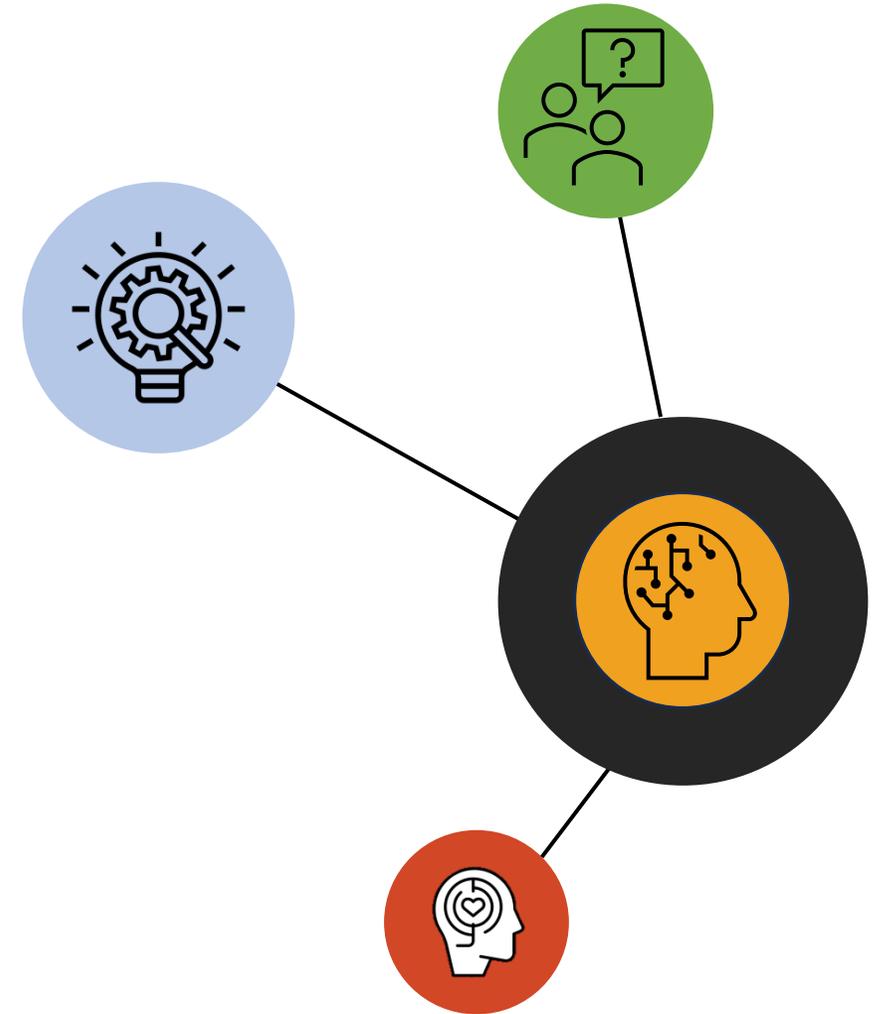


# A potential impact of mindfulness intervention on emotional intelligence in postgraduate pharmacists

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# Background: Emotional intelligence (EI) and Pharmaceutical Care

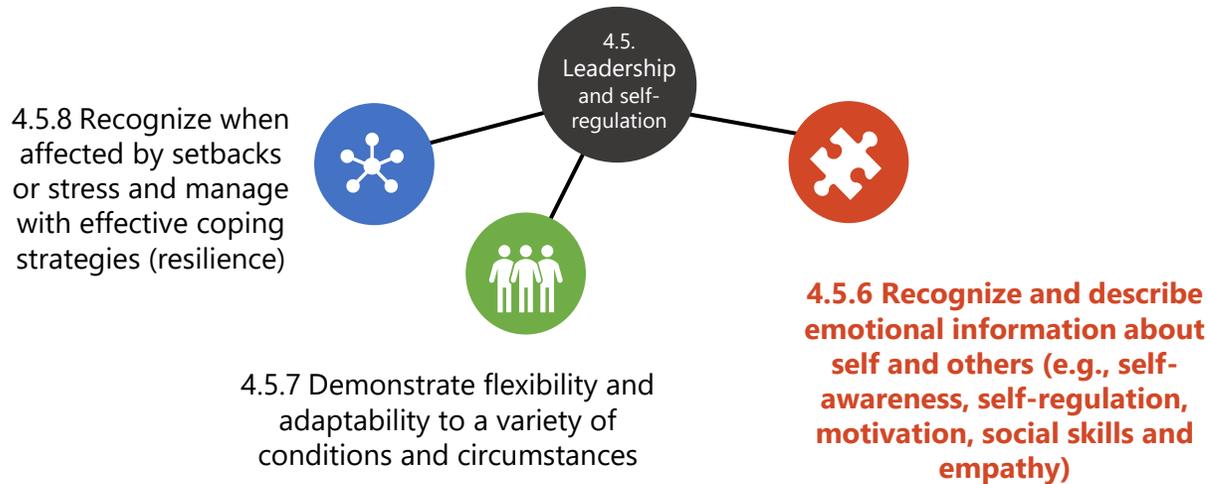


Figure 1. Essential skill set for pharmacists in Pharmaceutical Care<sup>1,2,3</sup>

**Emotionally intelligent clinical pharmacists** (CP) may develop effective stress-coping strategies<sup>4,5,6</sup>

**Mindfulness practice** may elevate EI levels in healthcare professionals<sup>7</sup>



Figure 2. Characteristics of an emotionally intelligent clinical pharmacist (the relative frequency of a code is indicated by its size)<sup>4</sup>

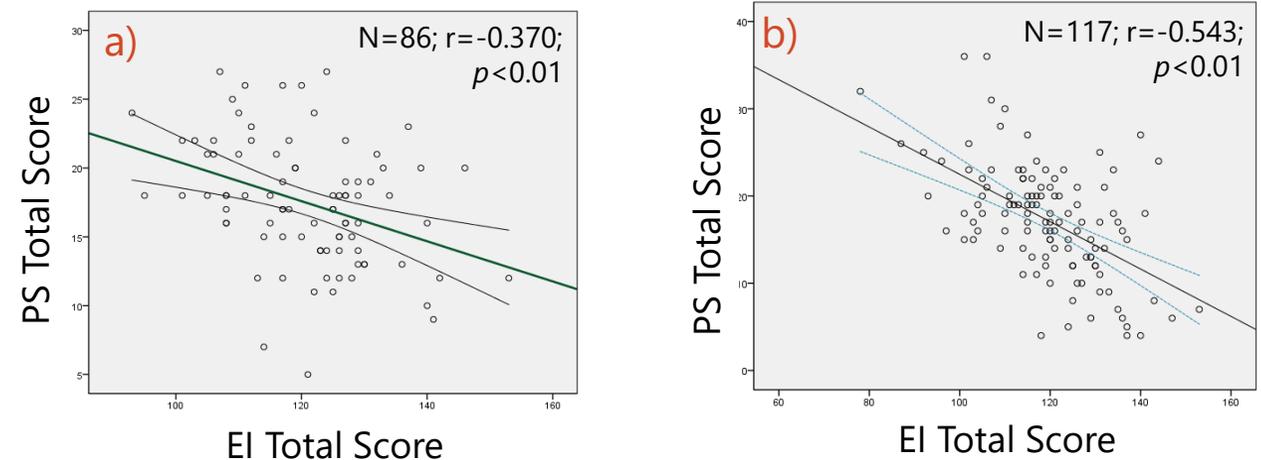
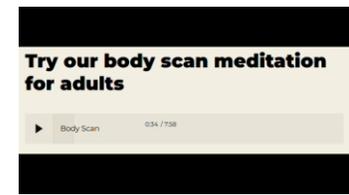


Figure 3. Pearson correlation between EI and PS total scores amongst a) community pharmacists<sup>5</sup> b) postgraduate pharmacists (different practice domains)<sup>6</sup>

# Purpose and Method



Source of the Exercise: <https://www.smilingmind.com.au/smiling-mind-app> Accessed 23.01.2025

To test the **potential impact of mindfulness intervention on EI levels** in postgraduate pharmacists and to **correlate EI and perceived stress levels** before and after the intervention

**Type of the study:** interventional with pretest-posttest design

**Population:** postgraduate pharmacists (CPs, Pharma Industry (PhI)-QA, PhI-M&S, Others (CRO & Logi)

**Sampling method and the setting:** purposeful sampling; Faculty of Pharmacy, University of Belgrade, Serbia

**Intervention:** two trainings on EI and **Mindfulness techniques** (180 minutes, meditation (“*focused attention and open monitoring*”), journaling, intention-setting & gratitude practices)

**Outcome measurement:** EI scale: **Genos Emotional Intelligence Inventory (GEII) Scale - Concise Version** (31 items)<sup>9</sup>, **Perceived Stress Scale (PS)** (10 items)<sup>10</sup>

**Statistics:** Paired Samples T-Test, Wilcoxon Signed-rank Test, ANOVA, correlation (*Pearson’s or Spearman’s correlation test*)

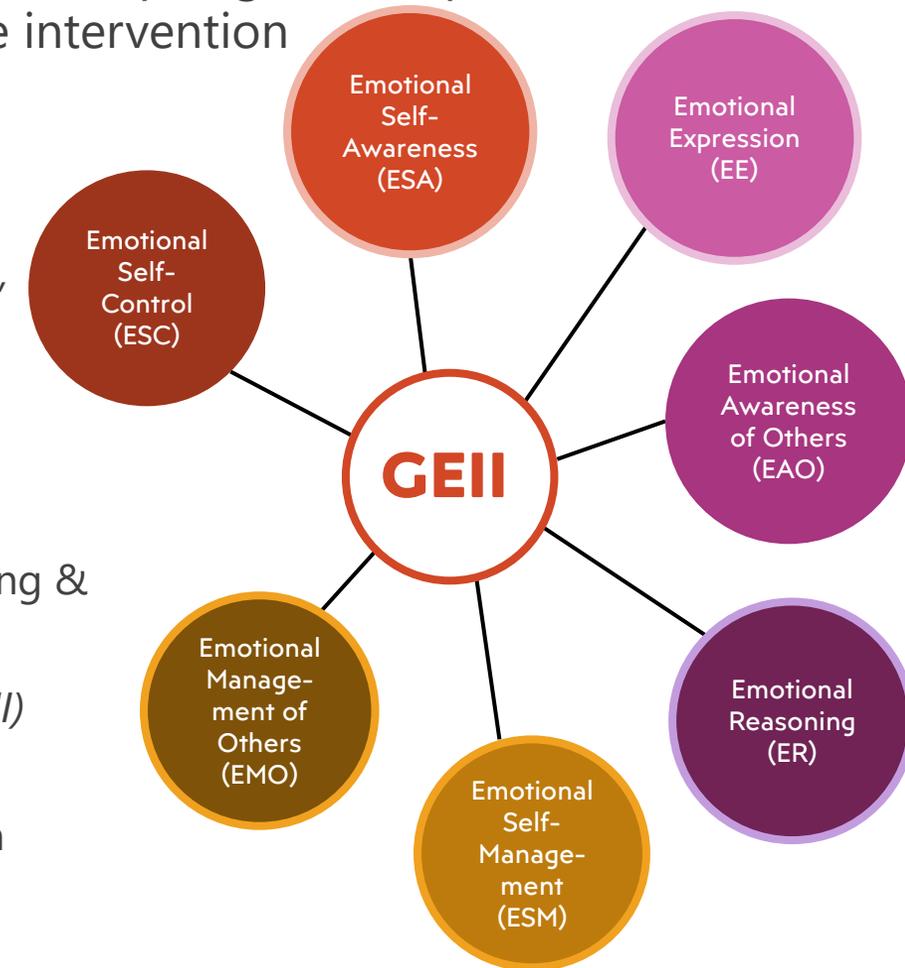


Figure 4. Genos Emotional Intelligence Inventory (GEII) with its subdomains<sup>9</sup>

9. Palmer BR, Stough C, Harmer R, et al. The Genos Emotional Intelligence Inventory: A Measure Designed Specifically for Workplace Applications. In: Stough C, Saklofske D, Parker J, editors. Assessing emotional intelligence: Theory, research & applications. New York: Springer; 2009. p. 103–17.  
10. Jovanović V, Gavrilov-Jerković V. More than a (negative) feeling: Validity of the Perceived Stress Scale in Serbian clinical and non-clinical samples. Psihologija. 2015;48(1):5–18.

# Findings

## Response:

- Invited participants: N=44
- Participated: n=35 (*response rate 80%*)
- Analyzed: n=28 (*dropout rate 20%*)

## Outcomes:

- EI and PS scores change at  $p > 0.05$  level
- Significant increase in the *Emotional Self-Control* EI subdomain levels after the intervention
- Highest EI level change in clinical pharmacy ( $5.1 \pm 6.6$ ) and other pharmacists' groups ( $5.5 \pm 6.2$ )

EI and PS scores and subdomains	Differences (t/Z test), significance ( $p$ ) and effect size ( $d/r$ )
<b>EI total score</b>	$t = -1.323, p = 0.197, d = -0.250$
• ESA	$Z = -0.231, p = 0.818, r = -0.031$
• EE	$Z = -0.869, p = 0.385, r = -0.116$
• EAO	$Z = -0.622, p = 0.534, r = -0.083$
• ER	$Z = -1.113, p = 0.266, r = -0.149$
• ESM	$Z = -0.164, p = 0.870, r = -0.022$
• EMO	$Z = -1.355, p = 0.175, r = -0.181$
• <b>ESC*</b>	$Z = -3.005, p = \mathbf{0.003}, r = \mathbf{-0.402}$
<b>PS total score</b>	$t = -0.055, p = 0.957, d = -0.010$
• Positive subscale	$Z = -1.258, p = 0.208, r = -0.168$
• Negative subscale	$Z = -0.961, p = 0.336, r = -0.128$

\*significance at  $p < 0.005$  level

Table 1. Score difference before and after the intervention

EI Subdomains	Before intervention ( <i>Spearman's <math>\rho</math></i> )	After intervention ( <i>Spearman's <math>\rho</math></i> )
ESA	-0.210	<b>-0.439*</b>
EE	-0.309	-0.158
EAO	0.037	-0.164
ER	-0.165	0.014
ESM	<b>-0.380*</b>	<b>-0.399*</b>
EMO	-0.306	-0.095
ESC	<b>-0.457*</b>	-0.037

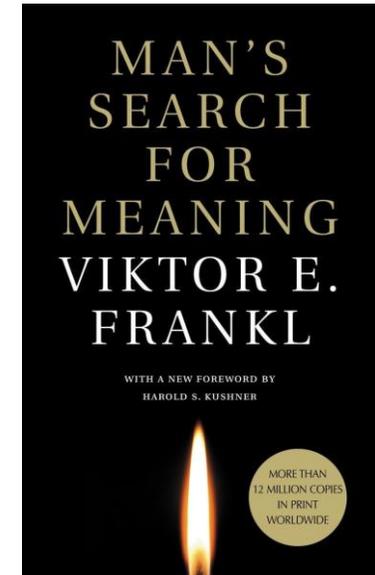
\*significance at  $p < 0.05$  level

Table 2. Correlation analysis between EI and PS scores

# Conclusion

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- Short-term mindfulness interventions may positively impact some EI competencies, particularly the *Emotional Self-Control* subdomain
- Intervention may increase *Emotional Self-Awareness*' protective effects against perceived stress in pharmacists
- Mindfulness-based interventions to be considered throughout the continuum of pharmacists' professional development, particularly in pharmaceutical care
- Additional research with longer-term interventions is needed to confirm the findings



*“When we are no longer able to change a situation, we are challenged to change ourselves.”*

Dr Viktor Frankl, 1946

## REFERENCES

1. International Pharmaceutical Federation (FIP). FIP Global Competency Framework Version 2. FIP GbCF-Supporting the development of foundation and early career pharmacists, Version 2. 2020. Available from: <https://www.fip.org/file/5127#> Accessed: 15.01.2025.
2. Ward A, Hall J, Mutch J, et al. What makes pharmacists successful? An investigation of personal characteristics. *J Am Pharm Assoc.* 2019;59(1):23-29.e1.
3. Senčanski D, Tadić I, Marinković V. Emotional intelligence and pharmaceutical care: A systematic review. *J Am Pharm Assoc.* (2003). 2022;62(4):1133-1141.e2.
4. Senčanski D, Tadić I, Jocić D, et al. Perceived importance of emotional intelligence for clinical pharmacy practice and suggested improvements: a focus group study of postgraduate pharmacists. *Int J Clin Pharm.* 2024;46(5):1152-1162.
5. Senčanski D, Marinković V, Tadić I. A cross-sectional study comparing emotional intelligence and perceived stress amongst community pharmacists delivering and not delivering a new service. *Int J Clin Pharm.* 2023;45(5):1136-1143.
6. Senčanski D, Marinković V, Milošević-Georgiev A, et al. Emotional intelligence and perceived stress in pharmacists completing post-graduate specialization programs: a cross-sectional study. *Indian J Pharm Edu Res.* 2024;58(2):671-8.
7. Jiménez-Picón N, Romero-Martín M, Ponce-Blandón JA, et al. The Relationship between Mindfulness and Emotional Intelligence as a Protective Factor for Healthcare Professionals: Systematic Review. *Int J Environ Res Public Health.* 2021;18(10):5491.

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# Thank you!

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