HUMOR STYLE AND COPING HUMOR EFFICACY

AS LONG AS I CAN LAUGH ABOUT IT: EXAMINING THE RELATIONSHIP BETWEEN

HUMOR STYLE AND COPING HUMOR EFFICACY

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Abstract

Assessment of coping has largely viewed the role of humor as both adaptive and effective. However, depending on an individual's humor style, there is the potential for humor production to lead to cognitive appraisals deleterious to psychological well-being. The present study examined how emotion-focused coping efficacy and appraisals vary by humor style in a sample of 232 undergraduate students. Participants underwent a false-feedback paradigm designed to induce stress before completing either a cartoon caption-writing task or a control condition, which involved writing descriptions of the same cartoon vignettes. Anxiety was assessed before and after each caption-writing task. Finally, participants reported on their humor styles and emotion-focused coping appraisals. It was hypothesized that the humor production group would experience a greater reduction in state anxiety following a caption-writing task than the control group. Additionally, a negative relation of self-defeating humor and anxiety reduction and coping efficacy following the caption writing task was hypothesized. On the other hand, the use of self-enhancing humor was predicted to have a positive relation with anxiety reduction and coping efficacy following the caption writing task. Findings revealed that producing humorous content was not related to changes in anxiety anxiety. However, humor styles predicted both anxiety relief and emotion-focused coping appraisal. Anxiety relief was positively related to affiliative humor and inversely related to self-defeating humor, while emotion-focused coping appraisal was positively related to self-enhancing humor and inversely related to both self-defeating humor and aggressive humor. These findings support previous literature that suggests self-defeating humor is unambiguously maladaptive and highlight the importance of both public and clinician awareness of how humor is used in treatment.

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As Long As I Can Laugh About It: Examining the Relationship Between Humor Style and

Coping Humor Efficacy

It is often assumed that having a good sense of humor helps people cope with distress and adversity. Efforts to definitively address this assumption have revealed the many ways humor relates to psychological well-being. Preliminary research largely portrayed coping humor as protective, as it can help create distance from negative emotion, promote post-traumatic growth, build emotional resilience, and even improve life satisfaction (Kuiper, 2012; Peterson et al., 2007; Peterson et al., 2008). Kuiper and colleagues (1993) posited that humor is conducive to psychological well-being because humorous individuals are less likely to appraise their environments as threatening. However, contemporary research has criticized early perspectives for failing to account for maladaptive humor usage (Dozois et al., 2009; Martin et al., 2003; Martin & Ford, 2018).

To differentiate between adaptive and maladaptive humor, Martin and colleagues (2003) identified and validated four distinct humor styles used to cope with stress: self-enhancing, affiliative, aggressive, and self-defeating.. While most individuals identify with some styles more than others, individuals are believed to use all four styles of humor in varying degrees throughout their lives. For example, individuals characterized as having a predominantly self-enhancing humor style may still sometimes make jokes at someone else's expense, which is considered to be a form of aggressive humor.

An individual's embodiment of all four styles is a core assumption of the Humor Styles Questionnaire (Martin et al., 2003), one of the leading measures of humor which includes a subscale for each style. Of the four humor styles, the *self-oriented* styles (i.e., *self-enhancing* and *self-defeating*) have been consistently found to be more predictive of psychological well-being

and thus carry greater clinical significance (Cann & Etzel, 2008; Cann et al., 2010; Hugelshofer et al., 2006) than *socially-oriented* styles (i.e., *affiliative* and *aggressive*). *Self-enhancing humor* serves to elevate one's own position by enriching the mundane and protecting the self from emotional damage. Individuals use self-enhancing humor when they make light of everyday situations, find humor in negative events, and gently self-deprecate. Although both self-enhancing humor and aggressive humor are both self-promoting, self-enhancing humor is tolerant and not perceived as harmful to others as the target of the humor content is typically the self. The self-enhancing humor style is further associated with several protective factors, including more skillful perspective-shifting, greater social competence, reduced psychological distress, and even improved health outcomes (Fritz, 2020; Hampes, 2010; Martin & Ford, 2018). Self-enhancing humor is often considered the most adaptive style for coping with distress, as it has been linked to a high number of positive outcomes.

Conversely, *self-defeating humor* involves making oneself the "butt" of the joke, amusing others by excessively playing up one's own weaknesses, inviting disparagement from others, humiliating oneself before others have the chance to, and laughing with others when being ridiculed (Martin et al., 2003). Self-defeating humor is the only humor style that is consistently labeled as a maladaptive coping mechanism, because it provides temporary relief from emotional dysfunction at the expense of self-respect (Poncy, 2017). Consequently, it remains the most studied style in clinical psychology. Notably, self-defeating humor can be used to repress or minimize one's negative feelings about oneself or others by joking about them (Martin et al., 2003; Mendiburo-Seguel et al., 2015). Self-defeating humor is notoriously associated with depression, emotional dependence, worthlessness, reduced autonomy, low self-esteem, loneliness, overall psychological distress, other forms of avoidance, and even poorer life

outcomes (Dozois et al., 2009; Ford et al., 2014; Fritz, 2020; Martin & Ford, 2018; Stieger et al., 2011). Poncy (2017) further linked the self-defeating humor style to increased emotional suppression and reduced cognitive reappraisal abilities, defined as the capacity to reinterpret emotion-eliciting situations in ways that alter their meaning and emotional impact (Gross & John, 2003; Lazarus & Alfert, 1964).

One possible explanation for the relationship between self-defeating humor and impaired emotion regulation derives from Borkovec et al.'s (2004) avoidance theory of worry, which describes worry as an avoidant coping strategy that precludes individuals from experiencing threat and processing emotional responses to negative outcomes. Individuals thus learn to rely on worry for threat protection, reinforcing worry to pathological proportions. Like worry, self-defeating humor is an avoidant coping strategy that self-reinforces by protecting against the greater threat of being ridiculed by others, which can be uncontrollable, unpredictable, and humiliating. However, self-defeating humor merely provides a temporary distraction at the expense of reinforcing negative beliefs about the self (Kuiper & McHale 2009).

Surprisingly, there is a dearth of conclusive research on the pathway between self-defeating humor and levels of anxiety and depression. The present study aims to demonstrate both the short-term and long-term impacts of a self-defeating humor style, proposing that individuals who report using more self-defeating humor are less effective at coping with acute negative emotions, as well as more likely to appraise stressful situations in ways that suppress their *emotion-focused coping potential* (EFCP). EFCP is defined as an individual's self-assessed ability to psychologically adjust to a particular stressor in an adaptive manner (Smith & Kirby, 2009). EFCP differs from problem-focused coping potential (PFCP), which refers to one's subjective ability to alter ecological factors that eliminate stressors. Rather, EFCP best indicates

how capable individuals feel they can act as "their own therapist" in face of a stressor. EFCP is also distinct from emotion-focused coping behavior, which is not influenced by self-efficacy and can be both adaptive or maladaptive. For example, denial is considered an avoidant emotion-focused coping strategy that is linked to greater levels of clinical depression (Kortte et al., 2003). Notably, while depressed individuals do not appear to differ from non-depressed individuals in PFCP, their emotion-focused coping appraisals suggest they trend towards maladaptive themes that drive inaction, such as uncertainty and avoidance (Coyne et al., 1981).

The current study will not emphasize socially-oriented humor styles because they are difficult to measure objectively. The distinction between *affiliative humor*, which strengthens social relationships, and *aggressive humor*, which creates entertainment at the expense of others, can often be ambiguous. For example, what may appear as playful teasing to some may be considered bullying by others. As both affiliative and aggressive humor styles are inherently social, they are distinguished by audience perception. Regardless of intention, if a joke is perceived as offensive rather than harmlessly humorous, it would be assessed as aggressive. Thus, affiliative and aggressive humor styles are difficult to evaluate given how humor content can be interpreted differently by its audience. Additionally, aggressive humor is surprisingly unrelated to psychological well-being (Fritz, 2020; Schneider et al., 2018).

As humor styles reflect an individual's personal ability to produce humorous content, evaluating humor usage as a coping skill demands a necessary distinction between humor production and humor exposure. Early experimental research supportive of humor's capacity to induce positive emotion and offset acute negative emotions largely did not require participants to generate their own humorous content, instead opting to present participants with comedic stories, videos, or jokes (Danzer et al., 1990; Dienstbier, 1995; Vilaythong et al., 2003). However, humor

production is more clinically relevant as it involves observable behavior that provides rich

insight into an individual's humor styles. Additionally, most studies implicitly define coping

humor through humor production. For example, the widely used Coping Humor Scale (CHS;

Martin & Lefcourt, 1983) comprises of items such as "I usually look for something comical to

say when I am in intense situations" and "I can usually find something to laugh or joke about

even in trying situations." The current study will therefore also define coping humor through

humor production.

The Current Study

The current study aimed to reveal how different styles of humor may relate to the ways in

which individuals effectively cope with negative emotion. This study will investigate the

efficacy of coping humor in a college student population, as college students face unique

stressors such as academic pressure, social and economic difficulties, and professional

uncertainty (Stallman, 2010). Studying coping humor efficacy in a college student population

aligns with most clinical research on coping humor, which have emphasized occupational groups

with high reputed stress and clinical need, such as healthcare workers, individuals with

disabilities, firefighters, or entrepreneurs (Fritz, 2022; Hmieleski & Cole, 2022; Savitsky et al.,

2020; Sliter et al., 2014). This study also deviated methodologically from reliance on self-report

measures such as the Coping Humor Scale, which can only assess the frequency, function, and

context of an individual's coping humor usage. However, humor's capacity to affect emotional

relief is best measured through direct demonstration of coping humor in response to induced

stress.

First, it was expected that following a stressful event, individuals who engaged in humor

production would experience a greater reduction in emotional distress, operationalized through

anxiety, than those who do not. Second, this study also examined whether humor styles differentially predict an individual's coping efficacy, positing that self-defeating and self-enhancing humor are associated with lesser and greater reductions in anxiety, respectively. Finally, predicated on Poncy's (2017) finding that both self-oriented humor styles are linked to cognitive reappraisal abilities, it was expected that greater endorsement of self-defeating humor will predict lower EFCP and greater endorsement of self-enhancing humor will predict higher EFCP.

Method

Participants

Undergraduate participants (N = 232, 167 female) 18 years or older were recruited using William Paterson University's SONA subject pool. The sample included only individuals who completed all parts of the procedure and was comprised of 75 (32%) participants identifying as White/Caucasian, 29 (13%) as Black/African American, 71 (31%) as Hispanic/Latinx, 20 (9%) as Asian American/Pacific Islander, and 7 (3%) as Middle Eastern. The remaining 30 (13%) participants either selected more than one race or did not identify with any of the racial/ethnic categories listed. 76% of participants were between 18 and 22 years-old.

Measures

Insoluble Anagrams Task

Insoluble anagram tasks are widely used to induce emotional distress (MacLeod et al. 2002, Poncin et al., 2017; Watkins et al., 2008; Wemm et al., 2010). The insoluble anagrams task used in the current study consisted of 15 solvable and 13 unsolvable items, administered in counterbalanced order and increasing character length. All items were derived from two previous studies (Aspinwall & Richter, 1999; Martner et al., 2012) that both included slightly more

solvable than unsolvable anagrams. Solvable anagrams are necessary to maintain participant

perception of the task's authenticity. The insoluble anagrams task also incorporated critical false

feedback, a technique shown to be highly effective in inducing negative mood states (Forgas &

Bower, 1987; Joseph et al., 2020; Westermann et al., 1996).

Cartoon Caption Writing Task

Although cartoons and parameters vary across most humor studies, cartoon caption tasks

have dominated humor production research (Nusbaum et al., 2017). This task requires

individuals to compose humorous captions in response to a series of cartoons. Participants are

informed that their captions can be weird, silly, dirty, ironic, and unrestrained, so as long as they

are humorous. As different cartoons were presented across studies, the current study will use

vignettes and instructions from Nusbaum et al.'s (2017) study, which validated a standardized

version of the task.

Measuring Post-Anagram Distress

Distress was assessed using the State subscale of the State-Trait Anxiety Inventory for

adults, a well-validated self-report state-trait measure of a distressful emotion (STAI-S;

Spielberger, 1983). The STAI-S asks respondents to rate 20 statements pertaining to their

feelings of anxiety in the very moment of administration. A reliability generalization performed

across 816 articles by Barnes and colleagues (2002) found the average internal consistency

coefficient of the STAI-S to be .91. Moreover, the state version has been validated through

elevated scores during exams and decreases from pre- to post surgery (Auerbach, 1973; Lazarus

& Opton, 1966). Anxiety reduction is computed as the difference between two administrations of

the STAI-S. The first administration occurred immediately after the insoluble anagrams task and

before the cartoon caption-writing task (or corresponding humor condition). The second administration occurred immediately after the cartoon caption-writing or control task.

Internal consistency of the STAI-S in the current sample was 0.92.

Humor Style

The Humor Styles Questionnaire (HSQ; Martin et al., 2003) is widely used in humor research and has impressive construct validity and concurrent validity. On a 7-point Likert scale, respondents rate their agreement to various statements about their humor usage that map to subscales for each of the four humor styles: self-enhancing, self-defeating, aggressive, and affiliative. Positive and negative humor styles correlated strongly with peer reports, as well as measures of mood, aggressiveness, self-esteem, optimism, and psychological well-being (Martin et al., 2003). Cronbach's alpha for the four subscales range from .77 to .81 in Martin et al.'s (2003) study, indicating strong internal consistency. However, Cronbach's alpha computed for each humor style in the current study only indicate strong internal consistency for self-enhancing ($\alpha = 0.72$), self-defeating humor ($\alpha = 0.80$), and affiliative humor ($\alpha = 0.78$), but not for aggressive humor ($\alpha = 0.64$)

Emotion-Focused Coping

The Appraisal Styles Inventory (ASI; Smith et al., 2008) includes items that measure both threat (i.e., assessment of how meaningful or harmful a stressful event is) and coping appraisal (i.e., assessment of one's ability to cope with a stressful event). Of the coping appraisal variables, two items were used to assess EFCP. The first item reads, "How certain are you that you would be able to deal emotionally with challenging situations such as this in the future?", while the second item reads, "How much do you think that you would be able to accept things and adjust to challenging situations such as this in the future, no matter how they turn out?"

Three items examining threat appraisal were administered as a manipulation check and will be discussed later in this report. Because the original ASI asks respondents to consider a list of ambiguous situations, all items were revised to be specific to the insoluble anagrams task. For example, item 1 was reworded from "How important *would this situation be* to you?" to "How important *was this test* to you?" The ASI was selected for its versatility due to the lack of standardized appraisal instruments, as most appraisal questionnaires used in research only examine appraisals of specific stressors such as illness, panic, or nightmares (Gieselmann et al., 2020; Marks et al., 2000; Telch et al., 1989). Among the few standardized instruments of cognitive appraisal, the ASI stands out for its inclusion of both threat and coping appraisal, the latter of which is often ignored in appraisal measures (Carpenter, 2016). Selecting a measure that includes coping appraisal was paramount as it includes the primary variable of interest in the present study. Items 13 and 14 yielded a Cronbach's alpha of 0.789, suggesting good internal consistency.

Procedure

This study received approval from the Institutional Review Board (IRB) of the university. The study was entirely conducted through Qualtrics, an online survey administration tool. College students were falsely informed they would be taking part in a study examining the relationship between 'verbal intelligence' and 'funniness.' This level of deception was necessary to invoke personal relevance to the insoluble anagrams task.

Although it could be argued that a baseline anxiety assessment would have enabled evaluation of the insoluble anagram's task potency in inducing stress, it was omitted to prevent excessive consecutive administrations of the STAI-S that would introduce additional variation due to regression toward the mean (RTM), a statistical phenomenon whereby more extreme

responses tend to be followed by more moderate ones. RTM should always be assumed unless

otherwise indicated (Barnett et al., 2005), and several studies have suggested high initial scores

on the STAI-S may increase the likelihood of yielding lower STAI-S scores in follow-up

assessments (Munday et al., 1995; Rutten et al., 2017). In the current study, administration of the

STAI-S prior to the insoluble anagrams task may have resulted in more moderate (and less

accurate) self-reported anxiety following the task.

The Qualtrics protocol thus opened with the insoluble anagrams task, designed to elicit

emotional distress. A 20-second countdown timer was displayed with each item. Regardless of

actual performance, all participants were informed that they did poorly. They then completed the

first administration of the STAI-S before being randomly assigned to the humor production

(experimental) group or the control group.

The experimental group completed a cartoon-caption writing task, which asked them to

write funny captions for four vignettes. The task was untimed, and no restrictions were placed on

language, content, and length of the captions. To ensure participants wrote captions that aligned

with their sense of humor, they were asked to rate each caption's funniness on a scale of 1-10.

Individuals in the control condition wrote detailed descriptions of the same vignettes before

rating the accuracy of their descriptions from a scale of 1-10. As some of the cartoons are

inherently humorous, exposing both groups to the same humorous content ensured that only

differences in humor production were assessed.

Afterwards, all participants completed a short battery of self-report questionnaires, which

included the second and final administration of the STAI-S, the EFCP items of the ASI, three

items from the ASI examining threat appraisal, the HSQ, and a demographic form. They also

rated the reliability of their responses. Finally, participants were debriefed regarding the

deception and were offered the option to provide open-ended feedback and/or nullify their

submission. A visual depiction of the procedure is enclosed in the appendix (see Figure 1). All

participants were compensated with course credit.

Statistical Analysis Plan

SPSS version 29 was used for all data analyses. First, the data were examined for

disingenuous response patterns, normality, and outliers. Of the initial 257 responses, three were

eliminated for unreliable questionnaire responses, 21 for taking an inordinately long amount of

time to complete the procedure, and one for completing it far too rapidly. Abnormally long

response times suggest that the participant did not complete the protocol continuously,

potentially affecting change in anxiety following the insoluble anagrams task. The removal of

these cases resulted in a final sample of 232 participants. The data were further checked to

ensure that the assumptions for hypothesis testing were met, and one extreme outlier reporting an

unusually high degree of distress reduction was winsorized.

First, the manipulation check was performed by comparing the groups for differences in

how personally relevant they perceived the outcome of the anagram task to be. This was to check

for inordinate reduction in distress across the groups, based on perceived task importance. A one-

way analysis of covariance (ANCOVA) was used to examine the first hypothesis of whether the

humor and control groups significantly differed in anxiety reduction, covarying pre-cartoon

caption task STAI-S scores. Actual performance on the anagrams task, which may affect the

potency of stress induction and subsequent appraisals, was considered as a covariate but was

ultimately excluded due to having no observed relationship with threat appraisal or change in

anxiety. The second hypothesis utilized a hierarchical linear regression using the four humor

styles as predictors while again controlling for pre-cartoon caption task STAI-S scores. Finally,

the third hypothesis was examined using a simple linear regression using the four humor styles as predictor variables and coping appraisal as the dependent variable. The data satisfied assumptions of linearity, homoscedasticity, multicollinearity, and autocorrelation for both regression analyses.

Results

The normality assumptions for EFCP and change in anxiety were assessed using skewness and kurtosis statistics and Kolmogorov-Smirnov tests. The distribution of EFCP satisfied the normality assumption in both the humor and control group. However, the distribution of change in anxiety was non-normal for both the humor group, $D(118) = .149$, $p < .001$ and the control group, $D(114) = .157$, $p < .001$. Violation of the normality assumption can be explained by three outliers in the humor condition and four outliers in the control condition. However, only one extreme value was winsorized in the control condition. Aside from skewness, the distribution of change in anxiety appeared approximately normal in both groups, suggesting the normality assumption had not been severely violated. Nevertheless, results of the first hypothesis should be interpreted with caution.

Additional assumptions relevant to the regression analyses, including linearity, multicollinearity, auto-correlation, and homoscedasticity were met. The Durbin-Watson and multicollinearity statistics (i.e., VIF, Tolerance) were well within normal limits.

Coping Efficacy of Humor Production

A one-way ANCOVA was conducted to examine the effect of humor production on change in anxiety from post-anagram task to post-cartoon caption task, controlling for pre-cartoon caption task STAI-S scores. Pre-task STAI-S scores indicate anxiety levels immediately following the insoluble anagrams task and thus constrain each individual's degree of reported

anxiety reduction. The results revealed no significant effect of the humor production condition on change in anxiety, $F(1) = 0.263$, $p = .608$. Pre-task STAI-S was significantly related to change in anxiety, $F(1) = 59.623$, $p < .001$, $\eta^2 = .207$.

Humor Styles and Change in Anxiety

A hierarchical linear regression was used to examine the relationship between the four humor styles (self-defeating, self-enhancing, affiliative, aggressive) as the predictor variables and change in anxiety as the outcome variable, again controlling for pre-task STAI-S scores. Pre-task STAI-S scores were entered on the first step of the analysis and was found to be a significant predictor of change in anxiety, $F(1, 230) = 61.230$, $p < .001$. The effect size for the first step was $f^2 = .266$, indicating that a large proportion of the variation in change in anxiety is explained by pre-task STAI-S scores. The second step, which included the addition of humor styles, was also significant and accounted for an additional 5.5% of the variation in change in anxiety, $F(5, 226) = 16.281$, $p = .003$. The effect size for the second step was $f^2 = .058$, which reveals that humor style explains a small proportion of the variance in change in anxiety.

As hypothesized, the second step of the model showed that self-defeating humor significantly predicted change in anxiety, $B = 0.136$, 95% CI [0.002, 0.270], $\beta = 0.130$, $t = 2.01$, $p = .046$. Higher levels of self-defeating humor were associated with increased anxiety from pre- to post-task measurement. However, contrary to the second hypothesis, self-enhancing humor did not significantly predict change in anxiety, $B = -0.061$, 95% CI [-0.213, 0.091], $\beta = -0.048$, $t = -0.788$, $p = .431$, while affiliative humor did, $B = -0.172$, 95% CI [-0.336, -0.007], $\beta = -0.125$, $t = -2.055$, $p = .041$. Additionally, aggressive humor did not significantly predict change in anxiety (see Table 1).

Humor Styles and Emotion-Focused Coping Potential

The hypothesis that self-defeating and self-enhancing humor styles would respectively predict lower and higher levels of EFCP was tested using a multiple linear regression analysis, in which the four humor styles served as predictors of EFCP, the outcome variable. The overall model was significant, $F(4, 227) = 8.019$, $p < .001$, with a moderate effect size of $f^2 = .142$ Moreover, the results supported the hypothesis, as EFCP was effectively predicted by both self-enhancing humor, $B = 0.070$, 95% CI [0.027, 0.113], $\beta = 0.210$, $t = 3.19$, $p = .002$ and self-defeating humor, $B = -0.048$, 95% CI [-0.085, -0.011], $\beta = -0.176$, $t = -2.58$, $p = .010$. Aggressive humor was also found to predict EFCP, $B = -0.046$, 95% CI [-0.017, 0.294], $\beta = -0.134$, $t = -1.99$, $p = .047$, while affiliative humor was not (see Table 2).

Discussion

This study examined the efficacy of coping humor following a stressful event in an undergraduate student population. It was hypothesized that participants engaged in humor production would experience a more significant reduction in state anxiety after completing the caption-writing task, compared to the control group. Furthermore, it was hypothesized that higher endorsement of self-defeating humor would be associated with to less anxiety reduction and coping efficacy following stressful situations, whereas higher endorsement of self-enhancing humor would predict increased anxiety reduction and coping efficacy.

Results indicated that, contrary to the first hypothesis, humor production did not affect reduction in induced anxiety. These findings seemingly contradict previous studies indicating a direct relationship between coping humor and protective cognitive appraisals (Kuiper et al., 1993; Kuiper et al., 1995). However, a major limitation of the present study is its imperfect representation of coping humor, as participants generated content unrelated to the stress induction task. Rather than implying that coping humor is generally ineffective, the results

support the lack of evidence for the therapeutic efficacy of humor-based interventions (Adams &

McGuire, 1986; Konradt et al., 2013; Martin & Ford, 2018; Rotton & Shats, 1996). In clinical

and research settings, individuals are required to generate humorous content under instruction at

specific times. Therefore, humor production in controlled settings is a suboptimal reflection of

naturalistic coping humor, which tends to be spontaneous and task-independent. As famously

pointed out by author Elwyn B. White in the preface of his book, *A Subtreasury of American*

Humor, "*Humor can be dissected, as a frog can, but the thing dies in the process and the innards*

are discouraging to any but the pure scientific mind (White & White, 1941, p. xvii)."

Furthermore, it is also possible that the mood induction elicited mood states other than anxiety,

such as frustration, annoyance, stress, or shame. These emotions were not assessed, and it is

likely that their inclusion would have affected these findings.

In examining the relationship between humor styles and change in anxiety, only self-

defeating and affiliative humor styles significantly predicted change in anxiety. As hypothesized,

self-defeating humor was associated with a smaller reduction in anxiety following the cartoon

caption-writing and control tasks. Contrary to the second hypothesis, higher self-reported

affiliative humor predicted greater anxiety reduction from pre- to post-task, while self-enhancing

humor was not found to be a significant predictor of anxiety reduction. These findings support

characterizations of affiliative humor as adaptive and self-defeating humor as maladaptive (Fritz

et al., 2017; Martin et al., 2003). Overall, the findings substantiate the assertion that coping

efficacy varies by humor style. Unexpectedly, these findings run counter to previous research

that suggest self-oriented styles are more powerful agents of emotional change (Cann & Etzel,

2008; Cann et al., 2010; Hugelshofer et al., 2006). However, such differences may be explained

by methodological limitations. For example, generated cartoon captions were not specific to the

insoluble anagrams task and do not necessarily reflect individuals' preferred humor styles. These findings may also be affected by the aforementioned omission of other negative mood states. Thus, interpretations of how humor styles differentially relate to coping efficacy should be interpreted with caution.

The third hypothesis examining the relationship between humor styles and EFCP was also supported. Self-defeating, self-enhancing, and aggressive humor styles all predicted EFCP, though results regarding the aggressive humor style should be interpreted cautiously given its questionable internal consistency on the HSQ. The results support existing literature that suggest self-enhancing humor can help preserve a positive and realistic perspective in spite of adversity (Kuiper et al., 1993; Martin et al., 2003). Above all, the finding that individuals with stronger endorsement of a self-defeating humor style tend to perceive themselves as less capable of adaptive emotion-focused coping supports prior literature associating self-defeating humor with poorer judgments of self-competence, emotional dependence, and avoidance (Fabrizi & Pollio, 1987, as cited in Martin et al., 2003; Kuiper et al., 2004; Mendiburo-Seguel et al., 2015). Applied clinically, these associations imply that clinicians should consider how self-defeating humor observed in therapy can signal thoughts and resultant behaviors that interfere with therapeutic engagement. Therefore, clinicians should be sensitive to how they model and reward coping humor in treatment.

Limitations and Future Directions

Several methodological limitations affect the generalizability of the current results. First, as stated above, the cartoon-caption writing task employed in the present study did not ask participants to create humorous content relevant to the stress induction task. Unlike in natural settings where individuals can joke about their stressors, participants were required to generate

content in response to cartoons unrelated to their stressor under instruction. Moreover, humorous

content produced during the cartoon-caption writing task was not evaluated for humor style and

may not be representative of each participant's predominant humor style. As the cartoon-caption

writing task is an independent task, affiliative and aggressive humor could not have been

observed. the results also failed to account for possible moderating factors to the caption task

such as perfectionism. When given the opportunity to provide feedback following debriefing,

several participants reported feeling a lack of confidence that their captions were indeed funny.

This lack of confidence may have been compounded by the insoluble anagrams task, which

deceived participants into believing they performed poorly on a test of verbal intelligence and

that their scores may have implied a weak sense of humor.

Although participants in the experimental condition evaluated the extent to which they

felt their captions were humorous, their self-assessments were excluded from the data analysis as

the control group, which instead rated the accuracy of their descriptions, did not undergo an

equivalent self-assessment. The study also did not evaluate the captions' comedic impact.

Though humorousness is subjective, individuals capable of generating more comedic content

may experience greater rewards for producing humor and thus may use coping humor more

effectively. Furthermore, conducting the study in a sample of predominantly female

undergraduate college students may threaten the ecological validity of the results. Additionally,

both mood induction and questionnaire responses could be unduly influenced by deception.

Several limitations further affect the evaluation and interpretation of change in distress.

Namely, change in anxiety is a limited operation of distress, which can include sadness,

frustration, and stress, among other emotions. However, well-validated self-report state measures

for other distressful emotions are scarce. Another major limitation of the present study is the

omission of a baseline state anxiety administration prior to stress induction. Although omitting a baseline protects against RTM, doing so makes unclear the extent to which anxiety relief was a function of baseline anxiety or induced anxiety. Change in anxiety was also skewed towards greater anxiety reduction, so results should be interpreted cautiously.

The present study's assessment of how humor styles relate to EFCP failed to account for actual emotional coping behaviors. For example, individuals may cope maladaptively despite appraising themselves as highly capable of dealing emotionally with stressors. Additionally, the ASI, which was used to measure EFCP, lacks psychometric validation. Thus, construct validity and reliability of the measure have not yet been adequately established.

Finally, the present study does not address the question of directionality, as it assumes humor styles to be dispositional characteristics that predict coping efficacy and cognitive appraisals. However, it is possible that ineffective coping and low EFCP also drive humor expression.

The above limitations call to attention several directions for further investigation. Future examination of the effects of humor production should account for individuals' judgments of their own humorous content, which may moderate the relationship between humor production and distress relitheThe present study also demonstrated the limits of the cartoon-caption writing task, indicating a need for a flexible humor production task with a social component that can be reliably evaluated for humor style. Additionally, findings of the test of the first hypothesis may be further explored by examining confounding effects of comedic impact using criteria with adequate construct validity and interrater reliability. Research on cognitive appraisals would also be greatly strengtehend by psychometric validation and refinement of an appraisal measure that reliably assesses both problem-focused and emotion-focused coping appraisals.

Furthermore, a broader study that includes a long-term follow-up would yield greater insight into the efficacy of long-term coping behaviors. Future research may also incorporate mediation analyses to delineate the full pathway between humor styles and psychopathological symptoms. Finally, the present study's limited measurement of state distress indicates a need for developing and validating self-report state measures for other distressful emotions, such as sadness, frustration, and stress. Self-report measures can be convenient, accessible ways of evaluating emotional change in psychological research. Acute stress, for example, is commonly assessed through costly techniques that examine physiological biomarkers, namely salivary cortisol (Bong et al., 2013; Campbell & Ehlert, 2012)

Although the present study provides preliminary evidence of humor styles' relationship to EFCP, the study falls short of establishing the connection between humor styles and depressions of anxiety and depression. Lastly, though humor's utility as a therapeutic intervention has consistently been shown to be suboptimal, results substantiate the value of evaluating humor styles as a supplemental clinical assessment that can yield nuanced information about an individual's coping efficacy and appraisals.

Conclusion

In summary, the current study supports the relationship between humor styles and coping efficacy. Specifically, greater endorsement of the self-defeating humor style predicted less anxiety reduction following a caption-writing task and poorer self-assessment of emotional coping abilities. Conversely, affiliative humor predicted greater anxiety reduction following the caption-writing task, while self-enhancing humor was associated with more optimistic and confident appraisals of coping potential. The findings contribute to the growing study of humor production as a multifaceted coping strategy that can be both adaptive and maladaptive.

Additionally, in a move towards linking humor to psychopathological symptoms, the present study attempted to explain the relationship between humor styles and self-assessed ability to cope with distress, providing evidence that self-defeating humor is consistently linked to poorer coping outcomes.

Clinically, these findings support the value of assessing client humor styles as signals of inefficient or avoidant coping, as well as the importance of clinician awareness of the humor styles they model and reward. This research sheds light on the intricate interplay between humor, coping efficacy, and psychological well-being. By examining the various dimensions of humor styles and their impact on coping outcomes, this study reinforces the prevailing notion that humor can be a double-edged tool for coping with distress and adversity. The contribution made by this study could be applied to the development of new humor-based interventions for mood dysphoria.

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Tables

Table 1

Multiple regression model of humor styles as predictors of change in anxiety

Step	Predictor	B	$SE\ B$	β	D adj.r^2	F adj.r^2
Step 1***	Pre-task STAI-S***	-0.382	0.049	-0.459	0.210	61.230
Step 2**	Self-enhancing	-0.061	0.077	-0.048	0.055	4.194
	Self-defeating*	0.136	0.068	0.130		
	Aggressive	0.117	0.081	0.089		
	Affiliative*	-0.172	0.084	-0.125		

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Multiple regression model of humor styles as predictors of EFCP

Predictor	B	$SE\ B$	β	t	p
Self-enhancing	0.070	0.022	0.210	3.188	.002
Self-defeating	-0.048	0.019	-0.176	-2.584	.010
Aggressive	-0.046	0.023	-0.134	-1.994	.047
Affiliative	0.034	0.024	0.093	1.413	.159

Figures

Figure 1

Study Procedure