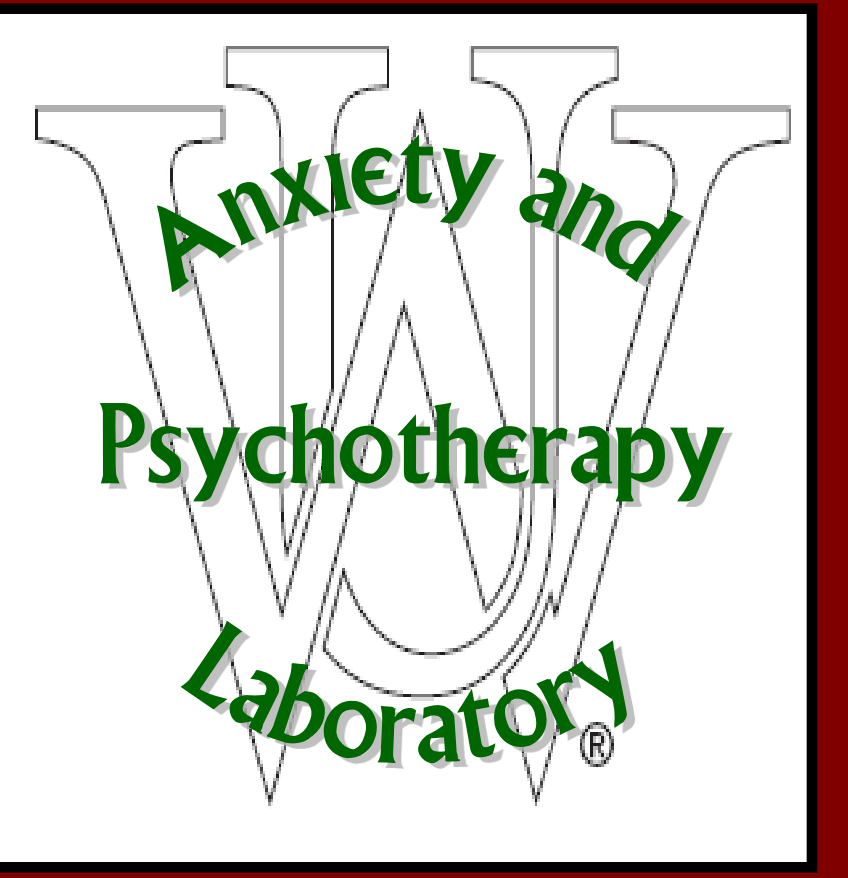




# Social Appearance Anxiety may be a Pathway between Perceived Flaws in Appearance and Body Dissatisfaction and Social Anxiety Symptoms Over Time

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## Abstract

**Introduction:** Social anxiety and eating disorders are highly comorbid (Pallister & Waller, 2008). However, the common pathways to these disorders are still unknown. Perceived flaws in appearance have been proposed as a possible core fear in social anxiety disorder (Moscovitch, 2009) and appearance concerns are central in the eating disorders (Rieger et al., 2010).

**Method:** We tested if social appearance anxiety (SAA) mediated the relationship between perceived flaws in appearance and social anxiety and body dissatisfaction both cross-sectionally and over time ( $N = 97$ ;  $N = 86$ ,  $N = 61$ ).

**Results/Discussion:** We found that cross-sectionally, SAA mediated the relationship between perceived flaws in appearance and social anxiety symptoms. We also found that SAA significantly mediated the relationship between perceived flaws in appearance and body dissatisfaction. We did not find that these results replicated over time.

## Introduction

- Social anxiety disorder (SAD) is highly comorbid with eating disorders (Godart et al., 2000)
- Perceived flaws in appearance have been proposed as a possible core fear in SAD (Moscovitch, 2009)
- Appearance concerns are central in eating disorders (Rieger et al., 2010)
- Social appearance anxiety (SAA) is *fear of negative evaluation of one's appearance* (Hart et al., 2008)
- SAA is a shared vulnerability for social anxiety and disordered eating in cross-sectional research (Levinson & Rodebaugh, 2012)
- Do evaluation concerns about perceived flaws in appearance lead to SAA, which in turn leads to social anxiety and/or body dissatisfaction?

## Measures

- **Social Appearance Anxiety Scale (SAAS)** (Hart et al., 2008)
  - Contains 16 items regarding anxiety about one's appearance in social situations
  - Demonstrates a unifactorial structure with high test-retest reliability
  - Positively associated with measures of social anxiety and a unique predictor of social anxiety over and above body image measures
- **Negative Self-Portrayal Scale (NSPS)** (NSPS; Moscovitch & Huyder, 2011)
  - Assesses the extent to which individuals are concerned about specific self-attributes viewed as deficient being exposed to evaluation by others
- 3 factors measuring concerns about (a) social competence (b) physical appearance and (c) signs of anxiety
- Good internal consistency, convergent and discriminant validity
- We used the subscale assessing concerns about physical appearance
- **S-Social Interaction Anxiety Scale (S-SIAS)** (S-SIAS; Mattick & Clarke, 1998; Rodebaugh, Weeks, & Heimberg, 2007)
  - Describes anxiety-related reactions to a variety of social situations
  - Good to excellent reliability, and good construct and convergent validity (see Heimberg & Turk, 2002, for a review)
  - For analyses, the reverse-scored items are dropped (Rodebaugh, Woods, & Heimberg, 2007)
- **Social Phobia Scale (SPS)** (SPS; Mattick & Clarke, 1998)
  - 20-item measure that assesses *fear of scrutiny*
  - Good to excellent reliability and ability to discriminate between social phobia and other disorders
- **Eating Disorder Inventory-2 (EDI-2)** (EDI-2; Garner et al., 1983)
  - 91-item measure assesses symptoms of bulimia and anorexia nervosa
  - In the current study the body dissatisfaction subscale was used

## Participants

- Participants were
  - Undergraduate women at a Midwestern University
  - Mostly Caucasian ( $n = 62$ , 63.9%) with a mean age of 18.77 ( $SD = 1.08$ )
- Ongoing longitudinal study with data collection at 4 time points
  - Time 1 ( $N = 97$ )
  - Time 2 ( $N = 86$ ): 2-3 months later
  - Time 3 ( $N = 61$ ): 6 months later

## Analyses

- Structural equation modeling was implemented using the maximum likelihood estimator and bootstrapping in the Mplus program Version 7 (Muthen & Muthen, 1998-2012)
- Model fit was evaluated using
  - Comparative fit index (CFI; Bentler, 1990)
  - Tucker-Lewis incremental fit index (TLI; Tucker & Lewis, 1973)
  - Root mean square error of approximation (RMSEA; Steiger & Lind, 1980)
- We used a standardized composite of the S-SIAS and SPS for a measure of *social anxiety symptoms*

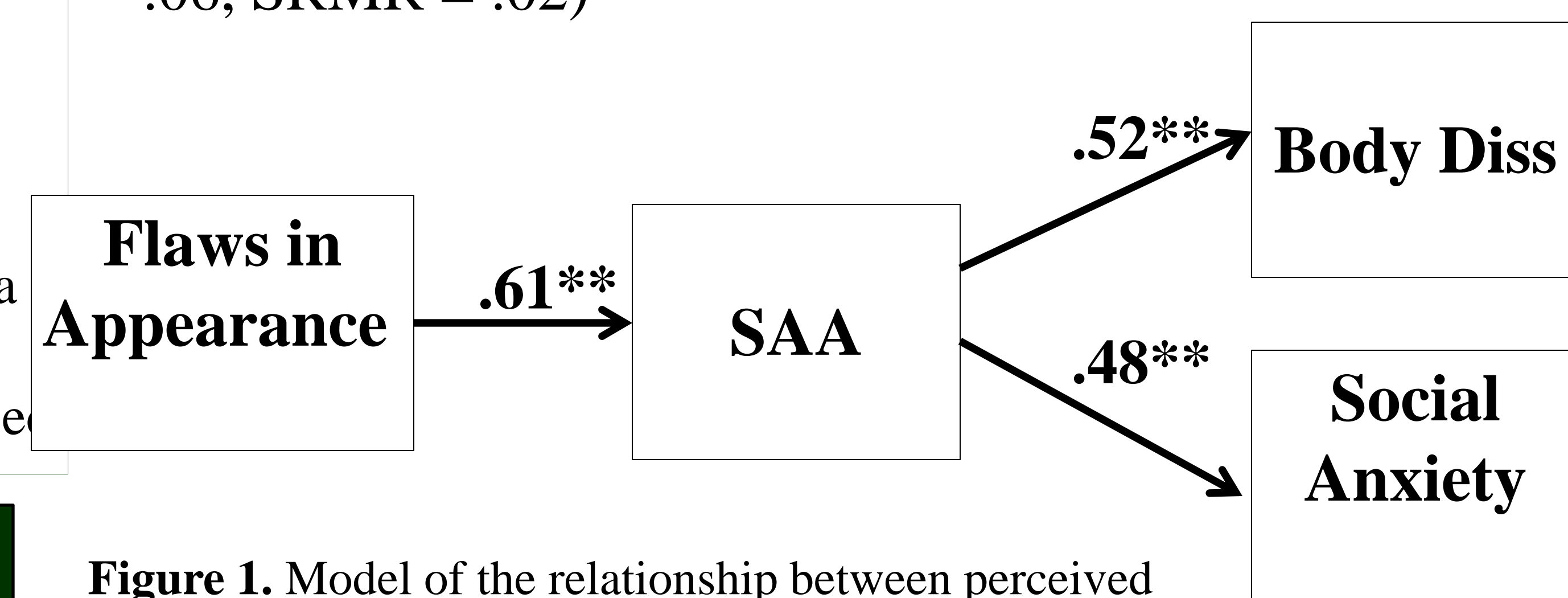
## Results

### Cross-Sectional (At Time 1)

- Mediation
  - SAA significantly mediated (95% CI of indirect effect: .10 to 2.59) the relationship between perceived flaws in appearance and social anxiety symptoms
  - SAA significantly mediated (95% CI of indirect effect: .37 to .98) the relationship between perceived flaws in appearance and body dissatisfaction

### Structural Equation Model (see Figure 1)

- Exhibited excellent fit (CFI = .99, TLI = .99, RMSEA = .06, SRMR = .02)



**Figure 1.** Model of the relationship between perceived flaws in appearance, social appearance anxiety, body dissatisfaction, and social anxiety symptoms. Flaws in appearance = perceived flaws in appearance; SAA = Social Appearance Anxiety; Body Diss = Body Dissatisfaction, \*\*  $p < .001$

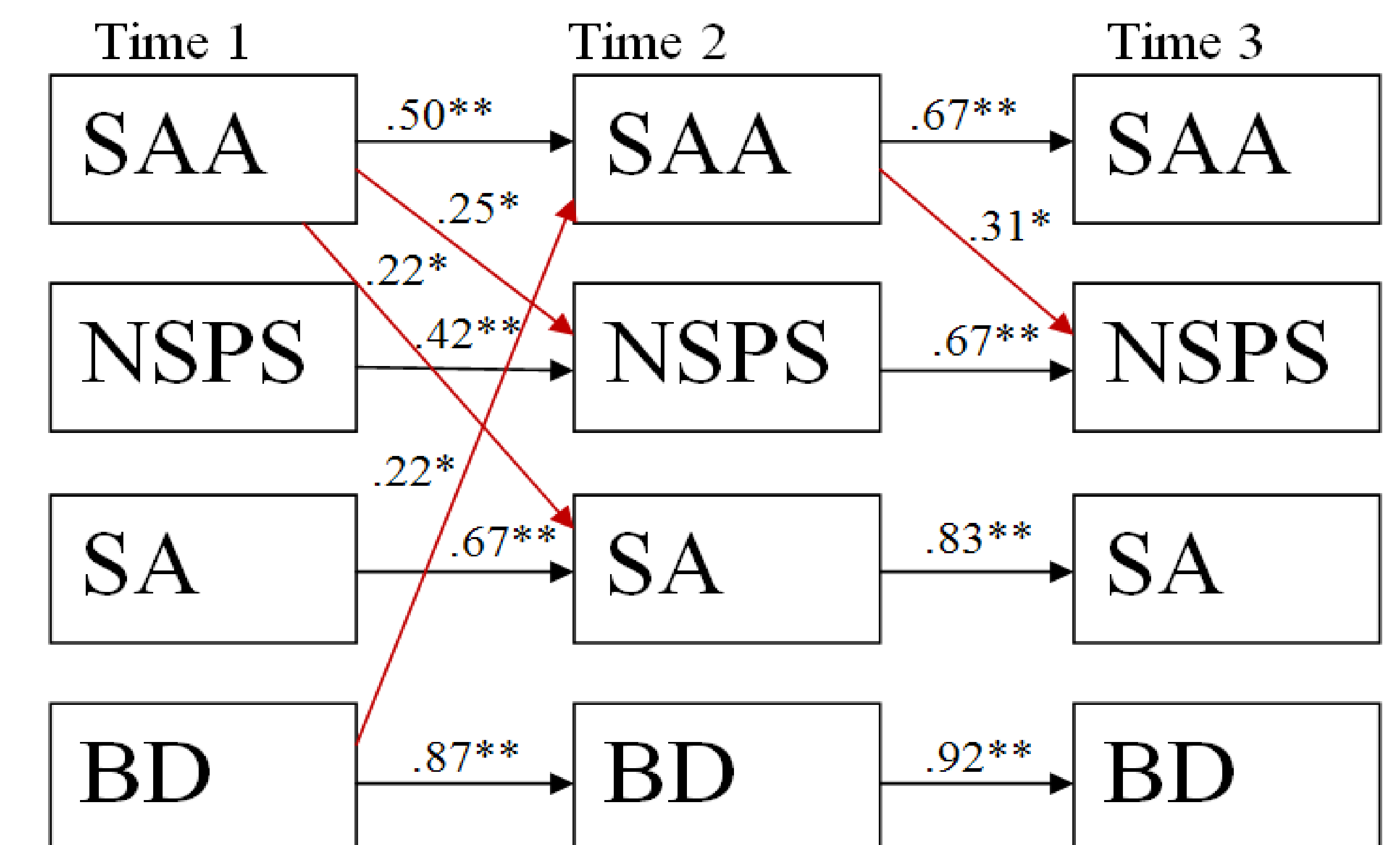
### Longitudinal Results

- Mediation
  - We tested if T2 SAA mediated the relationship between T1 perceived flaws in appearance and T3 body dissatisfaction and social anxiety

## Longitudinal Results Continued

- T2 SAA did not mediate the relationship between T1 perceived flaws in appearance and T3 body dissatisfaction (95% CI of indirect effect: -.102 to .066)
- T2 SAA did not mediate the relationship between T1 perceived flaws in appearance and T3 social anxiety symptoms (95% CI of indirect effect: -.021 to .018)

### Structural Equation Model (Figure 2)



**Figure 2.** Only significant paths shown. SAA = social appearance anxiety scale; NSPS = perceived appearance flaws; SA = social anxiety; BD = body dissatisfaction. \*  $p < .05$ ; \*\*  $p < .001$

## Discussion

- In cross-sectional data SAA significantly mediated the relationship between evaluation concerns about perceived flaws in appearance and body dissatisfaction and social anxiety
  - This result did not replicate in longitudinal data, which is consistent with research on mediation methodology (Maxwell & Cole, 2007)
- Over time
  - Body dissatisfaction predicted social appearance anxiety
  - SAA predicted perceived flaws about appearance
  - SAA predicted social anxiety symptoms