Humor Styles as Mediators Between Self-Evaluative Standards and Psychological Well-Being

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ABSTRACT. The authors examined how certain humor styles mediate the relations between self-evaluative standards (which form the primary evaluative component of the self-schema) and psychological well-being. As predicted, greater endorsement of positive self-evaluative standards led to the use of more affiliative humor, which, in turn, led to higher levels of social self-esteem and lower levels of depression. Also, as predicted, greater endorsement of negative self-evaluative standards led to the use of more self-defeating humor, which resulted in lower levels of social self-esteem and higher levels of depression. Further, affiliative humor also mediated the relation between negative self-evaluative standards and well-being. In this study, the greater endorsement of negative self-evaluative standards led to the use of less affiliative humor, which led to a decrease in social self-esteem. These results suggest that specific features associated with these 2 humor styles may contribute in a differential manner to an individual's level of well-being. In particular, the increased use of affiliative humor may facilitate the development and maintenance of social support networks that foster and enhance well-being. Alternatively, the greater use of self-defeating humor may result in the development of maladaptive social support networks that impede psychological well-being.

Keywords: depression, humor styles, self-esteem, self-evaluations, self-schema

CONTEMPORARY RESEARCH ON INDIVIDUAL DIFFERENCES in humor has documented four distinct humor styles—two adaptive and two maladaptive (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). The two adaptive styles are affiliative and self-enhancing humor. Affiliative humor involves using benign humor in a facilitative manner to enhance relationships with others. Individuals who display this style of humor say funny things and tell jokes to ease interpersonal tensions and make others feel comfortable. Self-enhancing humor involves

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a generally humorous outlook on life, even under adverse circumstances. These individuals use humor to help cope with the emotional regulation of stress but do so in a manner that does not harm themselves or others. In contrast, the two maladaptive humor styles are aggressive and self-defeating humor. Aggressive humor involves sarcasm, ridicule, and teasing; it is intended specifically to put down and hurt others. Last, self-defeating humor involves excessive self-disparaging and cynical humor that seeks to foster interpersonal relationships by amusing others, but it does so at an individual's own expense. We assessed these four humor styles using the Humor Styles Questionnaire (HSQ; Martin et al.). Many studies now provide strong converging evidence for the existence of these four distinct styles across diverse groups and cultures (Chen & Martin, 2007; Hampes, 2006; Kazarian & Martin, 2004; Saroglou & Scariot, 2002; Vernon, Martin, Schermer, & Mackie, 2008).

Of interest is that the adaptive and maladaptive humor styles show different relations with psychological well-being. In particular, a number of studies have now demonstrated that higher levels of either affiliative or self-enhancing humor are related to greater psychological well-being, characterized by lower levels of depression and higher levels of self-esteem (e.g., Martin et al., 2003). In contrast, higher levels of self-defeating humor are associated with the opposite pattern of well-being; namely, increased depression and reduced self-esteem. Further, studies have shown that aggressive humor is typically unrelated to either of these indexes of psychological well-being.

Although the aforementioned patterns between humor styles and well-being are extremely stable and robust across studies, researchers still know little about why these differential associations occur. In particular, why do individuals with higher levels of self-defeating humor also display increased depression levels, whereas those with higher levels of affiliative or self-enhancing humor display lower levels of depression?

To address this question, we proposed that it would be beneficial to consider the possible role of these three humor styles in the broader context of a self-schema model of emotion (Kirsh & Kuiper, 2002; Winter & Kuiper, 1997). In this model, psychological well-being depends on an individual's level of endorsement of self-evaluative standards. These standards form the primary evaluative component in an individual's self-schema, which he or she uses to guide, assess, and integrate his or her life experiences. Greater endorsement of negative self-evaluative standards results in poorer psychological well-being (higher levels of depression and lower self-esteem), whereas greater endorsement of positive self-evaluative standards results in enhanced well-being (lower levels of depression and higher self-esteem). In the present study, we examined the proposal that certain humor styles may serve to mediate the relations between these self-evaluative standards and psychological well-being. Accordingly, we subsequently describe the self-schema model of emotion, followed by a more detailed consideration of how some humor styles may serve as potential mediators in this approach.

Self-Schema Model of Emotion

Most of the research on the self-schema model of emotion has focused on negative self-evaluative standards and depression (Kirsh & Kuiper, 2002; Winter & Kuiper, 1997). These negative standards consist of two highly related components; namely, negative self-worth beliefs and negative self-worth contingencies. *Negative self-worth beliefs* consist of rigid and maladaptive dysfunctional attitudes such as "If others dislike you, you cannot be happy." *Negative self-worth contingencies* are based directly on these dysfunctional beliefs; thus, the corresponding negative self-worth contingency is "I am disliked by other people." The extent to which an individual endorses these negative self-evaluative standards (beliefs and corresponding contingencies) determines an individual's degree of depression. In particular, the rigid nature of these negative standards makes them extremely hard to meet, and thus further increases the development of negative affect and depression.

During the past 2 decades, many studies have demonstrated that increased endorsement of negative self-evaluative standards can result in depression. For example, researchers have found that dysfunctional attitudes (i.e., negative self-worth beliefs) remain stable and consistent over time and can predict subsequent levels of depression and self-esteem for periods of up to 3 years, even after controlling for initial levels of depression (Otto et al., 2007; Winter & Kuiper, 1997). Similarly, when exposed to negative interpersonal feedback, individuals with more negative self-worth contingencies experienced greater negative affect and lower self-esteem than did individuals who endorsed only a few negative self-worth contingencies (Park & Crocker, 2008). These negative self-evaluative standards emerge early in life, with coherent self-schemas evident in children as young as 3 years of age (Brown, Mangelsdorf, Agathen, & Moon-Ho, 2008). Reinforcing the fundamental nature of these self-evaluations is the finding that even 5-year-old children make global negative judgments of their self-worth, following mild stress or criticism (Murray, Woolgar, Cooper, & Hipwell, 2001).

The self-schema model of emotion introduces the notion that positive self-evaluative standards may also play an important role in determining an individual's psychological well-being (Kirsh & Kuiper, 2002; Winter & Kuiper, 1997). In particular, the model suggests that individuals may have positive self-worth beliefs that provide more adaptive standards for evaluating their life experiences (e.g., "It is important to have a sense of belonging with those around you"). Closely associated with these positive self-worth beliefs are positive self-worth contingencies (e.g., "I have a sense of belonging with those around me"). In this model, it is proposed that greater endorsement of these positive self-evaluative standards (beliefs and corresponding contingencies) results in enhanced psychological well-being, as marked by lower levels of depression and increased self-esteem. However, in contrast with negative self-evaluative standards, few researchers have explored the effect of positive self-evaluative standards on well-being.

Self-Evaluative Standards and Well-Being: A Mediation Model Involving Humor Styles

In contrast with the emergence of self-concept and self-evaluative standards at a early age (3–5 years), the systematic use of humor styles is not apparent until the ages of 10–12 years. It is only then that most children have acquired sufficient cognitive and social skills to appreciate and use humor as an effective form of social interaction and communication (Klein & Kuiper, 2006). Therefore, self-evaluative standards—the primary evaluative component of an individual's self-schema—are the predictor variables in our mediation approach; and the three humor styles that relate to psychological well-being are viewed as potential mediators. Our model focuses on two aspects of psychological well-being as outcome criteria. The first is depression, which is of primary interest when testing the self-schema model of emotion, and—as previously indicated—it has also demonstrated strong and consistent differential patterns with three of the humor styles. Second, to address the importance of social interactions and interpersonal functioning in the depression and humor domains (Kirsh & Kuiper, 2002; Klein & Kuiper, 2006), we also focused on social self-esteem as an outcome criterion.

In the self-schema model, self-evaluative standards play a fundamental role in guiding and shaping subsequent behaviors and emotions (Winter & Kuiper, 1997). In this conceptual framework, the humor styles can be considered as one set of behavioral tendencies that are commonly expressed in social interactions (Campbell, Martin, & Ward, 2008; Cann, Norman, Welbourne, & Calhoun, 2008). We proposed that these humorous tendencies are strongly influenced by the self-evaluative standards that an individual endorses. For example, individuals with negative self-evaluative standards may view the personal ramifications of a social encounter in a highly negative manner, leading them to use increased humor as one coping behavior to help maintain further social interactions. The heightened endorsement of negative self-evaluative standards means that perceptions of the self are uncomplimentary. This degradation of an individual's own abilities, skills, and personal attributes is highly congruent with the increased use of a humor style that puts down the self as the primary means of trying to maintain social interactions and to win the approval of others. Therefore, we predicted that these individuals would use greater self-defeating humor as a coping strategy to help maintain engagement in social activities, connection with others, and greater acceptance. This strategy is ultimately maladaptive; the increased use of self-defeating humor actually leads to a greater reticence by others to continue interactions with this individual (Kirsh & Kuiper, 2003a). Therefore, we propose that this use of self-defeating humor results in a downward spiral of social rejection and withdrawal, resulting in lower levels of social self-esteem and higher levels of depression. Overall, we predicted that the self-defeating humor style would be a particularly important mediator when considering relations between negative self-evaluative standards and psychological well-being.

In contrast, when considering relations between positive self-evaluative standards and well-being, we predicted that the adaptive humor styles would be the most salient mediators. In the present study, the positive view of the self engendered by greater endorsement of positive self-evaluative standards would also serve to enhance openness to experience and extraversion, with both of these attributes being linked in previous research to the greater use of affiliative and self-enhancing humor (Martin et al., 2003). For example, the affiliative humor style includes saying funny things, telling jokes, and engaging in spontaneous witty banter to amuse others (Campbell et al., 2008). Therefore, the use of this particular humor style would form one behavioral strategy for increasing inter-personal closeness and relationship satisfaction in a manner that is affirming to both self and others. Consistent with these beneficial effects, researchers have found that individuals are much more willing to continue interacting with a friend who uses affiliative humor (Kirsh & Kuiper, 2003a) and also feel much closer to a romantic partner who uses affiliative humor (Campbell et al.). Accordingly, we predicted that this greater use of affiliative humor would result in increased social self-esteem and lower levels of depression. In a similar fashion, positive mediating effects may also be evident for self-enhancing humor, with this more intrapsychic humor style also contributing to higher levels of social self-esteem and lower levels of depression.

Method

Participants

Participants were 137 undergraduate students (93 women, 44 men) who were enrolled in introductory psychology courses at the University of Western Ontario. Their mean age was 19.6 years (*SD* = 2.5 years, range = 17–37 years). The majority of these participants (87%) were in their 1st year at the university; 15% were in their 2nd year, and the remainder were in their 3rd or 4th year. Participants were recruited by signing up for the present study after reading a brief description posted on the research participation Web site associated with this course. Each participant received one course credit for taking part in the present study.

Measures

Humor Styles Questionnaire (HSQ; Martin et al., 2003). The HSQ is a 32-item self-report measure of four distinct styles of humor: two adaptive (affiliative, self-enhancing) and two maladaptive (aggressive, self-defeating). There are eight items in each subscale, with participants using a 7-point Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*) to rate agreement with each item. Thus, higher scores indicated greater use of that particular humor

style. The following are sample items for each style of humor: for affiliative, "I laugh and joke a lot with my friends"; for self-enhancing, "Even when I'm by myself, I'm amused by the absurdities of life"; for self-defeating, "I will often get carried away in putting myself down if it makes my family or friends laugh"; and for aggressive, "If someone makes a mistake, I will often tease them [*sic*] about it."

Psychometrically appropriate levels of reliability and validity have been established for the HSQ (Chen & Martin, 2007; Martin et al., 2003; Vernon et al., 2008). Cronbach's alphas across the four humor scales ranged from .77 to .81, indicating strong internal consistency. Factor-analytic work has consistently revealed the expected four-factor structure corresponding to the four humor styles (Chen & Martin). The humor styles also show the expected differential associations with other personality constructs, including the Big Five (Vernon et al.). Last, researchers have found that humor styles can be reliably coded by behavioral observers, and then these styles show the same pattern of effects as previously demonstrated for the self-report HSQ (Campbell et al., 2008).

Self-Evaluative Standards Scale (SESS). SESS is a self-report scale that measures the two components of self-evaluative standards; namely, self-worth beliefs and their corresponding self-worth contingencies. We assessed negative self-worth beliefs using 14 statements taken directly from the Dysfunctional Attitudes Scale (DAS; Cane, Olinger, Gotlib, & Kuiper, 1986). Seven of these statements assessed negative self-worth beliefs on personal performance, such as "If I fail partly, it is as bad as being a complete failure." The remaining seven statements focused primarily on negative self-worth beliefs pertaining to interpersonal approval from others, such as "What other people think about me is very important." We assessed positive self-worth beliefs using 14 items on the Positive Belief Statements Questionnaire (PBSQ) that Hillson (1997) developed (for details, see Kirsh & Kuiper, 2003b). Seven of these statements pertained to positive self-worth beliefs regarding personal performance, such as "A person should be in charge of creating a satisfying life for themselves [*sic*]." The remaining seven statements pertained to positive interpersonal evaluative beliefs, such as "It is important to have a sense of belonging with those around you." Participants rated their agreement with each of the 28 self-worth belief statements on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The SESS also assessed the self-worth contingencies corresponding to each of the self-worth beliefs. An example of a positive self-worth contingency associated with the previously mentioned positive self-worth belief is "I am in charge of creating a satisfying life for myself." All 14 of the positive self-worth contingencies were taken from Hillson's (1997) PBSQ. In turn, the negative self-worth contingencies pertaining to each of the 14 negative self-worth beliefs were taken from a modified version of the DAS (Kuiper & Olinger, 1989). For

example, the negative self-worth contingency corresponding to the previously mentioned negative self-worth belief is "Other people do not think very much of me." Participants rated each self-worth contingency using a 5-point Likert-type scale ranging from 1 (*not at all true*) to 5 (*extremely true*).

In terms of psychometric properties, the DAS—which assesses negative self-worth beliefs—is a highly reliable scale, with internal consistencies ranging from .79 to .93 and a test–retest reliability of .74 across an 8-week interval (Winter & Kuiper, 1997). Appropriate construct validity has also been shown using expected correlations with other measures of irrational beliefs (Kuiper & Olinger, 1989). Predictive validity is demonstrated by negative self-worth beliefs predicting subsequent depressive episodes, even after controlling for initial depression (Otto et al., 2007; Winter & Kuiper, 1997). The PBSQ has also demonstrated good reliability, with internal consistencies ranging from .70 to .85, and it has been shown to converge appropriately with other measures of positive attitudes and beliefs (Kirsh & Kuiper, 2003b). Further, a factor analysis of the entire set of 56 SESS items (i.e., negative and positive self-worth beliefs and contingencies) confirmed the expected two-factor solution, consisting of negative and positive self-evaluative standards. Scores on these two self-evaluative scales were only modestly related ($r = -.21$, $p < .01$), and we used them as the predictor variables in the present study.

Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D scale is a 20-item questionnaire designed to assess depressive symptomatology among both community and clinical populations. Examples of items include "I felt that everything I did was an effort" and "I thought my life had been a failure." We asked participants to indicate on a 4-point Likert-type scale ranging from 1 (*rarely or none of the time*) to 4 (*most or all of the time*) how frequently they had experienced each symptom during the past week. Higher scores indicated greater depressive symptomatology. The CES-D scale has demonstrated good reliability in university samples, with an internal consistency coefficient of .80, and it also displays strong convergent validity with clinical ratings and other self-report measures of depression (Devins et al., 1988).

Social Self-Esteem Inventory (SSEI; Lawson, Marshall, & McGrath, 1979). This 30-item scale assesses social self-esteem pertaining to social situations and interactions. Examples of items from this scale are "I find it hard to talk with strangers" and "I am confident in social situations." Participants rated each item on a 6-point Likert-type scale ranging from 1 (*completely unlike me*) to 6 (*exactly like me*). Lawson et al.'s factor-analytic work confirmed the one-dimensional nature of this scale because only the expected single factor of social self-esteem emerged. Lawson et al.'s research also demonstrated that the test–retest reliability for a university sample across a 1-month period was high (.88).

Procedure

Participants were tested in groups of 20–25 people. After providing informed consent, they completed a booklet of questionnaires within approximately 30–40 min. Measures were presented in different orders across the booklets. After completion of the booklet, participants were given a debriefing form that provided further details of the study.

Results

Baron and Kenny (1986) recommended that before conducting any mediation analyses, three preconditions should first be tested and met. To begin, the predictor variables should account for significant variance in the criterion variables. This was the case; greater endorsement of positive self-evaluative standards ($M = 29.85$, $SD = 2.51$) was associated with significantly higher levels of social self-esteem ($r = .39$, $p < .01$) and lower levels of depression ($r = -.34$, $p < .01$). Further, greater endorsement of negative self-evaluative standards ($M = 17.02$, $SD = 3.20$) was associated with significantly lower levels of social self-esteem ($M = 137.71$, $SD = 22.20$; $r = -.37$, $p < .01$) and higher levels of depression ($M = 37.52$, $SD = 11.46$; $r = .57$, $p < .01$). Therefore, these findings also provide initial support for the basic predictions pertaining to the self-schema model of emotion.

The second precondition was that the mediator variables should be significantly related to the criterion variables. For our three humor styles of interest, this was always the case. In particular, higher levels of affiliative humor ($M = 5.84$, $SD = 0.67$) predicted higher levels of social self-esteem ($r = .46$, $p < .01$) and lower levels of depression ($r = -.27$, $p < .01$). A similar pattern emerged for self-enhancing humor ($M = 4.83$, $SD = 0.91$); it also predicted higher levels of social self-esteem ($r = .32$, $p < .01$) and reduced depression ($r = -.28$, $p < .01$). Further, higher levels of self-defeating humor ($M = 3.77$, $SD = .97$) were significantly associated with lower levels of social self-esteem ($r = -.22$, $p < .01$) and higher levels of depression ($r = .32$, $p < .01$). Last, and also as expected, the fourth style of aggressive humor ($M = 4.20$, $SD = 0.82$) did not predict social self-esteem ($r = .04$, *ns*) or depression ($r = -.01$, *ns*). Therefore, we did not consider it further in any of our analyses.

The third and final precondition was that the predictor variables should be correlated with the mediator variables. Again, this was the case; the greater endorsement of positive self-evaluative standards was associated with higher affiliative and self-enhancing humor (both rs = .24, ps < .01), and with lower self-defeating humor ($r = -.17$, $p < .05$). In addition, greater endorsement of negative self-evaluative standards was associated with higher self-defeating humor ($r = .41$, $p < .01$), lower affiliative humor ($r = -.36$, $p < .01$), and lower self-enhancing humor ($r = -.31$, $p < .01$). Thus, the final precondition for mediation analysis was also met in our data set.

Using procedures that Preacher and Hayes (2008) described, we then conducted multiple mediation analyses to test the hypothesis that humor styles mediate the relations between self-evaluative standards and psychological well-being.[1] This procedure allows for the simultaneous examination and statistical testing of each of the estimated indirect (i.e., mediated) effects in a model (through the pathway of each mediator variable) and the direct effect of the predictor variable on the criterion variable, while controlling for potential effects of all other mediators. We conducted these analyses using SPSS to perform the bootstrap sampling procedures that Preacher and Hayes developed. This bootstrap procedure uses sampling with replacement to draw a large number (1,000) of samples from the data set, with path coefficients being calculated for each sample. Then, using the estimates on the basis of these 1,000 bootstrap samples, the mean direct and indirect effects and their confidence intervals (CIs) are calculated. These CIs are used to determine whether each effect (i.e., direct, indirect) is statistically significant. For each effect, we examined the 95% CI , and if the value of 0 did not fall within the range of the CI for that effect, then the finding was statistically significant at $p < .05$. In a similar manner, CIs can also be set at 99%, resulting in significance levels of $p < .01$, if the value of 0 is not within the calculated CI range.[2]

We separately conducted multiple mediation analyses for each type of self-evaluative standard (i.e., positive, negative) and for each criterion variable (i.e., social self-esteem, depression). In all of these analyses, the three mediators were affiliative, self-enhancing, and self-defeating humor. We also controlled for age and gender of participants in each analysis. Tables 1 and 2 summarize the results for each multiple mediator analysis, indicating the path coefficients and significance levels for each effect being tested in that model. Using Table 1 as an illustrative example, these effects consisted of the following: (a) the overall total effect (c-path) of the predictor variable (i.e., positive self-evaluative standards) plus the three mediator variables (i.e., affiliative, self-enhancing, self-defeating humor) on the criterion (social self-esteem); (b) the individual indirect effects for each of the 3 humor style mediators on the relation between negative self-evaluative standards and social self-esteem; and (c) the remaining direct effect (c-prime) of positive self-evaluative standards on social self-esteem, after taking into account all indirect (mediating) effects. For each of the four models, the total effect (c-path) was significant (see Tables 1 and 2), leading to further examination of the indirect and direct pathways associated with each analysis. Figures 1–4 present these pathways for each of the four models.

Considering first the positive self-evaluative standards, we found significant indirect mediating effects for the affiliative humor style. As predicted, greater endorsement of positive self-evaluative standards was associated with significantly higher levels of affiliative humor, which, in turn, predicted significantly higher levels of social self-esteem (see Table 1 and Figure 1) and significantly lower levels of depression (see Table 2 and Figure 2). In contrast, both of these multiple mediation analyses indicated that the remaining adaptive humor style

TABLE 1. Multiple Mediation Analyses: Positive Self-Evaluative Standards (*N* = 137)

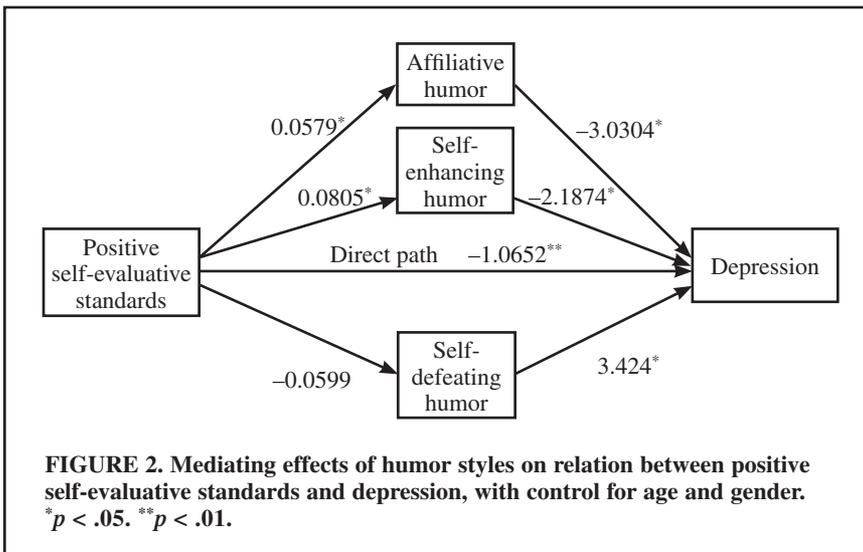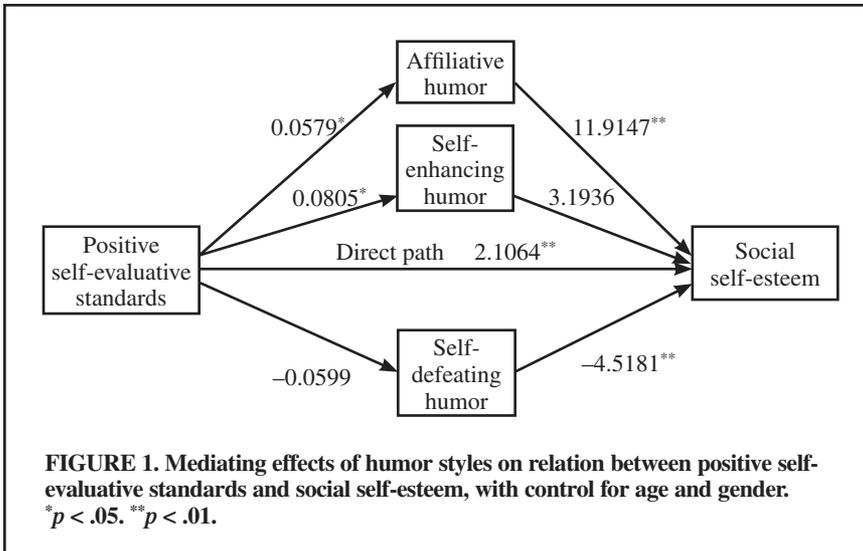| Variable and effect	Coefficient	a-path coefficient	b-path coefficient
Social self-esteem			
Affiliative humor	0.6904[*]	0.0579[*]	11.9147[**]
Self-enhancing humor	0.2569	0.0805[*]	3.1936
Self-defeating humor	0.2706	−0.0599	−4.5181[**]
Direct effect (c-prime)	2.1064[**]		
Total effect (c-path)	3.3243[**]		
Depression			
Affiliative humor	−0.1756[*]	0.0579[*]	−3.0304[*]
Self-enhancing humor	−0.1760	0.0805[*]	−2.1874[*]
Self-defeating humor	−0.2051	−0.0599	3.424[*]
Direct effect (c-prime)	−1.0652[**]		
Total effect (c-path)	−1.6129[**]		

[*]$p < .05$. [**]$p < .01$.

TABLE 2. Multiple Mediation Analyses: Negative Self-Evaluative Standards (*N* = 137)

Variable and effect	Coefficient	a-path coefficient	b-path coefficient
Social self-esteem			
Affiliative humor	−0.9295[*]	−0.0770[**]	12.0675[**]
Self-enhancing humor	−0.3237	−0.0911[**]	3.5537
Self-defeating humor	−0.5236[*]	0.1197[**]	−4.3743[**]
Direct effect (c-prime)	−0.7815		
Total effect (c-path)	−2.5582[**]		
Depression			
Affiliative humor	0.1089	−0.0770[**]	−1.4136
Self-enhancing humor	0.1319	−0.0911[**]	−1.4482
Self-defeating humor	0.2063	0.1197[**]	1.7234
Direct effect (c-prime)	1.5855[**]		
Total effect (c-path)	2.0326[**]		

[*]$p < .05$. [**]$p < .01$.

(i.e., self-enhancing) was not a significant mediator when predicting either social self-esteem or depression.

Two further findings were also of interest in these analyses. First, as expected, the maladaptive humor style (i.e., self-defeating humor) was not a
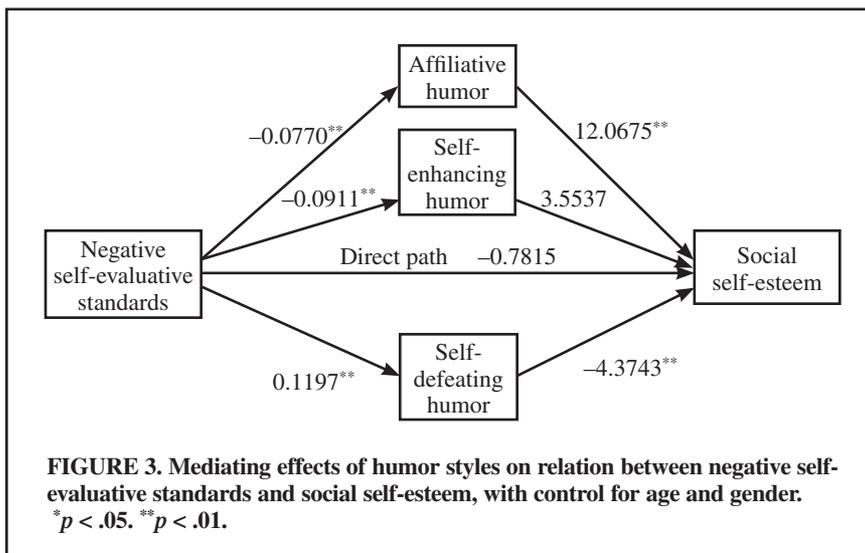
FIGURE 1. Mediating effects of humor styles on relation between positive self-evaluative standards and social self-esteem, with control for age and gender.
$^{*}p < .05. ^{**}p < .01.$

FIGURE 2. Mediating effects of humor styles on relation between positive self-evaluative standards and depression, with control for age and gender.
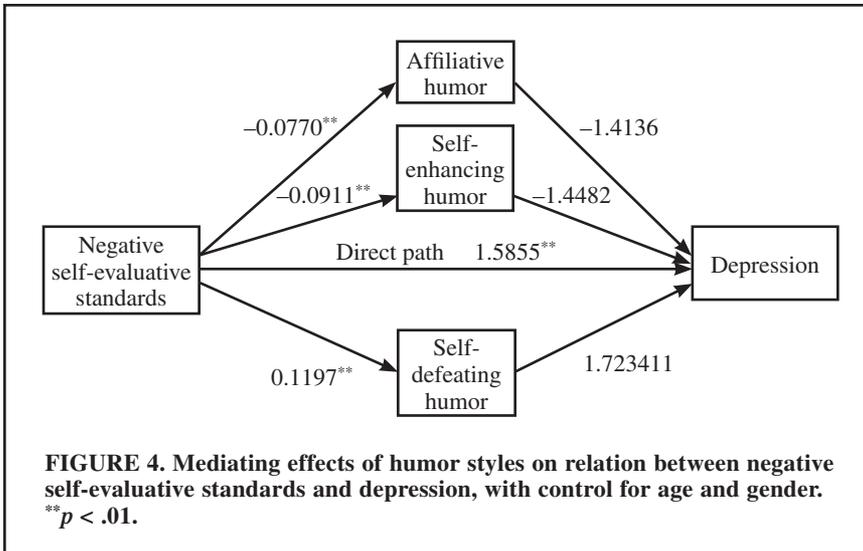$^{*}p < .05. ^{**}p < .01.$

significant mediator of the relations between positive self-evaluative standards and either one of the two outcome criteria. Second, a significant direct effect (c-prime) of positive self-evaluative standards was evident for social self-esteem and depression. This direct pattern indicates that affiliative humor only partially mediated the relations between positive self-evaluative standards and the criteria of social self-esteem and depression. In other words, positive self-evaluative standards still significantly predicted these two indexes of psychological

well-being, even after taking into account the significant indirect mediating effects of affiliative humor.

The final two multiple mediating analyses focused on the relations among negative self-evaluative standards, humor styles, and psychological well-being. When predicting social self-esteem, we found that two of the three humor styles were significant mediators (see Table 1 and Figure 3). As predicted, greater endorsement of negative self-evaluative standards predicted significantly higher levels of self-defeating humor, which, in turn, predicted significantly lower levels of social self-esteem. The analysis also revealed that greater endorsement of negative self-evaluative standards resulted in significantly less affiliative humor, which, in turn, led to significantly lower levels of social self-esteem. Last, it should be noted that the pathways described by these two significant humor style mediators (i.e., self-defeating, affiliative) fully accounted for the relation between negative self-evaluative standards and social self-esteem because the pathway for the direct effect (c-prime) in this analysis was not statistically significant (see Table 2). In other words, self-defeating and affiliative humor fully mediated the relation between negative self-evaluative standards and social self-esteem.

In the final multiple mediating analysis (see Table 2 and Figure 4), the direct effect was significant, with greater endorsement of negative self-evaluative standards resulting in higher levels of depression. However, self-defeating humor did not mediate the relation between these negative self-evaluative standards and depression because this indirect pathway was not significant. Further, the indirect pathways for each of the two remaining humor styles (i.e., affiliative, self-enhancing humor) were also not significant. Taken together, these findings

FIGURE 3. Mediating effects of humor styles on relation between negative self-evaluative standards and social self-esteem, with control for age and gender.
$^*p < .05.$ $^{**}p < .01.$

FIGURE 4. Mediating effects of humor styles on relation between negative self-evaluative standards and depression, with control for age and gender. ****p < .01.**

indicate that none of the three humor styles mediated the significant relation between negative self-evaluative standards and depression.

Discussion

Although previous researchers have established that the humor styles are differentially related to psychological well-being (e.g., Chen & Martin, 2007; Martin et al., 2003), little is known about why this occurs. Accordingly, we investigated this issue by hypothesizing that certain humor styles serve as mediators between self-evaluative standards (the primarily evaluative component in the self-schema model of emotion) and psychological well-being. Thus, to begin our investigation, we confirmed that the three preconditions necessary for mediation analysis—as Baron and Kenny (1986) specified—were satisfied. The negative and positive self-evaluative standards of the self-schema model of emotion were significantly predictive of psychological well-being (as indexed by social self-esteem and depression). In addition, and consistent with past humor research, the two adaptive humor styles (i.e., affiliative, self-enhancing) were associated with higher levels of social self-esteem and reduced depression. For self-defeating humor, we found the opposite pattern. Last, the self-evaluative standards in the self-schema model were also predictive of these three humor styles. In particular, individuals who endorsed more positive self-evaluative standards displayed significantly higher levels of affiliative and self-enhancing humor and lower levels of self-defeating humor. In contrast, those individuals with more negative self-evaluative standards displayed higher levels of self-defeating humor and lower levels of both adaptive humor styles.

In the conceptual model underlying our approach, humor styles are considered to be one relatively common set of behavioral tendencies that can be expressed in day-to-day interactions and encounters (Cann et al., 2008). These humorous behaviors then mediated between self-evaluative standards and well-being. For example, those individuals who endorsed more positive self-evaluative standards have a more life-affirming approach to themselves, the world, and those around them (Hillson, 1997). This positive view of self and the world then facilitates the greater use of affiliative humor, which, in turn, provides even more exposure to positive social interactions. Ultimately, these beneficial interpersonal experiences contribute to greater enjoyment of life and enhanced psychological well-being.

In support of this model, both of our multiple mediation analyses involving positive self-evaluative standards found that affiliative humor was a significant mediator, resulting in higher levels of social self-esteem and lower levels of depression. It is interesting that affiliative humor was also a significant mediator when testing the relation between negative self-evaluative standards and social self-esteem. An increase in negative self-evaluative standards led to a reduction in the use of affiliative humor, which, in turn, led to lower levels of social self-esteem. This pattern, when coupled with the results for positive self-evaluative standards, suggests that affiliative humor has a broad and pervasive mediating effect on psychological well-being. Not only can the increased use of affiliative humor lead to an enhancement of well-being, but a reduction in its use can be detrimental to an individual's well-being.

In further support of our theoretical model, we also found that self-defeating humor played a significant mediating role. As predicted, greater endorsement of negative self-evaluative standards was associated with the increased use of self-defeating humor, which, in turn, led to lower levels of social self-esteem. In the present study, the uncomplimentary view of self that these individuals displayed fostered the increased use of humor that is self-disparaging and focused unduly on an individual's own negative attributes. In turn, this greater use of self-defeating humor leads to more social rejection by others (Kirsh & Kuiper, 2003a), which ultimately results in poorer psychological well-being, as is evident by lower levels of social self-esteem.

It should be noted that the third humor style examined in the present study—self-enhancing humor—was not a significant mediator in any of our analyses. This finding was somewhat surprising because this intrapsychic humor style is closely tied to coping with adversity and the emotional regulation of stress (Martin et al., 2003). However, it is possible that any effects for self-enhancing humor only emerge under specific conditions of stress. Researchers could explore this by using an experimental paradigm that presents stressful and nonstressful performance feedback to individuals who score high on self-enhancing humor and then testing the relation between self-evaluative standards and well-being. In this regard, future researchers should also address the possibility that various indexes

of well-being may display a differential sensitivity to mediating effects. For example, we did not find any mediating effects for humor styles when considering the relation between negative self-evaluative standards and depression. These effects were only evident for social self-esteem, which may be a more sensitive (i.e., less pathological) index of well-being than depression.

In the future, researchers could directly explore this possibility by testing clinical and nonclinical samples. Such work would be illuminating because, at present, little is known about how humor may function in depressed individuals and the degree to which the humor styles may still serve as mediators. We also suggest that future work should focus much more directly on the specific features of the two humor styles that significantly mediated psychological well-being. In this regard, a particularly important next step may be the detailed examination of how affiliative humor versus self-enhancing humor may differentially facilitate or inhibit social relationships and interactions; this distinction can then exert a strong subsequent effect on well-being. For example, those individuals who score high on affiliative humor are more extroverted and open to experience and display greater social intimacy (Martin et al., 2003). These individuals tell jokes and engage in benign, humorous banter that helps build and maintain strong social support networks. These networks not only provide a wider range of positive social interactions and experiences, but also may help in buffering the strains and stresses of everyday life. In contrast, those individuals who score high on self-defeating humor lack social confidence, are often shy, and display an insecure and anxious attachment style (Cann et al., 2008; Hampes, 2006; Kazarian & Martin, 2004; Martin et al.). These individuals use ingratiating and excessively self-disparaging humor in a maladaptive attempt to gain the approval of others. Unfortunately, these maladaptive humor strategies may then lead to the development and maintenance of unhealthy relationships that lack the fundamentals of reciprocal trust and open communication. Although those individuals who score high on self-defeating humor may have a large network of acquaintances, the support afforded by this network may be insufficient for providing any substantial benefit for well-being. This network may be detrimental to well-being because it is based on an inappropriate and self-demeaning use of humor to gain the approval of others.

Overall, the use of affiliative humor may function to enhance social relationships, resulting in strong social support networks that facilitate psychological well-being. In contrast, the use of self-defeating humor may have the opposite effect, namely, the development of maladaptive social support networks that impede well-being. These possibilities would require further empirical testing with longitudinal designs. This research would also ideally include actual observations of humor use and its effect on others in various social settings and circumstances (Campbell et al., 2008).

At a general level, the type of mediational approach adopted in the present study offers a conceptually more integrative and refined means of examining

the role of humor than has typically been used in the literature. To date, most of the research on humor styles has focused primarily on developing the HSQ and then establishing the various correlates of each style, including other personality constructs and measures of psychological well-being (e.g., Hampes, 2006; Martin et al., 2003; Yip & Martin, 2006). This work was a necessary first step in providing a strong empirical foundation for the basic-humor-styles approach and has yielded considerable useful information on each style. However, the present approach represents the next stage in theoretical–empirical development because the role of humor is now considered specifically in the context of other existing theoretical models that have already addressed issues pertaining to psychological well-being. For example, our model highlights one primary component of the self-schema (i.e., self-evaluative standards), as an important precursor to the use of various humor styles and their subsequent effect on well-being. Interestingly, other humor investigators have proposed conceptually similar models. In one example, Cann et al. (2008) proposed that attachment styles, which consist of working models of self and others, guide the use of various humor styles in romantic relationships, which then affects the degree of relationship satisfaction. The benefit of these models is that they draw from existing work to provide a much more comprehensive theoretical framework for considering how the humor styles may actually function. In doing so, they help researchers to better understand the complex ways in which certain humor styles may either facilitate or impede an individual's mental health.

Last, it is important to note several limitations. First, the cross-sectional nature of the present study suggests that caution is warranted when making any strong causal inferences. Although several of our mediational findings support the proposed causal pathways, these should be examined in further research that not only provides a longitudinal perspective, but also includes an experimental manipulation (e.g., negative vs. positive performance feedback). Second, because the sample comprised university students, care should be taken in generalizing these findings. Further work with clinical and community samples would be useful. Third, the present study relied exclusively on self-report measures. Therefore, future researchers could benefit from using observational techniques to examine the effect of humor styles on the relations between self-worth evaluations and well-being (e.g., Campbell et al., 2008). A final caveat is that only a limited amount of research supports the contention that positive self-worth evaluations facilitate psychological well-being. Therefore, considerably more research is needed to establish the nature of the potential links among positive self-evaluative standards, humor styles, and well-being.

NOTES

1. This multiple-mediator approach builds directly on Baron and Kenny's (1986) seminal work with single-mediator models. Preacher and Hayes (2008) provided a detailed theoretical and statistical rationale for recommending a multiple-mediator

approach that uses bootstrap sampling methods and confidence interval testing to determine the significance of all indirect and direct effects in a multiple mediation model.

2. Preacher and Hayes (2008) articulated several advantages of using this bootstrap-driven CI statistical test for direct and indirect effects, compared with product-of-coefficient approaches such as the Sobel test. These include much less reliance on normalcy of distribution assumptions and greater sensitivity when used with smaller samples.

AUTHOR NOTES

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