

## Background

There exists a problem amongst teachers with regards to psychological adjustment and persistence, with approximately 40% of teachers estimated to leave the teaching occupation within their first five years (Rones, 2011). Burnout has been identified as an outcome of occupational stress (Antonioni, Polychroni, & Vlachakis, 2006; Blase, 1982; Kokkinos, 2007, Kyraicou, 1987; Manassero et al., 2006; McCormick & Shi, 1999) and research on burnout suggests that attrition may be due to a lack of psychological resources required to persist when the difficulties of one's work become excessive (Schwarzer & Hallum, 2008).

Previously researched motivational predictors of burnout in teachers have generally fallen into two categories focusing on perceived competence or expectancy (e.g., self-efficacy, Woolfolk Hoy et al., 2009) and value-related constructs such as goals (Butler & Shibaz, 2008), intrinsic motivation (Taylor & Ntoumanis, 2007), and specific instructional objectives (Banville, Desrosier, & Genet-Volet, 2002). Additionally, recent work has explored teachers' emotions (anxiety, anger and enjoyment) based on Pekrun's control-value theory of achievement emotions that postulates that emotions mediate the effects of motivational variables on subsequent adjustment, persistence, and performance. Finally, in an effort to evaluate the effects of motivational constructs on teachers' physical health, recent research has found that teachers with high levels of self-efficacy to exhibit reduced cortisol responses and report fewer cardiac complaints (Schwerdtfeger, Konermann, & Schonhofen, 2008).

Whereas these research efforts are consistent with a traditional expectancy-value perspective of achievement motivation (see Wigfield, Tonks, & Klauda, 2009), research exploring role of higher-order motivational constructs in predicting adjustment outcomes is presently lacking. One specific self-protective strategy previously explored in prior research based on Heckhausen's theory are social comparisons that, according to Festinger (1954), typically involves comparing oneself with worse-off others. According to work by Heckhausen (2010) and Festinger (1954), downward social comparisons have been typically found to serve as a self-protective strategy.

The present study evaluated the effects of social comparison strategies on illness symptoms in Canadian teachers. Consistent with Pekrun's theory, teachers' emotions were further evaluated as a mediator of the effects of motivational variables on health outcomes.

## Methods

### Participants and Procedure

Practicing teachers ( $N = 536$ , 85% female) were recruited from Quebec and Ontario via mass emails from school principals and teaching union representatives to complete a web-based questionnaire consisting of demographic and motivation measures. Roughly equivalent numbers of primary ( $n = 258$ ), secondary ( $n = 216$ ) and junior college teachers (Quebec grades 12-13;  $n = 31$ ) were obtained.

### Measures

**Social Comparisons.** Three 2-item measures evaluating social comparisons were adapted from Hasse et al. (2008) to assess downward comparisons ( $M = 3.0$ ,  $SD = 1.0$ ; sample item: "When I experience teaching setbacks, I remind myself that I am better off than other teachers in many ways"), horizontal comparisons ( $M = 3.3$ ,  $SD = .89$ ; sample item: "When I have difficulties with my students, I keep in mind that other teachers are struggling too"), and upward comparisons ( $M = 3.7$ ,  $SD = 9.2$ ; sample item: "When I experience teaching difficulties, I remind myself of successful teachers who overcame similar setbacks"; 1 = *strongly disagree* to 5 = *strongly agree*).

**Teacher Emotions Scale.** A 4-point Likert measure (Frenzel, 2009) was used to assess teachers' activity-related emotions of anxiety (four items;  $M = 1.7$ ,  $SD = .65$ ,  $\alpha = .76$ ; e.g., "I feel uneasy when I think about teaching") and enjoyment (four items;  $M = 3.5$ ,  $SD = .50$ ,  $\alpha = .76$ ; e.g., "I generally enjoy teaching") as per Pekrun's control-value theory, as well as the outcome-related emotion of anger (four items;  $M = 1.4$ ,  $SD = .51$ ,  $\alpha = .77$ ; e.g., "I often feel annoyed while teaching") as per Weiner's attribution theory (1 = *strongly disagree* to 4 = *strongly agree*).

**Illness Symptoms Scale.** A 5-point Likert measure was used to assess teachers' illness symptoms (revised from Cohen and Hoberman, 1983;  $\alpha = .82$ ; e.g., "sleep problems"; 1 = *not at all in a week* to 5 = *5 or more times in a week*).

## Analysis and Results

A structural equation model (SEM) was evaluated to evaluate the hypothesized directional relationships between social comparisons, emotions, and illness symptoms in teachers. SEM analyses included both direct paths from social comparisons to illness symptoms and indirect paths from social comparisons to illness via emotions.

Fit indices showed the hypothesized model to have satisfactory fit ( $CFI = .916$ ,  $RMSEA = .041$ ). First, upward social comparisons directly predicted both better emotional adjustment (lower anxiety, lower anger and higher enjoyment) and fewer illness symptoms. Moreover, upward social comparisons also indirectly predicted lower illness symptoms through beneficial effects on anxiety (see Figure 1). Conversely, horizontal social comparisons were found to have direct *negative* effects on teachers' emotional well-being (higher anger and anxiety, lower enjoyment) and predict more illness symptoms. Finally, downward social comparisons was not found to significantly predict any of the emotion variables or illness symptoms.

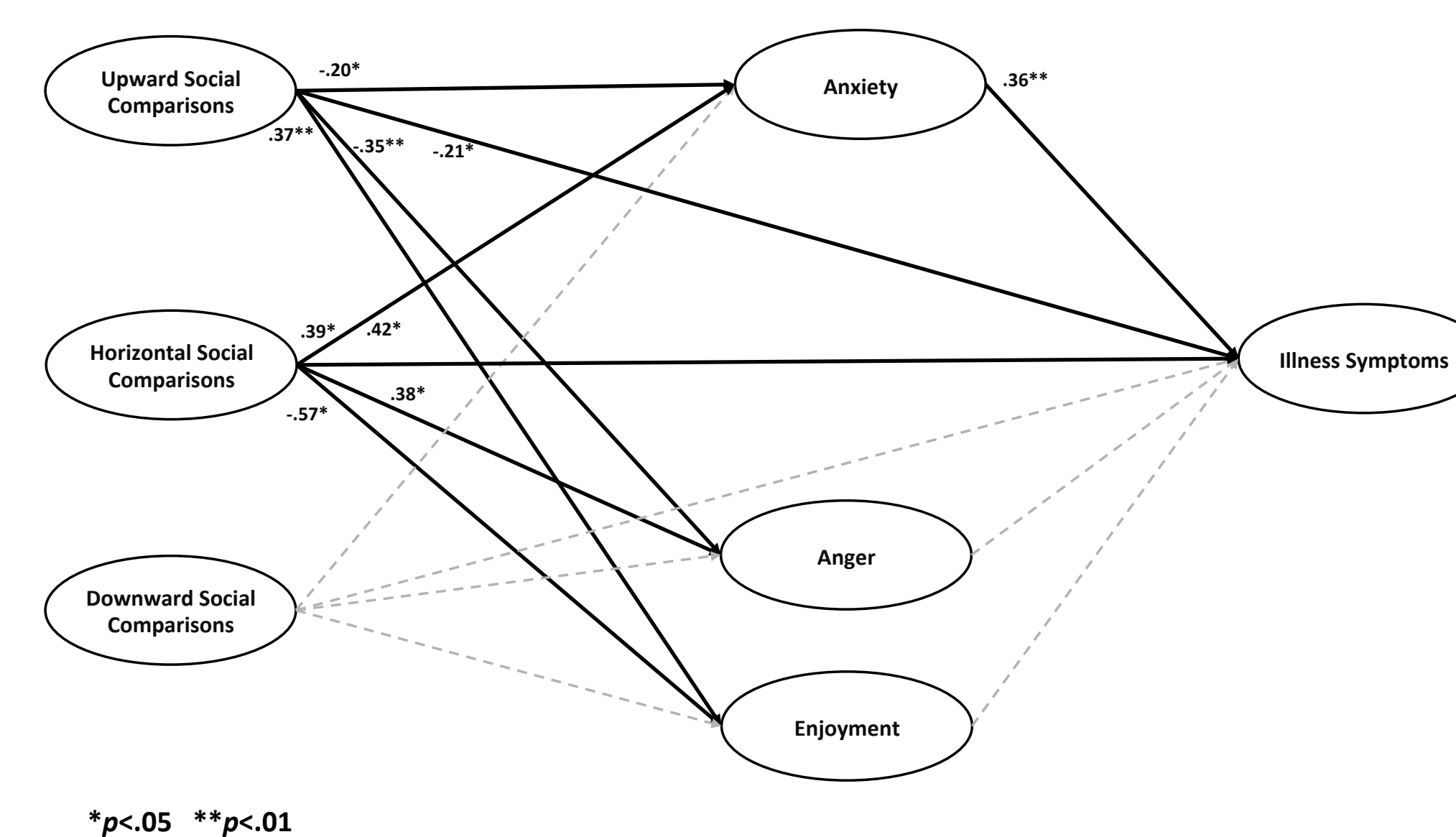


Figure 1. Structural equation model of social comparison effects on illness symptoms through emotions.

## Discussion

Consistent with previous research, upward comparisons were by far the most effective motivational strategy for teachers with respect to emotional adjustment, and were the only type of social comparison strategy to predict lower illness symptoms. These results are consistent with theoretical assertions that self-efficacy in teachers can be facilitated through vicarious experience, which entails watching others act as role models in educational settings (Tschannen-Moran et al., 1998). In contrast, horizontal comparisons were maladaptive for teachers in predicting poorer emotional well-being and physical health. This finding is inconsistent with recent research showing teachers' feelings of belongingness to be positively associated with adjustment (Skaalvik & Skaalvik, 2011), suggesting that commiserating over one's failings as a teacher is not equivalent to feeling accepted by one's peers.

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