

The Role of Humor Styles in the Clark and Wells Model of Social Anxiety

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Abstract

Clark and Wells propose that the social anxiety components of fear of negative evaluations, self-focused attention, stress and negative affect, can all contribute to heightened social anxiety. We suggest that social anxiety may also be influenced by the humor style typically employed by an individual. Ninety-four first year undergraduate students completed scales assessing their fear of negative evaluations, humor styles, positive and negative affect, stress, focus of attention and social phobia. Results showed that low affiliative humor use provided an additional contribution to the prediction of heightened social anxiety, above and beyond the social anxiety components of the Clark and Wells model. In addition, high self-defeating humor use, in combination with higher levels of perceived stress and negative affect, resulted in greater social anxiety. As such, the possible role of both affiliative and self-defeating humor in a modified version of the Clark and Wells model of social anxiety was then discussed.

Keywords: social anxiety, humor styles, fear of negative evaluations, negative affect, stress.

The Role of Humor Styles in the Clark and Wells Model of Social Anxiety

This study considers how various humor styles may play a role in social anxiety. Past research has shown that the adaptive styles of affiliative and self-enhancing humor are related to lower depression and anxiety (Kuiper, Grimshaw, Leite, & Kirsh, 2004; Martin, Puhlik-Doris, Larsen,

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Gray & Weir, 2003). Affiliative humor is a non-hostile style of humor that includes jokes and banter; and is used to enhance relationships, group cohesion and reduce conflict (Martin 2007). This adaptive humor style is also related to higher extraversion, cheerfulness, psychological well-being, and perceived control. In turn, self-enhancing humor is a positive coping strategy whereby individuals employ a humorous outlook on life as a means to enhance self-esteem and reduce negative emotions, without negatively impacting others. Past research has shown that this humor style is positively related to openness to experience, psychological well-being, and perceived control; and negatively related to anxiety (Kuiper, 2012). In contrast, the maladaptive styles of self-defeating and aggressive humor are damaging to the self or others. Self-defeating humor belittles the self in order to hide negative emotions and to gain approval from others. This maladaptive humor style is positively related to neuroticism and is negatively related to psychological well-being and self-esteem. Finally, aggressive humor is defined as humor that is used to put down others and occurs in the form of teasing, ridicule and sarcasm. Recent work suggests that these different humor styles also have important implications for social appraisals and evaluations from others (Kuiper, Aiken, & Pound, in press; Kuiper, Kirsh, & Leite, 2010). In particular, individuals who engage in adaptive humor (self-enhancing and affiliative) are viewed more positively and experience less social rejection, in comparison with those who use maladaptive humor styles (self-defeating, aggressive). Overall, these findings suggest that differential links may also exist between the various humor styles and social anxiety. We explore this proposal in more detail below, following a brief overview of a prominent theoretical-empirical model of social anxiety.

The Clark and Wells Model of Social Anxiety

Social anxiety usually emerges during mid-adolescence, and affects approximately 10% of the population (MacKenzie & Fowler, 2013). Social anxiety is characterized by fear of negative evaluations by others in social situations, combined with excessive worry and overly negative self-judgments. Social anxiety is also accompanied by heightened negative affect and social avoidance behaviors, often leading to social isolation. In their model, Clark and Well's (1995)

have proposed that a heightened fear of negative evaluations increases stress, negative affect, and negative self-focused attention, which can then lead to greater social anxiety

Fear of Negative Evaluations. Individuals with a heightened fear of negative evaluations place a strong emphasis on being evaluated positively. However they assume that other people are inherently critical and will evaluate them negatively. As a result, negative automatic thoughts are activated, leading to most social situations being perceived as negative and threatening (Clark & Wells, 1995).

Perceived Stress. Intense fear of negative evaluations eventually leads an individual to perceive all social situations as stressful, creating a negative heightened state of fear (Wells, 2000). Distress about this negative state enhances thoughts of losing regulatory control over emotions and behaviors, which could then become visible to others in the form of anxiety, fulfilling the fear of being evaluated negatively. Research has shown that these maladaptive thoughts and beliefs do contribute to negative evaluations by others. Gee, Antony, Koerner, and Aiken (2012), for example, found that socially anxious individuals, who appeared anxious to others, received much more negative judgments concerning their social ability.

Negative Affect. The fear of negative evaluations also generates a negative affective state. In turn, this heightens a negative self-focus which then impacts negatively on the ability to communicate with others. This reduction in the ability to perform effectively in social situations increases the likelihood of developing social anxiety.

Excessive Self-Focused Attention. Individuals with a heightened fear of negative evaluations focus on internally generated information and excessively monitor their own behaviors (Clark & Wells, 1995). This self-focus increases awareness of anxiety related symptoms and decreases awareness of many aspects of the external environment. As such, this negative self-focused attention leads to the development of a negative social interaction schema, which then casts most social situations as being personally threatening and dangerous.

The Role of Humor in Social Anxiety

Little is yet known about how the humor styles may also contribute to social anxiety, above and beyond the effects of the more established social anxiety components in the Clark and Wells model. Nor is much known about how these social anxiety components, such as perceived

stress or negative affect, may combine with humor styles in meaningful ways to contribute to social anxiety. As described in more detail below, the present study extends previous humor and social anxiety research by empirically testing a combined integrative model of social anxiety.

Affiliative Humor. Affiliative humor involves spontaneous, non-hostile witty banter that enhances relationships and reduces tension. This humor style facilitates positive emotions, feelings of ease and creates a lighthearted, positive environment. Individuals who utilize affiliative humor feel better about social experiences, as well as themselves. As such, affiliative humor facilitates social bonding, which can then help to buffer any detrimental effects of fear of negative evaluations (Kuiper, 2012). In addition, it should be noted that heightened negative affect and stress is generally incompatible with the conditions that encourage affiliative humor use. Instead, these individuals devote their cognitive resources to dealing with negative internal states, rather than focusing on environmental and communication cues that would facilitate the use of affiliative humor (Kuiper, Klein, Vertes & Maiolino, 2014).

Furthermore, the laughter and mirth that occurs as part of affiliative humor use enhances a positive affective state, facilitating the social sharing of positive emotions (Kuiper et al., 2014). The positive emotions associated with affiliative humor also foster a more resilient and positive self-concept, which then disconfirms a negative social interaction schema and helps enhance mastery in social situations. As such, heightened negative affect and stress may prevent the use of affiliative humor as a mode to share and emotionally regulate negative arousal. This may reduce social support and lead to greater rumination and focus on negative emotions, ultimately resulting in increased levels of social anxiety.

Self-Enhancing Humor. Self-enhancing humor is an adaptive coping strategy in which the individual maintains a humorous outlook on life, despite adversity or stress. This humor style involves cognitive flexibility to help restructure stressful situations as positive challenges, rather than negative threats (Kuiper, 2012). However, since the heightened social anxiety components in an individual (such as fear of negative evaluations, self-focused attention, negative affect and, stress) consume considerable cognitive resources inward, this prevents external situational reappraisals through the use of self-enhancing humor. In turn, this

reduction in the use of self-enhancing humor leads to the loss of an effective coping tool to deal with negative emotions, decreasing social support and increasing social isolation (Kuiper et al., in press), resulting in greater social anxiety.

Self-Defeating Humor. To deal with heightened negative arousal and stress, an individual may use self-defeating humor. Individuals who engage in this humor style employ jokes to belittle themselves, in an attempt to gain approval from others. Initially these individuals may seem witty or amusing, with this humor style drawing upon and reinforcing their negative assumptions about the self in social situations. Unfortunately, the reoccurring use of self-defeating humor also helps to build and transmit a *persona* of emotional neediness and low self-esteem. This makes others less likely to want to engage in future encounters with those using self-defeating humor (Kuiper et al., 2010). In turn, this increase in social isolation ultimately leads to a detrimental loss of opportunities to socially share emotions with others (Kuiper et al., 2014), ultimately exacerbating social anxiety.

Aggressive Humor. Aggressive humor, such as teasing and ridicule, tends to alienate others and impair social relationships (Kuiper et al., 2010). As such, the social isolation that occurs as a result of aggressive humor could potentially limit the social sharing of positive and negative emotions, and thus increase social anxiety. However, prior research has generally failed to find a relationship between aggressive humor and anxiety (Kuiper et al., 2004; Martin 2007). Thus, although aggressive humor is also considered in the present study, it is not expected that this humor style will contribute significantly to social anxiety.

Moderating Effects of Humor

Previous research suggests that self-defeating humor may be especially pertinent to social anxiety, as it is related to increased levels of shyness, loneliness, decreased self-esteem and social intimacy (Kuiper, 2012; Kuiper et al., 2014; Martin, 2007). Although this humor style is utilized with the intention of facilitating social relationships, it is ultimately not well received and may alienate oneself from others, leading to feelings of loneliness. This is consistent with interpersonal models of social anxiety that suggest that socially anxious individuals desire close relationships, but then impair these relationships by engaging in maladaptive behaviors that are consistent with their negative view of the self. As such, we expected that high levels of self-

defeating humor will increase the strength of the relationship between the various social anxiety components of the Clark and Wells model and our social anxiety outcome measures. For example, heightened levels of negative affect or stress, coupled with higher levels of self-defeating humor use, should interact significantly to result in the highest levels of social anxiety.

The Present Study

In this study we propose that the humor styles have a unique additional role when predicting social anxiety. This prediction is based on the proposal that heightened social anxiety components also have important implications for the use of adaptive and maladaptive humor styles, and thus the onset and maintenance of social anxiety. Greater self-focused attention, for example, may prevent the cognitive flexibility that is required for the effective use of self-enhancing humor, which then limits opportunities for social sharing of positive and negative emotions, contributing to greater social anxiety. Additionally, negative arousal and stress may inhibit the positive affective state that is required for the effective use of affiliative humor, also contributing to greater social anxiety. Greater negative arousal and stress may also facilitate the use of maladaptive coping strategies, such as self-defeating humor, that ultimately leads to social isolation and increased levels of social anxiety. In summary, we expected that low levels of affiliative and self-enhancing humor and high levels of self-defeating humor would contribute to the prediction of heightened social anxiety, above and beyond the effects attributable to the social anxiety components in the Clark and Wells model. To test this proposal, we conducted several multiple regression analyses to predict social anxiety levels, entering first the Clark and Wells social anxiety components and then the four humor styles. The second goal of this study was to determine if self-defeating humor serves as a moderator between the social anxiety components in the Clark and Wells (1995) model of social anxiety and social anxiety levels. Here, we suggested that individuals with a heightened fear of negative evaluations will use maladaptive coping techniques that will not be well received by others, and thus experience more social isolation. One of these ineffectual techniques is the increased use of self-defeating humor to re-engage with others, and win their approval. To test this proposal, we used moderator analysis to determine whether the relationship between the

social anxiety components in the Clark and Wells model and social anxiety outcome measures would be significantly moderated by level of self-defeating humor use (low versus high). Here, we expected that the relationship between social anxiety components and social anxiety outcomes would be significantly stronger when self-defeating humor use was high.

Method:

Participants

Ninety-four undergraduate students (74 females and 20 males), enrolled in introductory psychology courses at the University of Western Ontario, participated in this study. These participants were recruited using standard sign-up procedures. Each participant received research credit. Ages ranged from 17 to 28 years ($M = 18.96$, $SD = 2.23$).

Clark and Wells Social Anxiety Component Measures.

Brief Fear of Negative Evaluations (BFNE: Leary, 1983). The BFNE consists of 12 items, each assessed on a 5-point Likert scale ranging from 1 (*very uncharacteristic of me*) to 5 (*very characteristic of me*). Example items include “I worry about what people will think of me even when I know it doesn't make any difference” and “I am very upset when I commit a social error”. The 12 BFNE items correlate highly with the full scale FNE measure ($r = .96$). The BFNE also demonstrates acceptable levels of validity and internal reliability.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS consists of 20 adjectives, divided into two 10-item subscales assessing positive and negative affect, respectively. Each adjective was rated in terms of the respondent having experienced that characteristic during the past week. Items were assessed on a 5-point Likert scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Positive affect adjectives included ‘interested’, ‘excited’ or ‘enthusiastic’. Negative affect adjectives included ‘distressed’, ‘hostile’ and ‘afraid’. Psychometric properties of both PANAS subscales are quite acceptable, and indicate that positive and negative affect are generally independent dimensions.

Focus of Attention Questionnaire (FAQ; Chambless & Glass, 1984). The FAQ consists of 10 questions, divided across two subscales, which assess either self-focused or other-focused attention. Items on each subscale are rated on a 5-point Likert scale ranging from 1 (*I pay no attention to this item*) to 5 (*I pay total attention to this item*). Self-focused attention involves paying close attention to one's own behavior in social situations. An example item is "I was focusing on what I would do or say next". Other-focused attention involves paying close attention to one's social partner or the environment. An example item is "I was focusing on what the other person was saying or doing". The FAQ was originally designed to be administered immediately following a social task. In the present study, however, participants were instructed to think of a recent social encounter when completing the FAQ. Both the self and other-focused scales have acceptable psychometric characteristics.

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The PSS consists of 14 items used to assess the degree to which individuals appraise their lives as being unpredictable, uncontrollable and overwhelming. Items were rated on a 5-point Likert scale ranging from 0 (*I never experienced this particular thought*) to 4 (*I often experience this particular thought*). Example items are "In the last month, how often have you felt nervous or stressed?" or "In the last month, how often have you felt that you were on top of things?" Psychometric properties of the PSS are appropriate, with good internal consistency, test-retest reliability and convergent validity.

Humor Style Measures

Humor Styles Questionnaire (HSQ; Martin et al., 2003). The HSQ consists of 32 items that are divided into four scales of 8 items each, assessing affiliative, self-enhancing, aggressive and self-defeating humor. Items were rated on a 7-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). Example items are: "I laugh and joke a lot with my friends" (affiliative humor); "If I'm feeling depressed, I can usually cheer myself up with humor" (self-enhancing humor); "If

someone makes a mistake, I will often tease them about it” (aggressive humor) and; “I let people laugh at me or make fun at my expense more than I should” (self-defeating humor). The psychometric properties of the HSQ are good, with factor analytic work clearly indicating four distinct humor styles.

Social Anxiety Outcome Measures

Social Phobia Scale and Social Interaction Anxiety Scale (SPS & SIAS; Mattick & Clarke, 1998).

These two scales were jointly created in order to assess two main aspects of social anxiety, namely fear of scrutiny by others in performance situations and a fear of social interaction. Each scale consists of 20 items, with each item rated on a 4-point Likert Scale ranging from 1 (*statement is not at all characteristic of me*) to 4 (*statement is extremely characteristic of me*). Example items from the SPS and SIAS are, respectively, “I fear I may blush when I am with others” and “I am nervous mixing with people I do not know well”. Test-retest reliabilities for both scales are very good. The SPS and SIAS can also discriminate well between those with social anxiety and those with other types of anxiety. Prior work has found that three factors underlie SIAS and SPS responses, namely, interaction anxiety, anxiety about being observed by others and fear that others will notice anxiety symptoms (Safren, Turk & Heimberg, 1998). These factor scores were also used in the present study.

Procedure

Participants were randomly assigned and tested in small groups of 15 to 20. After completing an informed consent form, participants were administered a booklet of questionnaires, with each booklet in a different randomized order. The study took approximately 30-40 minutes to complete, with participants receiving a debriefing form at the end of the study.

Results

Descriptive Statistics and Correlations

Means, standard deviations and ranges for all of the measures are presented in Table 1.

Table 1. Means, standard deviations and ranges

| Measure | M | SD | Range |
|---|-------|-------|-------|
| Clark and Wells Social Anxiety | | | |
| Components | | | |
| Fear of Negative Evaluation | 38.85 | 9.39 | 14-60 |
| Perceived Stress | 27.76 | 7.27 | 12-48 |
| Negative Affect | 20.96 | 6.59 | 10-47 |
| Self-focused Attention | 12.18 | 3.49 | 5-22 |
| Humor Styles | | | |
| Affiliative Humor | 47.05 | 5.99 | 29-56 |
| Self-Enhancing Humor | 38.03 | 8.60 | 15-55 |
| Aggressive Humor | 29.84 | 7.67 | 11-54 |
| Self-Defeating Humor | 27.67 | 8.26 | 9-51 |
| Social Anxiety Outcome Measures | | | |
| Social Phobia | 37.74 | 12.22 | 20-75 |
| Social Interaction Anxiety | 43.12 | 13.92 | 22-91 |
| Factor 1: Interaction Anxiety | 36.40 | 11.87 | 18-76 |
| Factor 2: Fear of Being Observed by Others | 19.73 | 3.01 | 11-47 |
| Factor 3: Fear Others will Notice Anxiety | 9.94 | 3.01 | 5-18 |

Predicting Social Anxiety Outcomes from Social Anxiety Components and Humor Styles

Hierarchical regression analyses were conducted to determine the degree to which humor styles predicted social anxiety, above and beyond the effects attributable to the social anxiety components. Thus, for each social anxiety outcome measure (Social Phobia, Social

Interaction Anxiety, Factor 1 - Interaction Anxiety, Factor 2- Fear of Being Observed by Others and Factor 3 - Fear Others will Notice Anxiety), the set of four Clark and Wells social anxiety components (Fear of Negative Evaluation, Perceived Stress, Self-focused Attention, and Negative Affect) were entered as predictors in block 1, with the four humor styles (affiliative, self-enhancing, aggressive, and self-defeating) entered in block 2. Details of these block regression analyses are presented below, with a summary of significant findings presented in Table 2.

Social Phobia. When considering the block 1 social anxiety component predictors of social phobia, the regression equation was significant, with self-focused attention and fear of negative evaluations being the two significant predictors. The inclusion of the block 2 predictors of the four humor styles resulted in a significant incremental change in R^2 . The regression equation for this overall model was also significant, indicating that higher levels of social phobia were related to increased levels of both negative self-focused attention and a fear of negative evaluations, and a reduced level of affiliative humor use.

Table 2. Summary of significant block regression findings and regression coefficients.

| Social Anxiety Outcome Measures | Block 1 Predictors | Block 2 Change | Overall Model and Predictors |
|---------------------------------|--|---------------------------------------|--|
| Social Phobia | $F = 15.11^{**}$ $R^2 = .40$ SFOA (1.41) BFNE (.26) | $F = 3.44^{**}$ R^2 change = .08 | $F = 10.10^{**}$ $R^2 = .49$ SFOA (1.39) BFNE (.29) Affiliative (-.53) |
| Social Interaction Anxiety | $F = 20.35^{**}$ $R^2 = .48$ BNFE (.41) SFOA (1.44) | $F = 2.72^*$ R^2 change = .06 | $F = 12.32$ $R^2 = .54$ SFOA (1.31) BFNE (1.31) |

| | | | |
|--|--|---|---|
| | | | Affiliative (-.65) |
| Factor 1 - Interaction Anxiety | $F = 18.65^{**}$ $R^2 = .46$ SFOA (1.25) BFNE (.33) | $F = 2.66^*$ R^2 change = .06 | $F = 11.35$ $R^2 = .52$ SFOA (1.14) BFNE (.33) Affiliative (-.53) |
| Factor 2- Fear of Being Observed by Others | $F = 12.36^{**}$ $R^2 = .36$ SFOA (.86) | $F = 3.88^{**}$ R^2 change = .10 | $F = 8.84^{**}$ $R^2 = .45$ SFOA (.89) Self-enhancing (-.35) Affiliative (-.30) |
| Factor 3 - Fear Others will Notice Anxiety | $F = 7.04^{**}$ $R^2 = .24$ SFOA (.31) | F -change = 1.80 ns R^2 change = .06 | $F = 4.54$ $R^2 = .30$ SFOA (.31) Affiliative (-.12) |

Notes: * $p < .05$, ** $p < .01$; Block 1 included all social anxiety components; Block 2 included all 4 humor styles; SFOA = Self-focused Attention, BFNE = Brief Fear of Negative Evaluations, Affiliative = Affiliative Humor

Social Interaction Anxiety. The two significant predictors in block 1 were fear of negative evaluations and self-focused attention. Adding in the block 2 humor style predictors resulted in a significant incremental change in R^2 . The regression equation for the overall model was also significant; and showed that higher levels of social interaction anxiety were related to increases

in self-focused attention and a heightened fear of negative evaluations, along with a reduction in affiliative humor use.

Factor 1- Interaction Anxiety. The block 1 regression equation was significant for self-focused attention and fear of negative evaluations, with the addition of the humor styles in block 2 producing a significant incremental change in R^2 . The significant overall model showed that greater interaction anxiety related to increases in both a negative self-focus of attention and a heightened fear of negative evaluations, along with a reduction in affiliative humor use.

Factor 2- Fear of Being Observed by Others. The regression equation was significant for block 1, with self-focused attention being the only significant predictor. The inclusion of humor styles in block 2 resulted in a significant incremental change in R^2 , with the overall model showing that an increased fear of being observed by others was associated with an increase in negative self-focused attention and decreases in the use of both self-enhancing and affiliative humor.

Factor 3- Fear Others will Notice Anxiety. For block 1 the regression equation was significant, with self-focused attention being the only significant predictor. The inclusion of the block 2 humor predictors did not lead to a significant incremental change in R^2 . However, the regression equation for this overall model was significant; and showed that an increased level of fear that others will notice anxiety was related to higher levels of negative self-focused attention and lower levels of affiliative humor.

Overall, the above pattern of regression findings provides support for the importance of both the Clark and Wells social anxiety components (particularly self-focused attention and fear of negative evaluations) and the humor styles (particularly affiliative humor) in the prediction of four of the five social anxiety outcomes. Moreover, these findings indicate that affiliative humor added significantly to the prediction of social anxiety outcomes, above and beyond the well-established Clark and Wells social anxiety components.

Self-Defeating Humor as a Moderator

Moderator analyses were employed to examine potential interaction effects between the Clark and Wells social anxiety components and self-defeating humor for the five social anxiety

outcomes. Details of the analyses which yielded significant moderator effects (i.e., a significant interaction term involving self-defeating humor) are described below and in Figures 1 to 4.

Social Phobia Outcome

Negative Affect. There was a significant interaction between negative affect and self-defeating humor in predicting social phobia, $B = .05$, $t(90) = 2.34$, $p < .025$. In addition, significant main effects for both negative affect, $B = .80$, $t(90) = 4.53$, $p < .001$, and self-defeating humor, $B = .28$, $t(90) = 2.00$, $p < .05$ revealed that higher levels of both predicted greater social phobia. The overall model was also significant, $F = 8.81$, $p < .01$, with the slopes of both and low self-defeating humor significantly differing from zero, p 's $< .001$ (see Figure 1). This pattern indicates that the positive relationship between negative affect and social phobia is even stronger when self-defeating humor use is also high.

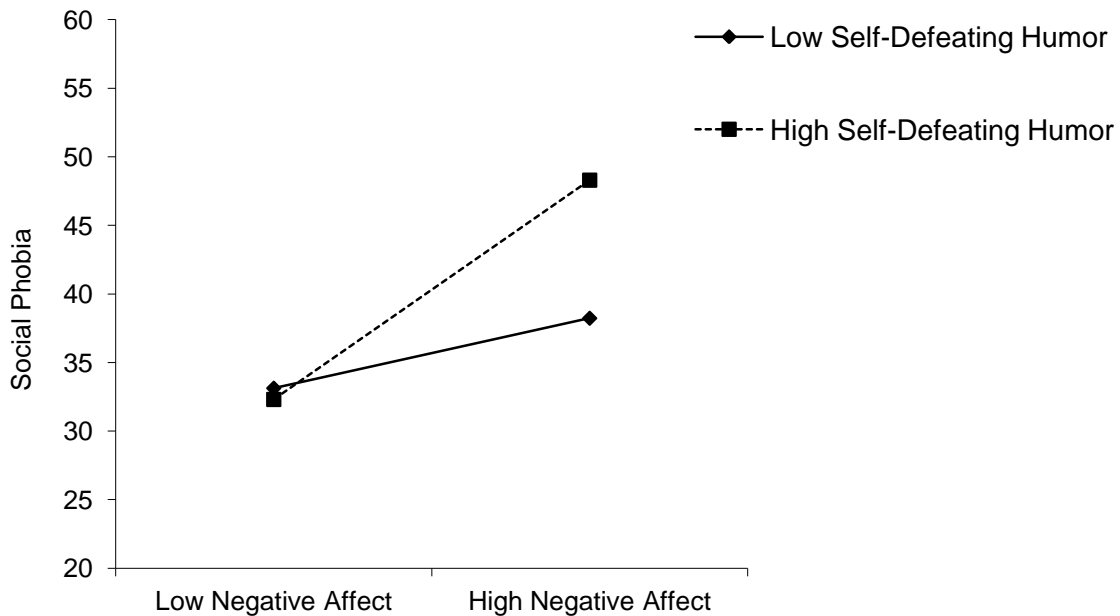


Figure 1. Moderating effect of self-defeating humor on the relationship between negative affect and social phobia.

Perceived Stress. Results indicate a significant interaction between perceived stress and self-defeating humor in predicting social phobia, $B = .037$, $t(90) = 2.14$, $p < .05$, as well as a significant main effect of perceived stress, $B = .646$, $t(90) = 4.10$, $p < .001$, but not self-defeating humor, $B = .25$, $t(90) = 1.81$, ns. The overall model was significant, $F = 8.13$, $p < .001$, with simple slope analyses indicating that the slopes of both high and low self-defeating humor significantly differed from zero, p 's $< .001$ (see Figure 2). This pattern indicates that the positive relationship between increased perceived stress and greater social phobia becomes even more pronounced at higher levels of self-defeating humor.

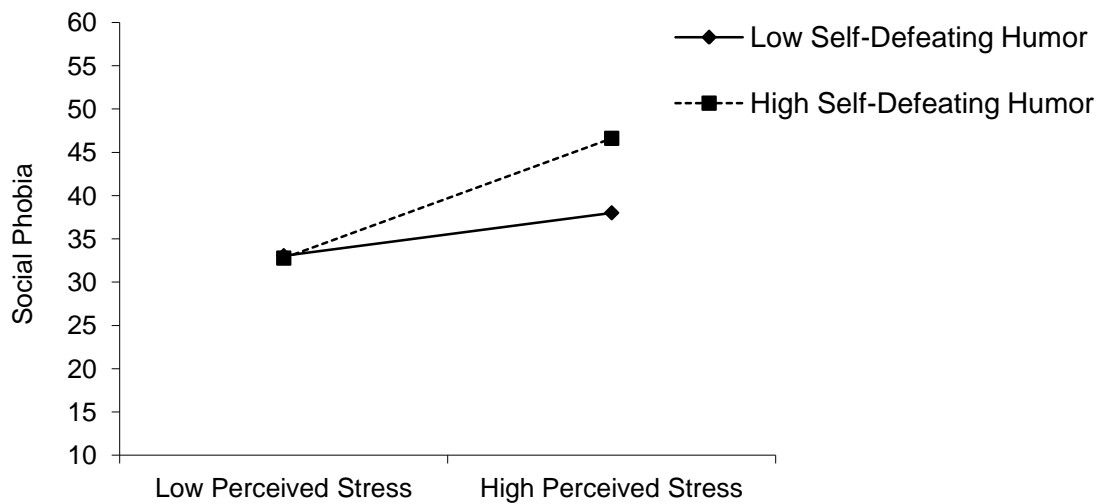


Figure 2. Moderating effect of self-defeating humor on the relationship between perceived stress and social phobia.

Fear of Being Observed By Others.

Negative Affect. There was a significant interaction between negative affect and self-defeating humor in predicting heightened fear of being observed by others, $B = .03$, $t(90) = 2.40$, $p < .025$, as well as significant main effects of both negative affect, $B = .49$, $t(90) = 4.53$, $p < .01$, and self-defeating humor, $B = .183$, $t(90) = 2.13$, $p < .05$. The overall model was significant, $F = 8.98$, $p =$

.001, with the slopes of both high and low self-defeating humor significantly different from zero, p 's < .001 (see Figure 3). This pattern indicates the positive relation between increases in negative affect and a greater fear of being observed by others is even stronger when self-defeating humor use is also high.

Perceived Stress. Results indicated a significant interaction between perceived stress and self-defeating humor in predicting heightened fear of being observed by others, $B = .02$, $t(90) = 2.25$, $p < .05$, as well as a significant main effect of perceived stress, $B = .39$, $t(90) = 3.98$, $p < .001$, but not self-defeating humor, $B = .17$, $t(90) = 1.93$, ns. The overall model was significant, $F = 8.10$, $p < .001$, with the slopes of both high and low self-defeating humor significantly differed from zero (see Figure 4). This pattern suggests that the positive

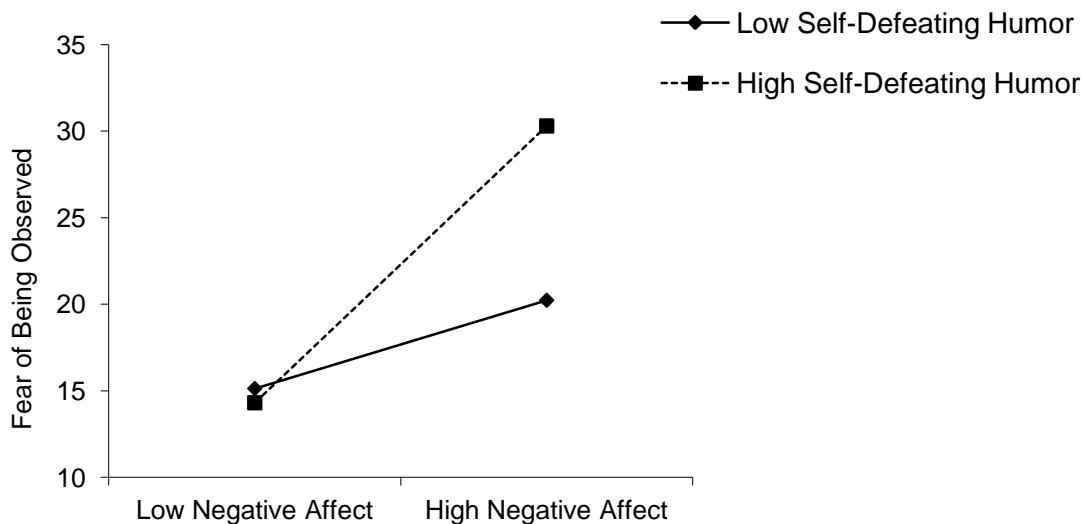


Figure 3. Moderating effect of self-defeating humor on the relationship between negative affect and fear of being observed by others.

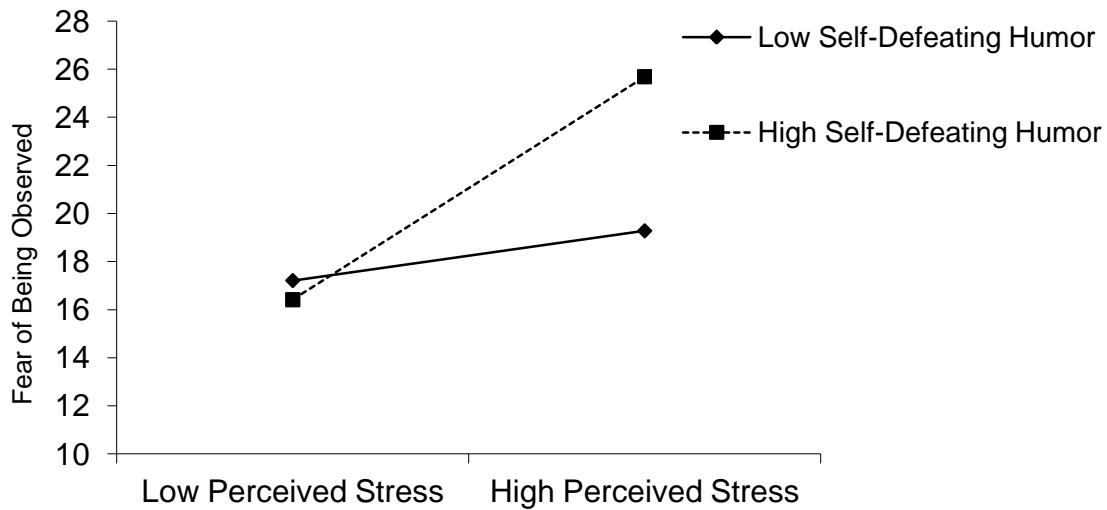


Figure 4. Moderating effect of self-defeating humor on the relationship between perceived stress and fear of being observed by others.

relationship between increases in perceived stress and a greater fear of being observed by others becomes even stronger at higher levels of self-defeating humor.

Discussion

This study examined various relationships between the Clark and Wells (1995) social anxiety components, humor styles and social anxiety outcomes. To begin, we found that an increased fear of negative evaluations, along with greater negative self-focused attention, consistently contributed to the prediction of increased social anxiety, even when the humor styles were also taken into account. This pattern suggests that these two social anxiety components of the Clark and Wells (1995) model may play a more central role in the development of social anxiety, with perceived stress and negative affect playing a less central role. The present findings also consistently indicated that lower levels of affiliative humor contributed to greater social anxiety outcomes, above and beyond the effects of both self-focused attention and a fear of negative evaluations. Affiliative humor had the strongest effect when predicting social interaction anxiety and the smallest effect when predicting a fear that others will notice one's anxiety. This distinction suggests that affiliative humor may be more strongly associated with the interpersonal rather than self-focused aspects of social anxiety.

As affiliative humor is a means to enhance relationships, the present findings are congruous with the essence of this humor style. Individuals who engage in affiliative humor create a lighthearted environment and facilitate positive emotions for themselves and their conversation partners who, in turn, want to interact with them again, thus facilitating social bonding (Kuiper et al. 2010; Kuiper et al., 2014). Furthermore, the positive emotions associated with the use of affiliative humor can foster both a positive self-concept and sense of mastery in social situations. In turn, this helps disconfirm a negative social interaction schema that all social situations are viewed as threatening and should be feared. However, a heightened fear of negative evaluations and self-focused attention consumes cognitive resources inward, rather than focusing on communication cues that would facilitate the use of affiliative humor as an effective strategy to bond with others. This inward focus could then impair social support and increase social isolation. Moreover, this suppression of affiliative humor use may prevent an individual from utilizing this adaptive humor style as a means to regulate the negative arousal and stress that accompanies social situations, thus leading to an increased focus and rumination on negative emotions. Taken together, these factors may then lead to increases in social anxiety.

Contrary to our expectations, self-enhancing humor did not significantly contribute to the prediction of social anxiety. We suspect that self-enhancing humor may be less relevant to social anxiety because this humor style is not innately a social behavior; and individuals may require a positive social experience to disconfirm or buffer the effects of the social anxiety components. As such, the inherent social nature of affiliative humor may buffer against the development of social anxiety. In contrast, using self-enhancing humor to regulate emotions and uphold positive outlook on life is not a social phenomenon *per se*, and thus may not bear as directly on the development or maintenance of social anxiety.

Our second research issue was to determine if self-defeating humor moderated the relationship between the Clark and Wells social anxiety components and the social anxiety outcomes. Since self-defeating humor has previously been implicated in negative interpersonal outcomes (Kuiper, 2012), it was expected that the greater use of this humor style would strengthen the relationships between each of the social anxiety components in the Clark and Wells model and

the social anxiety outcomes. However, self-defeating humor only moderated the relationships between perceived stress and negative affect for social phobia and the fear of being observed by others. This pattern suggests that those who use more self-defeating humor are more likely to experience heightened levels of social phobia or fear of being observed by others, when experiencing feelings of negative affect or perceived stress.

Individuals who have heightened negative affect tend to engage in excessive self-focus on this negative internal state, and thus have a reduced ability to communicate with others. Consistent with their self-focused attention, these individuals may turn to self-defeating humor as a maladaptive attempt to perform effectively in social situations. Moreover, individuals with heightened perceived stress fear that they will lose regulatory control of their emotions, and that this will be noticeable to others in the form of anxiety (Clark & Wells, 1995). In turn, the present findings suggest that individuals utilize self-defeating humor as a maladaptive attempt to gain emotional control and to reduce the likelihood that others will notice their anxiety symptoms. The negative evaluations and social isolation that ensues from self-defeating humor can thus exacerbate feelings of negative affect and perceived stress. In turn, this may increase the fear that these heightened social anxiety components will lead an individual to act undesirably in social situations; and that others will notice these actions.

The current findings suggest we should re-conceptualize our understanding of social anxiety to also include certain humor styles when attempting to explain the development and maintenance of this disorder. Specifically, it may be beneficial to integrate both affiliative and self-defeating humor styles into the Clark and Wells (1995) model of social anxiety. In line with the resiliency model of humor described by Kuiper (2012), we propose that the mirth and feelings of positive affect that accompany affiliative humor reduce the expression and repercussions associated with the negative emotions that accompany the social anxiety components described by Clark and Wells (1995) in their model. This beneficial effect then facilitates greater cognitive flexibility.

Cognitive flexibility is an antecedent-focused strategy that allows an individual to re-interpret a traumatic event (i.e. a social situation) and leads to a more positive re-appraisal of a negative situation (Kuiper, 2012). Affiliative humor use does not deny the negative experience, but

makes it less threatening and broadens attention to include more positive aspects of one's environment. Therefore, it is proposed that this broaden and build aspect of affiliative humor (Kuiper, 2012) may protect against the exacerbation of pre-existing social anxiety components; and may actually be an important preventative factor in the development of heightened social anxiety (Kuiper et al., in press). As such, individuals with pre-existing social anxiety components who also show low levels of affiliative humor use are more likely to narrow in on this negative state, exacerbating their detrimental effects. Thus, low levels of affiliative humor use may also act as an additional risk factor in the development of social anxiety. Accordingly, affiliative humor use should be considered an additional component of the Clark and Wells (1995) model of social anxiety.

In further accord with the above notions, high levels of self-defeating humor may function in a similar fashion as low levels of affiliative humor. Although self-defeating humor does not predict social anxiety in and of itself, it does strengthen the relationship between certain social anxiety components and social anxiety outcomes. In particular, the negative self-focused nature of self-defeating humor may hinder cognitive flexibility and thus increase the focus on social anxiety components, exacerbating their effects. Accordingly, self-defeating humor should also be taken into account in the Clark and Wells model of social anxiety, when examining possible relationships between pre-existing social anxiety components and social anxiety outcomes. Here, self-defeating humor may serve as an important moderator in an expanded model of the factors contributing to social anxiety.

A promising extension of the current findings might be to build upon humor skills program to incorporate certain humor styles and their specific relationships to social anxiety, in order to help reduce the development and maintenance of this disorder. Previous research suggests that it is possible to increase an individuals' use of adaptive humor to enhance positive affect, optimism and perceived control, while reducing levels of depression, perceived stress and anxiety (Kuiper, 2012). In the context of social anxiety it may be quite beneficial to learn how to decrease one's use of self-defeating humor, while also learning to increase the use of affiliative humor.

It is important to note the limitations of the current study. First, the sample was composed only of undergraduate students enrolled in an introductory psychology course. Although this work does provide valuable information regarding subclinical levels of social anxiety in young adults, it may not generalize to other samples, including older groups and those diagnosed with much more severe clinical levels of social anxiety. It should also be noted that the present sample was primarily composed of females, so our findings may be more representative of women than men. Accordingly, future research should attempt to replicate these findings in both clinical and community-based groups, while considering both males and females separately, in order to determine if the same roles emerge for affiliative and self-defeating humor.

A further limitation of the present study is that self-report measures were used to gather all of the information of interest. Future research should thus make use of observational research and lab-based experimental designs to further support these findings and minimize any bias inherent to self-report measures. Future research could also examine how individuals may differ in their typical use of humor styles. For example, some individuals may engage in high levels of both affiliative and self-defeating humor use, contributing to the development of social anxiety in unique ways. In order to examine this question, further longitudinal research with multiple testing points should be considered. Here, individuals could record their daily use of each humor style, as well as social anxiety components and social anxiety outcomes in a diary-based format, along with various social interaction events they may encounter. Such a design would allow for a closer examination of the types of relationships found in the present study, but under typical social scenarios and events encountered on a daily basis.

In summary, the present study provides some initial evidence for the potentially important role of certain humor styles in the context of social anxiety. In particular, the current findings indicate that a combined approach to social anxiety, rather than simply considering only the social anxiety components or only the humor styles, is the most beneficial. In doing so, this combined approach also needs to acknowledge that different patterns involving these constructs from both domains are required to predict various social anxiety outcomes. In particular, our findings consistently implicated affiliative humor in the prediction of social

anxiety, even after considering the more well-established social anxiety components described by Clark and Wells (1995). Our findings also indicate that self-defeating humor strengthens the relationship between perceived stress, negative affect and social anxiety outcomes. As such, further research should clearly acknowledge both of these humor styles when examining the development and maintenance of social anxiety.

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