



The Stress-Trust-Health Connection

Understanding Critical Pathways to Wellbeing

Summary of data findings by Robert Porter Lynch

Version 1.0 March 2025

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Introduction

The relationship between stress, trust, and health represents one of the most important but often overlooked connections in understanding human wellbeing. Extensive research has demonstrated that social relationships, particularly those characterized by high trust, significantly impact physical health outcomes. This connection operates through multiple pathways, including physiological responses, psychological states, and behavioral mechanisms. Understanding these relationships provides valuable insights into disease prevention and treatment approaches, especially regarding chronic conditions like cancer.

Stress & Trust – Summary of Findings

The Stress-Health Relationship: Biological Mechanisms

Neuroendocrine Effects

When we experience stress, our bodies activate the "fight-or-flight" response, releasing stress hormones like cortisol, adrenaline, and norepinephrine. These hormones prepare the body for immediate action, but chronic elevation can be harmful:

"The body responds to stress by releasing stress hormones, such as epinephrine (also called adrenaline) and cortisol (also called hydrocortisone). The body produces these stress hormones to help a person react to a situation with more speed and strength. Stress hormones increase blood pressure, heart rate, and blood sugar levels. Small amounts of stress are believed to be beneficial, but chronic high levels of stress are thought to be harmful."

Research evidence points to multiple ways stress impacts the body:

- **DNA Damage:** Stress hormones can directly induce DNA damage and suppress p53 function, a critical tumor suppressor gene, promoting cancer development
- **Anoikis Inhibition:** Stress can inhibit anoikis, a natural process that normally kills diseased cells and prevents their spread
- **Increased Growth Factors:** Chronic stress increases production of growth factors that enhance blood supply to tumors
- **Cell Growth Regulation:** "The body's neuroendocrine response can directly alter important processes in cells that help protect against the formation of cancer, such as DNA repair and the regulation of cell growth"

Immune System Effects

Perhaps the most significant biological impact of chronic stress occurs through the immune system:

"Chronic stress weakens a person's immune system, which in turn may affect the incidence of virus-associated cancers, such as Kaposi sarcoma and some lymphomas."

Stress-induced immune suppression includes:

- Reduced cellular immunity and interferon production
- Weakened immune surveillance
- Increased risk of cancer invasion and metastasis
- Creation of inflammatory environments that support tumor growth

As one researcher stated, "Studies have shown that factors, such as death of a spouse, social isolation, and medical school examinations, alter the way the immune system functions."

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The field of psychoneuroimmunology (PNI) has emerged to study these connections, examining "the complex interactions between psychological processes, the nervous system, and the immune system." This field explores how these systems communicate and influence each other through "bidirectional communication... facilitated by signaling pathways such as the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system."

Inflammation and Cancer Progression

Chronic stress creates a state of low-grade inflammation that supports cancer development:

"Inflammatory pathways activated by stress have been implicated in the development of tumors, metastasis of tumors, and resistance to chemotherapy."

One study showed that "stress hormones cause neutrophils (a type of white blood cell) to release proteins (S100A8/A9) that awaken dormant cancer cells" and "form sticky web-like structures that make body tissues more susceptible to metastasis."

Trust as a Stress Buffer

While stress can significantly harm health, trust appears to function as a powerful buffer against these effects. Trust—whether in other people, institutions, or spiritual beliefs—provides protection through multiple mechanisms.

Social Trust and Wellbeing

Research from the Gallup World Poll and Canadian General Social Survey demonstrates remarkably strong connections between trust and wellbeing:

"People who believe a lost wallet would be returned if found by a neighbor or police officer have significantly higher life evaluations... In quantitative terms, the wellbeing effect of living in a high-trust environment (like Norway) versus a low-trust environment (like Tanzania) was equivalent to a 40% increase in household income."

The Canadian data showed even stronger effects:

- Trust in co-workers: 7.6% higher life satisfaction
- Trust in neighbors: 5% higher life satisfaction
- Confidence in police: 3% higher life satisfaction
- Belief a stranger would return a lost wallet: 2.5% higher life satisfaction

"When combined, high levels of trust across these domains were associated with an 18% increase in life satisfaction."

People in high-trust companies report "74% less stress compared to those in low-trust companies," and social trust "provides a buffer against stress, especially for older adults."

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Trust and Mortality Reduction

Trust doesn't just improve subjective wellbeing—it saves lives. Research shows that higher levels of social trust correlate with reduced suicide rates and traffic fatalities:

"A 10% increase in the population moving from generally untrusting to trusting (a 0.1 increase on the social trust scale) was associated with a 2.3 point drop in the suicide rate - more than 10% of its average value."

The research found a clear pattern: "Cross-national data analysis showed that the same variables that explain differences in life satisfaction also explain variance in suicide rates and traffic fatalities."

This suggests trust creates broader social contracts that encourage responsible behavior toward others.

The Trust-Health Connection

Mechanisms of Protection

Beyond reducing stress, trust appears to promote health through several specific mechanisms:

1. Stress Reduction and Physiological Benefits:

"High-trust environments reduce chronic stress, which is increasingly recognized as a root cause of many diseases... Lower vigilance and threat perception in daily life... Reduced activation of stress hormones like cortisol... Lower inflammatory responses linked to chronic diseases... More stable immune system functioning."

2. Psychological Support and Mental Health:

"Strong social connections and trust provide psychological benefits that include: Emotional support during difficult times... Reduced feelings of isolation and loneliness... Higher resilience against depression and anxiety... Enhanced sense of meaning and purpose."

3. Behavioral Pathways:

Trust influences health behaviors through "information sharing... social norms... practical support... [and] healthcare access."

4. Community-Level Resources:

"Beyond individual benefits, social capital strengthens communities in ways that support health: More effective collective action to address health threats... Better functioning institutions and healthcare systems... More equitable distribution of resources... Enhanced community resilience during health crises."

Stress & Trust – Summary of Findings

Trust vs. Trustworthiness: The Perception Gap

An interesting finding emerged from the research: people consistently underestimate the trustworthiness of others, which may contribute to unnecessary stress:

"In Toronto, only 25% of survey respondents expected a wallet found by a stranger would be returned, but in reality, 80% of experimentally dropped wallets were returned."

Similar patterns appeared in crime statistics: "While actual burglary rates averaged 3.5% across 30 countries, 29% of respondents believed they were likely to be burglarized in the coming year."

The researchers conclude that "people's subjective well-being is more strongly linked to their perceptions of trust rather than actual trustworthiness. This implies that correcting overly pessimistic views about others' trustworthiness could substantially improve well-being at essentially no cost."

Cancer and Stress: Examining the Evidence

While direct causation between stress and cancer remains unproven, mounting evidence suggests significant connections.

Research Findings on Stress and Cancer

Multiple studies have identified relationships between stress and cancer:

- "Scientists have suggested that the effects of stress on the immune system may in turn affect the growth of some tumors."
- "A review of studies that evaluated psychological factors and outcome in cancer patients suggests an association between certain psychological factors, such as feeling helpless or suppressing negative emotions, and the growth or spread of cancer."
- "In general, stronger relationships have been found between psychological factors and cancer growth and spread than between psychological factors and cancer development."
- "Death rates are higher for cancer patients with pessimistic attitudes."

Recent research points to direct biological mechanisms:

"Recent animal models indicates that the body's release of stress hormones can affect cancer cell functions directly."

One study that received attention from Scientific American found that "stress hormones make it easier for malignant tumors to grow and spread... Cells that were exposed to stress hormones were protected from self-destruction—meaning they could survive without being anchored to their surroundings."

Stress & Trust – Summary of Findings

Animal studies confirmed these findings: "After receiving a transplant of ovarian cancer cells, mice were restrained to cause stress. As such, their tumors grow more quickly."

Debates in the Research

Despite these findings, scientists remain cautious about claiming direct causation:

"A direct relationship between psychological stress and the development of cancer has not been scientifically proven."

"Currently, there is no evidence that stress is a direct cause of cancer. But evidence is accumulating that there is some link between stress and developing certain kinds of cancer, as well as how the disease progresses."

Some scientists express stronger skepticism:

"There is virtually no connection between stress and cancer. I think it's disastrous that people are led to believe there is," said Robert Sapolsky, professor of neuroscience at Stanford University.

Others have observed that stress might lead to unhealthy behaviors that indirectly increase cancer risk:

"Part of the reason stress may be linked to cancer... is simply that when people are under pressure, they make poor choices — they begin smoking, stop exercising, start eating unhealthy foods — all factors that are also linked to cancer."

Religious Faith, Trust in God, and Health

The research consistently shows notable health benefits associated with religious faith and belief in God, particularly through stress reduction mechanisms:

"Helliwell's research found that religious involvement and belief in God significantly reduce suicide risk and increase well-being."

This effect appears to work through multiple mechanisms:

- Religious communities provide strong social networks
- Spiritual beliefs provide meaning and purpose during difficult times
- Religious practices offer comfort and reduce existential anxiety
- Religious communities frequently provide practical support systems

One meta-analysis of 42 studies covering nearly 126,000 people "found that highly religious persons had a 29% higher odds of survival compared with less religious persons." Other research showed "religiously affiliated people lived 5.64 to 9.45 years longer than those who were not religiously affiliated."

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The protective effects appear to stem from several factors, including stress reduction: "Trusting God also helps believers to avoid stress, one of today's biggest killers... stress has been linked to heart disease and early death."

Building Trust and Reducing Stress

Given the strong connections between trust, stress, and health, the research points to several promising interventions.

Individual-Level Approaches

The research indicates several strategies individuals can use to build trust and reduce stress:

- 1. Invest in relationships:** "Prioritize building trustworthy relationships and community connections."
- 2. Join voluntary organizations:** "Group membership correlates with better well-being outcomes."
- 3. Participate in community life:** "Civic engagement increases beneficial social capital."
- 4. Build trust intentionally:** "Practice trust and trustworthiness in daily interactions."
- 5. Maintain family connections:** "Work actively to preserve and strengthen family relationships."

Medical Applications

The field of psychoneuroimmunology offers promising applications for healthcare:

"Prof. Ben-Eliyahu concludes, 'By boosting the immune system and blocking its suppression by psychological and physiological stress, starting a day or two before surgery, during surgery and after surgery, we may be able to provide an intervention program that can extend people's lives and potentially increase their chances for long-term survival.'"

Healthcare systems can support these processes by:

- 1. Recognizing social factors:** "Include social capital assessment in health evaluations."
- 2. Community-based approaches:** "Develop prevention programs that enhance community connections."
- 3. Support for isolated patients:** "Create special interventions for those with limited social support."
- 4. Trust-building measures:** "Enhance trust between healthcare providers and communities."
- 5. Reducing stress burdens:** "Address chronic stress as a significant health risk factor."

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Community and Policy Approaches

At broader levels, communities and policymakers can foster environments that build trust and reduce stress:

- 1. Build institutions that foster trust:** "Governmental quality shows strong effects on well-being."
- 2. Create inclusive spaces:** "Design communities that facilitate social interaction."
- 3. Support voluntary organizations:** "Provide resources for groups that build social capital."
- 4. Address inequality:** "Social trust is undermined by high inequality."
- 5. Measure well-being directly:** "Include both subjective well-being and social capital measures in policy evaluation."

The Triple Protection Effect

Research suggests a powerful combined effect from three factors—belief in God, trusted friendships, and a positive mental attitude:

"People with a strong religious faith may live an average of several years longer than those without a religious affiliation, with some studies showing a life expectancy increase of between 5.64 and 9.45 years."

"Studies have shown that individuals with a positive outlook on aging tend to live significantly longer... People with more positive self-perceptions of aging lived 7.5 years longer than those with negative perceptions."

"People with strong, trusted friendships can potentially live significantly longer, with some studies suggesting a lifespan increase of up to 50% compared to those with limited social connections."

The impact of these positive factors exceeded traditional health factors:

"The impact of positive attitudes about aging on survival was greater than that of low blood pressure, low cholesterol, healthy weight, not smoking, and regular exercise."

Conclusion: Trust as Preventive Medicine

The evidence strongly suggests that social capital—particularly trust—functions as a form of preventive medicine with powerful effects on overall health and wellbeing. The research demonstrates that living in high-trust environments reduces chronic stress, improves psychological health, encourages healthier behaviors, and strengthens community resources in ways that may help prevent disease development and progression.

While medical research often focuses on physical risk factors and genetic predispositions, this evidence highlights the importance of social environments for maintaining health. Building

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trustworthy relationships and communities may be among our most powerful tools for preventing disease and enhancing quality of life.

As John F. Helliwell's research concludes:

"The results reveal sufficiently strong linkages between trust and well-being to support much more study of how trust can be built, maintained, and repaired where it has been damaged."

Understanding these connections invites a more holistic approach to health that recognizes humans as fundamentally social beings whose physical health cannot be separated from their social contexts. In this light, efforts to build social capital represent investments not just in community wellbeing but potentially in disease prevention as well.

I recommend all leaders and managers adopt the “FARTHEST” Principles to activate a strong culture of trustworthy relationships.

