Looking as Young as You Feel: Financial Stress Can Make You Look Older

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BACKGROUND
- There is evidence that different facets of subjective age are related to physical and psychological health. Feeling younger (than one's chronological age) is associated with better physical health (e.g., Barrett, 2003; Bowling, See-Tai, Ebrahim, Gabriel, & Solanki, 2005; Westerhof et al., 2003). Those who look younger than their actual age are actually healthier (e.g., Zebrowitz, 1997).
- Stress has been identified as a key contributor to poor health (e.g., Rice, 1999).
- There is evidence at the cellular level (telomere, hair follicle) that chronically stressed people have older "biological ages" (e.g., Simon et al., 2006; Trüeb, 2009).
- "Stress is a graying force" (Scharf & Shippee, 2010).
- Based on photographs of U.S. presidents at the beginning and end of their terms, some have suggested that stress can lead to premature aging (Sellors, 2009). Is it normal aging or extra stress?

RESEARCH GOALS
1. Examine multiple components of subjective age (feel and look) in younger, middle-aged, and older men and women.
2. Examine the longitudinal associations between perceived stress and subjective age.

CURRENT STUDY
- Three facets of subjective age measured at two occasions, between 8 and 10 years apart:
  - feel age - how old people say they feel
  - self-rated look age - how old people think they look
  - other-rated look age - how old people are perceived by others
- Multiple sources of stress: health, cognition, social relations, and finance & work.

METHOD
- **Participants**
  - Boston Longitudinal Study (BOLOS) = subsample of Midlife in the United States (MIDUS) national longitudinal study conducted in 1995-1996 and 2004-2005 (Rodler & Ryff, 2010)
- Time 1 (T1): N = 302, age range: 24 - 74 years (M = 47.89, SD = 13.74)
- Time 2 (T2): N = 151, age range: 34 - 84 years (M = 59.99, SD = 12.81)

MEASURES
- **Sociodemographic variables**
  - level of education in years (range 6 - 20) at T1: M = 14.82, SD = 2.76 household total income level in dollars

Subjective age variables
- **Feel Age**
  - I feel as though I am ___ years old.
- **Self-rated Look Age**
  - I look as though I am ___ years old.
- **Other-rated Look Age** (Photograph Ratings)

Photograph Ratings Study
Raters: N = 19
- Age range: 17-79 (M = 40.95, SD = 27.01)
- Younger raters (N = 11): M = 18.82 (SD = 1.25; range 17-22)
- Older raters (N = 8): M = 71.38 (SD = 6.80; range 58-79)

Stimuli: Front view pictures: photos randomly presented on the computer (T1 and T2 intermixed)
- 228 pictures (T1)
- 107 pictures (T2)
- 101 pictures (T1 + T2)

Questions:
- **Age:** What age do you think this person is?
  - Please rate each photo on the following scale, compared to other people of about the same age: 1 (not at all attractive) to 7 (very attractive).
- Note: for attractiveness, the actual age of the person in the photograph was also presented on the screen.

Computed Scores: average across all raters

Self-rated Health (MIDUS, T1)
- In general, would you say your physical health is 1 (poor), 2 (fair), 3 (good), 4 (very good), or 5 (excellent)?

Perceived Stress (BOLOS, T1 & T2)

DOMAINS:
1. **Health**
   - How much stress you experience in each of these areas: moving as quickly as you need to, physical appearance, vision, hearing, weight, health, sexual relations, mental health, lack, hair, sleep, energy level, stamina (1 = None, 2 = A little, 3 = Some, 4 = A lot)
2. **Cognition**
   - How much stress you experience in each of these areas: memory, learning, things, thinking as quickly as you need to
3. **Social Relations**
   - How much stress you experience in each of these areas: children, spouse/partner, parents, home/residence, neighborhood, friends, hobbies/leisure
4. **Work/Finances**
   - How much stress you experience in each of these areas: job, money

Computed Scores: average between T1 & T2 for each domain

RESULTS

Subjective Age in Younger, Middle-aged, and Older Men and Women
Model: 3 (age groups: younger (25-39), middle-aged (40-59), older (60-75)) x 2 (sex) ANOVA with repeated measures on subjective age measure
Outcomes: feel age, self-rated look age, and other-rated look age

Key Findings:
- Overall, participants are perceived as looking older than they think they look; participants feel younger that they think they look
- Younger participants feel younger, think they look younger, and are perceived as looking younger than the middle-aged participants. The same pattern applies to the differences between middle-aged and older participants.
- Women had significantly lower values of subjective age than men.
- For younger participants, there is no significant difference between how old they feel and how old they think they look.

Follow-up analysis: we added two additional items for each of the financial and work stress measures and decided to examine these domains separately.

Financial Stress (3 items):
1. How much stress do you have over your finances?
2. In general, would you say you (and your family) have more money than you need, just enough for your needs, or not enough to meet your needs?
3. How difficult is it for you (and your family) to pay your monthly bills? (from not at all difficult to very difficult)

Work Stress (3 items):
1. How much stress do you have over your job?
2. In the past 12 months, did you have any serious ongoing problems getting along with someone at work? (Yes/No)
3. Have you had any other serious ongoing stress at work - things like consistently extreme work demands, major changes, or uncertainties that most people would consider highly stressful? (Yes/No)

Computed Scores: average between T1 & T2

DISCUSSION

**Perceived Stress and Change in Subjective Age**

Multiple regressions with subjective age at T2 as outcome

**Predictor**
- Feel Age
- Self-rated Look Age
- Other-rated Look Age

**Outcome**
- Other-rated Look Age
- Feel Age
- Self-rated Look Age

**Key Findings**
- Higher stress over work/financials was positively associated with change in other-rated look age.
- When we conducted a follow-up analysis to examine financial and work stress separately, higher financial stress, but not work stress, was positively associated with change in other-rated look age. Participants were perceived as looking older at T2 than at T1, but this difference was greater for those with higher levels of financial stress.

**Change in other-rated look age over 8-10 years as a function of work/financial stress.**

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