

# Harnessing Research Pressure: A Dual Chain Mediation Effects of Achievement Motivation and Research Anxiety on Innovative Behavior Under Challenge-Hindrance Research Stressors [Letter]

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## Dear editor

The recent article by Ma and Hu provides a timely and rigorous examination of how research pressure influences innovative behavior through the dual mediating roles of achievement motivation and research anxiety.<sup>1</sup> Yet, in reading their study, one is left with the sense that the black box of academic stress remains only half illuminated.

The model distinguishes neatly between challenge and hindrance stressors, yet lived research life rarely affords such clarity. A looming grant deadline, for example, may serve as a motivating challenge when resources are plentiful, but the same demand may become a paralyzing hindrance when institutional politics shift or personal health falters. Stressors are dynamic, not static; they mutate over time.<sup>2</sup> Without a temporal or longitudinal perspective, the process risks being frozen into tidy causal arrows that may misrepresent the fluid reality of academic work.

The dual-chain mediation model treats achievement motivation and research anxiety as sequential links. In practice, however, their relationship is less linear than oscillatory. Anxiety may at times provide bursts of drive—what psychologists have called the “adrenaline of uncertainty”—while at other times it corrodes motivation, leaving researchers depleted.<sup>3</sup> Future models could profitably capture these nonlinear dynamics.

The study is firmly rooted in China's academic ecology, characterized by strict age limits, “up-or-out” employment policies, and heavy reliance on quantitative metrics. These institutional conditions actively shape how stress is perceived and categorized. A bureaucratic hurdle in one context may be construed as an opportunity in another. Without addressing these cultural contingencies, the model risks being overgeneralized to research systems where evaluative logics differ substantially. Stress cannot be fully understood apart from the institutional and cultural codes that define it.

Framing certain pressures as “challenge stressors” with positive outcomes carries ethical hazards. Universities or funding bodies may interpret such findings as license to deliberately institutionalize pressure under the guise of productivity. Yet even “productive” stress carries hidden costs: burnout, attrition, and, at times, misconduct.<sup>4</sup> While stress may stimulate bursts of creativity, the long arc of scholarship requires sustainability, not adrenaline dependency. Models of innovation under pressure should be cautious not to inadvertently legitimize exploitative practices.

Finally, reliance on self-reported Likert scales introduces vulnerabilities. In academic cultures where stoicism and achievement are prized, admitting to paralyzing anxiety risks stigma. Survey responses may therefore be polished for social desirability, making the lived experience of stress appear tidier than it truly is.<sup>5</sup> The degree to which the “black box” has been opened may thus be more modest than the statistical models suggest.

Ma and Hu have mapped an important section of the terrain linking stress to innovation.<sup>1</sup> To extend their contribution, future work would benefit from a temporal lens on stress dynamics, a nonlinear account of motivation and anxiety, deeper

engagement with cultural contexts, and ethical caution in valorizing pressure. Only by exploring these dimensions can the black box be brought into fuller light.

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