Age-Related Differences in Profiles of Mood Change Trajectories
Jennifer Tehan Stanley and Derek M. Isaacowitz
Brandeis University - Waltham, MA

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ABSTRACT
Older adults often display better emotion regulation skills than young adults (e.g., Blanchard-Fields, 2007; Gross et al., 1997). The extent to which there are subgroups of older adults who are less effective at regulating their emotions is less well known. The aim of the present study was to identify and characterize different subgroups of adults who exhibit distinct trajectories of mood change across a relatively short time period. Young and older adults were induced into a positive, negative, or neutral mood and then viewed emotional-neutral face pairs while continuously rating their mood. A cluster analysis suggested four distinct subgroups of mood change trajectories. Consistent with past work, more older adults belonged to the most positive mood group. However, the most negative mood group was also comprised of more older adults than young adults. Overall, the results suggest that there is a subgroup of older adults who are more likely to exhibit a negative mood.

RESEARCH QUESTIONS
1. Are there different trajectories of mood change?
2. What are the profile characteristics of participants who exhibit different mood change trajectories?
3. Do all older adults exhibit a positive mood trajectory?

HYPOTHESES
1. We expected several different trajectories of mood change to emerge, reflecting different initial moods and differences in the degree to which moods changed during the experimental task.
2. We expected that individuals who belonged to the most positive subgroups would have better cognitive, perceptual, and attentional functioning and more positive affective scores compared with the more negative subgroups.
3. Consistent with past work, we expected more OAs than YAs to belong to the most positive groups.

METHOD
Procedure
Mood Induction: Positive, Negative, or Neutral
Continuous Music Technique (Eich & Metcalfe, 1989)
Synthetic Face Pairs (Isaacowitz et al., 2006; Wilson et al., 2002)
272 Emotional (anger, fear, happy, sad) + Neutral Face Pairs
Watch slideshow naturally, as if you were watching TV at home
Prompted randomly throughout ~25 min. slide show to rate current mood with potentiometer (0 = worst; 100 = best)

Measures & Materials
Clustering Variables
14 mood ratings across ~25 min. (standardized into Z-scores)
Correlates
Demographic Variables
Age, Gender, Health (1 = poor, 5 = excellent), Education
Attentional Functioning
Attentional Network Test (ANT; Fan et al., 2002)
Cognitive Functioning
Processing Speed: WAIS Digit Symbol (Wechsler, 1981)
Short-Term Memory: WAIS Digit Span (Wechsler, 1981)
Affect Measures
State-Trait Anxiety Inventory (STAI; Spielberger, 1983)
Neuroticism Questionnaire (Bolger & Schilling, 1991)
Gaze Preferences
Fixation = 100 ms+ within 1° visual angle (Manor & Gordon, 2003)
Ratio Scores: (emotional – neutral) / (emotional + neutral)
4 Ratio Scores: Anger, Fear, Happy, Sad

RESULTS
We used a two-step clustering procedure (Hair & Black, 2000):
• First, we applied a hierarchical method with squared euclidean distances to help determine the theoretically and statistically appropriate number of clusters.
• Second, a non-hierarchical method (k-means) was applied to optimize cluster membership assignment.

1. Trajectories of Mood Change
Based on information from the cubic clustering criterion, change in coefficients, and the Pseudo F statistic, as well as conceptual considerations, we chose four as the ideal number of clusters.

METHOD (continued)

RESULTS (continued)

CONCLUSIONS
Consistent with past work suggesting that older adults are better emotion regulators than young adults, there were more older adults in the most positive group. Surprisingly, older adults were also more likely than young adults to belong to the most negative group. The characteristics of the negative group, although correlational, suggest that some adults may be hindered by fewer resources (e.g., slower processing speed) to devote toward regulating their emotions, and affective barriers such as greater anxiety, that may render the task more difficult. Overall, the results suggest that some older adults do experience and maintain negative emotions over a short time period, even more so than young adults. Future research should investigate the implications of this variability in mood change trajectories amongst older adults and whether this is a reflection of adaptive functioning or a potential indicator of dysfunction.

Note. These data come from a larger study; portions of which appeared in Isaacowitz et al., 2008 and Larcom & Isaacowitz, 2008.