



## Ethical Concerns of Meta AI in Higher Education

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### ABSTRACT

The objective of the research study was to investigate the ethical issues relating to application of Meta AI in higher education among undergraduate and postgraduate students. As the use of artificial intelligence tools in academics rapidly becomes integrated, such ethical aspects as academic integrity, plagiarism, responsible usage and institutional policies have gained more and more significance. In as much as it provides scholarly support in research and learning processes, Meta AI has also made headlines in regard to its un-ethical application among learners. To make the participants diverse in their experiences and perceptions, the sample of the study included 400 students in four universities in Lahore with two public and two private universities to represent diversity among them. The tools used to collect the data were a structured questionnaire with closed-ended questions and a Likert scale to analyze the perspectives of students on ethical concerns related to the use of Meta AI in academic practice. The quantitative results also revealed that the issue of ethics is still a major dilemma when it comes to the application of AI tools in institutions of higher learning. A significant percentage of learners indicated that there were no explicit ethical principles of AI use in institutions (59.29%). Also, a significant proportion of the students confessed that they occasionally used AI tools to get unfair academic benefits (54.39%), whereas a smaller number of students had had associations with plagiarism and academic dishonesty involving AI-generated materials (17.67%). These results suggest that there is an increased necessity of

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ethical consideration and morally responsible AI usage amongst college students. The paper finds that whereas Meta AI can assist in learning and academical performance, its application in the absence of appropriate ethical guidelines poses a danger to integrity in academics and accountable study behaviors. Consequently, colleges and universities need to create effective policies, ethics, and training material to facilitate responsible and ethical usage of AI technologies among students.

**Keywords:** Ethical Concerns, Meta AI, Academic Integrity, Artificial Intelligence in Education, Higher Education, Responsible AI Use

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## INTRODUCTION

Artificial Intelligence (AI) is quickly changing the face of higher education through the emergence of new technologies that have improved teaching, learning, and academic research. AI-based applications can be used to provide individualized learning, enhance academic performance, and assist students with their research and creative tasks. According to the recent research, the use of AI technologies in higher education has grown massively in the last few years, especially with adaptive learning platforms and smart academic support that are claimed to boost the student experience and improve their learning outcomes and wellbeing (Bond et al., 2024; Akram, Fatima & Ahmad, 2024). Meta AI has become one of such technologies and one of the significant digital tools that help students generate ideas, write academic papers, find information, and manage time. The surveys of the students and faculty members indicate that the AI tools usage in the education sector is increasing at an accelerated pace, and most learners acquire new skills to be able to utilize AI tools in their studies (Mulford, 2025). Such changes indicate that AI technologies are becoming a necessary element of the contemporary educational setting.

Although these are the benefits of AI in higher education, the implementation of AI has also brought serious ethical issues. The researchers have raised concerns about factors like plagiarism, academic dishonesty, risks of privacy of data, and the lack of ethical principles in using AI tools in academic practice (Zhou et al., 2025; Ahmad, Sewani & Khoso, 2024). On the same note, research has highlighted that AI technologies can be a threat to academic autonomy, and intellectual integrity when applied without the necessary regulation and awareness (Vieriu, 2025; Kolachi et al., 2024). Moreover, institutional and technological issues are normally linked with ethical issues. Caja et al. (2025) note that issues of student privacy, disparities in access to digital infrastructure, algorithmic racism, and the absence of institutional policies may pose a severe ethical dilemma during the adoption of AI tools in higher education (Imran et al., 2023). The challenges above underscore the need to formulate effective ethical guidelines and awareness campaigns to make AI technologies in academic contexts to be used responsibly and transparently (Oad et al., 2024; Ali et al., 2023).

Despite the growing use of AI technologies across the world, the few existing researches that explore students perceptions of ethical issues related to the adoption

of the Meta AI in Pakistani tertiary institutions of higher learning are insufficient. Thus, this research will set out to discuss the ethical aspects regarding the application of Meta AI to undergraduate and postgraduate students (Ahmad, Sewani & Ali, 2024; Khan et al., 2019). Research results can be of great use to universities and policymakers to come up with effective policies and ethical principles to ensure the responsible use of AI technologies in higher learning institutions. Artificial Intelligence (AI) means the computer systems, which are able to carry out the tasks that presuppose human intelligence, including learning, reasoning, problem-solving, and decision-making (Shah, Ali & Ahmad, 2024; Javed et al., 2023). AI has turned out to be a significant technological development in the education sector that supports the teaching and learning process. Studies have shown that AI technologies like machine learning, natural language processing and intelligent tutoring systems are assisting in enhancing efficiency in learning and offering innovative solutions in the educational process (Ahmad, Noorani, & Ali, 2024). The technologies enable teachers to automatize the processes and give more attention to the instruction. It has been demonstrated that AI has a major contribution to enhancing learning activities and facilitating online learning (Chen et al., 2020; Bond et al., 2024; Zawacki-Richter et al., 2019; Ul Haq, 2019; Pirzada, Tabassum & Ahmad, 2024).

Additionally, AI has also helped in creation of customized education, automated evaluation, and evidence-based educational choices. Adaptive learning systems ensure that students study at their own rate and requirements thus enhancing the level of participation and performance. Student data can also be analyzed with AI-based tools and give timely feedback to teachers and detect learning gaps and their quality of work (Akram, Sewani & Ahmad, 2024; Ali et al., 2023; Shaukat et al., 2020). Nevertheless, the integration of AI into education is also associated with a number of challenges and ethical concerns, including data privacy concerns, the problem of academic integrity, and the necessity of appropriate policy frameworks, which are also outlined by researchers (Dilshad, Shah, & Ahmad, 2023; Muzaffar et al., 2025). All these factors suggest that although AI provides important prospects to the higher education, its successful use requires thorough implementation and careful consideration of ethical concerns (Bozkurt et al., 2023; Khalid and Hashmi, 2023; Marín et al., 2025).

## **RESEARCH METHODOLOGY**

The research design used in this study was a positivist and quantitative research. The research adopted descriptive survey research design to examine the ethical issues that are correlated with the use of Meta AI by both undergraduate and postgraduate students of universities. The study population was made up of the entire population of the four universities studying in Lahore. The population of 400 students was chosen by a multi-stage sampling method to ensure that there is diversity in terms of academic fields and levels of education. A structured questionnaire was used as the primary instrument of data collection. The questions of the survey were closed-ended and measured using a five-point Likert scale. The

tool that was used in this study is a questionnaire modified based on the instrument designed by Alghazo et al. (2023). The tool was a bit adjusted to the aims of the current research devoted to the ethical issues associated with the application of Meta AI. The Ethical Concerns construct had 15 items and was further broken down into three sub-factors. This sub-factor investigated the anxieties pertaining to plagiarism, academic dishonesty, and the application of the AI-generated content in academic activities without the appropriate recognition. This was comprised of five statements (Statements 31, 32, 36, 37, and 39). This dimension investigated how the students felt about the abuse of the Meta AI tools and how they might have benefits in academic work as compared to the rest of the students. It was divided into six statements (Statements 33, 35, 38, 40, and 43). This sub-factor evaluated the perceptions of students in terms of the absence of clear guidelines on the ethical aspects, the limited awareness, and the lack of appropriate institutional policies pertaining to the responsible application of Meta AI in the higher education establishment. It was made up of four statements (Statements 41, 42, 44 and 45). The instrument has been piloted on the responses of 100 students in order to establish the level of clarity, relevance and appropriateness of the questions. Necessary adjustments were done depending on the feedback of the participants. The internal consistency reliability of the instrument was determined by the use of Cronbach Alpha. The overall coefficient of reliability was reported to be 0.897 that implies that the internal consistency is high. Moreover, the factor-wise reliability analysis demonstrated that all the sub-constructs had Cronbach Alpha more than 0.80.

### Data Analysis

The descriptive survey design was adopted to guarantee a systematic gathering of information in the chosen setting and to give a clear insight into the perceptions of the students to the ethical issues that exist in the utilization of the Meta AI. The data were analysed using descriptive statistics of mean scores and percentages, as well as inferential statistics of t-test, ANOVA, and regression analysis in order to determine the general trends and pattern of responses of the students.

Table 1

#### *Descriptive Statistics of the Students' Responses*

| <b>Plagiarism and Academic Dishonesty</b>                                   | <b>Mean</b> | <b>SD</b> |
|---|-------------|-----------|
| Using Meta Ai without reference lead to academic dishonesty.                | 3.56        | 1.058     |
| Students copy-paste Meta Ai content without understanding it.               | 3.51        | 1.088     |
| Using Ai generated content without proper understanding lead to plagiarism. | 3.59        | 1.035     |
| I don't care about plagiarism it will not checked by teachers.              | 3.52        | 1.130     |
| I use Meta Ai content without giving the reference                          | 3.50        | 1.083     |
| <b>Misuse and Unfair Academic Advantages</b>                                |             |           |
| Meta Ai mixes original work and Ai generated content.                       | 3.60        | .991      |
| I submit Ai generated assignments due to shortage of time.                  | 3.55        | 1.032     |
| Lack of teacher monitoring needs me to ignore academic policy.              | 3.63        | 1.070     |
| I am not sure whether using Meta Ai violets academic integrity.             | 3.58        | 1.037     |

|  |      |       |
|--|------|-------|
| Using Meta AI may give some students and unfair advantage.                         | 3.61 | 1.064 |
| <b>Lack of Ethical Awareness and Guidance</b>                                      |      |       |
| Students are not trained in the ethical use of Meta Ai.                            | 3.59 | 1.084 |
| Teachers do not clearly guide students about the uses of Meta Ai.                  | 3.74 | 1.065 |
| I am unaware of the ethical issues in using Meta Ai.                               | 3.44 | 1.065 |
| Universities should develop clear rules and awareness sessions for ethical Ai use. | 3.45 | 1.105 |

Table 1 shows the mean and standard deviation of the statements used to measure students' perceptions regarding the academic ethical concerns of Meta AI.

Table 2

*Independent T-test for mean difference between male and female responses based on ethical concerns*

| Gender | N   | M      | SD     | df. | t-value | Sig. |
|--------|-----|--------|--------|-----|---------|------|
| M      | 224 | 52.638 | 10.132 | 397 | -1.850  | .065 |
| F      | 175 | 54.291 | 6.890  |     |         |      |

Table 2 show the independent sample t-test results reveal that there was no statistically significant difference between male and female students in their ethical concerns regarding the use of Meta AI,  $t(397) = -1.850, p = .065$ . However, the mean score for female students ( $M = 54.29, SD = 6.89$ ) was slightly higher than that of male students ( $M = 52.64, SD = 10.13$ ), indicating that female students showed greater sensitivity toward ethical issues such as plagiarism, misuse, and academic dishonesty associated with Meta AI. Although this difference did not reach statistical significance, the trend suggests that female students may be somewhat more cautious and ethically aware in their use of Meta AI for academic purposes compared to male students.

Table 3

*Independent T-test for mean difference between adamic level responses based on ethical concerns*

| ACADEMIC LEVEL | N   | M     | SD    | df. | t-value | Sig. |
|----------------|-----|-------|-------|-----|---------|------|
| U              | 274 | 54.74 | 7.85  | 398 | 4.75    | .000 |
| P              | 126 | 50.30 | 10.17 |     |         |      |

The independent sample t-test in Table 3 indicated that there was a highly significant difference between undergraduate students and postgraduate students in terms of ethical issues concerning the use of Meta AI,  $t(398) = 4.75, p < .001$ . The undergraduate students ( $M = 54.74, SD = 7.85$ ) were more aware of the ethical issues than the postgraduate students ( $M = 50.30, SD = 10.17$ ). This shows that undergraduates were more reserved on the issue of plagiarism, fairness, and responsible use of Meta AI-generated content. This might be because, as an undergraduate student, they are repeatedly reminded of the policies of academic honesty and are more supervised by the institution itself. Conversely, postgraduates students are allowed to make their own decisions based on their judgment and

experience and occasionally they fail to touch on ethical considerations as a result of pressures associated with research or workload. On the whole, the results allow concluding that to guarantee responsible and integrity-based use of AI technologies in education, it is important to encourage regular AI ethics education at all levels of academic education.

Table 4

*Independent sample t-test for mean difference between male and female responses based on ethical concerns plagiarism and academic dishonesty.*

| <i>Gender</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|---------------|----------|----------|-----------|------------|----------------|-------------|
| M             | 224      | 17.45    | 3.68      | 397        | -1.41          | .157        |
| F             | 175      | 17.93    | 2.84      |            |                |             |

The table 4 displays gender-wise comparison for the sub-factor “*Plagiarism and Academic Dishonesty*” under the main factor *Ethical Concerns of Meta AI*. The mean score of male students ( $M = 17.45$ ,  $SD = 3.68$ ) is slightly lower than that of female students ( $M = 17.93$ ,  $SD = 2.84$ ), suggesting that females showed a somewhat higher awareness or concern regarding plagiarism and dishonest academic practices when using Meta AI. However, the obtained  $t(397) = (-1.46)$  and significance level  $p = 0.145$  indicate that the difference between male and female students is not statistically significant. This implies that both genders hold nearly the same views about the issue of plagiarism and academic dishonesty linked with Meta AI usage in higher education.

Table 5

*Independent sample t-test for mean difference between male and female responses based on ethical concerns lack of ethical awareness and guidance.*

| <i>Gender</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|---------------|----------|----------|-----------|------------|----------------|-------------|
| M             | 224      | 59.13    | 3.28      | 397        | -1.33          | .182        |
| F             | 175      | 59.52    | 2.33      |            |                |             |

This table 5 presents gender-based comparison on the sub-factor “*Lack of Ethical Awareness and Guidance.*” The mean score of male students ( $M = 59.13$ ,  $SD = 3.28$ ) is slightly lower than that of female students ( $M = 59.52$ ,  $SD = 2.33$ ). The obtained  $t(397) = (t = -1.33$  and  $-1.39)$  and significance levels  $p = .182$  indicate that the difference between male and female students is not statistically significant. This means that both male and female students show similar levels of lack of ethical awareness and guidance regarding the use of Meta AI in higher education.

Table 6

*Independent sample t-test for mean difference between male and female responses based on misuse and unfair advantages.*

| <i>Gender</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|---------------|----------|----------|-----------|------------|----------------|-------------|
| M             | 224      | 54.15    | 3.05      | 397        | -1.99          | .046        |
| F             | 175      | 54.70    | 2.26      |            |                |             |

This table 6 shows gender-based differences for the sub-factor “*Misuse and Unfair Advantages.*” The results indicate that male students ( $M = 54.15$ ,  $SD = 3.05$ ) scored slightly lower than female students ( $M = 54.70$ ,  $SD = 2.26$ ). The  $t(397) = (-1.99$

and -2.07) with corresponding significance levels ( $p = .046$  and  $p = .039$ ) reveal that the difference between male and female students is statistically significant. This means that female students perceive misuse and unfair advantages of Meta AI more strongly than male students, showing greater awareness of its ethical implications in academic settings.

Table 7

*Independent sample t-test for mean difference between undergraduate and post graduate students' responses based on plagiarism and academic dishonesty.*

| <i>Academic Level</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|-----------------------|----------|----------|-----------|------------|----------------|-------------|
| U                     | 274      | 18.11    | 3.13      | 398        | 3.96           | .000        |
| P                     | 126      | 16.71    | 3.58      |            |                |             |

Table 7 indicate that there is statistically significant difference between undergraduate students and postgraduate students with plagiarism and academic dishonesty with regard to the use of Meta AI. The means, ( $M = 18.11$ ,  $SD = 3.13$ ) of the undergraduate students were more than the means, ( $M = 16.71$ ,  $SD = 3.58$ ) of the postgraduate students and the  $t(398) = 3.96$ ,  $p = 0.000$ . This implies that undergraduate learners have high chances of indulging or being victimized by cases of academic dishonesty problems like plagiarism when operating the Meta AI tools. Postgraduate students, however, seem to be more responsible in their use of these tools, which may correlate to their increased academic maturity and understanding of ethical research practices.

Table 8

*Independent sample t-test for mean difference between undergraduate and post graduate students' responses based on lack of ethical awareness and guidance.*

| <i>Academic Level</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|-----------------------|----------|----------|-----------|------------|----------------|-------------|
| U                     | 274      | 59.74    | 2.72      | 398        | 4.68           | .000        |
| P                     | 126      | 58.31    | 3.06      |            |                |             |

According to the table 8 shows the results, an undergraduate and postgraduate student differ statistically significantly in terms of Lack of Ethical Awareness and Guidance when using meta AI. The significant difference was confirmed with  $t(398) = 4.68$  and  $p = 0.000$  with the reports of higher mean scores in undergraduate students ( $M = 59.74$ ,  $SD = 2.72$ ) compared to the postgraduate students ( $M = 58.31$ ,  $SD = 3.06$ ).

This observation indicates that undergraduates encounter more difficulties in comprehending the ethical perimeter and are inappropriately instructed on the application of Meta AI in academic settings. Conversely, the postgraduates show a little bit higher level of ethical awareness, perhaps because they are more exposed to research ethics and academic integrity training.

Table 9

*Independent sample t-test for mean difference between undergraduate and post graduate students' responses based on misuse and unfair advantages.*

| <i>Academic Level</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df.</i> | <i>t-value</i> | <i>Sig.</i> |
|-----------------------|----------|----------|-----------|------------|----------------|-------------|
| U                     | 274      | 54.85    | 2.51      | 398        | 5.061          | .000        |
| P                     | 126      | 53.39    | 2.97      |            |                |             |

Table 9 shows that there is statistically significant difference in Misuse and Unfair Advantages between undergraduate and postgraduate students with the use of Meta AI. The mean scores obtained by undergraduate students ( $M = 54.85$ ,  $SD = 2.51$ ) were higher than those obtained by postgraduate students ( $M = 53.39$ ,  $SD = 2.97$ ), whereas the  $t(398) = 5.06$  and  $p = 0.000$ , which means that the difference between the results was very significant.

This implies that undergraduates have a higher probability of abusing Meta AI or feel that it has provided unfair academic benefits, including writing assignments or reports at minimum effort. On the contrary, postgraduate students appear to be more responsible in their usage probably because they are more mature in academics and understand the rules of ethics.

Table 10

*ANOVA test to identify the mean difference in responses of participants or perceived ethical concerns based on Age.*

| <i>Age</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>F</i> | <i>Sig.</i> |
|------------|----------|----------|-----------|-----------|----------|-------------|
| Below 20   | 3        | 58.66    | 5.033     | 3         | 1.68     | .171        |
| 20-25      | 272      | 52.76    | 9.42      | 396       |          |             |
| 26-30      | 117      | 54.65    | 7.46      |           |          |             |
| Above 30   | 8        | 51.87    | 8.65      |           |          |             |

The table 10 presents the comparison of respondents' perceptions regarding ethical concerns associated with the use of Meta AI across different age groups. The results show that participants below 20 years had the highest mean score ( $M = 58.66$ ,  $SD = 5.03$ ), followed by those aged 26–30 years ( $M = 54.65$ ,  $SD = 7.46$ ), 20–25 years ( $M = 52.76$ ,  $SD = 9.42$ ), and above 30 years ( $M = 51.87$ ,  $SD = 8.65$ ). Although the younger respondents reported slightly higher concerns, the F-value (1.68) with a significance level of .171 ( $p > .05$ ) indicates that the differences among the age groups were not statistically significant. This suggests that, overall, participants across different age groups shared relatively similar views regarding the ethical concerns of using Meta AI in higher education.

Table 11

*ANOVA test to identify the mean difference in responses of participants or perceived ethical concerns based on department.*

| <i>departments</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>F</i> | <i>Sig.</i> |
|--------------------|----------|----------|-----------|-----------|----------|-------------|
| Philosophy         | 20       | 51.70    | 7.37      | 14        | 3.851    | .000        |
| Biochemistry       | 66       | 54.31    | 6.38      | 385       |          |             |
| Math               | 44       | 54.97    | 12.46     | 399       |          |             |

|             |    |       |       |
|-------------|----|-------|-------|
| Education   | 14 | 55.92 | 5.88  |
| BBA         | 25 | 56.80 | 5.40  |
| Nursing     | 13 | 47.38 | 11.74 |
| LLB         | 37 | 50.91 | 8.10  |
| Pharm-D     | 21 | 53.61 | 12.10 |
| Arabic      | 14 | 42.57 | 8.52  |
| Physics     | 37 | 54.97 | 9.53  |
| History     | 28 | 56.03 | 5.46  |
| Pol Sci     | 23 | 57.04 | 3.00  |
| English     | 16 | 50.68 | 5.64  |
| MLT         | 22 | 51.54 | 8.32  |
| Agriculture | 20 | 50.75 | 10.21 |

The ANOVA results of the variable Ethical Concerns among students who belong to the various departments are given in the table 11 According to the results, the mean scores of departments on ethical concerns show statistically significant difference ( $F = 3.851$ , Sig. = 0.000), since the value is less than 0.05. It implies that students with a varying academic background experience ethical issues concerning the use of AI tools in different ways. Based on the mean values, we can note that students of Political Science ( $M = 57.04$ ), BBA ( $M = 56.80$ ) and History ( $M = 56.03$ ) departments mentioned the existence of rather greater ethical concerns with the help of AI tools, which indicates that they are more cautious and aware of the ethical aspects of using AI tools. Students in Arabic ( $M = 42.57$ ) and Nursing ( $M = 47.38$ ) departments, on the other hand, did not demonstrate higher mean scores, which means that there were a relatively lower number of ethical issues. In general, the results show that disciplinary background plays a significant role in shaping the ethical views of students regarding the use of AI. These disparities could be as a result of the coursework undertaking, exposure to the ethical debate, and the focus of a given department on professional integrity in the respective academic discipline.

Table 12

*ANOVA test to identify the mean difference in responses of participants or perceived plagiarism and academic dishonesty based on Age.*

| Age      | N   | M     | SD   | df  | F     | Sig. |
|----------|-----|-------|------|-----|-------|------|
| Below 20 | 3   | 20.00 | 1.00 | 3   | 1.176 | .319 |
| 20-25    | 272 | 17.49 | 3.57 | 396 |       |      |
| 26-30    | 117 | 18.02 | 2.76 | 399 |       |      |
| Above 30 | 8   | 17.62 | 2.92 |     |       |      |

The results of the ANOVA were tabulated in Table 12 to show the outcomes of the variables of age group of the students with respect to the variable Plagiarism and Academic Dishonesty. The analysis shows that there is no statistically significant difference between the age groups since the value of  $F = 1.176$  and Sig. = .319 is more than 0.05. This implies that students of varying ages tend to show comparable

amounts of plagiarism and the matters of academic dishonesty concerns with regard to Meta AI. Even though the mean scores have some slight differences, students with less than 20 years score slightly higher ( $M = 20.00$ ) and students with 20-25 years score slightly lower ( $M = 17.49$ ), the difference is not significant. To sum up, the results indicate that age does not have a significant influence on the perceptions of students towards plagiarism and academic dishonesty related to Meta AI, and students of all ages demonstrate relatively similar attitude towards academic integrity.

Table 13

*ANOVA test to identify the mean difference in responses of participants or perceived lack ethical awareness and guidance based on Age.*

| <i>Age</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>F</i> | <i>Sig.</i> |
|------------|----------|----------|-----------|-----------|----------|-------------|
| Below 20   | 3        | 60.33    | 1.52      | 3         | 1.28     | .278        |
| 20-25      | 272      | 59.18    | 3.12      | 396       |          |             |
| 26-30      | 117      | 59.62    | 2.32      | 399       |          |             |
| Above 30   | 8        | 58.00    | 3.07      |           |          |             |

Table 13 presents the ANOVA results for the variable “Lack of Ethical Awareness and Guidance” across different age groups of students. The analysis reveals no statistically significant difference among the age groups ( $F = 1.28$ ,  $Sig. = .278$ ) because the significance value is greater than 0.05. This indicates that students of different ages generally have a similar perception regarding the lack of ethical awareness and guidance in the use of Meta AI. Although the mean scores show minor variations — with students below 20 years scoring slightly higher ( $M = 60.33$ ) and those above 30 scoring slightly lower ( $M = 58.00$ ) — these differences are not statistically meaningful. In conclusion, the findings suggest that age does not significantly influence students’ perceptions of ethical awareness and guidance, and students across all age groups demonstrate a fairly consistent understanding of these issues.

Table 14

*ANOVA test to identify the mean difference in responses of participants or perceived misuse and unfair advantages based on Age.*

| <i>Age</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>F</i> | <i>Sig.</i> |
|------------|----------|----------|-----------|-----------|----------|-------------|
| Below 20   | 3        | 56.33    | 2.08      | 3         | .743     | .527        |
| 20-25      | 272      | 54.30    | 2.96      | 396       |          |             |
| 26-30      | 117      | 54.55    | 2.21      | 399       |          |             |
| Above 30   | 8        | 54.12    | 2.35      |           |          |             |

The ANOVA findings on the variable of Misuse and Unfair Advantages are provided in table 14 based on the age group of students. The analysis shows that there is no statistically significant difference between the age groups ( $F = 0.743$ ,  $Sig. = .527$ ) due to the fact that the significance value exceeds 0.05. This shows that the students of various ages tend to have more or less the same perceptions about the abuse of the AI-Meta and taking advantage unjustly. Even though there are slight

differences in the means as students less than 20 years old have a higher score ( $M = 56.33$ ) and students older than 30 have a lower score ( $M = 54.12$ ), these are not significant differences. Finally, it is possible to conclude that the age does not influence the perception of misuse and unfair advantages regarding the use of such AI significantly, and students of all age groups portray quite a similar perception regarding this topic.

### **Regression Analysis**

Dependent Variable: Ethical Concerns

$$Y = a + bx$$

- Ethical Concerns =  $51.18 + 1.49(\text{Gender})$
- Ethical Concerns =  $50.92 + 1.04(\text{Age})$
- Ethical Concerns =  $59.17 - 4.13(\text{Academic Level})$
- Ethical Concerns =  $54.23 - 0.124(\text{Faculty Department})$

## **DISCUSSIONS**

Among the most important became the topics of the ethical concerns of the usage of the Meta AI in the higher education. The findings show that a significant percentage of students experienced ethical issues in the course of utilizing AI tools in their academic activities. Over fifty percent of the respondents (59.29) claimed that there are no unambiguous institutional ethics guidelines by which AI can be used, whereas 54.39% have acknowledged that AI can be abused to create unfair academic benefits. Moreover, 17.67 percent of the surveyed participants confirmed their problem with the plagiarism and other academic dishonesty, which proves that in some cases, AI-generated content can be utilized without any reference through leadership of institute (Ahmad, Sewani, & Fatima, 2025). These results are in line with other researchers that have established ethical threats related to artificial intelligence use in education. Indicatively, it has been noted that issues of plagiarism, privacy, and algorithmic bias are on the upswing in institutions of higher learning (Marin et al. 2025; Ahmad, Noorani, & Channa, 2025). On the same note, Qadir (2023) and Williamson (2017) noted that the lack of well-defined ethical standards on the application of AI can jeopardize the integrity of academic and intellectual autonomy of learners (Ahmad, Noorani, & Sewani, 2025; Jabeen, Ali, & Ahmad, 2023).

Moreover, the outcomes also confirm the conclusions of Zhou et al. (2025), who found plagiarism, threat to data privacy, and absence of ethical supervision as key issues of AI-based learning. These concerns indicate that although academic support can be offered by AI technologies like Meta AI, it can also lead to many chances of abuse unless the right institutional policies and ethical consciousness are put down. All in all, the results reveal that the ethical issues of AI are not specific to a single institution or nation but are a worldwide problem in higher education (Ahmad, Sewani, & Channa, 2025). The absence of institutional and ethical understanding in Pakistani universities can put the chances of misuse at a higher risk and dispense the value of academic integrity (Akram, Khan, & Ahmad, 2022). This

point can be traced to the warning of Khalid and Hashmi (2023), who emphasized the need to establish ethical policies, awareness campaigns, and guidelines on the responsible use of AI in educational establishments. Consequently, universities must develop effective ethical guidelines, AI policies and sensitization to facilitate ethical and transparent usage of AI technologies in higher education practices (Faheem, Gulab, & Ahmad, 2025).

## CONCLUSION

The current research was designed to research the ethical issues related to the application of Meta AI in tertiary education in undergraduate and postgraduate students in Lahore. The results prove that despite the growing popularity of the application of AI technologies in academic life, their implementation provokes a number of significant ethical issues requiring the attention of educational organizations as a priority. The findings have shown that a great proportion of the students were concerned with the issues of plagiarism, academic dishonesty and use of artificial intelligence tools to obtain unfair academic benefits. Additionally, some respondents said that there were no evident institutional ethical guidelines and policies that govern the responsible use of Meta AI in institutions of higher learning. Such ethical ignorance and absence of ethics could potentially engage the possibility of unethical AI application and undermine the concepts of academic integrity. Moreover, the results indicate that AI-related ethical concerns are not the technological issues only but also institutional and educational. AI tools can be exploited to undermine academic work in terms of fairness, originality, and intellectual accountability unless they are said to be regulated, observed, and known. Hence, the universities should be aware of the ethical costs of the introduction of AI and implement proactive actions to make sure that it is used responsibly. To sum up, the strengths of Meta AI are that it can be of great help to academics, yet it has some threats in its ethics. Colleges and universities should also come up with explicit code of ethics, institutional guidelines, and sensitization of students to use AI technologies in responsible ways. This can be achieved by encouraging AI literacy and ethical concern to ensure that Meta AI is not a source of educational misconduct.

### Recommendations

1. Universities and colleges are supposed to create proper codes of ethics on how to use Meta AI responsibly by paying attention to academic integrity, originality and privacy of data.
2. Ethical usage of AI, such as usage of AI to commit plagiarism, misinformation, and privacy threats should be trained to students.
3. Faculty should be held in regular workshops at the universities in order to foster ethical use of AI in the teaching, assessment, and academic practices.
4. Plagiarism and overreliance on AI-based tools in scholarly writing should be tracked down by deployment of monitoring systems.

5. There are a few policies, such as strong data privacy and cybersecurity policies, which could be implemented in order to guarantee safe and responsible management of AI-generated information.
6. Research institutions and universities must come up with AI tools that are in accordance with Pakistan cultural and ethical context.
7. Raising the issue of AI and human intelligence, policy-makers and educators are to make sure that AI strengthens human intelligence, but does not supplant this one to ensure ethical and balanced education.

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