

# Organization culture and burnout in software development teams

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## ABSTRACT

Work-related anxiety and mental disorders are common among tech employees. According to the International Journal of Social Sciences [7], software developers have a considerably higher likelihood of feeling fatigue, burnout, anxiety, and stress, compared to their colleagues who perform mechanical tasks. Deteriorating mental health threatens the well-being of employees and the companies' overall productivity. Retaining developers in today's "Great Resignation" era requires companies create the right balance in building team cultures that allow for high performance and workforce engagement without inducing high stress and burnout [3].

An organization culture that promotes psychological safety [1], shared responsibilities[6], and out-of-box thinking [12] can improve team performance as workers in such a culture feel engaged, motivated, and responsible for their teams' products. Indeed, prior DevOps research [2, 5] has found direct association between culture and less burnout, and impact of culture on software delivery performance, separately.

However, burnout and performance are closely connected—high performance teams may feel higher pressure and therefore have higher burnout. Therefore, it is important to study the triadic relationship in its entirety. Our hypothesis is that ORGANIZATIONAL CULTURES THAT ARE "GENERATIVE" REDUCE THE BURNOUT THAT MAY COME FROM HIGH-PERFORMANCE. Ron Westrum categorized organization culture as a spectrum bookended by *Pathological* (where teams have low cooperation, consider failure as guilt, have employees constantly looking for a scapegoat, and crush novelty) and *Generative* (where teams have high cooperation, share risks and responsibilities, encourage exchange between departments, are performance-oriented, and incentivize innovation and change).

Fig.1 models this triadic relationship, where we investigate how organizational culture can be a moderator between high performance (denoted by "stability") and developer well-being (denoted by "less burnout").

We evaluate the model empirically through a survey (N = 840 developers) at Globant. Globant is a multinational consulting company, where Globant developers embed in client teams with different corporate cultures. The eight survey questions [10] used for this model were inspired by previous instruments [2, 5, 11]; . We used the Smart-PLS 3.2.8 software [9] and Partial Least Squares - Structural Equation Models (PLS-SEM) with Moderation analysis methods [8] to investigate the relationships between stability, organizational culture, and well-being. Our model presented a good fit value (SRMR = .06), with no collinearity issues (Variance Inflation Factor below 5), and acceptable explanatory power ( $R^2$  .15) [4].

Therefore, our results support the hypothesis that organizational culture not only directly impacts developer well-being, but also is a moderator in reducing burnout when teams strive for high performance ( $p < 0.05$ , Fig.1). That is, high performance teams can

have higher burnout, but this impact is lessened in generative organization cultures.

Our results allow for actionable insights, since organizational culture can be adapted to reduce burnout while keeping high performance. Based on these results Globant is creating online content to train teams on practices that help teams to move from Pathological cultures to more Generative cultures. For example, how to create psychological safety when doing postmortem analysis. As next steps, we will evaluate how velocity (e.g., lead time for changes and deploy frequency) affects burnout. We are also evaluating how technical processes (such as, test-driven development, deployment automation) as well as management practices (such as, work-in-process limits) act as moderators to the relationship between performance and burnout.

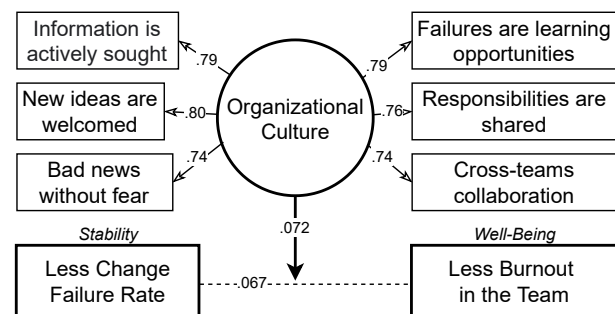


Figure 1: Item loadings and path coefficients ( $p < 0.05$  indicated by a full line and  $p \geq 0.05$  indicated by dashed lines)

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