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Do Humorous People Take Poorer Care of Their Health? Associations Between Humor Styles and Substance Use

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Abstract

A sense of humor is widely viewed as beneficial for physical health. However, some limited research suggests that humor may actually be related to increased smoking and alcohol consumption because humorous individuals may take a less serious attitude toward substance use. The purpose of the present study was to explore this hypothesis in greater detail in a sample of 215 undergraduate students. Individual differences in humor were measured using the Humor Styles Questionnaire (HSQ), and playfulness (i.e., low seriousness) was assessed using the trait version of the State-Trait Cheerfulness Inventory (STCI-T). Participants also completed a questionnaire about their substance use (smoking, alcohol, marijuana, cocaine). As predicted, affiliative humor, aggressive humor, and playfulness were significant predictors of greater substance use. Mediation analyses confirmed that the link between both affiliative and aggressive humor and substance use was mediated by seriousness, indicating that this association is due, at least in part, to high-humor individuals taking a less serious, more playful outlook on life. Overall, these results support the view that a sense of humor may be related to less healthy habits, at least in the domain of substance use.

Keywords: substance use, humor styles, playfulness, seriousness

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The humor and health movement has a dedicated following. Significant media attention, web-based publicity, magazine articles, and claims of some health care professionals promote the view that humor enhances immunity, increases pain tolerance, and improves the functioning of various body systems (e.g., Association for Applied and Therapeutic Humor, 2011; Cousins, 1976; McGhee, 1999). Although some research support has been found for benefits of humor and laughter on some aspects of health such as increased pain tolerance, research evidence in other areas is generally inconclusive (Martin, 2001, 2007).

For the most part, theories and research about health benefits of humor have hypothesized that potential links between humor and health are mediated by physiological mechanisms. In other words, it is assumed that humor and/or laughter produce bodily changes (e.g., hormone levels, heart rate) which in turn have beneficial effects on various systems of the body (e.g., immunity, cardiovascular function). It is further assumed that individuals with a greater sense of humor (who, by definition, tend to engage in humor and laughter more frequently in their daily lives) will tend to experience more of these health benefits than their low-humor peers.

Another potential link by which humor might affect physical health, which has received little consideration, is through health habits such as smoking and alcohol consumption (Martin, 2007). Given that a large body of research

exists to suggest that a number of illnesses (e.g., up to 30% of all common cancers) could be prevented through limiting the consumption of alcohol and tobacco (e.g., World Cancer Research Fund, American Institute for Cancer Research, 2007), it is important to explore potential associations between humor and substance use. However, rather than humor contributing to decreased substance use, the limited research that currently exists on this topic suggests that a sense of humor may actually be associated with *increased substance use*. Because humor inherently involves playfulness and a non-serious attitude, high-humor individuals may take a less serious attitude toward potentially risky behaviors such as the consumption of alcohol, tobacco, or marijuana. If this is the case, it would seem to have important implications for the humor and health movement.

The purpose of the present study was to follow up previous research exploring the relationship between sense of humor and substance use, by using a more updated and well-validated multidimensional measure of humor. A second purpose was to examine whether playfulness may mediate any observed associations between humor styles and substance use.

Theoretical Rationale

A sense of humor inherently involves a playful, non-serious perspective on life (Martin, 2007). Some theorists have suggested that an essential cognitive mechanism of humor is diminishment, which involves playing with a potentially serious topic in an incongruous way, making it less important (Apter, 2001; Wyer & Collins, 1992). In contrast to such a humorous perspective, the self-discipline needed for engaging consistently in healthy lifestyle practices, including avoiding unhealthy activities (e.g., smoking), would seem to require a generally serious attitude toward health concerns. Therefore, because they tend to view most aspects of life less seriously, individuals with a high sense of humor may also tend to view substance use less seriously.

This generally playful perspective of high-humor individuals may also be associated with unrealistic optimism, or the tendency to overestimate the likelihood of favorable outcomes (Schneider, 2001). Past research has shown that individuals who are higher on unrealistic optimism tend to engage in less healthy behaviors (e.g., Davidson & Prkachin, 1997; Weinstein, 1987). In addition, individuals with high scores on measures of sense of humor tend to be high on extraversion and sensation seeking (Deckers & Ruch, 1992), both of which have been found to correlate with riskier behaviors, such as greater substance use (e.g., Mezquita, Stewart, & Ruipérez, 2010; Raynor & Levine, 2009). In summary, the playful outlook on life that characterizes a sense of humor, because of its association with diminishment, unrealistic optimism, extraversion, and sensation-seeking, may give people a perception of immortality, invulnerability, and invincibility (Kerkkänen, Kuiper, & Martin, 2004), which in turn may lead to less motivation to avoid the use of unhealthy substances.

Previous Research

Past research bearing on the association between humor and substance use has been quite limited. Friedman and colleagues (1993) conducted analyses on data from the well-known Terman Life-Cycle Study which followed a cohort of 1178 individuals across their lifetimes. Ratings of sense of humor and optimism, provided by parents and teachers of the participants when they were 12 years of age, were used to create a composite measure of cheerfulness. The researchers found that children with higher cheerfulness scores actually died at a younger age in ensuing decades than did other children who were rated as less cheerful. To further explore this surprising finding, L. R. Martin and colleagues (2002) conducted analyses on the same data set and found that more

cheerful/humorous children also grew up to have greater alcohol consumption and tobacco usage than did their less cheerful/humorous counterparts. These authors speculated that, due to their less serious approach to life, more humorous individuals may not be as concerned about health risks and may therefore engage in more risky behaviors.

In a similar vein, Kerkkänen et al. (2004) found that Finnish police officers with higher scores on some subscales of the Multidimensional Sense of Humor Scale (MSHS; Thorson & Powell, 1993) had higher rates of smoking, suggesting an association between humor and a less healthy lifestyle. Finally, in a more recent study, Robertson, Xu, and Stripling (2010) explored the association between substance use and coping styles (one of which was humor) in a sample of female adolescent offenders. Humor was measured using the two-item humor subscale of the Brief COPE Inventory (Carver, 1997) designed to capture different coping styles in response to a stressful situation. Robertson and colleagues found that higher scores on this humor measure were significantly associated with greater alcohol use.

Taken together, these research findings suggest that a greater sense of humor could be considered a risk factor for increased substance use. However, these studies have limitations regarding the measurement of humor. In particular, sense of humor was measured using only one or two items or by employing measures that fail to distinguish between adaptive and maladaptive humor styles (cf. Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). These studies also did not examine potential mediating mechanisms, such as the hypothesis that the association between sense of humor and substance use is due to a less serious perspective on life.

The Present Study

The present investigation was designed to address the limitations of the existing research by employing the Humor Styles Questionnaire (HSQ; Martin et al., 2003) to assess both potentially beneficial and detrimental humor styles, in conjunction with substance use (including tobacco, alcohol, marijuana, and cocaine). The HSQ was designed to distinguish between two ways in which people use humor in everyday life that are potentially beneficial for mental health (affiliative and self-enhancing) and two styles that are potentially detrimental (aggressive and self-defeating; Martin et al., 2003). *Affiliative* humor is characterized by sharing witty comments, humorous anecdotes, and jokes to enhance relationships. S*elf-enhancing* humor involves the use of humor to cope with stress and maintain a cheerful outlook on life in the face of adversity. *Aggressive* humor refers to the tendency to use humor in the form of teasing or witty sarcasm to make fun of others. Finally, *self-defeating* humor consists of excessively self-disparaging humor to make others laugh at one's own expense.

In addition to the distinction between beneficial and detrimental uses of humor, the four humor styles may also be distinguished in terms of the degree to which they are other-focused versus self-focused (Cann, Zapata, & Davis, 2011). Affiliative and aggressive humor both involve humor that focuses particularly on social interactions, albeit with quite different outcomes for interpersonal relationships (affiliative humor is association with greater relationship satisfaction whereas aggressive humor is inversely related to relationship satisfaction; Cann et al., 2011). In contrast, self-enhancing and self-defeating humor both involve a greater focus on one's own emotional well-being, with the former being associated with high self-esteem and positive emotions, and the latter with low self-esteem and negative emotions.

We hypothesized that all four humor styles would be associated with increased substance use, consistent with the previous research described earlier. This hypothesis was based on the assumption that a generally playful,

non-serious outlook underlies all four humor styles. In turn, as suggested earlier, this playful outlook is assumed to lead to less concern about a healthy lifestyle (and hence, increased use of substances). Moreover, all four of the scales of the HSQ have been found to be positively correlated with the humor measures used in two of the studies described earlier, which were found to be associated with increased substance use (i.e., the MSHS and the COPE Humor scale; Martin et al., 2003). However, we expected that the other-focused humor styles would be more strongly associated with playfulness and substance use than would the self-focused uses of humor. Although exploratory, we hypothesized that humor used with a particularly interpersonal focus would be more playful than humor used to cope with one's own emotional state. Humor is predominantly a social phenomenon (Martin et al., 2003) and when used in social interaction, reaction and feedback to the humorous comments may enhance and prolong playful communication. This greater level of playfulness would then lead to increased substance use relative to the self-focused uses of humor, which we tentatively hypothesized to be less strongly associated with playfulness, and therefore less unhealthy with respect to health habits.

To assess the relationships between the humor styles and seriousness, the State-Trait Cheerfulness Inventory (STCI-T) was used. Developed by Ruch, Köhler, and Van Thriel (1996), the STCI-T measures three dimensions underlying a humorous temperament. The two more affective subscales are trait cheerfulness (cheerful mood, laughter, smiling) and trait bad mood (sad, grumpy interactional styles especially at times when others may be cheerful). In contrast, the more cognitive dimension capturing an attitude toward life is trait seriousness (i.e., inverse of playfulness). In this approach, a good sense of humor is seen as comprising a nonserious or playful attitude toward life, along with a habitually cheerful and non-dysphoric mood.

In this study, we were particularly interested in the seriousness subscale of the STCI-T, because of its direct relevance to our hypotheses about the role of playfulness (i.e., low seriousness) in the hypothesized link between sense of humor and substance use. We speculated that individuals with high scores on trait seriousness (and therefore low sense of humor) may more reliably estimate the dangers associated with substance use. Their tendency to plan ahead, combined with a rational frame of mind (Ruch & Köhler, 1998), may also make it easier to refrain from more unhealthy activities such as the use of marijuana and tobacco. Therefore, a higher level of playfulness (defined as low seriousness) was hypothesized to be predictive of increased substance use. Besides examining the direct correlation between seriousness and substance use, we were also interested in examining mediating effects of seriousness on any observed correlations between the humor styles and substance use scores, as a way of testing our assumption that a less serious outlook on life may mediate the predicted link between sense of humor (assessed via humor styles) and use of marijuana, alcohol, tobacco and cocaine. (For interest, the associations of the other STCI-T subscales, cheerfulness and bad mood, with substance use were also examined.)

In summary, the first research question addressed in the present study was the extent to which humor styles are associated with substance use in a sample of university students. The second research question was whether the associations between humor styles and substance use are mediated by a playful outlook toward life (i.e., low seriousness).

Method

Participants

The sample was comprised of 215 first-year undergraduate students (92 males, 123 females) at the University of Western Ontario who participated in this study for partial course credit. The mean age of participants was 18.58 years (*SD* = 1.99).

Measures

Demographics Questionnaire — A brief demographics questionnaire was administered to provide general information about participants' age, gender, and ethnicity.

Substance Use — A health habits questionnaire was developed by adapting and modifying items from the National College Health Assessment (NCHA; American College Health Association, 2005), a measure used to collect information about health habits and behaviors in college students. For the purpose of this paper, only the four item substance use scale, measuring the extent to which participants engaged in alcohol, tobacco, marijuana, and cocaine use during the preceding month, was of interest. Items were rated on a likert scale ranging from 1 (*never used in past 30 days*) to 8 (*used daily*). Consistent with Robertson et al.'s (2010) methodology, a substance use index was created by averaging the items. The Cronbach's alpha for the composite substance use variable was .61.

***Humor Styles Questionnaire* (HSQ; Martin et al., 2003) —** The HSQ is a 32 item measure that examines four styles of humor in everyday life: Affiliative humor (e.g., "I laugh and joke a lot with my friends"), self-enhancing humor (e.g., "If I am depressed I can usually cheer myself up with humor"), aggressive humor (e.g., "If I don't like someone, I often use humor or teasing to put them down") and self-defeating humor (e.g., "I let people laugh at me or make fun at my expense more than I should") . Items are rated on a 7-point, Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). In the present study, internal consistencies (Cronbach's alpha) for the Affiliative, Self-enhancing, Aggressive and Self-defeating scales were .81, .84, .73, and .79, respectively.

***The State-Trait Cheerfulness Inventory* (STCI-T; Ruch et al., 1996) —** The STCI-T is a 30-item self-report questionnaire that assesses individual differences in trait cheerfulness ("I like to laugh and do it often"); trait seriousness ("In most situations, I initially see the serious aspect") and trait bad mood ("When friends try to cheer me up by joking or fooling around, I sometimes become more morose and grumpy"). Respondents indicate the extent to which they agree or disagree with each item using a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Internal consistency (coefficient alpha) for trait cheerfulness, trait seriousness, and trait bad mood in the current study were .84, .73, and .82, respectively.

Procedure — Participants were tested in groups of 10 to 20. All measures were administered in a randomized order and completed in an average of twenty minutes.

Statistical Analyses

Correlation analyses were conducted to assess the relationships between the four humor styles and substance use. Similarly, the associations between the STCI-T subscales and substance use were also explored with a particular focus on the correlations between seriousness and substance use.

Mediation analyses were then conducted to test the hypothesis that seriousness mediates the relationship between the humor styles and substance use. As noted by Baron and Kenny (1986), a prerequisite for mediation is that there must be significant correlations between predictor and criterion variables, between predictor and mediator variables, and between mediator and criterion variables. Multiple mediation analyses were conducted separately for only those humor styles that were significantly correlated with both seriousness and substance use. A given humor style was used as the predictor variable and the substance use score as the criterion variable in each analysis. To test for potential mediating effects of seriousness, we used the recently developed bootstrap sampling procedure described by Preacher and Hayes (2008). This procedure allows for the statistical testing of the direct effect of the predictor variable on the criterion variable, as well as the indirect (i.e., mediating) effect through the pathway of the mediator variable.

This bootstrap procedure uses sampling with replacement to draw a large number of samples (2,000 in the present study) from the data set and calculate path coefficients for each sample. Then, using the estimates based on these 2,000 bootstrap samples, the mean direct and indirect effects and their confidence intervals (CIs) are calculated. These CIs are used to determine if each effect is statistically significant. For each effect, the 95% CI is examined and, if this range does not include zero, then this effect is statistically significant at $p < .05$. In a similar fashion, CIs can also be set at 99%, resulting in significance levels of $p < .01$ if zero does not fall within the calculated CI range. Preacher and Hayes (2008) articulated several advantages of using this bootstrap-driven CI statistical test for direct and indirect effects, compared to product-of-coefficient approaches such as the Sobel test. One important advantage of this approach is that it does not impose the assumption of normally distributed variables.

We conducted these analyses with SPSS 18.0 using the macro provided by Preacher and Hayes (2008) for carrying out the bootstrap procedure. In order to compare the results across analyses and variables, all variables used in these analyses were standardized ($M = 0$, $SD = 1.0$). Path coefficients can therefore be interpreted in a manner similar to correlation coefficients.

Results

For descriptive purposes, the means, standard deviations, and ranges of the measures of humor and substance use used in this study are presented in Table 1 (see Appendix). Pearson correlations between the four scales of the HSQ, the three subscales of the STCI-T, and substance use scores are presented in Table 2. Both affiliative and aggressive humor styles were positively correlated with substance use. As expected, seriousness was negatively correlated with substance use, whereas bad mood was positively correlated with this variable. Interestingly, seriousness was negatively correlated with the more interpersonal humor styles (affiliative and aggressive), but not with the more intrapsychic styles (self-enhancing and self-defeating), indicating that affiliative and aggressive humor are both associated with a more playful (less serious) attitude toward life. Given that affiliative and aggressive humor were significantly correlated with substance use and seriousness, and that seriousness and substance use were also correlated, the criteria for mediation analysis were met for these two interpersonal humor styles.

Using the bootstrap procedure described earlier, analyses were then conducted to examine the potential mediating effects of seriousness on the relationships between affiliative humor and substance use as well as between aggressive humor and substance use. The results of these analyses are presented in Figure 1.

Table 2

Correlations Between the Substance Use Composite and Scores on the HSQ and STCI-T as well as Correlations Between Seriousness and Scores on the HSQ

	Substance Use	Seriousness
HSQ SE	.003	-.06
HSQ AF	.20**	-.18**
HSQ AG	.22**	-.19**
HSQ SD	-.09	-.10
Seriousness	-.25***	
Cheerfulness	-.03	
Bad Mood	.15*	

Note. HSQ AF = Affiliative Humor, HSQ SE = Self-enhancing Humor, HSQ AG = Aggressive Humor, HSQ SD = Self-defeating Humor.
*p < .05. **p < .01. ***p < .001.

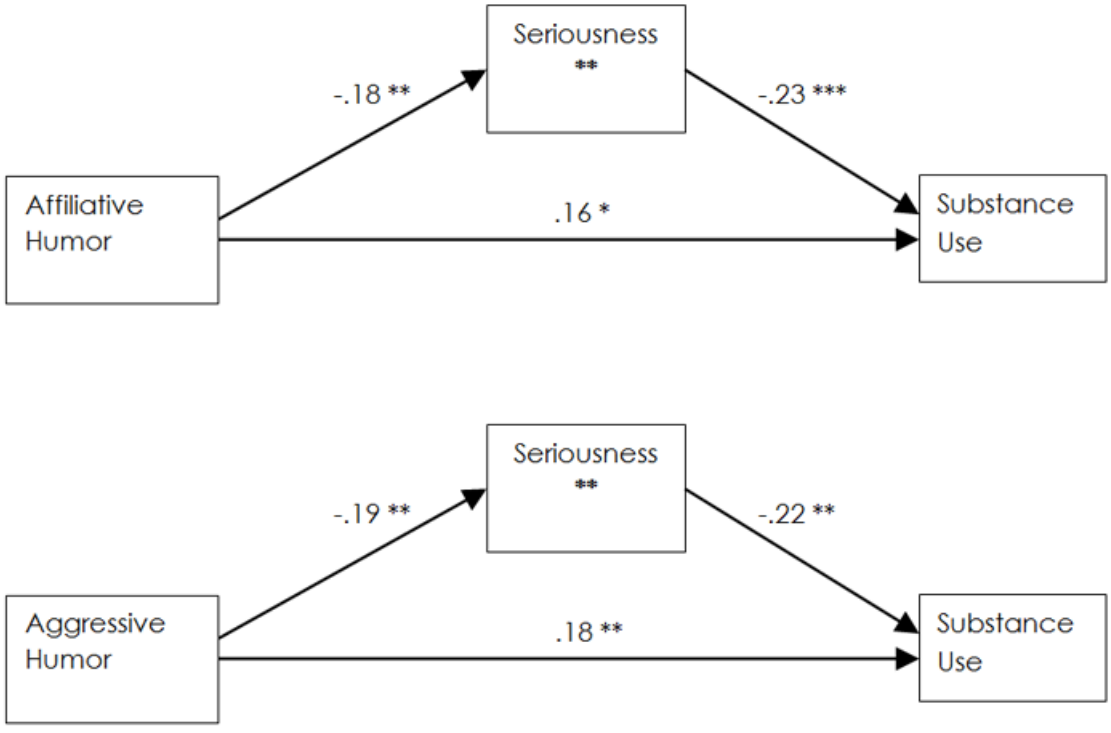

Figure 1. Mediating effect of seriousness on relationships between affiliative as well as aggressive humor and substance use. *Note*. *p < .05. **p < .01. ***p < .001.

In both mediation analyses, significant mediating effects were found for seriousness ($p < .01$). Thus, higher scores on both affiliative and aggressive humor were associated with lower scores on seriousness, which in turn predicted higher substance use scores. In addition to the indirect effect of these humor styles on substance use through seriousness, a direct effect was also found (affiliative humor: $c' = .16$, $p < .05$; aggressive humor: $c' = .18$, $p < .01$), indicating that seriousness only partially mediates these relationships. To obtain an estimate of the strength of this effect, multiple regression analyses were conducted to compare the variance in substance use scores

accounted for by affiliative and aggressive humor when each were entered as the sole predictor, and after first entering seriousness scores. The analysis for affiliative humor showed a reduction in R^2 from .04 to .02, whereas the analysis for aggressive humor showed a reduction in R^2 from .05 to .03, indicating that the mediating effect of seriousness accounts for about 50% of the total effect of affiliative humor and 40% of the total effect of aggressive humor on substance use.

Discussion

The main purpose of this study was to investigate the associations between humor styles, seriousness, and substance use. We hypothesized that all four styles would positively correlate with substance use, but that the relationships would be more pronounced for the interpersonal uses of humor. As predicted, affiliative and aggressive humor were positively correlated with substance use. However, contrary to our expectation, self-enhancing and self-defeating humor were unrelated to substance use.

These results can be understood within the context of the associations between humor styles and playfulness. Both affiliative and aggressive humor were negatively correlated with seriousness whereas self-enhancing and self-defeating humor were unrelated with this variable. These results indicate that we were incorrect in assuming that a sense of playfulness underlies all four humor styles. Instead, the results highlight the importance of the distinction between the intrapersonal (i.e., self-oriented) and interpersonal (i.e., other-oriented) functions of humor. Humor used either to enhance relationships (affiliative) or to tease and make fun of others (aggressive) is associated with playfulness, whereas humor that focuses on one's own emotional well-being either in a positive (self-enhancing) or negative (self-defeating) way is not significantly related to playfulness. Perhaps these latter uses of humor tend to be more strategic or purposeful and therefore less likely to be associated with playfulness. In addition, the more interpersonal styles of humor may be more likely to elicit humorous responses from others, leading to more reciprocated humor exchanges and enhanced feelings and expressions of playfulness. In contrast, the self-focused uses of humor may involve fewer playful signals from the user and any recipients who may be present, resulting in a humorous episode that is shorter in duration and overall experienced as less inherently playful. These hypotheses could be explored in future research.

With regard to correlations between the STCI-T subscales and substance use, the results indicated that, as predicted, more serious (i.e., less playful) persons are less likely to engage in substance use. Serious persons may attach more importance to a healthy lifestyle and, since they tend to plan ahead, may be more likely to foresee the dangers associated with health compromising behaviors. As a result, they may be less likely to smoke, drink alcohol, and use other drugs. In contrast, more playful persons may not be as concerned about the health risks associated with excessive substance use.

Although not a focus of this study, in addition to seriousness, the STCI-T bad mood subscale was found to be positively correlated with substance use, indicating that habitually grumpy or grouchy feelings could be a risk factor for substance use. Bad mood has previously been found to be positively correlated with neuroticism (Ruch & Köhler, 1998), and a link between neuroticism and risky health behaviors has been well established in past research (e.g., Goodwin & Hamilton, 2002; Vollrath & Torgersen, 2002). However, this raises the question of why self-enhancing and self-defeating humor (which are negatively and positively associated with neuroticism, respectively; Vernon, Martin, Schermer, & Mackie, 2008) were uncorrelated with substance use in the present

study. Perhaps the role of playfulness is more important than neuroticism when it comes to the link between humor styles and substance use. This is a question for further research with other populations.

A further purpose of this investigation was to test whether seriousness accounts for the hypothesized link between humor styles and substance use. As expected, our mediational analyses revealed that the associations of both affiliative and aggressive humor with substance use were mediated by seriousness, with moderate mediating effects (40% - 50% of the total effects). Thus, individuals with these other-focused styles of humor tend to be more playful in their outlook on life, which in turn may lead to greater substance use due to less concern about health risks. However, given that only partial mediating effects were found, it appears that other factors besides a lack of seriousness may account for the link between these two humor styles and substance use. Future research could explore variables such as extraversion and unrealistic optimism as possible additional mediators.

It is important to note that although the effect sizes being interpreted in this study are relatively small, they were statistically significant and of interest. As Sin and Lyubomirsky (2009) note, small effect sizes can have enormous practical importance and usefulness when examining dependent variables that are difficult to change, such as health habit behavior. Furthermore, many life-saving treatments in medicine have similar or even smaller effect sizes (e.g., taking aspirin for the prevention of heart attacks, r = .03) than those found in this study (Sin & Lyubomirsky, 2009).

An important limitation of the present study is that the use of a correlational methodology precludes drawing inferences about the direction of causality among variables. Therefore, future research using experimental methodology is warranted to demonstrate causal effects.

Another limitation of this study is the use of self-report questionnaires to assess humor and substance use. This may have influenced the strength of the findings because of common method variance. Future research should attempt to replicate our findings using observational approaches or daily diary reports of humor use and substance use, instead of retrospective self-report assessment measures.

An additional limitation of this study is the use of a university sample of participants. However, we would argue that this age group is particularly relevant for this research question, because the transition from adolescence to early adulthood is when most individuals initially establish a relatively stable pattern of life-long substance use behaviors (Sax, 1997). In addition, university students display a great deal of variability in patterns of substance use, increasing the likelihood of finding correlations. Nonetheless, it would be of interest to investigate this research question with other age groups as well.

In summary, although it is commonly believed that humor is good for one's health, the results of this study provided no evidence that a greater sense of humor (conceptualized using the Humor Styles Questionnaire) is related to healthier lifestyle behaviors. Instead, the results indicate that both affiliative and aggressive humor styles are associated with greater use of alcohol, tobacco, marijuana, and cocaine. This finding accords with previous research indicating that higher levels of humor are related to some types of unhealthy lifestyle behaviors (Friedman et al., 1993; Kerkkänen et al., 2004; Martin et al., 2002). The present findings suggest that these associations are primarily found with other-focused uses of humor rather than with self-focused uses. Furthermore, as expected, seriousness was a significant mediator of both of these relationships, suggesting that a playful attitude accounts, at least in part, for this link between humor styles and substance use.

Although the results of the present study are consistent with previous research suggesting that a sense of humor (at least when defined in terms of other-focused uses of humor) may be associated with *less healthy* lifestyle behaviors, it is important to recognize that there may well be other ways in which humor can lead to *improvements* in health. For example, the positive emotion associated with humor may produce physiological changes in hormone levels or endorphin production, which in turn could result in analgesic or immune-enhancing effects (Martin, 2007). Thus, we are not suggesting that humor is never beneficial for health. However, these results do suggest that advocates of the humor and health movement who wish to promote humor as a means of enhancing physical health should also promote awareness that, when it comes to substance use, a more serious perspective may be more beneficial than a humorous one.

Appendix

Table 1

Means, Standard Deviations, and Ranges of the HSQ, STCI-T, and Substance Use Composite

Variable:	Total Sample		
	M	*SD*	Range
HSQ AF	47.62	6.05	20.0-56.0
HSQ SE	38.30	8.43	11.0-56.0
HSQ AG	31.54	7.92	10.0-52.0
HSQ SD	28.96	8.64	10.0-49.0
Seriousness	26.32	4.46	15.0-37.0
Cheerfulness	33.95	4.18	17.0-40.0
Bad Mood	18.20	4.74	10.0-36.0
Substance Use	2.22	1.00	0.00-6.50

Note: HSQ AF = Affiliative Humor, HSQ SE = Self-enhancing Humor, HSQ AG = Aggressive Humor, HSQ SD = Self-defeating Humor.

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