Resilience Research Lab at the Department of Mindfulness and Spirituality, DYP B-School

Overview

The Resilience Research Lab supports the vision of the Department of Mindfulness and Spirituality at DYP B-School by conducting research projects that incorporate mindfulness-based approaches. The mission is to foster resilience, well-being, and awareness through evidence-based mindfulness interventions.

Research Project Summary

A study was conducted on 68 faculty members of DYP School to evaluate the impact of a brief mindfulness-based intervention on awareness and attention. The **Mindful Attention Awareness Scale (MAAS)**, developed by Kirk Warren Brown and Richard M. Ryan, was used to measure pre- and post-intervention scores.

About the Mindful Attention Awareness Scale (MAAS)

- **Conceptual Framework**

  The MAAS conceptualizes mindfulness as a trait comprising two main components:

  1. **Awareness**: A mental "radar" that continuously scans both external and internal environments.
  2. **Attention**: The ability to focus awareness on specific stimuli for a deeper appraisal of the experience.

- **Structure of MAAS**

  The scale consists of **15 statements** designed to measure the tendency to act mindlessly or mindfully.

  Higher scores indicate a greater tendency toward mindlessness, while lower scores reflect greater mindfulness.

- **Validity and Reliability**

  MAAS demonstrates high reliability and strong correlations with related constructs such as reflection, rumination, self-consciousness, and existing mindfulness measures.

  Reliability: The MAAS was found to have good internal consistency, with alphas ranging of .82 and .87 in student and adult samples (respectively).

Validity: The MAAS demonstrates convergent and discriminant correlations in the expected direction with other measures such as the NEO-PI, NEO-FFI, the Mindfulness / Mindlessness Scale(MMS), Beck's Depression Inventory (BDI), Rosenberg's SelfEsteem Scale, and the State-Trait Anxiety Inventory (STAI).

Source: Brown, K. W., & Ryan, R. M. (2009). The mindfulness attention awareness scale(MAAS). Acceptance and commitment therapy. Measures Package, 82.

Procedure: The participants were called in one room that was kept neat and noise free. The researcher started the process by taking consent from all the participants. To conduct Pre-test, questionnaire was distributed to participants and scores were taken.

In the second step a day after,the participants were gathered again and the mindfulness intervention was given.The participants were told to practice for 6 weeks and at the end of 6 weeks,the questionnaire was again distributed and results were collected.

Intervention Structure:

Participants underwent a six-week mindfulness training that included:

Breathing Meditation

Focused attention on natural breath sensations to enhance calm and presence.

Walking Meditation

Mindful engagement with movement to build body awareness and grounding.

STOP Technique

A four-step strategy (Stop, Take a breath, Observe, Proceed) for on-the-go mindfulness during transitions and moments of stress.

Each participant was encouraged to practice mindfulness for 30 minutes per day, using a flexible routine suited to their schedule.

Hypothesis: There will be a significant difference between the scores of pre- and post-intervention.

Pre-Intervention Statistics

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	What is your gender identity?	Statistic	df	Sig.	Statistic	df	Sig.
Average_score	Man	.079	28	.200*	.981	28	.871
	Woman	.111	39	.200*	.969	39	.359

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

As shown by above table, since the sig. value i.e. 0.871 and 0.359 are > 0.05, the data is normally distributed.

Hence 68% of scores fall within 2 standard deviations of the mean between Mean +-1 SD and Mean -1 SD i.e. 2.446+- 0.576 .

Pre-Intervention Summary

Sample Size: 68 (Males = 28, Females = 39)

Mean Score: 2.45

Standard Deviation: 0.576

Range of Scores: 1.09 – 3.73

Distribution: Normal (Shapiro-Wilk p > .05 for both genders)

Gender-wise Pre-Intervention Scores:

- Males: Min = 1.91, Max = 3.73
- Females: Min = 1.61, Max = 3.57

4. Post-Intervention Analysis (SPANOVA)

Descriptive Statistics

	Gender	Mean	Std. Deviation	N
BeforeScores	Male	2.4348	.66561	28
	Female	2.4840	.48475	39
	Total	2.4634	.56314	67
AfterScores	Male	3.0951	1.07237	28
	Female	3.0421	.95382	39
	Total	3.0642	.99747	67

Both males and females showed higher wellbeing scores after the mindfulness activity. The mean score for males increased from **M = 2.43, SD = 0.67** to **M = 3.10, SD = 1.07**, and for females from **M = 2.48, SD = 0.48** to **M = 3.04, SD = 0.95**. However, it is interesting to see if these differences are significant.

Assumption Testing

Null hypothesis (H_0): Covariance matrices are equal.

Alternative (H_1): Covariance matrices are different.

Box's Test of Equality of Covariance Matrices was not significant, p = .232, indicating homogeneity of covariance matrices across genders.The assumption of equality of covariance matrices is met. This means we can proceed with SPANOVA safely

Bartlett's Test of Sphericity was significant, *p* < *.001*, indicating that the assumption of sphericity was violated. Therefore, Greenhouse-Geisser corrections were applied in the within-subjects analysis.

Main Effects

Repeated Measures ANOVA Results for the Effect of Mindfulness Activity on Mental Wellbeing by Gender

Effect	df	F	p	Partial η^2	Interpretation
Mindfulness Activity (Time)	1, 65	60.75	< .001	0.483	Significant improvement post-activity
Gender	1	0	0.992	0	Not significant

Time × Gender Interaction	1, 65	0.43	0.515	0.007	Not significant

Main effect of mental activity

There was a **significant main effect of Time**, $F(1, 65) = 60.75$, $p < .001$, **partial η^2 = .483**, indicating that the mindfulness activity significantly improved mental wellbeing across participants. The effect size was large since partial eta square is greater than 0.14

Main effect of Gender

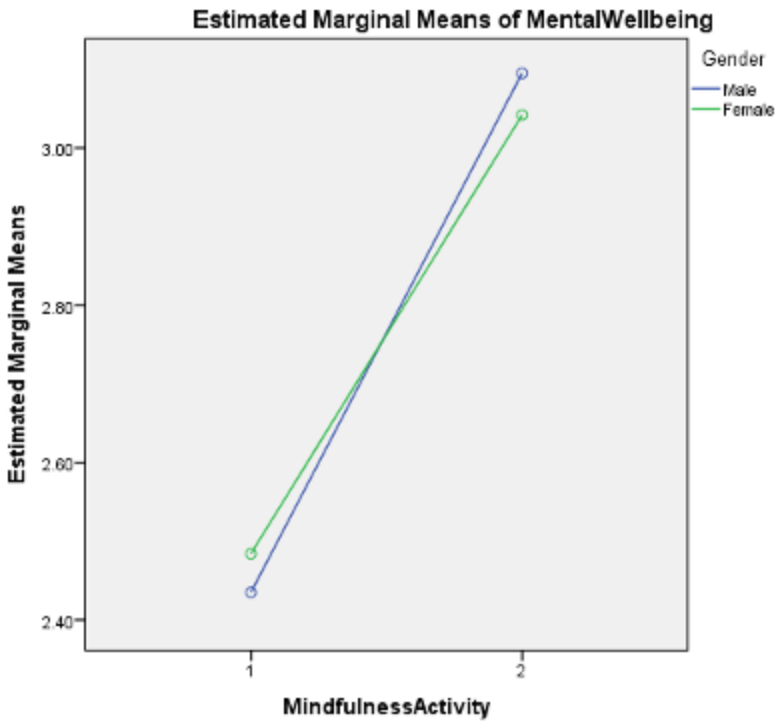
There was **no significant main effect of Gender**, $F(1, 65) = 0.00$, $p = .992$, **partial η^2 = .000**, suggesting no overall difference in mindful awareness between males and females.

Interaction Effect (moderation effect)

The **Time × Gender interaction** was not significant, $F(1, 65) = 0.43$, $p = .515$, **partial η^2 = .007**, indicating that the increase in mindful awareness did not differ significantly between males and females. There is no moderation effect of gender

Estimated Marginal Means

Estimated marginal means of mindful awareness averaged across time points were virtually identical for males (**M = 2.77, SE = 0.14**) and females (**M = 2.76, SE = 0.12**), with overlapping 95% confidence intervals.



The **line graph** shows the change in **mindful awareness** scores **before and after** the mindfulness activity, separated by **gender**. Both **males** and **females** show an increase in scores after the mindfulness activity. The lines for both genders are nearly parallel, visually confirming the **non-significant interaction**. **Males** show a slightly higher post-score, but the difference is negligible and not statistically significant.