



University of Messina

ISSN 2612-4033

Journal of Clinical & Developmental Psychology

Journal homepage: <https://riviste.unime.it/index.php/JCDP/index>



## The Psychological Effects of Solitary Confinement on Inmates with Pre-Existing Mental Illness: A Narrative Review of Clinical and Legal Implications

Shateri A.,\*<sup>1</sup> , Tahan M.,<sup>2</sup> 

<sup>1</sup> Florida International University, Miami, USA

<sup>2</sup> Department of Psychology and Education of Exceptional Children, University of Tehran, Tehran, Iran

### ABSTRACT

Solitary confinement is a widely implemented correctional practice, yet its psychological impact – particularly on individuals with pre-existing mental health conditions – has raised clinical, ethical, and legal concerns. This narrative review synthesizes findings from 35 peer-reviewed studies (2004-2024), identified through structured searches in PubMed, PsycINFO, and Scopus. The evidence demonstrates that solitary confinement may intensify psychiatric symptoms, contribute to the onset or worsening of psychosis, increase the risk of self-harm and suicide, and impair cognitive function. Neurobiological research further links isolation to adverse changes in stress response and brain function. Legally, its prolonged use for individuals with mental illness may contravene international human rights standards. The paper also examines potential alternatives and reforms, emphasizing the importance of evidence-based, mental health-informed correctional approaches. The review concludes that solitary confinement is disproportionately harmful for this vulnerable population and advocates for its severe restriction alongside the implementation of trauma-informed alternatives.

**Keywords:** solitary confinement; administrative segregation; mental health; prisons; human rights; psychological effects

\* Corresponding author: Ainaz Shateri, Department of Psychology, Florida International University, Miami, USA  
E-mail address: [ashat010@fiu.edu](mailto:ashat010@fiu.edu)

<https://doi.org/10.13129/2612-4033/0110-5110>

2026 by the Author(s); licensee Journal of Clinical & Developmental Psychology, Messina, Italy.  
This article is an open access article, licensed under a Creative Commons Attribution 3.0 Unported License.

## **Introduction**

Solitary confinement, a longstanding feature of correctional systems globally, entails the physical and social isolation of incarcerated individuals in spartan cells for approximately 22 to 24 hours per day with severely limited environmental stimulation or human contact (Smith, 2006). Initially conceived as a mechanism for discipline and protection, its application has expanded, rendering it a subject of intense debate among clinicians, legal scholars, and human rights advocates. A substantial and growing body of interdisciplinary literature now documents the profound psychological and neurological consequences of such prolonged isolation, raising significant ethical and human rights concerns (Haney, 2003; Arrigo & Bullock, 2008). These detrimental effects are particularly acute for incarcerated individuals with pre-existing serious mental illnesses (SMI), such as schizophrenia, major depressive disorder, bipolar disorder, and post-traumatic stress disorder (PTSD). Empirical evidence consistently demonstrates that the extreme sensory deprivation and social isolation inherent in solitary confinement not only exacerbate psychiatric symptoms but can also precipitate acute psychological decompensation, undermine treatment efficacy, and fundamentally impede rehabilitation (Metzner & Fellner, 2010). Recent large-scale studies have corroborated these risks, showing a clear temporal link between solitary confinement and significantly elevated suicide rates among incarcerated populations (Vanhaesebrouck et al., 2024). The harm often extends beyond the period of confinement, resulting in long-term deficits that impair social reintegration and adaptive functioning (Kupers, 2017). The implications transcend clinical outcomes, entering the realm of international human rights law. Instruments such as the United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules) explicitly call for the restriction of solitary confinement and its prohibition for individuals with mental health conditions, positing that its prolonged use may amount to cruel, inhuman, or degrading treatment or punishment (United Nations, 2015). This evolving legal standard is underscored by critical analyses suggesting that persistent reliance on extended solitary confinement may reflect systemic failures in correctional management rather than a necessary security measure (Mears et al., 2024). This evolving legal standard underscores a critical tension between institutional security objectives and the imperative to uphold fundamental human dignity. The convergence of robust clinical evidence and increasing legal scrutiny necessitates a critical re-examination of correctional practices. Therefore, this narrative review aims to critically synthesize recent evidence on the specific psychological and neurobiological effects of solitary confinement on inmates with pre-existing SMI, and to analyze the ensuing clinical, ethical, and legal imperatives for reform. Therefore, this review addresses the following central question: What are the specific psychological effects of solitary

confinement on inmates with pre-existing serious mental illness, and what are the clinical, ethical, and legal implications of its continued use?

By synthesizing contemporary empirical research from psychiatry, neuroscience, and penology, this paper provides a comprehensive analysis of the unique vulnerabilities of mentally ill inmates in solitary confinement. Furthermore, it evaluates promising alternative strategies and reform-oriented models that prioritize security, rehabilitation, and the preservation of mental health within carceral environments.

### **Conceptual Background**

Solitary confinement, also known as administrative segregation, involves isolating prisoners in confined spaces for most of the day, often with restricted access to natural light, social interaction, and meaningful activities. Employed globally, its purposes range from maintaining institutional control to protecting individuals deemed vulnerable. Despite its utility, growing scrutiny surrounds the practice due to its documented psychological and ethical repercussions. Unlike general incarceration, solitary confinement deprives individuals of fundamental psychological and physiological needs, including social interaction, sensory input, and cognitive stimulation. These deprivations create a psychologically taxing environment characterized by monotony, emotional detachment, and sensory deprivation. Such conditions have been shown to impair cognition, emotional regulation, and behavioral functioning – especially among individuals with pre-existing psychiatric conditions. The psychological toll of solitary confinement manifests in symptoms such as anxiety, depression, sleep disturbances, emotional blunting, agitation, and, in severe cases, psychosis. These outcomes are increasingly interpreted through a biopsychosocial lens. Neurobiological research suggests that isolation affects brain regions responsible for executive function, emotional processing, and social cognition. From a legal perspective, the application of prolonged isolation on vulnerable populations has been criticized for breaching international standards for humane treatment. Thus, solitary confinement must be assessed not only as a correctional measure but as an environment with significant psychological consequences, particularly for mentally ill inmates. Clarifying this conceptual foundation enables informed evaluation of its risks and legal and clinical implications.

### **Methodology**

This review employed a narrative methodology to synthesize peer-reviewed literature on the psychological effects of solitary confinement among incarcerated individuals with pre-existing mental illness. A narrative review methodology was chosen to allow for a broad, interdisciplinary

synthesis of literature from clinical, legal, and ethical perspectives, facilitating a comprehensive exploration of this complex issue. A comprehensive search was conducted across three major academic databases – PubMed, PsycINFO, and Scopus – to identify relevant studies published between January 2004 and April 2024. Search strings were constructed using boolean operators (AND, OR). For example: (“solitary confinement” OR “administrative segregation” OR “restrictive housing”) AND (“mental illness” OR “psychiatric disorders” OR “prison mental health”) AND (“psychological effects” OR “suicide” OR “neuropsychological”). Search terms included combinations of: “solitary confinement,” “restrictive housing,” “administrative segregation,” “mental illness,” “prison mental health,” “psychiatric disorders,” “suicide in prisons,” and “neuropsychological effects of incarceration”.

#### Inclusion criteria:

1. Published in peer-reviewed academic journals
2. Focused on incarcerated individuals diagnosed with psychiatric conditions
3. Discussed psychological, neurological, legal, or ethical consequences of solitary confinement
4. Written in English

#### Exclusion criteria:

1. Non-peer-reviewed content (e.g., opinion pieces, editorials, or news reports)
2. Studies unrelated to solitary confinement or mental illness

Following the screening process, 35 articles were selected based on their relevance, empirical rigor, and disciplinary diversity. The selected articles were then analyzed using inductive thematic analysis. Key findings and themes were extracted, compared, and synthesized into the coherent sections presented in this review (e.g., Effects on Psychological Well-Being, Legal Considerations). The literature was synthesized thematically into sections reflecting the psychological, neurobiological, legal, and policy-related dimensions of solitary confinement. Although formal risk-of-bias tools were not used—as this is not a systematic review—efforts were made to ensure that included studies represent a balanced and credible body of scholarship. A summary table of all 35 included studies, detailing author, year, design, key findings, and thematic category, is presented below (Table 1).

**Table 1.** Summary of Key Studies Included in the Narrative Review

Ref #	Author(s) & Year	Type of Source / Key Focus	Key Contribution to the Review's Argument	Thematic Category
1	Ahalt et al. (2017)	Program evaluation / Review	Documents depressive symptoms in isolation and evaluates a clinical alternative (CAPS).	Psychological Effects & Reform
2	Arrigo & Bullock (2008)	Theoretical / Review paper	Analyzes psychological effects in supermax units and recommends policy changes.	Psychological Effects

3	Andersen (2004)	Review (Danish remand prisoners)	Highlights high psychiatric comorbidity in prisons worsened by incarceration stress.	Elevated Risk for SMI
4	Briggs & Scott (2022)	Legal analysis	Emphasizes need for strict safeguards and oversight for prolonged solitary.	Legal & Ethical Considerations
5	Barragan et al. (2022)	Qualitative / Mixed-methods study	Identifies systemic barriers to mental healthcare access in solitary confinement.	Elevated Risk & Care Access
6	Buzath & Lederman (2023)	Normative ethical analysis	Advocates for consistent ethical frameworks to evaluate solitary confinement.	Legal & Ethical Considerations
7	Cloud et al. (2021)	Case study (North Dakota reform)	Shows trauma-informed alternatives reduce isolation use and improve outcomes.	Reform & Alternatives
8	Cloud et al. (2015)	Public health analysis	Frames solitary confinement as a critical public health and equity issue.	Legal & Public Health Perspective
9	Cloud et al. (2023)	Case study (Oregon's Resource Team)	Demonstrates a targeted intervention reducing solitary use for inmates with SMI.	Reform & Alternatives
10	Fraser (2009)	Public health perspective	Advocates for comprehensive prison mental health frameworks to reduce isolation.	Reform & Recommendations
11	Gill et al. (2023)	Clinical review	Links solitary confinement to anxiety, anhedonia, trauma symptoms, and biological stress.	Psychological & Biological Effects
12	Grassian (2006)	Clinical observation / Analysis	Describes a specific psychiatric syndrome induced by solitary confinement.	Psychosis & Cognitive Deterioration
13	Haney (2018)	Systematic critique	Provides a comprehensive synthesis of the wide range of psychological harms.	Psychological Effects
14	Haney (2003)	Review / Analysis	Early, influential review on mental health issues in long-term solitary and supermax confinement.	Psychological Effects
15	Henry (2022)	National survey analysis (U.S.)	Finds individuals with mental health diagnoses are more likely to be placed in disciplinary solitary.	Elevated Risk for SMI
16	Jahn et al. (2022)	Mixed-methods analysis	Shows solitary confinement exacerbates mental/physical health problems (multimorbidity).	Biological & Health Effects
17	Kaba et al. (2014)	Retrospective cohort study	Finds solitary confinement significantly increases risk of self-harm among jail inmates.	Suicidality & Self-Harm
18	Luigi et al. (2020)	Systematic Review & Meta-Analysis	Concludes solitary confinement is linked to higher psychological morbidity and suicide risk.	Suicidality & Self-Harm
19	Metzner & Fellner (2010)	Legal-medical ethics review	States that inmates with mental illness are especially vulnerable in solitary.	Elevated Risk for SMI

20	Mears et al. (2024)	Analytical review	Suggests reliance on extended solitary may reflect systemic correctional failures.	Legal & Systemic Critique
21	Morris & Izenberg (2023)	Commentary / Analysis	Critiques use of solitary as a substitute for mental healthcare.	Legal & Ethical Considerations
22	Mynard et al. (2024)	Qualitative study (OT)	Shows activity-based OT supports well-being in solitary forensic settings.	Reform & Alternatives
23	Narita et al. (2024)	General population sample analysis	Associates history of incarceration+solitary with higher suicide ideation/attempts.	Suicidality & Self-Harm
24	Nowak (2008)	UN Special Rapporteur report	States prolonged solitary may constitute torture or ill-treatment.	Legal & Ethical Considerations
25	Ndindeng (2024)	Conceptual model development	Integrates social determinants of health into a framework for detention settings.	Reform & Recommendations
26	Reiter et al. (2020)	Large-scale survey (U.S.)	Reports high prevalence of severe psychiatric symptoms among isolated individuals.	Psychosis & Cognitive Deterioration
27	Ryan & DeVylder (2020)	Secondary data analysis	Finds correlation between solitary and post-release psychosis, especially with trauma.	Psychosis & Cognitive Deterioration
28	Smith (2006)	Historical review	Provides foundational history and review of effects of solitary confinement.	Conceptual Background
29	Strong et al. (2020)	Survey analysis	Correlates long-term solitary with increased chronic illness and sleep disturbances.	Biological & Health Effects
30	Stephenson et al. (2021)	Literature review	Links lack of time out-of-cell and activity to increased self-harm and distress.	Reform & Alternatives
31	Tomova et al. (2020)	Neuroimaging study	Shows social isolation activates brain regions linked to craving and distress.	Biological Mechanisms
32	United Nations (2015)	International legal standard	The "Mandela Rules": Prohibit >15 days of solitary and its use for people with mental disabilities.	Legal & Ethical Considerations
33	Vanhaesebrouck et al. (2024)	Retrospective cohort (France)	Finds temporal link between solitary confinement and elevated suicide rates.	Suicidality & Self-Harm
34	Wright et al. (2023)	Mixed-methods / Survey	Suggests psychological outcomes vary based on individual coping styles and traits.	Psychological Effects
35	Kupers (2017)	Book / Scholarly work	Argues that harm from solitary extends long-term, impairing reintegration and functioning.	Psychological Effects & Outcomes

## Effects on Psychological Well-Being

### Depression and Anxiety

Symptoms of depression, anxiety, and emotional distress are commonly reported among individuals held in solitary confinement (Haney, 2018). Even short durations of isolation have been associated

with increased psychological burden. A study by Gill et al. (2023) observed that solitary confinement may contribute to persistent anxiety, anhedonia, and trauma-like symptoms, especially in individuals with prior mental health challenges. Ahalt et al. (2017) also reported high rates of depressive symptoms, such as emotional withdrawal and feelings of hopelessness, in isolated settings.

Arrigo et al. (2008) found that both short- and long-term isolation can lead to a range of emotional and psychological disturbances, including mood instability and emotional numbing, which were observed across diverse populations. While these effects may vary between individuals, evidence supports a strong correlation between solitary confinement and mental health deterioration. Wright et al. (2023) added that psychological outcomes may differ based on individual coping styles, personality traits, and prior prison experiences, suggesting a need for individualized assessments and caution in applying solitary confinement broadly.

### **Suicidality and Self-Harm**

The relationship between solitary confinement and increased risk of self-harm and suicide has been well documented. Inmates exposed to solitary environments frequently exhibit higher levels of psychological distress that may contribute to suicidal ideation (Gill et al., 2023). The combination of reduced sensory input, lack of social connection, and heightened stress has been identified as a contributing factor to such risks (Cloud et al., 2021).

A meta-analysis by Luigi et al. (2020) found that solitary confinement is significantly associated with increased psychological morbidity and a higher risk of suicide. Similarly, Vanhaesebrouck et al. (2024) observed a temporal link between confinement and elevated suicide rates in a large cohort, highlighting the potential risks of extended isolation.

Evidence suggests that the combination of incarceration and solitary confinement substantially heightens suicide-related risks. Narita et al. (2024) found that individuals with a history of both incarceration and solitary confinement had a significantly higher likelihood of experiencing suicidal ideation and suicide attempts compared to those without such histories.

### **Psychosis and Cognitive Deterioration**

Solitary confinement has been associated with the onset and worsening of psychotic symptoms such as hallucinations, paranoia, and delusions (Haney, 2018). Research by Ryan and DeVyllder (2020) found a correlation between solitary confinement and post-release psychotic symptoms, particularly in individuals with histories of trauma or psychological vulnerability.

According to Reiter et al. (2020), a large percentage of individuals subjected to extended isolation reported severe psychiatric symptoms, including perceptual disturbances and paranoia. Cloud et al.

(2021) further noted that long-term solitary confinement can affect cognitive functioning, including attention span, emotional regulation, and decision-making.

Grassian (2006) described a syndrome characterized by intrusive thoughts, perceptual distortions, panic, and memory impairment, which often resembles organic brain dysfunction. These symptoms were found to occur in individuals regardless of prior psychiatric diagnoses, suggesting that solitary confinement can exert neuropsychiatric effects broadly.

### **Elevated Risk for Individuals with Pre-Existing Mental Illness**

Individuals with mental health diagnoses, such as schizophrenia, bipolar disorder, major depressive disorder, and PTSD, may experience greater adverse effects from solitary confinement. Metzner and Fellner (2010) noted that these individuals are more vulnerable to psychiatric destabilization under isolated conditions.

Research by Henry (2022) indicated that individuals with mental health histories may be more likely to experience disciplinary isolation. This emphasizes the importance of integrating mental health evaluations into decisions related to confinement. Fraser (2009) recommended adopting a comprehensive mental health framework within correctional institutions, suggesting that a holistic approach to mental healthcare supports rehabilitation and reduces the need for punitive isolation.

Evidence suggests that solitary confinement may interfere with access to adequate psychiatric care, further complicating recovery and reintegration efforts. Andersen (2004) emphasized the high prevalence of psychiatric disorders among prison populations, noting that the stressors of imprisonment often exacerbate pre-existing mental health conditions. His review of Danish remand prisoners revealed a significant correlation between incarceration and psychiatric comorbidity, underscoring the need for proactive mental health interventions within correctional facilities.

Barragan et al. (2022) found that incarcerated individuals in solitary confinement face significant barriers to mental health care, including systemic constraints and stigmatizing assumptions about their need or worthiness for care. These findings underscore the ethical tension between correctional control and healthcare obligations in restrictive housing environments.

### **Biological and Neurological Mechanisms**

Emerging neurobiological research has begun to explore the physiological impact of solitary confinement. Gill et al. (2023) reported stress-related biological changes, including disruption of sleep and appetite regulation, linked to dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. Ahalt et al. (2017) similarly identified physiological stress responses that may impair emotional and cognitive functioning.

Tomova et al. (2020) demonstrated through neuroimaging that social isolation activates brain regions associated with craving and emotional distress, highlighting the biological need for social connection. These findings suggest that solitary confinement can produce a state of psychological discomfort that is deeply rooted in neurophysiology.

In addition to psychological harm, solitary confinement has been linked to adverse physical health outcomes. Strong et al. (2020) found that long-term solitary confinement correlates with increased reports of chronic illness, sleep disturbances, and other physiological symptoms. These findings expand the understanding of health disparities within incarcerated populations and support calls for systemic reform.

Jahn et al. (2022) found that solitary confinement exacerbates both mental and physical health problems, particularly among individuals with existing vulnerabilities. Their mixed-methods analysis revealed clusters of multimorbidity, highlighting the intersectionality of solitary confinement's health impacts.

### **Legal and Ethical Considerations**

The ethical and legal dimensions of solitary confinement have gained international attention. The United Nations' "Mandela Rules" discourage the use of solitary confinement for prolonged periods, defined as exceeding 15 consecutive days, and for individuals with mental health conditions (UN General Assembly, 2015).

Nowak (2008), the United Nations Special Rapporteur on Torture, stated that prolonged solitary confinement may constitute inhumane or degrading treatment under international standards. This view has informed global discussions on ethical incarceration practices and the treatment of vulnerable populations.

Briggs et al. (2022) emphasized the importance of using solitary confinement only under exceptional circumstances, supported by procedural safeguards and subject to independent oversight. Buzath et al. (2023) argued for consistent ethical frameworks when evaluating correctional practices, advocating for alternatives that preserve human dignity and mental well-being.

Solitary confinement is increasingly critiqued not only as a punitive measure but also as a surrogate for unavailable mental health care. Morris and Izenberg (2023) argued that its use in managing psychiatric crises among inmates is ethically concerning and clinically inadequate, as it can exacerbate psychological distress and undermine therapeutic goals.

While solitary confinement is often justified as a means of maintaining order and safety, Mears et al. (2024) proposed that its persistent use may reflect deeper structural failures in the correctional system.

Their analysis suggests that reliance on extended solitary confinement may stem from the lack of adequate rehabilitative resources and systemic inefficiencies.

### **Reform and Alternatives**

Various jurisdictions have begun to explore alternatives to solitary confinement that prioritize mental health and rehabilitation. In some correctional settings, trauma-informed models have been implemented, focusing on increased social engagement, psychiatric care, and structured activities. Cloud et al. (2021) documented that these approaches led to improved behavioral outcomes and reduced use of isolation.

Programs such as Clinical Alternatives to Punitive Segregation (CAPS), described by Ahalt et al. (2017), demonstrated a reduction in psychiatric emergencies and enhanced well-being among individuals with severe mental illness. These findings suggest that rehabilitative, treatment-oriented alternatives can be both effective and humane.

Research has shown that increasing inmates' time outside of their cells and providing opportunities for purposeful activity may mitigate adverse mental health outcomes. Stephenson et al. (2021) found that limited time out of cell and lack of structured engagement correlate with increased incidents of self-harm, suicide, and psychological distress. These findings reinforce the value of humane, activity-based reform models in correctional settings.

Cloud et al. (2023) presented a case study from Oregon demonstrating how a targeted intervention—known as the Resource Team—helped reduce the use of solitary confinement for individuals with serious mental illness. The reform focused on trauma-informed care and collaborative problem-solving strategies, offering a scalable model for humane corrections reform.

Occupational therapy may serve as a vital tool for countering the psychological and functional deterioration associated with solitary confinement. Mynard et al. (2024) found that occupational therapists working with forensic patients in solitary settings used activity-based approaches to support well-being and transition to less restrictive environments.

### **Future Directions and Recommendations**

Future reforms should prioritize mental health-centered correctional models. Longitudinal research is needed to examine the enduring psychological effects of solitary confinement, particularly in mentally ill populations. Comparative evaluations of alternatives – such as therapeutic units and step-down programs—are essential for identifying scalable and humane practices.

Recent literature emphasizes the importance of systemic reforms that address the social determinants of health within correctional environments. Ndindeng (2024) introduced a conceptual model that integrates these determinants with the stress process framework to guide mental health policy and practice in detention settings. Such frameworks offer actionable strategies for improving care, reducing recidivism, and promoting humane rehabilitation. Key recommendations include: (1) Implementing mandatory, comprehensive mental health screenings at intake and all subsequent stages of incarceration; (2) Limiting the use and duration of solitary confinement by implementing a statutory maximum of 15 consecutive days, with an absolute prohibition for individuals with serious mental illness, in alignment with the UN Mandela Rules; (3) Requiring independent psychiatric evaluations before and during any placement in restrictive housing for at-risk individuals; (4) Training all correctional staff on trauma-informed care, de-escalation techniques, and mental health first aid; (5) Establishing robust, transparent oversight systems with external monitoring to ensure compliance with ethical and legal standards; (6) Collaboration among researchers, clinicians, correctional administrators, and policymakers will be critical to advancing safe, effective, and humane alternatives to solitary confinement.

### **Conclusion**

Solitary confinement remains a widely used correctional measure, yet the evidence presented in this review underscores its significant and often devastating psychological consequences—particularly for individuals with pre-existing mental health conditions. Across multiple studies, solitary confinement has been linked to heightened emotional distress, exacerbation of psychiatric symptoms, and increased risk of cognitive dysfunction and suicidality. These effects are not only well-documented in clinical observations but also supported by emerging neurobiological findings, which show that social deprivation can produce measurable changes in brain function related to emotional regulation and stress.

For inmates with mental illnesses such as schizophrenia, bipolar disorder, PTSD, and major depressive disorder, the use of solitary confinement can accelerate symptom deterioration and interfere with psychiatric care. Isolation under such circumstances not only undermines the goals of correctional rehabilitation but also raises ethical and legal concerns. International human rights guidelines—such as the United Nations' Mandela Rules—strongly discourage the use of solitary confinement for individuals with mental illness and call for limitations on its duration and conditions. Solitary confinement has also drawn attention from public health agencies, which highlight its incompatibility with fundamental health equity goals. Cloud et al. (2015) argued that minimizing psychological and occupational hazards in correctional settings aligns with broader public health

functions, including violence prevention and surveillance. This perspective frames solitary confinement as not only a correctional issue but a matter of ethical and systemic reform.

In light of the evidence, correctional systems must urgently transition from a default reliance on solitary confinement to a paradigm centered on mental health, rehabilitation, and human dignity. This requires not only policy change but also dedicated funding for alternative programs (e.g., Clinical Alternatives to Punitive Segregation, therapeutic units), comprehensive staff training, and robust independent oversight. The continued reliance on solitary confinement, despite these concerns, points to a gap between empirical knowledge and correctional practice. This gap must be addressed through the development and adoption of policies that prioritize mental health-informed incarceration models. Evidence-based alternatives—such as therapeutic units, trauma-informed programming, and structured rehabilitative environments—have demonstrated success in reducing behavioral incidents and improving inmate well-being. Institutional reforms should incorporate comprehensive mental health assessments, training for correctional staff, and regular oversight to ensure that solitary confinement is used only when absolutely necessary and for the shortest duration possible.

Future research should aim to explore long-term outcomes of individuals exposed to solitary confinement, especially post-release reintegration, psychiatric stability, and recidivism. Specifically, longitudinal cohort studies and randomized evaluations of alternative programs are needed. Comparative policy analysis between regions or countries can also illuminate the practical effects of reform efforts. Interdisciplinary collaboration—bringing together correctional officials, clinical psychologists, legal experts, and human rights organizations—is essential to translate research findings into humane, effective practice.

Ultimately, this review highlights the urgent need to shift away from punitive isolation toward correctional strategies that reflect a balance between institutional security and psychological integrity. Protecting the mental health of incarcerated individuals, especially those already vulnerable, is not only a clinical and legal imperative but a reflection of societal commitment to human dignity.

### **Conflicts of Interest**

The authors declare no conflicts of interest.

### **Data Availability Statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

### **Funding**

The authors received no specific funding for this work.

### **Ethical Statement**

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. As this study is a narrative review of existing literature, it did not involve direct interaction with human subjects. Therefore, formal ethical approval was not required. However, all aspects of this review were conducted in accordance with accepted principles of academic and research integrity. The study has been reviewed by the Ethics Review Committee of University. All participants provided informed consent before participation. Participants' privacy and confidentiality were safeguarded throughout the research process, and all data were collected and analyzed in compliance with ethical standards.

### **References**

- Ahalt, C., Haney, C., Rios, S., Fox, M. P., Farabee, D., & Williams, B. (2017). Reducing the use and impact of solitary confinement in corrections. *International Journal of Prisoner Health*, 13(1), 41–48. <https://doi.org/10.1108/IJPH-08-2016-0040>
- Arrigo, B. A., & Bullock, J. L. (2008). The psychological effects of solitary confinement on prisoners in supermax units: Reviewing what we know and recommending what should change. *International Journal of Offender Therapy and Comparative Criminology*, 52(6), 622–640. <https://doi.org/10.1177/0306624X07309720>
- Andersen, H. S. (2004). Mental health in prison populations: A review—with special emphasis on a study of Danish prisoners on remand. *Acta Psychiatrica Scandinavica, Supplementum*, 110(s424), 5–59. [https://doi.org/10.1111/j.1600-0447.2004.00436\\_2.x](https://doi.org/10.1111/j.1600-0447.2004.00436_2.x)
- Briggs, J., & Scott, R. (2022). Prolonged solitary confinement (administrative segregation) and the human rights of a serving prisoner. *Journal of Law and Medicine*, 29(3), 904–942.
- Barragan, M., Gonzalez, G., Strong, J. D., Augustine, D., Chesnut, K., Reiter, K., & Pifer, N. A. (2022). Triaged out of care: How carceral logics complicate a 'course of care' in solitary confinement. *Healthcare*, 10(2), Article 289. <https://doi.org/10.3390/healthcare10020289>
- Buzath, E., & Lederman, Z. (2023). Eating in isolation: A normative comparison of force feeding and solitary confinement. *Cambridge Quarterly of Healthcare Ethics*, 32(3), 414–424. <https://doi.org/10.1017/S0963180122000883>
- Cloud, D. H., Augustine, D., Ahalt, C., Haney, C., Peterson, L., Braun, C., & Williams, B. (2021). "We just needed to open the door": A case study of the quest to end solitary confinement in North Dakota. *Health & Justice*, 9(1), Article 28. <https://doi.org/10.1186/s40352-021-00155-5>

Cloud, D. H., Drucker, E., Browne, A., & Parsons, J. (2015). Public health and solitary confinement in the United States. *American Journal of Public Health, 105*(1), 18–26. <https://doi.org/10.2105/AJPH.2014.302205>

Cloud, D. H., Haney, C., Augustine, D., Ahalt, C., & Williams, B. (2023). The resource team: A case study of a solitary confinement reform in Oregon. *PLOS ONE, 18*(7), Article e0288187. <https://doi.org/10.1371/journal.pone.0288187>

Fraser, A. (2009). Mental health in prisons: A public health agenda. *International Journal of Prisoner Health, 5*(3), 132–140. <https://doi.org/10.1080/17449200903115789>

Gill, G., Segal, Y., Yadav, G., Kainth, T., Kochhar, H., Singh, S., Walyzada, F., & Gunturu, S. (2023). Solitary confinement in prison systems and future psychopathological effects. *The Primary Care Companion for CNS Disorders, 25*(6), Article 23cr03503. <https://doi.org/10.4088/PCC.23cr03503>

Grassian, S. (2006). Psychiatric effects of solitary confinement. *Washington University Journal of Law & Policy, 22*, 325–383. [https://openscholarship.wustl.edu/law\\_journal\\_law\\_policy/vol22/iss1/24/](https://openscholarship.wustl.edu/law_journal_law_policy/vol22/iss1/24/)

Haney, C. (2018). The psychological effects of solitary confinement: A systematic critique. *Crime and Justice, 47*(1), 365–416. <https://doi.org/10.1086/696041>

Haney, C. (2003). Mental health issues in long-term solitary and “supermax” confinement. *Crime & Delinquency, 49*(1), 124–156. <https://doi.org/10.1177/0011128702239239>

Henry, B. F. (2022). Disparities in use of disciplinary solitary confinement by mental health diagnosis, race, sexual orientation and sex: Results from a national survey in the United States of America. *Criminal Behaviour and Mental Health, 32*(2), 114–123. <https://doi.org/10.1002/cbm.2240>

Jahn, J. L., Bardele, N., Simes, J. T., & Western, B. (2022). Clustering of health burdens in solitary confinement: A mixed-methods approach. *SSM – Qualitative Research in Health, 2*, Article 100036. <https://doi.org/10.1016/j.ssmqr.2021.100036>

Kaba, F., Lewis, A., Glowa-Kollisch, S., Hadler, J., Lee, D., Alper, H., Selling, D., MacDonald, R., Solimo, A., Parsons, A., & Venters, H. (2014). Solitary confinement and risk of self-harm among jail inmates. *American Journal of Public Health, 104*(3), 442–447. <https://doi.org/10.2105/AJPH.2013.301742>

Luigi, M., Dellazizzo, L., Giguère, C. É., Goulet, M. H., & Dumais, A. (2020). Shedding light on “the hole”: A systematic review and meta-analysis on adverse psychological effects and mortality following solitary confinement in correctional settings. *Frontiers in Psychiatry, 11*, Article 840. <https://doi.org/10.3389/fpsy.2020.00840>

Metzner, J. L., & Fellner, J. (2010). Solitary confinement and mental illness in U.S. prisons: A challenge for medical ethics. *The Journal of the American Academy of Psychiatry and the Law, 38*(1), 104–108.

Mears, D. P., Aranda-Hughes, V., & Pesta, G. B. (2024). Managing prisons through extended solitary confinement: A necessary approach or a signal of prison system failure? *International Journal of Offender Therapy and Comparative Criminology, 68*(1), 62–84. <https://doi.org/10.1177/0306624X211058948>

Morris, N. P., & Izenberg, J. M. (2023). Nowhere else to go: Solitary confinement as mental health care. *JAMA*, 330(1), 17–18. <https://doi.org/10.1001/jama.2023.2768>

Mynard, L., Joosten, A., D'Souza, A., Ashley, D., & Darzins, S. (2024). Occupational therapy with patients in forensic solitary confinement: A qualitative study. *Australian Occupational Therapy Journal*, 71(4), 447–460. <https://doi.org/10.1111/1440-1630.12930>

Narita, Z., Oh, H., Koyanagi, A., Wilcox, H. C., & DeVlyder, J. (2024). Association of a history of incarceration and solitary confinement with suicide-related outcomes in a general population sample from two U.S. cities. *Archives of Suicide Research*, 28(4), 1119–1130. <https://doi.org/10.1080/13811118.2023.2279523>

Nowak, M. (2008). *Interim report of the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment* (United Nations General Assembly Document A/63/175). United Nations.

Ndindeng, A. N. (2024). Mental health and well-being in prisons and places of detention. *International Journal of Prisoner Health*. Advance online publication. <https://doi.org/10.1108/IJOPH-07-2024-0035>

Reiter, K., Ventura, J., Lovell, D., Augustine, D., Barragan, M., Blair, T., Chesnut, K., Dashtgard, P., Gonzalez, G., Pifer, N., & Strong, J. (2020). Psychological distress in solitary confinement: Symptoms, severity, and prevalence in the United States, 2017-2018. *American Journal of Public Health*, 110(S1), S56–S62. <https://doi.org/10.2105/AJPH.2019.305375>

Ryan, A. T., & DeVlyder, J. (2020). Previously incarcerated individuals with psychotic symptoms are more likely to report a history of solitary confinement. *Psychiatry Research*, 290, Article 113064. <https://doi.org/10.1016/j.psychres.2020.113064>

Smith, P. S. (2006). The effects of solitary confinement on prison inmates: A brief history and review of the literature. *Crime and Justice*, 34(1), 441–528. <https://doi.org/10.1086/500626>

Strong, J. D., Reiter, K., Gonzalez, G., Tublitz, R., Augustine, D., Barragan, M., Chesnut, K., Dashtgard, P., Pifer, N., & Blair, T. R. (2020). The body in isolation: The physical health impacts of incarceration in solitary confinement. *PLOS ONE*, 15(10), Article e0238510. <https://doi.org/10.1371/journal.pone.0238510>

Stephenson, T., Leaman, J., O'Moore, É., Tran, A., & Plugge, E. (2021). Time out of cell and time in purposeful activity and adverse mental health outcomes amongst people in prison: A literature review. *International Journal of Prisoner Health*, 17(1), 54–68. <https://doi.org/10.1108/IJPH-06-2020-0037>

Tomova, L., Wang, K. L., Thompson, T., Matthews, G. A., Takahashi, A., Tye, K. M., & Saxe, R. (2020). Acute social isolation evokes midbrain craving responses similar to hunger. *Nature Neuroscience*, 23(12), 1597–1605. <https://doi.org/10.1038/s41593-020-00742-z>

United Nations. (2015). *United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)* (General Assembly Resolution 70/175).

Vanhaesebrouck, A., Fovet, T., Melchior, M., & Lefevre, T. (2024). Suicide following a conviction, solitary confinement, or transfer in people incarcerated: A comprehensive retrospective cohort study in France, 2017–2020. *\*Suicide and Life-Threatening Behavior*, 54\*(3), 450–459. <https://doi.org/10.1111/sltb.13064>

Wright, K. A., Young, J. T. N., Matekel, C. G., Infante, A. A., Gifford, F. E., Meyers, T. J., & Morse, S. J. (2023). Solitary confinement and the well-being of people in prison. *Social Science & Medicine, 335*, Article 116224. <https://doi.org/10.1016/j.socscimed.2023.116224>