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Machiavellian personality and its relationship to the attitudes towards academic cheating among university students

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Abstract

The current study aimed to investigate the nature of the relationship between the dimensions of Machiavellian personality and attitudes towards academic cheating among university students. The sample consisted of 324 male and female students from scientific and humanities colleges at King Faisal University. The Machiavellianism scale, prepared by Dahling et al. [1], and the Attitudes toward Academic Cheating Scale (ATC) developed by [2] were applied. The results of the study showed a positive correlation between the dimensions of Machiavellianism and positive attitudes towards academic cheating. There was also a negative correlation between the dimensions of Machiavellian personality and negative attitudes towards academic cheating. The results of the study also showed statistically significant differences in favor of males in the dimensions of Machiavellian personality, and differences between students of scientific and humanities colleges in positive attitudes towards academic cheating in favor of humanities colleges.

Keywords: Academic cheating, Cheating behavior, Dishonest academia, Integrity, Machiavellianism.

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1. Introduction

Personality traits are important in identifying attitudes and behavior toward academic cheating. Some studies have focused on the Big Five personality factors and examined the association between conscientiousness and acceptance and academic cheating among students [3, 4]. Some previous studies pointed to the Dark Triad of personality, which includes

narcissism, Machiavellianism, and psychopathy. These are factors that predict academic cheating, in addition to selfishness and antisocial behavior [5]. Machiavellianism is a characteristic of the Dark Triad personality, characterized by cynicism, manipulation, and the belief that the end justifies the means. These individuals, often with high scores, resort to deception and lying to achieve their goals, as well as low moral values [6, 7]. According to existing evidence, academic dishonesty had significant positive associations with Machiavellianism and psychopathy, e.g., Giluk and Postlethwaite [3]. This finding confirms that Machiavellianism is associated with dishonest behavior and more positive attitudes toward various forms of academic dishonesty [5, 7]. Academic cheating behavior among students impacts academic integrity and graduate quality, while moral education and the development of social values are considered in addressing the challenges of academic integrity in higher education [8].

Machiavellianism is the manipulation of others through malice, deceit, and opportunism. A Machiavellian person is characterized by the ability to influence and control others, motivated by their own self-interest. Machiavellianism is associated with a lack of awareness, impatience, and dishonesty. Machiavellianism consists of four dimensions: distrust of others, engaging in unethical manipulation, and the desire to control others and achieve social status [9]. Machiavellianism also exists in higher education in other forms, such as raising moral arguments rather than personal interests or greed for money [9]. Machiavellianism is based entirely on profit, manipulation, exploitation, and cunning, and is devoid of the traditional virtues of trust, honor, and decency. Machiavellian behavior is "immoral." Machiavellianism is defined based on three dimensions: an endorsement of deception and manipulation, a cynical view of human nature, and a disregard for conventional morality [10]. Subsequently, Dahling et al. [1] define Machiavellianism based on four dimensions: distrust of others, the desire for status, the desire for control, and unethical manipulation.

Unethical behavior, such as academic cheating, among university students is considered a consequence of psychological distress and moral detachment, which are predictors of academic cheating [11]. Unfortunately, poor academic integrity appears to be a common issue among university students, and worldwide, many students have committed academic cheating at least once in their educational career [4]. Academic cheating takes many forms, including plagiarism, not citing sources, attempting to obtain outside assistance during exams, unethically taking articles and research from the internet, violating the rights of others, violating scientific research standards, forgery, and presenting other people's work as one's own [3, 12]. Many studies have focused on the causes of academic cheating, including contextual factors such as exam proctoring and honor codes, and personal factors such as personality, attitudes, and values [4]. Some studies have shown significant differences between males and females in academic cheating practices, with males favoring them. This may be explained by the fact that males are raised to be impulsive and hasty, while females are raised to follow rules. However, most previous findings are conflicting [6]. The most common aspect of the Dark Triad is Machiavellianism. The results indicate that university students' propensity to cheat can increase their academic cheating behavior [8].

2. Literature Review

2.1. Machiavellianism Personality and Academic Cheating

There are unacceptable behavioral traits that have recently spread among university students, such as selfishness, deceit, double standards, and a focus on personal interests, even at the expense of others. This is known as Machiavellianism, and it has become a dangerous phenomenon that negatively impacts students' interactions and dealings, as well as their mental health and their harmony with themselves and society.

The Machiavellian personality is one that tends not to adhere to the ethical guidelines of society and uses organized, deceitful methods to get things done in a way that serves its interests. Dahling et al. [13] add two other aspects to the Machiavellian personality: the desire to control others and the concern for achieving status. Brewer and Abell [14] believe that a Machiavellian person is often characterized by the ability to persuade and be clever, in addition to a strong desire to achieve their own goals, even if it is at the expense of the needs of others. Students who scored higher on honesty-humility, agreeableness, conscientiousness, openness to experience, and extraversion were less likely to engage in academic misconduct [15]. A study of psychology students found that Machiavellianism was a significant predictor of academic dishonesty; Exploitative attitudes are a significant predictor of Machiavellianism and were a significant predictor of academic dishonesty [16]. Machiavellianism plays an important role in determining the tendency towards academic cheating in various forms, as well as the orientation towards learning (superficial, deep), moral detachment, and moral efficacy that resists deviant behavior [17, 18]. The immoral, manipulative personality trait promotes a superficial approach to learning and activates non-committal moral mechanisms; it reduces a deep approach to learning. This trait interacts further with perceptions of peer academic misconduct. So, students engage in academic cheating in conjunction with Machiavellianism. The network of relationships leading to academic cheating becomes possible when unethical manipulation enhances easy access to mechanisms of moral detachment and a focus on a superficial approach to learning, characterized by the intention to complete the task with minimal hassle and achieve minimal success [18]. No doubt that the relationship between Machiavellian and Implicit cheating theory, consistent with moral disengagement. It was shown that implicit cheating alone was associated with actual cheating behavior in situations where self-interest was not clearly at stake, there was no external evaluation, and social desirability was at its lowest [19]. Many studies have emphasized the contribution of moral disengagement in mediating the relationship between personality tendencies and deviant behaviors. Certain "immoral" goals may promote moral disengagement as a means of justifying these unethical behavioral strategies; Moral disengagement is considered a mediator of the relationship between Machiavellian dimensions and cheating.

2.2. Attitudes towards Academic Cheating

Academic cheating refers to students attempting to present academic work as their own. The most common forms include using cheat notes on tests, copying from other students during tests, and copying homework, e.g., [20, 21]. Academic cheating occurs at all levels of education. Furthermore, academic cheating is widespread worldwide, making it important to explore the factors associated with academic cheating. College education fosters students' values, principles, and moral development by creating an environment where transparency, accountability, and ethical decision-making are central. Today's college students are tomorrow's responsible citizens and leaders. However, as academic cheating continues to become widespread, achieving these educational goals will be increasingly difficult. Those who cheat in college are more likely to resort to cheating at work [22].

Academic fraud is a concept described as a type of deviance, and it is divided into two main subcategories: academic dishonesty and research misconduct [23]. Academic fraud involves cheating, deception, and violating rules for personal gain [24]. There are some individual factors that predict academic cheating. Some of the individual factors are: younger age, low GPA, participation in extracurricular activities, parental pressure to achieve high grades, a desire to excel, laziness, lack of responsibility, procrastination, and low self-esteem [20]. Additionally, students cheat less when evaluating the relevance and benefits of the subject for their future career, while cheating is associated with a tendency to exert minimal academic effort [25]. People with high Machiavellianism use dishonest methods to achieve their goals, manipulate others, and persuade others without being persuaded [26]. They also tend to violate the rights of others for their own personal gain [27]. According to the results of some previous studies on samples of university students, the manifestations of academic cheating are multiple, but they focused on the use of unauthorized electronic sources such as articles, Wikipedia, and YouTube, to write a research paper, project, homework, or other assignments; paraphrasing or copying a few or more sentences from any source without citing them in a research paper or assignment; and hiring someone else to do their academic work such as an essay, exam, or assignment, and presenting it as their own work [28-30]. Personality traits are highly predictive, such as impulsivity, psychopathy, Machiavellianism, and narcissism. Self-control may explain why people do or do not engage in plagiarism when given the opportunity [15]. Adherence to rules and regulations makes students more committed to avoiding academic cheating, thus avoiding disciplinary sanctions and penalties. They also exhibit a higher level of moral intelligence, as defined by Borba [31] in the seven virtues: conscience, justice, compassion, self-control, respect, fairness, kindness, and tolerance. Furthermore, students who are more compliant with the law report fewer cheating behaviors [15].

Machiavellian students will resort to unacceptable behaviors when they expect to benefit with little punishment, so the "response cost" principle should be reinforced, where the consequences of cheating are high and the potential benefits are minimal. Academic institutions should foster an environment in which cheating is not the norm. Honest academic behavior can be further promoted by motivating students with ethics awards and holding advisory or training sessions dedicated to ethical issues to highlight the importance of ethical standards and codes. Thus, discouraging the use of moral disengagement mechanisms to justify academic cheating may contribute to reducing academic dishonesty.

The reasons for cheating on exams may be attributed to a lack of values and weak religious restraint in some families who turn a blind eye to their children cheating on exams, the deterioration of moral values in some students, and their habit of cheating from the early stages of education. In addition, students may feel insecure, lack self-confidence, be lazy in putting in effort, and have a weak ability to organize their time, etc. The tendency towards cheating represents verbal behavior rather than actual behavior in the case of cheating.

3. Aims of the Study

The current study aimed to determine the nature of the relationship between Machiavellianism and academic cheating among students at King Faisal University. We present a brief review of several studies and models explaining academic cheating and Machiavellianism, and we conclude with a discussion of the most important findings of the current study. We also attempt to answer the following questions, guided by previous reviews and studies.

Is there a significant correlation between the dimensions of Machiavellianism and academic cheating among university students?

Are there differences in the dimensions of Machiavellianism and academic cheating due to gender and academic specialization?

4. Methods

4.1. Design

The current study employed a quantitative design methodology. The specific method used to collect data was a semi-structured survey, with participants completing the questionnaires in early 2025 in Arabic. After obtaining participants' consent, the survey was administered via Google Forms. Participants were asked to respond honestly and transparently, and the primary purpose of the questionnaires was for academic research only.

4.2. Participants

The participants consisted of 324 male and female students who were chosen as a convenient sample of bachelor's students in humanities colleges Arts, Business Administration, and scientific colleges, Medicine, and Engineering at King Faisal University in the second semester of the academic year 2024-2025. Participants ranged in age from 19 to 22 years, the mean age was 22 ± 4.14 . The instruments were applied after obtaining scientific research ethics approval from King Faisal University. The sample was 176 males and 148 females. For demographic details of the participants, please see Table 1.

Regarding educational background and specialization, the study sample was selected using a stratified random method, and no rewards were offered to participants.

Table 1.

Percentages for demographic variables of the study sample.

No	Demographic Characteristics	Students	
		Total	%
1.	Gender		
	Male	176	40%
	Female	148	60%
2.	Type of College		
	Scientific colleges	170	52%
	Humanities colleges	154	48%
	Total	324	100%

4.3. Data Collection

All measures were administered in Arabic, the participants' native and preferred language. Results were presented in English, the language of publication, and a detailed explanation of the translation process is provided below. Researchers used Google Forms to facilitate communication and data collection. Study participants were students from various colleges at King Faisal University in Al-Ahsa, Saudi Arabia.

4.4. Instruments

Machiavellianism Personality Scale (MPS), Dahling et al. [1] consisting of 16 items. Machiavellianism, i.e., students' willingness to disregard standards of morality and see value in behaviors that benefit the self at the expense of others. Machiavellianism contains four dimensions, such as amorality manipulation, desire for control, desire for status and distrust of others. Distrust of others is defined as a tendency to be skeptical about the motivations and intentions of others. Amoral manipulation reflects a willingness to disregard moral standards for the sake of benefiting oneself. Desire for control indicates a need to gain dominance in interpersonal situations to minimize the extent to which others have power. Desire for status is defined as a desire to gain external success (e.g., power, status). Sample items are "I believe that lying is necessary to maintain a competitive advantage over others"; "I would cheat if there was a low chance of getting caught"; "I am willing to sabotage the efforts of other people if they threaten my own goals"; "I like to give the orders in interpersonal situations"; "I want to be rich and powerful someday"; "I dislike committing to groups because I don't trust others". Differential association is another major component of social learning theory. It consists of three items that ask students to indicate on a five-point scale ranging from 1 = very negatively to 5 = very positively. Exploratory Factor Analysis for overall items between (0.34; 0.81). Final Cronbach alpha reliabilities for retained items (0.83, 0.72, 0.70, 0.75). Final Cronbach's alpha reliability for the overall Machiavellian Personality Scale was 0.82.

Attitudes toward Academic Cheating Scale (ATC), consisting of 34 items, developed by Gardner and Melvin [2]. The ATC scale proved to be a reliable measure of attitude toward cheating. More importantly, the scale was shown to have construct validity. As expected, the students' ATC scores indicated that they tended to be more tolerant of cheating than were faculty members. Although the correlation between ATC scores and cheating rates was not high ($r = -.30$), the upper limit of this predictive validity coefficient is set by the correlation between the true scores for the two variables, attitude toward cheating and actual cheating; that is, someone may cheat even though he/she may be intolerant of cheaters, or, conversely, someone may refrain from cheating but still be tolerant of others who cheat.

Predictive Validity: condemnatory attitudes toward cheating (i.e., high ATC scores) should be inversely related to actual cheating, presuming that a relationship exists between the attitude (verbal reference) and the referent behavior. The correlation coefficient (r) between ATC scores and mean cheating rates was $-.30$ ($p < .05$, one-tailed). The Likert scale response options were strongly agree (SA), agree (A), undecided or do not understand (U), disagree (D), and strongly disagree (SD). A response blank was provided to the left of each item. To quantify the answers, SA, A, U, D, and SD were scored (+2, +1, 0, -1, and -2), respectively. Before summing the 34 item scores to obtain total test scores, we reversed the signs for the 20 tolerant items. Thus, higher overall test scores indicated a less tolerant (i.e., more condemnatory) attitude toward cheating, arguably a better attitude.

5. Results

The data were analyzed to determine the relationship between the Machiavellian dimensions and attitudes toward academic cheating and beliefs, as shown in Table 2. A simple Pearson correlation test examined the relationship between the two variables. The results showed a statistically significant positive correlation ($p < .01$) between these variables. The results of the correlation analysis can be found in Table 2, which demonstrates a positive and statistically significant relationship between the Machiavellian dimensions and the attitudes toward academic cheating dimensions.

H₁: There is a significant correlation between the dimensions of Machiavellianism personality and attitudes to academic cheating among university students. To verify this hypothesis, Pearson's correlation coefficient was calculated from the raw values between the scores of the study sample members, as shown in Table 2.

Table 2.

The relationship between Machiavellianism and attitudes towards academic cheating.

V.	Machiavellianism Dimensions	Attitudes toward Cheating	
		Positive	Negative
	Amorality manipulation	0.212*	0.462**
	Desire for control	0.333*	0.512**
	Desire for status	0.372*	0.672**
	Distrust of others	0.252*	0.432**

* $p < .05$. ** $p < .01$

Table 2 showed that the participants' scores on the scale of attitudes towards academic cheating are in favor of a negative attitude. There is a weak positive relationship between Machiavellianism and a positive attitude towards cheating.

H₂: There are differences in the dimensions of Machiavellianism according to gender. To verify this hypothesis, a t-test was calculated from the raw values between the scores of males and females.

Table 3.

Differences between dimensions of Machiavellianism according to gender.

V.	Machiavellianism Dimensions	Male		Female		T
		M	SD	M	SD	
	Amorality manipulation	31.28	1.12	29.02	2.05	5.99**
	Desire for control	22.94	1.66	19.94	1.32	8.23**
	Desire for status	28.57	2.38	22.11	1.43	11.89**
	Distrust of others	28.26	2.19	22.12	1.45	11.73**

Table 3 shows a statistically significant difference at ($p < .01$) in favor of males in scores on the scale of dimensions of Machiavellianism, which explains that males have a higher level of Machiavellianism than females.

H₃: There are differences in the attitudes to academic cheating according to academic specialization. To verify this hypothesis, a t-test was calculated from the raw values between the scores of humanities colleges and scientific colleges.

Table 4.

Differences in attitudes to academic cheating according to the type of college.

V.	Academic cheating	Humanities colleges		Scientific colleges		T
		M	SD	M	SD	
	Positive attitudes	31.28	1.12	29.02	2.05	5.99**
	Negative attitudes	22.94	1.66	19.94	1.32	8.23**

Table 4 shows a statistically significant difference at ($p < .01$) in favor of humanities colleges in the attitudes towards academic cheating.

6. Discussion

6.1. Relationship between the dimensions of Machiavellianism and Attitudes of Academic Cheating

The reasons behind cheating on exams may be attributed to a lack of values and weak religious restraint in some families, who turn a blind eye to their children's cheating on exams. In addition, there is a deterioration of moral values among some students, who have become accustomed to cheating since the early stages of education. Furthermore, students may feel insecure, have low self-confidence, be lazy in putting in the effort, and have a weak ability to organize their time. Moreover, the tendency towards cheating represents verbal behavior rather than actual behavior that leads to cheating.

There is no doubt that an individual's belief in his abilities, his self-reliance, and his sound judgment in situations and in facing the problems he faces are a strong indicator of the presence of self-confidence. Therefore, the more self-confidence increases, the better academic achievement is. The student does not rely on cheating methods, whether in the positive direction towards cheating, or practicing the cheating behavior itself. There is no doubt that self-confidence is affected by the educational context in terms of the type of courses, assessment methods, test anxiety, and the student's personal characteristics.

The results of this hypothesis are consistent with the results of Plecha [32] study which examined the relationship between moral judgment and cheating attitudes among university students, and Akeley and Miller [33] study which examined the relationship between ethics, cheating attitudes, and cheating behavior among university students.

The results showed that the majority of students remain committed to academic integrity, despite the academic pressures and opportunities for cheating provided by modern technology, programs, and applications that facilitate access to information. Artificial intelligence programs, such as these, have facilitated the completion of research projects and assignments regardless of integrity or ethical standards. Furthermore, the ease of communicating with others through small earphones may facilitate academic cheating during exams. One component of Machiavellianism is the tendency to manipulate others and the lack or disregard for conventional morality, immoral manipulation and associated with individual academic dishonesty not only directly, but through the mediation of a superficial approach to study and moral detachment [19]. The effects of Machiavellianism on cheating are particularly exacerbated in contexts where cheating is normative, while this

relationship disappears when cheating behaviors are not the norm. Therefore, combating academic cheating must be an ingrained culture on campus.

Machiavellianism, or dishonest and deceitful behavior, refers to the relationship between past acts of academic dishonesty and academic dishonesty attitudes. Differential association with those who accept cheating strengthens the relationship between attitudes and intentions to cheat [22]. There are factors related to the tendency toward cheating, such as GPA, gender differences, differences in the type of study, and level of ambition [34]. Personal factors such as Machiavellianism are also associated with the tendency toward cheating, as individuals with high Machiavellianism are more likely to resort to deception for personal gain.

Many studies have shown that a positive attitude toward cheating is associated with students who are more accepting of cheating behavior and less likely to reject it. This may be due to the nature and characteristics of individuals who are lenient with regard to cheating, considering it an easy means of achieving academic success. There may also be external factors that facilitate cheating, such as the educational system's lax approach to deterrence and enforcement of the law against violators, given the rapid development of technological means and their misuse in cheating. Stephens' [35] study aimed to examine the factors that motivate college students to cheat, even though they believe it is morally wrong. The results predicted that cheating behavior was related to academic performance, peer perceptions, hypothesized interactions between moral judgment and cheating, and the tendency to benefit from cheating despite students' belief that it is morally wrong. Volpe et al. [36] presented a study of the relationship between college students' attitudes toward cheating and course content. She assessed the relationship between students' attitudes, their actual attempts to cheat, and cheating rates. She concluded that there was no relationship between students' attitudes toward cheating and the number of course subjects or the number of times students believed they had cheated. She also suggested that college played a role in the prevalence of cheating among students.

6.2. The Differences between Male and Female in Machiavellianism

Collison et al. [37] investigated the relationship between Machiavellian personality and gender, finding that Machiavellian traits are more strongly associated with males than with females. Láng [38] aimed to reveal the relationship between individuals' assumption of certain parental roles in childhood and Machiavellian traits in young adulthood. The study indicated that there were differences in Machiavellian traits attributed to gender, in favor of males. The findings are consistent with previous research that states that individuals with high levels of Machiavellianism are more likely to engage in cheating due to their orientation towards personal gain without regard to ethical norms. Dark triad personality traits, particularly Machiavellianism, can increase students' tendency to engage in academic dishonesty. These findings are consistent with previous research indicating that individuals with high levels of Machiavellianism are more likely to cheat due to their focus on personal gain without regard for ethical standards. They also tend to prioritize self-interest even at the expense of others. High Machiavellianism also indicates an individual's intent to cheat. Gender differences. Previous findings have indicated that males are more likely to engage in academic dishonesty [4]. This may be explained by the fact that males are more impulsive and can easily commit offenses without fear of detection and punishment. On the other hand, females, who scored lower on Machiavellianism, were more likely to follow rules, which may be a result of their socialization to strive for excellence and exert effort. According to existing evidence and the results of some previous studies, academic dishonesty has significant positive associations with Machiavellianism and psychopathy [3]. Machiavellianism is also associated with dishonest behavior [5]. If the differences in the tendency towards cheating are in favor of males, then the level of Machiavellianism is also high among them, and thus the differences shown by many studies in the tendency towards cheating high in favor of males, supporting this hypothesis. Therefore, the results revealed gender differences in academic cheating, with male students engaging in more cheating behaviors than female students. This is consistent with previous research, such as Williams and Aremu [39], which identified significant gender differences. Similarly, Nguyen and Goto [40] reported that male students were more likely to engage in cheating than their female. Socialization theory provides a framework for understanding these gender disparities. Research suggests that female students are generally more rule-abiding [4]. This is because women's moral reasoning is oriented toward their relationships with others, making them more sensitive to morality, more rule-abiding, and more concerned with the consequences of their behavior on others.

The social role of both males and females imposes on females a commitment and dedication to success without facing the legal and disciplinary consequences that cheaters face, especially since cheating is often displayed on screens in college corridors. Males, on the other hand, are more likely to act impulsively when it comes to cheating situations and are less concerned with maintaining their social standing. This does not mean that females do not cheat when the opportunity arises, but rather that they have a more negative attitude toward cheating compared to males.

6.3. Differences between in Attitudes to Academic Cheat According to College

Many students may view academic pursuits as essential to their personal growth and future professional identity, and that cheating poses a threat to them. Academic cheating is linked to mechanisms of moral disengagement, as they rely on moral distance when engaging in cheating and academic dishonesty. The value of education for an individual may be linked to future career prospects. Does the education stage end with obtaining a university degree alone, or is education related to the knowledge and skills necessary for an individual's continued professional life? We believe that this is related to the type of college and the nature of the study, whether scientific or humanistic. Jordan [41] conducted a study that aimed to investigate the role of motivation and perception of rules, attitudes, and policy of the institute or college among cheating and non-cheating students into two types according to motivation: mastery and extrinsic. The perception of social rules and norms, their opinions about cheating, and attitudes towards cheating, the results showed that cheating students were lower in mastery orientation and higher in extrinsic orientation. Furthermore, cheating students differed from non-cheating students in their

perception of social rules and norms, their opinions about cheating, and their attitudes towards cheating. Lim and See[42] conducted a study that aimed to investigate the tendency towards cheating among a sample of university students, amounting to 518 students from three educational institutes in Singapore with an average age of 20 years. The results of the study concluded that the students realized cheating behavior related to the exam and included in difficult situations, and despite the prevalence of academic cheating, the results showed a moral ambivalence about academic cheating and tolerance towards academic dishonesty among peers. Volpe et al. [36] presented a study that aimed to investigate the relationship between university students' attitudes towards cheating and the content of the curriculum on academic integrity. It was evaluated to determine the relationship between students' attitudes and their actual attempts to cheat and cheating rates. It was concluded that there is no relationship between students' attitudes towards cheating and the number of course items, and the number of times students believe cheating occurs. The college also plays a role in the prevalence of cheating among students.

One of the factors that contributes to preventing academic cheating is a deep approach to learning. Students who adopt this approach are commonly genuinely engaged in their academic subjects and view study as a means of self-realization [43]. Therefore, students in practical colleges such as medicine, engineering, dentistry, and others are not suitable for academic cheating, as theoretical study is the basis for practical training. Therefore, would a medical student accept being a doctor without knowledge or morals, or engaging in dishonest practices? Testing and assignment situations during the academic year represent a challenge for science college students, not a threat. High (positive) attitudes toward cheating are linked to viewing testing situations as a threat and psychological pressure that requires relief, unlike students with low (negative) attitudes toward cheating. Academic cheating attitudes are linked to several factors, including moral intelligence, moral maturity, guilt, and psychological resilience. These variables are negatively related to cheating. Some students may perceive cheating as cooperation between students in solving tests, or as an exchange of information between two individuals, as long as it is a common behavior. They do not consider it an unacceptable deviant behavior that deserves punishment.

The culture of easy access to results may result from a weak value system and moral education, especially in light of the development of cheating methods facilitated by modern technologies.

7. Conclusions

This study examined the dimensions of Machiavellian personality and its relationship to academic cheating among undergraduate students of both genders, whether in science or humanities colleges. The results revealed significant differences in Machiavellianism and academic cheating based on gender or academic program, favoring males. This trend also favored students in humanities colleges compared to students in practical colleges. This is supported by the results of numerous previous studies in various cultural and scientific environments. These findings indicate that male students have become more tolerant of academic cheating because they are more likely to be impulsive, ignore norms and rules, and attribute academic failure to external motivating factors. Similarly, the presence of variation across majors indicates that students in science colleges are more concerned with maintaining grades, sustaining a level of ambition, and securing monthly financial support from the university. They realize that engaging in dishonest behaviors negatively impacts their professional future, especially given the strict rules and penalties imposed by the university.

8. Recommendations

It is important to consistently reinforce academic integrity through various channels, such as classroom discussions or frequent reminders of the importance of integrity to students. Improving course design to mitigate the stressors that influence students' intentions to engage in academic dishonesty can be of significant benefit. Furthermore, communicating in advance what to expect from the course and providing students with the necessary information and resources to learn can also be helpful. It is essential to include appropriate sanctions to discourage students from engaging in academic misconduct. Academic cheating impacts not only the student but also the integrity and reputation of the educational institution. As a result, academic values such as honesty, responsibility, and ethics deteriorate. This requires confronting academic cheating, understanding its causes, and developing effective preventive strategies.

Educational institutions need to promote ethical education and academic integrity among students. Proactive prevention programs, such as seminars and workshops on academic integrity, can help reduce cheating. Given the relationship between Machiavellianism and academic cheating, institutions need personality-based interventions for students who exhibit Machiavellian tendencies through psychological counseling and training to enhance intelligence and ethical behavior.

9. Limitations

The current study is not without limitations. First, it was a correlational study, meaning that it is only possible to discuss relationships without causal links. This requires further research to investigate the causal factors behind academic cheating. The study did not address direct academic cheating behavior but rather addressed the tendency toward cheating. This requires conducting case studies of students who were subjected to disciplinary action for attempted cheating during exams. However, exam cheating is one of many behaviors related to academic integrity. The current study examined a sample from a single university; therefore, the results cannot be generalized. Future studies should examine the individual and contextual factors behind academic cheating in light of cultural and social norms.

References

- [1] J. J. Dahling, B. G. Whitaker, and P. E. Levy, "The development and validation of a new Machiavellianism scale," *Journal of Management*, vol. 35, no. 2, pp. 219-257, 2009. <https://doi.org/10.1177/0149206308318618>

- [2] W. M. Gardner and K. B. Melvin, "A scale for measuring attitude toward cheating," *Bulletin of the Psychonomic Society*, vol. 26, no. 5, pp. 429-432, 1988. <https://doi.org/10.3758/BF03334905>
- [3] T. L. Giluk and B. E. Postlethwaite, "Big Five personality and academic dishonesty: A meta-analytic review," *Personality and Individual Differences*, vol. 72, pp. 59-67, 2015. <https://doi.org/10.1016/j.paid.2014.08.027>
- [4] S. D. Lee, N. R. Kuncel, and J. Gau, "Personality, attitude, and demographic correlates of academic dishonesty: A meta-analysis," *Psychological Bulletin*, vol. 146, no. 11, p. 1042, 2020. <https://doi.org/10.1037/bul0000300>
- [5] M. E. Jaffé, R. Greifeneder, and M.-A. Reinhard, "Manipulating the odds: The effects of Machiavellianism and construal level on cheating behavior," *PloS one*, vol. 14, no. 11, p. e0224526, 2019. <https://doi.org/10.1371/journal.pone.0224526>
- [6] G. G. L. Esteves, L. S. Oliveira, J. M. de Andrade, and M. P. Menezes, "Dark triad predicts academic cheating," *Personality and Individual Differences*, vol. 171, p. 110513, 2021. <https://doi.org/10.1016/j.paid.2020.110513>
- [7] R. Z. Elias, "The effect of Machiavellianism on business students' perception of cheating," *Academy of Educational Leadership Journal*, vol. 19, no. 1, pp. 175-183, 2015.
- [8] S. Qodariah, M. Yanuvianti, F. Coralina, and T. Damayanti, "The influence of dark triads as a personality factor on academic dishonesty among students," *Schema: Journal of Psychological Research*, vol. 9, no. 02, pp. 76-81, 2024. <https://doi.org/10.29313/schema.v9i02.5348>
- [9] K. Spanou, A. Bekiari, and D. Theocharis, "Bullying and Machiavellianism in university through social network analysis," *International Journal of Sociology (Revista Internacional de Sociologia)*, vol. 78, no. 1, p. e151, 2020. <https://doi.org/10.3989/ris.2020.78.1.18.096>
- [10] I. M. Pekdemir and A. Turan, "The relationships among love of money, Machiavellianism and unethical behavior," *Canadian Social Science*, vol. 11, no. 6, pp. 48-59, 2015. <http://dx.doi.org/10.3968/7112>
- [11] C. M. Kokkinos and N. Antoniadou, "Understanding academic dishonesty in university settings: The interplay of dark triad traits and moral disengagement," *The Journal of Genetic Psychology*, vol. 185, no. 5, pp. 309-322, 2024. <https://doi.org/10.1080/00221325.2023.2297850>
- [12] S. Ampuni, N. Kautsari, M. Maharani, S. Kuswardani, and S. B. S. Buwono, "Academic dishonesty in Indonesian college students: An investigation from a moral psychology perspective," *Journal of Academic Ethics*, vol. 18, no. 4, pp. 395-417, 2020. <https://doi.org/10.1007/s10805-019-09352-2>
- [13] J. J. Dahling, D. Kuyumcu, and E. H. Librizzi, *Machiavellianism, unethical behavior, and well-being in organizational life* (Handbook of unethical work behavior: Implications for individual well-being). Armonk, NY, USA: M.E. Sharpe, 2012.
- [14] G. Brewer and L. Abell, "Machiavellianism and sexual behavior: Motivations, deception and infidelity," *Personality and Individual Differences*, vol. 74, pp. 186-191, 2015. <https://doi.org/10.1016/j.paid.2014.10.028>
- [15] H. Wang and Y. Zhang, "The effects of personality traits and attitudes towards the rule on academic dishonesty among university students," *Scientific Reports*, vol. 12, no. 1, p. 14181, 2022. <https://doi.org/10.1038/s41598-022-18394-3>
- [16] K. M. Williams, C. Nathanson, and D. L. Paulhus, "Identifying and profiling scholastic cheaters: Their personality, cognitive ability, and motivation," *Journal of Experimental Applied Psychology*, vol. 16, no. 3, p. 293, 2010. <https://doi.org/10.1037/a0020773>
- [17] A. Bandura, *Moral disengagement: How people do harm and live with themselves*. New York: Worth Publishers, 2016.
- [18] C. Barbaranelli et al., "Machiavellian ways to academic cheating: A mediational and interactional model," *Frontiers in Psychology*, vol. 9, p. 695, 2018. <https://doi.org/10.3389/fpsyg.2018.00695>
- [19] R. Fida, V. Ghezzi, M. Paciello, C. Tramontano, F. Dentale, and C. Barbaranelli, "The implicit component of moral disengagement: Applying the relational responding task to investigate its relationship with cheating behavior," *Personality and Social Psychology Bulletin*, vol. 48, no. 1, pp. 78-94, 2022. <https://doi.org/10.1177/0146167220984293>
- [20] N. Pavlin-Bernardić, D. Rovani, and J. Pavlović, "Academic cheating in mathematics classes: A motivational perspective," *Ethics & Behavior*, vol. 27, no. 6, pp. 486-501, 2017. <https://doi.org/10.1080/10508422.2016.1265891>
- [21] O. Petrak and A. Bartolac, "Academic honesty amongst the students of health studies," *Croatian Journal of Education*, vol. 16, no. 1, pp. 81-117, 2014.
- [22] M. Prince and E. Wang, "A model of academic dishonesty intentions: mediating effects of machiavellianism and differential association," *Journal of Further and Higher Education*, vol. 48, no. 6, pp. 582-593, 2024. <https://doi.org/10.1080/0309877X.2024.2375307>
- [23] J. T. Walker and K. Holtfreter, "Applying criminological theory to academic fraud," *Journal of Financial Crime*, vol. 22, no. 2, pp. 188-198, 2015. <https://doi.org/10.1108/JFC-08-2013-0053>
- [24] K. Sirejeki, A. Faturukhman, A. Praptapa, and B. S. Irianto, "Understanding academic fraud: The role of dark triad personality and situational factor," *Journal of Criminal Justice Education*, vol. 34, no. 2, pp. 147-168, 2023. <https://doi.org/10.1080/10511253.2022.2068630>
- [25] T. Ljubin-Golub, E. Petričević, and K. Sokić, "Predicting academic cheating with triarchic psychopathy and cheating attitudes," *Journal of Academic Ethics*, vol. 18, no. 4, pp. 377-393, 2020. <https://doi.org/10.1007/s10805-019-09338-0>
- [26] S. M. Zin, N. Ahmad, N. E. Ngah, R. Ismail, I. H. T. Abdullah, and N. Ibrahim, "Effects of Machiavellianism on ingratiation in organizational settings," *Canadian Social Science*, vol. 7, no. 2, p. 183, 2011. <https://doi.org/10.3968/j.css.1923669720110702.025>
- [27] T. J. Zagenczyk, S. L. D. Restubog, C. Kiewitz, K. Kiazad, and R. L. Tang, "Psychological contracts as a mediator between Machiavellianism and employee citizenship and deviant behaviors," *Journal of Management*, vol. 40, no. 4, pp. 1098-1122, 2014.
- [28] International Center for Academic Integrity, "Facts and Statistics," Retrieved: <https://academicintegrity.org/resources/facts-and-statistics>. [Accessed August 10, 2020], 2020.
- [29] D. L. McCabe, L. K. Treviño, and K. D. Butterfield, "Cheating in academic institutions: A decade of research," *Ethics & Behavior*, vol. 11, no. 3, pp. 219-232, 2001. https://doi.org/10.1207/S15327019EB1103_2
- [30] D. L. McCabe, K. Butterfield, and L. K. Trevino, *Cheating in college: Why students do it and what educators can do about it*. Baltimore, Maryland: John Hopkins University Press, 2012.
- [31] M. Borba, *Building moral intelligence: The seven essential virtues that teach kids to do the right thing*. San Francisco: Jossey-Bass, 2001.
- [32] M. Plecha, "The impact of motivation, student-peer, and student-faculty interaction on academic self-confidence," presented at the Annual Meeting of the American Educational Research Association New Orleans, Louisiana, 2002.

- [33] S. J. Akeley and A. N. Miller, "The effects of instructor fear appeals and moral appeals on cheating-related attitudes and behavior of university students," *Ethics & Behavior*, vol. 22, no. 3, pp. 196-207, 2012. <https://doi.org/10.1080/10508422.2012.659603>
- [34] M. E. Muñoz and I. Garcia, "The dark triad and attitudes toward academic cheating," *Journal of Scientific Psychology*, vol. 46, pp. 46-51, 2017.
- [35] J. M. Stephens, "Just cheating? Motivation, morality and academic (mis) conduct among adolescents," Doctoral Dissertation. Stanford University, California., 2004.
- [36] R. Volpe, L. Davidson, and M. C. Bell, "Faculty attitudes and behaviors concerning student cheating," *College Student Journal*, vol. 42, no. 1, pp. 164-175, 2008.
- [37] K. L. Collison, S. South, C. E. Vize, J. D. Miller, and D. R. Lynam, "Exploring gender differences in Machiavellianism using a measurement invariance approach," *Journal of Personality Assessment*, vol. 103, no. 2, pp. 258-266, 2021. <https://doi.org/10.1080/00223891.2020.1729773>
- [38] A. Láng, "Perceived childhood emotional parentification is associated with Machiavellianism in men but not in women," *Polish Psychological Bulletin*, vol. 47, no. 1, pp. 136-140, 2016. <https://doi.org/10.1515/ppb-2016-0015>
- [39] T. M. Williams and O. A. Aremu, "Some correlates of academic dishonesty among undergraduates in Ogun State," *Summa Psicológica UST*, vol. 16, no. 2, pp. 51–59, 2019. <https://doi.org/10.18774/0719-448.x2019.16.429>
- [40] H. M. Nguyen and D. Goto, "Unmasking academic cheating behavior in the artificial intelligence era: Evidence from Vietnamese undergraduates," *Education and Information Technologies*, vol. 29, no. 12, pp. 15999-16025, 2024. <https://doi.org/10.1007/s10639-024-12495-4>
- [41] A. E. Jordan, "College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy," *Ethics & Behavior*, vol. 11, no. 3, pp. 233-247, 2001. https://doi.org/10.1207/S15327019EB1103_3
- [42] V. K. Lim and S. K. See, "Attitudes toward, and intentions to report, academic cheating among students in Singapore," *Ethics & Behavior*, vol. 11, no. 3, pp. 261-274, 2001.
- [43] H. Asikainen and D. Gijbels, "Do students develop towards more deep approaches to learning during studies? A systematic review on the development of students' deep and surface approaches to learning in higher education," *Educational Psychology Review*, vol. 29, pp. 205-234, 2017. <https://doi.org/10.1007/s10648-017-9406-6>