Chapter #12

HOW PERSONALITY AND COPING STYLES DIFFER IN OPTIMISTS AND PESSIMISTS

Lilly E. Both

Department of Psychology, University of New Brunswick, Canada

ABSTRACT

Personality and coping styles were examined in relation to optimism and pessimism. The sample consisted of 178 individuals (M age = 23.00; SD = 6.27; range = 19-50 years; 79% women) who completed an online survey. Participants completed the BFI-2 to assess personality, the Ways of Coping Scale to determine coping styles, and the Future Events Scales to measure optimism and pessimism. The results found a moderate negative correlation between optimism and pessimism, suggesting that although these constructs are related, they are still distinct. A series of hierarchical multiple regression analyses were conducted predicting optimism and pessimism. Optimism was predicted by lower scores on negative emotionality (neuroticism), and higher scores on extraversion, agreeableness and conscientiousness. As well, problem-focused coping made a unique contribution. Specific facets that predicted optimism were higher compassion and lower depression scores. Pessimism, on the other hand, was predicted by age (being older), gender (being female), and higher negative emotionality (neuroticism) scores. Also, higher scores on emotion-focused coping contributed to the model. The only facet that predicted pessimism was depression. These results suggest that our perceptions – whether we have a positive or negative bias – are influenced by both dispositional factors (like personality) and situation influences (like coping).

Keywords: personality, coping, optimism, pessimism.

1. INTRODUCTION

The optimistic bias occurs when an individual believes an undesirable event is more likely to happen to someone else than to oneself (Shepperd, Waters, Weinstein, & Klein, 2015). Past research has focused on documenting the events for which the optimistic bias occurs, such as health risks like a fatal heart attack (Radcliffe & Klein, 2002), or addiction to cigarette smoking and alcohol (Masiero, Riva, Oliveri, Fioretti & Pravettoni, 2018), as well as environmental disasters such as hurricanes (Trumbo, Meyer, Marlatt, Peek & Morrisey, 2014), and even chance events (Weinstein, 1980). Other studies have focused on the cognitive and motivational reasons for the distortion (Weinstein, 1980), as well as the consequences (both harmful and beneficial) of having a positive bias (Shepperd, Pogge, & Howell, 2017).

Optimists tend to be more resilient (Davis & Asliturk, 2011) and report using active coping in stressful situations (Carver et al., 1993). Pessimists, who believe negative life events are more likely to happen to themselves than to others, report using more escape strategies (Carver et al., 1993). Thus, coping mechanisms play a role in the perceived risk of positive and negative life events. The theoretical foundation for much of this work is derived from the model of stress and coping based on Lazarus and Folkman (see Folkman, Lazarus, Gruen, & DeLongis, 1986). In their theory, coping styles cluster into strategies that are used to deal directly with the problem (i.e., problem-focused coping), or to regulate

the emotions that are felt (i.e., emotion-focused coping). In difficult circumstances, pessimists report more distress and lower quality of life in comparison to optimists, and coping style has mediated this link in several studies (Scheier, Carver, & Bridges, 2001). These results have been demonstrated in a wide variety of samples and circumstances ranging from adjustment to college life, to cardiac and cancer diagnoses, follow-up and treatment (Scheier et al., 2001). Pessimists tend to engage in avoidant strategies such as wishful thinking and denial (emotion-focused coping), whereas optimists tend to use active problem-focused coping such as planning, generating solutions or seeking information (Scheier et al., 2001). As such, coping style was examined in this study. This relation between coping style and optimism has practical implications for the mental health field. These coping strategies are considered a situational influence because they are learned and are amenable to change or interventions (Both & Best, 2015).

Despite the large database on the pervasiveness of the optimistic bias, few studies to date have focused on dispositional influences such as personality. In one study, Borkenau and Mauer (2006) found personality influenced risk estimates. However, the authors only examined neuroticism and extraversion in their model of positive and negative emotionality. Personality is generally examined using the five factor model, namely the traits of neuroticism, extraversion, openness, conscientiousness and agreeableness (Costa & McCrae, 1992). Furthermore, each trait can be sub-divided into subscale or facet scores (Costa & McCrae, 1992; Soto & John, 2017). The current study extended the literature by examining all five personality factors and their facets, along with coping styles, in relation to the optimistic and pessimistic bias. This approach allowed for a detailed examination of the personality characteristics that predict optimism and pessimism.

1.1. Purpose of the present study

The purpose of this study was to examine factors that predict optimism and pessimism. Both dispositional factors (personality) and situational influences (coping styles) were assessed.

2. METHOD

2.1. Participants

The sample consisted of 178 individuals (M age = 23.00; SD = 6.27; range = 19-50 years; 79% women) who completed an online survey. Although the survey was open to members from the general public, the vast majority of them were university students who were informed of the study through SONA, an online recruiting tool. The majority of participants were single (85% single; 12% married or common law; 3% divorced) and Caucasian (86% White or Caucasian, 7% Asian, 2% Black or African American; 5% Other). University students could earn one bonus point towards their final grade for participating in this research. As well, all participants had the opportunity to be entered into a draw for a \$50 Amazon gift card (i.e., they sent an email at the completion of the study that was separate, and not linked to their data).

2.2. Measures

Demographic Questionnaire. This brief measure asked participants to report their age, gender, marital status, race/ethnicity, and education level.

The Big Five Inventory -2 (BFI-2; Soto & John, 2017). This measure consists of 60 items (some reverse coded) that assess personality factors commonly known as the Big.

Five – extraversion, agreeableness, conscientiousness, negative emotionality (neuroticism), and open-mindedness. Each of these factors is comprised of three subscales, known as facets (15 total). Participants indicate the extent to which they agree or disagree with each statement on a 5 point scale where $1 = disagree \ strongly$ and $5 = agree \ strongly$. This inventory is used widely in personality research, due to its established reliability and validity (Soto & John, 2017). In the present study, the factor scores had excellent reliability (Cronbach's $\alpha = .87$ extraversion; .80 agreeableness; .79 conscientiousness; .91 negative emotionality; and .76 open-mindedness).

The Ways of Coping Checklist (Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). This scale is a 42 item self-report measure that asks participants to assess their coping strategies in stressful situations. Participants rate the degree (from $0 = not \ used$ to $3 = used \ a \ great \ deal$) to which they used certain strategies such as "blamed yourself" or "talked to someone who could do something about the problem." Three subscale scores are computed that assess problem-focused coping (15 items), emotion-focused coping (21 items), and seeking support (6 items). In the present study, only the problem- and emotion-focused subscales were utilized. This scale has good reliability and validity scores (see Vitaliano et al., 1985 for details). In the present study, Cronbach's $\alpha = .87$ for problem-focused coping, and .90 for emotion-focused coping.

The Future Events Scale (Wichman, Reich, & Weary, 2006). This scale consists of 23 items (the original scale had 26 items but new factor structure has dropped 3 items; see Wichman et al., 2006). Participants indicate the likelihood, on an 11 point scale, that certain events (such as "to have a loved one die in the next year") will happen to them. Two subscale scores were computed – one for optimism (Cronbach's $\alpha = .88$) and one for pessimism (Cronbach's $\alpha = .81$).

2.3. Procedure

All participants were directed to Qualtrics, an online survey platform. Participants read a consent form describing the nature of the study, and indicated whether they wished to participate by either clicking on the consent button or exiting the survey. Once inside the survey, the demographic measure was always presented first, followed by the remaining measures in random order. The survey took approximately 20 minutes to complete.

3. RESULTS

3.1. Gender differences

Independent samples *t*-tests were conducted to determine if there were any gender differences (see Table 1). Women scored higher than men on negative emotionality (neuroticism), including each of its facets or subscales (i.e., anxiety, depression, emotional volatility). Women also scored higher on emotion-focused coping and pessimism. Men scored higher on energy level.

3.2. Correlations

The bivariate correlations with personality factor scores are presented in Table 2. Age was correlated with open-mindedness, agreeableness, and pessimism (older adults scored higher on these measures). Negative emotionality (neuroticism) was correlated positively with emotion-focused coping and pessimism, and was negatively correlated with problem-focused coping and optimism. The remaining personality factors, by and large, showed the opposite pattern in that they correlated positively with problem-focused coping

and optimism, and correlated negatively with emotion-focused coping and pessimism. There was no statistically significant correlation between problem-focused and emotion-focused coping. However, problem-focused coping was correlated positively with optimism, whereas emotion-focused coping correlated negatively with optimism and positively with pessimism. Finally, optimism and pessimism were inversely and only moderately correlated.

The bivariate correlations with personality facet or subset scores followed a similar pattern and are presented in Table 3. Anxiety, depression and emotional volatility correlated positively with pessimism and with emotion-focused coping. All remaining personality facets (except for aesthetic sensitivity) were correlated positively with optimism (see additional results in Table 3).

3.3. Hierarchical regression analyses

3.3.1. Predicting Optimism

A hierarchical regression analysis was conducted to determine whether personality factors and coping strategies predicted optimism. Age and gender were entered on the first step to control for their effects. On the second step, the five personality factors were added. Finally, on the third step, the two coping strategies were added. Tolerance and VIF (variance inflation factor) were all within acceptable levels for the analysis. The overall model was statistically significant and accounted for 42% of the variance (F(9,165) = 13.34,p < .001, multiple R = .65). Age and gender were not statistically significant predictors $(F_{(2,172)} = 1.47, p = .23, R^2 = .02)$. The five personality factors were entered on the second step and produced a statistically significant change in the model (R^2 change = .34, F_{inc} (5,167) = 17.48, p < .001). Significant predictors were Negative Emotionality (neuroticism) $(\beta = -.17, t = -2.17, p = .03, sr^2 = .02)$, Extraversion $(\beta = .31, t = 4.29, p < .001, sr^2 = .07)$, Agreeableness ($\beta = .15$, t = 2.08, p = .04, $sr^2 = .02$), and Conscientiousness ($\beta = .19$, t = 2.61, p = .01, $sr^2 = .03$). Finally, the coping strategies were entered on the last step and produced a statistically significant change in the model (R^2 change = .07, F_{inc} (2.165) = 9.50, p < .001). The only significant predictor at this step was problem-focused coping ($\beta = .29$, $t = 4.36, p < .001, sr^2 = .07$). The adjusted R^2 value of .39 in the overall model indicates that more than a third of the variability in optimism scores was predicted by personality traits and coping, namely lower scores on negative emotionality (neuroticism), and higher scores on extraversion, agreeableness, conscientiousness, and problem-focused coping.

A second hierarchical regression analysis was conducted substituting the personality facet scores for the factor scores. Similar to the previous analysis, age and gender were entered on the first step to control for their effects. On the second step, the fifteen personality facets were added. Finally, on the third step, the two coping strategies were added. Tolerance and VIF (variance inflation factor) were all within acceptable levels for the analysis. The overall model was statistically significant and accounted for 48% of the variance (F(19,154) = 7.52, p < .001, multiple R = .69). Age and gender were not statistically significant predictors (F(2,171) = 1.44, p = .24, $R^2 = .02$). The fifteen personality facets were entered on the second step and produced a statistically significant change in the model (R^2 change = .40, F_{inc} (15,156) = 7.26, p < .001). Significant predictors were Compassion $(\beta = .21, t = 2.42, p = .02, sr^2 = .02)$, and Depression $(\beta = .31, t = .2.90, p = .004, sr^2 = .03)$. Finally, the coping strategies were entered on the last step and produced a statistically significant change in the model (R^2 change = .06, F_{inc} (2,154) = 8.95, p < .001). The only significant predictor at this step was problem-focused coping ($\beta = .29$, t = 4.18, p < .001, $sr^2 = .06$). The adjusted R^2 value of .42 in the overall model indicates that more than a third of the variability in optimism scores was predicted by personality facets

Table 1. Gender Differences.

	Males		Females	1	t-test (p)	
	Mean	SD	Mean	SD	_	
Negative Emotionality	2.41	.60	3.25	.87	-6.56 (< .001)	
Anxiety	2.87	.78	3.70	.90	-4.84 (< .001)	
Depression	2.09	.75	2.90	1.07	-5.13 (< .001)	
Emotional Volatility	2.27	.69	3.15	.99	-5.98 (< .001)	
Extraversion	3.59	.72	3.30	.78	1.94 (= .054)	
Sociability	3.32	1.00	3.15	1.04	.83 (= .405)	
Assertiveness	3.53	.87	3.24	.94	1.63 (= .106)	
Energy Level	3.91	.68	3.50	.85	2.61 (= .010)	
Open-Mindedness	3.63	.63	3.61	.62	.18 (= .860)	
Intellectual Curiosity	3.99	.66	3.83	.71	1.11 (= .267)	
Aesthetic Sensitivity	3.23	.94	3.45	.89	-1.29 (= .199)	
Creative Imagination	3.68	.76	3.54	.83	.87 (= .387)	
Agreeableness	3.82	.53	3.90	.62	69 (= .494)	
Compassion	3.94	.65	4.08	.75	99 (= .323)	
Respectfulness	3.90	.59	4.09	.67	-1.45 (= .150)	
Trust	3.62	.73	3.54	.76	.59 (= .557)	
Consciousness	3.42	.56	3.50	.63	60 (= .551)	
Organization	3.45	.86	3.61	.91	92 (= .361)	
Productiveness	3.38	.73	3.33	.78	.34 (= .734)	
Responsibility	3.45	.64	3.55	.73	76 (= .451)	
Problem-Focused Coping	2.74	.40	2.59	.52	1.50 (= .135)	
Emotion-focused Coping	2.21	.40	2.50	.59	-3.32 (= .001)	
Optimism	8.23	1.18	8.19	1.51	.14 (= .886)	
Pessimism	4.77	1.62	5.55	1.65	-2.46 (= .015)	

Note: Significant differences

are bolded.

Table 2. Bivariate Correlations with Age, Personality Factors, Coping, Optimism and Pessimism.

	N	Е	0	A	С	PFC	EFC	OPT	PES
Age	04	.04	.19*	.18*	.05	.11	10	04	.15*
N		42***	01	33***	26***	27***	.52***	40***	.50***
Е			.22**	.15	.24**	.22**	27***	.47***	32***
О				.21**	.20**	.22**	16*	.21**	07
A					.43***	.19*	30***	.33***	26***
С						.35***	30***	.38***	23**
PFC							04	.43***	11
EFC								28***	.44***
OPT									40***

Note: * p < .05; ** p < .01; *** p < .001

N is Negative Emotionality, E is Extraversion, O is Open-Mindedness, A is Agreeableness, C is Conscientiousness, PFC is problem-focused coping, EFC is emotion-focused coping, OPT is optimism, PES is pessimism

Table 3. Bivariate Correlations with Personality Facets, Coping, Optimism and Pessimism.

	PFC	EFC	OPT	PES
N ANXIETY	15	.42***	29***	.42***
N DEPRESSION	30***	.56***	48***	.52***
N EMOTIONAL VOLATILITY	26***	.41***	28***	.38***
E SOCIABILITY	.06	17*	.31***	23**
E ASSERTIVENESS	.26***	24***	.41***	25***
E ENERGY LEVEL	.25***	28***	.49***	33***
O INTELLECTUAL CURIOSITY	.26***	14	.21**	07
O AESTHETIC SENSITIVITY	00	08	.03	.02
O CREATIVE IMAGINATION	.27***	17*	.26***	11
A COMPASSION	.15*	13	.30***	10
A RESPECTFULNESS	.09	19*	.18*	20**
A TRUST	.22**	42***	.33***	34***
C ORGANIZATION	.33***	16*	.29***	13
C PRODUCTIVENESS	.31***	33***	.39***	18*
C RESPONSIBILITY	.15	23**	.19*	22**

Note: *p < .05; **p < .01; ***p < .001N is Negative Emotionality, E is Extraversion, O is Open-Mindedness, A is Agreeableness, C is Conscientiousness, PFC is problem-focused coping, EFC is emotion-focused coping, OPT is optimism, PES is pessimism

and coping, namely higher scores on compassion and problem-focused coping, and lower scores on depression.

3.3.2. Predicting pessimism

The above regression analyses were repeated substituting pessimism as the criterion variable. Again, tolerance and VIF were within acceptable limits for the analyses. When personality factors scores were used, the overall model was statistically significant and accounted for 36% of the variance $(F_{0.165}) = 10.23$, p < .001, multiple R = .60). The first step of the model was statistically significant ($F_{(2.172)} = 7.42$, p = .001, $R^2 = .08$). Significant predictors were age ($\beta = .17$, t = 2.31, p = .02, $sr^2 = .03$) and gender ($\beta = .24$, t = 3.25, p = .001, $sr^2 = .06$). The five personality factors were entered on the second step and produced a statistically significant change in the model (R^2 change = .24, $F_{\rm inc}$ (5,167) = 11.80, p < .001). The significant predictor at this stage was Negative Emotionality (neuroticism) ($\beta = .37$, t = 4.59, p < .001, $sr^2 = .09$). Finally, the coping strategies were entered on the last step and produced a statistically significant change in the model (R^2 change = .04, F_{inc} (2.165) = 4.93, p = .008). The only significant predictor at this step was emotion-focused coping ($\beta = .24$, t = 2.97, p = .003, $sr^2 = .04$). The adjusted R^2 value of .32 in the overall model indicates that a third of the variability in pessimism scores was predicted by being older, being female, having higher negative emotionality (neuroticism) scores, and using emotion-focused coping strategies.

When personality facet scores were used in the regression analysis to predict pessimism, the overall model was statistically significant and accounted for 40% of the variance (F ($_{19,154}$) = 5.42, p < .001, multiple R = .63). Age (β = .17, t = 2.36, p = .02, sr^2 = .03) and gender (β = .24, t = 3.22, p = .002, sr^2 = .06) were both statistically significant predictors on the first step (F ($_{2,171}$) = 7.43, p = .001, R^2 = .08). The fifteen personality facets were entered on the second step and produced a statistically significant change in the model (R^2 change = .29, $F_{\rm inc}$ ($_{15,156}$) = 4.89, p < .001). The only significant facet was Depression (β = .30, t = 2.74, p = .007, sr^2 = .03). Finally, the coping strategies were entered on the last step and produced a statistically significant change in the model (R^2 change = .03, $F_{\rm inc}$ ($_{2,154}$) = 3.39, p = .036). The only significant predictor at this step was emotion-focused coping (β = .21, t = 2.40, p = .018, sr^2 = .02). The adjusted R^2 value of .33 in the overall model indicates that more than a third of the variability in pessimism scores was predicted by being older and female, and by personality facets and coping, namely higher scores on depression and emotion-focused coping.

4. DISCUSSION

Why are some people optimistic while others are not? This study examined dispositional factors (personality traits) and situational influences (coping styles) to examine this question.

In this study, optimism was predicted by personality traits and coping, namely lower scores on negative emotionality (neuroticism), and higher scores on extraversion, agreeableness, conscientiousness, and problem-focused coping. Although the largest proportion of variance was explained by the block of personality factors, extraversion and problem-focused coping contributed the most unique variance. Extraverts are sociable, assertive and have high energy levels (Soto & John, 2017). Indeed, extraverts have been described as optimistic (Costa & McCrae, 1992). As well, problem-focused coping is related to positive attributes such as life satisfaction (Both, 2014) and forgiveness (Fowler & Both, 2017).

A different pattern emerged, however, when facet or subscale scores were substituted in the regression for the factor scores. In this case, the personality facets that predicted optimism were higher compassion (a facet of Agreeableness) and lower depression scores (a facet of Negative Emotionality). None of the individual facets of extraversion or conscientiousness made unique contributions. This result underscores the importance of examining personality constructs at the subscale level. Depression correlated negatively with extraversion, and compassion was positively correlated with conscientiousness. In the regression model, the facets of (lower) depression and (higher) compassion overshadowed any remaining contributions to optimism. However, although the combined personality facets contributed the largest proportion of variance, the most unique variance in the model was contributed by problem-focused coping.

Pessimism was predicted by age (being older), gender (being female), having higher negative emotionality (neuroticism) scores, and using emotion-focused coping. Again, the largest proportion of variance was explained by personality factors, namely negative emotionality. Negative emotionality is comprised of three subscales: anxiety, depression and emotional volatility (Soto & John, 2017). These characteristics are associated with maladjustment and individuals high on negative emotionality tend to experience more negative affective states and do not cope well in the face of adversity (Costa & McCrae, 1992). As well, women tend to score higher than men on neuroticism (Costa & McCrae, 1988; Fowler & Both, 2017) and on the use of emotion-focused coping strategies (Eaton & Bradley, 2008). However, in this study, the gender difference should be interpreted with caution given the majority of participants were women.

The importance of depression was borne out in the regression analysis using facet scores. Indeed, the only facet that emerged as a predictor of pessimism was depression. Taken together, lower depression scores predicted optimism whereas higher scores predicted pessimism. The debilitating effects of depression are widely documented in the literature, and are pervasive. For example, the World Health Organization (2017) estimates that approximately 4.4% of the world's population (or 322 million people) have depression, and it is often the precipitating factor for disability and suicide.

Optimism and pessimism were measured separately in this study and were inversely but only moderately correlated. However, for both the optimistic and pessimistic bias, personality factors as a block accounted for the lion's share of the variance. These results stress the importance of assessing personality. Personality is considered a dispositional trait that is relatively stable over the adult years (Costa & McCrae, 1988). One's personality can be viewed as a lens through which one perceives and interprets the world. Individuals who are extraverts, agreeable and conscientious experience their world differently than those who live their lives with high anxiety and depression.

Both problem-focused and emotion-focused coping strategies were assessed in this study. Interestingly, the two coping styles were not correlated, but differentially predicted the outcome variables. Problem-focused coping – dealing directly with a stressor by problem-solving solutions – predicted optimism, whereas pessimism was predicted by emotion-focused coping, such as blaming oneself or wishful thinking. Coping styles have been targeted in interventions (Powell, Wegmann, & Shin, 2019) and respond well to therapy. Thus, in order to address the pessimistic bias, therapists should focus on influences that are amenable to change.

5. LIMITATIONS

There were a number of limitations with this study. First, although participants ranged in age from 19 to 50 years, there was a greater proportion of younger than older adults in this study. Therefore, the average age of the sample was young. Second, there was an uneven gender split in the sample. To address these issues, age and gender were controlled

statistically on the first step of the regression analyses. Nevertheless, future research should attempt to recruit samples with a greater proportion of men and older adults. Finally, although an attempt was made to avoid a convenience sample by opening the study to members of the community, the majority of participants were university students. As such, generalizability of the results should be limited to younger, female university students.

6. CONCLUSION

Who are optimists? They are emotionally stable individuals who are cheerful and friendly, easy to get along with, and reliable. They are also more likely to cope with a stressor by facing it directly. Specifically, they have high compassion for others and are not depressed. Pessimists, on the other hand, tend to be older individuals who, by definition, have more life experiences under their belts. Perhaps they are disillusioned by the cumulative effect of long-term, everyday frustrations. They tend to be women and have higher depression scores. Pessimists also tend to put off dealing with stressors, which may not diffuse the situation. Wishing something will go away does not make it happen. The bottom line is that our perceptions – whether we have a positive or negative bias – are influenced by both dispositional factors (like personality) and situational influences (like coping).

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AUTHOR INFORMATION

Full name: Lilly E. Both

Institutional affiliation: Department of Psychology, University of New Brunswick **Institutional address:** 100 Tucker Park Road, Saint John, NB E2L 4L5 Canada

Short biographical sketch: Lilly E. Both is a faculty member in the Department of Psychology at the University of New Brunswick in Saint John, New Brunswick, Canada. She received her PhD in psychology from the University of Waterloo. She teaches courses in developmental psychology and graduate research ethics. Her current research interests include peer relationships and social skills across the lifespan, the relation between personality and subjective well-being, and coping styles. She has served as Chair of the Psychology Department, Acting Associate Dean of Graduate Studies, and as an elected member of the University of New Brunswick Senate in Saint John.