

# Proactive Coping, Positive Affect, and Well-Being

## Testing for Mediation Using Path Analysis

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**Abstract.** Traditionally, psychological research has focused on negative states, their determinants, and consequences. Theoretical conceptions of coping focus on strategies used to diminish distress. This approach is derived from the perspective that coping is mainly reactive, a strategy used once stress has been experienced. In contrast, proactive coping involves goal setting, having efficacious beliefs, and is associated with resources for self-improvement, including social support. In the present research, a theoretical model was developed in which coping and social support were seen in a synergistic relationship and were associated with a positive state that, in turn, was expected to relate to better psychological functioning. The general theoretical model was tested in three different samples: First year university students coping with depression ( $n = 68$ ), rehabilitation patients mastering independent functioning following major surgery ( $n = 151$ ), and employee absenteeism ( $n = 313$ ). Results of path analyses showed that proactive coping was a partial mediator of social support on positive affect and that positive affect was associated with better psychological functioning. In students only, positive affect mediated the relationship between proactive coping and depression. This research represents a contribution within the field of positive psychology by empirically demonstrating how positive constructs contribute to improved psychological functioning. Theoretical and applied implications of the results are discussed.

**Keywords:** coping, social support, positive affect

In the past, coping was viewed as an adaptive reaction to stressful experiences and was regarded as reactive, a strategy to be used once stress had been experienced. Reactive coping refers to the coping model put forth by Lazarus and Folkman (1984), who identified problem-focused versus emotion-focused coping. This has led to two distinctions, (a) instrumental or attentive coping, and (b) avoidant, palliative, and emotional coping. Coping is a process that unfolds in the context of a situation appraised as personally significant and exceeding one's resources for coping (Lazarus & Folkman, 1984). The coping process is initiated in response to the individual's appraisal that important goals have been lost or threatened. Thus, psychologists have evaluated coping mainly in terms of its effectiveness in regulating distress. Recently, however, coping has been conceptualized as something one can do *before* stress occurs. Increasingly, coping is seen as having multiple *positive* functions.

The idea that coping may have positive utility parallels research highlighting the role of positive beliefs in the promotion of health (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). It is hypothesized here that coping, and in particular, proactive coping, can predict positive outcomes important to the promotion of health and well-being. Proactive coping incorporates a confirmatory and positive approach to dealing with stressors. In line with Folkman and Moskowitz (2000), it is argued that by broadening

models of stress and coping to include positive affect, it is possible to change the kinds of questions psychologists ask about coping, its functions, its determinants, and outcomes. The focus on positive coping is important because it locates the focus away from mere responding to negative events toward a broader range of risk and goal management that includes active construction of opportunities and the positive experience of stress (Schwarzer & Knoll, in press).

There are several reasons for believing that positive beliefs contribute to the promotion of well-being. For example, individuals with a sense of self-worth and belief in their own ability to exert control may practice conscientious health habits more, thus, promoting their well-being. Those with well-developed psychosocial resources (including a sense of personal control, high self-esteem, and optimism) are more likely to cope proactively with their health, which may minimize stressful effects (Aspinwall & Taylor, 1997). Also, unrealistically high levels of optimism and control beliefs may reflect psychopathology and may carry serious liabilities (Baumeister, Smart, & Boden, 1996). According to Scheier and Carver (1987), if individuals believe they are always going to be safe or healthy, they may be less likely to take health precautions, thus, making themselves more vulnerable to accidents and illness.

Positive emotional states are also related to satisfying social relationships. Self-confident and optimistic individuals may receive more social support and/or may be more

effective in mobilizing it when they experience stress (Taylor & Brown, 1994). Thus, promotion of well-being is associated with positive beliefs.

This paper focuses on proactive coping and its function in promoting positive moods, mental states, and well-being. Proactive coping is a multidimensional, forward-looking strategy, integrating processes of personal quality-of-life management with those of self-regulatory goal attainment (Greenglass, Schwarzer, & Taubert, 1999). It differs from traditional conceptions of coping in three main ways (Schwarzer, 2000). First, traditional forms of coping tend to be reactive. They deal with stressful events that have already occurred and their purpose is to compensate for past harm or loss. Proactive coping is more future-oriented. The second distinction is that reactive coping is regarded as *risk* management whereas proactive coping is *goal* management. In proactive coping, people see risks, demands, and opportunities in the future, but they do not appraise these as threats. Instead, they perceive difficult situations as challenges. Thus, proactive coping becomes goal management instead of risk management. Third, the motivation for proactive coping is more positive; it results from perceiving situations as challenging, whereas reactive coping emanates from risk appraisal, that is, environmental demands are appraised as threats.

The proactive individual accumulates resources, takes steps to prevent resource depletion, and can mobilize resources when needed. This approach recognizes the importance of others' resources that can be incorporated into the individual's coping repertoire. Linking social support and coping, resources from one's network, including information, practical assistance, and emotional support, can contribute positively to the construction of individual coping strategies (Greenglass, 2002). Individuals higher in coping resources are more likely to use proactive coping strategies. The proactive individual also possesses highly developed social skills to mobilize such resources. Proactive coping entails processes through which people anticipate potential stressors and act in advance to prevent them from occurring; this can also be seen as proactive behavior. The Proactive Coping Inventory (PCI) consists of six subscales that assess various aspects of proactive coping (Greenglass, Schwarzer, & Taubert, 1999). These are: proactive coping, strategic planning, reflective coping, preventive coping, and instrumental and emotional support-seeking. Greenglass (2002) reports acceptable psychometric properties for the subscales including their cross-cultural validity.

The proactive coping subscale of the PCI is positively related to scores on an internal control scale in Canadian students and Polish-Canadians (Greenglass, 2002). An essential aspect of proactive coping is perceived control. Research reports that situational appraisals of control are linked to active problem-solving. Perceived control refers to the belief that one has the ability to influence the environment. Individuals with a sense of perceived control may be characterized by a "take charge" approach, which may involve making a plan of action, focusing efforts on solving

a problem, and taking direct action. They are more likely to employ coping strategies based on a sense of control than those who see outcomes as resulting by chance (Bandura, 1992; Schwarzer, 1992, 1993). Perceived control is associated with decreased stress levels and improved worker health. It also buffers the potential effects of stress on mental and physical health. If one feels confident enough to control challenges or threats, then successful action is more likely to be taken (Schwarzer, 1993). The concept of control is contrasted with that of perceived self-efficacy, that is, people's beliefs in their capabilities to perform a specific action required to attain a desired outcome (Bandura, 1997). General self-efficacy is the belief in one's competence to cope with stressful or challenging demands (Schwarzer & Jerusalem, 1995).

Research data attest to the advantages of proactive coping as assessed by the proactive coping PCI subscale (Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999). For example, in a longitudinal study with rehabilitation hospital in-patients, proactive coping was associated with less functional disability and a greater future cognitive orientation in terms of planning and goal setting (Greenglass, Marques, deRidder, & Behl, 2005). In this study, given that proactive coping predicted distance walked in 2 min, there is indirect evidence that proactive coping contributes to physical health; that is, walking farther is usually associated with better physical health. In a cross-sectional study of community-dwelling seniors, proactive coping was associated with less functional disability, less depression, and greater perceived social support (Greenglass, Fiksenbaum, & Eaton, 2006). In another cross-sectional study with Canadian-Turkish immigrants, proactive coping was associated with greater optimism, greater life satisfaction, and less depression (Uskul & Greenglass, 2005); regression analyses showed that proactive coping accounted for a significant degree of unique variance in depression scores, over and above the variance attributable to trait optimism (Uskul & Greenglass, 2005). Proactive coping is also associated with less burnout in German teachers (Schwarzer & Knoll, 2003). Taken together, the data indicate that proactive coping, as measured by the PCI (Greenglass, Schwarzer, & Taubert, 1999), is positively associated with an increase in well-being, as assessed by a variety of different psychological measures.

Further research has documented that subjective feelings of well-being are characterized by a positive mood, feeling energetic and efficacious, and perceiving obstacles as challenges that can be overcome (Greenglass, 2006). Subjective reports of vitality, an indicator of healthy functioning, are expressed as positive affect and moving forward with life. Appraising demands as not exceeding one's coping resources relates to that individual's appraisal of demands as a challenge.

In the past, research on coping and social support has tended to be separate, conceptually and empirically. Increasingly, research links coping and social support in order to evolve an interpersonal theory of coping with stress.

For example, DeLongis and O'Brien (1990) discuss how interpersonal factors may be important predictors of ability to cope in families dealing with Alzheimer's disease. They talk about the importance of drawing on others' resources in coping with difficult situations.

There are several advantages to linking social support to coping. First, in viewing social support as coping, one can theoretically link areas that have been previously viewed as conceptually distinct. This allows for elaboration of traditional constructs using theoretical developments in another area. Second, conceptualization of social support as coping broadens the concept of coping as it has been defined to include interpersonal and relational skills. Third, this approach recognizes the importance of others' resources that can be transformed into the individual's coping repertoire. Relational skills are conceptualized as positive coping strengths, which can be developed. Further, social support and coping synergistically contribute to positive affect and motivation to move ahead with life. Specifically, theoretical considerations suggest that social support contributes directly to proactive coping (Greenglass, 2002; Schwarzer & Taubert, 2002). These ideas parallel Hobfoll, Dunahoo, Ben-Porth, & Monnier (1994), who discuss the dynamic relationship between coping and social support acquisition. This approach further recognizes that resources (such as information, practical assistance, and emotional support) can serve as important, positive contributions to the individual's behavioral and cognitive coping repertoire (Greenglass, 1993).

With proactive coping, demands are interpreted as challenges rather than stressors. When individuals approach obstacles as challenges rather than stressors, one can identify high levels of vitality. There is an integral relationship between proactive coping and vitality (Greenglass, 2006). Challenges stimulate vitality, which leads to less negative outcomes and more positive ones. The idea that vitality can lead to less negative outcomes is not new. The hypothesis that positive emotions are incompatible with negative ones has been demonstrated in earlier work on anxiety disorders (e.g., systematic desensitization, Wolpe, 1958), motivation (e.g., opponent-process theory, Solomon & Corbit, 1974), and aggression (e.g., principle of incompatible responses, Baron, 1976).

## Hypotheses

The synergistic relationship between social support and coping is examined here in relation to a positive mental and emotional state. A theoretical model was developed in which social support was associated with proactive coping. Moreover, proactive coping should function as a partial mediator between social support and a positive emotional or cognitive state. Social support should lead directly to a positive state. Further, this positive state should be related to increased levels of well-being (see Figure 1).

The general theoretical model was tested with data from

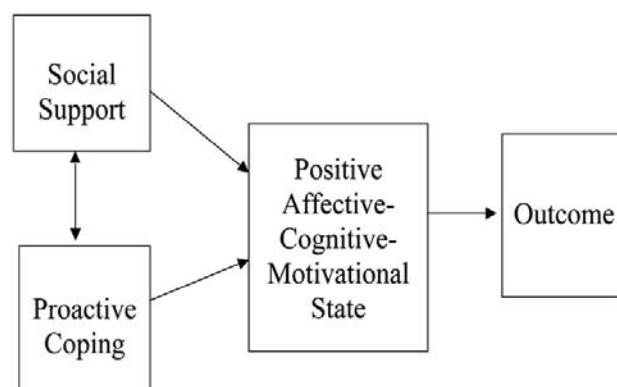


Figure 1. General theoretical model relating social support, proactive coping, positive affective-cognitive-motivational states to outcome.

three different studies: first year university students coping with depression, rehabilitation patients mastering independent functioning following major surgery, and employee absenteeism. In all three studies, proactive coping was assessed. In university students and employees, the positive state assessed was positive affect. In rehabilitation patients, a parallel cognitive-motivational construct was assessed, namely, the extent to which individuals saw themselves getting on with their lives following their hospital discharge. In previous research, scores on the getting on with life scale (Greenglass et al., 2005) correlated positively with life satisfaction and with positive state of mind scale scores (PSOM; Horowitz, Adler, & Kegeles, 1988). Individuals high on the PSOM scale experience high levels of positive states of mind including being able to focus attention on a task, feeling they are doing what they should to take care of themselves, and being able to enjoy bodily sensations (Greenglass, 2002).

In students and employees, support and coping are seen as leading to greater positive affect and proactive coping should partially mediate the relationship between support and positive affect. Positive affect should be associated with lower depression in students and lower absenteeism in employees. In rehabilitation patients, support and proactive coping should relate to higher scores on the getting on with life scale and proactive coping should partially mediate the relationship between support and getting on with life. Independent functioning should increase with higher levels of getting on with life.

## Method

### Study 1

In the first study, which was longitudinal, the sample consisted of 68 first year undergraduate students (81% female) recruited from a university participant pool who received course credit for participating in research studies.

The majority were full-time students (92%), with a mean age of 18.65 years ( $SD = 2.41$ ). Participants worked for pay an average of 12.52 hours ( $SD = 7.05$ ) per week, and studied, on average, 13.65 hours ( $SD = 8.51$ ) per week. Data were collected in an Internet survey in which variables studied were proactive coping, positive affect, social support, and depression. Proactive coping was assessed using the 14-item proactive coping subscale of the Proactive Coping Inventory (PCI; Greenglass et al., 1999; Cronbach's  $\alpha = .82$ ). A sample item is "When I experience a problem, I take the initiative in resolving it." Positive affect was measured using the positive affect scale (10 items) of the PANAS (Watson, Clark, & Tellegen, 1988; Cronbach's  $\alpha = .87$ ). Respondents indicated their feelings by checking one alternative for each of 10 adjectives. A sample item is "enthusiastic." Social support was assessed with a six-item adapted version of Caplan, Cobb, French, Van Harrison, and Pinneau's (1975) measure of social support (mainly informational and practical; Cronbach's  $\alpha = .91$ ). An example of a social support item is, "How much do people go out of their way to make things easier for you and your academic work?" All of these measures were administered at Time 1. Approximately 8 weeks later (Time 2), depression (Cronbach's  $\alpha = .81$ ) was measured with a 10-item measure (Hopkins Symptom Checklist: Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). A sample item is, "How often have you been feeling lonely?" In Study 1, the response rate at Time 2 was 45%; 68 participants responded at both Times 1 and 2.

## Study 2

In the second study, the sample consisted of 313 volunteering employees (68.70% female), who responded anonymously to an Internet study. Participants were recruited on Internet web pages that maintain updated lists of online research projects. Given this method of data collection, it was not possible to obtain a response rate. Age ranged from 16 to 60 years, with an average age of 27.60 years ( $SD = 9.85$ ). Slightly more than one-half of the sample (59.20%) was employed full-time, working an average of 35.01 hours per week ( $SD = 14.17$ ). Close to two-thirds (65.7%) were white-collar workers, and 34.3% were blue-collar workers. Approximately one-half of the participants (51.80%) were university educated, 20.30% were university or college graduates, and 24.40% had a high school education. The majority were single (61.50%). Data were collected in a confidential and anonymous cross-sectional Internet survey. Variables were: proactive coping (Cronbach's  $\alpha = .83$ ; see Study 1), perceived organizational support, positive affect, and absenteeism. Perceived organizational support was assessed with an eight-item measure (Eisenberger, Huntington, Huchison, & Sowa, 1986; Cronbach's  $\alpha = .90$ ). A sample item is "My organization really cares about my well-being." Positive affect was measured using the positive affect scale (10 items) of the

PANAS (Watson et al., 1988; Cronbach's  $\alpha = .89$ ; see Study 1). Absenteeism was assessed with a two-item measure (Greenglass & Burke, 2000; Cronbach's  $\alpha = .79$ ). An example of an item is "How many days of scheduled work have you missed in the past?"

## Study 3

In this longitudinal study, rehabilitation inpatients were the participants. There were 151 individuals who had undergone major surgery a few weeks earlier (63 hip replacement, 42 knee replacement, and 37 motor vehicle accident patients with 9 participants having no specific diagnosis), with a mean hospital stay of 32.38 days ( $SD = 32.75$ ). They were predominantly female (67.50%), and ranged in age from 15 to 88 years with an average age of 60.99 years ( $SD = 16.96$ ). Approximately 16.60% were widowed; 57% were married; and 23.80% were single, separated, divorced, or common-law. Approximately one-half of the sample (52.30%) had completed trade school, community college, or university; 38.40% completed high school; and only 9.30% reported less than a high school education. Approximately one-quarter (21.90%) lived alone; 58.90% lived with their spouse; and 19.20% lived with relatives, friends, and/or paid help. Among those who were employed, 71.20% had white-collar jobs. Participants were recruited during their hospital stay. They responded to a confidential and anonymous paper-pencil survey while in hospital (Time 1). At Time 2, approximately 18 days later (the day prior to their hospital discharge) their independent functioning was assessed by hospital personnel. All data were collected in Canada.

Psychological variables assessed at Time 1 included social support (mainly information and practical support (Cronbach's  $\alpha = .85$ ; see Study 1), proactive coping (Cronbach's  $\alpha = .79$ ; see Study 1), and their beliefs regarding getting on with their life. Getting on with life (Greenglass et al., 2005) consisted of 13 items that assessed perceived motivation, probability, and difficulty in getting on with life after their hospital stay (Cronbach's  $\alpha = .79$ ). A sample item is "I am looking forward to getting on with my life." Since the primary goal of rehabilitation is to enhance functioning independently following a hospital stay, independent functioning was the outcome variable studied in this sample. Independent functioning was evaluated at Time 2 (approximately 2 weeks later) in four categories (i.e., self-care, transfers, locomotion, and social cognition) by hospital personnel on a rating scale from 1 = *total assistance* to 7 = *complete independence*. Average ratings were obtained in each of these four areas. A single score of independent functioning was obtained by computing the mean of these four scores for each participant. In Study 3 with rehabilitation patients, the response rate was 100%.

Table 1. Zero-order correlation coefficients, means, and standard deviations

Measure	1	2	3	4
Employees				
1. Social support	–			
2. Proactive coping	.26***	–		
3. Positive affect	.38***	.45***	–	
4. Absenteeism	–.10	–.16**	–.13*	–
Mean	4.48	42.46	33.37	3.01
SD	1.48	6.28	8.73	1.56
Rehabilitation patients				
1. Social support	–			
2. Proactive coping	.21**	–		
3. Getting on with life	.33***	.43***	–	
4. Independence functioning	–.03	.12	.18*	–
Mean	3.25	42.93	5.64	6.32
SD	.62	5.93	.83	.33
Students				
1. Social support	–			
2. Proactive coping	.34**	–		
3. Positive affect	.40***	.64***	–	
4. Depression	–.17	–.15	–.28*	–
Mean	2.65	41.85	32.25	19.78
SD	.75	5.74	7.38	5.08

Note. \* $p < .05$ , \*\* $p < .01$ , and \*\*\* $p < .001$ .

## Results

The means, standard deviations, and zero-order correlations among the variables are presented in Table 1. In all three samples, social support correlated positively with proactive coping. A moderate positive correlation was found between social support and positive affect in employees and students. Similarly, social support and getting on with life correlated positively in rehabilitation patients. Proactive coping correlated positively with positive affect and getting on with life, and negatively with absenteeism. Positive affect was negatively related to absenteeism and depression. Getting on with life was positively related to functional independence.

Path analysis was used to examine how social support and proactive coping related to behavioral and affective outcomes in this research. A general theoretical model was tested in the three samples. Social support is seen as related to proactive coping, and coping should mediate between social support and a positive affective-cognitive-motivational state, which should lead to the outcome measure. Social support is hypothesized to be directly related to a positive affective-cognitive motivational state (see Figure 1).

It was hypothesized that proactive coping would mediate between social support and positive affect in students and employees, and between social support and getting on with life in rehabilitation patients. It was also hypothesized

that positive affect would be directly related to depression in students and absenteeism in employees. Further, it was expected that getting on with life would be directly related to functional independence in rehabilitation patients. All analyses were conducted in AMOS 7 (Arbuckle, 2007) using maximum likelihood parameter estimation with listwise deletion of missing cases. To evaluate overall model fit, several fit indices were used: The  $\chi^2$  goodness-of-fit statistic, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). A model is considered to have very good fit if the  $\chi^2$  statistic is nonsignificant, the GFI, AGFI, and CFI are greater than 0.95, and the RMSEA is below 0.05. According to Browne and Cudeck (1993), RMSEA values less than .08 correspond to an acceptable fit. The general model fit was very good in the rehabilitation and student samples, and satisfactory in the employee sample (Table 2).

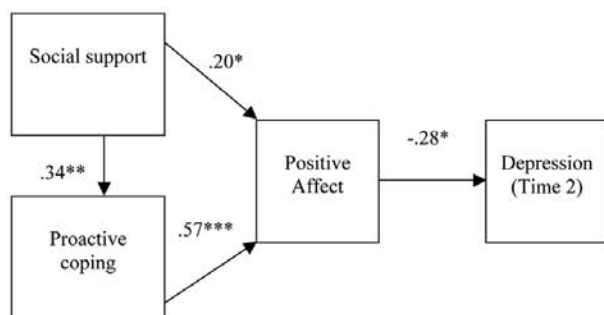
The unstandardized parameter estimates and standard errors for the general theoretical model are presented in Table 3. The standardized parameter estimates are presented in Figure 2. Social support was significantly predictive of proactive coping in all three samples and proactive coping was positively and significantly predictive of positive affect in students and employees, and of getting on with life in rehabilitation patients. In addition, the path from social support to positive affect was significant in students and in employees as was the path from social support to

Table 2. General theoretical model – fit indices of path models by sample

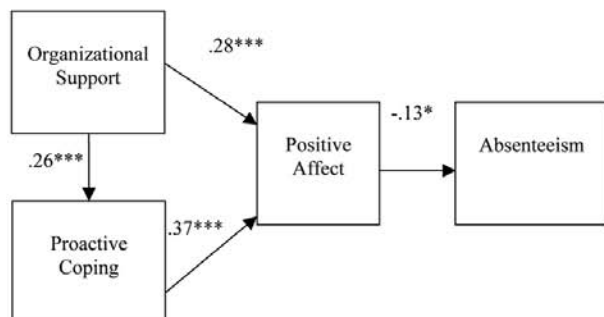
Sample	$\chi^2$	df	p	GFI	AGFI	CFI	RMSEA
Study 1 (students)	0.42	2	0.81	.99	.98	1.00	.00
Study 2 (employees)	4.23	2	0.12	.99	.96	.98	.06
Study 3 (rehabilitation patients)	2.08	2	0.35	.99	.96	.99	.02
<i>Alternative model – fit indices of path models by sample</i>							
Study 1 (students)	0.32	1	0.52	.99	.97	1.00	.00
Study 2 (employees)	0.57	1	0.45	.99	.99	1.00	.00
Study 3 (rehabilitation patients)	1.66	1	0.19	.99	.94	.98	.06

Note. GFI = goodness of fit index; AGFI = adjusted goodness of fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

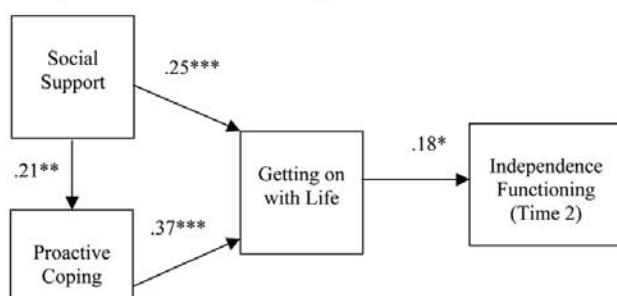
### Study #1: Students



### Study #2: Employees



### Study #3: Rehabilitation Sample



Note. \*  $p < .05$ , \*\*\*  $p < .001$

Figure 2. General theoretical model relating social support, proactive coping, positive affective-cognitive-motivational states to outcome: standardized parameter estimates.

getting on with life in rehabilitation patients. In summary, proactive coping was a partial mediator of social support on positive affect and on getting on with life.

In university students, higher levels of positive affect were related to less depression, whereas in employees, increased levels of positive affect were negatively related to reported absenteeism. In the rehabilitation sample, patients with greater motivation to get on with life were more likely to engage in independent functioning.

To assess whether mediation was present in the general theoretical model, the significance of the indirect effects were tested using the bias-corrected bootstrap confidence intervals (CIs). MacKinnon, Lockwood, and Williams (2004) conducted simulation studies to examine the accuracy of various tests on mediation effects, and advocated the bias-corrected approach as the best way to test indirect paths in mediation analysis. Although the bias-corrected bootstrap can be conducted in AMOS, specific indirect effects cannot be specified (MacKinnon, 2008). Consequently, Mplus 4.21 (Muthen & Muthen, 1998, 2007) was used to generate 2000 bootstrap samples and 95% bias-corrected CIs. Table 4 displays the estimates for specific indirect effects and bias-corrected 95% CI. All indirect pathways were significant for each sample (i.e., none of the estimated 95% CIs contained the value of zero).

Although the general theoretical model fit the observed data well, an alternative model was also tested. This allowed us to directly test whether the positive affective-cognitive-motivational state mediated between coping and the outcome measure. Specifically, in the alternative model a direct path from proactive coping to outcomes was added. The unstandardized parameter estimates and standard errors for the alternative model are presented in Table 5. Although all fit indices were within an acceptable range (see Table 1), this added path, from proactive coping to outcomes, was not significant in any of the three samples (see Figure 3). In contrast to the general theoretical model, in the alternative model, the path between positive affect and absenteeism in employees was not significant, and the path from getting on with life to independent functioning was only marginally significant ( $p < .08$ ).

A  $\chi^2$  difference test in each sample further revealed that the original, more parsimonious theoretical model was the

Table 3. Unstandardized path coefficients, standard errors, and *t*-values for general theoretical model

Path	Estimate	SE	<i>t</i>	<i>p</i>
Employees				
Social support to proactive coping	1.118	.232	4.808	<.001
Social support to positive affect	1.671	.296	5.648	<.001
Proactive coping to positive affect	.518	.070	7.444	<.001
Positive affect to absenteeism	-.024	.010	-2.390	.017
Rehabilitation patients				
Social support to proactive coping	2.032	.759	2.676	.007
Social support to "getting on with life"	.334	.097	3.454	<.001
Proactive coping to "getting on with life"	.052	.010	5.171	<.001
"Getting on with life" to independence functioning	.071	.032	2.231	.026
Students				
Social support to proactive coping	2.610	.879	2.970	.003
Social support to positive affect	1.974	.953	2.072	.038
Proactive coping to positive affect	.735	.125	5.902	<.001
Positive affect to depression	-.195	.081	-2.419	.016

Table 4. Specific indirect effects and their respective confidence intervals for the path model for each sample

Path	Indirect effect	Bias-corrected 95% CI
Employees		
Social support → Positive affect → Absent	-0.040*	-0.084, -0.008
Social support → Proactive coping → Positive affect → Absent	-0.014*	-0.033, -0.003
Social support → Proactive coping → Positive affect	0.579*	0.326, 0.902
Rehabilitation patients		
Social support → Getting on with life → Independence functioning	0.024*	0.004, 0.054
Social support → Proactive coping → Getting on with life → Independence functioning	0.008*	0.001, 0.021
Social support → Proactive coping → Getting on with life	0.106*	0.028, 0.224
Students		
Social support → Positive affect → Depression	-0.385*	-0.938, -0.048
Social support → Proactive coping → Positive affect → Depression	-0.374*	-1.081, -0.051
Social support → Proactive coping → Positive affect	1.918*	0.616, 3.693

Note. \*Significant indirect effect (i.e., confidence interval does not include zero).

better one, compared to the alternative model: in students,  $\chi^2(1) = 0.108$ ,  $p = .742$ ; in employees,  $\chi^2(1) = 3.665$ ,  $p = .056$ ; and in rehabilitation patients,  $\chi^2(1) = 0.414$ ,  $p = .520$ . The nonsignificant  $\chi^2$  difference values show that the more parsimonious model did not fit the data worse than the less constrained model with the additional path in any of the three samples.

## Discussion

It is argued here that the function of coping should be broadened to include promotion of positive mood and cognitions. The present focus is on the role of coping in promoting a perspective on life that involves positive feelings about future events. It is also held that coping does not

occur in a cognitive vacuum; rather it is in a reciprocal relationship with social support, which contributes to coping strategies. In the present study, two of the social support measures (with students and rehabilitation patients) involved assessment of mainly informational and practical support from others. In the third study with employees, the social support measure was perceived support from the organization. In contrast to previous research, where effective coping was conceptualized as independent, theoretical and empirical considerations in this study point to the synergistic relationship of social support and coping and their determination of positive mood.

A general theoretical model was put forth where coping and social support were seen in a synergistic relationship to each other. In the model, both support and coping were associated with a positive state that was expected to relate to better psychological functioning. Data from three differ-

Table 5. Unstandardized path coefficients, standard errors, and *t*-values for alternative model

Path	Estimate	SE	<i>t</i>	<i>p</i>
Employees				
Social support to proactive coping	1.118	.232	4.808	<.001
Social support to positive affect	1.671	.296	5.648	<.001
Proactive coping to positive affect	.518	.070	7.444	<.001
Positive affect to absenteeism	-.014	.011	-1.294	.196
Proactive coping to absenteeism	-.030	.015	-1.921	.055
Rehabilitation patients				
Social support to proactive coping	2.032	.759	2.676	.007
Social support to "getting on with life"	.334	.097	3.454	<.001
Proactive coping to "getting on with life"	.052	.010	5.171	<.001
"Getting on with life" to independence functioning	.062	.035	1.744	.081
Proactive coping to independence functioning	.003	.005	.644	.520
Students				
Social support to proactive coping	2.610	.879	2.970	.003
Social support to positive affect	1.974	.953	2.072	.038
Proactive coping to positive affect	.735	.125	5.902	<.001
Positive affect to depression	-.217	.105	-2.071	.038
Proactive coping to depression	.044	.135	.329	.742

ent spheres were presented: first-year university students coping with depression, rehabilitation patients mastering independent functioning following major surgery, and employee absenteeism. In university students and employees, the positive state was positive affect and in rehabilitation patients, the positive state was a cognitive-motivational one, namely, getting on with life. In all three studies, social support and coping contributed significantly to an increase in positive states. The significant role of positive affect was seen in its relationship to depression and absenteeism, in university students and employees, respectively. That is, to the extent that individuals reported greater positive affect, they were less likely to be depressed later (Study 1) and they were also less likely to be absent from work (Study 2). Thus, positive affect may be seen as significantly related to lower negative affect (depression) and less avoidance behavior (absenteeism).

These data are consistent with previous research reporting that positive affect promotes creativity and flexibility in problem solving (Isen & Daubman, 1984). In rehabilitation patients, social support and proactive coping were associated with greater motivation to get on with life, that is, the extent to which individuals were likely to see a role for themselves following hospital discharge. This entails a positive perspective of the future, including anticipation of fulfilling future roles, findings consistent with Fredrickson (2001) who discusses a broaden-and-build model of the function of positive emotions. In contrast to the narrowing of attention associated with negative emotions, Fredrickson argues that positive emotions broaden an individual's attentional focus and behavioral repertoire and as a consequence they build social, intellectual, and physical resour-

es. In a rehabilitation setting, independence functioning is the main goal following hospital discharge so that individuals will be able to get on with their lives and resume daily activities. In the present study, coping and social support (both directly and indirectly) contribute to the person's motivation to get on with life. Thus, social support from others is an important resource in determining one's motivation for the future probably because it increases one's efficacy in dealing with daily situations. The motivational aspect associated with wanting to get on with life at Time 1 contributed to greater independent functioning at Time 2, approximately 3 weeks later.

Results showed that social support was associated with positive affect (in employees and in students) and with motivation to get on with life (in rehabilitation patients). These findings coincide with others indicating that social support increases vitality levels (Kasser & Ryan, 1999; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Since social support involves provision of useful help, individuals with more support would report more vitality and positive mood, probably because of the greater belief in one's efficacy engendered by social support.

Additional data indicate that coping is associated with mood and motivation. Thus, coping may have additional functions to that of reducing distress. For example, proactive coping is conceptualized here more broadly as an approach to life in which an individual's efforts are directed toward goal management and where demands are seen more as challenges than stressors (Greenglass, Schwarzer, & Taubert, 1999). This explains the finding in the rehabilitation sample that proactive coping was related to greater motivation to get on with life. Thus, proactive copers report

greater motivation, as well as higher probability and less difficulty in getting on with life after their hospital stay, probably because they perceive future demands associated with life outside the hospital as challenges. At the same time, the data reported here reinforce the idea that coping and social support function synergistically in their relationship to positive outcomes and approach behavior. As indicated earlier, with proactive coping, demands are reappraised as challenges. Folkman, Chesney, and Christopher-Richards (1994) argue that positive reappraisal involves values activated during a stressful event. This may explain why proactive coping promotes greater motivation to get on with life in a rehabilitation setting where the salient value is achieving independence. Thus, coping has a motivational function in that it is associated with behavioral tendencies consistent with the values adopted in a particular situation. The relationship of changing values as a function of stress and coping could be developed in future research. Taken together, these data indicate that proactive coping was a partial mediator of social support on positive affect and on getting on with life.

An alternative model was put forth here that allowed us to directly test whether the positive affective-cognitive-motivational state mediated between coping and the various outcome measures. Specifically, in the alternative model a direct path from proactive coping to the outcomes was added, but this path was not significant in any of the three samples. Further, the path from positive affect to the outcome measure was significant in only one of the three samples – in university students positive affect led to lower depression. Therefore, positive affect (at Time 1) was a full mediator of proactive coping on depression (at Time 2) in university students. Further, the original, more parsimonious theoretical model was the better one, compared to the alternative model.

These findings have both theoretical and practical implications. From a theoretical perspective, coping is seen as promoting a positive mood that, over time, may inhibit depression. Interventions designed to help alleviate depression in students may incorporate programs that promote positive moods, for example, by increasing their self-esteem and/or their optimism. The findings of this study represent a contribution to the emerging field of positive psychology in that they demonstrate that social support, coping, and positive affective and motivational states are associated with psychological well-being. A theoretical model integrates these constructs in a way that allows for the prediction of outcomes in various spheres from the synergistic relationship of positive constructs, thus, providing a vehicle for future research in the area of positive psychology.

One limitation of the models tested was that they had one or two degrees of freedom. As McCallum (1995) suggests, models with few degrees of freedom tend not to be disconfirmable, that is, there is a small possibility that the model will have a bad fit to the data. The major aim of the present study was to identify whether paths in the hypoth-

esized model were the same across three different samples, i.e., university students, employed persons, and physical rehabilitation patients and across samples that employed longitudinal and cross-sectional designs. Despite the low number of degrees of freedom, results of path analyses showed that the alternative model (Figure 3) differed from the general model (Figure 2) in that different paths were significant, results that were replicated among the three independent samples. Another limitation of the present research is the response rate in the student sample at Time 2. Since students' participation in this research was part of a course requirement, they were more likely to have fulfilled this requirement later in the term (at Time 2) than at Time 1, which was closer to the beginning of the term, thus, decreasing their motivation to fill out the questionnaire at Time 2. It is also worth noting that the students who filled out the questionnaire at both times were representative of the sample who responded at Time 1, thus, making the response rate less of a concern. For example, in both samples, students were approximately 19 years old, the majority were women (approximately 80–83%), they reported spending approximately 13–14 h studying per week, and their entrance grade average was 82%. Taken together, these data suggest that the participants who responded to the survey at Times 1 and 2 are representative of the Time 1 sample.

In the present study, perceived social support was related to other variables. However, there are other aspects of social support that could be measured. For example, Norris and Kaniasty (1996) discuss the differential implications of perceived versus received social support for psychological well-being and the importance of distinguishing between them. In future research, it would be theoretically interesting to assess the relationship between proactive coping and these two kinds of social support, particularly in relation to various measures of psychological health in longitudinal studies. This paper included two longitudinal studies and one cross-sectional study; the latter study precludes inferences of causality. While collecting data at two points in time was a strength, as seen in the data reported with students and rehabilitation patients, a greater number of follow-up points would help to find more longitudinal relationships among variables.

## Conclusions

This paper reports a theoretical model in which social support and coping are related to positive mood and cognitive states associated with greater well-being. Data from three different spheres were presented to support the model. In contrast to theoretical conceptions of coping that focus on negative states, the present research focuses on the relationship between coping strategies and positive moods. Subjective feelings of well-being are characterized by a positive mood, feeling energetic and efficacious, and perceiv-

ing obstacles as challenges rather than to threats. This approach derives from the concept that positive affect facilitates approach behavior and continued action. In line with the suggestion that coping theory needs to be broadened to incorporate positive mood states and their relationship to well-being, data are presented here to indicate how proactive coping promotes positive mood and motivational states. Proactive coping involves goal setting, having efficacious beliefs, and is associated with resources for self-improvement. Since it is associated with self-efficacy and vigor, demands are perceived as a challenge rather than a threat. The trajectory in this study suggests that the process of reappraisal may involve values activated during a stressful event. With proactive coping, the salient values activated in a given setting are independence, activity, and approach behavior. Thus, coping is seen as having motivational attributes that promote positive mood and values congruent with indices of well-being. Explication of these processes could be carried out in future research on the functions of coping.

## Acknowledgments

We wish to acknowledge the following individuals' contributions to this paper: Lynda Cheng, Marla Klug, Ekaterina Solovieva, Pamela Stokes, Noelia Vasquez, Rob Cribbie, and David Flora. Grateful acknowledgment is due to St. John's Rehabilitation Hospital, Toronto, for its support of this project. We acknowledge the informative comments and suggestions made by the anonymous reviewers of this paper.

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