

Supplementary Appendix

The authors have provided this appendix containing additional information about their work.

Supplement to: Arbaugh C, Kopeccky KE. How Should Senior Surgeons Help Junior Colleagues and Trainees Experiencing Regret? *AMA J Ethics*. 2025;27(3):E171-E177. doi: 10.1001/amajethics.2025.171.

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Figure. Definitions

Regret: “an aversive emotion focused on the belief that some event from the past could have been changed in order to produce a more desirable outcome”¹

Self-blame: a common form of cognitive distortion characterized by the incorrect assignment of blame or responsibility for adverse events; often associated with self-criticism and accompanied by feelings of guilt, shame, regret, and self-directed frustration²

Self-talk: an inner voice “combining conscious thoughts and unconscious beliefs and biases”; a mechanism “for the brain to interpret and process daily experiences”³

Shame: “a painful emotion caused by consciousness of guilt, shortcoming, or impropriety”; “the susceptibility to such emotion”; “a condition of humiliating disgrace or disrepute”⁴

Perseverative thinking: the repeated activation of the cognitive representation of one or more psychological stressors⁵

Downward psychological spiral: a “situation where a series of negative thoughts, emotions, and actions continuously feed back into themselves, causing the situation to become progressively worse”⁶

Inner dialogue: similar to self-talk above, “the voice inside your head,” “inner voice,” “internal monologue,” “the result of certain brain mechanisms that cause you to ‘hear’ yourself talk in your head without actually speaking and forming sounds”⁷

Second victim syndrome: the burden of anxiety, depression, and shame held by the health care practitioner after an adverse patient outcome^{8,9,10}

References

1. Cherry K. How to cope with regret. *Verywell Mind*. November 28, 2023. Accessed April 28, 2024. <https://www.verywellmind.com/how-to-cope-with-regret-5218665>
2. Self-blame information handout. Psychology Tools.
3. Inner Voice. Self-talk. *Psychology Today*. November 10, 2017. Accessed April 28, 2024. <https://www.psychologytoday.com/us/basics/self-talk>
4. Shame. Merriam-Webster Dictionary. Accessed April 28, 2024. <https://www.merriam-webster.com/dictionary/shame>
5. Brosschot JF, Gerin W, Thayer JF. The perseverative cognition hypothesis: a review of worry, prolonged stress-related physiological activation, and health. *J Psychosom Res*. 2006;60(2):113-124.
6. Understanding the psychology behind downward spiral. Mpower Minds blog. Accessed April 28, 2024. <https://mpowerminds.com/blog/Understanding-the-psychology-behind-downward-spiral>
7. Cherney K. Everything to know about your internal monologue. Healthline. July 28, 2020. Updated April 10, 2023. Accessed April 28, 2024. <https://www.healthline.com/health/mental-health/internal-monologue>
8. Khansa I, Pearson GD. Coping and recovery in surgical residents after adverse events: the second victim phenomenon. *Plast Reconstr Surg Glob Open*. 2022;10(3):e4203.
9. Han K, Bohnen JD, Peponis T, et al. The surgeon as the second victim? Results of the Boston Intraoperative Adverse Events Surgeons' Attitude (BISA) Study. *J Am Coll Surg*. 2017;224(6):1048-1056.
10. Wu AW. Medical error: the second victim. The doctor who makes the mistake needs help too. *BMJ*. 2000;320(7237):726-727.

Recommended Resources

1. Wallingford G. Rapid supportive debriefs: a tool for embodying wellness-centered leadership after stressful events. AMA STEPS Forward®. Accessed January 14, 2025.
https://edhub.ama-assn.org/steps-forward/audio-player/18857779?utm_source=silverchair_edhub&utm_campaign=activity_alert-edhub&utm_content=weekly_batch&cmp=1&utm_medium=email
2. Supporting surgeons after adverse events. Royal College of Surgeons of England. Accessed January 14, 2025. <https://www.rcseng.ac.uk/standards-and-research/standards-and-guidance/good-practice-guides/supporting-surgeons-after-adverse-events/guide/>
3. Surgeon well-being. American College of Surgeons. Accessed January 14, 2025.
<https://www.facs.org/for-medical-professionals/professional-growth-and-wellness/surgeon-wellbeing/>
4. Better Together Physician Coaching. Accessed January 14, 2025.
<https://bettertogetherphysiciancoaching.com/>