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Impact of Online Misinformation on Mental Well-Being and Nursing Practice: A systematic Review

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ABSTRACT

The Internet-Derived Information Obstruction Tendency (IDIOT) explains how cognitive biases, algorithm-driven amplification, and information overload in digital environments foster resistance to credible information. This systematic review synthesizes findings from 15 peer-reviewed studies published between 2020 and 2025 to examine the mechanisms, impacts, and interventions related to IDIOT, with a particular emphasis on mental health and psychiatric nursing practice. Results show that confirmation bias, belief bias, and the echo chamber effect, intensified by platforms such as X (formerly Twitter), YouTube, and Facebook, accelerate the spread of misinformation. These dynamics have fueled COVID-19 vaccine hesitancy, increased polarization, and contributed to mental health problems including anxiety, mistrust, and stigma. Interventions such as psychological inoculation, media literacy, and artificial intelligence–based fact-checking tools demonstrated effectiveness, but challenges remain in achieving scalability and sustained behavioral change. The review highlights the unique responsibility of psychiatric nurses, especially in culturally diverse contexts like India, to counter misinformation by integrating patient education, fostering critical media evaluation skills, and applying empathy-driven strategies in clinical practice. Although the included studies employed strong methodologies, limitations such as non-random sampling, cross-sectional designs, and linguistic exclusions reduce generalizability. Future research should focus on longitudinal studies, intervention scalability, and the dual role of AI as both a driver and solution in misinformation ecosystems. This review underscores the urgent need for collaborative efforts across nursing, psychology, and technology to mitigate misinformation's impact on mental health care and strengthen public trust in evidence-based practices.

KEYWORDS: Digital misinformation, Cognitive bias, Mental health, Nursing practice, IDIOT

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INTRODUCTION

The internet has transformed access to knowledge, empowering individuals through social media, search engines, and news platforms. Yet, this digital revolution has a downside: the rapid spread of misinformation, which clouds judgment and disrupts meaningful dialogue (1,2). The Internet-Derived Information Obstruction Tendency (IDIOT), a phenomenon where cognitive and technological factors block acceptance of accurate information, encapsulates this challenge (3,4). As platforms amplify misleading content, people often cling to familiar beliefs, deepening societal divides and eroding trust (5,6). For psychiatric nurses, IDIOT's role in fueling anxiety, mistrust, and stigma around mental health care poses unique challenges, especially in contexts like India, where misinformation, such as myths about mental health treatments, intersects with cultural beliefs (15).

IDIOT arises from human psychology and technology. Our minds naturally favor information aligning with existing beliefs (confirmation bias) while rejecting contradictory evidence (1,2). Algorithms on platforms like X (formerly Twitter) and YouTube prioritize engaging content, often pushing sensational or false stories (3,7). This creates an environment where misinformation thrives, and individuals, overwhelmed by data, struggle to discern truth.(5,8) The consequences are significant—misinformation has driven vaccine hesitancy during COVID-19, weakened democratic trust, and heightened mental health challenges like anxiety and isolation (6,8). Misinformation also fuels stigma and depression, complicating psychiatric nursing efforts to build trust and encourage treatment adherence (15).

The urgency to address IDIOT is evident, as its effects ripple globally. Research from 2020 to 2025 calls for solutions to counter resistance to truth (9,10). Tools like psychological inoculation, media literacy, and AI-powered fact-checking show promise, but their scalability remains untested (9,11). This review synthesizes recent studies to explore IDIOT's mechanisms, impacts, and solutions, offering insights for psychiatric nursing practice in addressing misinformation-driven mental health challenges.

PURPOSE AND SCOPE

"This systematic review aims to examine IDIOT's cognitive, technological, and societal dimensions, emphasizing its mental health implications and relevance for psychiatric nursing practice in addressing misinformation." By analyzing peer-reviewed studies from 2020 to 2025, it traces IDIOT's mechanisms, effects on public health, democracy, and social cohesion, and the success of interventions. The scope is limited to digital misinformation on platforms like social media and video-sharing sites, emphasizing cognitive resistance. Non-digital misinformation and non-empirical studies are excluded to ensure rigor.

OBJECTIVES

1. To identify psychological and technological factors behind IDIOT, such as cognitive biases and algorithmic amplification.
2. To assess IDIOT's societal impacts, including public health setbacks and mental health challenges.
3. To evaluate solutions like psychological inoculation, media literacy, and tech-based tools in reducing IDIOT's impact.
4. To identify research gaps and suggest directions for future studies on IDIOT and its relevance to psychiatric nursing.

METHODS

This systematic review adheres to PRISMA 2020 guidelines to ensure transparency and reproducibility. The methodology includes defining eligibility criteria, selecting data sources, study selection, data extraction, and quality assessment. "As a systematic review, this study did not require ethical approval. All included studies were evaluated for ethical reporting, including informed consent and data integrity, during quality appraisal using JBI tools."

Search Strategy

Searched PubMed, Web of Science, Scopus, PsycINFO, and Communication Abstracts for peer-reviewed articles (January 2020–April 2025) using keywords like "digital misinformation," "IDIOT," "cognitive resistance," and "social media," combined with Boolean operators. Non-peer-reviewed sources were excluded to maintain academic rigor.

Inclusion Criteria

Studies were included if they:

- Focused on digital misinformation and cognitive resistance,
- Explored psychological or behavioral aspects of IDIOT,
- Were published in English,
- Were peer-reviewed,
- Appeared between 2020 and 2025.

Exclusion Criteria

Studies were excluded if they:

- Covered non-digital misinformation,
- Were non-empirical (e.g., opinion pieces),
- Lacked focus on cognitive resistance or misinformation.

Data Collection Process

Data were extracted using a standardized template, capturing study details (e.g., author, year, country), participant information (e.g., sample size, demographics), platforms studied (e.g., X, YouTube), key findings on IDIOT's mechanisms, impacts, or solutions, and statistical results.

Data Items

Extracted data included:

- Mechanisms of IDIOT: Cognitive biases (e.g., confirmation bias), algorithmic amplification, and information overload (1, 3, 5).
- Consequences of IDIOT: Impacts like vaccine hesitancy, polarization, and mental health challenges (6,8).
- Interventions: Types (e.g., media literacy, AI tools), effectiveness, and limitations (9, 11, 12).
- Study Quality: Assessed using Joanna Briggs Institute (JBI) tools, plus platform- and population-specific findings.

Quality Assessment

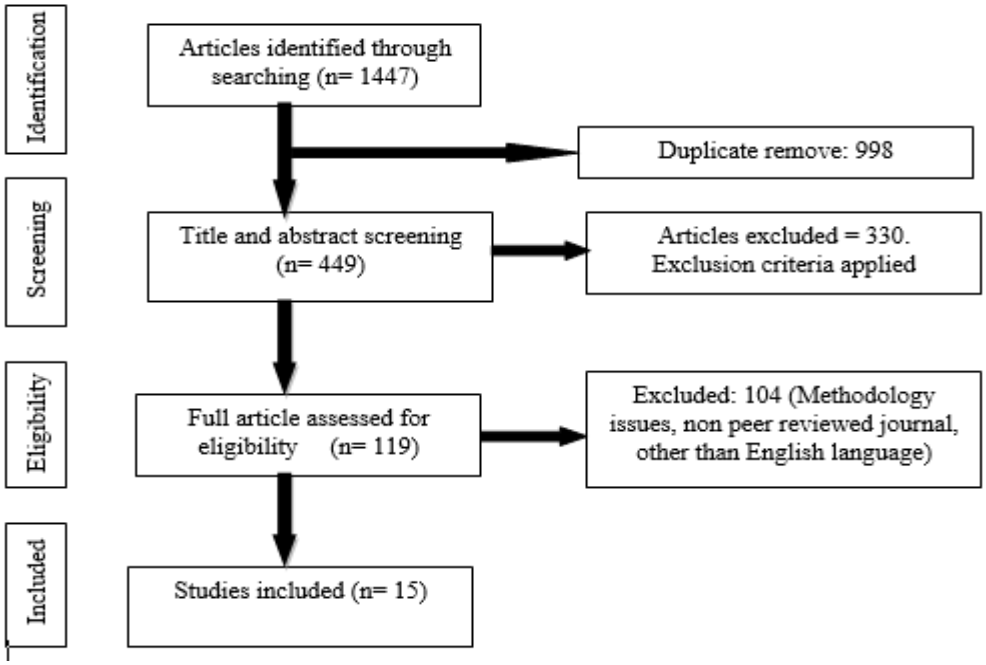
The JBI Critical Appraisal Tools evaluated study quality, checking methodological strength, bias, and relevance.

RESULTS

Study Selection

The search yielded 1,447 articles. After removing duplicates, 449 were screened by title and abstract, and 119 full texts were reviewed. 15 studies met the criteria, including qualitative (n=5), quantitative (n=7), and mixed-methods (n=3) designs from North America, Europe, and Asia. Figure 1 illustrates the PRISMA flow diagram, showing the selection process.

Figure 1: PRISMA Flow Diagram



Study Characteristics

The studies (Table 1) explored IDIOT through cognitive biases, algorithmic amplification, and interventions. Participants included social media users, healthcare professionals, and students, with platforms like X, Facebook, and YouTube as focal points.

Study	Study Design	Sample Size	Population	Key Findings
Bessi et al. (2020)	Quantitative	1,500	Social media users (USA)	Echo chambers amplify confirmation bias, limiting exposure to opposing views.
Novaes and de Ridder (2021)	Qualitative	30	General public (Netherlands)	Belief bias fuels resistance to correcting misinformation, strengthening IDIOT.
Yesilada and Lewandowsky (2022)	Quantitative	2,000	YouTube users (UK)	YouTube's algorithms promote misleading content, increasing misinformation exposure.
Fallou et al. (2020)	Qualitative	25	General public (France)	Information gaps during crises accelerate misinformation, worsening IDIOT.
Islam et al. (2020)	Quantitative	1,200	Social media users (Australia)	Information overload during COVID-19 reduced ability to identify credible sources.
Pierri et al. (2022)	Quantitative	3,000	X users (USA)	Misinformation linked to COVID-19 vaccine hesitancy, hindering public health efforts.
Kebede et al. (2020)	Qualitative	40	General public (Ethiopia)	COVID-19 myths fueled by misinformation undermined containment efforts.
Pasquetto et al. (2020)	Mixed-methods	500	Social media users (USA)	Polarization from misinformation eroded trust in democratic institutions.
Lu et al. (2023)	Quantitative	800	General public (China)	Psychological inoculation lowered belief in misinformation (d=-0.36, p<.001).
Dame Adjin-Tettey (2022)	Mixed-methods	200	Students (South Africa)	Media literacy boosted critical thinking, reducing misinformation sharing.
Saeidnia et al. (2025)	Quantitative	1,000	Social media users (Global)	AI fact-checking tools improved misinformation detection accuracy.
Buczel et al. (2024)	Quantitative	600	General public (Poland)	Over-reliance on automated warnings reduced critical thinking.
Kozyreva et al. (2020)	Qualitative	35	General public (Germany)	Digital platforms exploit cognitive weaknesses, increasing resistance to corrections.
Hameleers and Minihold (2022)	Mixed-methods	400	Social media users (Netherlands)	Partisan users rejected fact-checks clashing with beliefs, reinforcing IDIOT.
Zhao et al. (2023)	Qualitative	50	Healthcare professionals (Global)	Vaccine misinformation tied to cognitive biases and platform algorithms.

Table 1: List of studies included in the review

Risk of Bias in Included Studies

The risk of bias varied across the included studies (Table 2). The quality of the included studies based on various criteria such as sample representativeness, sample size justification, response rate, exposure ascertainment, confounder adjustments, outcome assessment, and statistical analysis. N/A indicates criteria not applicable for qualitative or non-survey designs. Total Scoring sums scores (Low=0, Moderate=1, High=2). Lower scores reflect lower bias risk.

Author and Year	Selection	Comparability	Outcome	Total Scoring (0–10)
Bessi et al. (2020)	Low	Low	Low	0
Novaes and de Ridder (2021)	Moderate	High	N/A	4
Yesilada and Lewandowsky (2022)	Low	Low	Low	0
Fallou et al. (2020)	Moderate	High	N/A	5
Islam et al. (2020)	Low	Low	Low	0
Pierri et al. (2022)	Low	Low	Low	0
Kebede et al. (2020)	Moderate	High	N/A	4
Pasquetto et al. (2020)	Low	Low	Low	0
Lu et al. (2023)	Low	Low	Low	0
Dame Adjin-Tettey (2022)	Moderate	Moderate	Low	2
Saeidnia et al. (2025)	Low	Low	Low	0
Buczel et al. (2024)	Low	Low	Low	0
Kozyreva et al. (2020)	Moderate	High	N/A	5
Hameleers and Minihold (2022)	Low	Low	Low	0
Zhao et al. (2023)	Moderate	High	N/A	4

Table 2: Risk of Bias of included studies

SYNTHESIS OF FINDINGS

Mechanisms of IDIOT

IDIOT is driven by psychological and technological factors. Confirmation bias leads individuals to favor belief-aligned information, as Bessi et al. (2020) found in social media echo chambers (1). Belief bias—valuing convictions over evidence—further entrenches IDIOT, per Novaes and de Ridder (2021) (2). Algorithms amplify this, with YouTube's systems promoting misleading content, increasing misinformation exposure (Yesilada and Lewandowsky, 2022) (3). Information gaps during crises allow false stories to spread first, worsening IDIOT (Fallou et al., 2020) (4). Information overload, as seen during COVID-19, overwhelmed users, leading to reliance on mental shortcuts that increased misinformation vulnerability (Islam et al., 2020) (5).

Consequences of IDIOT

IDIOT's impacts are profound. Misinformation fueled COVID-19 vaccine hesitancy, hindering public health efforts (Pierri et al., 2022) (6). In Ethiopia, myths undermined containment strategies (Kebede et al., 2020) (7). Polarization eroded democratic trust (Pasquetto et al., 2020) (8). For psychiatric nurses, IDIOT's role in driving anxiety, mistrust, and stigma around mental health care highlights the need for patient education to address misinformation-driven resistance (6,7). This is critical in psychiatric nursing, where misinformation can exacerbate symptoms like paranoia or reluctance to seek care, requiring tailored interventions."

Interventions to Mitigate IDIOT

Interventions include psychological, educational, and technological approaches. Psychological inoculation reduced misinformation believability ($d=-0.36$, $p<.001$; Lu et al., 2023) (9). Media literacy improved critical thinking, reducing misinformation sharing among students (Dame Adjin-Tettey, 2022) (10). AI fact-checking tools enhanced detection accuracy (Saeidnia et al., 2025) (11), but over-reliance on automated warnings may dull critical thinking (Buczel et al., 2024) (12).

Cognitive Resistance and the Paradox

Digital platforms offer vast information but exploit cognitive weaknesses, fostering resistance to corrections (Kozyreva et al., 2020) (13). Partisan users reject fact-checks clashing with beliefs, reinforcing IDIOT (Hameleers and Minihold, 2022) (14).

DISCUSSION

This review analyzed 15 studies with 13,250 participants to understand IDIOT's role in digital misinformation, focusing on its relevance to psychiatric nursing. It explored cognitive biases, technology, and social factors driving resistance to accurate information, with implications for mental health, democracy, and social cohesion (1,6,8).

Prevalence and Mechanisms of IDIOT

IDIOT reflects resistance to truth, driven by confirmation and belief biases (1,2). Echo chambers limit exposure to diverse views (Bessi et al., 2020) (1), while belief bias prioritizes convictions over evidence (Novaes and de Ridder, 2021) (2). Algorithms promote misleading content (Yesilada and Lewandowsky, 2022) (3), and information overload impairs discernment, especially during crises (Islam et al., 2020) (5). In India, misinformation on platforms like WhatsApp often intertwines with cultural beliefs, amplifying IDIOT's impact (4). For example, rumors about mental health treatments on WhatsApp can deter rural patients from seeking care, requiring nurses to address local myths."

IDIOT's prevalence varies. Polarized regions like the USA show higher misinformation-driven behaviors due to partisan divides (6,8). Gender may influence susceptibility, with some studies suggesting women are more swayed by emotional misinformation,

though this is inconsistent (14). Crises exacerbate IDIOT when information gaps let false stories take root (Fallou et al., 2020) (4).

Strengths and Weaknesses of Reviewed Articles
The studies used robust methods, including large samples and rigorous analysis, ensuring reliable findings (1,3,6). Qualitative research offered deep insights through careful data collection (2,4,7). Diverse platforms and populations enhanced applicability (3,10,15). However, cross-sectional designs limit causality insights, and small qualitative samples reduce generalizability (1,3,5). Non-random sampling and self-reported data introduce potential biases (10,14).

Implications for Psychiatric Nursing
IDIOT's mental health impacts, such as anxiety, mistrust, and stigma (6,8), highlight psychiatric nurses' role in countering misinformation. Nurses can integrate media literacy into patient education, teaching clients to critically evaluate online health information. Psychological inoculation techniques (9) could be adapted for group therapy to build resilience against misinformation, particularly for patients with anxiety or paranoia. Training programs should equip nurses to address IDIOT-driven behaviors empathetically, especially in India, where misinformation, such as myths about mental health treatments, intersects with cultural beliefs. In rural Indian settings, where access to mental health care is limited, nurses can use community outreach to dispel misinformation, fostering trust and treatment adherence."

LIMITATIONS

This review's focus on English-language studies may miss insights from non-English regions, including India, where cultural and linguistic factors shape misinformation. Limiting to 2020–2025 peer-reviewed articles excluded emerging or older works. Varied study designs prevented statistical pooling, and restricted database access may have missed some research. Future studies should explore longitudinal intervention effects and AI's role in misinformation spread.

CONCLUSION

"IDIOT poses a significant challenge by fostering resistance to truth, with profound mental health implications. Psychiatric nurses are uniquely positioned to counter this through media literacy education, psychological inoculation, and empathetic engagement, particularly in India, where cultural myths amplify misinformation. Collaborative efforts across psychology, technology, and policy, tailored to diverse contexts, are vital for a more informed digital ecosystem, empowering nurses to enhance mental health care." This emphasizes nurses' agency.

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Ethics Approval: This article is a systematic review and did not involve direct human or animal participants; hence, ethical approval was not required. However, all included studies were peer-reviewed and ethically conducted according to their respective institutional standards.

Data Availability: All data generated or analyzed in this study are included in the manuscript. Additional details can be made available from the corresponding author upon reasonable request.

Abbreviations:
IDIOT – Internet-Derived Information Obstruction Tendency
AI – Artificial Intelligence
PRISMA – Preferred Reporting Items for Systematic Reviews and Meta-Analyses
COVID-19 – Coronavirus Disease 2019

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