A longitudinal study of adjustment disorder after trauma exposure - supplementary information

Assumptions required for MANOVA (from page 11 of manuscript).

The three month dependant variables were assessed for multicollinearity and correlations ranged from .46 to .81 which is acceptable for the purpose of running a MANOVA. We failed to find homogeneity of variance-covariance matrices, as assessed by Box's test of equality of covariance matrices ($p < .001$). As a result we used Pillai's Trace to assess for multivariate significance. Levene's test for equality of variances found 3-month Anxiety, Depression, WHOQoL-bref (Social), and WHOQoL-bref (Environment) were significant. We therefore selected to set $\alpha = .01$ for significance. Additionally we used the Games-Howell post hoc test to account for violating the assumption of homogeneity of variances.

Model Fit Criteria (from page 11 of manuscript).

To determine the number of classes that best fit the data, we initially fitted the most parsimonious model (one-class). Successive models with an extra class sequentially added were then fitted to determine which number of latent classes which was appropriate. The final decision on the preferred number of classes was determined based on model fit criteria, interpretability and parsimony (see supplementary information for fit criteria). Model fit was assessed based on the traditional criteria which is the Bayesian Information Criterion (BIC), the Sample Size Adjusted Bayesian Information Criterion (SS-BIC), and the Akaike's Information Criterion (AIC). In addition entropy, an index of classification quality, was also considered. Finally, we the Lo-Mendell-Rubin likelihood ratio test (LMR-LRT) and the bootstrap likelihood ratio test of model fit (B-LRT) were reviewed. A significant LMR-LRT or B-LRT indicates that the current model is better fitting than the k-1 class model. When the

LMR-LRT and B-LRT provide conflicting results it is suggested the B-LRT is preferred (1, 2)

1. Nylund KL, Asparouhov T, Muthen BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. Structural Equation Modeling. 2007;14:535-69.
2. Tein JY, Coxe S, Cham H. Statistical Power to Detect the Correct Number of Classes in Latent Profile Analysis. Structural Equation Modeling. 2013;20(4):640-57.

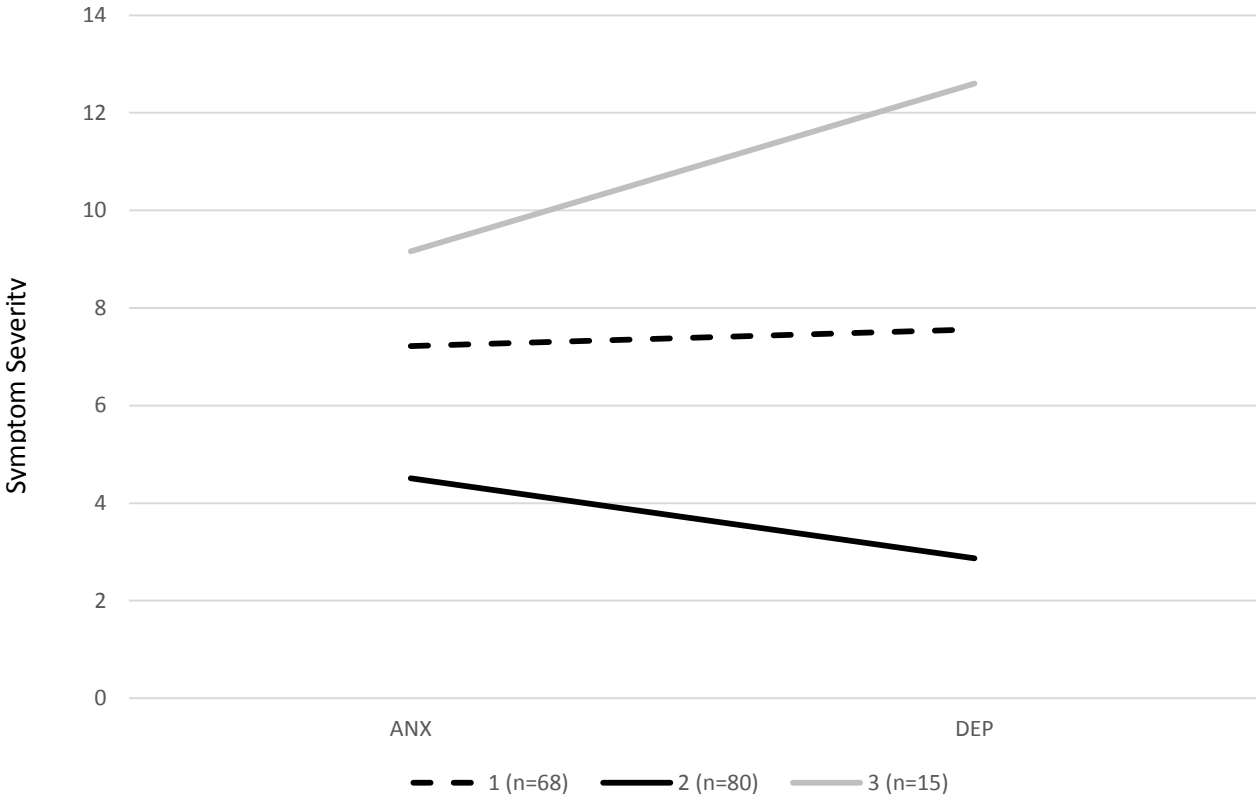

Figure 1 Latent Profile Analysis - anxiety and depression mean scores for each class

ANX – anxiety

DEP - depression