Interventions

A. As indicated by some studies on active learning, <u>active learning approaches themselves can promote a reduction in psychological distress</u>. Araghi and colleagues' (2023) study of students with depression found that active learning could provide connection with similar peers, positive social experiences, and distraction from symptoms (See also, Bledsoe & Baskin, 2014). To the degree that an active learning environment promotes autonomy, feelings of competence and control over one's learning, and connection to the others, it may directly support the well-being of students who are experiencing psychological distress (Howard et al., 2024; R, C, A).

B. <u>Psychoeducation on psychological distress</u> can be within the realm of college instructors' capacities and is generally an effective tool (Donker et al., 2009). This might include sharing links to information from trusted resources (e.g. National Institute of Mental Health, https://www.nimh.nih.gov/health/publications; Centre for Clinical Interventions, https://www.cci.health.wa.gov.au/Resources/Looking-After-Others) and a description of on-campus services. This requires obtaining familiarity with the relevant resources, which itself has been recommended for supporting the mental health of students (Bledsoe & Baskin, 2014; Hsu & Goldsmith, 2021; C, A, R).

C. In addition to recommending that struggling students seek professional help, students may be well served by <u>self-help tools</u> (Amanvermez et al., 2022; Worsley et al., 2022). There is some evidence that evidence-based digital mental health applications can be helpful for providing information and reducing distress (Linardon et al., 2019). Although not a thorough overview, some of the applications that seem the most widely used and supported by research evidence are Wysa, Headspace, Youper, MoodGym, SuperBetter, and Happify (Gál et al., 2021; Wasil et al., 2020). Also, the Association for Behavioral and Cognitive Therapies has complied a recommended list of self-help books, which could be shared with students (https://www.abct.org/self-help-book-recommendations/; Gualano et al., 2017). (Intervention; C, R, A)

D. Mindfulness has positive impacts on young adult mental health (Reangsing et al., 2022), including self-help versions of mindfulness interventions (Gong et al., 2023; Taylor et al., 2021). Mindfulness can also improve academic performance as well (Ostermann et al., 2022). There is early evidence on the integration of mindfulness into classrooms, as delivered by instructors (see Honsky et al., 2023) or counseling staff (Glena et al., 2023). (Intervention; C, R, A)

E. Henry and colleagues (2019) outline models for conceptualizing pre- and post-failure attitudes and behaviors in academic settings. In these models, one of the determining factors of long-term success is whether the student possesses a growth mindset at pre-failure (Dweck, 2006). Growth mindset interventions are mainly helpful for those that are underperforming (Burnette et al., 2023), which may very well be the students who have the greatest levels of psychological distress. (C, A)

F. Henry and colleagues (2019) also argue that successfully responding to failure depends on the belief that failure is the result of unstable and controllable factors, leading to the use of adaptive coping strategies (Henry et al., 2019). Providing information on the various forms of coping from Henry and colleagues (2019) may promote a greater openness to failure and better responses post-failure. (Intervention; C, A, R)

G. Stigma reduction may increase struggling students' willingness to seek help and non-struggling students' acceptance of their struggling peers. Social contact-based interventions may be effective for reducing stigma, including the National Alliance on Mental Illness' In Our Own Voice program (Matteo & You, 2012; Pittman et al., 2010). For classes covering related content, supplemental assignments might also be used to reduce mental illness stigma (Strassle, 2018). (Intervention; R, A, C)

H. Lifestyle change may have positive outcomes on college students' well-being. Basic psychoeducation could describe the association between the most well-supported lifestyle behaviors (e.g. physical activity, sleep, smoking, and diet) with mental health outcomes (Firth et al., 2020). Notably, failure to obtain enough quality sleep is common among young people, and may very well be one of the driving factors for the current

mental health crisis (Twenge et al., 2019). Sleep interventions can be directly beneficial for mental health (Hershner & O'Brien, 2018), likely due to the bidirectional impact of sleep and depression (Dinis & Bragança, 2018). Beyond basic psychoeducation, students should be directed to see health providers for specific recommendations. (A, C, R)

References

Amanvermez, Y., Zhao, R., Cuijpers, P., de Wit, L. M., Ebert, D. D., Kessler, R. C., Bruffaerts, R.,
        & Karyotaki, E. (2022). Effects of self-guided stress management interventions in college
        students: A systematic review and meta-analysis. *Internet Interventions*, *28*, 100503.
        https://doi.org/10.1016/j.invent.2022.100503

Bledsoe, T. S., & Baskin, J. J. (2014). Recognizing Student Fear: The Elephant in the Classroom.
        College Teaching, *62*(1), 32–41.

Burnette, J. L., Billingsley, J., Banks, G. C., Knouse, L. E., Hoyt, C. L., Pollack, J. M., & Simon, S.
        (2023). A systematic review and meta-analysis of growth mindset interventions: For
        whom, how, and why might such interventions work? *Psychological Bulletin*, *149*(3-4),
        174–205. https://doi.org/10.1037/bul0000368

Dinis, J., & Bragança, M. (2018). Quality of sleep and depression in college students: A
        systematic review. *Sleep Science*, *11*(4), 290.

Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for
        depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine*, *7*(1), 79.
        https://doi.org/10.1186/1741-7015-7-79

Dweck, C. S. (2006). *Mindset: The New Psychology of Success*. Random House Publishing Group.

Firth, J., Solmi, M., Wootton, R. E., Vancampfort, D., Schuch, F. B., Hoare, E., Gilbody, S., Torous,
        J., Teasdale, S. B., Jackson, S. E., Smith, L., Eaton, M., Jacka, F. N., Veronese, N., Marx,
        W., Ashdown-Franks, G., Siskind, D., Sarris, J., Rosenbaum, S., … Stubbs, B. (2020). A
        meta-review of "lifestyle psychiatry": The role of exercise, smoking, diet and sleep in the
        prevention and treatment of mental disorders. *World Psychiatry*, *19*(3), 360–380.
        https://doi.org/10.1002/wps.20773

Gál, É., Ștefan, S., & Cristea, I. A. (2021). The efficacy of mindfulness meditation apps in
        enhancing users' well-being and mental health related outcomes: A meta-analysis of
        randomized controlled trials. *Journal of Affective Disorders*, *279*, 131–142.
        https://doi.org/10.1016/j.jad.2020.09.134

Glena, V. S., Mushquash, A. R., Gotwals, J. K., Sinden, K. E., & Pearson, E. S. (2023). "Staying in the present moment is important": Examining the impact of a short-term classroom-based mindfulness intervention among first-year students. *Journal of American College Health*, *0*(0), 1-10. https://doi.org/10.1080/07448481.2022.2155057

Gong, X.-G., Wang, L.-P., Rong, G., Zhang, D.-N., Zhang, A.-Y., & Liu, C. (2023). Effects of online mindfulness-based interventions on the mental health of university students: A systematic review and meta-analysis. *Frontiers in Psychology*, *14*, 1073647. https://doi.org/10.3389/fpsyg.2023.1073647

Gualano, M. R., Bert, F., Martorana, M., Voglino, G., Andriolo, V., Thomas, R., Gramaglia, C., Zeppegno, P., & Siliquini, R. (2017). The long-term effects of bibliotherapy in depression treatment: Systematic review of randomized clinical trials. *Clinical Psychology Review*, *58*, 49-58. https://doi.org/10.1016/j.cpr.2017.09.006

Henry, M. A., Shorter, S., Charkoudian, L., Heemstra, J. M., & Corwin, L. A. (2019). FAIL Is Not a Four-Letter Word: A Theoretical Framework for Exploring Undergraduate Students' Approaches to Academic Challenge and Responses to Failure in STEM Learning Environments. *CBE—Life Sciences Education*, *18*(1), ar11. https://doi.org/10.1187/cbe.18-06-0108

Hershner, S., & O'Brien, L. M. (2018). The Impact of a Randomized Sleep Education Intervention for College Students. *Journal of Clinical Sleep Medicine*, *14*(03), 337-347. https://doi.org/10.5664/jcsm.6974

Honsky, J., Edguer, M. N., Click, E. R., Rusnak, S., Burgess Van Aken, B., Salerno, M. A., & Berg, K. A. (2023). Mindfulness matters in the classroom: A pilot study of a university-wide classroom-based brief mindfulness program. *Journal of American College Health*, 1-10. https://doi.org/10.1080/07448481.2023.2237596

Howard, J. L., Slemp, G. R., & Wang, X. (2024). Need Support and Need Thwarting: A Meta-Analysis of Autonomy, Competence, and Relatedness Supportive and Thwarting Behaviors in Student Populations. *Personality and Social Psychology Bulletin*, 01461672231225364. https://doi.org/10.1177/01461672231225364

Hsu, J. L., & Goldsmith, G. R. (2021). Instructor Strategies to Alleviate Stress and Anxiety among College and University STEM Students. *CBE—Life Sciences Education*, *20*(1), es1. https://doi.org/10.1187/cbe.20-08-0189

Linardon, J., Cuijpers, P., Carlbring, P., Messer, M., & Fuller-Tyszkiewicz, M. (2019). The efficacy of app-supported smartphone interventions for mental health problems: A meta-analysis of randomized controlled trials. *World Psychiatry*, *18*(3), 325-336. https://doi.org/10.1002/wps.20673

Matteo, E. K., & You, D. (2012). Reducing Mental Illness Stigma in the Classroom. *Teaching of Psychology*, *39*(2), 121-124. https://doi.org/10.1177/0098628312437720

Ostermann, T., Pawelkiwitz, M., & Cramer, H. (2022). The influence of mindfulness-based interventions on the academic performance of students measured by their GPA. A systematic review and meta-analysis. *Frontiers in Behavioral Neuroscience*, *16*, 961070. https://doi.org/10.3389/fnbeh.2022.961070

Pittman, J. O. E., Noh, S., & Coleman, D. (2010). Evaluating the effectiveness of a consumer delivered anti-stigma program: Replication with graduate-level helping professionals. *Psychiatric Rehabilitation Journal*, *33*(3), 236-238. https://doi.org/10.2975/33.3.2010.236.238

Reangsing, C., Lauderman, C., & Schneider, J. K. (2022). Effects of Mindfulness Meditation Intervention on Depressive Symptoms in Emerging Adults: A Systematic Review and Meta-Analysis. *Journal of Integrative and Complementary Medicine*, *28*(1), 6-24. https://doi.org/10.1089/jicm.2021.0036

Strassle, C. G. (2018). Reducing Mental Illness Stigma in the Classroom: An Expanded Methodology. *Teaching of Psychology*, *45*(4), 351-357. https://doi.org/10.1177/0098628318796922

Taylor, H., Strauss, C., & Cavanagh, K. (2021). Can a little bit of mindfulness do you good? A systematic review and meta-analyses of unguided mindfulness-based self-help interventions. *Clinical Psychology Review*, *89*, 102078. https://doi.org/10.1016/j.cpr.2021.102078

Twenge, J. M., Cooper, A. B., Joiner, T. E., Duffy, M. E., & Binau, S. G. (2019). Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017. *Journal of Abnormal Psychology*, *128*(3), 185–199. https://doi.org/10.1037/abn0000410

Wasil, A. R., Gillespie, S., Shingleton, R., Wilks, C. R., & Weisz, J. R. (2020). Examining the Reach of Smartphone Apps for Depression and Anxiety. *American Journal of Psychiatry*, *177*(5), 464–465. https://doi.org/10.1176/appi.ajp.2019.19090905

Worsley, J. D., Pennington, A., & Corcoran, R. (2022). Supporting mental health and wellbeing of university and college students: A systematic review of review-level evidence of interventions. *PLOS ONE*, *17*(7), e0266725. https://doi.org/10.1371/journal.pone.0266725