This is a repository copy of *Simulated natural environments bolster the effectiveness of a mindfulness programme: A comparison with a relaxation-based intervention*.

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Version: Supplemental Material

Normality and assumption check

All analysis was carried out using SPSS for Windows version 24.0 using an alpha of .05. Before proceeding with MANOVAs, initial checks were carried out for independent observation, homogeneity of variance, normality and sphericity. Each record in the data was a distinct and independent entity, and the dependent variable was normally distributed in each time point.

1. Level of mindfulness

- Assumption 1: Levene's test indicated equal variances, F =1.27, p= .29 at T0, F= 0.60, P= .61 at T1 and F=1.50, P= .22 at T2.
- Assumption 2: The p-values for the Shapiro-Wilk test are 0.12 (at T0), 0.19 (at T1) and 0.22 (at T2) suggesting that the data is normally distributed.
- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)=1.92$, p= .38.
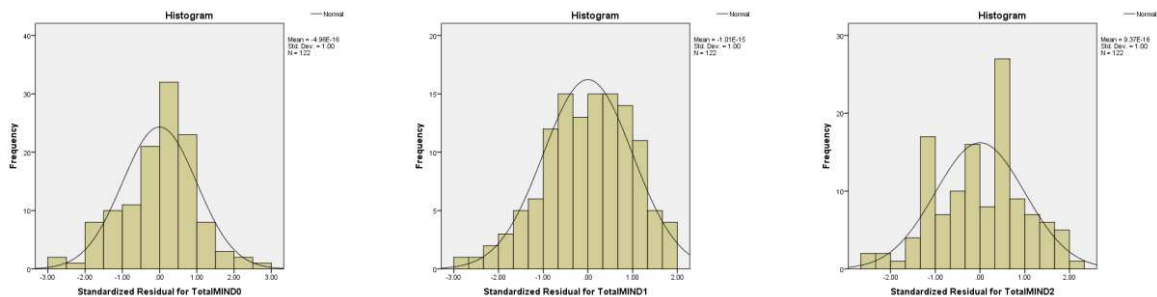

Figure 1. Histograms showing normality of residuals by time point: mindfulness

2. Nature connectedness

- Assumption 1: Levene's test indicated equal variances, F = 1.63, p= .18 at T0, F= 1.09, P= .35 at T1 and F= 0.20, P= .89 at T2.
- Assumption 2: The p-values for the Shapiro-Wilk test are .05 (at T0) and .12 (at T2) suggesting that the data is normally distributed. At T2, the p-value for the Shapiro-Wilk test is .02 suggesting that the data is not normally distributed. However, the histogram suggests that the data is approximately normal (see Figure 2).
- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(2)=0.92$, p= .05.
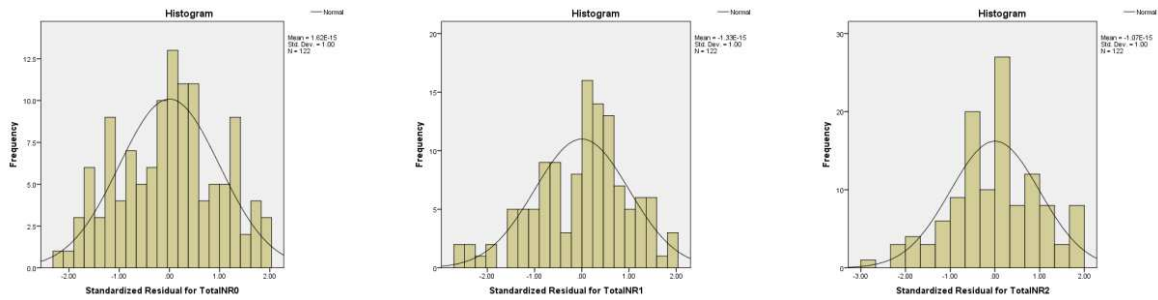
Figure 2. Histograms showing normality of residuals by time point: nature connectedness

3. Positive and Negative Affect

Positive affect

- Assumption 1: Levene's test indicated equal variances, F = 1.90, p= .13 at T0, F= .29, P= .83 at T1 and F= 1.36, P= .26 at T2.
- Assumption 2: The p-value for the Shapiro-Wilk test are .20 (at T0), .18 (at T1) and .41 (at T2) suggesting that the data is normally distributed.
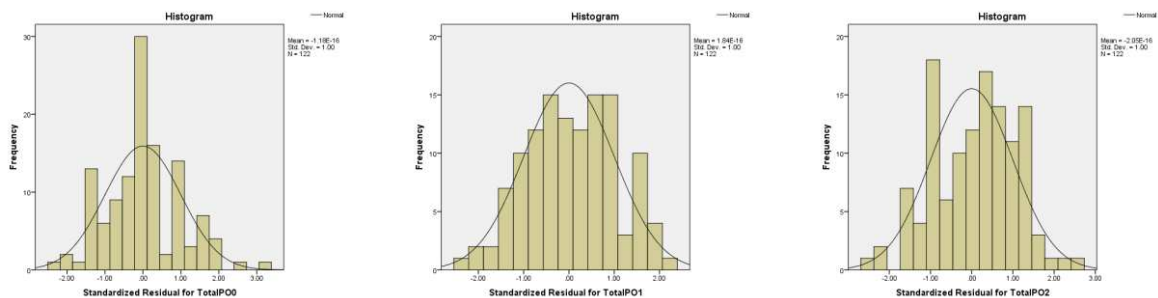- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)=$ 0.92, p= .05.

Figure 3. Histograms showing normality of residuals by time point: positive affect

Negative affect

- Assumption 1: Levene's test indicated equal variances, F = .61, p= .61 at T0, F= .19, P= .90 at T1 and F= 2.40, P= .07 at T2.
- Assumption 2: The p-value for the Shapiro-Wilk test is .18 (at T0) suggesting that the data is normally distributed. At T1 and T2, the p-value for the Shapiro-Wilk test is .00 suggesting that the data is not normally distributed. However, the histogram suggests that the data is approximately normal (see Figure 4).
- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)=$ 0.94, p= .06.

Figure 4. Histograms showing normality of residuals by time point: negative affect

4. Depression, Anxiety and Stress

Depression

- Assumption 1: Levene's test indicated equal variances, $F = .95$, $p= .33$ at T0, $F= 2.62$, $P= .11$ at T1 and $F= 5.21$, $P= .06$ at T2.
- Assumption 2: At T0, T1 and T2, the p-value for the Shapiro-Wilk test is .00 suggesting that the data is not normally distributed. However, the histogram suggests that the data is approximately normal (see Figure 5).
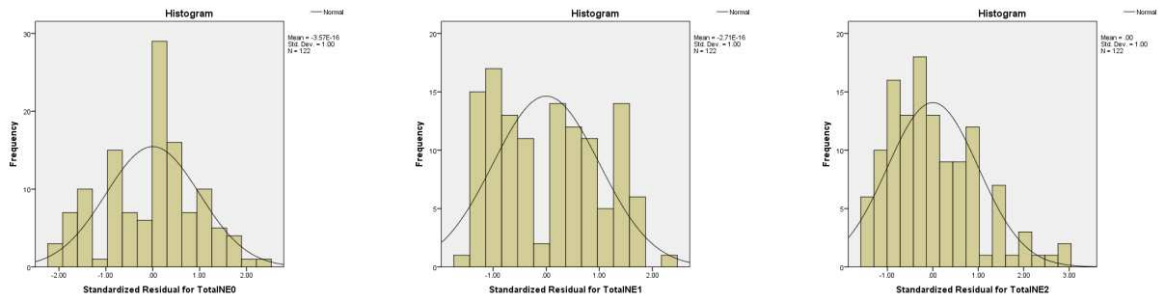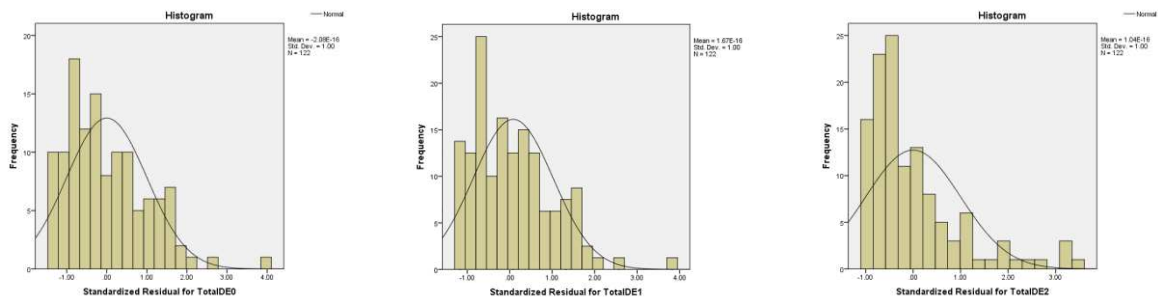- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)= 0.96$, $p= .09$.

Figure 5. Histograms showing normality of residuals by time point: depression

Anxiety

- Assumption 1: Levene's test indicated equal variances, $F = .94$, $p= .42$ at T0, $F= 0.88$, $P= .46$ at T1 and $F= 1.10$, $P= .35$ at T2.
- Assumption 2: At T0, T1 and T2, the p-value for the Shapiro-Wilk test is .00 suggesting that the data is not normally distributed. However, the histogram suggests that the data is approximately normal (see Figure 6).
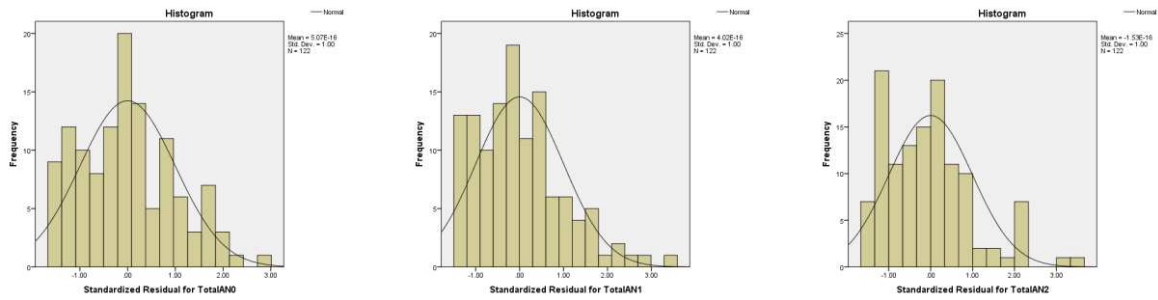- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)= 4.04$, $p= .13$.

Figure 6. Histograms showing normality of residuals by time point: anxiety

Stress

- Assumption 1: Levene's test indicated equal variances, F = 3.53, p= .06 at T0, F= 0.28, P= .60 at T1 and F= 0.04, P= .84 at T2.

- Assumption 2: the p-values for the Shapiro-Wilk test are .23 (T0) and .06 (T1) suggesting that the data is not normally distributed. At T2, the p-value for the Shapiro-Wilk test is .01 suggesting that the data is not normally distributed. However, the histogram suggests that the data is approximately normal (see Figure 7).

- Assumption 3: Mauchly's test indicated that the assumption of sphericity had been met, $\chi^2(2)= 0.92$, p= .05.
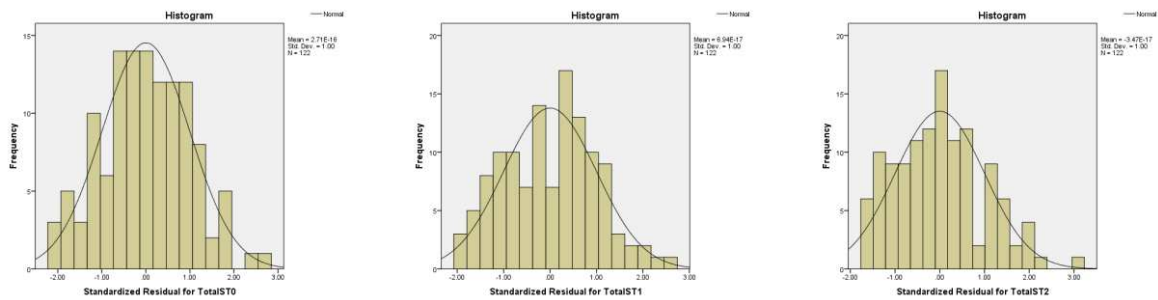

Figure 7. Histograms showing normality of residuals by time point: stress