

The Impact of Nutrition and Physical Activity on Well-Being in Doctor of Physical Therapy Students and Recent Graduates

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Introduction:

- DPT students and recent graduates experience high rates of stress, anxiety, and burnout which may negatively impact overall well-being.^{1, 2}
- Well-being includes both reduced negative emotions and positive functioning, satisfaction, and quality of life.^{1,2}

Purpose: Examine relationships between nutrition, physical activity, and well-being in DPT students and recent graduates.

Hypothesis: Healthier nutrition and physical activity behaviors would be associated with higher well-being.

Methods:

Research Design: Non-experimental, cross-sectional survey design, administered electronically via Qualtrics.

Inclusion Criteria: ≥18 years old, currently enrolled in a U.S. accredited DPT program OR graduated from a U.S. DPT program (2022–2025).

Instruments:

Demographics Questionnaire

- Age, gender, graduation year, program type
- Region, commute distance, living situation
- Financial support, relationship status, dependents

WHO-5 Well-Being Index¹⁷

- 5 item validated measure of well-being
- Scores range from 0–25 (converted to 0–100%)
- Score ≤13 indicates low well-being

Physical Activity Survey (adapted from WHO guidelines)¹⁸

- Frequency, duration, and weekly activity patterns
- Sedentary time

Nutrition Survey (adapted from USDA MyPlate)¹⁹

- Daily intake of major food groups
- Junk/fast food intake, daily caffeine, supplement use

Procedures:

- IRB Approval
- Survey distributed via email with survey link and cover letter

Data Analysis:

- IBM SPSS (Version 31.0)
- Descriptive statistics, Pearson Product-Moment and Spearman Rho correlations.

Results:

Demographics: 109 total participants

- Highest reported:* female, current student, traditional DPT program in the Midwest, using loans to finance school, ≤ 15 minute commute, and living with roommates.

WHO-5 Well-Being: (Figure 1).

- Mean = 13.78 | SD = 4.17 | Range = 3–22 | *Cutoff score for poor well-being* = < 13.

Physical Activity (PA):

- 42% reported meeting WHO PA Guidelines
- Average:* 4 days per week of any PA | 3 days per week strength training | 7 hours per day sitting

Nutrition: (Figure 2).

- Participants met or sometimes met MyPlate guidelines at least 70% of the time.

Factors Decreasing Well-Being: (Figure 3).

- Top 2 Factors (most of the time/always): Academic pressures & School/life balance

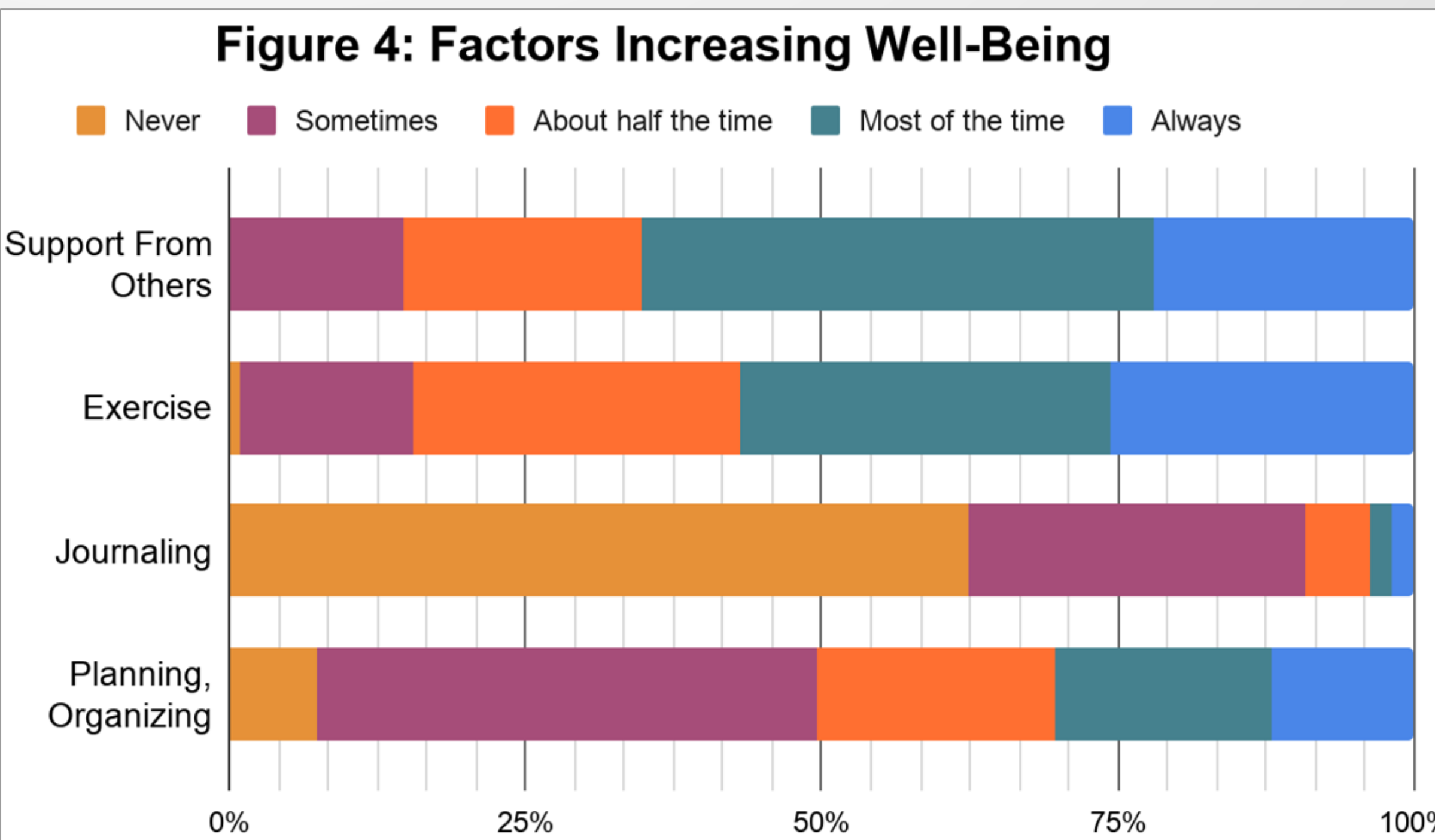
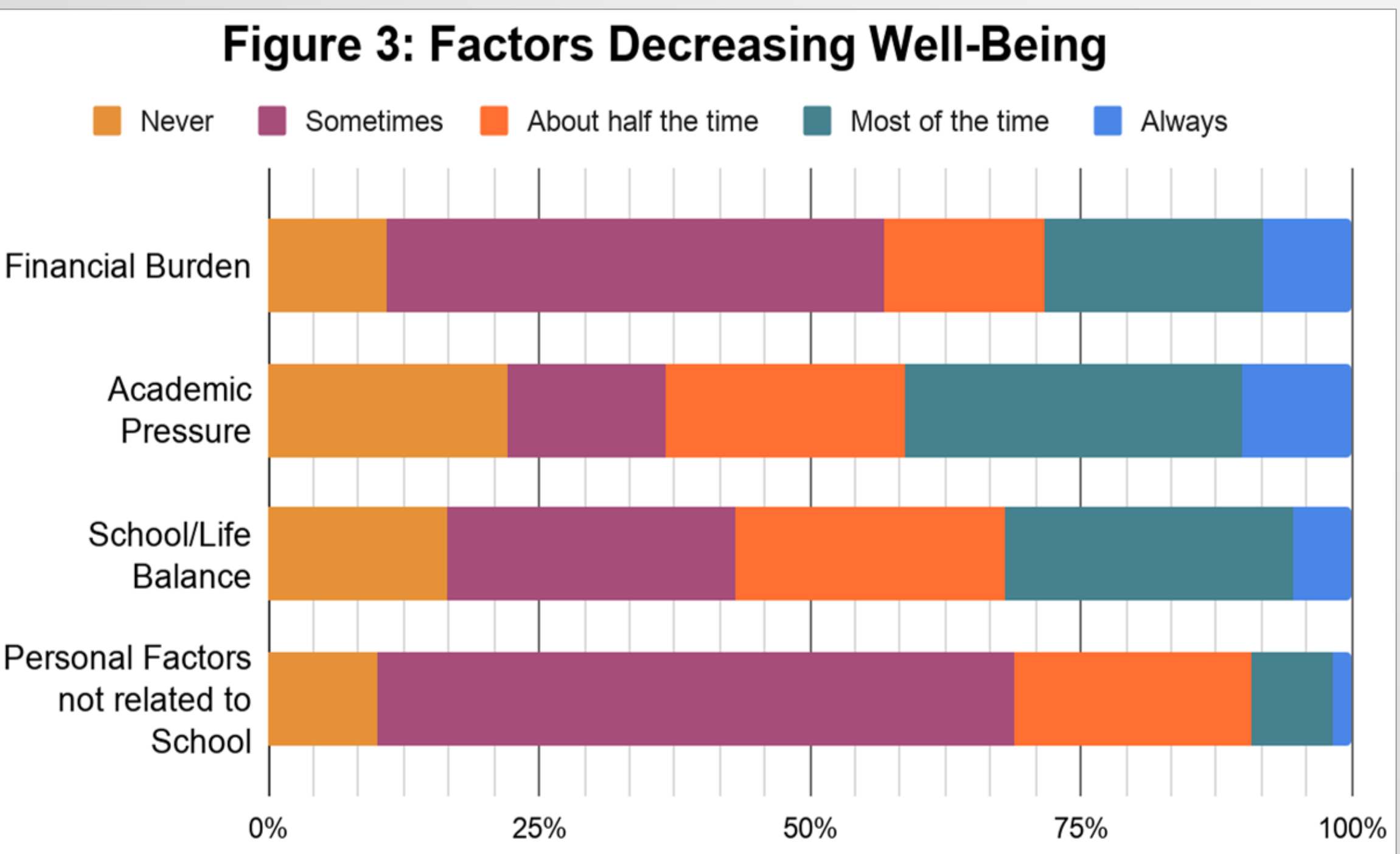
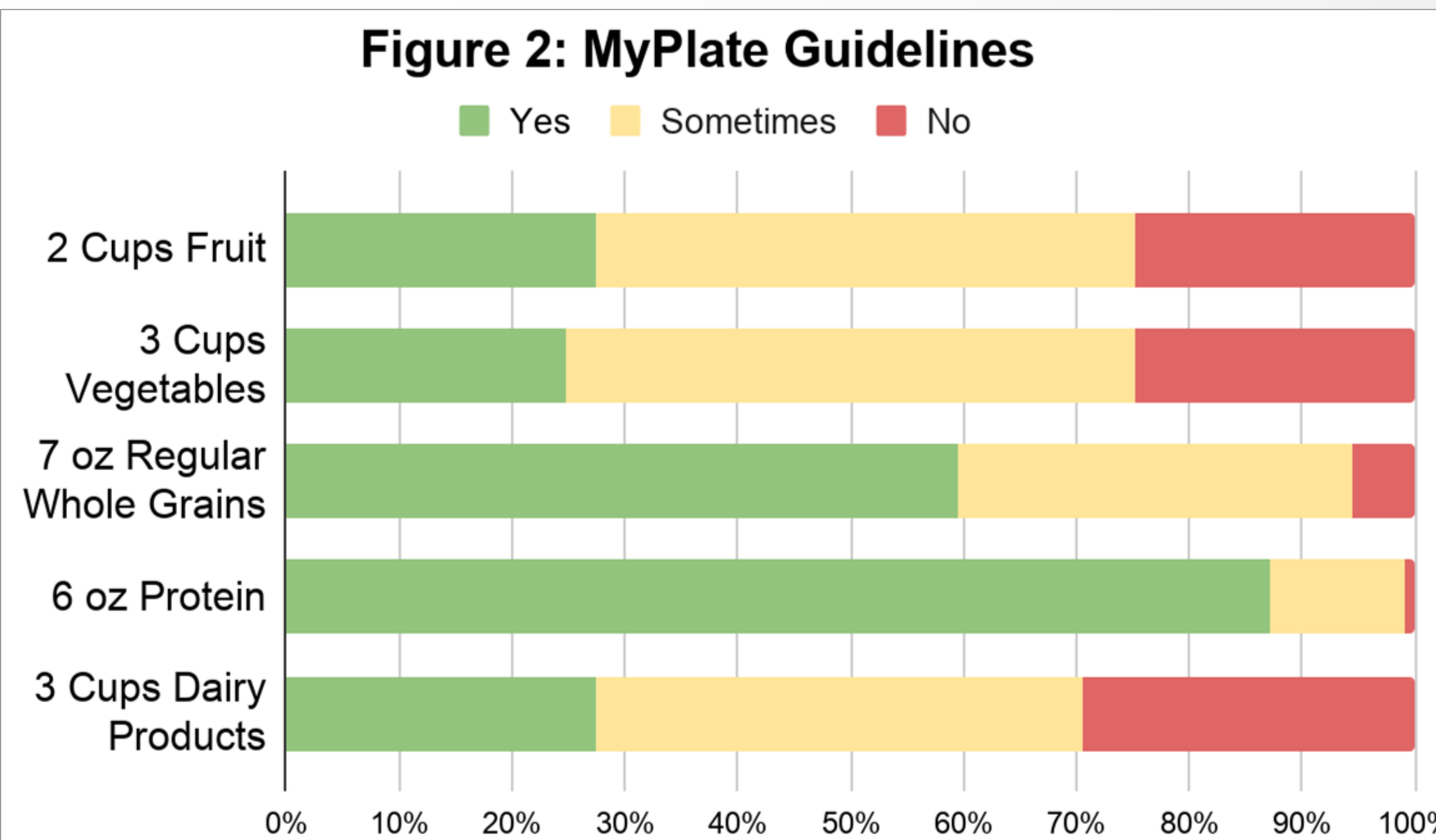
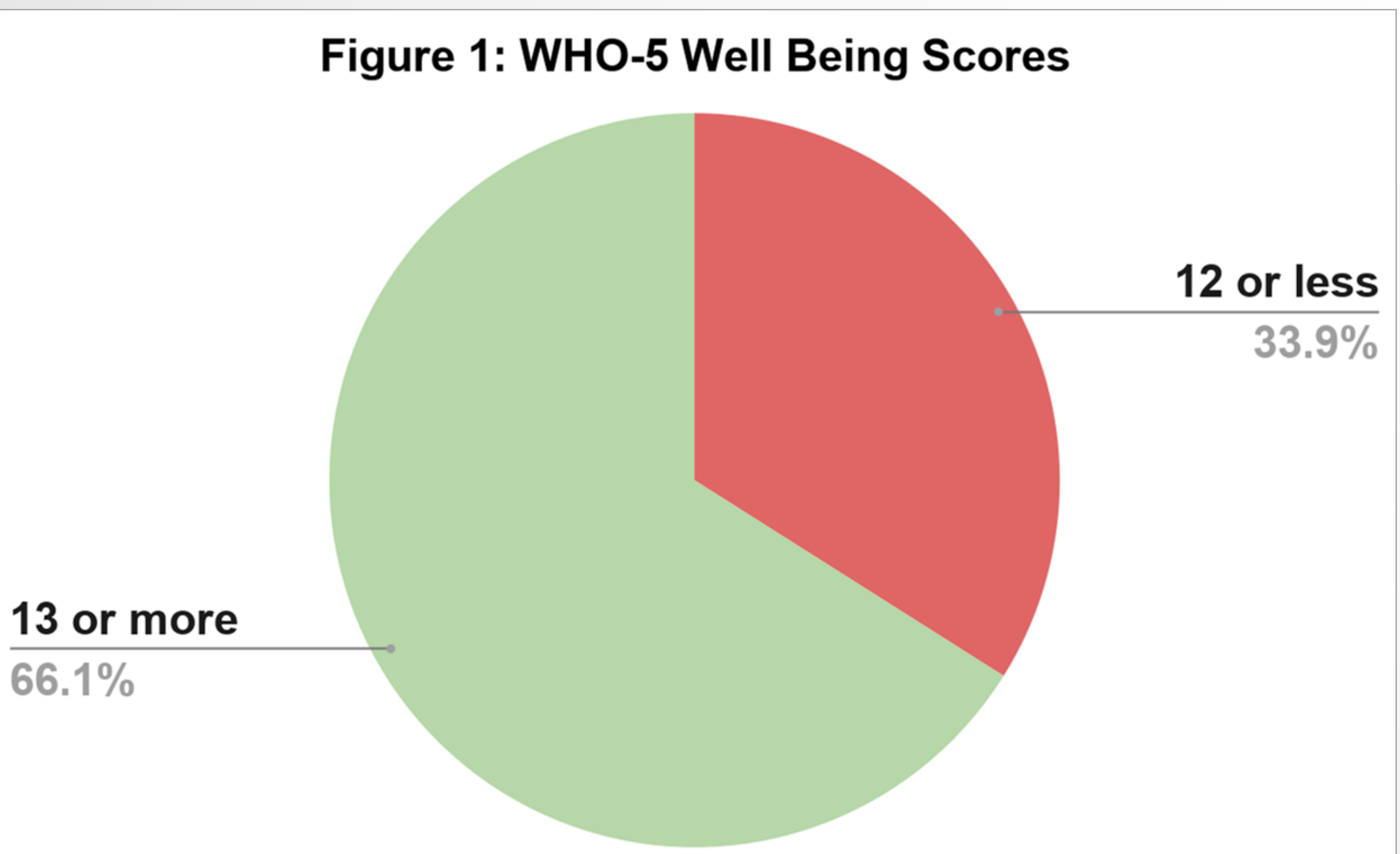
Factors Increasing Well-Being: (Figure 4).

- Top 2 Factors (most of the time/always): Support from others & Exercise.

Correlations (Pearson & Spearman Rho):

- WHO-5 score had the following low, but significant correlations:**

- Positive* correlation with: Days per week of any PA ($r = .406$); Days with ≥ 10 min continuous PA in the past week ($r = .427$); Exercise (increasing well-being).
- Negative* correlation with: academic pressures AND school/life balance (decreasing well-being).



Discussion:

Hypothesis partially supported:

- Physical activity showed a weak but significant positive relationship with well-being, consistent with previous research.⁶
- Academic pressure and poor school-life balance demonstrated stronger negative associations with well-being, which aligns with prior research.^{1, 2, 4, 5}
- Nutrition was not significantly associated with well-being despite prior evidence supporting its role in well-being and cognitive function.^{22, 24}
- Findings suggest that well-being is multifactorial. Psychosocial stressors may have a greater influence on well-being than lifestyle behaviors in DPT students.

Limitations:

- Small sample size (n = 109)
- Potential selection bias
- Timing of survey distribution
- Survey design may not have fully captured the complexity of well-being, nutrition, and physical activity

Clinical Relevance:

These findings highlight the importance of addressing well-being in DPT education, as stress and burnout can negatively impact empathy and quality of care.^{4,5} Students should be encouraged to develop coping strategies, such as physical activity, to support their well-being. Programs can play a key role by monitoring student stress, promoting balance, and incorporating wellness strategies into advising and curriculum.

Future Research:

- Include larger and more diverse sample populations
- Expand research to other healthcare professions
- Include practicing clinicians beyond recent graduates

Conclusion:

- Well-being is influenced by multiple factors, with academic stress and school-life balance being key influences.
- Physical activity serves as a positive coping strategy but has a limited independent impact.⁶
- Findings support a holistic approach to well-being, incorporating stress management and healthy lifestyle behaviors.

References:

Please scan the QR code.

