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Impact of Ai on mental health of a designer

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Abstract
Artificial Intelligence (AI) has become an integral component of contemporary design practice, reshaping ideation, visualization, and routine production tasks. While AI delivers creative acceleration and operational efficiency, its psychological implications for designers remain insufficiently examined. Increasing dependence on generative and algorithmic tools introduces both relief from repetitive work and new anxieties surrounding originality, authorship, autonomy, and long-term job relevance. This research addresses this critical gap by investigating the dual impact of AI on designers' mental health, focusing on emotional well-being, stress, burnout, creative confidence, and professional identity.
A mixed-method design was employed to capture both measurable trends and lived experiences. Quantitative data were collected from 58 participants, including undergraduate students, postgraduate students, and professional designers across textile, fashion, communication, and product design disciplines. A structured questionnaire assessed key indicators such as anxiety, creative control, burnout, perceived originality, productivity, and satisfaction using a five-point Likert scale. To deepen these insights, 12 semi-structured interviews were conducted, enabling exploration of emotional reactions, cultural discomfort, fear of replacement, and personal strategies for navigating AI-assisted workflows. Descriptive statistical analysis mapped psychological patterns, while thematic coding revealed recurring concerns about creative displacement, cultural dilution, and adaptation fatigue.
Findings show that AI significantly reduces time spent on repetitive tasks and enhances experimentation and innovation, contributing to workflow ease and creative stimulation. However, these benefits coexist with heightened anxiety related to originality, fear of being overshadowed by AI-generated work, and reduced perceived control over the creative process. Moderate levels of burnout and mental fatigue emerged due to the constant need to adapt to rapidly evolving AI technologies. Designers who maintained a balanced human–AI collaboration demonstrated stronger creative confidence and emotional stability compared to those who relied heavily on AI or avoided it altogether.
The study concludes that sustainable and psychologically healthy AI adoption requires intentional integration frameworks, mental-wellness support, and pedagogical strategies that reinforce human creativity rather than diminish it. These insights contribute to evolving design education and the development of responsible technological ecosystems that protect creative identity while embracing innovation.

Keywords: Artificial intelligence, mental health, designers, creativity, human–AI collaboration

Introduction
Artificial Intelligence has moved from being a background convenience to becoming a core part of how creative work gets done in fields like fashion, product, and communication design. Tools that once handled routine digital tasks now influence ideas, aesthetics, and even decision-making. This shift has sped up workflows and opened creative access to people who previously lacked technical skills. It has also pushed designers to rethink their roles not just as creators, but as people who guide, select, and refine what machines generate.
But this rapid progress has an emotional side that gets ignored far too often. Creativity is tied to identity. Many designers measure their value through originality, intuition, and the feeling that their ideas are uniquely theirs. When AI starts producing concepts that look polished enough to compete with human work, it can unsettle that sense of identity. It raises uncomfortable questions about what creativity means, what skills still matter, and where the "human" sits in the process.
Most existing literature focuses on productivity, UI efficiency, or typical ethical issues like authorship and bias (Boden, 2016; McCormack & d'Inverno, 2012) [1, 2]. Very few studies examine what designers actually *feel* while adapting to this shift. Earlier research on mental health in creative professions (Gunay, 2025) [10] came before generative AI became widespread, so it misses the emotional pressure that comes with working alongside algorithms.
This gap is the starting point of the present study. The goal is to understand how AI can simultaneously support and strain designers' mental well-being. The study looks specifically at anxiety, burnout, creative confidence, and the changing meaning of professional identity. A mixed-method approach survey data combined with interview insights helps capture both the measurable and the personal dimensions of this issue.
The broader contribution of this work is a clearer understanding of how designers and AI might coexist in the long run. As creative education and industry practice continue to evolve, technical skills alone won't be enough. Designers will also need support in navigating the emotional and psychological impact of this new partnership.

Literature Review
1. AI and Creative Labor
Early work on computational creativity suggested that AI systems could combine and remix ideas in ways that look

surprisingly similar to human imagination (Boden, 2016; McCormack & d'Inverno, 2012) [1, 2]. What was once a theoretical possibility has now become part of everyday design work. Tools like Midjourney, DALL·E and Runway ML make it easy for anyone to generate visuals quickly, lowering the entry barrier and changing how designers approach the creative process. Instead of starting every concept from scratch, many designers now guide, select and refine what these systems produce a shift from being the sole originator of ideas to acting more like a curator (Shneiderman, 2020) [5].

Research in digital art and machine learning shows a similar trend: AI is no longer just a tool but a collaborator that shapes aesthetic choices and influences the final outcome. Human judgement and machine output often merge in these moments of co-creation, blurring the line between the two (Caramiaux & Donnarumma, 2019; Elgammal et al., 2017) [3, 4].

2. Psychological Effects of Automation

Psychological reactions to automation have been studied for years in areas like human–computer interaction and workplace research. Hancock and colleagues (2020) [6] describe one of the most common reactions as "automation anxiety" the worry that intelligent systems might outperform or replace human abilities. In creative professions, this feeling often blends with imposter-like doubts, where designers question whether their own artistic judgment still matters when AI can generate strong visual results (Feigenbaum, 2020) [7]. Researchers in psychology also point out that when people feel their autonomy or authorship is being challenged, their motivation drops, they take fewer creative risks, and their overall confidence in their work declines (Amabile & Pratt, 2016) [8].

3. Mental Health in Design Education and Practice

Design education has long been linked to intense emotional pressure. Students deal with subjective critiques, a competitive studio culture, and the constant expectation to produce something original (Yokochi & Okada, 2005) [9]. Recent studies show that this environment is becoming even more demanding, with many students reporting higher levels of stress, self-comparison, and burnout (Gunay, 2025) [10]. The introduction of AI tools adds another layer to this pressure. Because these systems can generate clean, polished ideas within seconds, students often feel that their own skills fall short. This can disrupt their sense of progress, make them question their abilities, and create new anxieties around what "good" design should look like (Costantino & Lorenzo, 2021; Oxman, 2017) [11, 12].

4. Cultural and Ethical Concerns in Design AI

Most discussions around AI tend to overlook questions of cultural identity, even though these issues are central in fields connected to craft and heritage. For many Indian design students, the ability of AI tools to imitate traditional textiles or indigenous motifs can feel unsettling. These systems may reproduce cultural designs in ways that seem inauthentic or disconnected from their original meaning, creating worries about misrepresentation or cultural dilution (Bhatia & Bhattacharya, 2022; Vaidyanathan, 2021) [13, 14]. Because creative identity in textile and fashion design is closely tied to cultural history and symbolism, such concerns can add emotional pressure that does not usually appear in Western-focused research.

5. Research Gaps

AI tools have changed the pace and nature of creative work, allowing designers to generate ideas quickly and pushing many of them into roles where they guide or curate machine-produced outputs rather than creating everything themselves. Yet, despite this major shift, existing research rarely looks at what these changes mean for designers on a personal and psychological level. Most studies focus on the technical side of computational creativity how AI generates images or patterns but pay far less attention to how designers cope with the loss of authorship, the reduced sense of creative control, or the discomfort of seeing AI produce work that competes with their own. These issues are especially important in creative fields, where originality and intuition are closely tied to a designer's sense of identity, but they remain largely missing from current AI discussions.

Another gap is the limited attention given to design students. They already navigate a demanding environment shaped by subjective critiques, competition, and constant expectations for novelty. When AI enters this space, it complicates how students judge their progress and abilities, often making them question their skills or artistic confidence. Despite how vulnerable students are during this early stage of identity formation, there is little research exploring how AI influences their mental health, motivation, or sense of creative legitimacy.

There is also a noticeable absence of work on cultural and ethical concerns in non-Western design settings, particularly in India. Generative models can easily imitate traditional crafts, indigenous patterns, and region-specific textile languages. For Indian design students who work closely with cultural heritage, these replications can feel like misrepresentation or dilution of their traditions. The emotional strain caused by such cultural tensions is rarely mentioned in global AI scholarship, which tends to focus more on Western contexts and broad ethical themes instead of region-specific creative identities.

Taken together, these gaps reveal a major blind spot in current research. While many studies examine the efficiency, technical capabilities, or ethical issues of AI, they do not address its emotional, identity-related, and culturally grounded impact on designers especially students in culturally rich design environments like India. This highlights the need for research that examines how AI affects designers' psychological well-being, creative confidence, and cultural identity within design education and practice.

Research Objectives

1. To examine how AI influences designers' psychological well-being, particularly in terms of anxiety, burnout, and mental fatigue.
2. To analyse how AI affects designers' sense of originality, creative control, and overall creative confidence.

Methodology

1. Research Design

This study employed a mixed-method approach, combining quantitative and qualitative methods to examine the psychological impact of Artificial Intelligence on designers.

The quantitative phase measured trends in anxiety, burnout, originality concerns, and creative autonomy through a structured survey.
The qualitative phase explored deeper emotional experiences, identity-related tensions, and cultural responses through semi-structured interviews.
Together, these two approaches provided a comprehensive understanding of how AI affects designers' mental health, daily workflow, and sense of creative identity.

2. Sampling Strategy
The study consisted of 58 participants, including undergraduate students, postgraduate students, and professional designers from disciplines such as textile design, fashion design, product design, and communication design. Participants were recruited through academic networks, institutional groups, and design community platforms associated with NIFT Bengaluru.
The sample represented individuals with varying levels of familiarity with AI tools such as Midjourney, DALL·E, Adobe Firefly, and Runway ML, ensuring that the data reflected real, hands-on experiences rather than hypothetical assumptions.
Data was collected through an online Google Form to ensure accessibility, anonymity, and convenience for all participants.

3. Data Collection Framework
The survey was divided into two sections:

Section A: Demographic Information
This section recorded basic participant details such as:
- Age group
- Gender (optional)
- Education level
- Design discipline
- Frequency of AI usage

Section B: Psychological & Creative Indicators
Participants rated ten statements on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).
The statements assessed:
- Anxiety
- Burnout
- Originality concerns
- Creative control
- Productivity
- Satisfaction
- Innovation and experimentation

This structure enabled quantitative measurement of emotional and cognitive responses to AI-assisted design.

4. Qualitative Component
To complement and enrich the statistical findings, 12 participants were selected for semi-structured interviews based on their survey responses and willingness to participate.
The interviews focused on:
- Emotional reactions to AI-generated designs
- Fear of being replaced or overshadowed
- Perceived loss or preservation of originality
- Cultural tensions around AI replicating traditional motifs
- Changing attitudes toward manual skills
- Strategies used to balance human creativity with AI assistance

Interview transcripts were analysed to identify recurring emotional themes.

5. Data Analysis Plan
Two analytical approaches were used:
- **Quantitative Analysis**
  Descriptive statistics were used to identify trends in anxiety, originality concerns, burnout, productivity, and innovation among the 58 participants.
- **Qualitative Analysis**
  Thematic analysis was used to code interview responses and identify repeated patterns related to fear, creativity, identity conflict, and empowerment.

6. Ethical Considerations
Informed consent was obtained prior to participation. Identities were anonymized, data confidentiality was maintained, and participation was voluntary in accordance with institutional guidelines.

Results
A total of 58 participants completed the survey examining the psychological and creative impact of Artificial Intelligence on designers. The results reveal distinct patterns in how designers experience AI in their creative workflows.

1. Quantitative Findings
The mean scores for the ten Likert-scale statements are presented below. Higher averages indicate stronger agreement among participants.

Table 1: Mean Scores of Psychological & Creative Indicators

Indicator	Mean Score
AI helps me experiment with innovative ideas	4.22
AI reduces the time I spend on repetitive tasks	3.94
AI-generated designs make me question my originality	3.89
I feel satisfied when collaborating with AI	3.78
AI improves my creative output	3.72
I feel anxious that AI might replace designers	3.72
AI makes me feel less in control of my creative process	3.56
I experience burnout due to AI updates	3.50
I feel mentally fatigued adapting to new AI technologies	3.44
AI increases my overall productivity	3.33

2. Key Quantitative Trends
2.1 Strong Creative Stimulation
The highest mean score (4.22) shows that designers feel AI significantly enhances experimentation and idea generation.

2.2 Concerns about Originality and Replacement
High agreement with statements related to:
- Questioning originality (3.89),
- Fear of replacement (3.72),
- and loss of control (3.56),
- Indicates emotional tension and insecurity.

2.3 Mixed Productivity Outcomes
While AI reduces repetitive work (3.94) and improves output (3.72), overall productivity gains are moderate (3.33).

2.4 Psychological Strain Present but Not Extreme
Burnout (3.50) and mental fatigue (3.44) suggest notable, but not severe, stress related to constant AI adaptation.

3. Qualitative Findings
Semi-structured interviews with 12 participants revealed recurring emotional themes:

- **Fear of Replacement**
  Participants expressed worry that AI might overshadow or replace human designers in the future.

- **Threat to Originality and Identity**
  Many felt that AI-generated visuals sometimes undermine their sense of uniqueness and artistic authorship.

- **Cultural and Manual Skill Concerns**
  Textile and craft-based designers voiced discomfort with AI replicating traditional motifs without cultural context.

- **Creative Empowerment**
  Some participants reported that AI expanded their creative possibilities and provided fresh inspiration.

4. Summary of Findings
Overall, the results show a dual impact:

- **Positive:** Innovation boost, faster idea generation, efficiency in repetitive tasks.
- **Negative:** Anxiety, originality concerns, moderate burnout, reduced creative control.

Discussion
The findings reveal that AI influences designers in a distinctly dual manner enhancing creativity and workflow efficiency while simultaneously creating psychological tension. The combination of quantitative trends and qualitative themes provides a deeper understanding of how designers interpret and emotionally respond to AI in their creative practice.

1. AI as a Creative Enhancer
The highest mean score was associated with innovation (M = 4.22), indicating that designers strongly perceive AI as a tool that expands their creative exploration. This aligns with existing research stating that AI enables rapid ideation and exposes designers to unexpected directions. Participants also appreciated AI's ability to reduce repetitive tasks (M = 3.94), confirming its usefulness in speeding up routine workflows.
These results suggest that AI is not only accepted but actively used for inspiration, experimentation, and efficiency.

2. Concerns about Originality and Loss of Creative Control
Despite the creative advantages, participants showed strong agreement that AI-made designs sometimes challenge their sense of originality (M = 3.89). Fears of losing control over the creative process (M = 3.56) indicate a perceived threat to personal authorship, a finding reinforced in the interviews where many designers expressed that AI sometimes "overpowers" their own thinking.
This emotional conflict reflects a deeper identity struggle designers want to remain the source of creativity, not merely editors of AI-generated outcomes.

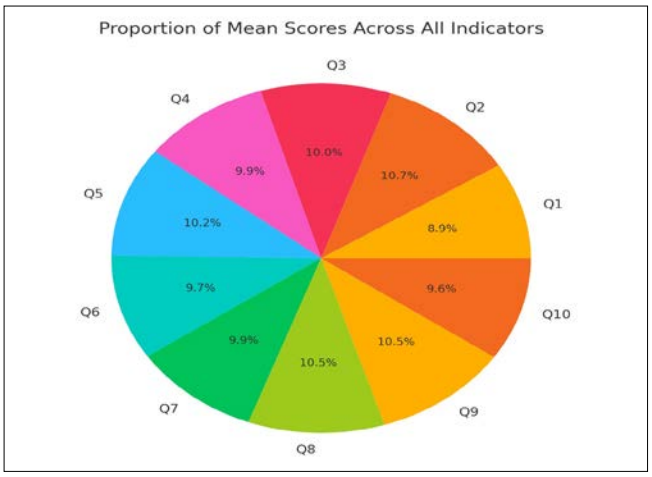
3. Anxiety about Professional Replacement
A significant mean score (M = 3.72) indicates widespread concern that AI might replace human designers. This fear was strongly echoed in interviews, where participants described AI as a long-term threat to job stability, especially in fields relying on visual output.
Such anxiety mirrors global discussions about automation and creative labour, showing that psychological insecurity is an unavoidable part of AI adoption.

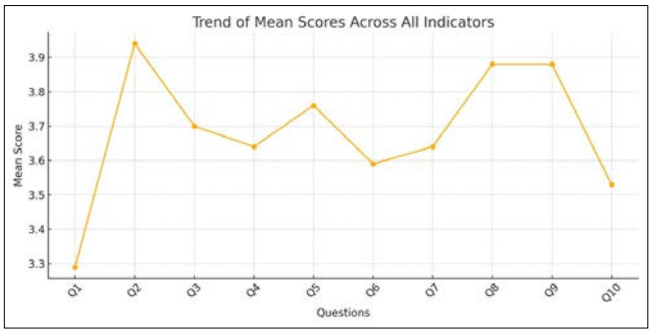
4. Burnout and Fatigue from Continuous AI Adaptation
Moderate scores for burnout (M = 3.50) and mental fatigue (M = 3.44) highlight the pressure designers feel in keeping up with rapidly evolving AI tools. Constant updates, new features, and shifting workflows create an ongoing learning burden. Interviews confirmed that adapting to emerging technologies can feel overwhelming, especially for students balancing academic stress.
This suggests that AI not only influences creative outcomes but also adds emotional strain to the design process.

5. Cultural and Manual Skill Concerns
A unique dimension emerged from participants in textile and craft-based disciplines. They expressed anxiety about AI replicating traditional motifs without context or authenticity. Some felt that manual skills, sketching, and heritage techniques could lose their value in a fast-AI environment.
This cultural aspect is especially relevant in the Indian design context and highlights issues not commonly discussed in Western AI research.

6. Overall Interpretation
The results point to a clear conclusion: **AI is both a creative catalyst and a psychological disruptor.**

- It enhances innovation, speeds up work, and opens new creative pathways.
- But it also generates insecurity, raises questions about originality, and contributes to mental fatigue.





Conclusion

This study reveals that AI has a complex and dual impact on designers' mental health and creative practice. While AI significantly enhances innovation, speeds up repetitive tasks, and provides new possibilities for experimentation, it also introduces notable psychological challenges. Many designers experience anxiety about being replaced, question their originality, and feel a reduced sense of control during AI-assisted creation. Additionally, moderate levels of burnout and fatigue suggest that continually adapting to evolving AI tools places emotional strain on users.

The findings indicate that AI is not merely a technical addition to the design process but a factor that reshapes creative identity, confidence, and cultural values especially within design disciplines rooted in heritage and manual craftsmanship. As AI becomes more integrated into education and professional practice, it is essential to support designers in developing a balanced relationship with the technology, one that preserves human creativity while embracing digital innovation.

Overall, the study emphasizes the need for institutions and industry to consider both the creative benefits and the mental health implications of AI, ensuring that designers can adopt these tools without compromising their well-being or sense of artistic authenticity.

Limitations

This study has a few limitations that should be acknowledged:

1. **Sample Size and Scope**
   Although the study represents 58 participants, the responses were collected primarily from design students and early-career designers, which may limit generalizability to senior professionals or industry leaders.

2. **Self-Reported Data**
   The survey relied on self-assessment, which may include personal bias, exaggeration, or underreporting of psychological experiences.

3. **Limited Geographical Context**
   Most participants were associated with NIFT Bengaluru or similar academic environments, which may not reflect the experiences of designers from different cultural or institutional settings.

4. **Rapid Evolution of AI Tools**
   AI technologies evolve quickly, meaning perceptions captured in this study may shift as tools become more advanced or more widely adopted.

5. **Mixed-Method Depth Constraint**
   While interviews added depth, the qualitative sample size was limited to 12 participants and may not capture the full emotional spectrum of designers.

Future Scope

Several areas offer potential for extended research:

1. **Comparative Studies Across Design Disciplines**
   Future research can examine differences between fashion, textile, communication, UI/UX, and product designers to understand discipline-specific responses to AI.

2. **Longitudinal Research on AI Impact**
   Tracking designers over several years would help understand how ongoing AI integration shapes mental health, creative confidence, and career identity over time.

3. **Cross-Cultural and Multi-Institutional Studies**
   Expanding the study across different design schools, geographic regions, and professional studios could provide more diverse insights.

4. **In-Depth Cultural Analysis**
   As AI increasingly replicates traditional motifs, future work can investigate cultural appropriation, authenticity, and the psychological impact on designers working with heritage crafts.

5. **Intervention-Based Research**
   Institutions could test programs such as AI ethics workshops, creative autonomy training, or mental health support modules to help designers adapt to AI more comfortably.

6. **Exploration of AI–Human Collaboration Models**
   Future research can explore frameworks that balance automation with human creativity, ensuring neither overwhelms the other.

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