

Impact of Coping Strategies on Pharmacy Students' Performance During Transition From Extreme-Online to In-Class Learning

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Objective

Explore the relationship between students' Coping Strategies (Carver et al., 1989) and...

- Self-efficacy
- Perceived course difficulty
- Overall performance

...when transitioned from online to face-to-face instruction during and after the COVID 19 pandemic; Target course: PharmD - Pharmaceutics I (PSCI 368)

Methods

Research Design

A quantitative survey-based methodology:

- **Online survey** administered at the end of each of the three semesters used for this study
- **Grades** were collected from the course LMS for the participating students

Participants

Three cohorts were targeted:

- the first cohort transitioned from traditional pre-pharmacy training to a pandemic-affected online synchronous format;
- the second cohort moved from pandemic-affected pre-pharmacy training to an in-class format with pandemic restrictions;
- the third cohort had consistent in-class instruction for pre-pharmacy and pharmaceutics I courses.

Sampling & Sample Size

Convenience sampling: all students enrolled in the target courses were invited to voluntarily participate in the study.

No reward was offered for participating in this study.

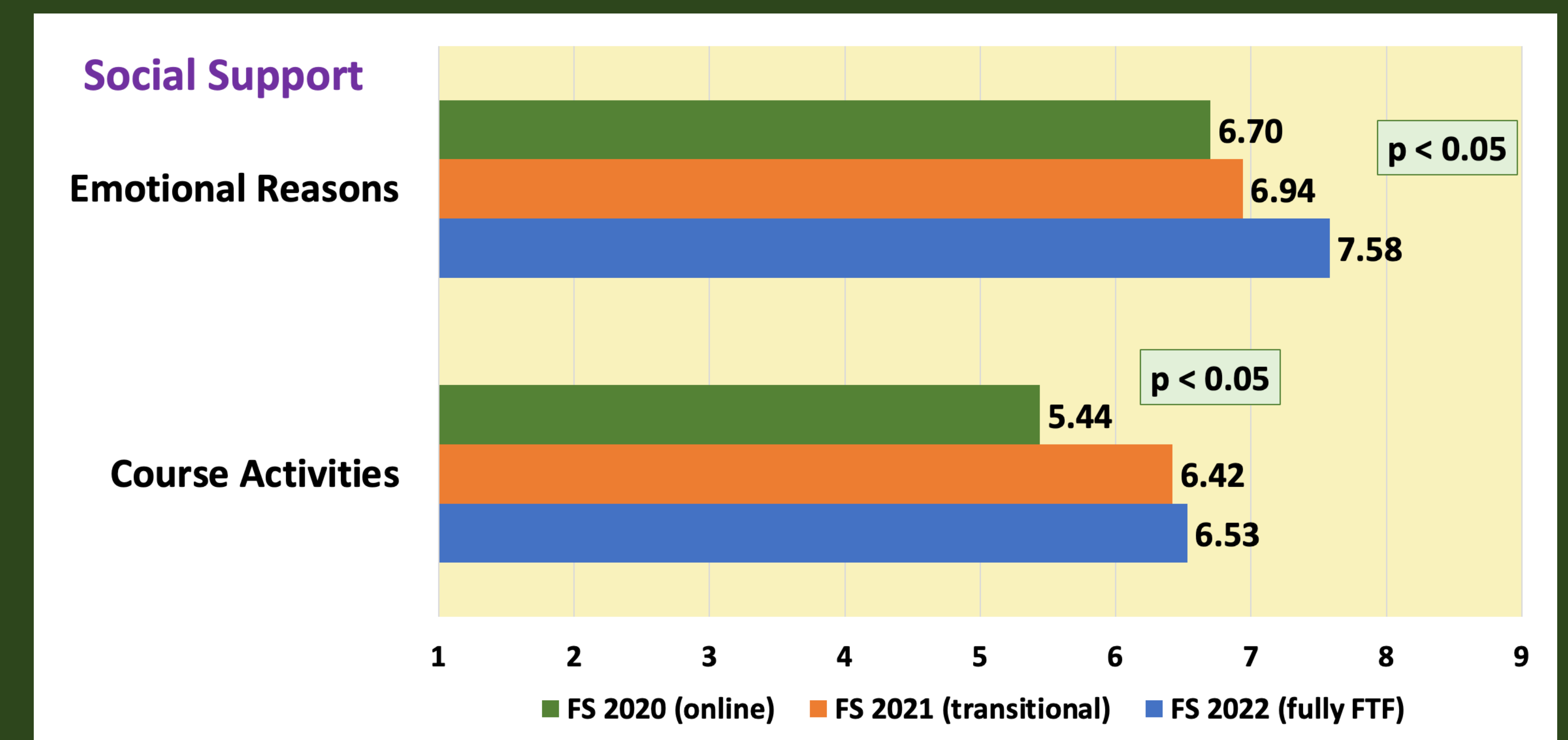
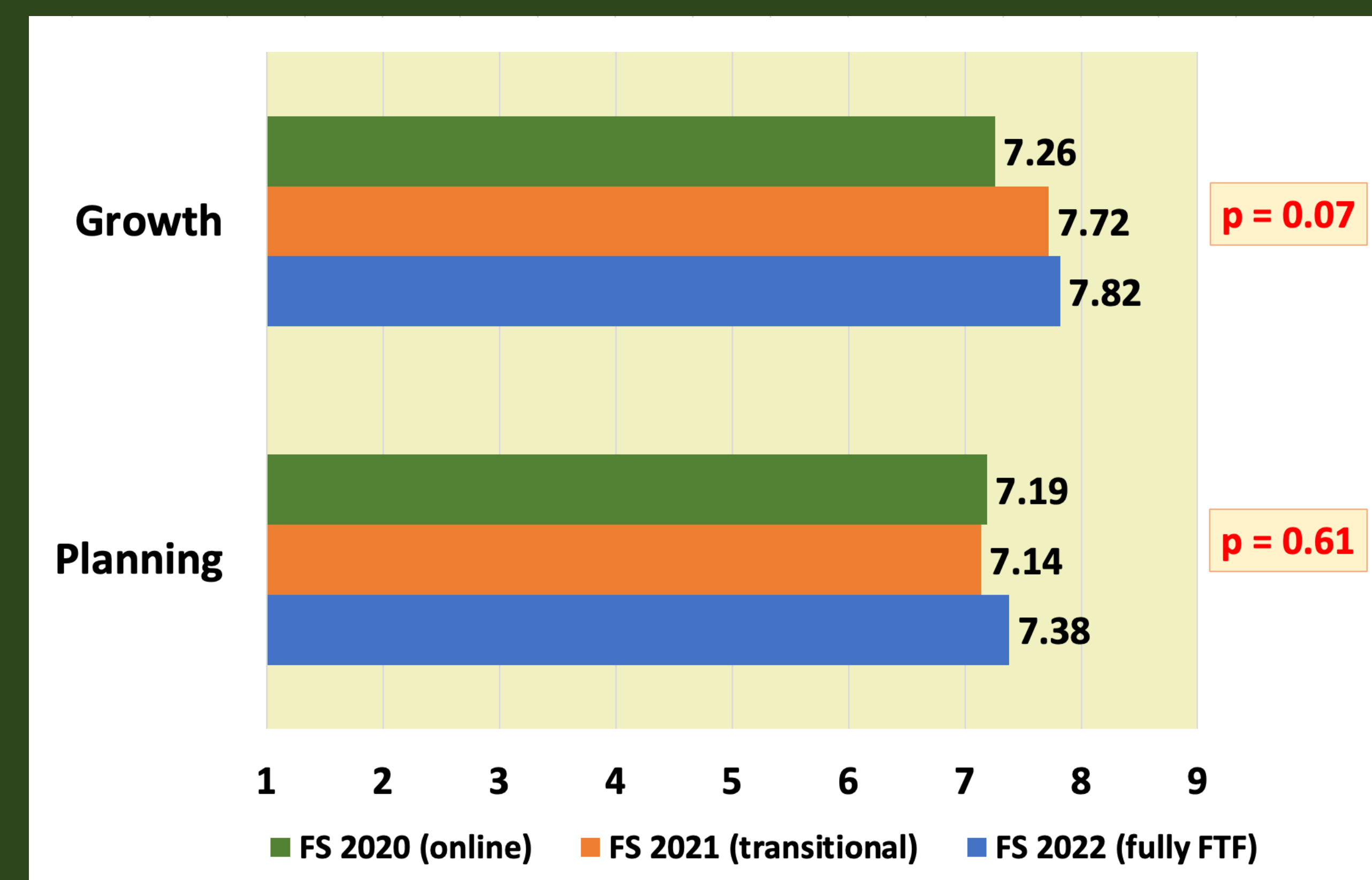
- First cohort (Fall 2020): 56% (N = 62)
- Second cohort (Fall 2021): 91% (N = 54)
- Third cohort (Fall 2022): 89% (N = 55)

An independent-sample t-test showed no significant differences in student performance between the study participants and the whole class for all three cohorts (p from 0.14 to 0.98).

Planning & growth coping strategies were highly utilized across all cohorts, and positively correlated with self-efficacy *only for in-class cohort* ($r = 0.36$ & 0.64 , $p < .001$)

The use of social support was significantly lower for the online cohort during the pandemic compared to:

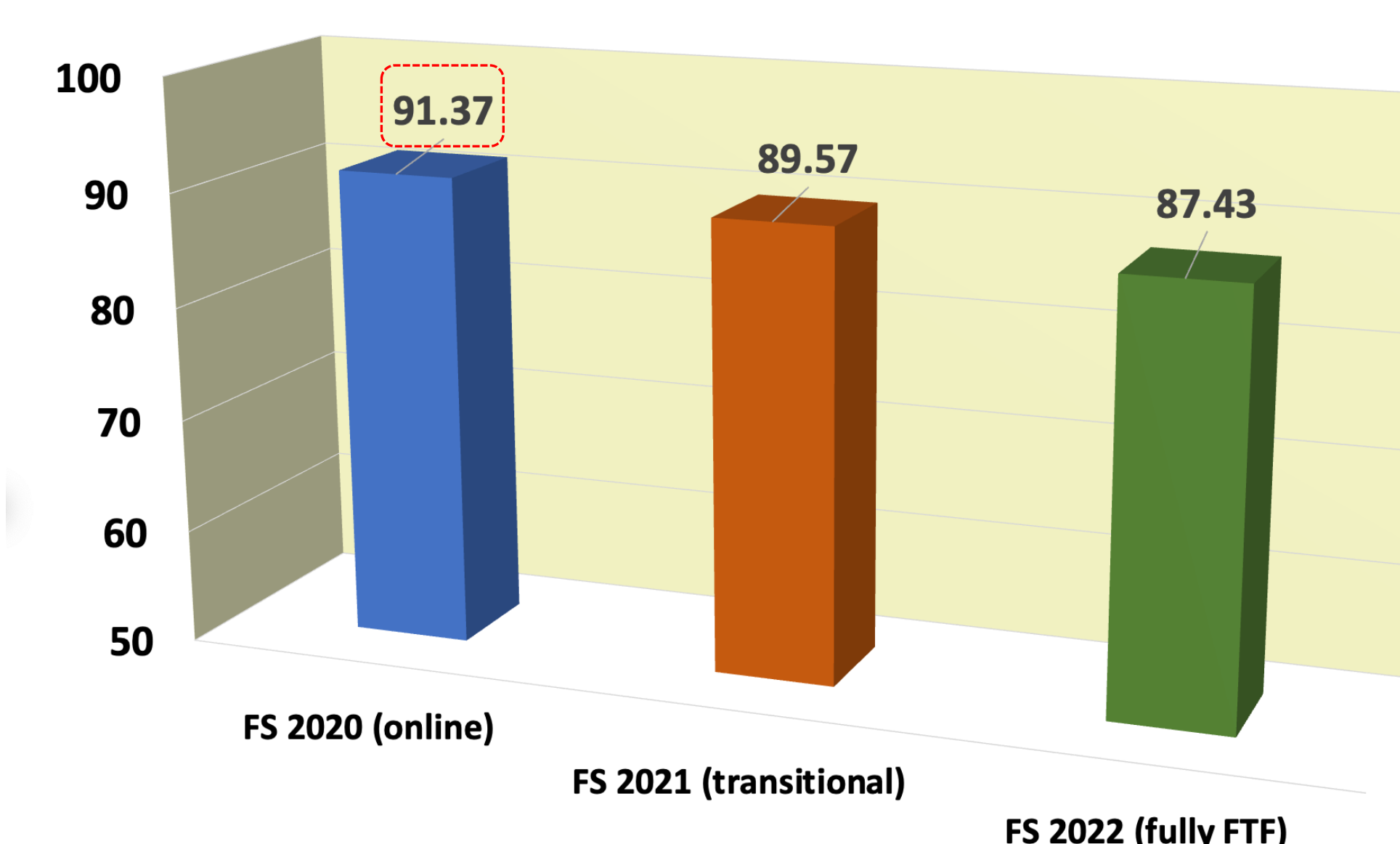
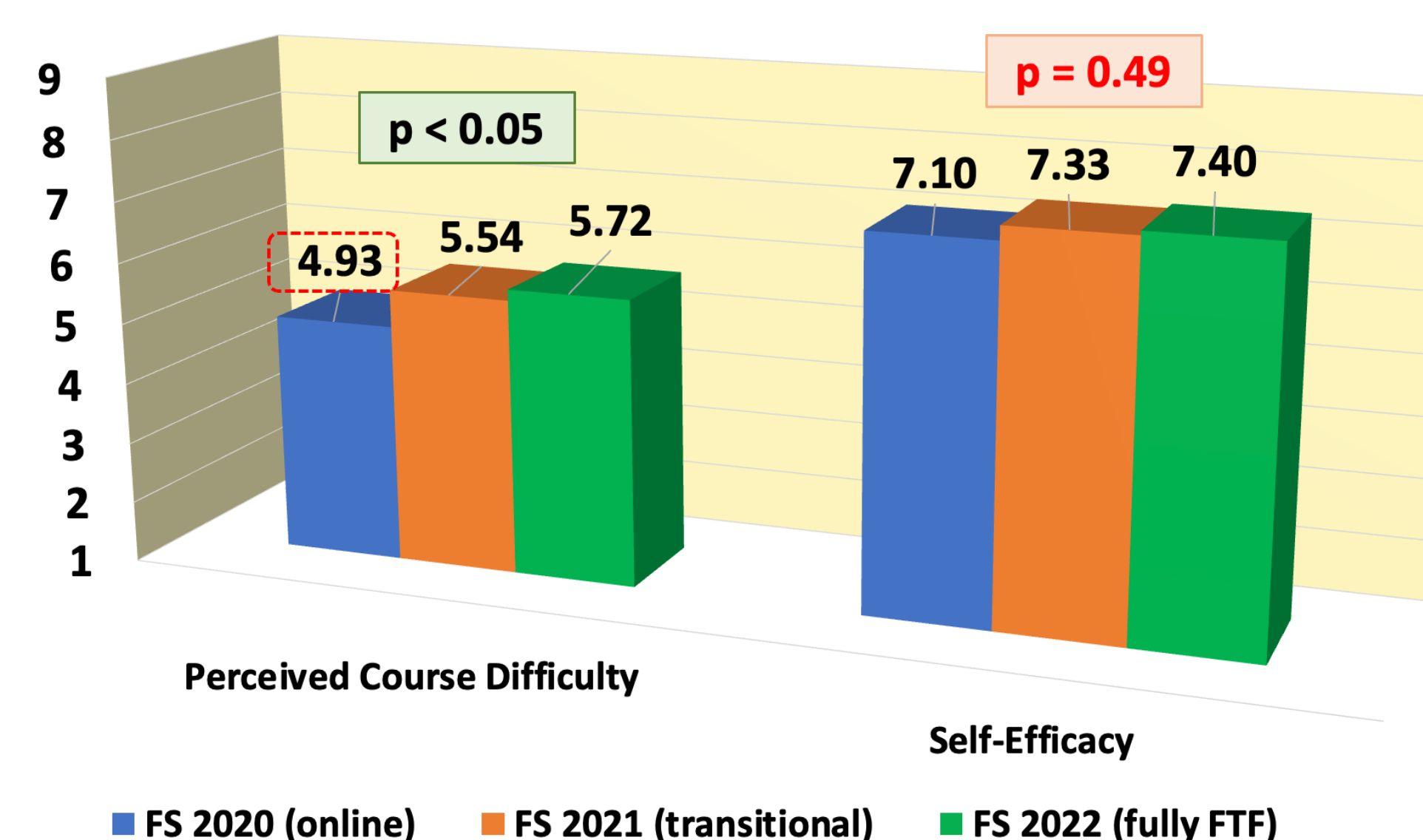
- In-class cohort for emotional reasons
- Both transitional and in-class cohorts for course activities



Supporting Findings

Although self-efficacy was statistically similar and high for all cohorts, **the online (pandemic) cohort reported the lowest perceived course difficulty** and showed a strong significant correlation between social support and perceived difficulty ($r = 0.51$, $p < 0.01$).

The online cohort achieved statistically significant higher overall course grades than both the transitional and the regular in-class cohorts ($p < 0.001$).



Conclusions

The extreme pandemic conditions *impeded students' use of critical growth and planning strategies.*

Despite limitations in social support for online format, *a lower perceived difficulty—attributable to the course's effective online structure and instructor's flexibility* (Cernusca & Mallik, 2022), *compensated for these challenges.*

For post-pandemic groups (transition & regular in-class), *an increased reliance on social support strategies helped managing higher course difficulty.*

REFERENCES

- Carver, C., Scheier, M.F. & Weintraub, J.K. (1989). Assessing coping strategies: A theoretical based approach, *Journal of Personality and Social Psychology*, 56(2), 267-283, DOI: 10.1037//0022-3514.56.2.267
- Cernusca, D. & Mallik, S. (2022). Successful Transfer of Face-To-Face Active Learning Instructional Design to Online Synchronous Format During COVID-19 Pandemic. *Quarterly Review of Distance Education*, 23(1), 1-11.