, and not only undermines educational fairness but also damages campus order and interpersonal relationships[22, 23]. Typical forms include cheating, plagiarism, classroom misbehaviour, inappropriate remarks, insufficient learning engagement, procrastination in assignments, and impolite interactions[11, 24], all of which have been shown to exert detrimental effects on the educational environment and social trust[23]. Empirical research has demonstrated that the level of institutional normativity is directly associated with the frequency of misconduct: when rules are explicit and enforcement is strong, students' propensity for unethical decision-making is significantly reduced; conversely, weak or ambiguous enforcement tends to increase the likelihood of deviant behaviours[11, 25]. Nevertheless, some scholars have argued that the effect of school ethical climate is not universally stable across contexts[26]. For example, the qualitative study by Fazli et al.[27] revealed that faculty members' experiences of student ethical problems highlight how the educational ethical climate shapes student behaviour, suggesting that such effects may be moderated by factors including institutional enforcement, prevailing social norms, or individual characteristics. Qualitative research has likewise indicated that school ethical climates play an important role in constraining student misconduct, as the reinforcement of ethical expectations through clear rules and institutional frameworks substantially reduces inappropriate behaviour[28]. Taken together, although existing studies emphasise the importance of school ethical climates in curbing unethical behaviour, systematic investigation into the association between rule-oriented school ethical climates and student misconduct remains scarce. Therefore, the present study focuses on the relationship between perceptions of a rule-oriented school ethical climate and undergraduates' unethical behaviour, aiming to test this association and offer explanatory insights, thereby providing a new theoretical perspective and empirical evidence for school management practices.

Social Learning Theory provides a solid theoretical foundation for understanding the association between school ethical climate and students' behaviour. This theory emphasizes that individuals' behavioural choices are not only driven by internal motivation but are also gradually shaped through continuous observation and imitation of the external environment, with reinforcement from rewards and punishments helping to establish stable behavioural norms[29]. Building on this, Grojean et al.[3] further argued that an organizational climate that supports and encourages ethical behaviour fosters the development of individuals' ethical conduct. In the context of higher education, explicit ethical norms and role-modelling behaviours offer students a reference framework for behavioural judgment, enabling them to better recognise which behaviours are valued and encouraged, and gradually internalize these as personal standards[30]. Through ongoing observation of the interactions and behaviours of teachers and peers, students can learn and imitate patterns of conduct deemed appropriate, further incorporating these ethical behaviours into everyday practice[31]. This continuous process of observation, imitation, and interaction not only reinforces individual ethical behaviour but also contributes to the gradual establishment of shared ethical values and behavioural standards within student groups[32]. When school members collectively reinforce the moral environment, it helps enhance individuals' sense of ethical responsibility, aligns behavioural orientations, and ultimately strengthens students' ethical awareness[33].

In the context of Chinese higher education, university students face unique academic and social pressures, including intense academic competition, high-stakes examinations, and rapidly changing learning environments. Numerous empirical studies have documented the prevalence and potential impacts of academic stress among Chinese undergraduates. For instance, academic burnout—a typical manifestation of chronic academic stress—has been found to positively predict depressive symptoms, with male students being more adversely affected[34]. Moreover, a multiple mediation study among Chinese university students revealed that academic stress indirectly contributes to depression by intensifying anxiety symptoms and reinforcing feelings of hopelessness[35]. In recent years, scholars have also observed the emergence of unethical behaviours among Chinese university students, such as academic misconduct, plagiarism, classroom violations, and breaches of institutional regulations. These behaviours may undermine educational fairness and disrupt campus order. Evidence from a large-scale survey based on the China Family Panel Studies, which covered 3,724 Chinese adolescents, further suggests that students' adaptive responses to rule-related pressures may be influenced by cultural context[36]. Therefore, conducting this study among Chinese university students not only fills an existing gap in the literature but also provides empirical insights for enhancing ethical management, academic integrity policies, and values-based education practices in higher education institutions.

Moreover, the concept of outcome expectancies in Social Learning Theory posits that individuals' behavioural choices are shaped by their anticipation of consequences and their perceptions of the environment[29, 37, 38]. In a learning environment characterised by a positive ethical orientation, students observe that mentors who adhere to moral principles receive favourable responses, which gradually fosters the expectation that normative behaviour will be rewarded, thereby encouraging them to imitate and internalise such conduct[31]. Conversely, when students perceive that deviations from established norms elicit negative consequences or punishment, their motivation to engage in such behaviours diminishes accordingly[21, 39]. In other words, when students believe that misconduct may result in condemnation or sanctions, they are more likely to avoid engaging in these behaviours[40]. These mechanisms highlight that students' perceptions of a rule-oriented school ethical climate may systematically influence their ethical decision-making and behavioural choices through observational learning, yet existing research has rarely examined this process in the context of Chinese higher education. Thus, Social Learning Theory provides an essential theoretical lens for this study, helping to illuminate the potential association between perceptions of a rule-oriented school ethical climate and university students' unethical behaviour.

In summary, a rule-oriented school ethical climate serves as a critical contextual factor in higher education, providing not only boundaries for students' academic norms and value identification but also exerting a long-term influence on their sense of social responsibility. Although previous studies have suggested that a clearly institutionalized campus climate can suppress students' misconduct to some extent[11], the association between such a climate and undergraduates' unethical behaviour has yet to be systematically examined, particularly in the Chinese higher education context[2]. Existing evidence remains limited and the findings inconsistent, while cross-cultural and institutional differences have not been fully explored[2]. Against this backdrop, this study addresses the research gap by investigating how perceptions of a rule-oriented school ethical climate relate to students' unethical behaviour, incorporating both the mechanisms of observational learning and the potential influence of contextual factors. Particularly in the context of rapid expansion and increasing diversity within universities, clarifying the dynamic link between institutional norms and student behaviour can help uncover how educational organisations guide value identification and behavioural choices through rule design and climate building. Moreover, this line of inquiry not only addresses the gaps and inconsistencies in the existing literature but also offers valuable insights for

comparing educational management practices across cultural and institutional settings. Ultimately, systematically examining this association can provide both theoretical grounding and empirical support for universities to construct transparent, fair, and predictable learning environments, thereby advancing the long-term goals of values-based education and students' ethical development.

2. Literature review

2.1. Social learning theory

Social Learning Theory, proposed by Bandura[41], emphasizes that individual behavior is shaped through the observation of others' actions and their consequences within social environments. The theory posits that individuals do not rely solely on direct experience when choosing their behaviors but also engage in vicarious learning—that is, they make judgments and adopt behaviors based on observable norms, modeled actions, and the outcomes associated with those actions[41]. Its central premise, known as triadic reciprocal determinism, suggests that human behavior is jointly determined by personal factors, environmental influences, and behavioral responses, with the environment transmitting behavioral norms and shaping behavioral tendencies through mechanisms of modeling and reinforcement[42]. In the context of this study, the university ethical climate can be regarded as a salient environmental cue. Students observe how teachers, administrators, and peers comply with—or deviate from—campus rules to infer which behaviors are acceptable, thereby adjusting their own decisions accordingly. This implies that university students' unethical behaviors do not stem solely from individual moral deficiencies but rather possess a pronounced social learning component[43].

Furthermore, Social Learning Theory also acknowledges that personal traits influence how individuals perceive and respond to environmental cues, as well as the paths through which they learn from them[44, 45]. This provides a theoretical foundation for examining the moderating mechanisms explored in the present study.

2.2. Perceived rule-oriented school ethical climate and unethical behavior

The university ethical climate refers to students' overall perception of the ethical values, institutional regulations, and behavioral norms advocated within the campus environment[46]. It reflects the degree of consistency and shared understanding within the institution regarding moral standards, rule enforcement, and the behavioral patterns of teachers and peers. From the perspectives of justice and care, the ethical climate encompasses both a justice-oriented dimension—emphasizing fairness, adherence to norms, and integrity—and a care-oriented dimension—highlighting support, empathy, and interpersonal assistance[4, 5].

Unethical behavior refers to actions that violate social or organizational norms and harm others or the public interest. Within the higher education context, it primarily manifests as cheating, academic misconduct, deception, and other behaviors that contravene institutional ethical expectations[11, 47-49]. The occurrence of such behaviors is influenced not only by individual characteristics—such as self-interest and impulsivity—but also by the surrounding environment[50-52].

According to Social Learning Theory[41], individual behavior is shaped not only by cognitive judgment but also through the observation and imitation of others' actions and the consequences those actions elicit. In the university context, students observe whether teachers, administrators, and peers comply with campus rules and ethical norms, and whether violations are tolerated or sanctioned, thereby forming their own judgments and expectations of acceptable behavior[53, 54]. A positive university ethical climate facilitates students' internalization of norms and self-regulation, thereby reducing the likelihood of unethical behavior. Conversely, when the ethical climate is weak or the enforcement of norms is ambiguous, students are more

likely to emulate inappropriate behaviors or selectively disregard rules, which increases the risk of unethical conduct[55, 56].

Empirical evidence has also confirmed that in both organizational and educational contexts, a higher level of ethical climate can effectively suppress members' unethical behavior through the establishment of clear rules, exemplary role modeling, and positive reinforcement mechanisms[11, 56, 57]. In addition, students' engagement in unethical behavior is influenced by background variables such as gender, year of study, place of origin, and type of institution. Specifically, male, lower-grade, or rural-origin students tend to exhibit higher tendencies toward unethical behavior, whereas female, upper-grade, or urban-origin students show relatively lower levels[47, 58-60].

In summary, the university ethical climate influences students' perceptions of behavioral norms through social learning mechanisms and exerts an inhibitory effect on their unethical behavior. Accordingly, this study proposes the following hypotheses:

H1: Perceived university ethical climate is expected to be negatively associated with university students' unethical behavior.

2.3. Research objectives

This study focuses on examining the association between Chinese university students' perceptions of a rule-oriented school ethical climate and their unethical behaviour. Based on relevant literature, we hypothesise that perceptions of a rule-oriented school ethical climate are significantly associated with university students' unethical behaviour.

3. Sample and methods

This study adopted a descriptive correlational research design. The participants were university students from three institutions in Henan Province, China, including two private universities and one public university. Data were collected via the "Questionnaire Star" online platform over a 14-day period in two waves. The questionnaire was distributed in two phases to enhance data quality: the first wave served as a pretest to assess item clarity and the reliability and validity of the scales, yielding 614 valid responses for students' perceptions of a rule-oriented school ethical climate; the second wave was the formal survey, assessing students' unethical behaviour, with 540 valid responses. To ensure proper matching of responses across waves, all participants used a unique identification code, resulting in 525 valid paired responses for analysis.

Ethical considerations were strictly observed throughout the study. All participants provided informed consent prior to participation, were assured of confidentiality and anonymity, and were allowed to withdraw at any time without penalty. Invalid questionnaires were identified and excluded based on the following criteria: incomplete responses, patterned or repetitive answers, and extremely short completion times that suggested inattentive responding.

All descriptive statistics, correlation analyses, and regression analyses were conducted using SPSS software. Specifically, descriptive statistics were applied to present the sample characteristics and the means and standard deviations of the main variables; correlation analysis was employed to examine the association between perceptions of a rule-oriented school ethical climate and students' unethical behaviour; and regression analysis was further used to test the association between these two variables.

4. Measures

4.1. Perceived rule-oriented school ethical climate (T1)

This study adopted the ethical climate scale developed and validated by Deshpande et al.[46]. Unlike the original research, which primarily focused on ethical climate in organisational management and workplace settings, the present study adapted the scale to the educational context and applied it to a university student sample. In measuring perceptions of a rule-oriented school ethical climate, emphasis was placed on students' subjective perceptions of whether the university relies on formal rules, codes of conduct, and official policies as the primary basis for behavioural judgment. While maintaining the core structure of the original scale, several terms were contextually revised—for example, "employee" was replaced with "student" and "organization" with "school"—to enhance semantic relevance and respondent comprehension. The adapted scale consisted of six items, all rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with higher scores indicating stronger perceptions of a rule-oriented school ethical climate. Example items included: "In this university, students are expected to abide by rules and codes of conduct" and "In this university, the school emphasises behaviours that conform to norms and moral standards." Luo et al.[61] applied this scale in the Chinese educational context and confirmed its reliability and validity. In the present study, the Cronbach's α for the overall scale was .87.

4.2. Unethical behaviour (T2)

This study employed the 14-item Unethical Behaviour Scale developed by Birtch and Chiang[11] to assess university students' behaviours that deviate from institutional norms, ethical values, or social expectations in academic, daily, and interpersonal contexts. In measuring unethical behaviour, the present study not only retained the broad coverage of rule-deviant acts in the original scale but also incorporated common misconduct scenarios specific to the university setting (e.g., lack of concentration in learning, procrastination on tasks, and impolite interactions) to enhance contextual relevance. Example items included: "I have said things at university that might make others feel uncomfortable," "I occasionally make jokes at school that may hurt others," and "I sometimes prioritise personal matters over academic tasks." All items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with higher scores indicating a greater frequency or intensity of unethical behaviour. Guo et al.[62] applied this scale in the Chinese educational context and confirmed its reliability and validity. In the present study, the overall scale demonstrated excellent internal consistency (Cronbach's α = .979).

5. Results

5.1. Descriptive statistics

Prior to data analysis, descriptive statistics were conducted for the demographic variables. The final sample consisted of 525 students, including 204 males (38.9%) and 321 females (61.1%). In terms of grade level, 374 students (71.2%) were freshmen, 102 (19.4%) were sophomores, and 49 (9.3%) were juniors or above. In addition, 237 students (45.1%) were from private universities and 288 (54.9%) were from public universities (see Table 1).

Table 1. Demographic characteristics (N=525).

Variable	Category	Number	Percentage (%)
Gender	Male	204	38.9
	Female	321	61.1
Academic Year	First-year	374	71.2
	Second-year	102	19.4
	Third-year and above	49	9.3

Variable	Category	Number	Percentage (%)
Institution Type	Private	237	45.1
	Public	288	54.9

Table 1. (*Continued*)

With respect to the descriptive statistics of the study variables, the mean score for perceived rule-oriented school ethical climate (PRC) was 3.68 (SD = 1.05), which is higher than the scale midpoint of 3. This indicates that, overall, university students reported a moderately high perception of school rules and regulations. The mean score for unethical behaviour (UB) was 2.74 (SD = 1.26), which is lower than the scale midpoint, suggesting that although students engaged in some degree of unethical behaviour, the overall level remained relatively low (see Table 2).

Table 2. Descriptive Statistics.

Variable	M	SD
PRC	3.684	1.051
UB	2.739	1.260

Note: *PRC = Perceived rule-oriented school ethical climate; UB = Unethical Behavior.*

5.2. Correlation analysis

The results of the Pearson correlation analysis are presented in Table 3. Perceived rule-oriented school ethical climate was found to be significantly and negatively associated with unethical behaviour (r = −0.339, p < .01), providing preliminary support for the study hypothesis. In addition, the correlations among the other variables were consistent with theoretical expectations, with coefficients falling within a reasonable range and no evidence of high intercorrelations, indicating a low risk of multicollinearity.

Table 3. The correlation between perceived rule-oriented school ethical climate and unethical behavior.

Variable	PRC	UB
PRC	1	
UB	-0.339**	1

Note: **p < .01; PRC = Perceived rule-oriented school ethical climate; UB = Unethical Behavior.*

5.3. Regression analysis of perceived rule-oriented school ethical climate and unethical behaviour

To examine whether university students' unethical behaviour was significantly associated with their perceptions of a rule-oriented school ethical climate, a regression analysis was conducted. The overall model was significant, $F(1, 523)=67.812$, *p*<.001. Further analysis revealed a significant negative association between perceived rule-oriented school ethical climate and students' unethical behaviour (β=−0.339, *t*=−8.235, *p*<.001), indicating that the higher students' perceptions of a rule-oriented school ethical climate, the less likely they were to engage in unethical behaviour. Multicollinearity was assessed using the Variance Inflation Factor (VIF), and the VIF value for the predictor was 1.000, indicating no multicollinearity concerns (see Table 4).

Table 4. Regression Analysis of Perceived rule-oriented school ethical climate on Unethical Behavior.

Variables	*B*	*SE*	*β*	*t*	VIF
Constant	4.234	0.189		22.418***	-
PRC	-0.406	0.049	-0.339	-8.235***	1.000
F			*F*=67.812***		
R²			*R²*=0.115		

Note: ***p<.001; PRC = Perceived rule-oriented school ethical climate; UB = Unethical Behavior; VIF=Variance Inflation Factor.*

6. Discussion

This study aimed to further examine the relationship between perceptions of a rule-oriented school ethical climate and university students' unethical behaviour. The findings revealed a significant negative association between the two variables, which is highly consistent with previous research and further supports the view that "rule clarity and rule orientation can effectively suppress misconduct"[11]. In other words, when students hold stronger perceptions and recognition of institutional rules and behavioural codes communicated by universities, they are less likely to engage in rule-violating behaviours in their academic and daily lives.

Building on this, the present study provides new empirical evidence based on a sample of Chinese university students, extending prior research that has largely focused on Western educational contexts, and offering valuable insights into the understanding of school ethical climates from a cross-cultural perspective. A possible explanation lies in the fact that when universities clearly and consistently articulate normative requirements and institutional expectations, and reinforce them through administrative practices, classroom education, and everyday campus life, students gradually internalise these standards into their cognitive frameworks. This process fosters recognition of and adherence to rules, thereby reducing the likelihood of misconduct while simultaneously strengthening students' awareness of fairness and responsibility[3].

Furthermore, this result offers renewed support for Social Learning Theory[29]. The theory posits that individuals' values and behaviours are not only driven by internal motivation but are also gradually shaped and reinforced through continuous observation of others' actions and their outcomes. In the university setting, the explicit norms conveyed by institutional rules and codes of conduct provide students with stable and reliable behavioural boundaries, while the modelling roles of teachers and peers further serve as "reference exemplars," enabling students to adjust their conduct through processes of imitation and comparison[30]. Through such observation, modelling, and internalisation, students progressively develop stronger identification with institutional norms, thereby reducing the occurrence of unethical behaviour.

A possible underlying mechanism is that universities serve not only as sites of knowledge transmission but also as crucial environments for students' moral socialisation. Clear rules and sanction mechanisms enable students to receive consistent normative information through classroom teaching, teacher–student interactions, and institutional enforcement, while teachers' role-modelling and peers' group norms further strengthen social reference points. Together, these factors reduce students' unethical behaviour through the combined influence of observational learning and group pressure[3, 63]. In contrast, when the ethical climate lacks clarity or enforcement is weak, students are more likely to receive ambiguous or even tolerant signals, which may lead them to rationalise misconduct during social comparison and imitation processes, and gradually develop a tolerant attitude toward unethical behaviour[64].

It is important to consider the Chinese cultural context. China is characterised by high collectivism and high uncertainty avoidance. In this context, clear rules and institutional enforcement may be particularly effective in guiding student behaviour, as students are more attentive to group norms and are motivated to avoid uncertainty or negative evaluation. Previous studies in China have shown that students' adaptation to rule pressure is influenced by these cultural characteristics, which may explain why a rule-oriented ethical climate has a strong inhibitory effect on unethical behaviour[36].

7. Practical implications for education

The findings of this study provide important insights for university educational management. First, universities should establish clear and enforceable regulations, academic standards, and codes of conduct to offer students explicit value orientations and behavioural boundaries. Second, institutions need to strengthen the enforcement of rules, ensuring that reward and sanction mechanisms are transparent and consistent, thereby enhancing the credibility and binding force of norms. Third, teachers should serve as role models by demonstrating adherence to and respect for regulations in classroom teaching, academic interactions, and daily management, thus subtly reinforcing students' identification with rules. At the same time, peer education and student self-governance organisations can be leveraged to foster a positive group climate, making peer norms an important force in reducing unethical behaviour. Finally, universities may consider introducing courses or special lectures focused on ethics and responsibility, helping students to understand the value foundations behind institutional rules and to strengthen their ability to make normative decisions in both learning and daily life.

8. Limitations and future directions

This study has several limitations that should be acknowledged. First, the sample was drawn from only three universities in Henan Province, which limits its regional scope and representativeness. Consequently, the findings may not be generalisable to other types of universities across China. Future research could expand sampling to include a wider range of institutions, or adopt cross-regional and multi-level data to enhance external validity[65]. Second, although a two-wave survey design was employed to mitigate common method bias to some extent, the relatively short time interval between waves made it difficult to capture dynamic changes among variables. Moreover, the study relied primarily on students' self-reported questionnaires, which may be influenced by social desirability effects or common method variance. Future research may consider longitudinal or experimental designs and incorporate multi-source data (e.g., peer evaluations or teacher observations) to improve objectivity and reliability[66]. Third, this study did not include a rigorous construct validation process, and the absence of confirmatory factor analyses for all measures may limit the robustness of the constructs. Additionally, the research design does not permit causal inference, as the correlational approach cannot fully determine directional effects among variables. Finally, the analytic strategy employed in this study was relatively simple, relying mainly on regression analyses. Future research could employ more sophisticated statistical techniques—such as structural equation modeling or multilevel analysis—to explore complex relationships and enhance the theoretical precision of findings.

Author contributions

Yan Zhao: Conceptualization; Methodology; Formal analysis; Writing – original draft; Visualization; Project administration. Jian-Hao Huang: Supervision; Conceptualization; Methodology; Writing – review and editing.

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Conflict of interest

The authors declare no conflict of interest.

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