An Examination of the Factor Structure of the Multidimensional Psychological Flexibility Inventory

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Author Note

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Abstract

The Multidimensional Psychological Flexibility Inventory (MPFI), a 60-item self-report measure, assesses the Acceptance and Commitment Therapy (ACT) Hexaflex. The factor structure of the MPFI was examined in this study. In a community sample of adults ($N = 827$), four models (correlated six-factor, one-factor, higher-order, and bifactor) were tested for each of the constructs of interest (i.e., psychological flexibility [PF] and psychological inflexibility [PI]). All models, with the exception of the one-factor, provided adequate fit to the data. Differences between the three adequate fitting models were trivial in magnitude. Additional statistical indices from the bifactor models indicated that the general factors accounted for the large majority of reliable variance. The majority of the domain-specific factors evidenced redundancy with their respective general factors. Results from a series of structural regressions indicated that the domain-specific factors did not provide additional incremental utility above and beyond the general factors in predicting two relevant clinical constructs (i.e., health anxiety and depression). These results provide support for the use of the MPFI Flexibility and Inflexibility total scores, but not subscale scores. The MPFI may require further refinement to either greatly reduce the length of the measure, or to ensure that subscales have incremental utility.

Keywords: Multidimensional Psychological Flexibility Inventory, bifactor analysis, psychological flexibility, psychometrics
Psychological flexibility, a construct that is particularly relevant to Acceptance and Commitment Therapy (ACT), is defined as “the ability to fully contact the present moment and the thoughts and feelings it contains without needless defense, and, depending on what the situation affords, persisting in or changing behavior in the pursuit of goals and values” (Hayes, Strosahl, & Wilson, 2011). Psychological flexibility is most often operationalized in terms of its component parts: acceptance, cognitive defusion, contact with the present moment, self as context, committed action, and values (Hayes, Strosahl, & Wilson, 1999). Each component of psychological flexibility, often times described as the ACT “Hexaflex,” represents a method of enhancing well-being by openly and flexibly responding to the present moment in spite of uncomfortable experiences (Hayes et al., 1999, 2011). While empirical evidence supports the use of ACT for treating individuals with a number of psychological disorders (e.g., Bai, Luo, Zhang, Wu, & Chi, 2020; Arch et al., 2012; Hayes, Luoma, Bond, Masuda, & Lillis, 2006), research related to the measurement of the domains of psychological flexibility has moved more slowly (Hayes et al., 2006).

Assessment of psychological flexibility has generally focused on experiential avoidance, or the unwillingness to remain in contact with aversive internal experiences (Hayes et al., 1999). The most common self-report measures of psychological flexibility are the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011) and the Multidimensional Experiential Avoidance Scale (MEAQ; Gámez, Chmielewski, Kotov, Ruggero, & Watson, 2011). The former and similar measures (e.g., Avoidance and Fusion Questionnaire; Fergus et al., 2012) serve as global measures of psychological inflexibility. These measures are unable to capture the unique
variance that each dimension of the Hexaflex accounts for in predicting constructs of interest. The MEAQ and its shorter counterpart, the BEAQ (Gámez et al., 2014), were developed to provide sufficient coverage of different manifestations of experiential avoidance and to address concerns regarding the construct validity of the AAQ-II (Wolgast, 2014; Rochefort, Baldwin, & Chmielewski, 2018). Specifically, some evidence indicates that the AAQ-II is more strongly related to measures of general distress than measures of acceptance or avoidance (Rochefort et al., 2018; Wolgast, 2014). The MEAQ has been successful in providing greater breadth of manifestations of experiential avoidance and providing better discriminant validity in comparison to the AAQ-II. However, the MEAQ was not developed with a specific theoretical model in mind and none of these measures captures all of the components of the ACT Hexaflex.

Recently, Rolffs, Rogge, and Wilson (2018) developed the Multidimensional Psychological Flexibility Inventory (MPFI) in an attempt to address this gap in the literature. Specifically, they designed a measure that would align with the underlying ACT theory by capturing the six proposed underlying dimensions of psychological flexibility (Hayes, Strosahl, & Wilson, 2011). Additionally, the authors propose six dimensions of psychological inflexibility (i.e., experiential avoidance, lack of contact with the present moment, self as content, fusion, lack of contact with values, inaction), citing literature that these related but distinct constructs would contribute meaningful information in fully understanding relevant outcomes (Rolffs et al., 2018). Aligning with some previous research in this area (e.g., Kashdan & Rottenberg, 2010), the authors suggest that rather than distinct opposites, the six components of psychological flexibility are more strongly related to each other than to their inflexibility counterparts.

Rolffs et al. (2018) recruited adult participants from undergraduate and online research pools (e.g., Amazon’s Mechanical Turk). Three initial studies were conducted to refine an initial
pool of 554 items to a final measure consisting of 60 items. The authors generated some of the items for the initial item pool themselves, but the large majority of items were taken from existing self-report measures used in studies from the ACT and mindfulness literature. Following initial exploratory and confirmatory factor analyses (EFA and CFA), item response theory (IRT) was used on a refined pool of 288 items in a second study to identify the five most effective items for each dimension of the ACT Hexaflex. EFA and CFA were conducted one final time to verify the proposed factor structure with the 60 items that were identified via IRT. As part of this verification process, all 60 items of the MPFI were examined simultaneously via EFA. Results of the EFA were indicative of a 12-factor solution. Each of the proposed hierarchal models (i.e., inflexibility and flexibility) provided adequate fit to the data in the follow-up CFA. Although the latent correlation between the global inflexibility and flexibility higher-order factor in the CFA model was large in magnitude (i.e., $r = -.74$), the authors suggested that the two higher-order factors provided valuable unique information, and thus, should be modeled independently. The MPFI represents an important step forward in this line of research because it is necessary to have psychometrically sound measures of psychological in/flexibility and the dimensions outlined in the Hexaflex model to evaluate ACT and its underlying theory. However, an independent examination of the MPFI’s factor structure has not yet been conducted.

As described, Rolffs et al. (2018) designed the MPFI to produce a global inflexibility and flexibility score, with each total score consisting of six distinct, but related, subscale scores. Use of total scores assumes that each domain-specific factor of the flexibility and inflexibility higher-order factors represents the same overarching construct, while use of subscale scores assumes that the domain-specific factors provide unique information beyond the total scores. While Rolffs et al. (2018) has provided some initial evidence in support of two hierarchical models,
hierarchical modeling does not directly test the assumption that items of the domain-specific factors provide unique information beyond a higher-order or general factor (Reise, 2012). Because the MPFI was designed for use with total and subscale scores, it is important to use an analytic approach that can simultaneously address both of these assumptions (i.e., bifactor analysis; Chen, West, & Sousa, 2006).

Through the use of bifactor analysis, the unique contributions of both the general and domain-specific factors can be isolated (Reise, 2012), which allows for the simultaneous investigation of the general factors and the degree to which each domain-specific factor is meaningfully distinct from the general factors (Reise, Bonifay & Haviland, 2013; Reise, Moore, & Haviland, 2010; Rodriguez, Reise, & Haviland, 2016). To our knowledge, the MPFI has not yet been examined using a bifactor modeling approach. Use of this approach may yield important new insights into the factor structure of the MPFI and help to determine appropriate use of its total and subscale scores. For example, domain-specific factors that are redundant with their respective general factor might suggest that a total score should be used in lieu of subscale scores (Reise, 2012). Conversely, when domain-specific factors do not represent the same higher-order construct, a total score may be deemed uninterpretable as an indicator of a single construct, while use of subscales scores may still be psychometrically justified.

Consistent with standard practice (Brown, 2015; Kline, 2016), we compared the fit of each bifactor model (i.e., inflexibility and flexibility) with competing models (i.e., a correlated six-factor model, a one-factor model, and a hierarchical model). The value of comparing bifactor models with alternative models has been questioned on the grounds that bifactor models may provide better fit to the data because of their inherent flexibility (Bonifay, Lane, & Reise, 2017; Reise, Kim, Mansolf, & Widaman, 2016). As such, a number of additional statistical indices that
were developed for use with the bifactor approach were examined in the present study (discussed in greater detail below; Rodriguez et al., 2016). These indices provide information that is consistent with the central aim of the present study (i.e., examining the incremental value of the domain-specific factors beyond the general factor, determining the replicability and stability of the factors).

A further benefit of utilizing bifactor modeling is the ability to determine whether domain-specific factors provide incremental value in predicting criterion variables above and beyond the contribution of the general factor (Brown, 2015). Thus, as a preliminary investigation, structural regression models were used to examine if the domain-specific factors of the MPFI accounted for unique variance in scores on two criterion measures (i.e., health anxiety and depression) after accounting for the general factors (i.e., inflexibility and flexibility). Per the recommendations of Brown (2015), the other models tested as part of this study (e.g., correlated six-factor, higher-order) were not utilized for the structural regression models because they do not offer the same benefit.

Although health anxiety is just one of many variables that is theoretically relevant to both flexibility and inflexibility, it has been shown to be related to ACT-related constructs such as cognitive fusion and experiential avoidance in several studies (Fergus, 2015; Wheaton, Berman, & Abramowitz, 2010). Health anxiety has also recently been a focus of ACT outcome research, with several recently published studies examining moderators of treatment outcome with respect to health anxiety, especially within the context of the COVID pandemic (Hoffman et al., 2014; Landi et al., 2020; Leonidou et al., 2019). Similarly, a clear relationship between depression and psychological inflexibility has been established in a number of empirical studies (Fonseca, Trindade, Mendes, & Ferreira, 2020; Kashdan & Rottenberg, 2010; Yasinski et al., 2020). Based
on these previous findings, using health anxiety and depression as the criterion variables should allow for an adequate test of the incremental utility of the MPFI subscales beyond the total score.

**Method**

**Participants and Procedure**

Adult participants ($N = 999$) were recruited via Amazon’s Mechanical Turk (MTurk) to complete a battery of self-report measures as part of a larger study (Benfer, Rogers, & Bardeen, 2020). MTurk is an online platform that provides adults with the opportunity to participate in research studies for financial compensation. Evidence suggests that MTurk participants, compared to college student samples, are more attentive and more diverse (Behrend, Sharek, Meade, & Wiebe, 2011; Chandler & Shapiro, 2016; Hauser & Schwarz, 2016). Participants were required to be between 18 and 64 years of age and fluent in English. Quality control questions were embedded in the study to ensure that participants were attentive (Oppenheimer, Meyvis, & Davidenko, 2009; Paolacci, Chandler, & Ipeirotis, 2010). Participants were excluded ($n = 124$) from analyses if they answered fewer than two quality control questions correctly (Bardeen, Fergus, Hannan, & Orcutt, 2016; Bardeen & Michel, 2017; Rogers, Bardeen, Fergus, & Benfer, 2018). As part of the larger study, participants were also asked to provide text responses to open-ended questions, thus allowing investigators to identify responses that were generated by “bots” (i.e., computer programs that complete online forms automatically; Yarrish et al., 2019). Forty-eight participants were identified as bots and excluded from further analysis. The average age of the final sample ($N = 827$) was 37.5 years ($SD =11.2$), and the majority of participants were female (53.8%). The majority of the sample identified their race as White (75.8%), followed by Black (12.8%), Asian (5.7%), “other” (3.4%), and American Indian/Alaska Native (2.2%). Additionally, 8.9% of the sample identified their ethnicity as Hispanic or Latino.
Research procedures were approved by the local Institutional Review Board prior to recruitment. Participants were able to complete the study from any computer with internet access. Data were collected via Qualtrics, a secure online survey platform. Participants were required to provide electronic consent, and there was no penalty for withdrawing from the study. Participants were debriefed and paid $1.75 upon completing a battery of self-report measures (see below). This payment amount is consistent with compensation provided in studies of similar length (Buhrmester, Kwang, & Gosling, 2011; Crump, McDonnell, & Gureckis, 2013).

Self-Report Measures

The Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2018) is a 60-item measure of psychological in/flexibility. The scale is divided into 12 subscales with six representing flexibility (i.e., Acceptance, Present Moment Awareness, Self as Context, Defusion, Values, Committed Action) and six representing inflexibility (i.e., Experiential Avoidance, Lack of Contact with the Present Moment, Self as Content, Fusion, Lack of Contact with Values, Inaction). Participants were asked rate each item (e.g., “I tried to keep perspective even when life knocked me down” and “Negative feelings often trapped me in inaction”) based on how true the item was for them in the past two weeks on a 6-point scale (1 = Never True to 6 = Always True). Higher scores represent higher levels of the dimension being assessed. The scales and subscales of the MPFI have exhibited adequate internal consistency and evidence of convergent (e.g., AAQ-II, AFQ) and discriminant validity (e.g., emotional intelligence, curiosity; Rolffs et al., 2018). MPFI-Flexibility ($\alpha = .97$) and MPFI-Inflexibility ($\alpha = .99$) demonstrated excellent internal consistency in the current study. Internal consistency was also excellent for the subscales of both the flexibility ($\alpha$s from .90 to .94) and inflexibility ($\alpha$s from .93 to .96) composites.
The Whiteley Index-6 (WI-6; Asmundson, Carleton, Bovell, & Taylor, 2008) is a brief self-report measure of health anxiety derived from the original longer version of the measure (Pilowsky, 1967). Participants rate the degree to which each of the six statements (e.g., “Do you often worry about the possibility that you have got a serious illness”) is true for them on a 5-point scale (1 = not at all to 5 = a great deal). Several studies have suggested that the six-item version of the measure resolves concerns related to the factor structure of the original measure (Welch, Carleton, & Asmundson, 2009; Veddegjærde, Sivertsen, Wilhelmsen, & Skogen, 2014). Additionally, the WI-6 has demonstrated high internal consistency (Welch et al., 2009), convergence with other measures of health anxiety (Fergus, 2013), and invariance across racially diverse groups (Fergus, Kelley, & Griggs, 2018). Internal consistency in the current sample was excellent (α = .92).

The Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001) is a brief self-report measure of depression. Participants rate the degree to which they have been bothered by symptoms of depression (e.g., “feeling, down, depressed, or hopeless”) over the past two weeks on a four-point scale (0 = not at all to 3 = nearly every day). The PHQ-9 has demonstrated strong internal consistency and good convergent validity with other measures of depression as well as criterion-related validity with measures of quality of life (Kroenke et al., 2001). Internal consistency in the current sample was adequate (α = .81).

Data Analytic Strategy

Confirmatory Factor Analysis. Four models were examined for each of the higher-order constructs (i.e., flexibility and inflexibility), thus resulting in a total of eight models being tested. The first model was a correlated six-factor model. No secondary loadings were modeled, but the factors were allowed to intercorrelate. The second model was a one-factor model; 30
items loaded onto one factor (either Flexibility or Inflexibility). The third model was a higher-order model in which the correlations from the six-factor solution in the first model were removed and direct pathways from the higher-order factors to each first-order factor were modeled. The fourth model was a bifactor model in which 30 items were simultaneously loaded onto a general factor (either Flexibility or Inflexibility) and their respective domain-specific factors. All factor covariances were fixed to zero in the bifactor model (Brown, 2015).

**Model Estimation and Comparison.** All models were tested using robust maximum likelihood (MLR) estimation and MPlus 8.2 (Muthén & Muthén, 2015). The MPlus syntax used to test all of these models can be found in the supplemental materials. Four commonly recommended fit statistics were used to evaluate the fit of each model: the comparative fit index (CFI), the Tucker-Lewis index (TLI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA; Brown, 2015; Kline, 2016). The following guidelines were used to evaluate model fit: CFI and TLI should be near .95, SRMR should be less than .08 (Hu & Bentler, 1999), RMSEA should be near .06, and the upper limit of the 90% RMSEA confidence interval (CI) should not exceed .10 (Kline, 2016). In addition to evaluating the fit statistics for each model, models were compared with $\chi^2$ difference testing. The $\chi^2$ difference test was used to evaluate model comparisons (Kline, 2016). However, $\chi^2$ difference tests are strongly influenced by sample size, often indicating a significant difference when actual differences are trivial in magnitude (Cheung & Rensvold, 2002). As such, RMSEA 90% CIs were also used to compare models (Brown, 2015; Kline, 2016). Specifically, differences in model fit were considered non-significant when models had overlapping 90% RMSEA CIs, (Wang & Russell, 2005).
**Bifactor Model Evaluation.** The bifactor model was further evaluated using the following statistical indices (Dueber, 2016; Rodriguez et al., 2016). OmegaH (ωH) reflects the proportion of variance in the total score that can be attributed to the general factor. Omega HS (ωHS) reflects the proportion of variance accounted for by each subscale factor after removing the variance due to the general factor. Whereas ωH is best understood as a measure of general factor reliability, explained common variance (ECV), calculated as the proportion of common variance that is accounted for by the general factor, is a better index of the unidimensionality of a measure (Dueber, 2016). Item-level explained common variance (I-ECV) provides a measure of the proportion of common variance for each item that can be explained by the general factor. I-ECV values greater than .80 - .85 are indicative of unidimensionality at the item level (Gorsuch, 1983; Stucky & Edelen, 2015). Percentage of uncontaminated correlations (PUC) is an indicator of the percentage of item correlations contaminated by variance attributed to the general and domain-specific factors. PUC is typically interpreted in combination with ECV. When both are greater than .70, common variance within a model is considered largely unidimensional. Average relative parameter bias (ARPB) represents the bias across parameters if items are forced into a unidimensional solution. ARPB values less than 0.10 or 0.15 suggest that multidimensionality within a measure is not substantial enough to preclude a unidimensional solution (Muthén, Kaplan, & Hollis, 1987; Rodriguez et al., 2016). The factor determinacy (FD) value represents the correlation between factors and factor scores and represents the degree to which factor scores are of practical value and should be used in measurement models (i.e., FD > .90 is suggested; Gorsuch, 1983). Construct replicability (H) indicates the degree to which a factor is well defined by its indicators. H values greater than .80 suggest that a latent variable will demonstrate sufficient stability across studies (Hancock & Mueller, 2001).²
**Structural Regression Model.** Structural regression models were used to examine whether the domain-specific factors of the MPFI relate to clinically relevant constructs (i.e., health anxiety and depression) after accounting for the general factors (i.e., either inflexibility or flexibility). The general and domain-specific factors from each bifactor model were simultaneously regressed onto the WI-6 and PHQ-9 in separate models. Domain-specific factors from each bifactor model that demonstrated redundancy with the general factor were removed from their respective models and the models were reassessed. Model fit was assessed using the guidelines outlined above. Additional criterion measures from the larger study were not used in the present study because they had already been used in published works and studies under review (e.g., Benfer, Rogers, & Bardeen, 2020).

**Results**

**Model Estimation and Comparison for MPFI-Flexibility.** Means, standard deviations, and bivariate correlations are presented in Table 1. Fit statistics for all models are presented in Table 2. Of the four models that were tested, the one-factor model was the only model that did not provide adequate fit to the data for MPFI-Flexibility. Relative to the six-factor model, the one-factor model provided significantly worse fit to the data, as evidenced by a significant change in $\chi^2 (\chi^2[15] = 2321.233, p < .001)$ and non-overlapping RMSEA 90% CIs. The higher-order, correlated six-factor, and bifactor models evidenced similar fit statistics. For the higher-order model, all domain-specific factors exhibited significant factor loadings on the higher-order factor (i.e., MPFI-Values = .92, MPFI-Self as Context = .89, MPFI-Commitment = .88, MPFI-Defusion = .87, MPFI-Awareness = .83, MPFI-Acceptance = .53). Although a significant $\chi^2$ difference test suggested significantly worse fit of the higher-order model to the six-factor model ($\chi^2[9] = 490.600, p < .001$), overlapping RMSEA 90% CIs suggested that the difference in fit
between the higher-order and correlated six-factor models was trivial in magnitude. Similarly, while a significant $\chi^2$ difference test was observed between the higher-order and bifactor model ($\chi^2[24] = 568.747, p < .001$), suggesting that the bifactor model provided better fit to the data, overlapping RMSEA 90% CIs suggested that the difference in fit between these models was trivial in magnitude. See Table 3 for standardized factor loadings from the bifactor model for MPFI-Flexibility. All items exhibited significant positive loadings onto the general factor (all $p$s < .001). Item loadings on the domain specific factors tended to be smaller than on the general factor. All variances of the domain-specific factors were significant at $p < .001$, with the exceptions of MPFI-Self as Context ($p = .02$) and MPFI-Values ($p = .001$). This, in addition to the large loadings of these factors on the higher-order construct for the higher-order model (.89 and .92, respectively), suggested the possibility that these factors were redundant with the general factor.

**Model Estimation and Comparison for MPFI-Inflexibility.** Consistent with above, the one-factor model was the only model that did not provide adequate fit to the data for MPFI-Inflexibility. Relative to the six-factor model, the one-factor model provided significantly worse fit to the data, as evidenced by a significant change in $\chi^2$ ($\chi^2[15] = 2673.686, p < .001$) and non-overlapping RMSEA 90% CIs. The higher-order, correlated six-factor, and bifactor models evidenced similar fit statistics. For the higher-order model, all domain-specific factors exhibited significant factor loadings on the higher-order factor (i.e., MPFI-Values/Lack = .94, MPFI-Inaction = .94, MPFI-Fusion = .92, MPFI-Self as Content = .85, MPFI-Present Moment/Lack = .76, MPFI-Experiential Avoidance = .44). Although a significant $\chi^2$ difference test suggested significantly worse fit of the higher-order model relative to the six-factor model ($\chi^2[9] = 121.581, p < .001$), overlapping RMSEA 90% CIs suggested that the difference in fit between these
models was trivial in magnitude. Similarly, while a significant $\chi^2$ difference test was observed between the higher-order and bifactor model ($\chi^2[24] = 135.608, p < .001$), suggesting that the bifactor model provided better fit to the data, overlapping RMSEA 90% CIs suggested that the difference in fit between these models was trivial in magnitude. See Table 4 for standardized factor loadings from the bifactor model for MPFI-Inflexibility. All items exhibited significant positive loadings onto the general factor (all $p$s < .001). Item loadings on the domain specific factors tended to be smaller than on the general factor, except in the case of the MPFI-Experiential Avoidance factor which exhibited larger loadings on the domain-specific factor. All variances of the domain-specific factors were significant at $p < .001$, with the exception of MPFI-Values/Lack ($p = .02$). This, in addition to the large loading of this factor on the higher-order construct for the higher-order model (.94), suggested the possibility that this factor was redundant with the general factor.

**Bifactor Model Evaluation for MPFI-Flexibility.** Additional indices derived from the bifactor model are presented in Table 5. Results suggested acceptable reliability for the MPFI-Flexibility general ($\omega = .98$) and domain-specific factors ($\omega$s from .90 to .98). The majority of the reliable variance in MPFI-Flexibility was attributable to the general factor ($\omega_H = .93$). In contrast, the domain-specific factors accounted for substantially less variance in MPFI-Flexibility ($\omega_{HS}$ scores from .16 to .47). The ECV of .73 indicates that the general factor accounts for 73% of common variance and 27% of common variance is spread across the domain-specific factors (i.e., Acceptance = 7.9%, Present Moment Awareness = 4.6%, Defusion = 4.3%, Committed Action = 4.3%, Self as Context = 3.5%, Values = 2.9%). Acceptance is the only domain-specific factor for which the majority of item-level variance was accounted for by this specific factor (ECV = .52). For the five-remaining domain-specific factors, the
overwhelming majority of variance in the items associated with each domain-specific factor was accounted for by the general factor (ECV values from .18 to .29). Eight of 30 items exhibited I-ECV values greater than .80, which suggests that these items contribute more to the general factor than to their respective domain-specific factor (Gorsuch, 1983; Stucky & Edelen, 2015). Additionally, 14 of the remaining 22 items exhibited I-ECV values greater than .70, further calling into question the multidimensional nature of this measure. The PUC value for MPFI-Flexibility was .86. When interpreted in combination with the ECV value of .73 for the general factor, this indicates low relative bias and increased likelihood of unidimensionality. Model ARPB was extremely low (.02), which further supports a unidimensional solution (Rodriguez et al., 2016). The FD values for the general factor and the Acceptance factor (.97 and .90, respectively) suggest adequate factor determinacy. The FD values of the five remaining domain specific factors (.76 to .83) suggest that these factors may not be suitable for use as summed subscale scores or as latent variables in an SEM framework (Gorsuch, 1983). The general factor exhibited acceptable construct replicability (H = .97), while the construct replicability of the domain-specific factors was inadequate (Hs from .42 to .74).

**Bifactor Model Evaluation for MPFI-Inflexibility.** As seen in Table 5, the reliability of the MPFI-Inflexibility general (ω = .98) and domain-specific factors (ωs from .93 to .96) was acceptable. The majority of the reliable variance in MPFI-Inflexibility scores was attributable to the general factor (ωH = .92). In contrast, the domain-specific factors, with the exception of the Experiential Avoidance factor (ωHS = .75), accounted for substantially less variance in MPFI-Inflexibility (ωHS scores from .10 to .39). The ECV of .69 indicated that the general factor accounted for 69% of common variance and 31% of common variance was spread across the domain-specific factors (i.e., Experiential Avoidance = 12.7%, Lack of Contact with Present
Moment = 7.0%, Self as Content = 4.5%, Fusion = 2.9%, Inaction = 2.2%, Lack of Contact with Values = 1.8%). Experiential Avoidance was the only domain-specific factor for which the majority of item-level variance was accounted for by this specific factor (ECV = .80). For the five-remaining domain-specific factors, the majority of variance in the items associated with each domain-specific factor was accounted for by the general factor (ECV values from .11 to .41). Sixteen of 30 items exhibited I-ECV values greater than .80, which suggests that these items contributed more to the general factor than to their respective domain-specific factor (Gorsuch, 1983; Stucky & Edelen, 2015). All of the items from Fusion, Lack of Contact with Values, and Inaction had I-ECV values greater than 80. The PUC value for MPFI-Inflexibility was .86. When interpreted in combination with the ECV value of .69 for the general factor, this indicates low relative bias and increased likelihood of unidimensionality. Model ARPB was extremely low (.03), which further supported a unidimensional solution (Rodriguez et al., 2016). The FD values for the general factor, Experiential Avoidance factor, and Lack of Contact with the Present Moment Factor (.97, .95, and .91, respectively) suggested adequate factor determinacy. The FD values of the four-remaining domain-specific factors (.76 to .87) suggested that these factors may not be suitable for use as summed subscale scores or as latent variables in a SEM framework (Gorsuch, 1983). The H values for the general factor and Experiential Avoidance factor (.98 and .88, respectively) suggested acceptable construct replicability. The construct replicability of the five-remaining domain-specific factors was inadequate (Hs from .37 to .71).

**Structural Regression Models for MPFI-Flexibility.** The structural regression model with health anxiety as the criterion variable provided adequate fit to the data, with all fit indices falling within the specified guidelines: \(\chi^2 (557) = 1254.08, p < .001; \) RMSEA = .04 (90% CIs =
[.036, .042]); CFI = .96; TLI = .95; SRMR = .04. The general factor significantly predicted the WI-6 in the expected direction ($\beta = -.16$, $p = .005$). After accounting for the general factor, the Acceptance domain-specific factor also accounted for a significant portion of the variance, though not in the theoretically expected direction ($\beta = .26$, $p < .001$). In the initial iteration of the model, none of the other domain-specific factors accounted for additional significant variance (Present Moment Awareness: $\beta = .16$, $p = .06$, Self as Context: $\beta = .14$, $p = .08$, Defusion: $\beta = .01$, $p = .93$, Values: $\beta = .10$, $p = .34$, Committed Action: $\beta = .14$, $p = .12$).

A second iteration of the model was tested in which all redundant MPFI domain-specific factors were removed. In this version of the model, the general factor was a significant predictor of WI-6 scores in the expected direction ($\beta = -.11$, $p < .01$). After accounting for the general factor, the Acceptance domain-specific factor accounted for a significant amount of the variance in WI-6 scores, though the relationship was in a theoretically unexpected direction ($\beta = .21$, $p < .001$).

An additional structural regression was examined using depression as the criterion variable. This model provided adequate fit to the data, with all fit indices falling within the specified guidelines: $\chi^2 (628) = 1455.98$, $p < .001$; RMSEA = .04 (90% CIs = [.037, .043]); CFI = .95; TLI = .95; SRMR = .05. The general factor significantly predicted the PHQ-9 in the expected direction ($\beta = -.27$, $p < .001$). After accounting for the general factor, the Acceptance domain-specific factor accounted for a significant portion of the variance, though not in the theoretically expected direction ($\beta = .30$, $p < .001$). In the initial iteration of the model, none of the other domain-specific factors accounted for additional significant variance (Present Moment Awareness: $\beta = .15$, $p = .13$, Self as Context: $\beta = .12$, $p = .27$, Defusion: $\beta = -.07$, $p = .53$, Values: $\beta = .06$, $p = .64$, Committed Action: $\beta = .02$, $p = .82$).
A second iteration of the model was tested in which all redundant MPFI domain-specific factors were removed. In this version of the model, the general factor was a significant predictor of PHQ-9 scores in the expected direction ($\beta = -0.24, p < 0.001$). After accounting for the general factor, the Acceptance domain-specific factor accounted for a significant amount of the variance in PHQ-9 scores, though the relationship was in a theoretically unexpected direction ($\beta = 0.29, p < 0.001$).

Based on the outcomes of these models, the Acceptance domain-specific factor may be redundant with the general factor in the Flexibility model. It should also be noted that while the Acceptance domain-specific factor was superior to the other subscales in the Flexibility composite, the bifactor indices generally did not provide strong support for the value of the subscale. For example, approximately half of the variance in the Acceptance domain-specific items were explained by the general factor. Further, although the Acceptance domain-specific factor appears to be quite reliable ($\omega = 0.90$), after accounting for variability related to the general factor, it only accounted for a smaller proportion of the reliable variance ($\omega_H = 0.47$) and construct replicability was inadequate.

**Structural Regression Model for MPFI-Inflexibility.** The structural regression model with health anxiety as the criterion variable provided adequate fit to the data, with all fit indices falling within the specified guidelines: $\chi^2 (557) = 1102.96, p < 0.001$; RMSEA = 0.03 (90% CIs = [0.031, 0.037]); CFI = 0.97; TLI = 0.96; SRMR = 0.03. The general factor significantly predicted the WI-6 in the expected direction ($\beta = 0.56, p < 0.001$). After accounting for the general factor, none of the domain-specific factors accounted for a significant amount of variance in WI-6 scores (Experiential Avoidance: $\beta = 0.03, p = 0.33$, Lack of Contact with the Present Moment: $\beta = 0.05, p = \ldots$)
.37, Self as Content: $\beta = .06, p = .41$, Fusion: $\beta = .11, p = .19$, Lack of Contact with Values: $\beta = .01, p = .91$, Inaction: $\beta = .08, p = .38$).

An additional structural regression was examined using depression as the criterion variable. This model also provided adequate fit to the data, with all fit indices falling within the specified guidelines: $\chi^2 (628) = 1102.96, p < .001$; RMSEA $= .04$ (90% CIs $= [.033, .039]$); CFI $= .96$; TLI $= .96$; SRMR $= .04$. The general factor significantly predicted the PHQ-9 in the expected direction ($\beta = .77, p < .001$). After accounting for the general factor, none of the domain-specific factors accounted for a significant amount of variance in PHQ-9 scores (Experiential Avoidance: $\beta = -.01, p = .71$, Lack of Contact with the Present Moment: $\beta = .02, p = .76$, Self as Content: $\beta = -.01, p = .84$, Fusion: $\beta = .07, p = .41$, Lack of Contact with Values: $\beta = -.06, p = .61$, Inaction: $\beta = .04, p = .67$).

**Discussion**

The factor structure of the MPFI was examined in a large sample of community adults in the present study. Consistent with previous research, higher-order models of MPFI-Flexibility and MPFI-Inflexibility demonstrated adequate fit to the data, while one-factor models did not (Rolffs et al., 2018). Additionally, this study is the first to test correlated six-factor and bifactor models of these two constructs. For both MPFI-Flexibility and MPFI-Inflexibility, the correlated six-factor model and the bifactor model demonstrated adequate fit to the data. While $\chi^2$ difference testing suggested that both bifactor models provided better fit to the data than their corresponding higher-order models, examination of RMSEA 90% CIs suggested that differences in fit were trivial. Importantly, examination of follow-up statistical indices from bifactor analysis allowed us to simultaneously test two assumptions that are central to measures for which total and subscale scores are calculated: 1) domain-specific factors represents the same overarching
construct (either flexibility or inflexibility), and 2) the domain-specific factors provide unique information beyond the general factors (Dueber, 2016; Rodriguez et al., 2016).

Further examination of the bifactor model for MPFI-Flexibility suggests mixed evidence of multidimensionality. Generally, statistical indices suggested that the general factor was the most stable factor and accounted for the greatest proportion of variance. The pattern of results was similar for the inflexibility composite, with the majority of statistical indices suggesting unidimensionality. Both Acceptance and Experiential Avoidance (from the MPFI-Flexibility and MPFI-Inflexibility, respectively) exhibited some value as domain-specific factors, though the evidence was mixed. Across both general factors (inflexibility and flexibility), none of the domain-specific factors accounted for more than 20% of the unique variance beyond their respective general factors. The Acceptance and Experiential Avoidance domains did represent the largest portion of unique variance beyond the general factors, accounting for approximately 8% and 13%, respectively. Additionally, both of these domain-specific factors exhibited adequate factor determinacy, and the Experiential Avoidance factor met the specified cut-off for construct replicability. However, for both bifactor models, the magnitude of factor loadings was larger for the total score than the domain-specific scores, suggesting the possibility that there may be considerable content redundancy between the domain-specific and general factors. Taken together, our results suggest that the subscale scores for both of these measures may not have significant value beyond their respective general factors, with the possible exception of the Acceptance and Experiential Avoidance subscales. It is also important to highlight that almost all of the domain-specific factors exhibited inadequate construct replicability and factor determinacy, which further calls into question the use of scores from domain-specific subscales.
It is important to note additional research will likely clarify the potential value of the MPFI subscales. While the Experiential Avoidance subscale provided the most convincing evidence of unique value, it is possible that other domain-specific factors may also provide unique predictive power when considered with other more diverse criterion variables. As the evidence currently stands, it seems inappropriate to utilize the MPFI subscales, and it is notable that the use of only total composite scores would yield a much blunter instrument than was intended by the authors of the measure. Further, the use of the measure in this manner does not align with the theoretical basis of ACT and psychological flexibility as was originally intended. Additionally, these findings are in notable contrast to the existing literature which includes numerous studies utilizing measures of the psychological in/flexibility domain-specific factors (e.g., cognitive fusion as measured by the Cognitive Fusion Questionnaire) that have demonstrated meaningful relationships with related, but distinct forms of psychopathology such as anxiety, depression, and trauma-related disorders (e.g., Kelly et al., 2019; Kelso, Kashdan, Imamoğlu, & Ashraf, 2020; Moroz & Dunkley, 2019; Thomas & Bardeen, 2020). The pattern of results from this study and the existing literature suggests that further refinement of the measurement of these constructs and the constructs themselves are worthy of further study.

The MPFI is a recently developed self-report measure that, according to its authors, aims to capture each of the domain-specific factors represented in the Hexaflex model (Rolffs et al., 2018). While it has not been used extensively in research, some studies have started to use the measure to capture the components of psychological flexibility (Rogge, Daks, Dubler, & Saint, 2019; Stabbe, Rolffs, & Rogge, 2019). Based on their study findings, the authors of these studies advocate for using the domain-specific factors of the flexibility and inflexibility factors to monitor treatment progress and make treatment decisions (Rogge et al., 2019; Stabbe et al.,
While the results of this study do indicate that the total scores of the flexibility and inflexibility scales are suitable for measuring these constructs, their respective subscales do not appear to have the same support. In sum, the results of this study suggest that it is most appropriate to interpret the MPFI based on composite rather than subscale scores.

It is also important to highlight that the results of this study provide some evidence that the Acceptance and Experiential Avoidance domains of the Flexibility and Inflexibility composites, respectively, may adequately capture distinct domains. This finding is particularly notable given recent research suggesting that existing measures of experiential avoidance may not make an adequate distinction between that construct and general distress (Wolgast, 2014; Rochefort et al., 2018). Further examination of how the MPFI total and subscale scores differentially relate to relevant outcomes could serve to provide further evidence of psychological flexibility and inflexibility as distinct. Additionally, a number of measures of the proposed In/Hexaflex components have been developed in recent years, which would allow for direct evaluation of the degree to which the MPFI provides adequate coverage of these constructs. Finally, additional research evaluating how the MPFI relates to clinical outcomes will be important in understanding the predictive value of psychological flexibility and its proposed components and counterparts, with this study providing an initial step toward this aim.

The predictive utility of the MPFI with regard to two relevant clinical constructs, health anxiety and depression, was evaluated. Results from a structural regression with Inflexibility predicting health anxiety showed that the general factor significantly predicted this clinical outcome. However, no domain-specific factor evidenced incremental utility in predicting health anxiety beyond this general factor. Results were similar with regard to the depression outcome. Taken together, these results suggest that domain-specific factors of the inflexibility factor may
have relatively little unique value in relation to these specific outcomes. These results align with the results of the examination of the bifactor model and suggest that it may be inadvisable to model the domain-specific factors for the Inflexibility scale. However, the limited number of outcomes utilized in this investigation limits our ability to draw conclusions about the potential value of the domain-specific factors to other potentially relevant criterion variables.

Results of a structural regression with the MPFI Flexibility scale were less straightforward. Like the Inflexibility scale, the Flexibility general factor significantly predicted health anxiety, indicating that psychological flexibility does share a significant, negative relationship with this construct, as theory would suggest. After accounting for the Flexibility factor, the Acceptance factor of the MPFI also significantly predicted health anxiety, though the relationship was in a theoretically unexpected direction. Results from a second iteration of the model including only the general factor and the Acceptance subfactor, the two most promising scales, suggested that the Acceptance scale may also be redundant with the general factor. Additionally, this pattern of results suggests that the MPFI Flexibility composite and its respective domain-specific scales may have less predictive value overall in predicting clinical outcomes. Several studies have attempted to examine this hypothesis more closely by considering how different combinations of flexibility and inflexibility may differentially predict relevant outcomes. Stabbe et al. (2019) reported that even when individuals are high in both flexibility and inflexibility, as measured by the MPFI, inflexibility is a more powerful predictor of clinical outcomes. While flexibility may not predict negative mental health outcomes as well as inflexibility, it seems as though flexibility remains an important predictor of overall well-being and quality of life (Momeniarbat, Karimi, Erfani, & Kiani, 2017; Stabbe et al., 2019).
Given the more general effects of higher flexibility, it also seems plausible that flexibility may buffer the negative effects of inflexibility, though this hypothesis has not been directly evaluated.

When considered in the context of additional research, the results of this study add to the understanding of how psychological flexibility is measured and how it may relate to clinical outcomes. Traditionally, measurement of ACT-related constructs has relied on the assumption that psychological flexibility and inflexibility are polar opposites, such that a measure of inflexibility can be used to extrapolate information about flexibility and vice versa. The approach used to construct the MPFI is in contrast to this approach in that flexibility and inflexibility scores are allowed to fluctuate independently. This independence allows for independent evaluation of these constructs, and, as some researchers have previously proposed, the two constructs do not appear to be polar opposites of a single construct (Kashdan & Rottenberg, 2010; McAndrews, Richardson, & Stopa, 2019). Further, the results of this study appear to suggest that psychological flexibility may have less value as a predictor of psychopathology. It is important to note that this study only considered two criterion variables and further research would be necessary to clarify the relationship between psychological flexibility and other pathological outcomes. It also seems equally important to examine the relationship of psychological flexibility with constructs related to psychological health, such as quality of life.

This study adds value to the existing literature in that it provides the first know bifactor analysis of the MPFI and also considers the fit of other relevant models, though it is important to recognize study limitations. The data for this study were collected via Amazon’s MTurk. While research suggests that MTurk is capable of producing high quality data (Chandler & Shapiro, 2016), MTurk samples may not be fully representative of the general population due to the tendency for these samples to be more highly educated and younger than the general population.
(Paolacci & Chandler, 2014). As such, replicating this study in a more representative sample will be important for ensuring generalizability. Additionally, a-priori power analysis was not entirely feasible because the MPFI was a relatively new measure at the time that this study was conducted and there was a lack of existing studies examining the relationship between the domain-specific factors and criterion variables. However, even though sample size recommendations for confirmatory factor analysis vary greatly (Koran, 2016; MacCallum, Widaman, Zhang, & Hong, 1999), MacCallum, Browne, and Sugawara (1996) suggest that the sample size used in the present study is substantially larger than that which is needed to assure power of at least 0.80 for rejecting the hypothesis of close fit if $\varepsilon_a = 0.08$ (see Table 4 in MacCallum et al., 1996).

It is also important to note that the sample for this study was unselected for pathology. Although evidence suggests dimensional, rather than categorical (presence versus absence), conceptualizations of health anxiety and depression, and there was considerable variability in these symptoms in the present sample (e.g., 30% of the sample reported clinically significant health anxiety; Fergus, Kelley, & Griggs 2018), replication of the results of this study in a clinical population, with a thorough assessment of diagnostic history, may be important for ensuring generalizability of findings to those with more severe psychopathology.

To our knowledge, this study is the first to evaluate the factor structure of the MPFI since the original validation study (Rolffs et al., 2018). The results of this study provide clear evidence of strong general factors for each overarching domain (flexibility and inflexibility). Examination of a bifactor model of each of these domains suggests that the majority of the variance in MPFI scores is accounted for by the general factors. In contrast, the domain-specific factors accounted for relatively little variance in MPFI scores. Additionally, the majority of the domain-specific
factors did not exhibit factor determinacy and construct replicability and appear to be largely redundant with their respective general factors. This pattern of results suggests that while continued use of the total scores is warranted, the domain-specific factors may be of little practical value for use as subscale scores and in measurement models. However, the Acceptance and Experiential Avoidance subscales may be exceptions to this larger pattern of results, as both exhibited some evidence of providing information above and beyond their respective general factors. Overall, these results suggest that the MPFI may require further refinement to clearly capture the proposed domain-specific constructs.
References


Footnotes

1At the request of a Reviewer, a model was tested in which all 60 MPFI items were included in the same model. Specifically, flexibility and inflexibility were modeled as two separate higher-order models and the general factors for these two models were allowed to correlate. This model provided adequate fit to the data ($\chi^2 = 3411.42, p < .001; \text{RMSEA} = .04$, 95% CI [.033, .037]; $\text{CFI} = .947; \text{TLI} = .944; \text{SRMR} = 0.074$). Notably, the latent correlation between the two general factors was small to medium in size ($-.22, p < .001$), thus providing additional evidence in support of the distinctiveness of these two constructs.

2Construct replicability and factor determinacy are two of several variables summarized by Rodriguez et al. (2016) to aid in the interpretation of bifactor models. These two indices are particularly relevant for determining the value of subscale scores and their appropriateness for use in measurement models. Factor determinacy provides a measure of how closely factor scores align with true differences in scores on a given factor. In the bifactor model, indeterminate factors may suggest a high degree of variability in scores on that factor whereas determinate factors suggest that observed differences in scores are well-represented for factor scores. Construct replicability, as outlined by Hancock and Mueller (2001) is the idea that a particular set of items may vary in how well it represents a given construct across studies. Thus, the H value allows researchers to determine how well a construct is represented by a measure and the identified model. Higher H values suggest that the identified items are representing the latent variable well. A bifactor calculator was used in the present study to compute these additional bifactor indices (Dueber, 2016). This calculator relies on the processes outlined by Gorsuch (1983) and Hancock and Mueller (2001) to calculate factor determinacy and construct replicability, respectively.
Table 1. Descriptive Statistics and Bivariate Correlations

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<tr>
<th>Factors/Subscales</th>
<th>M</th>
<th>SD</th>
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<td>1) MPFI Flexibility</td>
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<td>2) Present Moment Awareness</td>
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<td>3) Self as Context</td>
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<td>5) Contact with Values</td>
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<td>6) Committed Action</td>
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<td>7) Defusion</td>
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<td>8) MPFI Inflexibility</td>
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<td>11) Experiential Avoidance</td>
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<td>12) Lack of Contact with Values</td>
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<td>13) Inaction</td>
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<td>14) Fusion</td>
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<td>15) WI-6</td>
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<td>16) PHQ-9</td>
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Note. MPFI = Multidimensional Psychological Flexibility Inventory; WI-6 = Whiteley Index-6; PHQ-9 = Patient Health Questionnaire-9.

*p < .05, **p < .01, ***p < .001.
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<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>LL</th>
<th>UL</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
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Note. *$p < .05$, **$p < .01$, ***$p < .001$. 

Table 2. Goodness of Fit Statistics for Tested Models
Table 3. Standardized Factor Loadings for the Bifactor Model for MPFI Flexibility Composite

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<th>Item</th>
<th>General</th>
<th>Acceptance</th>
<th>Present Moment Awareness</th>
<th>Self as Context</th>
<th>Defusion</th>
<th>Values</th>
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Note. All factor loading were significant at \( p < .001 \).
Table 4. Standardized Factor Loadings for the Bifactor Model for MPFI Inflexibility Composite

<table>
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<tr>
<th>Item</th>
<th>General</th>
<th>Experiential Avoidance</th>
<th>Lack of Contact with the Present Moment</th>
<th>Self as Content</th>
<th>Fusion</th>
<th>Lack of Contact with Values</th>
<th>Inaction</th>
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Note. All factor loading were significant at $p < .001$. 
Table 5. Additional Bifactor Indices for the MPFI Inflexibility and Flexibility Composites

<table>
<thead>
<tr>
<th>MPFI Flexibility Composite</th>
<th>$\omega/\omega_S$</th>
<th>$\omega_H/\omega_{HS}$</th>
<th>ECV</th>
<th>H</th>
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<td>Lack of Contact with Values</td>
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<td>Inaction</td>
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</table>

Note. $\omega/\omega_S = \Omega/\Omega_S$; $\omega_H/\omega_{HS} = \Omega_H/\Omega_{HS}$; ECV = explained common variance; H = construct replicability; FD = factor determinacy.
Supplemental Materials

Multidimensional Psychological Flexibility Inventory

Flexibility Composite

Acceptance Subscale
1. I made room to fully experience negative thoughts and emotions, breathing them in rather than pushing them away.
2. When I had an upsetting thought or emotion, I tried to give it space rather than ignoring it.
3. I was receptive to observing unpleasant thoughts and feelings without interfering with them.
4. I tried to make peace with my negative thoughts and feelings rather than resisting them.
5. I opened myself to all of my feelings, the good and the bad.

Present Moment Awareness Subscale
6. I paid close attention to what I was thinking and feeling.
7. I was attentive and aware of my emotions.
8. I was in touch with the ebb and flow of my thoughts and feelings.
9. I was in tune with my thoughts and feelings from moment to moment.
10. I strived to remain mindful and aware of my own thoughts and emotions.

Self-as-Context Subscale
11. I tried to keep perspective even when life knocked me down.
12. When I was scared or afraid, I still tried to see the larger picture.
13. Even when I felt hurt or upset, I tried to maintain a broader perspective.
14. When something painful happened, I tried to take a balanced view of the situation.
15. I carried myself through tough moments by seeing my life from a larger viewpoint.

Defusion Subscale
16. I was able to let negative feelings come and go without getting caught up in them.
17. When I was upset, I was able to let those negative feelings pass through me without clinging to them.
18. When I was scared or afraid, I was able to gently experience those feelings, allowing them to pass.
19. I was able to step back and notice negative thoughts and feelings without reacting to them.
20. In tough situations, I was able to notice my thoughts and feelings without getting overwhelmed by them.

Values Subscale
21. I was very in-touch with what is important to me and my life.
22. I tried to connect with what is truly important to me on a daily basis.
23. I stuck to my deeper priorities in life.
24. Even when it meant making tough choices, I still tried to prioritize the things that were important to me.
25. My deeper values consistently gave direction to my life.

Committed Action Subscale
26. Even when I stumbled in my efforts, I didn’t quit working toward what is important.
27. Even when times got tough, I was still able to take steps toward what I value in life.
28. Even when life got stressful and hectic, I still worked toward things that were important to me.
29. I didn’t let set-backs slow me down in taking action toward what I really want in life.
30. I didn’t let my own fears and doubts get in the way of taking action toward my goals.
Inflexibility Composite

Experiential Avoidance Subscale

1. When I had a bad memory, I tried to distract myself to make it go away.
2. When unpleasant memories came to me, I tried to put them out of my mind.
3. I tried to distract myself when I felt unpleasant emotions.
4. When something upsetting came up, I tried very hard to stop thinking about it.
5. If there was something I didn’t want to think about, I would try many things to get it out of my mind.

Lack of Contact with the Present Moment Subscale

6. I did most things on “automatic” with little awareness of what I was doing.
7. I went through most days on auto-pilot without paying much attention to what I was thinking or feeling.
8. I floated through most days without paying much attention.
9. I did most things mindlessly without paying much attention.
10. Most of the time, I was just going through the motions without paying much attention.

Self-as-Content Subscale

11. I thought some of my emotions were bad or inappropriate and I shouldn’t feel them.
12. I believed some of my thoughts are abnormal or bad and I shouldn’t think that way.
13. I told myself that I shouldn’t be feeling the way I’m feeling.
14. I told myself I shouldn’t be thinking the way I was thinking.
15. I criticized myself for having irrational or inappropriate emotions.

Fusion Subscale

16. Negative thoughts and feelings tended to stick with me for a long time.
17. Distressing thoughts tended to spin around in my mind like a broken record.
18. It was very easy to get trapped into unwanted thoughts and feelings.
19. When I had negative thoughts or feelings, it was very hard to see past them.
20. When something bad happened, it was hard for me to stop thinking about it.

Lack of Contact with Values Subscale

21. My priorities and values often fell by the wayside in my day to day life.
22. The things that I value the most often fell off my priority list completely.
23. When life got hectic, I often lost touch with the things I value.
24. I didn’t usually have time to focus on the things that are really important to me.
25. When times got tough, it was easy to forget about what I truly value.

Inaction Subscale

26. Negative feelings often trapped me in inaction.
27. Getting upset left me stuck and inactive.
28. Negative feelings easily stalled out my plans.
29. Negative experiences derailed me from what’s really important.
30. Unpleasant thoughts and feelings easily overwhelmed my efforts to deepen my life.
Mplus Syntax-CFA Models

Flexibility Composite:

**One Factor Model**

TITLE: Flexibility one factor model
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
USEVARIABLES ARE F1-F30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
FLEX by F1-F30;

OUTPUT: STANDARDIZED MODINDICES(All);

**Correlated Six Factor Model**

TITLE: Flexibility six factor correlated model
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
USEVARIABLES ARE F1-F30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;

OUTPUT: STANDARDIZED MODINDICES (All);
Bifactor Model

TITLE: Flexibility Bifactor
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
USEVARIABLES ARE F1-F30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;
FLEX by F1-F30;

ACCEP WITH PRES @ 0;
ACCEP WITH SELF @ 0;
ACCEP WITH DEF @ 0;
ACCEP WITH VAL @ 0;
ACCEP WITH COM @ 0;
ACCEP WITH FLEX @ 0;
PRES WITH SELF @ 0;
PRES WITH DEF @ 0;
PRES WITH VAL @ 0;
PRES WITH COM @ 0;
PRES WITH FLEX @ 0;
SELF WITH DEF @ 0;
SELF WITH VAL @ 0;
SELF WITH COM @ 0;
SELF WITH FLEX @ 0;
DEF WITH VAL @ 0;
DEF WITH COM @ 0;
DEF WITH FLEX @ 0;
VAL WITH COM @ 0;
VAL WITH FLEX @ 0;
COM WITH FLEX @ 0;

OUTPUT: STANDARDIZED MODINDICES (All);
**Higher Order Model**

TITLE: Flexibility Higher Order  
DATA: FILE IS Flexibility N=827.dat;  

VARIABLE: NAMES ARE F1-F30;  
USEVARIABLES ARE F1-F30;  

ANALYSIS:  
ESTIMATOR=mlr;  

MODEL:  
ACCEP by F1-F5;  
PRES by F6-F10;  
SELF by F11-F15;  
DEF by F16-F20;  
VAL by F21-F25;  
COM by F26-F30;  
FLEX by ACCEP PRES SELF DEF VAL COM;  

OUTPUT: STANDARDIZED MODINDICES (All);
Inflexibility Composite:

**One Factor Model**

TITLE: Inflexibility one factor model
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
USEVARIABLES ARE In1-In30;

ANALYSIS:
ESTIMATOR is MLR;

MODEL:
INFLX by In1-In30;

OUTPUT: STANDARDIZED MODINDICES (ALL);

**Correlated Six Factor Model**

TITLE: Inflexibility six factor correlated model
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
USEVARIABLES ARE In1-In30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;

OUTPUT: STANDARDIZED MODINDICES (All);
Bifactor Model

TITLE: Inflexibility Bifactor
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
USEVARIABLES ARE In1-In30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;
INFLEX by In1-In30;

EXPAV WITH LACK @ 0;
EXPAV WITH CONT @ 0;
EXPAV WITH FUS @ 0;
EXPAV WITH NOVAL @ 0;
EXPAV WITH INACT @ 0;
EXPAV WITH INFLEX @ 0;
LACK WITH CONT @ 0;
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LACK WITH NOVAL @ 0;
LACK WITH INACT @ 0;
LACK WITH INFLEX @ 0;
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CONT WITH NOVAL @ 0;
CONT WITH INACT @ 0;
CONT WITH INFLEX @ 0;
FUS WITH NOVAL @ 0;
FUS WITH INACT @ 0;
FUS WITH INFLEX @ 0;
NOVAL WITH INACT @ 0;
NOVAL WITH INFLEX @ 0;
INACT WITH INFLEX @ 0;

OUTPUT: STANDARDIZED MODINDICES (All);
Higher Order Model

TITLE: Inflexibility Higher Order
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
USEVARIABLES ARE In1-In30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;
INFLEX by EXPAV LACK CONT FUS NOVAL INACT;

OUTPUT: STANDARDIZED MODINDICES (All);
Mplus Syntax-CFA Models Difference Testing

Flexibility Composite:

**Difference Test 1**

**Saving Data from Correlated 6-Factor Model**

TITLE: Flexibility six factor correlated model  
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;  
CATEGORICAL = F1-F30;

ANALYSIS:  
ESTIMATOR is WLSMV;

MODEL:  
ACCEP by F1-F5;  
PRES by F6-F10;  
SELF by F11-F15;  
DEF by F16-F20;  
VAL by F21-F25;  
COM by F26-F30;

OUTPUT: STANDARDIZED MODINDICES (All);  
SAVEDATA: DIFFTEST = DIFF1.DAT;

**Running Difference Test between Correlated 6 Factor Model and One Factor Model**

TITLE: FLEX Diff Test  
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;  
CATEGORICAL = F1-F30;

ANALYSIS:  
ESTIMATOR is WLSMV;  
DIFFTEST IS DIFF1.DAT;

MODEL:  
FLEX by F1-F30;

OUTPUT: STANDARDIZED MODINDICES(All);
Saving Data from Correlated 6-Factor Model

TITLE: Flexibility six factor correlated model
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
CATEGORICAL = F1-F30;

ANALYSIS:
ESTIMATOR is WLSMV;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;

OUTPUT: STANDARDIZED MODINDICES (All);
SAVEDATA: DIFFTEST = DIFF3.DAT;

Running Difference Test between Correlated 6 Factor Model and Higher Order Model

TITLE: Flexibility six factor correlated model
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
CATEGORICAL = F1-F30;

ANALYSIS:
ESTIMATOR is WLSMV;
DIFFTEST IS DIFF3.DAT;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;
FLEX by ACCEP PRES SELF DEF VAL COM;

OUTPUT: STANDARDIZED MODINDICES (All);
Difference Test 3

Saving Data from Bifactor Model

TITLE: Flexibility Bifactor
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
CATEGORICAL = F1-F30;

ANALYSIS:
ESTIMATOR is WLSMV;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;
FLEX by F1-F30;

ACCEP WITH PRES @ 0;
ACCEP WITH SELF @ 0;
ACCEP WITH DEF @ 0;
ACCEP WITH VAL @ 0;
ACCEP WITH COM @ 0;
ACCEP WITH FLEX @ 0;
PRES WITH SELF @ 0;
PRES WITH DEF @ 0;
PRES WITH VAL @ 0;
PRES WITH COM @ 0;
PRES WITH FLEX @ 0;
SELF WITH DEF @ 0;
SELF WITH VAL @ 0;
SELF WITH COM @ 0;
SELF WITH FLEX @ 0;
DEF WITH VAL @ 0;
DEF WITH FLEX @ 0;
VAL WITH COM @ 0;
VAL WITH FLEX @ 0;
COM WITH FLEX @ 0;

OUTPUT: STANDARDIZED
MODINDICES (All);

SAVEDATA: DIFFTEST = DIFF4.DAT;

Running Difference Test between Higher Order Model and Bifactor Model

TITLE: Flexibility Higher Order
DATA: FILE IS Flexibility N=827.dat;

VARIABLE: NAMES ARE F1-F30;
CATEGORICAL = F1-F30;

ANALYSIS:
ESTIMATOR is WLSMV;
DIFFTEST IS DIFF4.DAT;

MODEL:
ACCEP by F1-F5;
PRES by F6-F10;
SELF by F11-F15;
DEF by F16-F20;
VAL by F21-F25;
COM by F26-F30;
FLEX by ACCEP PRES SELF DEF VAL COM;

OUTPUT: STANDARDIZED
MODINDICES (All);
Inflexibility Composite:

**Difference Test 1**

**Saving Data from Correlated 6-Factor Model**

TITLE: Inflexibility six factor correlated model

DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;

OUTPUT: STANDARDIZED MODINDICES (All);
SAVEDATA: DIFFTEST = DIFF1.DAT;

**Running Difference Test between Correlated 6 Factor Model and One Factor Model**

TITLE: INFLEX Diff Test
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;
DIFFTEST IS DIFF1.DAT;

MODEL:
INFLEX by In1-In30;

OUTPUT: STANDARDIZED MODINDICES(All);
Difference Test 2

Saving Data from Correlated 6-Factor Model

TITLE: Inflexibility six factor correlated model
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;

OUTPUT: STANDARDIZED MODINDICES (All);
SAVEDATA: DIFFTEST = DIFF3.DAT;

Running Difference Test between Correlated 6 Factor Model and Higher Order Model

TITLE: Inflexibility six factor correlated model
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;
DIFFTEST IS DIFF3.DAT;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;
INFLEX by EXPAV LACK CONT FUS NOVAL INACT;

OUTPUT: STANDARDIZED MODINDICES (All);
Difference Test 3

Saving Data from Bifactor Model

TITLE: Inflexibility Bifactor
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;
INFLEX by In1-In30;

EXPAV WITH LACK @ 0;
EXPAV WITH CONT @ 0;
EXPAV WITH FUS @ 0;
EXPAV WITH NOVAL @ 0;
EXPAV WITH INACT @ 0;
EXPAV WITH INFLEX @ 0;
EXPAV WITH INFLEX @ 0;
LACK WITH CONT @ 0;
LACK WITH FUS @ 0;
LACK WITH NOVAL @ 0;
LACK WITH INACT @ 0;
LACK WITH INFLEX @ 0;
CONT WITH FUS @ 0;
CONT WITH NOVAL @ 0;
CONT WITH INACT @ 0;
CONT WITH INFLEX @ 0;
FUS WITH NOVAL @ 0;
FUS WITH INFLEX @ 0;
NOVAL WITH INACT @ 0;
NOVAL WITH INFLEX @ 0;
INACT WITH INFLEX @ 0;

OUTPUT: STANDARDIZED
MODINDICES (All);

SAVEDATA: DIFFTEST = DIFF4.DAT;

Running Difference Test between Higher Order Model and Bifactor Model

TITLE: Inflexibility Higher Order
DATA: FILE IS Inflexibility N=827.dat;

VARIABLE: NAMES ARE In1-In30;
CATEGORICAL = In1-In30;

ANALYSIS:
ESTIMATOR is WLSMV;
DIFFTEST IS DIFF4.DAT;

MODEL:
EXPAV by In1-In5;
LACK by In6-In10;
CONT by In11-In15;
FUS by In16-In20;
NOVAL by In21-In25;
INACT by In26-In30;
INFLEX by EXPAV LACK CONT FUS NOVAL INACT;

OUTPUT: STANDARDIZED
MODINDICES (All);
Mplus Syntax-Structural Regressions

Flexibility Composite:

**Structural Regression with WI-6**

TITLE: Flexibility Structural Regression with WI
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPFI1-MPFI30, WI1-WI6;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:
gfactor by MPFI1-MPFI30;
accep by MPFI1 MPFI2 MPFI3 MPFI4 MPFI5;
pres by MPFI6 MPFI7 MPFI8 MPFI9 MPFI10;
self by MPFI11 MPFI12 MPFI13 MPFI14 MPFI15;
def by MPFI16 MPFI17 MPFI18 MPFI19 MPFI20;
val by MPFI21 MPFI22 MPFI23 MPFI24 MPFI25;
com by MPFI26 MPFI27 MPFI28 MPFI29 MPFI30;

wi by WI1, WI2, WI3, WI4, WI5, WI6;

accep with pres@0;
accep with self@0;
accep with def@0;
accep with val@0;
accep with com@0;
pres with self@0;
pres with def@0;
pres with val@0;
pres with com@0;
self with def@0;
self with val@0;
self with com@0;
def with val@0;
def with com@0;
val with com@0;

OUTPUT: STAND;
Structural Regression with WI-6
Iteration 2

TITLE: Flexibility Structural Regression with WI
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPFI1-MPFI30, WI1-WI6;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:
gfactor by MPFI1-MPFI30;

accep by MPFI11 MPFI12 MPFI13 MPFI14 MPFI15;
pres by MPFI16 MPFI17 MPFI18 MPFI19 MPFI10;
sel by MPFI111 MPFI112 MPFI113 MPFI114 MPFI15;
def by MPFI116 MPFI117 MPFI118 MPFI119 MPFI20;
val by MPFI121 MPFI122 MPFI123 MPFI124 MPFI25;
com by MPFI126 MPFI127 MPFI128 MPFI129 MPFI30;

wi by WI1, WI2, WI3, WI4, WI5, WI6;

accep with pres@0;
accep with self@0;
accep with def@0;
accep with val@0;
accep with com@0;

self with val@0;
self with com@0;
def with val@0;
def with com@0;
val with com@0;

wi ON gfactor;
wi ON accep;

OUTPUT: STAND;
Structural Regression with PHQ-9

TITLE: Flexibility Structural Regression with PHQ
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPFI1-MPFI30, PHQ1-PHQ8;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:
gfactor by MPFI1-MPFI30;

accep by MPFI1 MPFI2 MPFI3 MPFI4 MPFI5;
pres by MPFI6 MPFI7 MPFI8 MPFI9 MPFI10;
sel by MPFI11 MPFI12 MPFI13 MPFI14 MPFI15;
def by MPFI16 MPFI17 MPFI18 MPFI19 MPFI20;
val by MPFI21 MPFI22 MPFI23 MPFI24 MPFI25;
com by MPFI26 MPFI27 MPFI28 MPFI29 MPFI30;

phq by PHQ1, PHQ2, PHQ3, PHQ4, PHQ5, PHQ6, PHQ7, PHQ8;

accep with pres@0;
accep with sel@0;
accep with def@0;
accep with val@0;
accep with com@0;
pres with sel@0;
pres with def@0;
pres with val@0;
pres with com@0;
sel with def@0;
sel with val@0;
sel with com@0;
def with val@0;
def with com@0;
val with com@0;
gfactor with accep@0;
gfactor with pres@0;
gfactor with sel@0;
gfactor with def@0;
gfactor with val@0;
gfactor with com@0;
gfactor with phq@0;
phq ON gfactor;

OUTPUT: STAND;
Structural Regression with PHQ-9
Iteration 2

TITLE: Flexibility Structural Regression with PHQ Round 2
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPFI1-MPFI30, PHQ1-PHQ8;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:
gfactor by MPFI1-MPFI30;
accep by MPFI1 MPFI2 MPFI3 MPFI4 MPFI5;
pres by MPFI6 MPFI7 MPFI8 MPFI9 MPFI10;
self by MPFI11 MPFI12 MPFI13 MPFI14 MPFI15;
def by MPFI16 MPFI17 MPFI18 MPFI19 MPFI20;
val by MPFI21 MPFI22 MPFI23 MPFI24 MPFI25;
com by MPFI26 MPFI27 MPFI28 MPFI29 MPFI30;

phq by PHQ1, PHQ2, PHQ3, PHQ4, PHQ5, PHQ6, PHQ7, PHQ8;

accep with pres@0;
accep with self@0;
accep with def@0;
accep with val@0;
accep with com@0;
pres with self@0;
pres with def@0;
pres with val@0;
pres with com@0;
gfactor with accep@0;
gfactor with pres@0;
gfactor with self@0;
gfactor with def@0;
gfactor with val@0;
gfactor with com@0;
gfactor with phq@0;
phq ON gfactor;
phq ON accep;

OUTPUT: STAND;
Inflexibility Composite:

**Structural Regression with WI-6**

TITLE: Inflexibility Structural Regression WI

DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPII1-MPII30, WI1-WI6;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:

gfactor by MPII1-MPII30;
expav by MPII1 MPII2 MPII3 MPII4 MPII5;
lack by MPII6 MPII7 MPII8 MPII9 MPII10;
cont by MPII11 MPII12 MPII13 MPII14 MPII15;
fus by MPII16 MPII17 MPII18 MPII19 MPII20;
noval by MPII21 MPII22 MPII23 MPII24 MPII25;
inact by MPII26 MPII27 MPII28 MPII29 MPII30;
wi by WI1, WI2, WI3, WI4, WI5, WI6;

expav with lack@0;
expav with cont@0;
expav with fus@0;
expav with noval@0;
expav with inact@0;

lack with cont@0;
lack with fus@0;
lack with noval@0;
lack with inact@0;

cont with lack@0;
cont with inact@0;
fus with noval@0;
fus with inact@0;
noval with inact@0;

gfactor with expav@0;
gfactor with lack@0;
gfactor with cont@0;
gfactor with fus@0;
gfactor with noval@0;
gfactor with inact@0;

gfactor with wi@0;

wi ON gfactor;
wi ON expav;
wi ON lack;
wi ON cont;
wi ON fus;
wi ON noval;
wi ON inact;

OUTPUT: STAND;
TITLE: Inflexibility Structural Regression PHQ
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, W11-W16;
USEVARIABLES ARE MPII1-MPII30, PHQ1-PHQ8;

ANALYSIS:
ESTIMATOR IS MLR;

MODEL:
gfactor by MPII1-MPII30;
expav by MPII1 MPII2 MPII3 MPII4 MPII5;
lack by MPII6 MPII7 MPII8 MPII9 MPII10;
cont by MPII11 MPII12 MPII13 MPII14 MPII15;
fus by MPII16 MPII17 MPII18 MPII19 MPII20;
noval by MPII21 MPII22 MPII23 MPII24 MPII25;
inact by MPII26 MPII27 MPII28 MPII29 MPII30;

phq by PHQ1, PHQ2, PHQ3, PHQ4, PHQ5, PHQ6, PHQ7, PHQ8;

phq ON gfactor;
phq ON expav;
phq ON lack;
phq ON cont;
phq ON fus;
phq ON noval;
phq ON inact;

OUTPUT: STAND;
MPFI Complete Model as Suggested by Reviewer

TITLE: MPFI model all items
DATA: FILE IS MPFI Data for Structural Regression N=827.dat;

VARIABLE:
NAMES ARE MPFI1-MPFI30, MPII1-MPII30, PHQ1-PHQ8, WI1-WI6;

USEVARIABLES ARE MPFI1-MPFI30, MPII1-MPII30;

ANALYSIS:
ESTIMATOR=mlr;

MODEL:
ACCEP by MPFI1-MPFI5;
PRES by MPFI6-MPFI10;
SELF by MPFI11-MPFI15;
DEF by MPFI16-MPFI20;
VAL by MPFI21-MPFI25;
COM by MPFI26-MPFI30;
EXPAV by MPII1-MPII5;
LACK by MPII6-MPII10;
CONT by MPII11-MPII15;
FUS by MPII16-MPII20;
NOVAL by MPII21-MPII25;
INACT by MPII26-MPII30;
Flex by accep pres self def val com;
inflex by expav lack cont fus noval inact;

FLEX WITH INFLEX;

OUTPUT: STANDARDIZED MODINDICES (All);