

# Optimism, Pessimism, and Positive and Negative Affectivity in Middle-Aged Adults: A Test of a Cognitive–Affective Model of Psychological Adjustment

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This study attempted to address limitations in the understanding of optimism and pessimism among middle-aged adults. Specifically, a model of affectivity as a mediator of the link between outcome expectancies and psychological adjustment (life satisfaction and depressive symptoms) was presented and examined in a sample of 237 middle-aged adults. Consistent with a mediation model, results of path analyses indicated that optimism and pessimism (particularly the former) had significant direct and indirect links (by means of positive and negative affectivity) with depressive symptoms and life satisfaction. These results add to the small but growing literature identifying optimism and pessimism as important concomitants of psychological adjustment in more mature adults.

Over the past several decades, researchers, scholars, and practitioners have become increasingly interested in studying optimism and pessimism (Chang, 2001b). According to Scheier and Carver (1985), *optimism* and *pessimism*, defined as generalized positive and negative outcome expectancies, respectively, are believed to represent important predictors of adjustment. Specifically, these investigators have argued that optimism is associated with and leads to securing positive outcomes, whereas pessimism is associated with and leads to incurring negative outcomes (Scheier & Carver, 1985). Consistent with this view, numerous studies have found that optimism is associated with greater positive psychological outcomes, whereas pessimism is associated with greater negative psychological outcomes (for reviews, see Andersson, 1996; Scheier & Carver, 1992; Scheier, Carver, & Bridges, 2001). For example, in studies of young adults, optimism has been found to be associated with greater life satisfaction (Chang, Maydeu-Olivares, & D’Zurilla, 1997), whereas pessimism has been found to be associated with greater depressive symptoms (Chang et al., 1997). Accordingly, there has been growing interest in studying the links between optimism, pessimism, and psychological adjustment.

## Optimism, Pessimism, and Affectivity in More Mature Adults

Recent studies have made clear that an examination of cognitive concomitants of psychological adjustment must consider the role

of mood (e.g., Miranda & Persons, 1988). According to Watson and Clark (1984; Watson, Clark, & Carey, 1988; Watson, Clark, & Tellegen, 1988), mood is composed of two distinguishable dimensions, namely positive affect (PA) and negative affect (NA). Whereas *positive affectivity* reflects the extent to which individuals generally feel active, alert, and enthusiastic, *negative affectivity* reflects the extent to which individuals generally feel upset or unpleasantly aroused (Watson, Clark, & Tellegen, 1988). In that regard, studies have shown that measures of psychological adjustment (e.g., depressive symptoms and anxious symptoms) are strongly associated with negative affectivity and to a lesser degree with positive affectivity (e.g., Watson, Clark, & Carey, 1988). Accordingly, when considering psychological models of adjustment, it has become crucial to show that beyond affectivity, cognitive factors remain significantly associated with measures of psychological adjustment (e.g., Jolly, Dyck, Kramer, & Wherry, 1994). Such efforts may be particularly important when considering the role of outcome expectancies given that some studies have shown optimism and pessimism, like positive and negative affectivity, to not only be distinguishable from each other (Chang, D’Zurilla, & Maydeu-Olivares, 1994; Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992) but also to map onto positive and negative affectivity, respectively (Marshall et al., 1992).

On that note, Chang (2000, 2001a) has proposed a model in which affectivity is hypothesized to serve as a mediator of the link between certain cognitive processes, including optimism and adjustment. Importantly, there are at least two reasons for considering affectivity as a mediator of the link between outcome expectancies and psychological adjustment. First, the notion that chronic pessimism may lead to a general proclivity to experience negative emotions, which then can lead to the manifestation of specific negative affective conditions, is nothing new. Beck and his colleagues (Beck, 1967, 1976; Beck & Emery, 1985; Beck, Rush, Shaw, & Emery, 1979) have previously argued that chronic engagement in pessimistic thinking can lead to the development of a psychological vulnerability to experience negative emotions,

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which in turn combined with individual differences in experience is expected to result in varying degrees of psychological disturbances as indicated by symptoms of anxiety, depression, panic, and anger. Second, studies by Norem and her colleagues (Norem, 1989, 2001; Norem & Cantor, 1986; Norem & Illingworth, 1993) on *defensive pessimism* have shown that some individuals may use pessimism as a way to generate or harness NA to help foster motivation to engage in constructive behaviors (e.g., preparing for a difficult task). Hence, it may not be pessimism per se that may be most important to defensive pessimists but rather whether or not the repeated use of this cognitive strategy consistently generates the necessary negative affective conditions to get them moving.

In a recent study of young adults that examined the role of positive and negative affectivity as hypothesized mediators of the link between outcome expectancies and psychological distress, Chang (2001a) found that optimism and pessimism as measured by Scheier and Carver's (1985) Life Orientation Test (LOT) had direct and indirect links (through affectivity) with anxious and depressive symptoms consistent with a mediation model. For example, consistent with tests for mediation (Baron & Kenny, 1986), the significant association that existed between pessimism and anxious symptoms became nonsignificant after controlling for affectivity, whereas the links remained significant between pessimism and affectivity and between affectivity and anxious symptoms. However, the generalizability of such findings to more mature adult populations (e.g., middle-aged adults, older adults) remains largely unknown and uninvestigated. Limiting our understanding of optimism and pessimism even further, most studies examining these constructs in more mature adult populations typically have involved selected participants experiencing a chronic illness or recovering from an illness (e.g., cancer, poor vision, arthritis; Barron, Foxall, von Dollen, Shull, & Jones, 1992; Long & Sangster, 1993; Schulz, Bookwala, Knapp, Scheier, & Williamson, 1996; for reviews, see Scheier & Carver, 1992; Scheier et al., 2001). Hence, in contrast with the extensive literature on optimism and pessimism based on studies of young adults, we know very little about the value of optimism and pessimism as concomitants of adjustment in more mature populations.

In one of the few studies that examined outcome expectancies in middle-aged adults, Bromberger and Matthews (1996) used the LOT and found that pessimism was associated with greater depressive symptoms and greater negative affectivity (as measured by trait anxiety) in middle-aged women. However, after controlling for negative affectivity and baseline symptoms, these investigators found that pessimism was no longer a significant statistical predictor of later depressive symptoms. In contrast, Bromberger and Matthews found that negative affectivity remained a significant statistical predictor of later symptoms. Hence, their findings provide some indirect support for the view that affectivity may mediate the link between outcome expectancies and adjustment among middle-aged adults. Yet, a more direct and thorough test for understanding how affectivity mediates the link between outcome expectancies and adjustment in middle-aged adults remains to be conducted.

First, Bromberger and Matthews (1996) considered optimism and pessimism as facets of a unidimensional phenomenon, rather than as bidimensional constructs. However, there is some reason to consider optimism and pessimism separately when studying middle-aged adults. Specifically, in one of the other few studies

that examined outcome expectancies in a more mature adult population, Mroczek, Spiro, Aldwin, Ozer, and Bossé (1993) found that the association between LOT optimism and pessimism was much lower in their study of older men ( $r = -.28$ ), than has been typically found in studies of young adults. Accordingly, Mroczek et al.'s finding suggests that the nomological nets for optimism and pessimism in more mature adults may be quite different from those found in younger adults and thus may warrant separate examinations. In that regard, using separate LOT optimism and pessimism scores, Robinson-Whelen, Kim, MacCallum, and Kiecolt-Glaser (1997) found that pessimism, but not optimism, was significantly linked to depressive symptoms for a sample of older adults even after controlling for negative affectivity.

Second, Bromberger and Matthews (1996) did not set out to examine a mediation model involving outcome expectancies, affectivity, and adjustment. Rather, their primary goal was to examine the extent to which stress would moderate the link between optimism and psychological distress. Therefore, it is not surprising that these investigators did not assess for both positive and negative affectivity. Similarly, it is worth noting that Robinson-Whelen et al. (1997) also did not look for the role of positive affectivity. Third, Bromberger and Matthews's study, Mroczek et al.'s (1993) study, and Robinson-Whelen et al.'s study of optimism and pessimism in more mature adults all focused almost exclusively on predicting negative outcomes (e.g., depressive symptoms, psychological symptoms) and did not consider a prediction model that included positive outcomes (e.g., life satisfaction).<sup>1</sup> Hence, despite Scheier and Carver's (1985, 1992) model implicating the role of optimism and pessimism as important concomitants of both positive and negative outcomes, we again have very limited information about the links between optimism and pessimism with adjustment, broadly conceived, in more mature adults. Lastly, given that previous studies of more mature adults have been based on using the LOT, it would be important to evaluate the relations between outcome expectancies, affectivity, and adjustment in a more mature adult population by using the revised LOT, or LOT-R, which is believed to be a better measure of generalized outcome expectancies (Scheier, Carver, & Bridges, 1994).

### Purpose of the Present Study

Given these limitations and our desire to extend previous research findings to middle-aged adults, the purpose of the present study was to (a) assess the relations between measures of outcome expectancies (optimism and pessimism), affectivity (positive and negative affectivity), and psychological adjustment (life satisfaction and depressive symptoms) in a sample of middle-aged adults; and (b) examine a cognitive-affective model of psychological adjustment for middle-aged adults consistent with a mediation model. In accordance with previous findings obtained for younger adults (e.g., Chang, 1998b, 2001a; Chang et al., 1997), we expected that measures of outcome expectancies, affectivity, and psychological adjustment would be significantly interrelated with each other. For example, we expected to find significant negative

<sup>1</sup> Although Robinson-Whelen et al.'s (1997) study included a measure of self-rated health, the validity and utility of this measure is unclear given that it consisted of only a single item.

associations between optimism and pessimism and between positive and negative affectivity. In addition, consistent with these expectations and previous research findings for young adults (e.g., Chang, 2001a) and for more mature adults (e.g., Bromberger & Matthews, 1996; Robinson-Whelen et al., 1997), we hypothesized that affectivity would partially mediate the link between outcome expectancies and psychological adjustment.

## Method

### Participants

To obtain a normative sample of middle-aged adults for the present study, 261 parents (57 men and 204 women) of students from a mid-sized, midwestern university were solicited to participate in this study. Students were enrolled in an introductory psychology course and fulfilled a course requirement by participating in a separate study in which they were also asked to help solicit parent participants for the present study.<sup>2</sup> Ages across this parent sample ranged from 38 to 57 years, with a mean of 46.83 years. The majority of these participants were White (95%)

### Measures

**LOT-R.** The LOT-R (Scheier et al., 1994) is a six-item measure (plus four filler items) of individual differences in optimism, or OPT (e.g., "In uncertain times, I usually expect the best"), and pessimism, or PESS (e.g., "If something can go wrong for me, it will"). Respondents are asked to rate the extent of their agreement to these items across a 5-point Likert-type scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). The LOT-R is a brief modified version of the original LOT (Scheier & Carver, 1985) and has been found to correlate .95 with the latter (see Scheier et al., 1994).

**Positive and Negative Affect Schedule (PANAS).** The PANAS (Watson, Clark, & Tellegen, 1988) is a 20-item self-report measure of PA and NA, with 10 items assessing for PA (e.g., "enthusiasm") and 10 items for NA (e.g., "irritable"). Respondents are asked to rate how they feel for each item across a 5-point Likert-type scale ranging from 1 (*very slightly*) to 5 (*extremely*). For the present study, instructions asked how respondents felt in general (i.e., "Indicate to what extent you *generally* feel this way, that is, how you feel on the *average*"). Evidence for the construct validity of the PANAS has been reported in Watson, Clark, and Tellegen (1988).

**Beck Depression Inventory (BDI).** The BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) is a commonly used 21-item self-report measure of depressive symptomatology, which assesses many of the symptom categories found in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) for a diagnosis of major depression. Respondents are asked to rate the extent to which they have experienced *in the past week, including today*, specific depressive symptoms across a 4-point Likert-type scale (e.g., "0 = I do not feel sad" to "3 = I am so sad or unhappy that I can't stand it"). Higher scores generally indicate more severe levels of depressive symptomatology.

**Satisfaction With Life Scale (SWLS).** The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a five-item measure of global life satisfaction (e.g., "I am satisfied with my life") or a person's satisfaction with life as a whole, rather than any specific domain. Respondents are asked to rate the extent of their agreement to these items across a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on the SWLS reflect greater life satisfaction (Diener et al., 1985; Pavot & Diener, 1993).

### Procedure

All study measures were given to parents by students who participated in a completely different study in the form of a take-home survey. Of the initial 263 parents who participated, 26 failed to complete all study mea-

asures, and thus their responses were subsequently dropped from the study. This left a total of 237 participants for the present study whose responses were used in subsequent analyses. Participants were not made aware of the purpose of the study until after they had completed all measures. To protect the participants' anonymity, only participant numbers were placed on the instruments. In addition, all student and parent participants signed separate consent forms, which indicated that all test data would be kept strictly confidential.

### Data Analysis Plan

First, because previous studies of more mature adults have been based on mostly women (e.g., Robinson-Whelen et al., 1997), all women (e.g., Bromberger & Matthews, 1996), or all men (e.g., Mroczek et al., 1993), we first conducted a multivariate analysis of variance (MANOVA) to determine whether there were significant gender differences between men and women on the present set of measures. Second, to determine whether and how the present set of variables related to each other, we computed zero-order correlations for all of the variables. Finally, to evaluate our mediation model, we conducted a series of regression equations by using ordinary least squares.

## Results

### Evidence for Significant Gender Differences?

The result of conducting a MANOVA between men ( $n = 50$ ) and women ( $n = 187$ ) on the present set of measures failed to indicate significant gender differences, Wilks's  $\lambda(6, 230) = .98$ , *ns*. Therefore, all subsequent analyses are based on combining the responses obtained by both men and women.

### Relations Between Outcome Expectancies, Affectivity, and Psychological Adjustment

Zero-order correlations, means, standard deviations, and internal consistencies for all the study measures are presented in Table 1. As the table shows, optimism and pessimism were moderately related to one another ( $r = -.54$ ). Consistent with expectations, significant associations emerged between OPT scores and scores on the PA and NA of the PANAS, BDI, and SWLS. Similarly, significant associations (but in the expected opposite direction) were obtained between PESS scores and scores on the PA and NA of the PANAS, BDI, and SWLS. PA and NA were also related to one another, although the association was small ( $r = -.25$ ). In addition, although both PA and NA had significant associations with BDI and SWLS, the association between NA and BDI was particularly large, accounting for over 42% of the shared variance. Finally, as the table shows, BDI and SWLS scores were significantly and negatively related to each other, accounting for 25% of the shared variance.

In general, mean scores for the present set of measures were not dramatically different from those typically reported in studies of young adults. For example, the means for NA and PA in the present sample ( $M_s = 33.88$  and  $17.32$ , respectively) were well within the typical range reported for young adults (using the same PANAS form,  $M_s = 35.0$  and  $18.1$ , respectively; Watson, Clark, & Tellegen, 1988). Similarly, although a bit lower, the BDI mean

<sup>2</sup> These students completed a battery of measures unrelated to the present study dealing with schemas for self and others.

Table 1  
Correlations and Internal Reliabilities for All Study Measures

Measure	1	2	3	4	5	6
1. OPT	—					
2. PESS	-.54***	—				
3. PA	.43***	-.38***	—			
4. NA	-.46***	.46***	-.25***	—		
5. BDI	-.50***	.40***	-.32***	.65***	—	
6. SWLS	.48***	-.45***	.41***	-.44***	-.50***	—
<i>M</i>	8.52	3.72	33.88	17.32	6.40	24.08
<i>SD</i>	2.46	3.22	7.13	6.90	6.19	6.69
$\alpha$	.72	.77	.85	.89	.90	.88

Note.  $N = 237$ . OPT = Optimism scale of the Life Orientation Test-Revised (LOT-R); PESS = Pessimism scale of the LOT-R; PA = Positive Affect scale of the Positive and Negative Affect Schedule (PANAS); NA = Negative Affect scale of the PANAS; BDI = Beck Depression Inventory; SWLS = Satisfaction With Life Scale.  
\*\*\*  $p < .001$ .

of 6.40 in the present sample is close to the mean of 8.33 reported in Chang's (2001a) study of young adults.<sup>3</sup> Also, consistent with Robinson-Whelen et al.'s (1997) findings using the LOT, OPT scores were found to be significantly stronger than PESS scores in the present sample ( $M_s = 8.52$  vs.  $3.72$ , respectively),  $t(236) = 14.80$ ,  $p < .001$ .

#### PA and NA as Mediators of the Link Between Outcome Expectancies and Psychological Adjustment

Because the present correlation results for middle-aged adults offer some indication that affectivity may mediate the link between outcome expectancies and psychological adjustment along the lines discussed earlier, we examined a mediation model in which the hypothesized influence of optimism and pessimism on psychological adjustment is mediated by PA and NA. Following the general guidelines of Baron and Kenny (1986), to establish evidence for the proposed mediation model based on conducting a series of regression equations, it would be necessary to meet three conditions. First, results of regressing affectivity on outcome expectancies must show that expectancies are significantly associated with affectivity. Second, results of regressing psychological adjustment on outcome expectancies must show that expectancies are significantly associated with psychological adjustment. Third, results of regressing psychological adjustment on both outcome expectancies and affectivity should result in a weaker association between expectancies and psychological adjustment. Complete mediation would be indicated if the associations between outcome expectancies and affectivity and between affectivity and adjustment were significant, but the previously significant association between outcome expectancies and adjustment became nonsignificant after controlling for affectivity. However, given the moderately strong correlations that have typically been found between the independent variables and between the hypothesized mediators, we took a more conservative approach to control for covariation at each level of analysis in predicting each of the dependent variables.<sup>4</sup> For example, in determining the unique association between optimism and PA, a regression analysis was conducted by regressing PA simultaneously on optimism, pessimism, and NA.

Similarly, in determining the unique association between optimism and depressive symptoms, a regression analysis was conducted by regressing depressive symptoms simultaneously on optimism and pessimism and on PA and NA.

Results of conducting these analyses for depressive symptoms and life satisfaction are presented in Figures 1 and 2, respectively. As Figure 1 shows, the previously significant link between optimism and depressive symptoms for middle-aged adults ( $\beta = -.50$ ) was found to be partially mediated by NA ( $\Delta\beta = .30$ ). In contrast, the significant link observed between pessimism and depressive symptoms ( $\beta = .40$ ) became nonsignificant ( $\beta = .01$ ) and was found to be fully mediated by NA ( $\Delta\beta = .39$ ). It is worth noting, PA was not found to serve as a mediator of the link between outcome expectancies and depressive symptoms. The resulting model including optimism, pessimism, and NA accounted for 47% of the variance in depressive symptoms,  $F(3, 233) = 68.26$ ,  $p < .001$ . As Figure 2 shows, the significant link between optimism and life satisfaction ( $\beta = .48$ ) was found to be partially mediated by PA ( $\Delta\beta = .29$ ). Similarly, the significant link observed between pessimism and life satisfaction ( $\beta = -.45$ ) was found to be only partially mediated by PA ( $\Delta\beta = .28$ ). In this case, however, NA failed to serve as a mediator of the link between outcome expectancies and life satisfaction. Accordingly, the resulting model including optimism, pessimism, and PA was found to account for 32% of the variance in life satisfaction,  $F(3, 233) = 36.11$ ,  $p < .001$ . In summary, these path-analytic results indicate that optimism and pessimism (especially the former) have important direct and indirect links with depressive symptoms and life satisfaction in middle-aged adults.

#### Discussion

One of the goals of the present study was to examine the relations between the present set of variables in a middle-aged population. Consistent with previous findings obtained in young adults, OPT and PESS scores obtained by using the LOT-R were found to be significantly and moderately associated with each other ( $r = -.54$ ) in the present sample of middle-aged adults. Hence, in contrast with Mroczek et al.'s (1993) finding for older adults based on using the LOT noted earlier, optimism and pessimism may not be strongly independent of each other in middle-aged adults. Importantly, Plomin et al. (1992) also found that separate scores on optimism and pessimism obtained by using a Dutch-translated version of the LOT failed to be significantly related to each other ( $r = -.02$ ) in their sample of older adults who averaged 60.7 years. However, recent findings obtained by Robinson-Whelen et al. (1997) suggest that other factors typically

<sup>3</sup> All subsequent references to findings and results associated with young adults from Chang's (2001a) study refer to those found for White participants only.

<sup>4</sup> Given the moderately high association between depressive symptoms and life satisfaction in the present study ( $r = -.50$ ), we initially conducted our analyses controlling for covariation between the dependent variables. However, to clarify the associations between outcome expectancies and affectivity with each of the dependent variables, we looked at the former variables separately. In that regard, it is worth noting that the results of our initial analyses were not substantially different from those reported here where we did not control for covariation among the dependent variables.

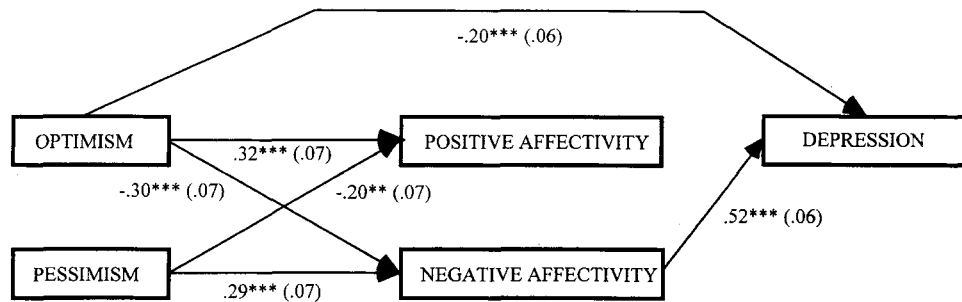


Figure 1. Results of the path analyses delineating those paths found to be significant for middle-aged adults ( $n = 237$ ). All numbers represent standardized beta weights. Numbers in parentheses represent standard errors.  $**p < .01$ .  $***p < .001$ .

associated with age (e.g., providing intensive care to impaired relatives) may moderate the association between optimism and pessimism. In support of this possibility, it is worth noting that the correlation found between optimism and pessimism obtained by using the LOT in Robinson-Whelen et al.'s study was considerably weaker for older noncaregivers (e.g.,  $r = -.23$  at Year 1) than for older caregivers (e.g.,  $r = -.61$  at Year 1). However, because these past studies were based on using the LOT, it would be important for future studies to clarify the contexts and conditions around which optimism and pessimism represent facets of a uni-dimensional construct versus two partially independent constructs based on using the LOT-R.

With regard to affectivity, although PA and NA were found to be significantly associated with each other, the association was small in magnitude ( $r = -.25$ ). This finding, however, is similar to those findings reported in studies of young adults (Watson, Clark, & Tellegen, 1988). Accordingly, it is not surprising that some of the associations between PA and other measures in the present study were found to be considerably different from those found for NA. For example, PA was found to be significantly and

negatively associated with BDI ( $r = -.32$ ), but the magnitude of the association was much larger between NA and BDI scores ( $r = .65$ ). On that note, Watson, Clark, and Tellegen (1988) found a higher correlation also for young adults between NA and BDI scores compared with PA and BDI scores. Hence, as for young adults, NA appears to be more strongly related to depressive symptoms for middle-aged adults than PA.

In addition to examining the relations between the present set of variables in a sample of middle-aged adults, a second goal of the present study was to evaluate a cognitive-affective model of adjustment in which the link between outcome expectancies and psychological adjustment was hypothesized to be mediated by affectivity. In general, results of conducting path analyses indicated that optimism had both direct and indirect links (through NA) with depressive symptoms, whereas pessimism had only an indirect link (through NA) with depressive symptoms. Hence, for example, the present results suggest that greater pessimism may be associated with greater experience of depressive symptoms only insofar that the former is also associated with greater NA. Furthermore, optimism and pessimism were found to have indirect

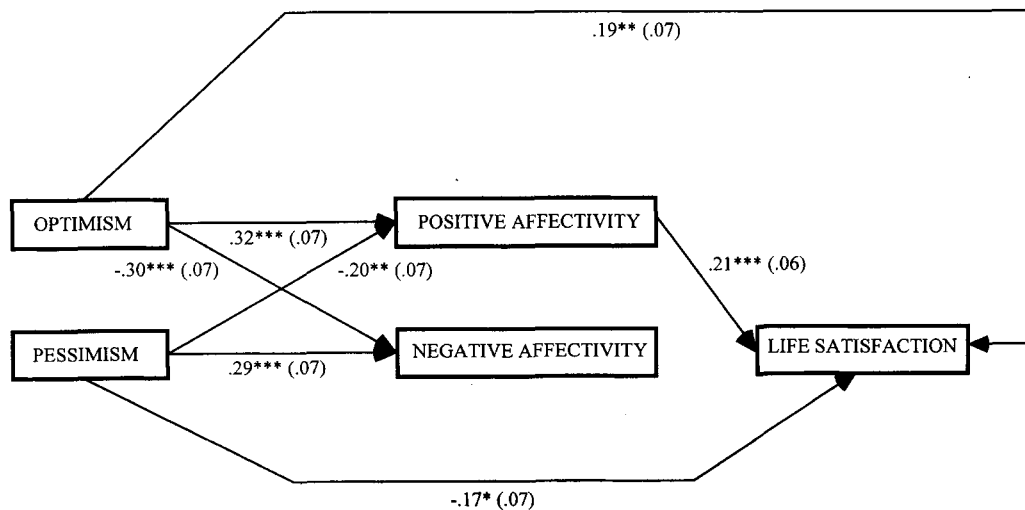


Figure 2. Results of the path analyses delineating those paths found to be significant for middle-aged adults ( $n = 237$ ). All numbers represent standardized beta weights. Numbers in parentheses represent standard errors.  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .

links (through PA) with life satisfaction for middle-aged adults. However, although greater optimism and lower pessimism were independently associated with greater experience of life satisfaction through greater PA, both optimism and pessimism were found to retain significant direct links with life satisfaction. Thus, beyond relations with PA, optimism and pessimism appear to remain important concomitants of life satisfaction for middle-aged adults. Accordingly, these path-analytic findings are consistent with Scheier and Carver's (1985) contention that optimism and pessimism are important concomitants of psychological adjustment in adults. Moreover, these findings also point to the potential specificity of NA as a mediator of the link between outcome expectancies and negative psychological outcomes and PA as a mediator of the link between outcome expectancies and positive outcomes in middle-aged adults.

Importantly, the present focus on affectivity as a mediator of the link between outcome expectancies and psychological adjustment raises an interesting possibility. A little more than a decade ago, a considerable amount of controversy ignited over serious questions regarding the construct validity of the LOT. Specifically, Smith, Pope, Rhodewalt, and Poulton (1989) found across two studies that after controlling for trait anxiety, the previously significant associations found between optimism (based on LOT scores) and measures of adjustment became nonsignificant. Thus, these investigators argued that optimism could not be distinguished from the broader construct of neuroticism (Smith et al., 1989). Although a number of studies since the publication of Smith et al.'s findings have shown that optimism is not completely redundant with measures of neuroticism (e.g., Chang, 1998b; Chang et al., 1997; Scheier et al., 1994), a mediation framework may also be useful for considering Smith et al.'s contention. That is, even if previously significant associations found between optimism and measures of adjustment became nonsignificant after controlling for NA, the conclusion that optimism is indistinguishable from mood is not the only one that is possible. Another possibility, one consistent with the present mediation framework, is that affectivity may function as a mediator of the link between optimism and psychological adjustment. No doubt, it would be useful to revisit this issue more thoroughly in future investigations.

### *Some Limitations of This Study*

It is important to note several potential limitations to the present findings. First, the present findings are based on responses obtained from a middle-aged adult population. Whether these findings can be generalized to more select older adult populations remains to be seen. For example, Robinson-Whelen et al. (1997) found considerable differences in prediction models of adjustment involving optimism and pessimism between older noncaregivers and older caregivers. Second, it is worth noting that participants in the present study were almost entirely White. Given that significant ethnic differences have been found between Caucasian Americans and Asian Americans on optimism and pessimism (e.g., Chang, 1996, 2001a), it would be important to determine whether the present set of findings can be generalized to middle-aged adults of different ethnic backgrounds.

Third, consistent with Lazarus and Folkman's (1984) model of stress and coping, studies have shown that the correlates of optimism and pessimism with adjustment are partially influenced by

coping efforts (e.g., Carver et al., 1993; Chang, 1998a). For example, in a study of 726 young adults, Chang (1998a) found that the most consistent difference between optimists and pessimists was the latter group's use of more disengaged coping activities (e.g., wishful thinking, self-criticism, and social withdrawal). Noteworthy, however, even after controlling for the influences of appraisals and coping, optimism continued to account for a significant amount of additional variance in both life satisfaction and depressive symptoms for young adults (Chang, 1998a). Therefore, the development of a more integrative model that considers outcome expectancies, affectivity, and coping altogether may offer a more useful framework for studying psychological adjustment in more mature adults.

Lastly, although the present study examined the role of cognitive and affective concomitants of psychological adjustment for middle-aged adults, one cannot draw any inferences about cause and effect given the present cross-sectional design. That is, given the present design, it is impossible to discern the directionality of any of the hypothesized paths in the mediation models tested. Although findings from studies have shown that, as hypothesized in the present study, cognitive processes often precede changes in affect rather than the reverse (DeRubeis et al., 1990) and that there is still considerable variability in measures of PA and NA across time (Watson & Walker, 1996), it remains impossible to rule out the potential influences of affectivity or even of psychological adjustment on outcome expectancies. Clearly, the next step would be to consider longitudinal and experimental designs in future studies to help clarify the causal relations between outcome expectancies, affectivity, and psychological adjustment in middle-aged adults.

### *Concluding Comment*

In conclusion, the present findings offer a useful contribution to the growing literature identifying optimism and pessimism as important concomitants of adjustment in more mature adults (e.g., Bromberger & Matthews, 1996; Mroczek et al., 1993; Robinson-Whelen et al., 1997; Schulz et al., 1996). In addition, they also suggest the importance of considering affective variables as potential mediators of the link between outcome expectancies and psychological adjustment. No doubt, more research needs to be done in studying optimism and pessimism in middle-aged and older adult populations. By conducting studies that examine the links between optimism, pessimism, and psychological adjustment in children, young adults, middle-aged adults, and in older adults, we may get closer to understanding their interrelations across the entire life span.

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### Call for Nominations

The Publications and Communications Board has opened nominations for the editorships of *Journal of Experimental Psychology: Animal Behavior Processes*, *Journal of Personality and Social Psychology: Personality Processes and Individual Differences*, *Journal of Family Psychology*, *Psychological Assessment*, and *Psychology and Aging* for the years 2004–2009. Mark E. Bouton, PhD, Ed Diener, PhD, Ross D. Parke, PhD, Stephen N. Haynes, PhD, and Leah L. Light, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 2003 to prepare for issues published in 2004. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

Search chairs have been appointed as follows:

- Lucia A. Gilbert, PhD, and Linda P. Spear, PhD, for *JEP: Animal*
- Sara Kiesler, PhD, for *JPSP: PPID*
- Susan H. McDaniel, PhD, and Mark I. Appelbaum, PhD, for the *Journal of Family Psychology*
- Lauren B. Resnick, EdD, for *Psychological Assessment*
- Randi C. Martin, PhD, and Joseph J. Campos, PhD, for *Psychology and Aging*

To nominate candidates, prepare a statement of one page or less in support of each candidate. Address all nominations to the appropriate search committee at the following address:

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The first review of nominations will begin December 14, 2001.