

More Questions Than Answers: Ethical Considerations at the Intersection of Psychology and Generative Artificial Intelligence

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Psychology has changed considerably over the past several decades in response to technological advances. Changes to the profession accelerated during COVID-19, a time during which there was a rapid increase in the use of cloud-based virtual collaboration platforms (e.g., Zoom, Microsoft Teams) for telehealth services as well as virtual teaching and research activities. Technology continues to advance swiftly, and the introduction of artificial intelligence (AI), particularly generative AI (genAI), is creating profound changes in all aspects of society, including the psychology profession. With these changes come questions about how to practice ethically as a clinician, as a teacher, and as a researcher. In this article, we explore the ethical principles and standards of most relevance to genAI use in the activities of psychologists (clinical, teaching, research) across settings (private practice, hospitals, colleges/universities, research centers). Ethical issues and questions are presented within the context of the current American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (2017), which is under revision. Recommendations are provided for approaching ethical concerns amidst the rapid technological advances that are changing the way psychologists do their work.

What is the significance of this article for the general public?

Psychologists' use of generative artificial intelligence (genAI) can benefit society by, for example, increasing access to mental health services, improving diagnosis and treatment planning, advancing psychological science, and supporting education and training. However, ethical challenges exist. This article explores the potential benefits and ethical challenges of genAI within the psychology profession and offers recommendations for incorporating genAI into psychological practices in ways that promote positive, and avoid detrimental, outcomes for society.

Keywords: ethics, psychology, technology, artificial intelligence, generative AI

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Psychology has changed considerably over the past several decades in response to technological advances. Changes to the profession accelerated during COVID-19 during which there was a rapid increase in the use of cloud-based virtual collaboration platforms (e.g., Zoom, Microsoft Teams) for telehealth services as well as virtual teaching and research activities (Beidas & McHugh, 2022; Wosik et al., 2020). Since then, technology has continued to advance swiftly, profoundly affecting all disciplines, including psychology.

Crafted to function with varying levels of autonomy, artificial intelligence (AI) refers to a constructed or machine-driven system with the capability to produce outcomes like forecasts, suggestions, or choices that impact either real or virtual surroundings, based on specified goals (National Institute of Standards and Technology [NIST], 2023). Generative AI (genAI) is a specific type of AI that encompasses computational methods and algorithmic tools to produce novel and meaningful content (e.g., generating text, images, and audio; translating language; answering questions) derived from input data through training processes (Cao et al., 2023; Feuerriegel et al., 2024; Følstad et al., 2021; Gozalo-Brizuela & Garrido-Merchan, 2023). Although ChatGPT has received much attention, many other examples of genAI exist (e.g., Google's Bard, AlphaCode, GitHub Copilot, Perplexity, DALL-E 2; see <https://huggingface.co/models> for more examples). Large language models (LLMs) are often, but not always, used as the foundation for genAI systems (NIST, 2023). Aimed to model language, LLMs are trained on massive data sets in order to generate human-like text in response to prompts or other input and represent a common example of genAI in action.

Like other forms of technology, genAI has great potential to advance the psychology discipline. Indeed, genAI benefits psychologists and the consumers of psychological services in many ways. For example, genAI can improve diagnostic reliability (Loch et al., 2022) and assist with clinical documentation (Baker et al., 2024; Blease et al., 2024); reduce article writing time (Anderson et al., 2023); improve teacher efficiency and student learning (Alasadi & Baiz, 2023; Baidoo-Anu & Ansah, 2023; Su & Yang, 2023); and, overall, increase work productivity (Brynjolfson et al., 2023).

At the same time, the use of genAI presents some risks, including ethical risks related to, for

example, privacy breaches (Vilaza & McCashin, 2021), incorrect or fraudulent citations (Day, 2023), and biased output (Bonnefon et al., 2020). In the context of genAI, bias is defined as a systematic deviation in decision-making procedures resulting from various factors (e.g., data collection, algorithm formulations, human inference), which may lead to inequitable results (Ferrara, 2023). GenAI can produce biased output if the training data contain systemic bias (e.g., relating to a lack of diversity or increased likelihood of certain diagnoses; Meskó & Topol, 2023). A particular concern about genAI based on LLMs in psychology is the issue of safety. LLMs do not understand what they reproduce and are not capable of reasoning. Rather, the output LLMs produce is based on memory and probability sequences (Bender et al., 2021). Furthermore, LLMs do not function within a goal-oriented framework, at least not in the same ways humans are considered to be goal-oriented. Rather, they simply generate text or images in response to prompts. Therefore, concerns exist about factual correctness and bias, which may perpetuate negative stereotypes and perceptions that promote racism, sexism, heterosexism, and other stigmatizing or discriminatory attitudes. For example, Zhou et al. (2024) found evidence of systematic racial and gender bias in images produced using genAI.

Existing evidence suggests people may have complicated feelings about the use of genAI, ranging from resistance to appreciation, which may relate to the concepts of algorithm aversion and reluctance (Jussupow et al., 2020), given that algorithms enable genAI systems to learn and create new content. Algorithm aversion, or the reluctance to trust an algorithm's capabilities over a human's, may lead people to avoid using AI technologies (Burton et al., 2020; Jussupow et al., 2020), including genAI. However, if people are not aware that a technology utilizes AI (Bonnefon et al., 2020), if accuracy information is provided about the algorithms used in genAI systems (Pezzo & Beckstead, 2020), or if genAI algorithms demonstrate the capability of learning to increase accuracy (Reich et al., 2023), then people may be more willing to trust or engage in genAI systems. Algorithm aversion and appreciation vary among psychologists and the people they serve and will influence how genAI systems are used and perceived across clinical, research, and educational settings.

Currently, societies are grappling with concerns about the use of genAI across industries. Exemplifying the reality that currently more questions exist than answers, President Biden recently issued an Executive Order on Safe, Secure, and Trustworthy AI, calling for the development of new standards for AI safety and security; the protection of Americans' privacy; the advancement of equity and civil rights; and the protection of consumers, patients, and students (The White House, 2023). This executive order is timely for the psychology profession as many questions exist among psychologists about how to practice ethically as a clinician, as a researcher, and as an educator, among other roles. Whether algorithm-averse or algorithm-appreciative, ethical use of genAI is important for maximizing this technology's potential benefits to society. For psychologists, this requires an examination of how to ethically use genAI across settings and activities.

With more than 157,000 members including clinicians, educators, researchers, consultants, and students, the American Psychological Association (APA) (n.d.-a, n.d.-b) is the largest professional and scientific organization for psychologists in the world and the leading organization in the United States. As such, the APA Ethical Principles of Psychologists and Code of Conduct (2017),¹ hereafter referred to as the APA Ethics Code, sets the standard for ethical behavior within the psychology profession. Furthermore, APA members are required to adhere to the code, as are most licensed psychologists given the majority of state licensing boards have adopted the APA Ethics Code, or a modified version, as the standard for ethical behavior among licensees (Knapp et al., 2020). In addition, most doctoral programs in psychology require students to adhere to the APA Ethics Code (Knapp et al., 2020). Although debates exist about whether the APA Ethics Code should apply to all psychology specializations, particularly nonclinical specialties (e.g., industrial-organizational [I-O]), we argue the code is relevant to the work of all psychologists although, admittedly to varying degrees. For example, findings from a recent study of the applicability of the APA Ethics Code to I-O psychologists revealed that over 84% of the ethical standards outlined in the code applied to a sample of 398 ethical incidents reported by I-O psychologists with Standards 1, Resolving Ethical Issues and 3, Human Relations, most applicable. Therefore, the

APA Ethics Code (2017) serves as an important framework for thinking through ethical issues.

Acknowledging that questions currently exceed answers, this article explores ethical considerations through the lens of the APA Ethics Code (2017). Specifically, this article explores psychology's ethical principles within the context of genAI followed by an exploration of the ethical standards of most relevance to thinking about the use of genAI by psychologists across clinical, research, and educational settings and activities. Although we do not explicitly address consulting or other activities psychologists might engage in, we believe much of the discussion of ethical issues and considerations in the domains of clinical, research, and educational settings applies to consulting work (particularly the work of practice consultants, research consultants, and educational consultants) and other activities. We conclude with recommendations and future directions. The ethical considerations and suggestions described in this article are not intended to be exhaustive nor prescriptive but, rather, to help psychologists think about the issues and questions they should be considering to ensure the ethical use of genAI in their professional activities.

Ethical Principles: Professional Aspirations Within the Context of genAI

Many themes emerge when thinking about the ethical issues associated with genAI use among psychologists in clinical, research, and educational settings such as privacy and confidentiality; informed consent; accountability and liability; quality of care; bias and fairness; accessibility; autonomy and informed decision-making; transparency; data privacy and security; research ethics and integrity; ethical review and approval; plagiarism and originality; intellectual property and attribution; transparency and reproducibility; erosion of professional expertise; impact on human workers; ethical oversight and regulation; algorithmic dependence; overstandardization; unintended consequences; and unknown long-term effects (OpenAI, 2023; see the [online supplemental materials](#) for the full ChatGPT3.5 transcript). Most,

¹ The APA Ethics Code (2017) is currently being revised. For more information about the progress of the revision, please visit the APA Ethics Code Task Force webpage at <https://www.apa.org/ethics/task-force>.

if not all, of these themes are encapsulated in the ethical principles outlined in the APA Ethics Code (2017), which represent the psychology profession's aspirational goals. Unlike ethical standards, the principles are not enforceable rules but, rather, the basic tenants that should drive psychologists' activities across settings.

The principle of beneficence and nonmaleficence urges psychologists to do good and avoid harm. The principle of fidelity and responsibility emphasizes the importance of the relationship of trust between psychologists and the consumers of their services, including clients, students, and/or research participants. The principle of integrity implores psychologists to ensure accuracy, honesty, and truthfulness in all professional activities. The principle of justice encourages psychologists to promote equity with regard to accessing and benefitting from psychological services. The principle of respect for people's rights and dignity calls attention to personal autonomy as a value that psychologists should consider in their professional activities.

With the aforementioned principles in mind, questions arise about how genAI (a) can be used by psychologists to benefit and not harm the consumers of psychological services and society as a whole; (b) influences the relationship of trust between psychologists and their clients, students, and/or research participants, and the larger relationship of trust between the psychology profession and members of society; (c) can be used in ways that promote and do not diminish accuracy, honesty, and truthfulness in science, teaching, and clinical practice; (d) can enhance and not detract from one's ability to access and benefit from psychological science and services; and (e) can be used in ways that respect individual autonomy. See Table 1 for a summary of the overarching questions the psychology profession should be asking regarding how to maintain the profession's ethical principles within the context of genAI.

Relevant Ethical Standards: An Exploration of genAI's Impact on Clinical, Research, and Teaching Activities

Whereas ethical principles are aspirational in nature, the ethical standards outlined in the APA Ethics Code (2017) represent the enforceable rules of the profession for those accountable for adhering to the code (e.g., APA members, doctoral

students in APA-accredited programs, most licensed psychologists) and provide guidance for all psychologists regardless of enforceability. Thus, it is prudent to consider how these ethical standards apply in the world of genAI. Highlighted below are the standards of most relevance to discussions about the ethical use of genAI among psychologists across clinical, research, and teaching activities and settings (see Table 1). Below we further explore potential ethical concerns for psychologists' use of genAI across settings and activities, using the ethical standards outlined in the APA Ethics Code (2017) as a framework for thinking through the issues and considerations. Following this exploration are specific recommendations (see the Recommendations and Future Directions section).

Resolving Ethical Issues

Standard 1, Resolving Ethical Issues, specifically 1.01, Misuse of Psychologists' Work, is highly relevant given the increased risk of psychologists' clinical, research, and teaching materials being misused as genAI use becomes more common. In the clinical domain, chatbots, a type of genAI, are increasingly used to deliver mental health services (Abd-Alrazaq et al., 2019). Based on psychological principles and research, mental health chatbots have many benefits, including increased accessibility, yet chatbots may misinterpret emotional cues or fail to recognize the severity of mental health issues if not developed and maintained monitored properly (De Freitas et al., 2022). Platforms delivering genAI-mediated treatment services can also be used to fulfill ulterior motives that benefit their administrators or third-party benefactors, such as through intense marketing and targeted ideological or political promotion (Elyoseph et al., 2024; Freeman, 2023).

In the research domain, there have been instances of genAI platforms inaccurately citing work and, in some cases, citing articles that do not exist (Day, 2023). Similarly, in the teaching domain, ethical concerns exist about how educators' materials are used and/or credited. For example, genAI systems are capable of replicating psychology course and other educational materials without permission or attributions. Furthermore, genAI may misrepresent psychological theories or concepts, which could negatively affect learning. Among other issues, Bozkurt et al. (2023) described issues of "instructional

Table 1*Ethical Questions to Consider*

Ethical principles and standards	Questions to consider
General principles	
Beneficence and nonmaleficence	How do psychologists ensure that genAI benefits and does not harm the consumers of psychological services and society as a whole?
Fidelity and responsibility	In what ways do genAI systems influence the relationship of trust between psychologists and the consumers of their services (clients/patients, students, research participants)?
Integrity	How do psychologists ensure accuracy, honesty, and truthfulness in science, teaching, and practice in the world of genAI?
Justice	How might genAI affect—enhance or detract from—one’s ability to access and benefit from psychological science and services?
Respect for people’s rights and dignity	In what ways does genAI, affect psychologists’ respect for autonomy?
Ethical standards	
1. Resolving Ethical Issues	
1.01. Misuse of Psychologists’ Work	How do psychologists prevent or address genAI’s misuse of their clinical, teaching, and/or research materials?
2. Competence	
2.01. Boundaries of Competence	How can psychologists develop and demonstrate genAI competence, and what constitutes adequate genAI competence across different settings and activities?
2.03. Maintaining Competence	How do psychologists attain and maintain genAI competence given how fast this technology is evolving?
2.04. Bases for Scientific and Professional Judgments	How do psychologists ensure the basis of scientific and professional judgments is sound when using genAI?
2.05. Delegation of Work to Others	Should genAI be considered an “other” and, if so, how do psychologists ensure the accuracy of work delegated to genAI?
3. Human Relations	
3.01. Unfair Discrimination	How do psychologists ensure that the use of genAI in their practices across settings and activities does not result in unfair discrimination, especially given concerns about bias in genAI?
3.04. Avoiding Harm	How do psychologists avoid harming their patients, research participants, and/or students when using genAI?
3.10. Informed Consent	How should psychologists be thinking about informed consent in the world of genAI and how might informed consent regarding genAI use differ across settings and activities?
4. Privacy and Confidentiality	
4.01. Maintaining Confidentiality	How do psychologists maintain the confidentiality of their patients, research participants, and/or students when using genAI?
4.02. Discussing the Limits of Confidentiality	How do psychologist ensure their patients, research participants, and/or students understand the limits of confidentiality when using genAI in their practices?
4.04. Minimizing Intrusions of Privacy	How do psychologists minimize and/or address privacy breaches when using genAI?
4.06. Consultations	How do psychologists protect the privacy of their patients, research participants, and/or students when using genAI as a consultant?
7. Education and Training	
7.03. Accuracy in Teaching	How do psychologists ensure the accuracy of the genAI output they incorporate into teaching?
8. Research and Publication	
8.02. Informed Consent to Research	How do psychologists ensure that research participants are truly informed about the use of genAI in research studies incorporating such technology?
8.10. Reporting Research Results	What are psychologists’ obligations with regard to acknowledging the use of genAI in the dissemination of research findings, including article writing?
8.11. Plagiarism	How do psychologists avoid claims of plagiarism when using genAI?
8.12. Publication Credit	How do psychologists credit genAI in publications?

(table continues)

Table 1 (*continued*)

Ethical principles and standards	Questions to consider
9. Assessment	
9.02. Use of Assessments	How do psychologists incorporate genAI into assessment activities including testing and report writing?
9.03. Informed Consent to Assessments	How do psychologists ensure that patients are truly informed about the use of genAI in assessment practices, including the potential benefits and risks of such use?
10. Therapy	
10.01. Informed Consent to Therapy	How do psychologists ensure that patients are truly informed about the use of genAI in therapy, including the potential benefits and risks of such use?

Note. genAI = generative artificial intelligence.

authority” when speculating about the future educational landscape in a world with genAI.

Competence

Standard 2, Competence, is relevant across settings and activities. When used as a training tool, genAI may increase professional competence. For example, among a sample of medical students, the use of genAI for training purposes increased self-directed learning, provided access to simulation scenarios, and helped improve writing (Preiksaitis & Rose, 2023). However, to reap such benefits, psychologists must understand the ways in which the genAI model has been trained and be aware that genAI output will depend on the resources used during such training (Bonneton et al., 2020; Følstad et al., 2021; Meskó & Topol, 2023). Although findings from a recent study suggested genAI (ChatGPT-3.5 and ChatGPT-4, specifically) demonstrated less gender and socioeconomic bias than primary care physicians when evaluating depression and developing treatment protocols (Levkovich & Elyoseph, 2023), psychologists should not assume genAI-created information or materials are accurate or unbiased. Bias and inaccuracies associated with the use of genAI may be particularly troublesome in clinical work or research with or for vulnerable and/or marginalized populations (Følstad et al., 2021). Given these realities, psychologists must continually assess the competence of the genAI systems they use through, for example, evaluating the veracity of genAI output. At the same time, with research demonstrating the ability of genAI to pass medical licensing exams in the United States (Gilson et al., 2023) and Japan (Tanaka et al., 2024), questions

arise about whether genAI’s competence will exceed that of humans. Understanding the role of humans in training and operating genAI systems is therefore important.

In the clinical domain, specifically, psychologists should have at least a basic understanding of genAI’s clinical utility, including the benefits and challenges of using genAI to treat certain populations and/or conditions (Fulmer et al., 2021). This will require staying abreast of research in this area, which is evolving rapidly. A recent scoping review of mental health chatbots revealed a dearth of randomized controlled trials (RCTs) in this area, serving as a reminder that, while promising, this technology is in its infancy and much more research is needed to demonstrate the feasibility, acceptability, and transferability of chatbots to the therapeutic context (Bendig et al., 2022). In the educational domain, there is growing recognition of the importance of genAI competence among educators and students, which has resulted in the introduction of several genAI competency frameworks (e.g., Ng et al., 2023; Su & Yang, 2023; United Nations Educational, Scientific and Cultural Organization, 2023). Although a description of these frameworks is beyond the scope of this article, readers are encouraged to explore the competency frameworks cited here, and others, in order to think through the knowledge, skills, and competencies needed to effectively and ethically incorporate genAI into their teaching.

Human Relations

Standard 3, Human Relations, may be the most relevant to discussions about the ethical use of genAI among psychologists. Across settings and activities, many questions exist about how to

uphold Standards 3.01 (Unfair Discrimination), 3.04 (Avoiding Harm), and 3.10 (Informed Consent), which correspond quite directly with the principles of justice, beneficence, and nonmaleficence, and respect for people's rights and dignity, respectively. Standard 3.04, Avoiding Harm, underlies most concerns about how to use genAI ethically. This standard requires psychologists to avoid harm and, in cases where harm cannot be avoided but is foreseeable, to minimize harm. Given the unknown and unintended long-term consequences of genAI, adherence to this standard may be challenging. However, psychologists are ethically obligated to consider the potential harm associated with genAI use in their practices. For example, Sætra (2023) described potential micro (e.g., cognitive atrophy related to overreliance on genAI to think and create, impact of genAI's increasing ability to manipulate humans and to replace human relationships), meso (e.g., shifts in power relations between employers and employees as well as different groups, negative impact of biased or discriminatory systems), and macro (e.g., negative impact on democracy, political instability, labor market disruptions as human workers are replaced by genAI, environmental impact related to the energy required to use genAI) level dangers associated with genAI. Applied to the psychology profession, questions arise about how these dangers will affect individual relationships (e.g., psychologist–client, consultant–client, teacher–student, researcher–participant) and what harms might result for clients, students, and research participants as these relationships morph in response to the availability and increased use of genAI.

Standard 3.01, Unfair Discrimination, is also highly relevant as concerns exist about biased genAI output, which may increase societal biases including stigma and discrimination against groups already marginalized (Ferrara, 2023). Existing research provides evidence of gender bias (ul Ain, 2023; Zhou et al., 2024) and racial bias (Zhou et al., 2024), which may exacerbate health disparities (Ferrara, 2023). As Schwartz et al. (2022) point out, the fact that genAI bias stems from human bias is often overlooked. Fair and representative genAI output requires the use of diverse data sets when training genAI (Ferrara, 2023). Thus, human oversight is important for addressing issues related to bias and accuracy when using genAI (Hosseini et al., 2023; Stokel-Walker & Van Noorden, 2023). Psychologists are ethically

required to be part of such human oversight while continuing to address the systemic, institutional, and societal factors that contribute to bias and unfair discrimination.

Standard 3.10, Informed Consent, requires special considerations to ensure the recipients of psychological services are truly informed about the extent, as well as the potential benefits and risks, of genAI use among psychologists. However, there are questions about what information is pertinent for consent to be truly informed. For example, should clients be made aware of their clinicians' use of genAI for diagnostic and treatment purposes if no identifying information is shared? Similarly, should students be made aware of their teachers' use of genAI for grading purposes, or should research participants be made aware of a scientists' use of genAI for data analytic purposes if student assignments or research data, respectively, is deidentified? The answer is probably yes, yet some psychologists may feel the need to conceal the use of genAI due to concerns about algorithm aversion (Burton et al., 2020; Jussupow et al., 2020). When deciding what to share with clients, students, research participants, or other stakeholders, psychologists may consider including information about the accuracy of genAI for specific purposes and genAI's capability of learning to increase accuracy, as sharing such information may increase trust or the willingness to engage in genAI-based technologies (Pezzo & Beckstead, 2020; Reich et al., 2023).

Privacy and Confidentiality

Standard 4, Privacy and Confidentiality, is also highly relevant given concerns about increased risk of privacy breaches when using genAI for psychologists engaged in clinical work (Vilaza & McCashin, 2021), teaching (McDonald et al., 2024), or research (Følstad et al., 2021), among other activities. Maintaining confidentiality is how privacy is respected, so ensuring the confidentiality of information accessed or shared through genAI technologies is imperative. It is prudent for psychologists to be aware of potential harm that may result from privacy breaches. For example, exposure of a person's mental health diagnosis(es) could increase their risk of experiencing discrimination due to mental health stigma (Vilaza & McCashin, 2021). Additionally, psychologists should understand that digital data

creates greater opportunity for adversarial attacks due to its persistence (i.e., digital data remain longer than analog data and are more difficult to completely delete; [Oseni et al., 2021](#)) as well as its potential to be repurposed in unforeseen ways ([Tucker, 2019](#)).

Protecting the confidentiality of clients and research participants should be considered carefully, especially when data collected includes sensitive information (e.g., protected health information, citizenship status; [Følstad et al., 2021](#)). At minimum, clients and research participants should be made aware of the potential for data breaches and the consequences of such breaches during the informed consent process ([Rubeis, 2022](#)) while also acknowledging that some of the risks associated with genAI, including downstream consequences, are largely unknown or cannot all be accounted for, as is true for anything shared via the internet ([Kelly et al., 2019](#); [Montalto, 2014](#)). In the educational domain, there are concerns about Family Educational Rights and Privacy Act (FERPA) violations when using genAI to, for example, grade assignments ([McDonald et al., 2024](#)). FERPA is a federal law that limits who can access educational records. Some may argue that using genAI in education is no different than using learning management systems (LMS) such as Canvas or Blackboard. However, most LMS are developed to comply with FERPA policies ([McDonald et al., 2024](#)). Across settings, there are concerns about unauthorized third-party use of private data ([McDonald et al., 2024](#)).

Education and Training

Specific to educational settings, Standard 7, Education and Training, requires that psychologists consider how to ethically incorporate genAI into their teaching and training practices. Plagiarism is a common concern among educators given that genAI can be used to create original and sophisticated text without being detected using traditional plagiarism detection software ([Khalil & Er, 2023](#)). Acknowledging that regulating genAI use among students may be futile, many believe educators should integrate genAI into their teaching practices. Among a sample of 116 research-intensive (or R1) universities in the United States, [McDonald et al. \(2024\)](#) found that most encourage and provide guidance to faculty for incorporating genAI use in the

classroom including but not limited to providing sample syllabi, curricula, and activities. For example, faculty might use genAI for lesson planning and might design assignments that require students to fact-check or otherwise evaluate the accuracy of material created using genAI ([McDonald et al., 2024](#)). It seems that working with, and not against, the existence of genAI for teaching and learning is an ethical imperative for psychology educators. Simply ignoring the reality that genAI exists will negatively impact training, especially considering the next generation of psychologists will be fully immersed in the world of genAI.

Research and Publication

Specific to research settings, standard 8, Research and Publication, must be considered when incorporating genAI practices into research activities. Just as genAI can be used during every stage of the research process, from the generation of ideas to the dissemination of findings, so do ethical concerns exist about the use of genAI during every stage of the research process. As noted above, questions arise regarding what should be included about genAI use in the informed consent/assent process, how to protect the privacy of research participants when using genAI to collect or analyze data, and how to credit genAI when preparing manuscripts or when otherwise disseminating research findings. The ability for genAI to create text on its own is relatively new ([Hosseini et al., 2023](#)) and has created questions about how to ethically use and/or cite genAI when writing manuscripts. The increased access to and use of genAI for article writing has prompted many publishers to create recommendations and policies surrounding the inclusion of genAI in article creation ([Kaebnick et al., 2023](#); [Kakarmath et al., 2020](#); [Zielinski et al., 2023](#)). A recent study revealed that 70% of the top 100 journals now have some form of genAI use guidelines; however, there is a lack of uniformity across guidelines in exactly how genAI can be used, cited, or represented ([Ganjavi et al., 2023](#)). The Committee on Publication Ethics clearly prohibits the inclusion of genAI as a coauthor but allows for genAI to be used for article writing and requires its use to be cited in the methods section of research papers ([Committee on Publication Ethics, 2023](#)). Similarly, the [APA \(2023\)](#) has issued a policy allowing for the use of genAI in publications but

prohibiting coauthorship for genAI and requiring that genAI use be described and cited in the methods section of research articles or in another appropriate section for theoretical or review articles. The APA (2023) further requires that the full output of the genAI queries and responses be included as [online supplemental materials](#) when submitting manuscripts for publication.

Assessment and Therapy

Specific to clinical work and settings, Standards 9, Assessment, and 10, Therapy, are relevant. While clinical genAI research remains in its infancy, preliminary findings are promising in terms of the potential benefits of using genAI in therapy and assessment. For example, some findings suggest that genAI can be helpful for detecting and identifying human emotions from written text (Elyoseph et al., 2024) and may improve the reliability of diagnostic results (Loch et al., 2022). In addition, genAI has been used to create automated conversational agents and chatbots (Lim et al., 2022; Vilaza & McCashin, 2021) and can be a useful tool for developing digital treatment programs (Giunti & Doherty, 2024; Rodriguez et al., 2024). These forms of genAI-mediated treatment have been explored for addressing pervasive psychological concerns such as depression and anxiety (Abd-Alrazaq et al., 2019; Fiske et al., 2019) and used to implement several interventions from evidence-based treatments (e.g., acceptance and commitment therapy; Martinengo et al., 2022; cognitive behavioral therapy; Ly et al., 2017; dialectical behavior therapy; Dimeff et al., 2021). GenAI-mediated psychotherapeutic interventions have been praised for decreasing clinician burden and increasing access to services among largely underserved and vulnerable populations (Bragazzi et al., 2023; Sedlakova & Trachsel, 2023), as these services may be available when practitioners are not (Sweeney et al., 2021). GenAI may also be used to support clinical or diagnostic decision-making (Giordano et al., 2021; Magrabi et al., 2019) and review ongoing symptom monitoring to improve treatment outcomes (Davenport & Kalakota, 2019).

While genAI has promising impacts on psychological treatment, ethical concerns exist. First, genAI functionality is dependent on algorithms that develop and evolve based on learned information, which may result in built-in human biases that reinforce existing forms of social inequity (Fiske

et al., 2019; Fulmer et al., 2021). Moreover, genAI requires an abundance of information to function well, some of which will be collected from clients (Khan et al., 2023). As previously discussed, this may result in increased risk of violating clients' privacy and breaching confidentiality. Second, some attempts to implement genAI-mediated treatment have indicated that genAI can fail in ways that can harm clients (Thimmanayakanapalya et al., 2024). For example, one chatbot, Woebot, failed to identify difficult and dangerous situations presented by clients, and research suggests chatbots' responses to suicide are limited and inappropriate in many cases (Vaidyam et al., 2019). Similarly, when provided text descriptions of hypothetical clients with varying degrees of suicidal risk, ChatGPT routinely underestimated clients' risk for suicide (Elyoseph & Levkovich, 2023). This suggests that genAI may skew clinical decision-making in ways that may be detrimental to clients. Third, the long-term effects of genAI-mediated treatment (e.g., automated cognitive behavior therapy) are unknown and most digital mental health tools on the market have not been ethically evaluated (Vilaza & McCashin, 2021). Furthermore, professional guidelines specific to genAI use are limited, and currently, most professional ethics codes do not directly address genAI use (Fulmer et al., 2021; Jones & Moffitt, 2016).

Recommendations and Future Directions

Currently, there are more questions than answers regarding how to think about professional ethics in psychology within the context of emerging technology, particularly genAI. Nonetheless, given the speed at which genAI is evolving, it is critical for psychologists to be aware of, and able to respond to, ethical issues that are likely to arise when using genAI. Psychologists are encouraged to embrace the benefits of genAI while being aware of its potential ethical risks. This will require staying abreast of emerging research and guidelines on evidence-based and ethical genAI practices via continuing education courses, workshops, conferences, and other training opportunities to inform their decisions on when and how genAI may be appropriate for use with their clients or in their research and teaching activities. Psychologists also need to be transparent about their use of genAI and provide information about the potential risks and benefits of such use in their informed consent

processes with clients and research participants. Educators have an ethical obligation to their students and trainees to rethink how to teach in the world of genAI. Researchers need to stay apprised of regulatory changes related to the protection of human participants when using genAI in research and are encouraged to consult regularly with institutional review boards. Psychologists across settings are ethically obligated to verify the sources of information gathered using genAI. The use of an ethical decision-making model may be useful for psychologists faced with ethical challenges related to the use of technology in their activities as a clinician, a teacher, and/or a researcher (see Cottone & Claus, 2000, for a review of ethical decision-making models). See Table 2 for specific recommendations organized by relevant ethical standards.

The APA Ethics Code (2017) is currently being revised and we hope the revised code will provide more guidance to psychologists about the use of technology, including genAI. Updates from the APA Ethics Code Task Force (ECTF), commissioned by the APA Ethics

Committee and responsible for revising the code, suggest the revised code will do just that (APA Ethics Code Task Force, 2023). In addition to expanding the principles in number and focus, the revised code will have an ethical standard focused on technology among other proposed changes to the ethical standards. The revised code also is likely to contain an ethical decision-making model to assist psychologists faced with ethical dilemmas. Readers are encouraged to evaluate and share feedback on the proposed revisions with the ECTF, which can be done in a number of ways (e.g., by attending ECTF sessions at the APA annual convention, by completing an electronic feedback form on the ECTF website). Knapp et al. (2020) recommend that, when commenting, psychologists consider the purpose of the code, how the code can meet conflicting objectives, the overarching ethical theories underlying the code, and the extent to which ethical standards are useful and comprehensive without unnecessarily harming the public or psychologists. Readers also may reference the questions posed in Table 1 when evaluating the utility of the proposed revised code for addressing

Table 2
Recommendations by Relevant Ethical Standards

Ethical standards	Recommendations
1. Resolving Ethical Issues ^a	• Review genAI systems and applications that incorporate psychologists' work to ensure accurate representation of psychological theories and scientific findings. • Initiate discussions with genAI developers and stakeholders to raise awareness of ethical considerations and encourage responsible use of psychologists' contributions in genAI systems. • Offer educational materials or training resources to genAI users regarding the ethical implications of using psychologists' work and how to do so ethically. • Monitor genAI systems for instances of misrepresentation or misuse of psychologists' work and report any issues to relevant authorities or organizations. • Collaborate with ethicists and experts in genAI ethics to establish frameworks or guidelines for the ethical integration of psychological contributions in genAI systems. • Advocate for transparency in genAI systems by promoting clear disclosure of sources and methodologies used in content generation. • Stay abreast of advancements in genAI technology and potential ethical considerations, and adapt strategies to effectively address emerging issues.
1.01. Misuse of Psychologists' Work ^a	
2. Competence ^a	• Pursue ongoing education or training focused on the integration of genAI in psychology practice, research, and education. • Stay abreast of advancements and best practices in genAI applications within psychology through regular review of the available literature and available resources. • Gain practical experience by actively experimenting with genAI systems across settings to develop proficiency. • Participate in professional networks or forums dedicated to discussing genAI applications in psychology to foster peer learning opportunities. • Seek guidance or supervision from experienced professionals when incorporating genAI into clinical practice or research endeavors to ensure competency and adherence to best practices and ethical standards.

(table continues)

Table 2 (*continued*)

Ethical standards	Recommendations
3. Human Relations ^a	• Foster interdisciplinary collaborations with experts from fields like computer science or engineering to gain diverse insights into genAI's application in psychology. • Continuously assess your proficiency and comfort level with genAI technologies in psychology to identify areas for improvement.
3.01. Unfair Discrimination ^a	• Educate yourself about the data sets used to train genAI systems to assess potential sources of bias.
3.04. Avoiding Harm ^a	• Utilize bias detection tools and techniques to identify and address any unfair discrimination present in genAI outputs (e.g., open source IBM AI Fairness Detection Tool 360). • Seek input and feedback from diverse stakeholders, including marginalized groups, when developing and implementing genAI applications in psychology. • Be transparent about the limitations and potential biases of genAI-created content. • Educate yourself and others involved in genAI applications about the potential for bias and unfair discrimination, promoting awareness and sensitivity to these issues. • Advocate for the development and implementation of policies and regulations that promote fairness and equality in the use of genAI technologies across all settings and activities in psychology.
3.10. Informed Consent ^a	• Obtain explicit consent from clients and research participants regarding the use of genAI in psychological activities. • Conduct comprehensive risk assessments to identify potential harm associated with the integration of genAI in clinical practice, research, and educational endeavors. • Seek regular supervision and consultation from seasoned professionals when integrating genAI into clinical practice or research to mitigate the risk of harm. • Adhere strictly to data privacy regulations and guidelines when collecting, storing, and utilizing data for genAI applications to safeguard the confidentiality of clients, students, and research participants. • Employ strategies to mitigate biases in genAI outputs to prevent harm stemming from unfair discrimination or inaccurate representations. • Continuously monitor and evaluate the impact of genAI on clients, students, and research participants to promptly identify and address any potential harm. • Provide stakeholders with education and training on the utilization of genAI in psychology, including potential risks and possible safeguards to mitigate harm. • Develop and enact crisis management protocols to address any unexpected harm or adverse effects resulting from the implementation of genAI in psychological activities. • Collaborate with other professionals and advocate for policies and regulations that uphold the responsible and ethical use of genAI in psychology, with a focus on safeguarding individuals from harm. • Top of Form • Bottom of Form
4. Privacy and Confidentiality ^a	• Clearly delineate the purpose and application of genAI technology within the informed consent process for therapy, assessment, or research. • Inform clients or research participants about the potential risks and advantages associated with genAI use, including privacy concerns, accuracy limitations, and potential biases. • Describe how client or participant data may be gathered, stored, and employed using genAI technology, highlighting measures implemented to uphold confidentiality and privacy. • Present information regarding alternative methodologies or technologies that could be employed instead of genAI to empower clients or participants to make informed choices. • Acknowledge any constraints or uncertainties surrounding the use of genAI, acknowledging its experimental nature and the potential for unforeseen outcomes. • Encourage clients or participants to pose questions and seek clarification about genAI usage, fostering transparent communication and informed decision-making. • Assess and document clients' or participants' comprehension of the information provided about genAI use during the informed consent process. • Periodically revisit discussions on informed consent regarding genAI use to ensure continued understanding and agreement as therapy, assessment, or research progresses. • Update informed consent procedures as needed to reflect any alterations or advancements in genAI technology use to maintain transparency and promote informed decision-making. • Encrypt data utilized in genAI applications during both storage and transmission to safeguard confidentiality.

(*table continues*)

Table 2 (*continued*)

Ethical standards	Recommendations
7. Education and Training ^b	• Enforce stringent access control protocols, restricting access to sensitive data used in genAI to authorized personnel exclusively. • Anonymize data used in genAI to minimize the risk of privacy breaches and to uphold confidentiality. • Securely store data used in genAI applications using encrypted databases and secure servers to prevent unauthorized access. • Obtain informed consent from individuals regarding the collection and utilization of their data in genAI activities, ensuring transparency regarding privacy and confidentiality risks. • Collect and utilize only the essential data required for genAI applications to mitigate privacy risks. • Conduct routine audits of data handling procedures in genAI projects to ensure alignment with privacy and confidentiality standards. • Solicit ethical review and endorsement from pertinent institutional review boards for genAI projects involving sensitive data to ensure compliance with privacy and confidentiality standards and regulations. • Continuously monitor data handling practices and update security measures as necessary to address emerging privacy and confidentiality concerns in genAI applications. • Foster transparency with students and trainees regarding the use of genAI in teaching and grading activities. • Include a genAI policy within course syllabi to establish clear guidelines for its use. • Integrate education on genAI ethics into psychology curriculum, stressing responsible use and potential ethical implications. • Use case studies or examples to illustrate ethical considerations and dilemmas associated with genAI in psychology education and training. • Promote critical thinking and ethical decision-making through interactive discussions and debates on ethical issues surrounding genAI use in educational settings. • Invite genAI ethics experts to deliver guest lectures or workshops on ethical considerations specific to genAI in psychology education. • Provide students with access to ethical guidelines and resources relevant to genAI use in psychology, encouraging their application in educational activities. • Design practical exercises or simulations enabling students to explore ethical decision-making in scenarios involving genAI applications. • Incorporate real-world cases or examples showcasing ethical challenges and best practices concerning genAI use in psychology education, enabling students to apply theoretical knowledge to practical situations. • Engage students in role-playing activities where they adopt various roles (e.g., psychologist, genAI developer, research participant) to examine diverse perspectives on genAI ethics. • Assign reflective writing tasks where students analyze their ethical considerations and decision-making processes concerning genAI utilization in educational settings. • Encourage students to stay abreast of advancements and debates in genAI ethics beyond the classroom, fostering a lifelong commitment to ethical practice in genAI utilization within psychology education and beyond.
8. Research and Publication ^c	• Obtain approval from relevant ethics committees for research projects incorporating genAI, ensuring adherence to ethical standards throughout all research phases. • Secure informed consent from participants regarding the use of genAI in research activities and any potential implications for privacy and confidentiality. • Clearly delineate the methodology employed for genAI data collection, analysis, and interpretation in research publications to allow for replication and validation. • Uphold data integrity in genAI research through rigorous validation and verification procedures, mitigating the risk of bias or inaccuracies. • Employ measures to safeguard the privacy and confidentiality of research participants' data used in genAI research, including encryption and anonymization methods. • Implement strategies to mitigate inherent biases in genAI algorithms and data sets, ensuring equitable and unbiased research outcomes. • Submit research findings involving genAI to peer-reviewed journals to allow for scrutiny to maintain scientific rigor. • Disclose any limitations or uncertainties associated with genAI use in research (e.g., potential biases, data quality issues, algorithmic constraints).

(*table continues*)

Table 2 (*continued*)

Ethical standards	Recommendations
9. Assessment ^d	• Embrace open data practices for genAI research, granting accessibility to data sets and code to promote transparency and reproducibility. • Disseminate research findings involving genAI responsibly and ethically, ensuring accurate representation and interpretation of results without exaggerating or distorting conclusions. • Familiarize yourself with journal guidelines regarding the use and attribution of genAI in manuscripts to uphold scholarly standards and integrity. • Obtain clients' informed consent regarding the use of genAI in assessment and therapy, providing transparent information on its purpose, limitations, and potential implications.
10. Therapy ^d	• Employ genAI as a supplementary tool in assessment and therapy, prioritizing clinical judgment and expertise to guide decision-making and interventions. • Safeguard the confidentiality and privacy of client data utilized in genAI assessments or therapy sessions, adhering to pertinent privacy regulations and guidelines. • Remain cognizant of potential biases in genAI algorithms and outputs, critically assessing their relevance and accuracy within the clinical context. • Continually assess the effectiveness and appropriateness of genAI tools in assessment and therapy, adapting their use based on clinical feedback and outcomes. • Solicit client feedback regarding their experiences with genAI-assisted assessments or therapy and integrate their perspectives into treatment planning and decision-making processes. • Foster a strong therapeutic alliance with clients, emphasizing collaboration and shared decision-making in the use of genAI technologies. • Seek supervision or consultation from seasoned professionals when incorporating genAI into clinical practice, ensuring competence and adherence to ethical standards. • Stay abreast of advancements and best practices in the integration of genAI in clinical assessment and therapy through ongoing training and professional development. • Engage in ethical reflection and dialogue concerning the use of genAI in assessment and therapy, considering its potential impact on clients' well-being and the therapeutic process.

Note. ChatGPT 3.5 was used to help generate recommendations (OpenAI, 2023; see the [online supplemental materials](#) for the full ChatGPT 3.5 transcript). Some of these recommendations will be useful for individual psychologists while others will require the support of professional organizations such as the APA. genAI = generative artificial intelligence.

^a Applies to all settings and activities—clinical, research, and educational. ^b Applies to educational settings and activities. ^c Applies to research settings and activities. ^d Applies to clinical settings and activities.

questions about genAI. Once published, it will be important for mechanisms to be in place to quickly amend the APA Ethics Code in response to the evolving nature of genAI and other emerging technologies and to educate the APA Ethics Committee and state regulatory boards about such amendments given their responsibility for enforcing ethical standards.

Beyond revisions to the APA Ethics Code, there exists a need for professional guidelines on the ethical use of genAI across settings to be continually reviewed and updated (or created where guidelines are lacking). Involving clinicians in the discussion and development of genAI-mediated treatment can help ensure that machine learning algorithms are integrating the proper use of evidence-based intervention techniques. Furthermore, empirical research is needed on the ethical impact of genAI use on the activities of psychologists across settings. As noted earlier, few RCTs exist in this domain. Again, see

[Table 2](#) for specific recommendations organized by relevant ethical standards. In closing, psychologists are urged to educate themselves about genAI and to contemplate the ethical use of this powerful technology that is changing all aspects of our society.

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