Mindful Publishing in the AI Era: Navigating Trends and Fostering Environmental Awareness

Oleg N. Medvedev

Chris U. Krägeloh

Co-Editors in Chief

Springer Nature *Mindfulness*

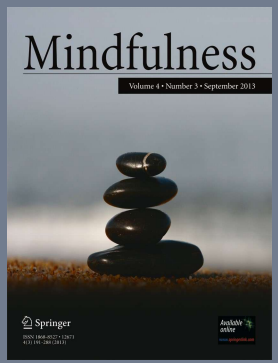
Handbook of Assessment in Mindfulness Research

International Handbook of Behavioral Health Assessment

1

The Journal

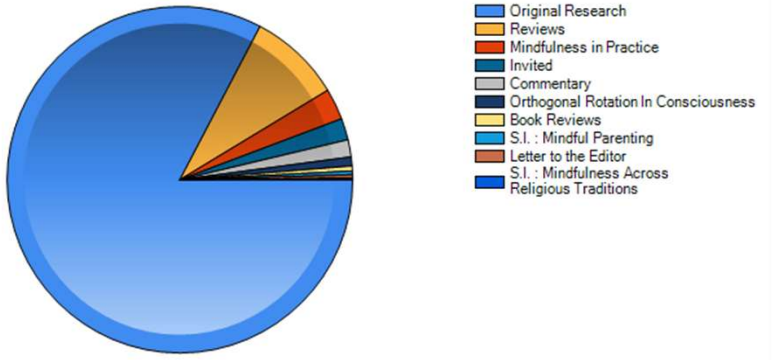
2010-2024



Mindfulness

- **Hybrid publishing model**
  - 800+ submissions per year (872 in 2023)
  - Acceptance rate 25 - 30%
  - 6 days from submission to first editorial decision
  - Impact Factor = 3.6 (2022)
  - Five-year Impact Factor 4.7 (2022)
  - Article downloads = 1,284,632 downloads
  - 90% author satisfaction

2



What are we publishing?

- Original Research
- Reviews & Meta-Analysis
- Commentary
- Mindfulness in Practice

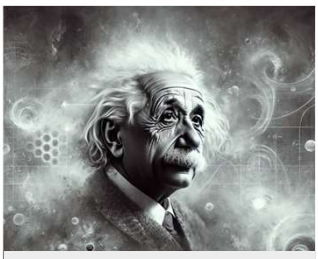
3

Current Trends in Mindfulness Research

- **Research Areas:** Old, new, and emerging
- **Streetlight effect:** Selection of research topics, issues, or areas
- **Participants**:
  - Topic specific – clinical, non-clinical
  - MTurk and other crowd sourcing websites
  - University students - WEIRD, WEIRDO
- **Research Designs**: Experimental, correlational, descriptive
- **Measures**:
  - Increasingly diverse measures
  - Psychometric scales reign supreme

4

Current Mindfulness Research



Not everything that can be counted counts, and not everything that counts can be counted.

Albert Einstein

- **Data analyses**:
  - Statistical sophistication, qualitative, mixed methods
- **Interpretation of findings**:
  - Appropriate
  - Overly positive (self-congratulating language)
- **Implications:**
  - Cautious optimism
  - Fragility of confidence
  - Explanatory fictions
- **Conclusion:**
  - Where and how we look affects what we "know" in mindfulness research

5

Exploring Critical Issues through Mindfulness and Research: Examples

- Climate Change and Sustainability
- Promoting Pro-Environmental Behaviors
- Political Dynamics and Refugee Crises
- Community Violence and Wars
- Understanding Diversity: Race, Sexual Orientation, Indigenous Cultures

- Mindfulness and Mental Health
- Viewing Mental Health as Systems, Not Just Syndromes (Oman, 2023)
- Impact of Meditation on Family Dynamics
- Mindfulness Training in Western, Educated, Industrialized, Rich, and Democratic (WEIRD) Societies

- Research Focus and Methodology
- Emphasis on Holistic Outcomes: Extending Rating Scales to Measuring Suffering and Quality of Life
- Advanced Research: Nondual Awareness and Consciousness Studies
- Practical Applications: Mindfulness Interventions for Real-World Issues (e.g., Youth in Turmoil, Immunity)

6

Mindful Publishing: AI Models Examples

- **ChatGPT – OpenAI (GPT 4 Plus the most advanced)**
- Natural language text generation for various tasks.
- Useful for content creation, editing, and reviewing.
- Includes data analytic and image creation modes with variety of plugins.

- **Claude 2 - Anthropic**
- Advanced AI chatbot for text generation and interaction.
- Noted for safety, performance, and improved coding skills.

- **Gemini** from Google: more successful than previous attempts
- **Llama 2** - **Meta**
- Large-scale knowledge graph for scientific data.
- Can assist in literature review and synthesis of knowledge.

7

Advantages of Using AI for Research and Publishing

- Improve overall quality of writing through error checking and feedback
- Create level playing field for non-native English speakers
- Increase efficiency and quality of data analysis (e.g. optimizing R scripts)
- Generate ideas and provide support with literature reviews and drafting text
- Medvedev & Krägeloh (2023)

8

Limitations and Cautions When Using AI

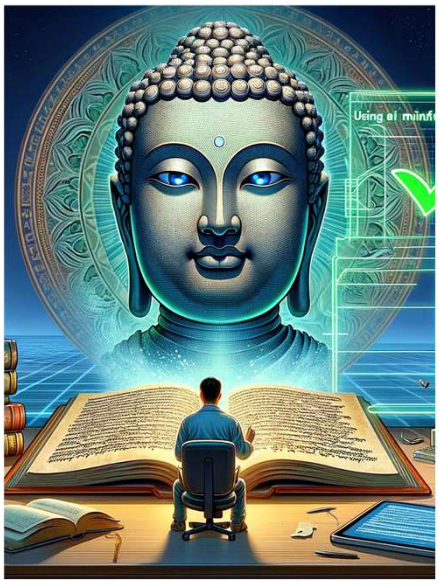
- Lack of nuanced expertise in specific domains like mindfulness
- Potential biases in training data
- Cannot be an author
- Cannot conduct original research or provide new insights
- May struggle with nuance, complex ideas, contextual understanding
- Need to validate factual accuracy and edit AI-generated texts
- Medvedev & Krägeloh (2023)

9

Limitations and Cautions When Using AI

- Deliberate, cautious, and planned use of ChatGPT is necessary to minimize its impact on the environment, as the technology (in its current stage) still consumes a lot of energy.
- Medvedev & Krägeloh (2023)
- Apparently, each Google search query consumes 0.0003 kWh, compared to 0.001-0.01 kWh for a ChatGPT-4 query.

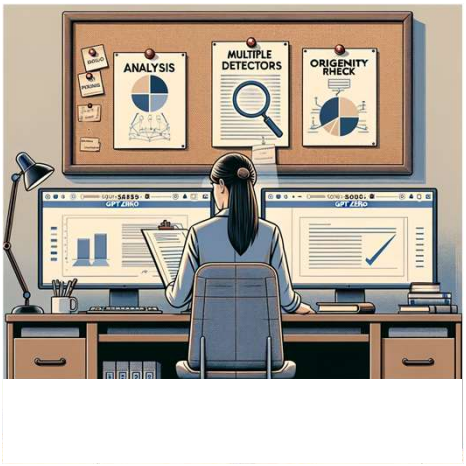
10



Using AI Mindfully for Publishing

- Clearly describe role of AI tools in research process and methods
- Provide transparency - share prompts used to generate text or analyses
- Critically evaluate AI output; don't rely completely on system
- Validate factual accuracy from independent, reliable sources
- Acknowledge AI creators; cite tools appropriately
- Use AI ethically and efficiently; check AI score, avoid unnecessary computations

11



AI Detection: Considerations for Academics

- GPTZero - Claims 99.9% accuracy in detecting texts from ChatGPT, GPT-3/4 and other large language models. Provides detailed analysis. Useful for verifying academic work.
- Originality AI - Detects texts from ChatGPT, GPT-3/4 and other AI models. Also checks for plagiarism. Provides percentage scores and highlights. Comprehensive for content creation and verification.
- No tool is fully accurate. Use multiple detectors and human evaluation for academics. Compare outputs and highlights for nuance. Cite AI sources properly.

12

Key Takeaways:

- AI can assist with quality and efficiency, but has limitations
- Need for transparency, validation, and responsible usage
- Critical evaluation and editing of AI output remains crucial
- Follow reporting guidelines to uphold integrity of research (Medvedev & Krägeloh, 2023)

13

THANK YOU

A deep bow of gratitude for your presence today

14

References

- Medvedev, O. & Krägeloh, C. (2023) Harnessing Artifcial Intelligence for Mindfulness Research and Dissemination: Guidelines for Authors. *Mindfulness, 14,* 1019–1020. https://doi.org/10.1007/s12671-023-02155-y
- Oman, D. (2023). Mindfulness for global public health: Critical analysis and agenda. *Mindfulness*. https://doi.org/10.1007/s12671-023-02089-5
- Krägeloh, C.U., Alyami, M.M., Medvedev, O.N. (2023). AI in Questionnaire Creation: Guidelines Illustrated in AI Acceptability Instrument Development. In: Krägeloh, C.U., Alyami, M., Medvedev, O.N. (eds) *International Handbook of Behavioral Health Assessment*. Springer. https://doi.org/10.1007/978-3-030-89738-3_62-1