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The Meta-Mood Experience: Exploring the One-, Three-, and Four-Factor Models of the Trait Meta-Mood Scale

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The Meta-Mood Experience: Exploring the One-, Three-, and Four-Factor Models of the Trait Meta-Mood Scale

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Introduction

- The meta-mood experience involves “thinking about mood, examining the relation between mood and thoughts, maintaining good moods, and altering bad moods” (Mayer & Gaschke, 1988). Meta-mood can help individuals have a better grasp of what they are feeling at different times.
- The 30-item Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) measures the extent to which people attend to, distinguish among, and regulate their mood and emotions.
- Salovey et al. (1995) found three factors (Emotional Attention, Clarity, and Repair), while Palmer et al. (2003) found evidence for a fourth but left it unnamed.
- We named the fourth factor in our study Emotional Susceptibility because this factor looks at how easily influenced the participants are in regard to their mood and emotions.
- Censoring occurs when the value of a variable is only partially known (Gijbels, 2010). If there are a significant number of people that are scoring 1 on an item, there could be left-censoring. This is because low scores on the item fail to reflect low levels of the dimension that is being measured.
- Our study aimed to determine whether the one-factor, three-factor, or four-factor model fits the data the best when we assumed that participants may have censored values on some of the TMMS items.

Method

- 202 participants were recruited from a Subject Pool of undergraduate students from General Psychology (PSY 101) or Research Methods (PSY 240). They each received three research credits as compensation. The demographic was 65 males and 137 females with ages ranging from 18 to 49 ($M = 22.70$, $SD = 6.29$). 116 participants identified as White, 20 as Black, 20 as Hispanic, 32 as Asian, 1 as Native American, and 13 as “other”.
- We assessed a general factor model, Salovey et al.’s (1995) original 3-factor model and Palmer et al.’s (2003) four-factor model. The three-factor model consists of the following factors: Attention, Clarity, and Repair. Items under the Attention factor consist of questions on how much attention participants pay to their mood and emotions. Items under the Clarity Factor consist of questions on how clear they are on their mood and emotions. Items under the Repair factor are questions on how well the participants can regulate their mood and emotions. The four-factor model will use factors Attention, Clarity, Repair, Emotional Susceptibility. See Table 1 for item-factor relationships
- Participants’ demographic information and responses to the TMMS were completed online. They were asked (but not required) to complete the study in UNLV computer labs. Participants completed these measures during the first of two testing sessions. The session took approximately 1.5 hours to complete.

Results

- For the results of our study, we found the four-factor model to be the best model of fit which was determined by having the lowest AIC and BIC values (See Table 2). The four-factor showed that even though it had more variation compared to the one- and three-factor models, it was the better fit.

Table 1

Confirmatory Factor Analysis

| Model | AIC | BIC |
|-------|----------|----------|
| 1 | 15067.46 | 15671.31 |
| 3 | 14583.70 | 15221.10 |
| 4 | 14021.00 | 14688.56 |

Note: AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion

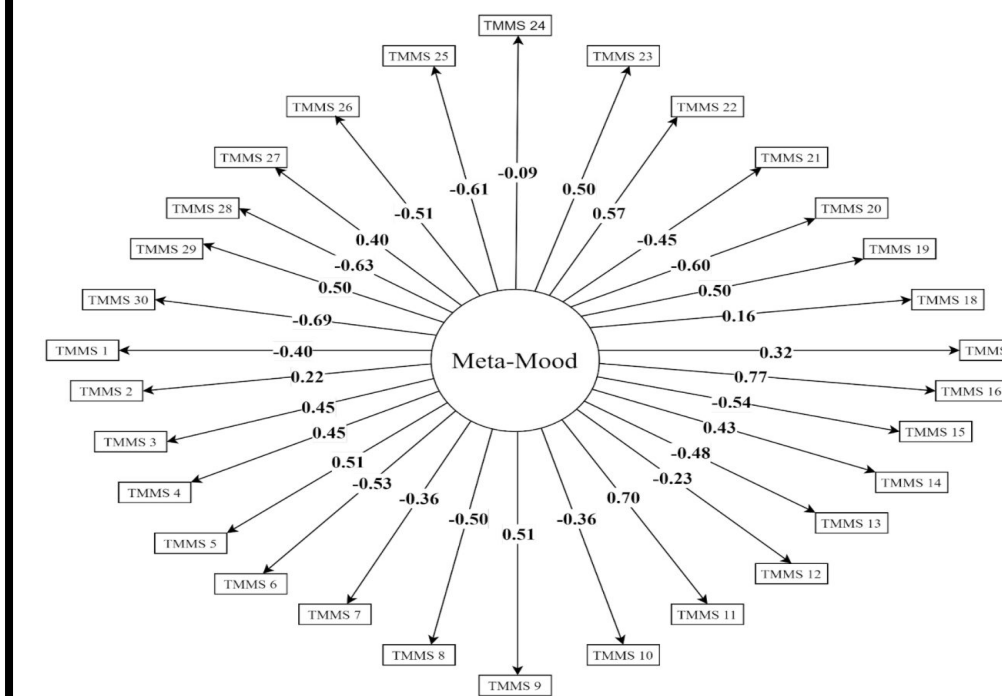
The four-factor model fits the data the best when we assume that participants may have censored values on some of the Trait Meta-Mood Scale items

Discussion

- We provided additional support for Palmer et al.’s four-factor model while assuming some data points might be censored.
- To better capture the breadth of meta-mood experience, we recommend TMMS users calculate scale scores based upon all four factors.
- One limitation of our study was that we did not use absolute measures of fit. Instead, we used AIC and BIC, which are relative fit statistics.
- Another limitation was that our sample being primarily recruited from the UNLV Psychology Subject Pool. As such, our sample is not truly a random sample or an accurate representation of the general populace.
- Future research can focus on obtaining a random sample that is more diverse and not just psychology students that are doing it for research credit.
- Future researchers could also calculate scale scores based upon the four-factor model. The scale scoring for the fourth factor can focus on items such as 8, 19, 21, and 24, which all fall under more than one factor.
- Future researchers could use absolute measures of fit to analyze the factor models directly to determine model fit rather than comparing them indirectly by their AIC and BIC values. This can be achieved by using a different statistical program such as MPlus.

Figure 1

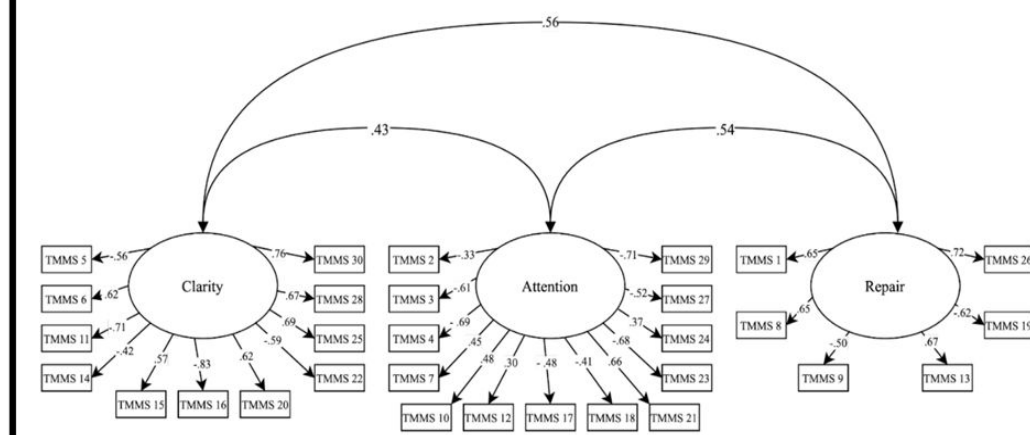
General Factor Model



Note. Depicts the item loadings and factor correlations between the one-factor and the TMMS items

Figure 2

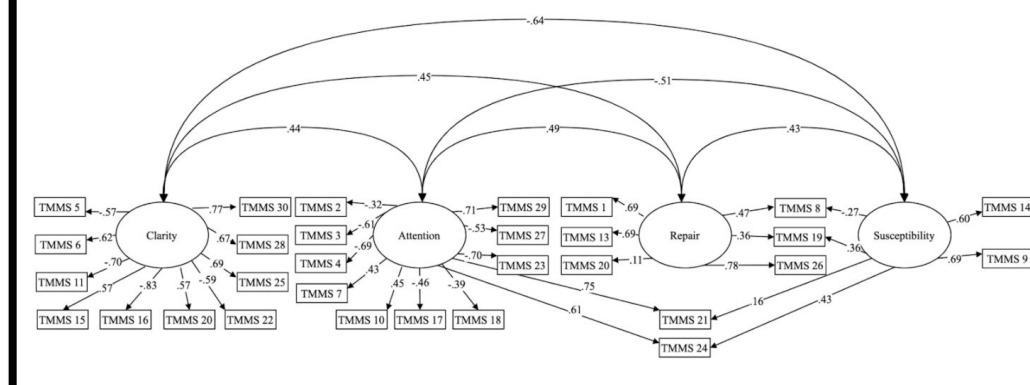
Three-Factor Model (Salovey et al., 1995)



Note. Depicts the item loadings and inter-factor correlations for the three-factor model

Figure 3

Four Factor Model (Palmer et al., 2003)



Note. Depicts the item loadings and inter-factor correlations for the four-factor model