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AI and Existential Dread: A Rising Concern in Pediatric Psychology

Andrew Edgington[1*], **Grant Nelson**[1]

[1] University of Toledo College of Medicine & Life Sciences

Email: andrew.edgington@rockets.utoledo.edu

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1. Introduction

Artificial intelligence (AI) is reshaping modern life, from how we communicate and learn to how we perceive our own abilities. For adolescents, who are in the formative stage of identity development, AI introduces psychological challenges that remain poorly understood. As generative models now author essays, compose music, and solve complex problems, young people are increasingly exposed to comparisons that question the uniqueness of human thought.

Digital media has long been associated with increased anxiety and depressive symptoms in youth (1). But AI may take this further, challenging foundational beliefs about human relevance. Adolescents may begin to wonder: What is the point of cultivating skill or meaning in a world where machines are more efficient? What was once an abstract concern for adults is now a daily dilemma for teenagers. Mental health providers are starting to encounter this distress, yet few frameworks exist to guide clinical understanding. This paper explores the rise of AI-related existential anxiety in adolescents, relevant psychological theories, and implications for pediatric mental health care.

2. Discussion

AI Exposure and the Changing Mental Health Landscape

In the last decade, mood disorders and identity-related struggles have surged among adolescents (1). While social media and academic pressures have received significant attention, AI introduces a distinct psychological burden. Teens now routinely interact with generative tools like ChatGPT or image generators, which perform tasks once considered exclusive to human creativity and intellect (2,3).

Some adolescents report feelings of inadequacy and irrelevance after seeing AI produce superior creative or intellectual output (4). In clinical settings, providers are beginning to hear youth voice fears of being replaceable or unnecessary. Although large-scale studies remain limited, emerging qualitative evidence suggests these reactions are not isolated. Unlike previous technology-related anxieties tied to social comparison or attention span, AI-related distress appears more ontologically centered on meaning, identity, and purpose (4).

Psychological Frameworks Explaining the Response

To understand why AI provokes such distress, it is helpful to integrate developmental and existential theories. Erik Erikson's psychosocial model characterizes adolescence as a period of identity formation (5). During this phase, adolescents explore values, goals, and roles that contribute to a cohesive sense of self. When AI encroaches into academic or creative spaces, it can destabilize this process. If a machine can outperform a student's best effort, questions about their value or future contributions may arise.

Existential psychology further illuminates this experience. Irvin Yalom outlined core human concerns, including meaninglessness, isolation, and the threat of non-being (6). Adolescents exposed to narratives of AI dominance may experience these concerns prematurely and more intensely. Alvin Toffler's "future shock" offers another lens, describing how overwhelming technological acceleration can induce psychological disorientation (7). Today's teens are not just forming identity online; they are doing so in an era where AI is increasingly portrayed as surpassing human potential.

Clinical Implications for Pediatric Psychiatry

As AI continues to permeate learning environments, social media, and entertainment, clinicians must be prepared to recognize AI-related distress. Standard intake forms and checklists may overlook existential fears such as obsolescence or purposelessness. Instead, mental health professionals may need to ask open-ended questions about AI use and related emotions, especially when adolescents are present with identity confusion, demotivation, or a sense of futility (8).

Therapeutic approaches grounded in meaning-making and value-based living may be particularly useful. Narrative therapy can help youth reclaim authorship of their identity in a machine-dominated world (9). Acceptance and Commitment Therapy (ACT) encourages patients to accept difficult thoughts and commit to actions aligned with personal values, offering a practical way to address existential anxiety without resistance (10). These interventions shift focus

from comparison with machines, such as emotional depth, moral reasoning, and lived experience.

Psychoeducation also plays a critical role. Helping adolescents understand AI's limitations and lack of consciousness can reframe unhelpful comparisons. Applying a biopsychosocial model, clinicians can situate AI anxiety within developmental and societal contexts, ensuring treatment reflects the complexity of adolescent experience. Families and educators can further reinforce messages of intrinsic human worth and encourage engagement in activities that foster purpose beyond productivity.

3. Conclusions

AI represents more than a technological shift; it is a cultural and psychological one. For adolescents already navigating the vulnerable process of identity formation, generative models introduce new existential stressors. Feelings of displacement, inadequacy, and disconnection are emerging in clinical settings and must be taken seriously. Although research in this area is just beginning, existing theories and early observations support the concern that AI may be reshaping adolescent mental health. Pediatric providers must guide youth through this transformation with compassion, evidence-based interventions, and a renewed focus on meaning, resilience, and what it truly means to be human.

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