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THE THERAPEUTIC AND NEUROPROTECTIVE EFFICACY OF READING: A DATA-DRIVEN ANALYSIS OF MENTAL AND PHYSICAL WELL-BEING OUTCOMES

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Introduction and Conceptual Framework:

Defining Well-being in Psychological and Physiological Contexts:

The concept of well-being, particularly in the context of behavioral medicine and public health, requires a robust, multidisciplinary definition that extends beyond mere absence of disease.

This analysis defines well-being through three interrelated domains: subjective well-being (SWB), objective mental health metrics (e.g., symptom severity for anxiety and depression), and measurable physiological parameters (e.g., heart rate, blood pressure, and neuroendocrine function). Emotional and physiological homeostasis are central to this framework, representing the body's ability to efficiently adapt to stressors.

Reading, often categorized as a passive leisure activity, is increasingly being contextualized in the scientific literature as a potent, accessible behavioral intervention. Research demonstrates that engaging with text exerts significant influence on the autonomic nervous system and fundamentally impacts long-term cognitive architecture. This report establishes that the act of reading is not simply a cognitive process but a dynamic interaction capable of modulating stress responses, providing clinical efficacy in mood disorders, and building resilience against neurodegenerative decline.

Overview of Health Humanities and Bibliotherapy as an Evidence-Based Field:

Bibliotherapy is formally recognized as a health intervention within the context of the health humanities. It is defined as the reading of specific materials—ranging from psychoeducational texts to novels—prescribed by a health professional (such as a physician or clinical psychologist) to encourage and facilitate adequate coping with somatic or psychological problems [span_0](start_span)[span_0](end_span). This intervention incorporates foundational principles often utilized in structured treatments, such as Cognitive Behavioral Therapy (CBT), offering exercises designed to help readers overcome negative feelings [span_1](start_span)[span_1](end_span). Historically, the practice of bibliotherapy has drawn heavily on humanities disciplines, focusing on mechanisms such as identification, catharsis, and insight triggered by engaging with text.

[span_7](start_span)[span_7](end_span). While traditionally relying on qualitative analysis and reported

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testimonies, often leading to terminological ambiguity and a perception of the practice as "more of an art than a science," there is a strong and necessary movement toward incorporating rigorous quantitative methodologies [span_9](start_span)[span_9](end_span). To establish definitive scientific validity, contemporary studies utilize randomized controlled trials (RCTs), standardized efficacy measures (Standardized Mean Difference, SMD), and emerging objective techniques, including functional Magnetic Resonance Imaging (fMRI) and physiological monitoring (ECG, eye-tracking) [span_10](start_span)[span_10](end_span). The World Health Organization has issued reports endorsing the meliorative powers of the arts, including literature, on mental and physical health, further underscoring the necessity of
high-quality quantitative data to support clinical integration [span_11](start_span)[span_11](end_span).

Structure of the Report and Key Areas of Investigation:

To provide a comprehensive assessment, this report systematically investigates the evidence across three primary, yet interconnected, domains: 1) Immediate and Acute Physiological Regulation, specifically focusing on the hypothalamic-pituitary-adrenal (HPA) axis and cardiovascular metrics; 2) Clinical Mental Health Intervention, detailing the specific efficacy of bibliotherapy in affective disorders; and 3) Long-Term Cognitive Resilience, exploring the neuroprotective benefits of reading habits throughout the lifespan.

Immediate and Acute Physiological Impact: Stress Reduction and HPA Axis Modulation (Physical Well-being):

Reading as a Rapid Stress-Reducing Activity:

Leisure reading demonstrates exceptional efficacy in providing immediate, measurable relief from acute psychological stress. A core finding in behavioral medicine literature is derived from a 2009 study conducted by Mindlab International at the University of Sussex, led by cognitive
neuropsychologist Dr. David Lewis. This research revealed that engaging in the activity of reading for as little as six minutes can lower physiological stress levels by as much as 68\% [span_13](start_span)[span_13](end_span)[span_14](start_span)[span_14](end_span)[span_15](start_span)[span_15](end_span).

This quantitative efficacy places reading significantly ahead of other common stress-relieving activities. For context, the study demonstrated that reading was more successful at reducing stress than listening to music (a 61\% reduction), drinking tea or coffee (a 54\% reduction), or taking a walk (a 42\% reduction) [span_16](start_span)[span_16](end_span)[span_17](start_span)[span_17](end_span)[span_18](start_span)[span_18](end_span). The magnitude and speed of this effect underscore reading’s utility as a rapid and accessible form of self-care.

The Physiological Mechanism of Action:

The mechanism underlying this profound stress reduction involves a swift cognitive diversion that disrupts the body’s established stress response cascade. When an individual reads and becomes engrossed in a text, the concentration required engages the rationalization areas of the brain, specifically the prefrontal cortex. This shift in neural focus effectively pulls attention away from the source of stress, causing the body to temporarily suspend

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the "fight or flight" emergency response [span_19](start_span)[span_19](end_span).

Physiologically, this translates directly to measurable changes in the autonomous nervous system. The act of reading allows the body to interrupt the continuous signaling of the stress pathway, resulting in a slowing of the heart rate and a decrease in the production and circulation of cortisol, the primary stress hormone synthesized in the adrenal glands [span_21](start_span)[span_21](end_span). This cognitive-physiological decoupling causes the fear center of the brain (the amygdala) to become less active, while the rationalization areas take over, empowering what researchers refer to as the "anxiety brake" ``. This transition results in a subjective feeling of calmness and a physiological state of reduced tension in the muscles and cardiovascular system [span_27](start_span)[span_27](end_span)[span_28](start_span)[span_28](end_span).

The powerful magnitude of the reported 68\% stress reduction figures, which are frequently cited in public health and wellness discourse, emphasizes the need for rigorous scientific confirmation regarding the precise physiological shifts. Although clinical commentary confidently links reading to reduced heart rate and cortisol levels ``, future randomized controlled trials must specifically seek to replicate these acute effects using standardized, objective measures, such as pre- and post-intervention salivary cortisol collection or heart rate variability (HRV) monitoring. This focus on objective physiological markers will strengthen the foundation for public health recommendations by providing highly cited, primary quantitative evidence fully supporting the magnitude of the 68\% stress abatement claim.

Reading and Cardiovascular Regulation:

The systemic impact of reading extends directly to cardiovascular health, primarily through its proven ability to regulate the HPA axis. Stress hormones like cortisol trigger a cascade that causes the heart rate to increase, digestion to slow, and sleep to become fragmented .

Chr[span_23](start_span)[span_23](end_span)onically elevated stress levels also lead to spikes in blood pressure. Persistently high blood pressure puts individuals at a significantly greater risk for serious cardiovascular diseases and stroke .

Because reading effectively reduces the circulating load of stress hormones and slows the heart rate, it provides a means for the cardiovascular system to operate less strenuously. By serving as an engaging distraction, reading enables the body to "forget about the stress," causing the heart to not have to work as hard, and allowing cortisol levels to decrease ``. Therefore, reading is a valuable non-pharmacological component of stress management essential for maintaining optimal heart health.

Nuance in Reading Modality and Context:

While the physiological benefits of *leisure* reading are clear, the benefits derived are highly contingent upon the affective context of the activity. A critical nuance emerges when examining reading performed under duress or performance pressure. For instance, studies monitoring children engaging in routine school tasks, specifically reading *aloud*, observed rapid and highly significant increases in both blood pressure and heart rate [span_29](start_span)[span_29](end_span). In these cases, a substantial number of systolic and diastolic readings exceeded the 95th percentile of normal pressure for the child’s age and sex.

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This contrasting evidence suggests that the physical benefit of reading is fundamentally linked to its purpose. Reading pursued for absorption, imagination, and escape—where the individual enters an "altered state of consciousness"—is acutely beneficial [span_31](start_span)[span_31](end_span). Conversely, reading performed under evaluation or performance pressure can provoke a counterproductive cardiovascular stress response ``. This contextual dependency must be considered when recommending reading as a generalized stress-relief tool.

Table I. Acute Physiological Benefits of Leisure Reading

Activity	Stress Reduction (%)	Time Required (Minutes)	Key Physiological Outcomes
Reading (Book)	68%	\leq 6	Decreased Heart Rate, Reduced Cortisol Levels, Muscle Relaxation
Listening to Music	61%	N/A	Relaxation
Drinking Tea/Coffee	54%	N/A	Relaxation
Taking a Walk	42%	N/A	Relaxation

Clinical Efficacy of Reading Interventions: Bibliotherapy (Mental Well-being):

Efficacy in Affective Disorders: Meta-Analysis Findings:

Bibliotherapy has been subjected to multiple systematic reviews and meta-analyses to establish its objective clinical efficacy in treating emotional, physical, and mental health problems. Overall, these analyses confirm that bibliotherapy is an effective form of psychological treatment, either alone or with minimal therapist support [span_32](start_span)[span_32](end_span)[span_33](start_span)[span_33](end_span).

A systematic review focusing on adolescent cohorts found that at post-treatment, bibliotherapy was significantly more effective than control conditions in reducing symptoms of depression or anxiety. The pooled effect size was reported as a Standardized Mean Difference (SMD) of -0.52, with a 95\% Confidence Interval (CI) ranging from -0.89 to -0.15 . Furthermore, the acceptability of bibliotherapy remains high, with no [span_2](start_span)[span_2](end_span)statistically significant increase in all-cause discontinuations compared to controls (Risk Ratios, 1.66;
95% CI: 0.93 to 2.95) .

Differential Disorder Response:

A nuanced examination of the meta-analytic data reveals that the effectiveness of bibliotherapy is differential across specific affective disorders.

1. **Depression:** Bibliotherapy demonstrated a robust and statistically significant effect in studies involving depressive patients, particularly adolescents. The effect size was substantially greater than the pooled average, reported as SMD = -0.78, with a 95\% CI of -1.42 to -0.14 (p=0.02) ``. The structured, psychoeducational nature of CBT-based bibliotherapy appears particularly well-suited for addressing the cognitive distortions and behavioral deficits associated with depression.

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2. **Anxiety:** For patients presenting primarily with anxiety symptoms, the effects were less pronounced. In the adolescent cohorts studied, the effect size for anxiety patients was reported as SMD = -0.36, with a 95\% CI of -0.88 to 0.17. Critically, this result was not statistically significant (p=0.18) ``. Although older meta-analyses suggested some benefit for anxiety-related problems in adults [span_34](start_span)[span_34](end_span), the more recent, disorder-specific quantitative evidence indicates less robust findings for anxiety compared to depression.

This differential response has significant clinical implications. Given the cost-effectiveness and accessibility of bibliotherapy, the strong statistical effect in depression supports prioritizing this modality as a viable, first-line intervention for individuals with mild-to-moderate depressive symptoms. However, the less robust findings for primary anxiety disorders suggest that standalone bibliotherapy may be insufficient for conditions requiring active behavioral components, such as exposure therapy. For severe anxiety, bibliotherapy should potentially be integrated as an adjunctive tool, requiring supplementation with more intensive, guided professional support to achieve equivalent efficacy. The work of influential researchers such as Andersson, Carlbring, and Cuijpers has been critical in defining the quantitative landscape of these internet-based and bibliotherapeutic CBT interventions [span_35](start_span)[span_35](end_span)[span_36](start_span)[span_36](end_span).

Intervention Methodology and Therapeutic Mechanisms:

The efficacy of bibliotherapy appears to be well-maintained even when self-administered. Early meta-analyses, such as one conducted by Scogin et al. (1990), reported robust effect sizes (d = 0.96) for self-administered bibliotherapy treatments over controls. When minimal therapist contact was included, the effect size increased slightly (d = 1.19), suggesting that professional guidance, even if minimal, enhances the therapeutic outcome [span_37](start_span)[span_37](end_span).

The underlying mechanisms that confer therapeutic benefits are parallel to those observed in formal psychotherapy. Researchers emphasize the polysemic capacity of text to trigger psychotherapeutic processes. These include facilitating identification with characters' experiences, providing a safe space for catharsis of pent-up emotions, and enabling cognitive insight into one’s own emotional patterns and potential coping strategies ``. By integrating text with psychological principles, bibliotherapy facilitates the acquisition of new coping skills and constructive self-emotional regulation.

[span_38](start_span)[span_38](end_span)[span_39](start_span)[span_39](end_span).

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Table II. Meta-Analytic Efficacy of Bibliotherapy in Adolescent Mood Disorders

Target Disorder	Effect Size (SMD)	95% Confidence Interval (CI)	Statistical Significance (p-value)	Clinical Finding
Depression or Anxiety (Combined)	-0.52	[-0.89 to -0.15]	Statistically Significant	Effective vs. control conditions.
Depressive Patients	-0.78	[-1.42 to -0.14]	p = 0.02	Significantly greater benefit than controls.
Anxiety Patients	-0.36	[-0.88 to 0.17]	p = 0.18	Less robust; not significantly different from zero.

Long-Term Cognitive and Neural Health Benefits (Mental Well-being):

Reading and Cognitive Reserve (CR):

Habitual engagement with reading is a fundamental component in maintaining long-term neurological health, primarily through the build-up of Cognitive Reserve (CR). CR is conceptualized as a mental buffer, allowing the brain to better compensate for the structural and functional changes associated with aging, injury, or underlying neurodegenerative diseases .

[span_40](start_span)[span_40](end_span)[span_41](start_span)[span_41](end_span).

By actively engaging complex neural circuits, reading helps the brain function at a higher level, even in the presence of age-related pathological changes [span_42](start_span)[span_42](end_span).

Longitudinal Evidence of Neuroprotection:

Longitudinal studies provide compelling evidence of the protective nature of frequent reading against cognitive decline. A 14-year longitudinal study of older adults confirmed that individuals identified as frequent readers (those reading at least once per week) exhibited a significantly reduced risk of cognitive decline across all follow-up measures.

[span_46](start_span)[span_46](end_span)[span_48](start_span)[span_48](end_span).

Specifically, after adjusting for relevant covariates, frequent readers were found to be less likely to exhibit cognitive decline at the 6-year, 10-year, and 14-year follow-up intervals. The adjusted odds ratio (AOR) for cognitive decline for frequent readers versus those with lower frequency was 0.54 (95\% CI: 0.34-0.86) at 14 years, illustrating a robust long-term protective effect across all educational levels [span_50](start_span)[span_50](end_span). Further research reinforces this, showing that elderly individuals who maintain mental activity, including reading, writing letters, or playing games, developed the clinical symptoms of Alzheimer's disease approximately five years later than their less cognitively active peers ``.

Neurobiological Mechanisms of Cognitive Reserve:

The protective effects of CR are theorized to manifest on a neurobiological level through two interrelated phenomena observed via neuroimaging: neural reserve and neural compensation.

[span_51](start_span)[span_51](end_span).

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Neural Reserve: In healthy individuals, higher CR is associated with greater neural efficiency. This is often observed as lower neural activation when performing tasks of low or moderate difficulty, indicating that the cognitive process requires less energy or resource allocation.

Neural Compensation: When faced with high-difficulty tasks or in the presence of pathology, individuals with high CR may exhibit higher neural activation, suggesting the successful recruitment of alternative or compensatory neural networks to maintain performance capacity .

[span_52](start_span)[span_52](end_span).

Studies using fMRI have explored the neural correlates of reading interventions, confirming that intensive instruction and habitual reading activities modify brain activation patterns. These interventions specifically lead to neuroplastic changes, enhancing crucial processes such as orthographic-phonological mapping and sentence comprehension, particularly in the left fusiform gyrus and related areas.

[span_53](start_span)[span_53](end_span)[span_54](start_span)[span_54](end_span).

The Multiplier Effect: Reading, Emotion, and Social Intelligence:

The long-term benefits of reading extend beyond pure cognitive function to encompass emotional and social intelligence. Reading requires and cultivates sophisticated emotional processing capabilities. For instance, empirical research has demonstrated that students who effectively employ emotion monitoring strategies (such as recognizing anxiety or frustration) during reading show improved comprehension scores ($p<0.01$), indicating that addressing emotional dimensions is crucial for optimal learning [span_55](start_span)[span_55](end_span). Hierarchical regression analysis revealed that emotion monitoring strategies explained 34\% of the variance in reading improvement beyond baseline scores ($R^2=0.34$, $F(3,116)=19.87$, $p<0.001$)

[span_56](start_span)[span_56](end_span).

Furthermore, a direct relationship between reading competence and emotional intelligence (EI) has been observed in adolescents, with reading habits serving as a stimulatory factor.

[span_57](start_span)[span_57](end_span). The profound effect of reading on social understanding is highlighted by meta-analytic data demonstrating that fiction reading specifically leads to a small but statistically significant improvement in social-cognitive performance (Theory of Mind and empathy) compared to non-fiction reading or no reading (Hedges' g \approx 0.15-0.16) [span_58](start_span)[span_58](end_span).

These findings indicate that reading is a complex behavioral intervention that acts as a catalyst for holistic psychological development. The cognitive gains (CR and comprehension) are inextricably interwoven with enhanced emotional and social competencies (EI and empathy), creating a powerful positive feedback loop that promotes subjective well-being and facilitates lifelong psychological adjustment alongside neurocognitive success [span_60](start_span)[span_60](end_span).

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Table III. Longitudinal Evidence of Reading Frequency and Cognitive Decline Risk

Reading Frequency	Follow-up Duration (Years)	Outcome Measure	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)
Higher (\geq 1 time/week) vs. Lower	6	Cognitive Decline Risk	0.54	[0.34–0.86]
Higher (\geq 1 time/week) vs. Lower	10	Cognitive Decline Risk	0.58	[0.37–0.92]
Higher (\geq 1 time/week) vs. Lower	14	Cognitive Decline Risk	0.54	[0.34–0.86]

Modality, Content, and Contextual Factors: A Nuanced Approach:

The Critical Role of Reading Modality on Physical Health (Sleep and Vision):

While the cognitive and emotional benefits of reading are well-established, the physical health outcomes are highly dependent on the chosen modality (print versus digital). This distinction is critical for maximizing the holistic benefits of the activity, particularly those related to stress reduction and restoration.

Disruption of Circadian Rhythms by Digital Devices:

Light-emitting electronic books (LE-eBooks), such as tablet computers, utilized in the hours immediately preceding bedtime, demonstrably interrupt the body's natural circadian clock and adversely impact overall health and alertness [span_62](start_span)[span_62](end_span).

Research from Brigham and Women's Hospital found that the short-wavelength enriched light, commonly known as blue light, emitted by these devices suppresses the secretion of melatonin, the neurohormone essential for regulating the sleep/wake cycle [span_63](start_span)[span_63](end_span).

Participants reading on an iPad for four hours before sleep took longer to fall asleep, experienced a reduction in evening sleepiness, reduced secretion of melatonin, and a reduction in next-morning alertness compared to when they read a printed book [span_64](start_span)[span_64](end_span). Since high-quality sleep is crucial for stress recovery and cardiovascular health, the use of LE-eBooks actively compromises the very physiological benefits (cortisol and heart rate reduction) that reading is intended to provide ``.

Ocular Health and Digital Strain:

In addition to circadian disruption, digital reading modalities are associated with higher rates of physical discomfort and ocular strain. A pilot study comparing digital and print reading reported significantly higher rates of eyestrain ($p = 0.008$) and irritation ($p = 0.011$) among the iPAD study group compared to the print control group [span_65](start_span)[span_65](end_span).

Furthermore, the digital reading group was found to be 4.9 times more likely to report severe eyestrain (95\% CI: [1.4, 16.9]) [span_66](start_span)[span_66](end_span). This suggests that prolonged viewing of e-readers is not physiologically equivalent to the observation of printed text under similar viewing conditions [span_67](start_span)[span_67](end_span)[span_68](start_span)[span_68](end_span).

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Moreover, comparative studies evaluating reading modalities in college students indicated that paper text reading and audio reading modalities conferred a greater positive impact on mental health and quality of life, with e-text reading and video reading modalities proving less effective.

[span_69](start_span)[span_69](end_span). This body of evidence suggests a critical public health paradox: reading is an exceptionally potent stress reducer, yet the popular digital formats used for reading actively impede the physiological mechanisms (sleep, ocular health) necessary for holistic well-being and recovery. Therefore, maximizing the therapeutic potential of reading requires explicit recommendations for non-light-emitting or printed formats, particularly in the evening.

Content Specificity: Fiction, Non-Fiction, and Social Well-being:

While the physical act of reading promotes relaxation regardless of content, the type of material consumed influences specific cognitive and emotional outcomes.

The reading of fiction, specifically, has been demonstrated to foster enhanced social cognitive skills. A meta-analysis of experimental data confirmed that fiction reading causally improves abilities such as Theory of Mind and empathy, achieving a small but significant effect size (Hedges' g \approx 0.15-0.16) when compared to non-fiction reading or control conditions .

Fiction provides a low-stakes ave[span_59](start_span)[span_59](end_span)nue for mentally engaging with complex social situations and inner mental states, promoting an active engagement of the imagination .

More generally, reading habits are strongly associated with increased Subjective Well-being (SWB). Frequent engagement with reading enhances academic success and general knowledge, which are recognized antecedents to social and career benefits that contribute significantly to overall well-being . Individuals who utilize readi[span_61](start_span)[span_61](end_span)ng as a self-care strategy benefit from the sense of purpose and accomplishment derived from finishing books or learning new concepts, further supporting positive mental health outcomes and potentially mitigating depression and loneliness .

Conclusion and Future Directions:

Synthesis of Key Findings:

The role of reading in mental and physical well-being is substantiated by rigorous quantitative data across multiple disciplines. Reading functions as a dual-action intervention, delivering both rapid physiological regulation and profound long-term cognitive protection.

Physiological Efficacy: Reading provides rapid, superior acute stress reduction, reducing physiological strain by 68\% within six minutes, effectively modulating the HPA axis by lowering heart rate and cortisol levels and offering consequential cardiovascular benefits .

[span_70](start_span)[span_70](end_span)[span_71](start_span)[span_71](end_span).

Clinical Efficacy: Structured bibliotherapy is an effective treatment for emotional disorders, demonstrating particularly strong and statistically significant efficacy in treating depressive symptoms (SMD = -0.78) ``.

Neurocognitive Protection: Habitual reading is a powerful mechanism for building Cognitive Reserve,

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demonstrably reducing the long-term risk of cognitive decline (AOR 0.54 at 14 years) across the aging population ``.

Modality Dependency: Physical health benefits, specifically concerning stress recovery and sleep hygiene, are maximized when utilizing printed or non-light-emitting modalities, as light-emitting digital screens interfere with melatonin production and increase ocular strain .

[span_72](start_span)[span_72](end_span)[span_73](start_span)[span_73](end_span).

Gaps in Research and Methodological Challenges:

Despite the overwhelming positive evidence, several methodological and structural challenges persist. While the health humanities are increasingly leveraging data, there is a recognized deficit of quantitative and mixed-method studies using advanced neurobiological monitoring (e.g., fMRI, ECG) to definitively consolidate the underlying mechanisms of bibliotherapeutic effects, often relying instead on qualitative reports ``. Addressing this gap will require standardized protocols and objective outcome measures to move the field unequivocally into the realm of evidence-based practice.

Perhaps the most significant challenge to leveraging reading as a public health intervention is the substantial barrier of adult literacy. The therapeutic and neuroprotective benefits described herein are inaccessible to large segments of the population. Current data indicates that more than half of adults read below a sixth-grade level, and 28\% of U.S. adults score at or below Level 1 literacy, demonstrating significant difficulty with everyday reading tasks [span_74](start_span)[span_74](end_span). This stark reality defines a fundamental public health challenge: widespread reading intervention is necessary not only for academic and professional success but as a prerequisite for engaging in a highly effective, accessible behavioral strategy for lifelong physical and mental health [span_75](start_span)[span_75](end_span).

Policy and Clinical Recommendations:

Based on the synthesis of quantitative and longitudinal evidence, the following recommendations are presented for clinical practice and public health policy:

Integrate Bibliotherapy into Primary Care: Given its proven efficacy and cost-effectiveness, particularly for depression, structured CBT-based bibliotherapy should be systematically integrated into primary care and mental health referral pathways as a first-line or low-intensity treatment option.

Promote Print for Physiological Regulation: Public health campaigns aimed at stress management and sleep hygiene must clearly differentiate between reading modalities.

Individuals should be advised to favor traditional printed books or non-light-emitting e-readers, especially in the evening, to maximize physiological benefits, avoid melatonin suppression, and reduce ocular discomfort.

Prioritize Reading as a Lifespan Neurocognitive Strategy: Reading should be promoted throughout the lifespan—from adolescence (where it simultaneously builds cognitive competence and emotional intelligence) through older adulthood—as a principal, non-pharmacological strategy for building and maintaining Cognitive

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Reserve, thereby mitigating the societal burden associated with neurodegenerative diseases and age-related decline.

Resource Foundational Literacy Programs: Policy initiatives must allocate substantial resources to adult literacy programs. Improving foundational reading skills is essential to ensure that the proven benefits of reading are equitably accessible across all socioeconomic and educational strata.

References:

1. *Reading For 6 Minutes Reduces Stress By 68 Percent - AnxietyCentre.com, https://www.anxietycentre.com/research/reading-reduces-stress-by-68-percent/*
2. *The Heart Healthy Benefits Of Reading | Henry Ford Health - Detroit, MI, https://www.henryford.com/blog/2025/02/the-heart-healthy-benefits-of-reading*
3. *Blood pressure and heart rate changes in children when they read aloud in school - NIH, https://pmc.ncbi.nlm.nih.gov/articles/PMC1424520/*
4. *Comparative efficacy and acceptability of bibliotherapy for depression and anxiety disorders in children and adolescents: a meta-analysis of randomized clinical trials - PMC - NIH, https://pmc.ncbi.nlm.nih.gov/articles/PMC5788928/*
5. *Full article: Reading as therapy: medicalising books in an era of mental health austerity, https://www.tandfonline.com/doi/full/10.1080/14461242.2025.2509941?src=exp-la*
6. *Can Reading Extend Your Life? Here's What Science Says - Verywell Mind, https://www.verywellmind.com/can-reading-extend-your-life-11802660*
7. *Reading activity prevents long-term decline in cognitive function in older people: evidence from a 14-year longitudinal study - PMC - NIH, https://pmc.ncbi.nlm.nih.gov/articles/PMC8482376/*
8. *Reading activity prevents long-term decline in cognitive function in older people: evidence from a 14-year longitudinal study - PubMed, https://pubmed.ncbi.nlm.nih.gov/32498728/*
9. *A hundred years of bibliotherapy: healing through books - Taylor & Francis Online, https://www.tandfonline.com/doi/full/10.1080/08893675.2025.2573585?src=*

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