

Bridging the Ethics Gap: Assessing Knowledge, Attitudes, and Practices of Research Teachers

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DOI: <https://doi.org/10.47772/IJRISS.2026.100500080>

Received: 26 April 2026; Accepted: 01 May 2026; Published: 23 May 2026

ABSTRACT

Responsible conduct of research (RCR) underpins academic integrity. Knowledge, attitudes, and practices (KAP) of research teachers regarding research ethics remain underexplored outside medical and scientific fields. Limited empirical evidence exists on how research teachers in junior high school, senior high school, and tertiary education understand and operationalize ethical principles, including informed consent, confidentiality, and protection of minors. This study assessed the level of knowledge, attitudes, and practices of research teachers regarding research ethics. A mixed-method research design was employed, and involved research teachers (N=91) from junior high schools (n₁=33), senior high schools (n₂=34, and 24 tertiary institutions in Metro Manila. An adapted 30-item KAP questionnaire and five open-ended qualitative questions were administered. Quantitative data were analyzed using a mixed-methods approach, wherein quantitative data were analyzed descriptively. Qualitative data underwent reflexive thematic analysis. Quantitative findings revealed high knowledge of research ethics principles (mean range: 4.56–4.90 out of 5). Confidentiality scored highest (M=4.90, SD=0.34). Minor assent procedures scored lowest (M=4.56, SD=0.69). Attitudes were strongly positive toward mandatory ethics training (M=4.85, SD=0.39) and ethical review (M=4.76, SD=0.50). Gaps emerged: 63.7% suspected academic dishonesty, 61.5% intervened in plagiarism cases, 72.5% struggled with workload-ethics balance, 93.4% reported past research shaped their teaching. Qualitative identified four major themes: (1) role of ethical review process, (2) recommendations for training, (3) significant ethical challenges including improper AI use (~66%), data privacy (>50%), plagiarism and fabrication (>50%), and informed consent violations (~45%), and (4) ethical concerns while supervising students. Teachers preferred restorative approaches over punitive measures. Despite high knowledge and positive attitudes, significant KAP gaps persist. There is an urgent need for contextualized ethics training, periodic refresher courses, institutional monitoring, and clear AI use policies.

Keywords: research ethics, research knowledge-attitude-practices (KAP), ethical challenges, research teachers, ethical review process

INTRODUCTION

In academic and professional settings, adherence to research ethics is essential in maintaining public trust and ensuring that knowledge production contributes meaningfully and responsibly to society. (Resnik, D. 2024) As the literature has articulated, public confidence in the scientific enterprise rests in large part on public trust in the integrities of individual researchers," a trust that will endure only if the scientific community devotes itself to exemplifying the values associated with ethical scientific conduct" (Spicker, 2023)(Institute of Medicine & National Research Council, 2002). While educators generally demonstrate awareness of ethical standards, there are inconsistencies between their knowledge and actual practices, with studies emphasizing that ethical competence requires continuous training, structured instruction, and institutional support (Van Stekelenburg et al., 2024; Karakuş et al., 2025; Mohamed, 2025; Gurr et al., 2024). Hence, existing studies have not sufficiently examined the combined dimensions of knowledge, attitudes, and practices (KAP) of research ethics among research teachers, particularly within specific educational contexts where cultural and institutional factors may influence ethical behavior. In response to this gap, this study aims to assess research teachers' knowledge, attitudes, and practices regarding research ethics, providing a rationale for developing targeted interventions,

strengthening policy implementation, and improving ethics training programs in educational institutions.

This KAP framework holds significant potential application in the educational setting, examining how educators understand and implement ethical principles in teaching research to their students. (Venkataraman et al., 2025). This framework holds significant potential for examining how educators understand and implement ethical principles in teaching research to their students. Recent studies have validated the KAP survey approach specifically in faculty development contexts, demonstrating strong reliability in assessing educator readiness and revealing a critical finding: knowledge does not consistently translate into practice (Venkataraman et al., 2025). This knowledge-practice gap is particularly consequential in research ethics education, where educators are expected not only to possess ethical knowledge but also to model and transmit ethical practices to their students. The application of KAP in educational research is further supported by foundational arguments that educational inquiry is grounded in the moral purposes of teaching and learning (Sikes et al., 2003). Within K-12 school systems, KAP assessments have successfully identified discrepancies between teachers' perceptions and students' actual behavior regarding ethical information use, demonstrating the framework's feasibility in basic education contexts (Ballard et al., 2009). Moreover, scholars emphasize that the attitudinal component of KAP may be a prerequisite for applying learned ethical knowledge, suggesting that positive attitudes toward research ethics must be cultivated alongside factual knowledge to achieve meaningful practice change (Kalichman & Plemmons, 2015). Together, these studies support the application of the KAP framework to investigate research ethics knowledge, attitudes, and practices among educators across junior high school, senior high school, and tertiary levels. Given that research ethics exists fundamentally to protect the rights and welfare of research participants, and that both teachers and students conducting research must follow established ethical guidelines (Ghimire et al., 2022), understanding the current state of ethics in educational research is essential for identifying gaps between ethical knowledge and actual practice. Responsibility is particularly critical across different educational levels—Junior High School, Senior High School, and Tertiary Education—where research teachers play a key role in ensuring ethical research practices. Thus, assessing educators' research ethics across these levels is necessary to ensure consistent ethical instruction and strengthen the culture of ethical research in education.

Most published research has focused on researchers in medical and scientific fields. According to Ghimire et al. (2022), many researchers lack awareness of national ethical guidelines. In a study conducted by Qadri et al. (2024), findings revealed that neuroscience residents in Pakistan exhibited limited awareness of the functions of research ethics, with a concerning proportion of respondents perceiving the fabrication of research data as acceptable. Similarly, Jin et al. (2024), reported that medical professionals in China had little understanding or had zero knowledge about research integrity. Despite aforementioned studies examining research ethics among professionals in medical and scientific fields, a significant gap remains in the literature regarding educators responsible for teaching research ethics at the secondary and tertiary levels. Existing research has largely focused on disciplines such as medicine and health sciences, where ethical oversight mechanisms are more established, leaving the educational sector comparatively underexplored (Kalichman & Plemmons, 2020; Ghimire et al., 2022). Furthermore, while studies highlight the importance of ethics instruction, there is limited empirical evidence specifically examining how research teachers understand and operationalize core ethical concepts in their teaching practice (Van Stekelenburg et al., 2024; Mohamed, 2025). In addition, the literature has given insufficient attention to how educators address special protections for minors in research contexts, despite clear ethical requirements that participants under 18 years of age must obtain parental or guardian consent and retain the right to withdraw at any time (Council for International Organizations of Medical Sciences; World Health Organization). This gap is particularly concerning in school-based research, where students frequently serve as participants. Moreover, the assumption that classroom-based or low-risk research is exempt from formal ethical scrutiny remains largely unexamined, even though ethical guidelines emphasize that all research involving human participants, regardless of perceived risk, requires careful consideration of principles such as respect for persons, beneficence, and justice (American Educational Research Association, 2020; American Psychological Association).

Yet empirical evidence and theoretical discourse suggest that many research teachers demonstrate insufficient mastery of fundamental ethical principles, such as obtaining informed consent, safeguarding participants' privacy, and ensuring appropriate protections for minors and other vulnerable populations (Ghimire et al., 2022;

Jin et al., 2024).

When such deficiencies exist at the instructional level, they are inevitably transmitted to learners, thereby perpetuating gaps in ethical practice and increasing the risk of academic misconduct in future research. Moreover, the pervasive assumption that classroom-based or low-risk studies are exempt from ethical scrutiny constitutes a serious oversight, reflecting a disregard for the principle of beneficence and the protection of participants' rights. This neglect, whether unintentional or systemic, underscores a pressing need for empirical investigation. As Jin et al. (2024) assert, students form the foundational force of future research, making the cultivation of ethical awareness a non-negotiable priority. Likewise, Ghimire et al. (2022) demonstrate strong consensus among educators that research ethics should be a mandatory component of teacher training, highlighting the urgency of assessing how ethical knowledge, attitudes, and practices are currently operationalized.

The present study is situated within the critical recognition that ethical research practice must be systematically instilled in students before they engage in any research endeavor. Educators, as the primary arbiters of research instruction, bear a profound responsibility in shaping not only students' methodological competence but also their ethical discernment. By systematically examining the knowledge, attitudes, and practices of research teachers to describe how research ethics education is embedded in practice at all levels.

Specifically, the following questions are raised:

What are the prevalent perceptions of research teachers about research ethics in terms of:

- 1.1 knowledge,
- 1.2 attitude,
- 1.3 practices, and
- 1.4 personal experiences?

How do teachers describe their experiences of handling research subjects relative to:

- 2.1 role of ethical review process,
- 2.2 recommendations for training,
- 2.3 significant ethical challenges, and
- 2.4 ethical concerns while supervising students?

METHODOLOGY

Research Design

A mixed-methods approach was used in this descriptive research survey, integrating quantitative and qualitative data to comprehensively explore the knowledge, attitudes, and practices (KAP) of secondary and tertiary research teachers in both public and private schools in Metro Manila. Relationships between/among demographic variables, KAP scores, and personal experiences were explored.

Research Participants

A total of 91 research teachers from public and private schools in Metro Manila voluntarily participated. Informed consent was secured from the research teachers prior to survey administration. The Google Form included the following consent items: *"Do you agree to participate in this research survey?"* and *"Yes. I have read and understood the information above and voluntarily agree to participate."* Only respondents who

affirmed both statements were allowed to proceed with the survey. Participants were purposively selected based on the following criteria: 1. should be a permanent or contractual public and private school teacher within Metro Manila; 2. should be currently teaching or have previously taught research subjects such as Practical Research I, Practical Research II, or Inquiries, Investigation, and Immersion. These criteria ensure that quantitative data on knowledge, attitudes, practices, and experiences are described. Richer insights into their experiences and dilemmas are provided in the qualitative phase. In inviting the participants, the researchers employed three concurrent strategies, namely: (1) contacting potential respondents personally through direct messages on social media for 28 days; (2) disseminating a Google Form link via Facebook, and (3) submitting request letters to various universities and schools across Metro Manila.

Research Instrument

A 35-item questionnaire on “Research Ethics among Teachers Handling Research Subjects” was administered online via Google Forms from March 08 to April 04, 2026. The questionnaire involved collecting quantitative and qualitative data in a single tool. The survey items were adapted from a study by Ghimire et al. (2022), which examined knowledge, attitudes, and practices regarding research ethics. Modifications to the survey questionnaire included items on personal experiences in handling research subjects. Part 1 consists of 6 items that focus on participants' demographic information. Part 2 includes 10 items that measure their level of knowledge of research ethical standards (e.g., informed consent, risk minimization, and confidentiality) using a five-point Likert scale. Part 3 consists of 10 items that investigate the principles that research teachers use to guide their students in research writing. Part 4 included 10 items on practices related to the observance and implementation of research ethics. Part 5 consisted of 5 items to examine the research teachers' personal experiences. While part 6 included 4 open-ended questions that explored research teachers' experiences with research subjects.

Data Analysis

Quantitative data were analyzed using descriptive statistics (means, standard deviations, frequencies, and percentages (Jamovi version 2.7.24). Inferential statistics and correlation coefficients were computed to describe the relationships among the three KAP dimensions.

Qualitative data from the participants' responses to the 4 open-ended questions were analyzed using reflexive thematic analysis (Braun and Clarke, 2021). To enhance transparency and rigor, the research team employed DeepSeek as an assistive tool to organize, analyze, and interpret responses. The researcher used the following prompts:

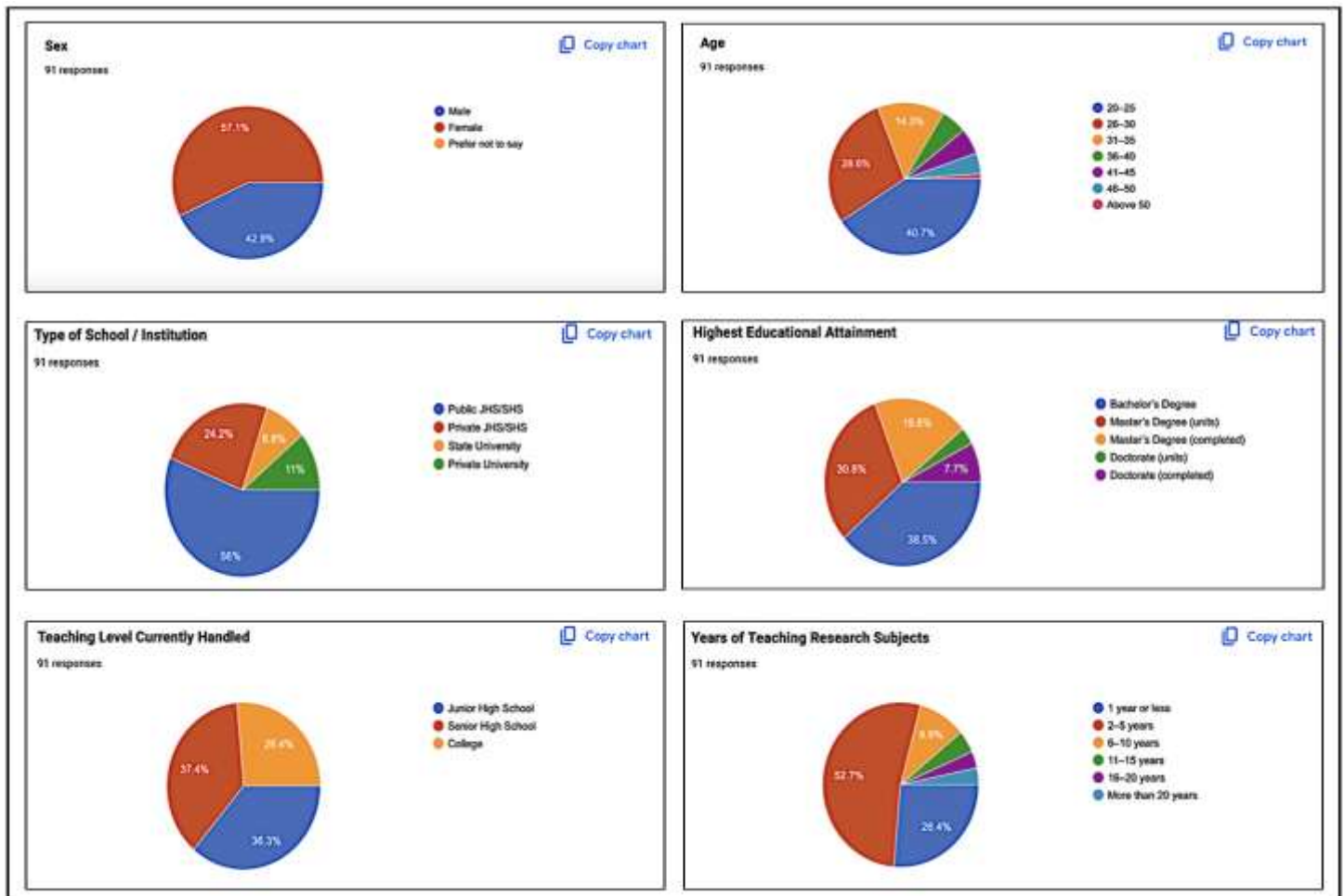
"Act as an academic research expert in Qualitative Thematic Analysis. Your task is to perform a coding reliability thematic analysis on the uploaded Excel dataset to explore [insert open-ended question]. The analysis is rigorous, accurate, relevant, and thorough while refraining from offering personal opinions. Use the uploaded Excel file to perform the given task and name it 'RQ1-Data Set.'"

The AI-generated output served as an initial coding framework. The researcher independently reviewed, revised, and validated all themes, resolving discrepancies through reflexive engagement with the raw data. This dual-layer approach (AI-assisted coding followed by human expert validation) strengthened the trustworthiness of the findings. All AI-generated themes and preliminary interpretations were independently reviewed and validated by the researchers to ensure accuracy, contextual relevance, and alignment with the study objectives. The final thematic structure reflects collective researcher consensus, not automated output alone.

RESULTS AND DISCUSSIONS

The demographic characteristics of the research teachers are presented (Fig.1). A total of 91 participants completed the survey. The distribution of age, gender, education level, teaching level, type of institution, and years of teaching the research subject is summarized below.

Figure 1. Profile of Research Teachers



As shown in Fig. 1, the largest age group was 20-25 years, indicating that the majority of research teachers were relatively young. Regarding gender, female research teachers were better represented. In terms of educational level, a bachelor's degree was the highest. While the teaching level currently handled, the distribution was relatively balanced. Regarding the type of institution, the sample was predominantly drawn from public secondary education institutions, and the majority of participants had 2-5 years of experience teaching the research subject.

Table 1. Knowledge towards research ethics among research teachers (N=91)

Statement	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	N	Mean	SD
Research ethics helps protect the rights and welfare of research participants.	79 (86.8)	11 (12.1)	1 (1.1)	–	–	91	4.86	0.38
Teachers and students conducting research must follow ethical guidelines.	81 (89.0)	10 (11.0)	–	–	–	91	4.89	0.31
Informed consent means participants agree to join a study after being told all necessary information.	73 (80.2)	16 (17.6)	2 (2.2)	–	–	91	4.78	0.47
Informed consent should always be obtained before collecting any data from participants.	79 (86.8)	11 (12.1)	1 (1.1)	–	–	91	4.86	0.38

Minors (below 18 years old) require parental/guardian consent before joining a research study.	64 (70.3)	22 (24.2))	4 (4.4)	1 (1.1)		91	4.64	0.62
Written consent is needed from minors who can read and understand the research (usually ages 7–17).	59 (64.8)	26 (28.6)	4 (4.4)	2 (2.2)		91	4.56	0.69
Personal data collected for research must be kept private and confidential.	83 (91.2)	7 (7.7)	1 (1.1)	–	–	91	4.90	0.34
Researchers must ask permission before using school records or student information for research.	80 (87.9)	9 (9.9)	2 (2.2)	–	–	91	4.86	0.41
Changes in an approved research proposal must also be approved before implementation.	73 (80.2)	14 (15.4)	4 (4.4)	–	–	91	4.76	0.52
Even non-sensitive classroom-based studies require ethical considerations.	78 (85.7)	11 (12.1)	2 (2.2)	–	–	91	4.84	0.43

Table 1 presents the knowledge levels of 91 research teachers from Junior High School, Senior High School, and College regarding ten statements on research ethics. Respondents were asked to score on a 5-point Likert scale (5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree). Higher scores indicate greater knowledge of research ethics.

Most teachers showed very strong knowledge of basic ethical principles. The highest scores were for keeping personal data private (M = 4.90, SD = 0.34), following ethical guidelines (M = 4.89, SD = 0.31), and protecting participant rights (M = 4.86, SD = 0.38). This means teachers clearly understand that confidentiality, informed consent, and participant welfare are essential in research. These results compare favorably with the findings of Ghimere et al. (2024). Kongniam, Masantiah, and Tippayakulpairroj (2023) reported that teachers generally perform well on these core topics because they are commonly included in basic research ethics training.

The lowest scores were for two items about research involving children. "Minors require parental consent" scored M = 4.64 (SD = 0.62), and "Written consent from minors who can read" scored M = 4.56 (SD = 0.69). These were still high, but they had the largest standard deviations, meaning teachers disagreed more with each other on these items. Why? Because teachers may not clearly understand the difference between parental permission (legal consent from parents) and child assent (the child's own agreement). Berson, Berson, and Mirabella (2025) explain that while parental permission is required by law, best practice also asks for a child's agreement, especially for children aged seven and older. Lyons and Thomas (2024) add that many educators are confused about when written assent is required versus simply recommended. Interestingly, a small number of teachers disagreed with these items. This suggests that a few teachers believe adults should make all decisions for children, or that young children cannot truly agree to participate in research (Stearns, 2020; Stearns, 2022). Nelson and Sullivan (2025) similarly found that in educational settings, child assent is often treated as a paperwork step rather than a genuine opportunity for children to have a voice. Overall, research teachers have strong, correct knowledge of standard research ethics like confidentiality and informed consent. However, research teachers show some confusions about parental consent and child assent procedures.

Table 2. Attitude towards research ethics among research teachers (N=91)

Statement	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	N	Mean	SD
Research ethics must be taught as a mandatory subject in the curriculum of post graduate.	66 (72.5)	22 (24.2)	3 (3.3)	-	-	91	4.69	0.531

A research study must undergo ethical review to be more credible.	72 (79.1)	16 (17.6)	3 (3.3)	-	-	91	4.76	0.502
Ethical review of research should be restricted to international research and projects only.	26 (28.6)	16 (17.6)	7 (7.7)	22 (24.2)	20 (22)	91	3.07	1.569
Disclosure of full research details including risks and benefits can be skipped to avoid possible refusal of the participants to participate in the study.	25 (27.5)	8 (8.8)	3 (3.3)	28 (30.8)	27 (29.7)	91	2.74	1.625
For vulnerable groups such as children or mentally ill, informed consent should be obtained from legally authorized representatives.	68 (74.7)	19 (20.9)	3 (3.3)	1 (1.1)	-	91	4.68	0.648
For female participants who are of legal age, researchers must always obtain informed consent from any dominant male person in the family.	22 (24.2)	6 (6.6)	19 (20.9)	15 (16.5)	29 (31.9)	91	2.75	1.561
Modification of data to improve the outcome of research is acceptable as long as there is no harm to the respondents.	24 (26.4)	21 (23.1)	8 (8.8)	11 (12.1)	27 (29.7)	91	3.04	1.619
Data obtained from the participants must be kept in place to protect the data from disclosure.	66 (72.5)	25 (27.5)	-	-	-	91	4.73	0.449
All researchers should be trained in research ethics.	78 (85.7)	12 (13.2)	1 (1.1)	-	-	91	4.85	0.392
Failure to adhere to research ethical guidelines makes it more difficult for researchers to publish their work.	55 (60.4)	26 (28.6)	7 (7.7)	3 (3.3)	-	91	4.46	0.779

Table 2 presents the attitudes of research teachers regarding 10 statements on research ethics. Respondents were asked to score on a 5-point Likert scale (5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree).

Results revealed that most research teachers showed strong positive attitudes toward fundamental ethical principles. Specifically, the highest mean scores were recorded for all researchers who should be trained (M = 4.85, SD = 0.39), followed by the conduct of credible ethical review (M = 4.76, SD = 0.50). Confidentiality of data obtained (M = 4.73, SD = 0.45), and mandatory teaching of research ethics (M = 4.70, SD = 0.53) were observed. Further, respondents strongly agreed that informed consent should be obtained from legal representatives for vulnerable groups (M = 4.69, SD = 0.53) and that failure to adhere to ethical guidelines hinders publication (M = 4.46, SD = 0.78). These findings are supported by Shepherd et al. (2025), which highlights improvements of researchers' knowledge and practice through training that serves as a model and suggests a policy trend toward mandatory ethics education. However, Sabolic (2026) presented arguments regarding the lack of ethics training and problems in academic research publishing, including the proliferation of trivial research problems, perverse incentives, and ethical concerns with open-access models. This calls for an urgent inclusion of ethics as a mandatory subject. As for the findings of the research ethics review, which are strongly aligned with the 2025 campaign report on VAW/VAC, noting that many peer-reviewed academic journals now require proof of Research Ethics Committee (REC) endorsement before considering a paper for publication. REC also serves as strong evidence that ethical review is now a standard part of any research project (Mehta et al., 2023).

It is noteworthy that neutral responses were observed in statements about "Ethical review of research should be restricted to international research only" (M = 3.07, SD = 1.57) and "Modification of data to improve research outcome is acceptable as long as there is no harm to respondents" (M = 3.04, SD = 1.62). Data modification — even without perceived harm constitutes research misconduct (Resnik, 2020). That nearly half of the respondents

showed neutrality or agreement with these statements suggests a dangerous normalization of questionable research practices. Relatively lower mean scores, reflecting general disagreement, were found for statements: "Disclosure of full research details can be skipped to avoid possible refusal of participants" ($M = 2.74$, $SD = 1.63$), and "For female participants of legal age, researchers must obtain consent from a dominant male in the family" ($M = 2.75$, $SD = 1.57$). These findings suggest that research teachers reject gender-biased consent practices, which may be seemingly alarming.

This discrepancy between positive attitudes toward abstract ethical principles and acceptance of specific questionable practices is consistent with Jin et al. (2024), who found that medical professionals in China had little understanding of research integrity despite expressing general support for ethics. Overall, Table 2 indicates that while research teachers hold strong positive attitudes toward fundamental research ethics principles, there are significant areas of disagreement and inconsistency, particularly regarding the scope of ethical review and the acceptability of data modification.

Table 3. Practice of research ethics among researchers (N=91)

Questions	Option	Number	Percentage
Have you ever initiated or conducted a research study prior to obtaining formal ethical approval from the appropriate ethics review committee?	YES	56	60.1%
	NO	36	39.1%
Have you obtained informed consent from participants before conducting research involving human subjects?	YES	89	97.8%
	NO	2	2.2%
Was the information sheet provided to participants written in clear, non-technical, and easily understandable language?	YES	91	100%
	NO	0	0%
Did you provide participants with adequate time to read and understand the information sheet before signing the consent form?	YES	90	98.9%
	NO	1	1.1%
Did you use any method to assess whether participants understood the information provided in the consent form?	YES	85	93.4%
	NO	6	6.6%
Did you maintain confidentiality and privacy while obtaining informed consent from participants?	YES	91	100%
	NO	0	0%
Did you provide participants with a copy of the signed informed consent form?	YES	76	85.4%
	NO	13	14.6%
Have you shared research data with colleagues prior to publication?	YES	52	57.1%
	NO	39	42.9%
Was the consent form written in English?	YES	79	85.9%
	NO	13	14.1%
Have you ensured that all research data and findings you reported were accurate, complete, and free from fabrication, falsification, or plagiarism?	YES	91	100%
	NO	0	0%

Table 3 shows that all the research teachers adhere to the practice of providing an information sheet that is non-technical and easily understandable, maintaining confidentiality and privacy while obtaining informed consent, and ensuring that all research data and findings are reported accurately, completely, and free from fabrication, falsification, and plagiarism. These results suggest a paradoxical pattern in which research teachers demonstrate strong adherence to participant-facing ethical practices, such as informed consent, confidentiality, and data integrity. However, notable procedural lapses were observed, particularly regarding prior ethical approval and the provision of signed consent copies to participants. The high rates of pre-approval research initiation and pre-publication data sharing indicate areas requiring institutional monitoring and training reinforcement. Self-reported data integrity is universally claimed; however, the gap between ethical knowledge and actual practice observed in earlier items suggests that reported integrity may overestimate actual behavior. This pattern is consistent with broader findings in research ethics literature: researchers consistently rate their own ethical practices as superior to those of their peers, a statistical impossibility that reflects systematic self-assessment bias

(Tinghög et al., 2024). Similarly, Bruton and colleagues (2025) found that while researchers endorse strong ethical norms, they report their own behavior as "much less ethically deficient than that of their peers," despite acknowledging that both fall short of endorsed standards. Institutional mechanisms, including mandatory ethics review tracking, accessible consent documentation protocols, and clear data sharing guidelines, are urgently needed to align practice with established ethical standards. Digital ethics tracking systems have demonstrated effectiveness in monitoring compliance, supporting institutional oversight, and enabling informed evaluation of ethics committee performance (Kara & Pickering, 2025; University of Bath, 2025).

Table 4. Personal experiences toward research ethics (N=91)

Questions	Options	Number	Percentage
Have you ever supervised a student whose research work you suspected was not entirely their own (e.g., bought, copied, or ghostwritten)?	YES	58	63.7%
	NO	33	36.3%
Have you experienced a situation where a student asked you to “edit” their research beyond what you consider ethically acceptable (e.g., rewriting entire sections)?	YES	38	41.8%
	NO	53	58.2%
Have you ever had to intervene in a case of plagiarism, data manipulation, or unethical behavior in a student’s research project?	YES	56	61.5%
	NO	35	38.5%
Have you personally struggled with balancing academic workload and the ethical expectations required when supervising multiple research groups?	YES	66	72.5%
	NO	25	27.5%
Has your own past experience conducting research (e.g., thesis, dissertation, action research) influenced how you teach or enforce research ethics in your classes?	YES	85	93.4%
	NO	6	6.6%

Participants' personal experience (Table 4) shows that the majority of teachers have suspected academic dishonesty in students’ work, and that it was not their own. A few but still notable number of teachers have been asked by their students to go beyond reasonable editing, such as rewriting entire sections. Over 60% of the teachers have intervened in various cases, such as plagiarism, data manipulation, and students' unethical behavior in writing their research projects. The most frequently reported challenge teachers face is balancing their workloads with ethical expectations, supervising multiple student groups, and admitting to feeling torn about it. An overwhelming 93.4% of teachers indicated that their past experiences have directly shaped how they teach or enforce research ethics to their students, and this is consistent with Mardani et al.’s (2025) findings that prior training and personal exposure to ethical dilemmas are critical factors in improving ethical competencies among those who oversee research. This suggests that ethics education is most effective when it is personal and reflective, not merely theoretical.

The preceding section presents the verbal data culled from the four open-ended questions in Part 6 of the questionnaire.

Role of Ethical Review Process

The analysis of 91 research teachers’ responses revealed three general themes regarding their role in the ethical review process: (1) *ethical review as a protective and integrity-enhancing mechanism*, (2) *ethical review as a bureaucratic burden*, and (3) *ethical review as a necessary but imperfect safeguard*. Many research teachers viewed the ethical review process as a tool that protects research participants and promotes research integrity. The collected responses emphasized that ethical review protects participants' rights, dignity, safety, and confidentiality.

For instance, *one respondent stated that ethical review "protects the participants which promotes honesty and integrity in work that builds credibility and trust"*

This aligns with AlFattani et al. (2025), who found that researchers across 179 participants identified human

participant protection as the primary function of their Institutional Review Board. Uganda National Guidelines for Research Involving Humans (2025) further reinforces that ethical review protects participants' rights, dignity, safety, and confidentiality, especially for vulnerable groups. The related literature strongly validates the respondents' perception of ethical review as a protective mechanism. On the other hand, more than half of the respondents (59%) perceived the ethical review process as a procedural burden that creates practical difficulties in conducting research. A significant number of respondents perceived the process as time-consuming, paperwork-heavy, and restrictive.

Respondent R4 stated that the process *"takes time, requires extensive documentation that delays timeliness."*

Another respondent elaborated that ethical review can be *"bureaucratically complex, potentially delaying the progress of research, especially in time-sensitive studies"* (R29).

These findings are supported by Raykov (2023), Couzens et al. (2024), and Brown (2024), who documented that ethics review processes often create administrative burdens, slow down time-sensitive studies, and are poorly aligned with insider or emic research designs common in educational settings. Plausible explanations may include: (1) experiences of research teachers in terms of delays that affected student graduation timelines, (2) perceived mismatch between the risk level of their educational research, and (3) intensity of the review required.

A minority of respondents (45%) expressed a balanced perspective, acknowledging ethical review as necessary for responsible research conduct while recognizing its limitations.

Respondent (R8) stated that while ethical review *"provides a lot of red tape... it's ultimately for the better, since it prevents harm for both respondent and researcher."*

Respondent R15 concluded that *"the benefits of ethical review far outweigh the challenges,"*

a sentiment echoed by R29: *"its benefits in safeguarding human dignity and ensuring responsible research practice far outweigh its constraints."*

These statements align with the literature, particularly Couzens et al. (2024), who found that researchers view ethics paperwork as burdensome but necessary, and Thaitae & Phulkerd (2024), who call for capacity-building to improve both researcher competence and ethics committee efficiency. This idea is related to the research on teachers' strong support for mandatory ethics education, which includes researcher-level capacity building that is efficient and contextually appropriate.

In summary, research teachers strongly endorse the protective and integrity-building functions of ethical review but experience significant procedural frustrations. The findings highlight a need for more context-sensitive, efficient, and educationally aligned ethics review processes.

Recommendations for Training

Among research teachers surveyed, responses revealed three general themes regarding their recommendations to strengthen research ethics training and implementation in their institution:

- (1) integration of practical, context-specific scenarios,
- (2) mandatory periodic refresher training, and
- (3) strengthening institutional monitoring and accountability mechanisms.

The majority of respondents (82%) recommended that research ethics training move beyond generic, decontextualized modules toward discipline-specific, case-based learning. One respondent stated that;

“The current online training uses only biomedical examples. I work in educational research, and none of the scenarios feel relevant to my daily work. We need case studies from our own fields.” (R14).

This is supported by Kalichman and Plemmons (2017), who demonstrated that contextualized, problem-based ethics instruction improves researchers’ ability to recognize and resolve ethical conflicts. The strong agreement among the research teachers provides an opportunity to implement evidence-based ethics curricula alongside a mandatory instruction designed according to principles of contextualized, problem-based learning rather than compliance-oriented training. Other recommendations include recurring ethics training at regular intervals rather than a single, one-time certification (76%).

A respondent explained: *“Ethics isn’t static. New challenges come up—preprints, AI-generated data, cross-border collaboration. One training session at the start of your career is completely insufficient.” (R58).*

This result aligns with Mumford et al. (2015), who found that spaced ethics education, delivered every 2 to 3 years, produces superior long-term retention of responsible conduct of research (RCR) standards compared to one-time instruction. While Mumford et al. highlight the delivery format and retention outcomes of ethics training, this study focuses on the attitudes of research teachers themselves. The respondents not only acknowledged the importance of ethics training but also advocated its mandatory inclusion in the curriculum. This shows that research teachers recognize the need for greater exposure to research ethics and demand structured, mandatory, and sustained ethics instruction.

Moreover, over two-thirds of respondents (68%) recommended establishing independent ethics monitoring committees, conducting random audits of consent documentation, and transparent reporting of compliance metrics.

For instance, one respondent stated that *“We have policies on paper, but no one checks if they are followed. I have never seen an audit of consent forms or data storage practices. An independent ethics monitoring committee is needed.” (R9).*

This result is strongly supported by DuBois et al. (2018), who emphasized that training alone is insufficient without embedded accountability structures. As individuals who witnessed firsthand the gap between students’ stated ethical knowledge and their actual research practices, they explain why they continue to endorse training without a proper ethical review process. In conclusion, research teachers strongly endorsed recommendations for compliance-oriented, contextualized ethics education. These findings show that strengthening research ethics requires not only improved training content but also structural, institutional, and cultural changes.

Significant Ethical Challenges

Four main ethical challenges were noted. First, the *improper use of artificial intelligence* was the most common challenge, reported by about two-thirds of respondents. While AI tools can help with research, their misuse leads to academic dishonesty and overreliance. Concerns included using AI without disclosure, lack of policies, and students relying on AI without learning (R3, R6, R10). Studies confirm that generative AI challenges academic integrity and requires urgent policy updates (Cotton et al., 2024; Perkins et al., 2023). Second, *data privacy and confidentiality* were cited by more than half of the respondents. Researchers are concerned about data breaches, cloud storage risks, and the protection of information in digital environments (R12, R21, R46). Literature shows that digital data collection creates new vulnerabilities, and many researchers lack training in secure data handling (Samuel & Buchanan, 2022; Ferguson & Soave, 2023). Third, *plagiarism and data fabrication* were noted by just over half of respondents. Problems include data manipulation, falsification, and copying, driven by easy online access and pressure to produce quick results (R9, R14, R40). Research indicates that academic pressure increases data fabrication, and plagiarism remains underaddressed (Anderman & Murdock, 2022; Grove, 2024). Fourth, *informed consent and participant protection* were identified by slightly less than half of respondents. Consent often becomes a procedural form rather than a genuine agreement, especially with vulnerable groups like students. Concerns included cultural misrepresentation, undue inducement, and power imbalances when teachers research their own students (R41, R7, R62). Studies confirm that consent in schools is often procedural,

and power dynamics undermine voluntary participation (Manti & Licari, 2023; Homan, 2022).

Ethical Concerns While Supervising Students

Analysis of 91 research teachers' responses revealed four main ethical concerns encountered during student research supervision: plagiarism, data fabrication, violations of informed consent, and misuse of artificial intelligence. In all cases, teachers responded by privately discussing the issue, educating students on ethical standards, guiding revisions, and offering opportunities to correct mistakes rather than imposing immediate punishment.

The most frequently reported concern, mentioned by about 60% of respondents, was plagiarism and improper citation. Students commonly copied text from online sources without giving credit.

One respondent stated: *"While supervising a student research project, I once noticed that the student was tempted to copy parts of another study instead of writing their own analysis. I addressed the situation by having a private discussion, explaining the importance of academic honesty, and guiding them on how to properly paraphrase, cite sources, and conduct original work. I also monitored their progress more closely and provided additional support to ensure that the final submission adhered to ethical standards. This approach reinforced the value of integrity while helping the student learn from the experience."* (R15).

Another teacher shared a more punitive but still restorative approach: *"Plagiarism after checking their paper in TurnItIn. I returned their paper, applied a demerit, called the attention of the adviser and parents so they know it's a big deal. But I gave them second chance to redo their paper."* (R21).

Eaton (2022) argues that punitive measures alone are less effective than restorative practices in addressing student plagiarism, and Sefcik et al. (2023) emphasize that supervisors play a critical role in modeling citation ethics (<https://doi.org/10.1007/s40979-023-00130-5>). About 35% of respondents encountered data fabrication or manipulation, including students falsifying responses, making up data, or manipulating results to fit their hypotheses.

One respondent discovered: *"While supervising a group of junior high students conducting a survey-based science investigatory project, I noticed that their questionnaires were already filled out even though they had not yet distributed them. Upon checking, I found out that some students had fabricated responses to save time and meet deadlines. I immediately discussed the issue with the group, explaining why fabricating data is unethical and how it affects the integrity of their study. I required them to discard the falsified data and restart the data collection process properly. I also guided them on how to administer surveys ethically, including obtaining consent and collecting real responses."* (R72).

Another teacher encountered a different form of data manipulation: *"I encountered a case where a student's data seemed unusually consistent, raising concerns about possible errors in reporting. Instead of accusing them, I discussed the issue privately and asked them to explain their process. It turned out they had excluded results they thought were 'mistakes,' not realizing this was unethical. I explained the importance of reporting all data transparently and guided them in correcting their work. The student repeated parts of the study and revised the analysis properly. This experience became a valuable teaching moment on research integrity."* (R28).

Anderman and Murdock (2022) confirm that academic pressure increases data fabrication, and Sattler et al. (2022) note that clear supervision reduces such behaviors (<https://doi.org/10.3389/fpsyg.2022.857937>). Approximately 30% of respondents reported violations of informed consent and participant protection, including students collecting data without proper consent, failing to protect privacy, or exposing participants to potential harm.

One respondent described a situation involving vulnerable participants: *"I encountered a situation where CICLs (Children in Conflict with the Law) were selected by houseparents to participate in our study, even though some of them did not want to join. I guided my students to respect the participants' autonomy by reminding them that participation should always be voluntary. We assured the participants that if they did not want to participate,*

their answers would not be included in the study, and their decision would be respected. This helped reinforce the importance of informed consent and ethical responsibility in research." (R5).

Another teacher demonstrated proactive harm prevention: *"A student wanted to survey classmates about family financial problems. The questions were too personal and could have embarrassed respondents in front of their peers. I sat down with the student and explained that while the topic was interesting, the potential for social harm was too high. We worked together to refocus the project on a broader, less sensitive topic like part-time jobs, ensuring the research remained meaningful but safe for everyone."* (R41).

Manti and Licari (2023) highlight that informed consent in school-based research is often procedural rather than genuine, and Homan (2022) emphasizes that power imbalances require active mitigation (<https://doi.org/10.4135/9781529774012>). About 20% of respondents identified misuse of artificial intelligence, where students used AI to generate content or references without verification or disclosure. Teachers responded by thoroughly questioning students, requiring them to admit to AI use, and guiding proper use of AI tools.

One respondent recalled: *"AI generated discussions and interpretations were evident before in a certain research team. Students insist that the work was not AI generated. As the instructor, I had to thoroughly ask them questions about it until they told the truth that it was indeed AI generated only, and that the students did not review much about the content."* (R6).

Another teacher discovered a more sophisticated form of AI misuse: *"Negligence, as there have been several instances in which a student failed to provide proper citations to support his claims. Upon further verification, it was discovered that the research assertions were baseless, as the cited sources did not exist. It was later determined that these references had been generated through the use of artificial intelligence. Unfortunately, the researcher did not adequately review, verify, or validate the information obtained from AI before incorporating it into the study."* (R9).

Perkins et al. (2023) argue that the absence of transparent AI use policies undermines research integrity, and Sullivan et al. (2024) recommend that supervisors explicitly teach appropriate AI use (<https://doi.org/10.1007/s40979-023-00145-y>).

Four Major Ethical Challenges

The thematic analysis revealed four major ethical challenges faced by research teachers:

1. **Improper Use of Artificial Intelligence** — The most frequently reported challenge. Teachers expressed concerns about undisclosed AI use, lack of institutional policies, and student overreliance on AI without learning. This aligns with Cotton et al. (2024) and Perkins et al. (2023), who document that generative AI poses unprecedented challenges to academic integrity. The absence of transparent AI use policies in most schools leaves teachers without clear guidance.
2. **Data Privacy and Confidentiality** — Teachers worried about data breaches, cloud storage risks, and protecting information in digital environments. Samuel and Buchanan (2022) and Ferguson and Soave (2023) confirm that digital data collection creates new vulnerabilities, and many researchers lack training in secure data handling.
3. **Plagiarism and Data Fabrication** — Problems include data manipulation, falsification, and copying due to easy online access and pressure to produce quick results. Anderman and Murdock (2022) note that academic pressure increases data fabrication, while Grove (2024) emphasizes that plagiarism remains under-addressed in many institutions.
4. **Informed Consent and Participant Protection** — Consent often becomes a procedural form rather than a genuine agreement, especially with vulnerable groups like students. Manti and Licari (2023) and Homan (2022) confirm that consent in schools is often procedural, and power dynamics undermine voluntary participation.

Teachers' Responses to Ethical Violations: Restorative, Not Punitive

Importantly, when faced with ethical violations, teachers in this study responded by privately discussing the issue, educating students, guiding revisions, and offering opportunities to correct mistakes rather than imposing immediate punishment. For plagiarism, teachers discussed academic integrity and taught proper citation. For data fabrication, they required students to discard falsified data and restart collection. In response to informed consent violations, they paused data collection and revised the consent forms. For AI misuse, they questioned students thoroughly and required verification of sources. This restorative approach is supported by Eaton (2022), who argues that punitive measures alone are less effective than restorative practices in addressing student plagiarism. Sefcik et al. (2023) emphasize that supervisors play a critical role in modeling citation ethics.

CONCLUSION

Regarding the prevalent perceptions of research teachers about research ethics in terms of knowledge, attitude, practices, and personal experiences, research teachers demonstrated high foundational knowledge of research ethics principles, particularly regarding confidentiality, informed consent, and participant protection, yet knowledge gaps emerged specifically regarding parental consent and assent procedures for minors, with notable variability among respondents. Teachers expressed strongly positive attitudes toward abstract ethical principles, including mandatory ethics training and ethical review; nevertheless, a concerning minority (approximately) expressed neutrality or agreement with questionable practices, including data modification and restricting ethical review to international research only. Despite high knowledge and positive attitudes, self-reported practices revealed significant gaps: more than half of teachers had suspected academic dishonesty or intervened in cases of plagiarism or data manipulation, nearly three-quarters struggled with balancing workload and ethical expectations, and most notably, reported that their own past research experiences shaped how they teach ethics, suggesting that informal, experiential learning currently outweighs formal training.

Regarding teachers' experiences in handling research subjects relative to the ethical review process, recommendations for training, significant ethical challenges, and ethical concerns while supervising students, the qualitative findings identified four major themes. First, regarding the ethical review process, teachers recognized its importance but described inconsistent implementation across institutions, with some viewing it as bureaucratic compliance rather than meaningful protection. Second, for training recommendations, teachers requested contextualized, discipline-specific workshops and periodic refresher courses rather than one-time orientations. Third, significant ethical challenges included improper use of artificial intelligence, data privacy and confidentiality concerns, plagiarism and data fabrication, and violations of informed consent. Fourth, regarding ethical concerns while supervising students, teachers reported difficulty monitoring student compliance, addressing AI-generated submissions, and balancing mentorship with enforcement. Teachers consistently preferred restorative approaches to education, guidance, and second chances over punitive measures when responding to ethical violations.

While research teachers in Metro Manila possess strong knowledge and positive attitudes toward research ethics, significant gaps exist between what they know and what they practice and, more critically, between what they teach and what their students produce; without systemic intervention, the integrity of student research remains compromised. Feasible recommendations include mandatory periodic refresher training, institutionalization of ethical review for student research, development of clear policies on the use of artificial intelligence, establishment of peer mentoring circles, integration of ethics KAP into preservice training, and creation of a centralized repository of contextualized case studies.

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