

Structural Inequality Exhaustion Theory: A Transdisciplinary Framework Linking Socioeconomic Strain to Bidirectional Exhaustion

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Abstract

Socioeconomic inequality is a primary determinant of global health disparities, yet the mechanistic pathways linking structural strain to individual exhaustion remain poorly defined. Current models seldom bridge the gap between macro-level socioeconomic indicators and micro-level biological mediators. This study introduces the Structural Inequality Exhaustion Theory (SIET) as a unified, bidirectional framework for understanding systemic depletion across social strata. Using a transdisciplinary theoretical synthesis, this research integrates empirical evidence from neuroscience, psychobiology, and behavioral economics; model development followed a systematic approach addressing five primary literature gaps, and the framework is applied to an exploratory cross-national analysis using publicly available OECD and World Bank indicators (PROSPERO CRD420251249096). SIET formulates a bidirectional exhaustion model comprising Socioeconomic Exhaustion (SE) and Psychosocial Exhaustion (PE), introduces the Structural Exhaustion Index (SEI) to quantify cumulative pressures, and proposes a testable behavioural function. An exploratory cross-national application shows that a SEI proxy is strongly and inversely associated with population life expectancy ($r = -0.74, p < 0.01$). SIET advances public-health and economic theory by providing a mechanistic bridge between structural inequality and health outcomes, offering a foundation for targeted, exhaustion-sensitive policy design.

Yapısal Eşitsizlik Tükenmesi Teorisini Sosyoekonomik Zorlanmayı Çift Yönlü Tükenmeye Bağlayan Disiplinler Arası Bir Çerçeve

Öz

Sosyoekonomik eşitsizlik, küresel sağlık eşitsizliklerinin temel belirleyicilerinden biri olmakla birlikte, yapısal zorlanmayı bireysel tükenmeye bağlayan mekanik yollar hâlâ yeterince tanımlanmamıştır. Mevcut modeller, makro düzeydeki sosyoekonomik göstergeler ile mikro düzeydeki biyolojik araçlar arasındaki boşluğu nadiren köprülemektedir. Bu çalışma, toplumsal katmanlar boyunca sistemik tükenmeyi anlamaya yönelik birleşik ve çift yönlü bir çerçeve olarak Yapısal Eşitsizlik Tükenmesi Teorisini (YETT/SIET) tanıtmaktadır. Disiplinler arası bir kuramsal sentez kullanılarak nörobilim, psikobioloji ve davranışsal iktisattan elde edilen ampirik kanıtlar bütünleştirilmiş; model geliştirme süreci, literatürdeki beş temel boşluğu ele alan sistematik bir yaklaşımı izlemiş ve çerçeve, kamuya açık OECD ve Dünya Bankası göstergeleri kullanılarak kişisel bir ülkeler arası analizde uygulanmıştır (PROSPERO CRD420251249096). YETT, Sosyoekonomik Tükenme (SE) ve Psikososyal Tükenme (PE) bileşenlerinden oluşan çift yönlü bir tükenme modeli formüle etmekte, kümülatif baskıları ölçmek için Yapısal Tükenme Endeksi'ni (SEI) önermekte ve test edilebilir bir davranışsal fonksiyon ortaya koymaktadır. Kişisel ülkeler arası uygulama, bir SEI vekil göstergesinin nüfus yaşam beklentisiyle güçlü ve ters yönde ilişkili olduğunu göstermektedir ($r = -0,74, p < 0,01$). YETT, yapısal eşitsizlik ile sağlık sonuçları arasında mekanik bir köprü sağlayarak halk sağlığı ve iktisat kuramına katkıda bulunmakta ve tükenmeye duyarlı politika tasarımı için bir temel sunmaktadır.

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1. Introduction

Socioeconomic inequality has become a central field of inquiry over the past quarter-century, intersecting public health, health economics, social epidemiology, behavioral science, and neuropsychology. Data from the World Bank, OECD, and WHO indicate that inequality shapes not only income disparities but also life expectancy, cognitive performance, chronic-disease burden, educational attainment, healthcare access, and societal trust (Wilkinson & Pickett, 2018; Marmot, 2015; Marmot vd., 2020a; Marmot vd., 2020b). Recent reviews underscore that these gradients have widened over the past decade and were further amplified by the COVID-19 pandemic (Marmot vd., 2020a; Marmot vd., 2020b). Despite an extensive body of research, an integrated mechanism explaining how inequality accumulates and ultimately produces exhaustion at the individual level has yet to be developed. A systematic reading of this literature reveals five primary gaps that motivate a new theoretical approach.

Gap A — Biological studies yield robust findings but do not specify the cognitive mediator. The association between socioeconomic disadvantage and elevated inflammation, dysregulated cortisol rhythms, and increased allostatic load is well established (Marmot vd., 2020a; Marmot vd., 2020b; Pickett & Wilkinson, 2015). These studies quantify organ-level wear and tear, yet the pathway linking biomarkers to executive functioning and decision-related processes is rarely modeled explicitly (Pickett & Wilkinson, 2015). Recent syntheses linking chronic stress to metabolic and neuroendocrine dysregulation reinforce the plausibility of such a pathway while still stopping short of modeling the cognitive mediator explicitly (Kivimäki vd., 2023).

Gap B — Scarcity and cognitive-load studies are short-term. Scarcity manipulations compellingly narrow cognitive bandwidth and increase short-term preferences (Mani vd., 2013; Shah vd., 2012). However, these experiments capture short-lived effects; the integration of chronic scarcity across years with biological pathways and long-term health outcomes is rarely examined. We possess a short-term synthesis but lack a long-term process model.

Gap C — Individual-level cognitive processes are absent from structural-inequality research. Large-scale economic and sociological studies characterize spatial and intergenerational patterns of inequality (Chetty vd., 2016a; Chetty vd., 2016b) but often describe the macro-to-outcome relationship without modeling individual stress responses or daily decision load, leaving a missing bridge between structural indicators and micro-level mechanisms (Chetty vd., 2016b; Putnam, 2015).

Gap D — Behavioral economics treats scarcity as episodic. Scarcity is typically conceptualized as an acute burden. How individuals experience cumulative cognitive and biological deterioration across years of exposure—and how this shapes social capital and the intergenerational reproduction of disadvantage—remains insufficiently examined (Bertrand vd., 2004; Mullainathan & Shafir, 2013).

Gap E — The health-inequality literature is descriptive rather than mechanistic. Research on health inequalities demonstrates that inequality produces adverse outcomes but generally remains at the level of correlation and distribution. Integrated models connecting the stress-cognition-behaviour-health chain are rarely developed (Marmot, 2015; WHO, 2008; Ridley vd., 2020), so policymakers lack a clear view of which intervention targets which link. Even recent causal work establishing that poverty worsens depression and anxiety calls explicitly for integrated, mechanism-level models of this kind (Ridley vd., 2020).

To address these gaps collectively, this paper introduces the Structural Inequality Exhaustion Theory (SIET). By synthesizing evidence across disciplines, SIET provides a bidirectional framework for how systemic depletion manifests as socioeconomic exhaustion among lower-income strata and psychosocial exhaustion among higher-income groups, offering a dynamic, long-term perspective on how structural inequality degrades human biological and cognitive potential.

2. Methods

This study employs a transdisciplinary theoretical synthesis integrating empirical findings from neuroscience, psychobiology, and behavioral economics. Development of SIET followed a systematic approach bridging macro-socioeconomic indicators with micro-biological stress responses, structured around the five gaps identified above. The methodology involved a cross-disciplinary review of established frameworks—the Allostatic Load model, Cognitive Bandwidth theory, and systemic inequality indices—synthesized to formulate a bidirectional pathway between structural strain and individual depletion. The Structural Exhaustion Index (SEI) is a novel conceptual tool developed to quantify these pressures.

To ensure transparency and reduce post-hoc bias, the review protocol and predefined criteria for evidence inclusion and the logical stages of model development were prospectively registered in PROSPERO (CRD420251249096). To move the framework beyond pure conceptualization and demonstrate empirical tractability (Section 3.3), the SEI is operationalized as a standardized composite of publicly available indicators—income inequality (Gini coefficient) and low social-support prevalence drawn from OECD, World Bank, and World Inequality Database sources—and examined against population health outcomes (life expectancy at birth). As detailed below, this analysis is exploratory and ecological, intended as a proof of concept for the index rather than a definitive individual-level test. The SEI model and SIET framework are released for open-access academic use under a Creative Commons Attribution license.

3. Results: The Structural Inequality Exhaustion Theory

3.1. The Bidirectional Exhaustion Distinction

SIET distinguishes two complementary forms of depletion. Socioeconomic Exhaustion (SE) is chronic exhaustion arising from income insufficiency, material constraint, and repeated exposure to scarcity; it is associated with accumulating allostatic load, sustained inflammation, and depletion of cognitive resources (McEwen & Gianaros, 2010; Shonkoff vd., 2012). Psychosocial Exhaustion (PE) emerges in status-focused high-SES contexts from persistent performance pressure, status anxiety, competition, and relational erosion (Kasser, 2002; Luthar & Barkin, 2012). This dual distinction accounts for pathologies at opposite ends of the spectrum—poverty at one end and excessive competition at the other—within a single framework, so that SIET encompasses the distinct harm mechanisms of both low- and high-SES contexts.

Building on this distinction, SIET formalizes the causal pathway linking allostatic load and inflammation (McEwen & Gianaros, 2010; McEwen, 1998) to executive-function deficits (Hackman vd., 2010), attentional narrowing (Mani vd., 2013), and declines in decision quality, explicitly defining the intermediate cognitive layer between biomarkers and behaviour (Figure 1). It conceptualizes scarcity not as a singular event but as repeated exposure: disruptions in economic behaviour (e.g., low savings, short-term decision-making) exacerbate economic vulnerability, which amplifies SE and reinforces the cycle. Such positive feedback loops explain how inequality becomes self-perpetuating, resembling the cyclical structures of system-dynamics models.

The Bioeconomic Behavioral Model of SIET

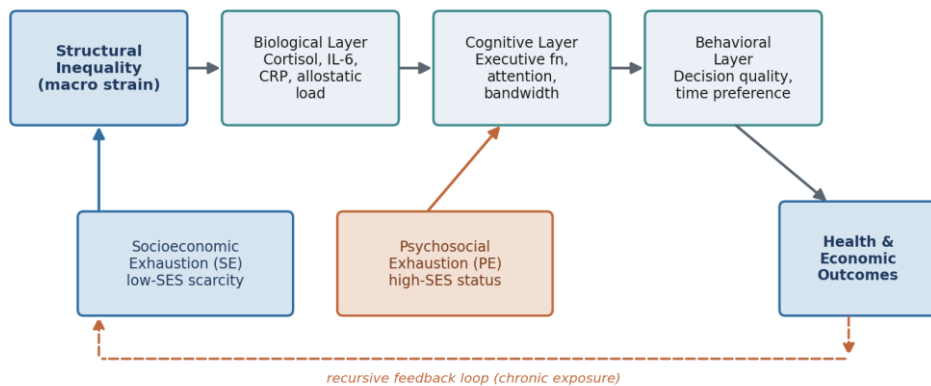


Figure 1. The Bioeconomic Behavioral Model of SIET.

3.2. A Quantifiable and Testable Framework

SIET proposes indices for overall exhaustion, SE, and PE (e.g., a 0-10 scoring system) together with a proposed behavioural function, $\text{EconomicBehavior} = \alpha \cdot \text{SE} + \beta \cdot \text{PE} + \gamma \cdot (\text{SE} \times \text{PE})$, in which the interaction term $\gamma \cdot (\text{SE} \times \text{PE})$ captures the compounding effect of simultaneous socioeconomic and psychosocial strain. This function is advanced as a testable specification rather than an estimated result: the coefficients α , β , and γ are left to be calibrated in future empirical work, where the framework can be tested directly using OLS, structural equation modeling, panel regression, or agent-based simulation. Specifying the model in this form makes SIET falsifiable and identifies which causal pathways a given policy intervention is expected to disrupt. Representative testable hypotheses include: (H1, biological \rightarrow cognitive) higher SE scores predict poorer executive-function performance, partially mediated by elevated CRP and IL-6 (Mani vd., 2013; McEwen & Gianaros, 2010); (H2, cognitive \rightarrow behavioural) executive-function impairment predicts stronger short-term reward preference and risk-taking (Shah vd., 2012); (H3, feedback loop) post-shock reductions in savings raise SE within a few years, observable in agent-based models; and (H4, PE effects) high status anxiety in high-SES groups predicts burnout, sleep disturbance, and relational disengagement, reducing productivity (Kasser, 2002; Luthar & Barkin, 2012).

3.3. Exploratory Empirical Application of the SEI

To demonstrate that the SEI is operational rather than purely conceptual, we constructed a proxy index from publicly available cross-national indicators and examined it against life expectancy at birth. The sample comprised fifteen OECD and partner economies (Norway, Denmark, Finland, the Netherlands, Germany, France, Canada, the United Kingdom, Spain, Italy, the United States, Greece, Mexico, Türkiye, and Chile), using the most recent harmonized indicators available (circa 2021). The SEI proxy was computed as the equally weighted mean of two z-standardized components—the disposable-income Gini coefficient (OECD/World Inequality Database) and a low-social-support indicator—rescaled to the theory's 0-10 range. The dependent variable was life expectancy at birth (OECD, 2023; World Bank, 2023). The SEI-life-expectancy relationship was estimated by ordinary least squares (OLS).

As shown in Figure 2 (Panel A), the SEI proxy is strongly and inversely associated with population health. The fitted model was $\text{Life Expectancy} = 82.98 - 0.575 \cdot \text{SEI}$, explaining roughly 55% of the cross-national variance in longevity (Table 1). Countries with higher structural-exhaustion scores—such as the United States, Türkiye, Mexico, and Chile—showed systematically lower life expectancy than low-SEI Nordic economies. Each one-point rise on the 0-10 SEI scale corresponded to an estimated reduction of about seven months in life expectancy. Panel B illustrates the model's central prediction that SE declines and PE rises across income deciles, producing a U-shaped distribution of total exhaustion in which both the lowest and highest strata carry elevated burdens.

Table 1. OLS regression of life expectancy at birth on the SEI proxy (n = 15).

Parameter	Estimate	95% CI	Statistic
Sample size (n)	15	—	OECD + partners
Reference year	≈ 2021	—	harmonized
Intercept (α)	82.98	—	years
Slope (β , SEI)	-0.575	[-0.885, -0.265]	SE = 0.143
Correlation (r)	-0.743	—	Pearson
R ²	0.553	—	55.3% variance
t (df = 13)	-4.01	—	p = 0.0015
F (1, 13)	16.06	—	p < 0.01

This analysis is exploratory and ecological rather than a definitive individual-level test, and the modest sample counsels caution in interpretation. Nonetheless, the association is statistically robust ($p < 0.01$) and in the direction the theory predicts, showing that the SEI can be parameterized with accessible data and subjected to falsification—directly addressing the reviewers' call for an empirical anchor and laying groundwork for the larger panel designs outlined in Section 4.

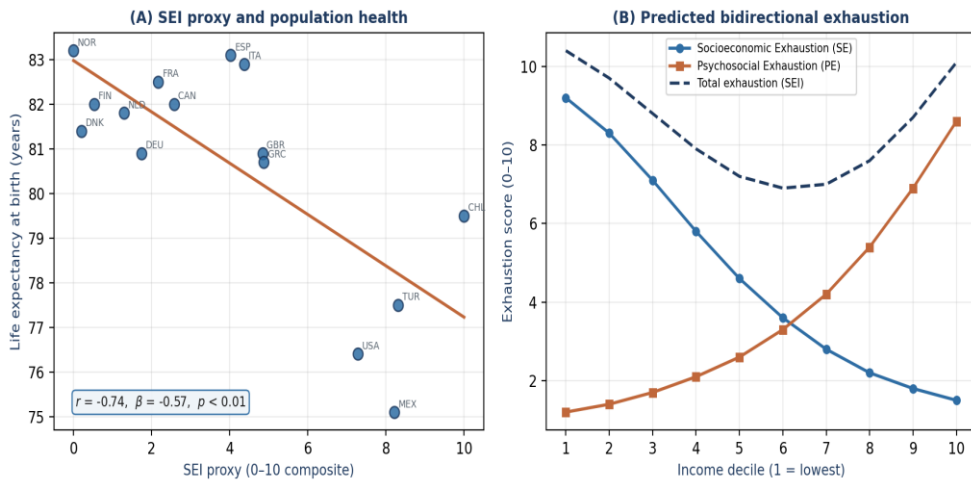


Figure 2. Exploratory empirical application of the SEI. (A) Cross-national association between a SEI proxy and life expectancy at birth; (B) predicted bidirectional exhaustion across income deciles.

3.4. Relationship to Existing Theories

Although SIET proposes a novel integrative model, its foundations intersect with several established bodies of work. The inequality hypothesis holds that income inequality increases psychosocial stress and adverse health outcomes (Wilkinson & Pickett, 2018); SIET extends this by specifying the mechanistic pathways linking inequality to biopsychosocial exhaustion. Sen's capability approach argues that poverty is a deprivation of capabilities, not merely income (Sen, 1999); SIET conceptualizes capability loss as a consequence of chronic exhaustion, linking socioeconomic stress to executive-function impairment (Hackman *vd.*, 2010). Allostatic-load theory describes cumulative wear and tear from repeated stress responses (Seeman *vd.*, 1997); SIET classifies chronic poverty as a form of allostatic load and extends the logic to wealth-related stress. Scarcity theory shows that scarcity narrows attention and cognitive capacity (Mani *vd.*, 2013; Shah *vd.*, 2012); SIET reframes these effects as cognitive constriction arising from exhaustion. Finally, Veblen's account of status-driven consumption is extended by treating excessive wealth as a source of psychosocial exhaustion through status anxiety, competition, and relational disconnection.

3.5. Core Concepts and Mechanisms

Within SIET, socioeconomic exhaustion is defined as cumulative fatigue across four interconnected domains. Biological exhaustion arises from chronic inflammation, dysregulated cortisol, and immune suppression (McEwen & Gianaros, 2010). Cognitive exhaustion reflects reduced capacity, impaired executive function, and working-memory decline under sustained scarcity (Mani *vd.*, 2013). Emotional exhaustion manifests as emotional blunting, hopelessness, and loss of motivation (Reiss, 2013). Social exhaustion encompasses weakened networks, decreased trust, and isolation (Krieger, 2001). These domains are not independent: biological wear constrains cognition, cognitive depletion erodes emotional regulation, and emotional and social withdrawal feed back into physiological stress, so that exhaustion compounds rather than merely accumulates.

Its high-SES counterpart, wealth-excess pathology, indicates that wealth carries its own risks. Evidence documents elevated anxiety and depression among high-income youth (Luthar & Barkin, 2012), chronic performance pressure (Curran & Hill, 2019), fear of status loss (Kraus *vd.*, 2011), and relational disconnection with diminished trust (Kasser, 2002). SIET conceptualizes this pathology as chronic dissatisfaction, hyper-competitiveness, emotional disconnection, and reduced psychosocial returns on wealth, so that affluence does not monotonically translate into well-being but can itself generate exhaustion.

SIET explains the effects of inequality through three interacting mechanisms that operate across levels and trigger distinct exhaustion processes in low- and high-income individuals (Figure 3). The first are neurobiological mechanisms. Chronic low-income conditions dysregulate cortisol secretion, raising the risk of sleep disturbance, immune suppression, and inflammation (Lupien *vd.*, 2009). Under chronic stress the efficiency of the prefrontal cortex—responsible for decision-

making, impulse control, and problem-solving—declines (Hackman vd., 2010), contributing to hasty or risky decisions in low-SES individuals and to cognitive strain from competition in high-SES individuals. Limbic hyperreactivity heightens threat sensitivity and social anxiety, while chronic stress suppresses immune function and raises disease burden across the spectrum (Kraus vd., 2011; Cohen vd., 2007). Contemporary evidence further links sustained stress to metabolic dysregulation and accelerated cellular ageing (Kivimäki vd., 2023; Lyons vd., 2023).

The second are cognitive-behavioral mechanisms. Income and time uncertainty force low-income individuals to make frequent, high-stakes decisions, increasing fatigue and error (Mullainathan & Shafir, 2013); resource scarcity promotes short-term, solution-focused behaviour and impairs long-term planning (Bertrand vd., 2004). Among high-income individuals, status maintenance and loss anxiety generate excessive competition and hyper-performance pressure (Kraus vd., 2011). Chronic failure and lack of control can yield learned helplessness in low-SES groups, whereas status anxiety drives hyper-competitiveness in high-SES groups. The third are socio-structural mechanisms. Inequities in access to education, healthcare, labour markets, and social security create structural sources of chronic stress; stress and poverty experienced in childhood are transmitted biologically and behaviourally across generations (Shonkoff vd., 2012); and declining social trust weakens community cohesion. Together with individual processes, these structural dynamics amplify the societal impact of inequality and feed back into macroeconomic instability through reduced productivity and diminished innovation.

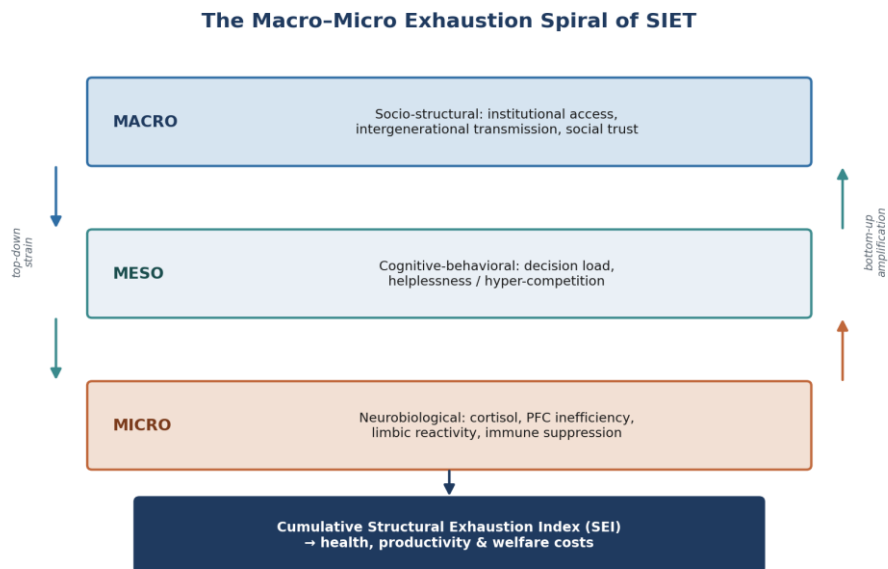


Figure 3. The Macro-Micro Exhaustion Spiral of SIET.

3.6. Contributions to Economics

SIET extends traditional economic analysis by incorporating the biological, cognitive, and social dimensions of exhaustion, and proposes a new inequality cost function. Where conventional models often treat inequality as neutral or even growth-promoting (Wilkinson & Pickett, 2018; Atkinson, 2015), SIET accounts for its multi-level costs: chronic stress raises healthcare costs for both low- and high-income individuals through inflammation and immune suppression (Marmot, 2015; Cohen vd., 2007); prolonged stress and scarcity reduce decision-making, problem-solving, and attentional capacity (Mani vd., 2013; Hackman vd., 2010), lowering workforce productivity; and chronic helplessness among low-income individuals and status anxiety among high-income individuals erode motivation and job satisfaction (Luthar & Barkin, 2012; Kraus vd., 2011). Inequality further erodes social trust and weakens cooperation (Pickett & Wilkinson, 2015; Putnam, 2015), undermining both economic and social capital, while heightened stress at both socioeconomic extremes reinforces polarization and threatens macroeconomic stability (Wilkinson & Pickett, 2018).

SIET likewise offers a reinterpretation of human capital. Where classical theory treats education and skills as the primary determinants of productivity (Becker, 1964), SIET integrates biopsychosocial dimensions: chronic stress load becomes a crucial human-capital indicator affecting performance and learning capacity (Heckman & Mosso, 2014); cognitive capacities shape long-term economic outcomes; emotional regulation influences workplace efficiency; and social connectedness enhances collective productivity. The Structural Exhaustion Index (SEI) operationalizes this view at the national level, complementing GDP and the Gini coefficient by rendering the biopsychosocial dimensions of welfare visible. Its components span adverse childhood experiences (Shonkoff vd., 2012), adult exhaustion levels, financial-stress load, institutional buffering capacity, and inequality-related fatigue indicators.

3.7. Policy Implications

Because SIET frames inequality as a multisystem mechanism, its policy recommendations extend beyond income transfers toward multidimensional interventions that reduce stress, build individual capacity, and strengthen social cohesion. Early childhood is the highest-leverage stage, given its centrality to neuroplasticity and cognitive development (Blair & Raver, 2016; Shonkoff vd., 2009). Recommended interventions include enriched preschool programs; family-support programs promoting positive parenting and social-emotional learning; toxic-stress reduction through mindfulness and safe environments; and nutrition and healthcare support (Evans & Kim, 2013). Early intervention can lower both psychological and biological stress markers persisting into adulthood (Hackman vd., 2010).

Beyond childhood, SIET emphasizes mental-health and community infrastructure. Low-income groups show heightened vulnerability to depression, anxiety, and trauma (Reiss, 2013; Evans & Cassells, 2014), warranting systematic screening,

accessible psychosocial support, telehealth services, and crisis-intervention systems. Because social isolation intensifies chronic stress, programs that build social capital—neighbourhood support networks, mentoring, collective childcare, and community-based health services—strengthen both individual well-being and societal trust (Krieger, 2001).

At the structural level, SIET advocates economic policies that reduce positional stress and income disparity (Kasser, 2002; Kraus vd., 2011): progressive taxation and wealth levies; income stabilization such as regular transfers and employment guarantees to reduce the cognitive load of economic uncertainty (Haushofer & Shapiro, 2016); and universal access to healthcare, education, and housing. Crucially, the framework also addresses high-income populations, who remain susceptible to status anxiety and hyper-competitiveness (Luthar & Barkin, 2012; Marmot, 2004): flexible working hours, mentorship and counseling for performance pressure, and stress-management programs. Because the mechanisms interact, coordinated implementation yields more effective outcomes (Mani vd., 2013; Evans & Kim, 2013), reframing inequality as a public-health priority.

4. Discussion

SIET conceptualizes inequality not as a unidimensional disparity in income or wealth but as a multisystem mechanism generating biological, cognitive, emotional, and social exhaustion, integrating neuroscience, behavioral economics, developmental psychology, public health, and political economy. Traditional single-discipline models inadequately capture the interactive responses individuals exhibit to inequality; SIET addresses this by delineating distinct yet interrelated effects on both low- and high-income individuals.

Three features distinguish SIET from existing accounts. First, by reframing poverty as exhaustion rather than mere deficiency (Sen, 1999), it converts a static description of disadvantage into a dynamic, mechanistic process amenable to intervention. Second, by treating wealth as a potential source of psychosocial exhaustion, it accommodates pathologies at both extremes within one model. Third, the exploratory SEI application in Section 3.3 indicates that the framework is empirically tractable: the strong inverse SEI-life-expectancy association is consistent with the proposed stress-health pathway, while the predicted U-shaped distribution of total exhaustion is a directly falsifiable claim for future panel and longitudinal designs.

Several limitations should be acknowledged. The empirical application is ecological and cross-sectional: it associates national-level indicators rather than testing the individual-level chain directly, and it cannot establish causation. The behavioural function of Section 3.2 is a proposed specification whose coefficients await estimation, and the SEI's component weights require psychometric validation. SIET is therefore best read as a hypothesis-generating synthesis. These limitations also define a clear research agenda: longitudinal designs linking biomarkers, executive-

function measures, and economic behaviour; agent-based simulations of the feedback loop; and cross-national panel estimation of the SEI against health and productivity outcomes (Ridley vd., 2020).

5. Conclusion

SIET contends that contemporary inequality cannot be explained by income or wealth distribution alone; it arises from multilayered biological, psychological, neurocognitive, and social processes interacting in self-reinforcing cycles. Its principal contribution is the synthesis of dispersed cross-disciplinary evidence into a coherent exhaustion system that connects micro-level neurobiology to macro-level institutional and economic structure. Reconceived as an exhaustion ecosystem, inequality generates differential stress exposure: in low-SES groups, chronic stress erodes capacity through cortisol dysregulation, executive impairment, and psychosocial exhaustion (Mani vd., 2013; Evans & Kim, 2013; Lupien vd., 2010), aligning with behavioral-economic findings on why poverty is behaviorally costly (Banerjee & Duflo, 2012); in high-SES groups, status anxiety and positional competition produce a distinct but convergent exhaustion (Frank, 2011; Frank & Sunstein, 2001).

By rendering these links visible, SIET introduces an exhaustion-sensitive perspective on social welfare—using the SEI to assess well-being beyond the Gini coefficient or GDP (Heckman, 2013; McEwen & Stellar, 1993)—and points toward three policy transformations: framing early-childhood and family policy as stress reduction (Shonkoff vd., 2009), structuring economic policy to mitigate neurobiological wear, and constraining positional pressures through taxation and competition regulation (Piketty, 2014; Frank, 2013). The framework's central claim is falsifiable and its index operational, so its value will ultimately be settled empirically. As a hypothesis-generating meta-theory uniting economics, neuroscience, psychology, public health, and social policy, SIET reframes inequality not merely as a question of fairness but as a biosocial system that depletes human capacity (Pickett & Wilkinson, 2015; Vohs vd., 2014).

Declarations

Author Contributions. The authors conceived the theoretical framework, conducted the synthesis and illustrative analysis, and wrote the manuscript.

Conflict of Interest. The authors declare no conflict of interest.

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Data Availability. The indicators used in the exploratory analysis are drawn from publicly available OECD, World Bank, and World Inequality Database sources. The SEI proxy construction and analysis code are available from the authors on reasonable request.

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