

Modeling Psychological and Environmental Influences on Surgical Resident Well-being

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BACKGROUND

General Surgery (GS) residents are susceptible to burnout and depression.

Mechanistic relationships among relevant psychological and environmental variables remain incompletely understood.

METHODS

Residents from 16 academic GS programs

2 surveys: N=300, 251; RR=34%, 31%

Social network analysis (SNA) yielded **conceptual networks** of well-being variables and quantified relative influence.

Path analysis identified drivers and mediators of burnout and depression.

RESULTS & DISCUSSION

Stress and psychological wellbeing were central mediators of well-being outcomes.

Workplace demand and mindfulness were key drivers of these pathways.

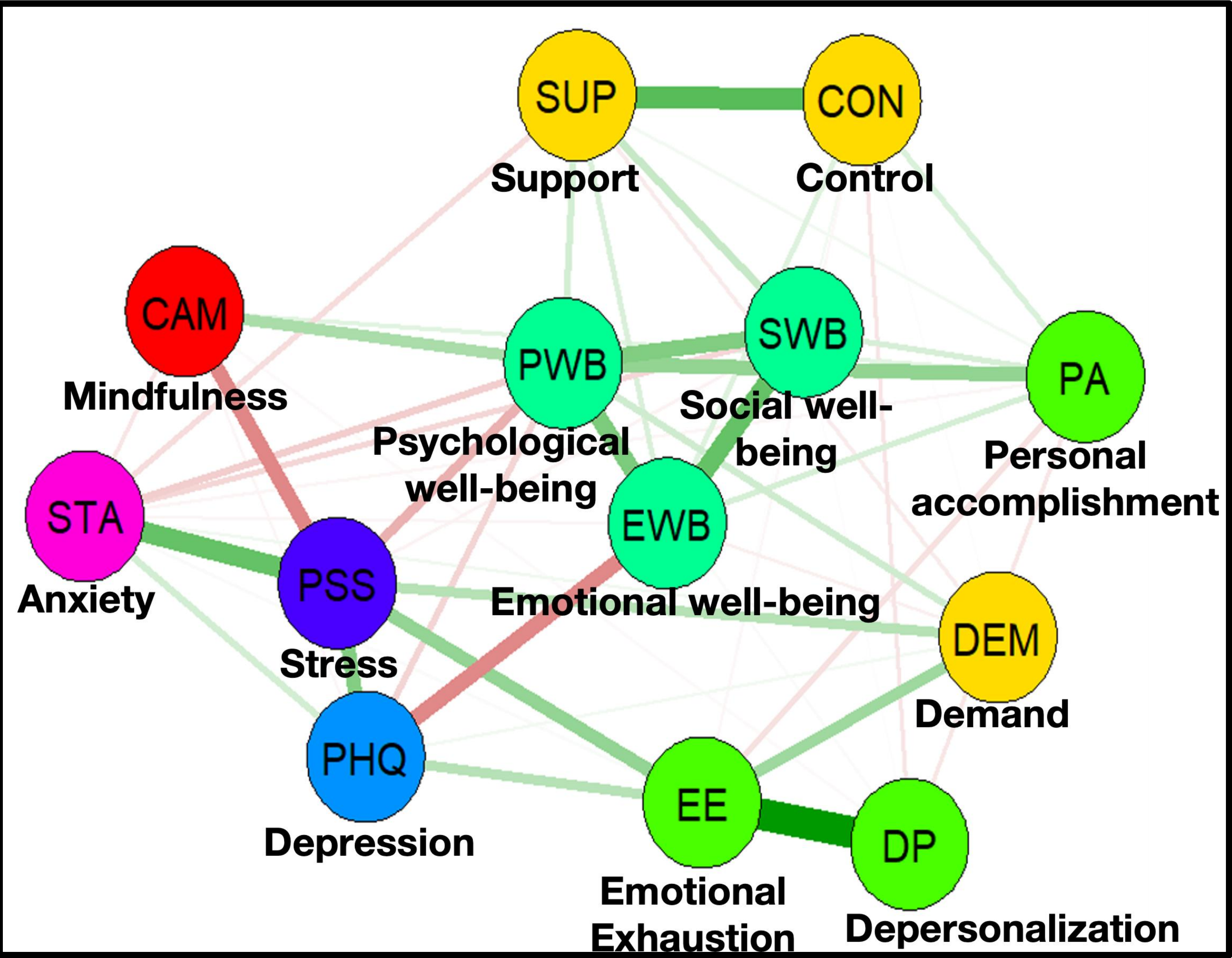
Positive elements of **culture (psychological safety, feeling valued)** at multiple organizational levels correlated with flourishing (a proxy for well-being).

CONCLUSIONS

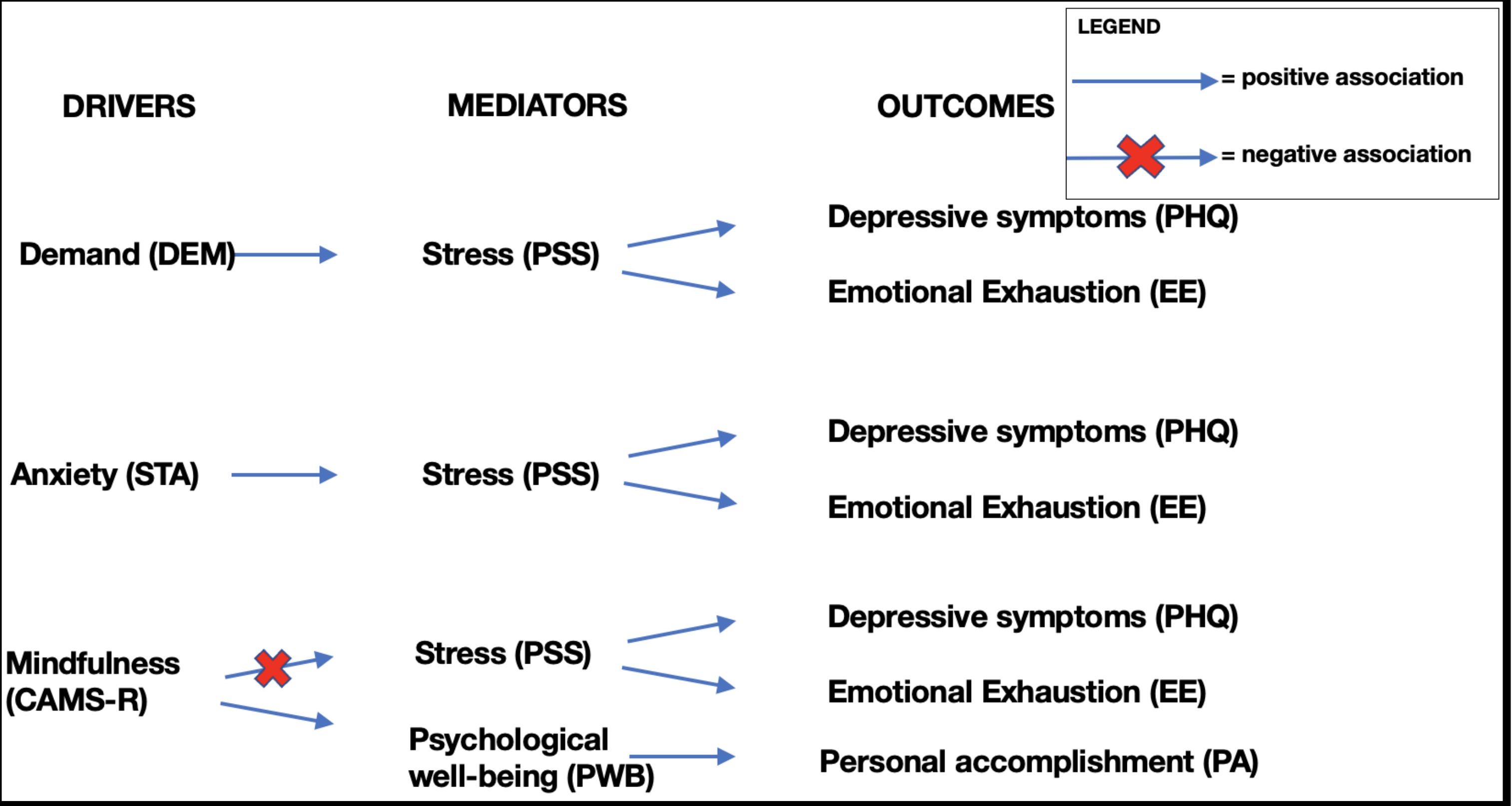
This study mapped two **novel conceptual networks** of factors related to well-being in surgical residency and identified potentially high-yield **interventional targets**.



Social Network Analysis (#1):



Path Analysis (#1):

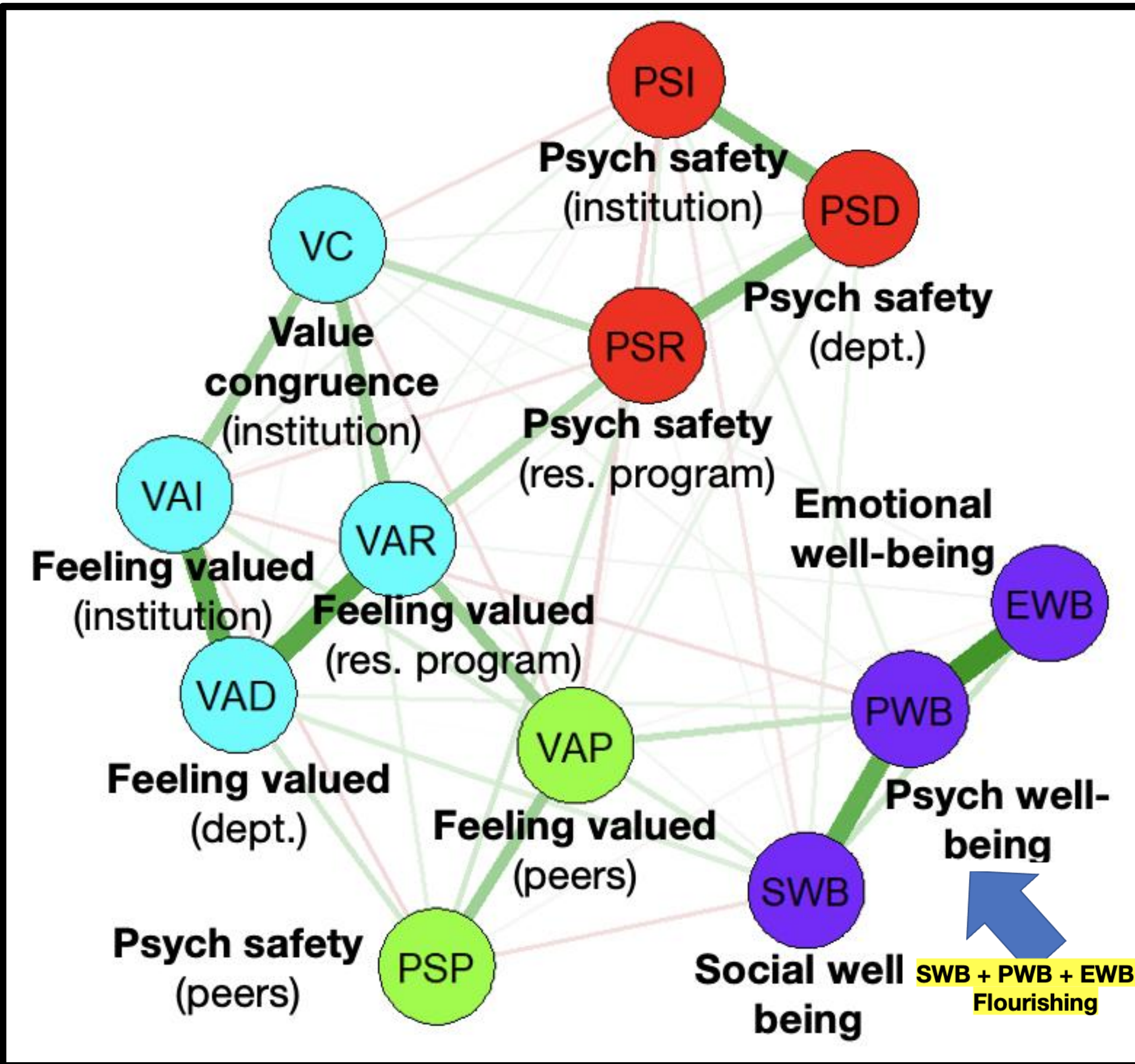


Hypotheses generated from SNA #1 and literature. $P < 0.05$ for all pathways shown. In all cases, *mediated* > *direct* effects. Demand, anxiety, and mindfulness influenced depressive symptoms and components of burnout. Stress and psychological well-being mediated these effects.

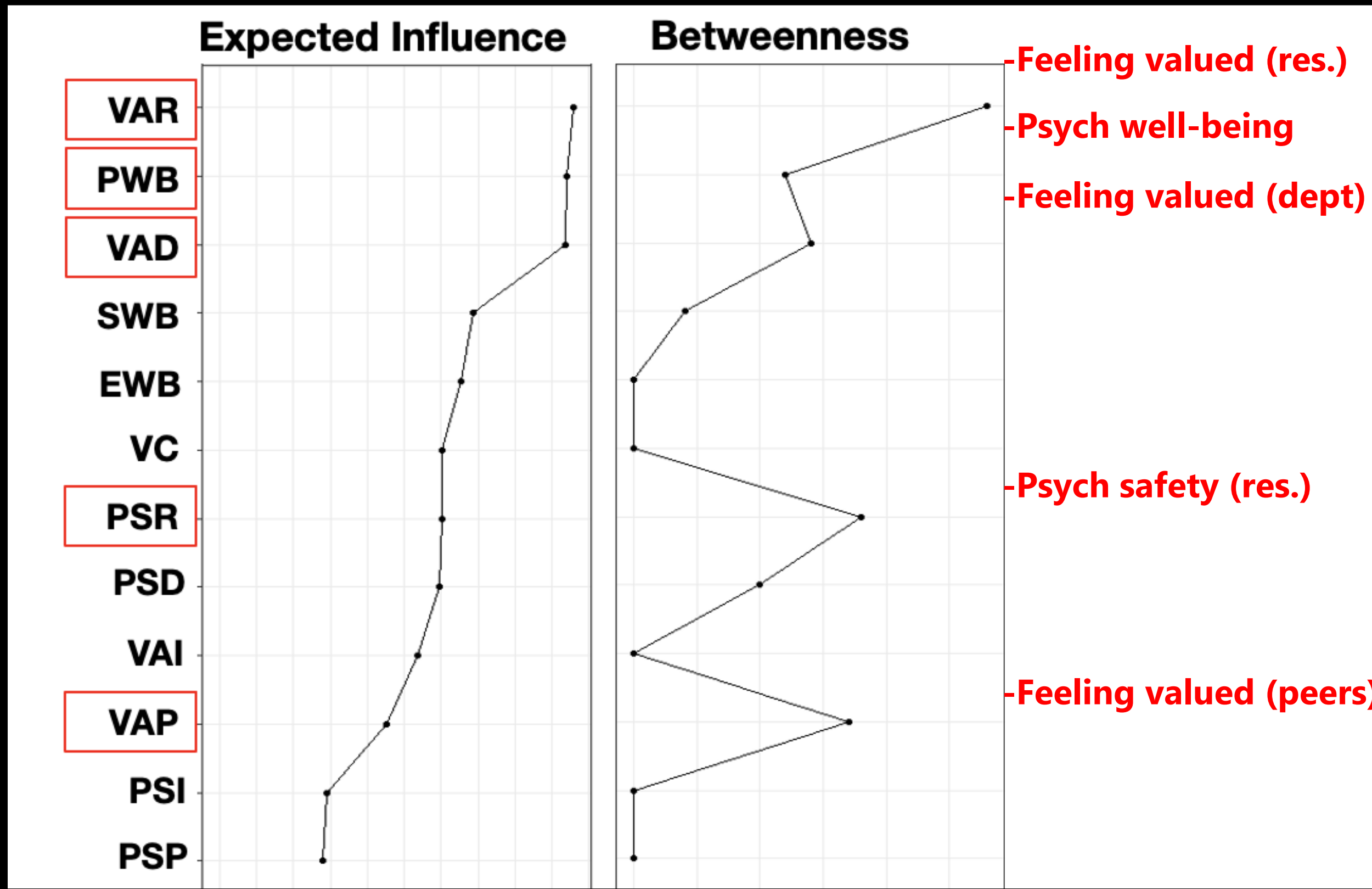
NEXT STEPS

Semi-structured interviews with GS residents to operationalize key variables (psych well-being, workplace demand, etc.) and investigate differences in individual experiences.

Social Network Analysis (#2):



Influential Variables (#2):



In SNA #2, peer-level elements appeared most closely related to flourishing. Feeling valued at residency program and dept. levels had the greatest influence on the model as a whole. Psychological safety at the residency program level was a central mediator. Logistic regression revealed correlation of flourishing with psychological safety at program and dept. levels.

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