



Development and Validation of a Self-Report Measure of Ambivalence Toward Change

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Introduction

► Readiness for change is widely recognized as a strong predictor of successful behavioral change. However, many psychotherapies (e.g., CBT) assume that clients are ready to change and fail to address the ambivalence about change that clients may bring to therapy. Motivational interviewing, psychodynamic, and process-experiential therapies directly target ambivalence, but a reliable and valid measure of this construct is needed for researchers to study whether decreases in ambivalence are associated with better outcomes. The availability of such a measure would also enable research on the role of ambivalence in therapies that do not directly target it.

► Most measures of ambivalence have used a decisional balance (DB) format constructed for one particular problem; there does not exist a standardized DB measure that can be adapted for use across a wide variety of problems. Additionally, most DB measures are exclusively cognitive, not accounting for emotional components of ambivalence that may increase predictive validity.

► To develop a measure of ambivalence that addresses these problems, two studies were conducted:

Study 1: Development of Emotion Scale

Method

Participants were 99 undergraduate students (age range 18-32). Each participant was asked to identify a difficult change or decision that he or she was currently trying to make, and then to rate how strongly he or she was experiencing each of 60 emotions relating to that change or decision.

Results

► Principal components factor analysis using varimax rotation yielded two strong emotion factors, which accounted for 51.09% of the variance in scores. We characterized these factors as Negative Affect (NA) and Positive Affect (PA).

► This resulted in an 11-item emotion scale with high internal consistency reliability:

Negative Affect items

nervous
frustrated
cautious
confused
worried

Cronbach's $\alpha = .813$

Positive Affect items

optimistic
ambitious
determined
enthusiastic
hopeful
strong

Cronbach's $\alpha = .817$

Study 2: Format Selection and Concurrent Validity

Method

Participants were a different sample of 390 undergraduates (age range 18-38). Again, each participant was asked to identify a difficult change or decision that he/she was currently trying to make. The following measures were administered:

- Either an open-ended (N = 195) or a closed-ended (N = 195) decisional balance questionnaire
- The emotion scale developed in Study 1
- Five "change-related questions" regarding constructs that have been linked with ambivalence (previous failures to change, mixed feelings, rumination, confidence, and commitment)

For the decisional balance portion, subjects who received the open-ended format generated their own reasons for and against change and rated the strength of each, while subjects who received the closed-ended format rated a list of 40 reasons that had been gathered or constructed for the questionnaire.

Examples of closed-ended "Pro" items

- "I will feel better about myself if I make this change."
- "Others will think more highly of me if I succeed in making this change."

Examples of closed-ended "Con" items

- "I am too busy to do the things I need to do in order to make this change."
- "I don't like admitting to myself that I need to make this change."

Results

► The closed-ended decisional balance format demonstrated high internal consistency

- Cronbach's $\alpha_{Pros} = .884$
- Cronbach's $\alpha_{Cons} = .876$

► While the open-ended format did not permit traditional reliability analyses, comparisons of sets of open- and closed-ended items suggested that the open-ended format was the less reliable.

► The emotion scale also showed high internal consistency

- Cronbach's $\alpha_{PA} = .869$
- Cronbach's $\alpha_{NA} = .802$

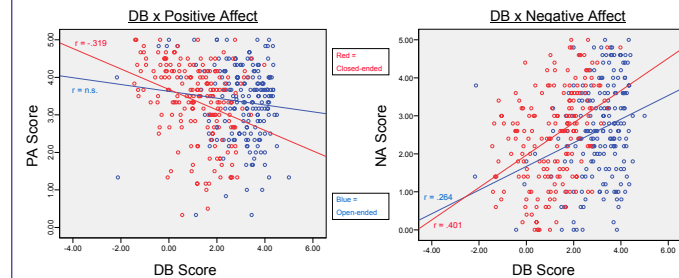
Results (cont'd)

A total decisional balance score (DB) was calculated for each participant using the formula suggested by previous research:

$$DB = [(Pros + Cons)/2] - |Pros - Cons|$$

with higher DB scores reflecting greater ambivalence.

- DB scores were significantly higher for the open-ended format than for the closed-ended format, $t(385) = -16.37, p < .001$
- DB correlated positively with NA and negatively with PA.
- These correlations were larger for the closed-ended format than the open-ended format (trend for NA; significant difference for PA).



Hierarchical regression analyses with both formats indicated that:

- DB scores significantly predicted the five change-related questions.
- Adding the emotion scales to the model significantly increased explained variance ($p < .001$ for both formats):
 - without emotion scales: $R^2_{closed} = .346$; $R^2_{open} = .097$
 - with emotion scales: $R^2_{closed} = .417$; $R^2_{open} = .429$

Conclusions

► The closed-ended decisional balance measure showed high internal consistency and significantly predicted participants' answers to questions about change.

► The addition of the empirically-derived emotion scale improved its predictive ability.

► Although further research is necessary, these data suggest that we have made a promising start to developing a measure of ambivalence toward change.

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