

## Theme: Cognitive Neuroscience

### Exploratory pilot study to inform RESOUT— a smartphone app for RESident physicians' burnOUT

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#### Abstract:

Burnout is highly prevalent in medical career, peaking in residency. Our research with medicine students revealed that their high perfectionism and related emotional regulation strategies are risk factors for burnout.

This pilot study, part of our new project “RESOUT - Smartphone app for RESident physicians' burnOUT monitoring and prevention”, aims to explore residents' burnout levels, psychological correlates and attributions.

130 Pt residents (77% women) completed a protocol to evaluate Burnout, Psychological distress/PD, Perfectionism, Worry and rumination (WR), Self-compassion (SC), Satisfaction with life (SL) and Perceived-self-efficacy (PSE), -empathy (PE) and -medical errors (PME).

Most participants had moderate (35%)/high (22%) burnout levels. Among these, 38.9% reported thinking about leaving residency often/very often, for the following main reasons: high workload (72%), lack of personal/family time (73.6%), and difficulty dealing with stress (48.3%).

Perfectionism, WR, and low SC predicted higher burnout levels ( $\beta > .40$ ). SC mediated the relationship between the other predictors and burnout. Both perfectionism and SC moderated the relationship between reasons to think about leaving residency and burnout.

Burnout predicted frequency of thoughts about leaving residency ( $\beta = .583$ ), PD ( $\beta = .677$ ) and low SL ( $\beta = -.589$ ), PSE ( $\beta = -.324$ ), PE ( $\beta = .665$ ) and PME ( $\beta = .224$ ) (all  $p \leq .001$ ).

These findings highlight a critical unmet need in medicine residents' mental health. They also empirically inform the assessment and intervention strategies to be included in an app-based solution and the secondary outcomes to be considered in its effectiveness analysis. By delivering SC based practices the app may help residents manage perfectionism, reduce burnout and mitigate its impact on them and their patients. Considering they attribute their distress to the high job demands they face, digital interventions – accessible, flexible and AI-powered personalized – can promote their adherence.

**Keywords:** Burnout, Intern physicians, Personality, Self-Compassion, Smartphone app