

A Ten-Week Wellness Intervention Promotes Pharmacy Students' Well-being

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Take-home Points

- A **ten-week wellness intervention** (composed of mindfulness exercises and weekly wellness messages) **was offered to first-year (P1) and second-year (P2) Pharmacy students to promote wellness.**
- **P1 students demonstrated a statistically significant improved resilience score following the 10-week intervention.** (Figure 2)
- **Neither P1 nor P2 students demonstrated a statistically significant reduction in their perceived stress score (PSS).** (Figure 1)
- **75% (30/40) of P1 students and 71% (27/38) of P2 students found the in-class mindfulness sessions helpful to stay focused in class or as an efficient use of class time.** (Table 1)
- **50% (20/40) of P1 students and 42% (16/38) of P2 students indicated that they started practicing mindfulness outside of classes.** (Table 1)
- **68% (19/28) of P1 students and 76% (40/53) of P2 students indicated that the content shared in wellness messages was relevant and helpful** (Table 2).

Study Objective

- Offering wellness resources (e.g., mindfulness exercises, wellness messages) to students has been shown to improve student wellbeing^{1,2,3}.
- This study assessed **the effect of a 10-week wellness intervention - composed of in-class mindfulness sessions and weekly wellness messages - on pharmacy students' resilience and perceived stress.**

Methods

- **Study Population:** Pharmacy students enrolled in the courses *Introduction to Pharmaceutical Sciences* (P1 students) and *Principles of Drug Action II* (P2 students) in the Fall of 2022 were invited to participate. The study was approved by Drake University IRB (Proposal #: 2021-22015).
- **Ten-week Wellness Intervention:** Students were offered the following resources to improve their physical, emotional, and social wellness.
 - **Mindfulness Exercises** (Twice-a-week) - At the beginning of every class session.
 - **Wellness Messages** (Weekly) – Related to selfcare, stress management, optimism, grit, growth mindset, and resilience.
- **Assessment (Pre-Post Design):** Before and after ten weeks of exposure to wellness resources, students' perceived stress scores and resilience scores were measured using the following instruments.
 - 10-item **Perceived Stress Scale (PSS-10)**
 - 10-item **Connor-Davidson Resilience Scale (CD-RISC-10)**
- **Statistical Analysis:** Wilcoxon matched-pairs signed rank test was used to compare the mean PSS and resilience scores pre- and post-intervention. A p-value less than 0.05 was considered statistically significant.

Results

Figure 1. Effect of the 10-week wellness intervention (in-class mindfulness sessions and weekly wellness messages) on Pharmacy students' (P1 and P2) **Perceived Stress Score (PSS)**. PSS scores were expressed as Mean \pm SD (sample size, n) with a maximum score of 40.

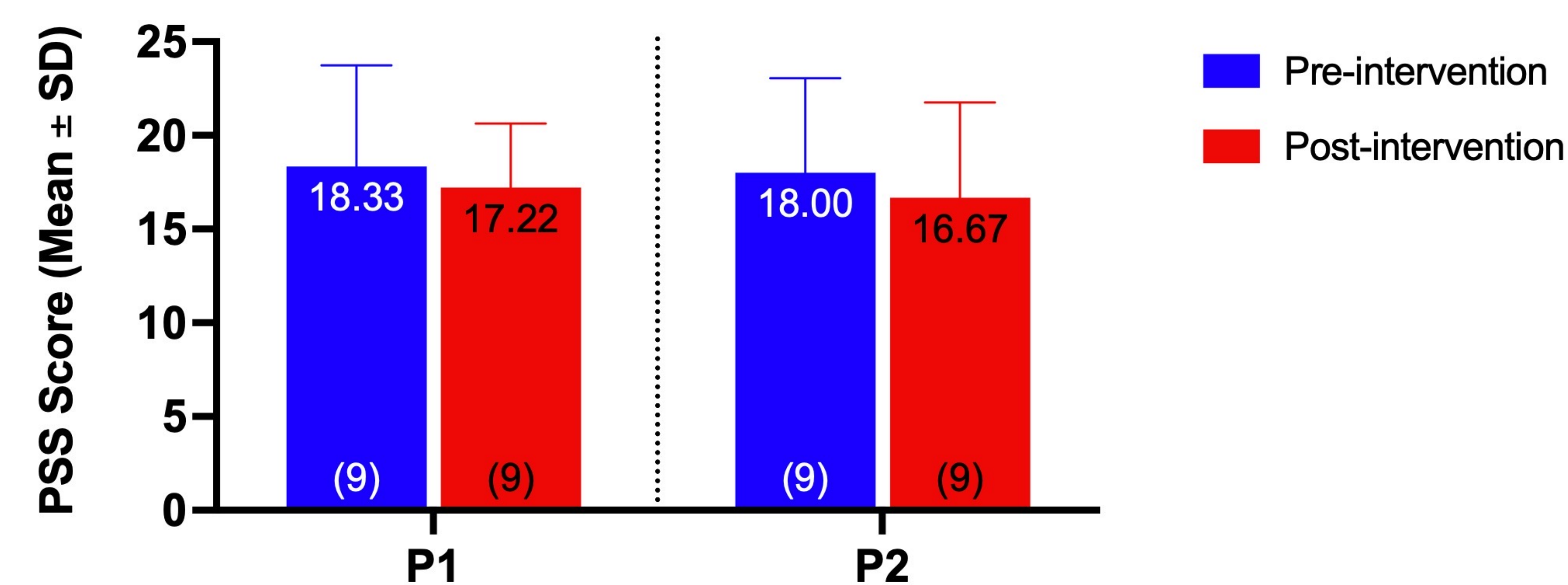


Figure 2. Effect of the 10-week wellness intervention (in-class mindfulness sessions and weekly wellness messages) on Pharmacy students' (P1 and P2) **Resilience Score**. Resilience scores were expressed as Mean \pm SD (sample size, n), with a maximum score of 40. *p<0.05 vs. Pre-intervention

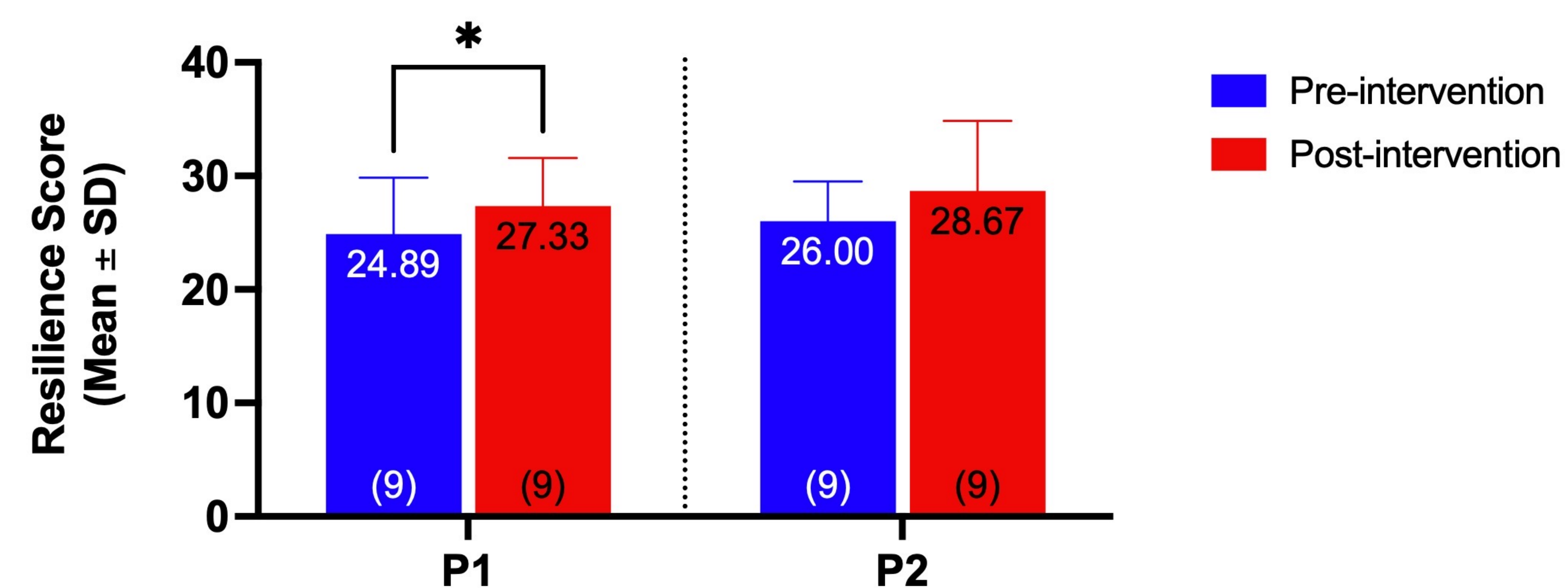


Table 1. Pharmacy students' perceptions of the in-class mindfulness sessions – collected via the end-of-the-semester course evaluation

1. Which of the following statements best describes your opinion on the value of time spent on mindfulness sessions (~3 minutes/lecture) in class?	Percent of Students Agree or Strongly Agree (n)	
	P1 Response rate: 86.96% (n=40/46)	P2 Response Rate: 55.07% (n=38/69)
a) It helped me stay focused and attentive in class	30% (12)	23.68% (9)
b) It was an efficient use of class time	45% (18)	47.37% (18)
c) I did not gain anything from the activity	25% (10)	26.32% (10)
d) It distracted me from the material to be covered	0% (0)	2.63% (1)
2. Have you started practicing mindfulness outside of class?		
a) Yes	50% (20)	42.11% (16)
b) No	50% (20)	57.89% (22)

Results (continued)

Table 2. Pharmacy students' perceptions on the 10-week wellness intervention – collected through the end-of-the-semester course evaluation.

	Percent of Students Agree or Strongly Agree (n)	
	P1 Response rate: 60.87% (n=28/46)	P2 Response Rate: 76.81% (n=53/69)
1. I found the mindfulness sessions before the class helpful.	78.57% (22)	84.91% (45)
2. I found the content shared in weekly wellness messages relevant and helpful.	67.86% (19)	75.47% (40)

Conclusion

- Offering mindfulness sessions in classrooms and sharing wellness messages promote student wellness indices, such as resilience.
- Most students (~68-85%) found the mindfulness sessions and wellness messages to be helpful.
- Encouraging and supporting faculty members to embed wellness interventions in their courses could effectively improve student wellness.
- **Limitation:** Low participation in the PSS and resilience score arm of this study. Thus, changes in PSS and resilience scores could not be rigorously assessed.
- Future studies will measure perceived stress and resilience levels in a larger student population including students in other health professions to assess the effect of mindfulness sessions and wellness messages.

References

1. O'Driscoll M, Byrne S, Kelly M, Lambert S, Sahm LJ. A Thematic Analysis of Pharmacy Students' Experiences of the Undergraduate Pharmacy Degree in Ireland and the Role of Mindfulness. *American journal of pharmaceutical education*. 2019;83(1):6457-.
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3. Zollas I, Poirier TI, Pailden J. Effects of mindfulness meditation on mindfulness, mental well-being, and perceived stress. *Curr Pharm Teach Learn*. 2019;11(10):1022-8.