The Psychological Record, 2011, 61, 253–268

FUTURE-ORIENTED COPING AND JOB HUNTING AMONG COLLEGE STUDENTS

Yueqin Hu and Yiqun Gan

Peking University

*Using a sample of Chinese college students (*n *= 216), the present study showed that future-oriented coping negatively correlated with perceived pressure and positively correlated with successful job hunting. The relationship between proactive coping and preventive coping was also explored. Structural equation modeling suggested that a sequence model was better than a parallel model; that is, proactive coping mediated the effect of preventive coping on perceived pressure and successful job hunting. They are sequential stages of one process rather than two separate processes. Students' appraisal of job hunting and their preparing and hunting behaviors were also investigated.*

Key words: future-oriented coping, proactive coping, preventive coping, job hunting, college students, China

In a person's career, the transition from school to work is a critical stage (Super & Hall, 1978). Individuals in this stage may encounter many difficulties, for example, seeking a job. Ten years ago, this was not a problem for Chinese university graduates, because only a few high school students had the opportunity to receive a college education, and they were assigned a job after graduation. This situation changed in 1999 when the government implemented a policy to expand enrollment in Chinese institutions of higher learning. Since 2003, the sharp increase in the number of college graduates has placed a strain on the employment market, and the issue of unemployment has gradually become problematic (Feng, 2003). As a result, seeking a job has become a major stressor for college students, and most students begin to prepare for their careers at the very beginning of college. Compared with "occasional stressors" such as accidents, job layoffs, and so on (Schwarzer & Taubert, 2002), seeking a job after graduation is inevitable and foreseeable for most graduates. Therefore, the related coping process involves more initiative and proactive components. In this case, the concept of "future-oriented coping" is introduced to the research area of job hunting.

This research was supported by the National Natural Science Foundation of China (Project Number 31070913) and also in part by grants from the Chinese National Office for Education Sciences Planning (Project Number DBA080173).

Correspondence concerning this article should be addressed to Yiqun Gan, Department of Psychology, Peking University, Beijing 100871, China. E-mail: ygan@pku.edu.cn

Coping is defined as thoughts and behaviors that people use to manage the internal and external demands of situations that are appraised as stressful (Lazarus & Folkman, 1984). Although anticipating harm or loss is central to this widely accepted definition (Folkman & Moskowitz, 2004), traditional coping models tend to overemphasize the reactive nature of coping (Schwarzer & Taubert, 2002) and focus attention on how people cope with past or ongoing stressors. In contrast, future-oriented coping focuses on stressors that one may encounter in the future. Currently, there are several terms used to refer to future-oriented coping, such as *proactive coping* and *preventive coping*. The definitions of these concepts and their differences will be introduced later. Searching online with these terms as key words suggests that future-oriented coping has not been introduced to the field of career development. However, some semantically similar terms, such as *planfulness*, *forecasting,* and *anticipation of the future,* are mentioned frequently. For example, Stevens (1973) found that high school students who "look ahead" develop greater job-seeking readiness; Levinson (1978) mentioned that coping with transitions need to be foreseen; Super (1983) emphasized the critical importance of "future perspective" toward planning and exploration when measuring career maturity; and Heppner, Neal, and Larson (1984) found that preventive training in problem solving is beneficial to college students. Recently, Brown, Cober, and Kane (2007) examined the impact of proactive personality in the process of graduates' job hunting and demonstrated a significant correlation between proactive personality and job search success (r = .22). Considering these links between foresight and career development, we predicted that future-oriented coping would have a positive effect on graduate job hunting.

Proactive Coping and Preventive Coping

Aspinwall and Taylor (1997) first proposed the concept of proactive coping, which raised the issue of coping with future stress. They defined proactive coping as individuals' efforts to prepare for difficult changes and events that threaten personal goals or general well-being. They also proposed the five-stage model of proactive coping, in which resource accumulation, attention recognition, initial appraisal, preliminary coping, and eliciting and using feedback were regarded as the five stages.

Schwarzer and Taubert (2002) identified four kinds of coping: reactive coping, anticipatory coping, proactive coping, and preventive coping, each differentiated by the time at which the target stress occurs. Reactive coping emphasizes past events; anticipatory coping deals with impending stresses, for example, a presentation in 10 minutes; proactive coping aims at upcoming challenges; and preventive coping focuses on uncertain stresses in the distant future (Schwarzer & Knoll, 2003). Compared with reactive coping and anticipatory coping, proactive coping and preventive coping confront stress in the less immediate future. They can be put together into one concept named *future-oriented coping* (Gan, Yang, Zhou, & Zhang, 2007).

Proactive coping and preventive coping are mainly discriminated by their motivations. Compared with preventive coping, proactive coping regards stresses as challenges instead of threats. Therefore, proactive coping should be redefined as individuals' efforts to build up general resources that

facilitate goal achievement and self-realization (Schwarzer & Taubert, 2002). According to this definition, proactive coping as proposed by Aspinwall and Taylor (1997) was in fact preventive coping, because its goal is preventing a bad outcome rather than constructing a good one. Sohl and Moyer (2009) confirmed the separation of two differing conceptualizations of proactive coping. That is, conceptualizing proactive coping as positively focused on striving for goals could predict well-being, whereas conceptualizing it as focused on preventing a negative future could not.

The Present Study

The primary aim of this study was to test the process of future-oriented coping under the situation of graduate job hunting. As proposed by Aspinwall and Taylor (1997), appraisal of stress occurs before coping, and then coping results in outcomes. In the present study, we tested the mediating effect of future-oriented coping between appraisal of stress and outcome of job hunting. Our first hypothesized model did not discriminate the different roles of proactive coping and preventive coping and treated them equally as mediators between appraisal and outcome. This model, which we named the parallel model, is shown in Figure 1.

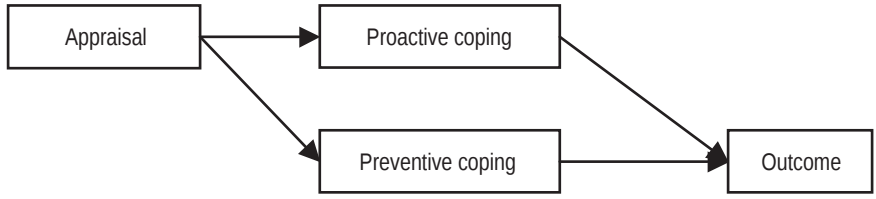

Figure 1. Hypothesized parallel model of proactive coping and preventive coping.

Another aim of the present study was to explore the difference and relationship between proactive coping and preventive coping. According to Schwarzer and Taubert (2002), preventive coping deals with uncertain stress and employs more defensive and general strategies (preparing for adverse events, saving resources for future needs). Considering the five-stage model, preventive coping is similar to the first stage, resource accumulation. In contrast, proactive coping takes more constructive and purposeful actions (taking charge, seeking challenges; Greenglass, Schwarzer, Jakubiec, Fiksenbaum, & Taubert, 1999) and includes logical analysis/problem solving and social support (Roesch et al., 2009), which is in line with the fourth stage, preliminary coping. Concerning job hunting, preventive coping may start earlier when the stress is distant and uncertain, for example, in the first years of college, whereas proactive coping may be invoked later when the stress is upcoming, such as in the graduating year. In addition, preventive coping resources can affect the appraised desirability of taking a new job (McCarthy & Lambert, 1999). Taken all together, we assumed that, based on years of accumulation of resources through preventive coping, individuals would form a certain appraisal of job hunting and then start the proactive coping process, and that the proactive coping process would influence the result of job hunting. We called this process the sequence model, as shown in Figure 2.

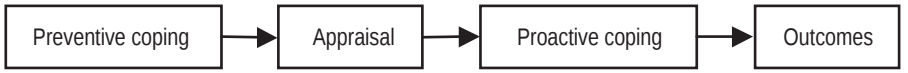

Figure 2. Hypothesized sequence model of proactive coping and preventive coping.

We compared the parallel model and the sequence model in order to shed light on the relationship between proactive coping and preventive coping. Although they were regarded as distinct concepts by Schwarzer and Taubert (2002), their link may exceed the surface similarity that they both focus on future stresses and may compose a sequential process. In that case, it is better to say that proactive coping and preventive coping are two stages rather than two types of future-oriented coping.

In the present study, outcome variables included both subjective and objective indicators (i.e., perceived pressure of job hunting and obtained job offers). In addition to the two models for testing, four hypotheses were proposed:

1. Future-oriented coping will be negatively correlated with perceived pressure.
2. Future-oriented coping will be positively correlated with successful job hunting.
3. Proactive coping will be positively correlated with challenge appraisal of job hunting, but preventive coping will not.
4. Preventive coping will be positively correlated with threat appraisal, but proactive coping will not.

Method

Participants

Two hundred and thirty Chinese college students participated in this study. Among the respondents, 14 students had incomplete data or provided random responses; thus their data were discarded. The remaining sample consisted of 216 students: 124 men (57.4%) and 91 women (42.1%). One participant did not indicate gender (0.5%). Of the participants, 65 majored in liberal arts and social sciences (30.1%), 138 majored in natural science (63.9%), and 13 did not indicate their major (6.0%). One hundred and sixty-six participants were investigated in 2007 (76.9%) and 50 in 2009 (23.1%). All of the participants were in their graduating year when investigated.

Instruments

The Future-Oriented Coping Inventory. The Future-Oriented Coping Inventory (FCI) was originally developed from the Proactive Coping Inventory (Greenglass et al., 1999). Gan et al. (2007) translated and revised it into a 16-item, self-administered questionnaire to measure future-oriented coping of Chinese college students. The FCI includes two subscales, Proactive Coping and Preventive Coping. Participants were asked to indicate the extent to which each item describes their behavior or attitude toward potential stresses on a 4-point scale, ranging from 1 (*not like me at all*) to 4

(*completely like me*). A representative item for proactive coping is "After attaining a goal, I look for another, more challenging one" and for preventive coping is "I will save money to prevent suffering from poverty in my old age." Cronbach's alphas were .85 for proactive coping and .78 for preventive coping.

The Perceived Pressure Scale. The Perceived Pressure Scale (PPS) is a global measure of perceived stress, which in this study was introduced to measure the perceived pressure of job hunting. It is a 14-item, self-administered questionnaire constructed by Cohen, Kamarck, and Mermelstein (1983). The reliability and validity of its Chinese version (Yang & Huang, 2003) was confirmed in a sample of 3,666 Chinese urban residents, including 206 college students. In order to measure the pressure of job hunting in the current study, the instructions were revised to read, "Please report the frequency of the following situations since you have begun seeking a job." Participants indicated their answers using a 5-point scale ranging from 1 (*never*) to 5 (*always*). Higher scores indicate higher pressure. The Cronbach's alpha for this measure in the current study was 0.84.

The self-developed job-hunting appraisal inventory. This inventory was developed by the authors. It is based on Lazarus and Folkman's (1987) cognitive appraisal framework of coping, which distinguishes between two kinds of appraisal: primary (appraisal of circumstances, including harm, threat, and challenge) and secondary (appraisal of control). In the current study, only primary appraisal was evaluated. Because harm appraisal targets past events and this study focused on future stresses, we designed only two dimensions of appraisal: threat (three items: threat, burden, and unwillingness) and challenge (three items: challenge, opportunity, and self-growth). Using a 5-point scale, the instruction was "What does seeking a job mean for you personally?" (Lazarus & Folkman addressed this issue with the question, "What does it mean for me personally?") Principal component factor analysis with oblique rotation was performed on the six items. Two factors were extracted. The first factor, challenge appraisal, accounted for 42.3% of the variance; the alpha coefficient was .78. The second factor, threat appraisal, accounted for 23.1% of the variance; the alpha coefficient was .53, which was too low to accept. Therefore, only the challenge appraisal subscale was analyzed later.

Outcomes

Outcome data on job hunting were collected to supply external indices. The item used to indicate the result of job hunting was "Thus far, have you received at least one job offer?" We also investigated the frequency of 17 typical behaviors before and during the period of job hunting to increase the practical potential of this study. The frequency was measured by a 4-point scale, 1 = *never* and 4 = *often*. The questionnaire about behavior was only collected among the participants in 2009, as a supplement to the main results of this study.

Procedures

The first sample was investigated in January 2007. By this time, most recruitment had finished, and about half of the graduates planning to work

after graduation had already received at least one job offer. There would still be some recruitment in March. However, since large companies and government ministries are able to recruit eligible employees in the first round of recruitment, whereas many small companies cannot fulfill their vacancies and offer a second chance in March, offers sent out before January are usually regarded as better than those sent after March. Therefore, we investigated January offers as an indication of successful job hunting. The second sample was investigated during the same period in 2009. We supplemented the data in order to increase sample size and satisfy the requirement of more reliable statistical analyses. In addition, objective behavior was added in the second questionnaire. All participants were recruited through convenience sampling. Investigators sent out questionnaires in student dormitories at 10:00 p.m. when most students were in their rooms. Only the students searching for jobs were selected to participate. All of them completed the questionnaire independently, anonymously, and voluntarily. After investigation, each participant was compensated with a gift.

Results

Demographics and Correlations

The effects of gender, major, and time on the self-reported variables, proactive coping, preventive coping, challenge appraisal, and perceived pressure, were tested. MANOVA showed that these demographic variables had no effect on the self-reported variables. However, they did influence the result of job hunting. We conducted three separate chi-square tests for gender, major, and time on the number of people who had successfully found a job. Results showed that more men found a job than women, $\chi^2(1) = 14.33$, $p < .01$, and more science-majored students found jobs than social-majored students, $\chi^2(1) = 13.24$, $p < .01$. No difference was detected between 2007 graduates and 2009 graduates, $\chi^2(1) = 0.352$, $p > .05$.

Table 1 shows the mean, standard deviation, and correlations of related variables. The correlation coefficient between proactive coping and perceived pressure ($r = -.51$) is significantly larger than the one between preventive coping and perceived pressure ($r = -.34$), $Z = 2.23$, $p < .05$. Challenge appraisal was positively correlated with both proactive coping ($r = .54$) and preventive coping ($r = .41$).

Table 1
Descriptive Statistics and Zero-Order Correlations

	M	*SD*	1	2	3	4
Proactive coping	24.73	4.04	1			
Preventive coping	25.63	3.36	.53**	1		
Challenge appraisal	11.31	2.30	.54**	.41**	1	
Perceived pressure	39.09	7.69	−.51**	−.34**	−.40**	1

Note. $n = 216$.
*$p < .05$. **$p < .01$.

MANOVA indicated that students with job offers ($M = 25.96$, $SD = 4.14$) employed more proactive coping than those without offers ($M = 23.90$, $SD = 3.73$), $F(1, 145) = 8.16$, $p < .01$. However, those with and without job

offers employed preventive coping with similar frequency (M = 26.46, SD = 3.28; M = 25.01, SD = 3.33), $F(1, 145) = 2.86$, $p > .05$.

Parallel Model and Sequence Model

SEM was performed to test the two hypothesized alternative mediating models. M_0 was a zero model with only direct paths from challenge appraisal, proactive coping, and preventive coping to perceived pressure. M_1 (shown in Figure 3) was the parallel model, with indirect paths from challenge appraisal to perceived pressure through proactive coping and

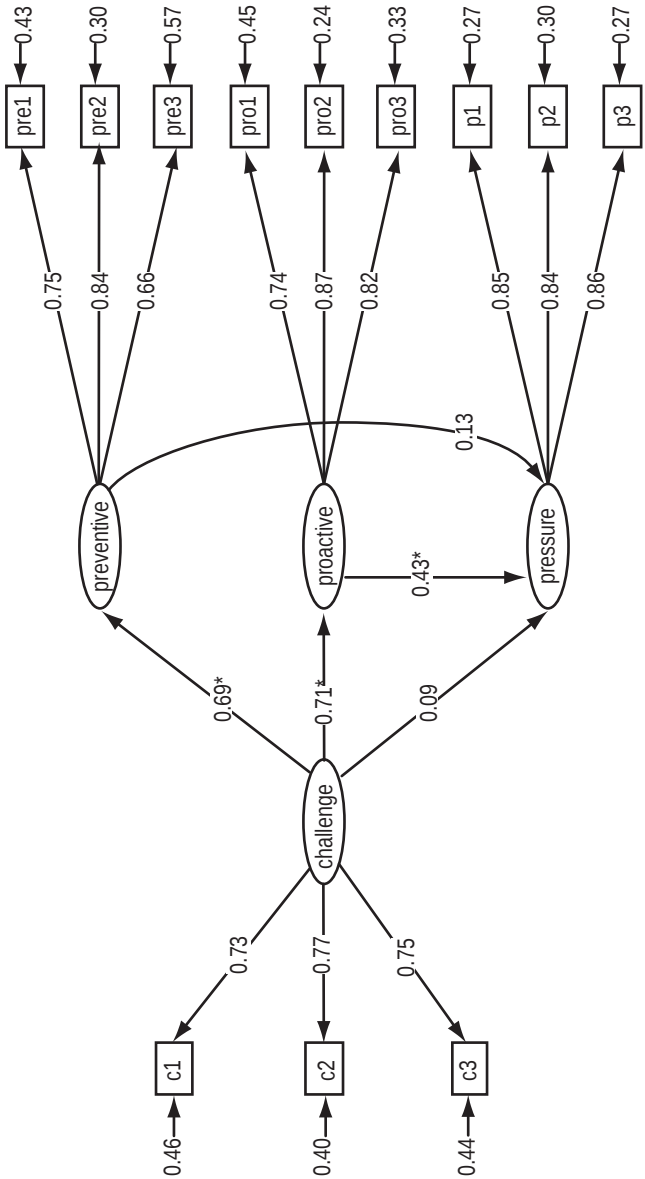

Figure 3. Parallel model of perceived pressure. *Note.* $\chi^2 = 109.77$; $df = 49$; $p = 0.00000$; RMSEA = 0.076.

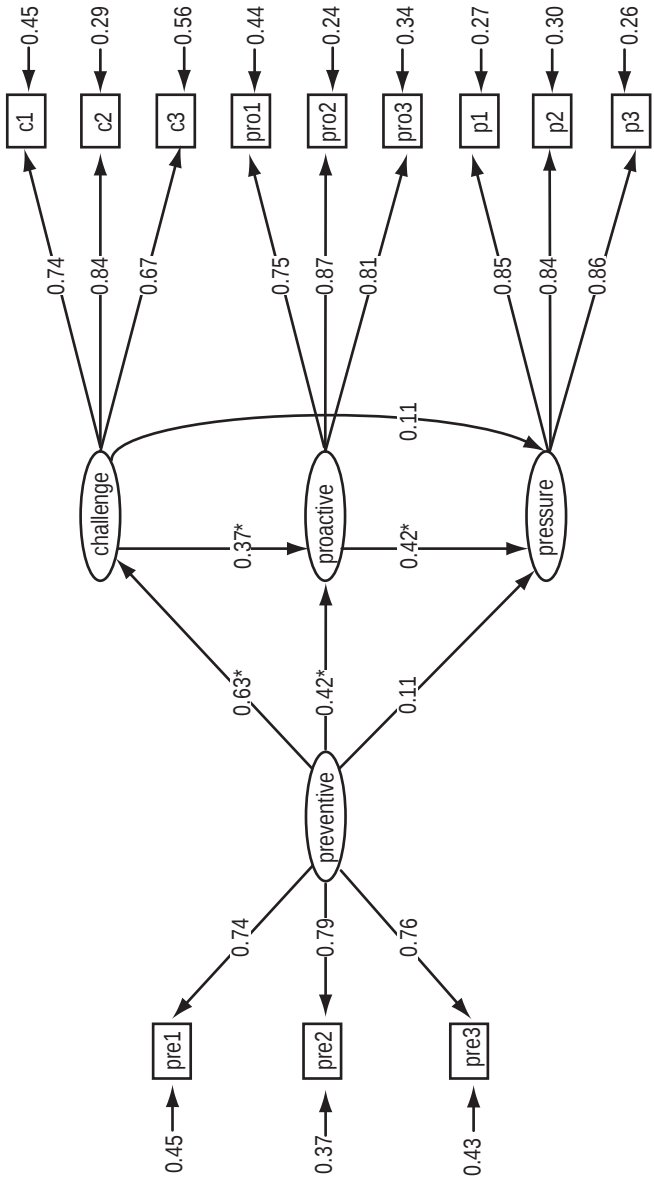

Figure 4. Sequence model of perceived pressure. *Note.* $\chi^2 = 92.36$; $df = 48$; $p = 0.00013$; RMSEA = 0.066.

preventive coping separately. M_2 (shown in Figure 4) was the sequence model, with direct and indirect paths from preventive coping to proactive coping. In all the three models, each latent variable was predicted by three packaged items.

The fit indices of the three models are listed in Table 2. According to Hu and Bentler's (1999) criteria of model fit, CFI must be higher than .95, RMSEA lower than 0.08, and SRMR lower than 0.05. Only the model fit indices of M_2 were within the acceptable range. The three models were not nested; therefore, we did not compare their χ^2 and *df*. Instead, we compared their information criterion (Akaike information criterion). Only the model AIC of M_2 was lower than independence AIC and saturated AIC, which suggests that M_2 was effective and better than the saturated model (Akaike, 1973).

Table 2
Fit Indices of Models of Perceived Pressure and Successful Job Hunting

	Perceived pressure							
	χ^2	*df*	RMSEA	CFI	SRMR	Model AIC	Saturated AIC	Independence AIC
M_{10}	270.56	51	0.14	0.91	0.26	324.56	156.00	2616.25
M_{11}	109.77	49	0.08	0.98	0.06	167.77	156.00	2616.25
M_{12}	92.36	48	0.07	0.98	0.05	152.36	156.00	2616.25
	Successful job hunting							
	χ^2	*df*	RMSEA	CFI	SRMR	Model AIC	Saturated AIC	Independence AIC
M_{20}'	207.62	33	0.16	0.88	0.26	251.62	110.00	1526.08
M_{21}'	65.74	31	0.07	0.97	0.07	123.47	110.00	1526.08
M_{22}'	54.17	30	0.06	0.98	0.04	104.17	110.00	1526.08

Similar analysis was conducted on the objective dependent variable by replacing perceived pressure with successful job hunting (named "job" in the figure) in the above three models. Figure 5 shows M_1' and Figure 6 shows M_2'. The model fit indices are listed in Table 2. Again, only the sequence model (M_2') was acceptable.

Both perceived pressure and result-of-job-hunting models supported the sequence model, which suggests that proactive coping and preventive coping are highly covariant. To further clarify the results, we classified participants by proactive coping and preventive coping. K-means cluster analysis suggested that two clusters were agglomerated. Cluster 1 included 113 people, with cluster centers at 22 and 24 for proactive coping and preventive coping, respectively. Cluster 2 included 95 people, with cluster centers at 28 and 28. Thus, Cluster 1 is a low future-oriented coping group, and Cluster 2 is a high future-oriented coping group.

Job Hunting Behavior and Future-Oriented Coping

In the second sample (n = 50), we explored several behaviors related to job hunting. Principal component analysis with an oblique rotation was conducted on 17 behaviors. Two factors were extracted. Factor 1 explained 26.34% of total variance and Factor 2 explained 14.80%. The items and loadings of each factor are shown in Table 3. We named Factor 1 "hunting behavior" and Factor 2 "preparing behavior."

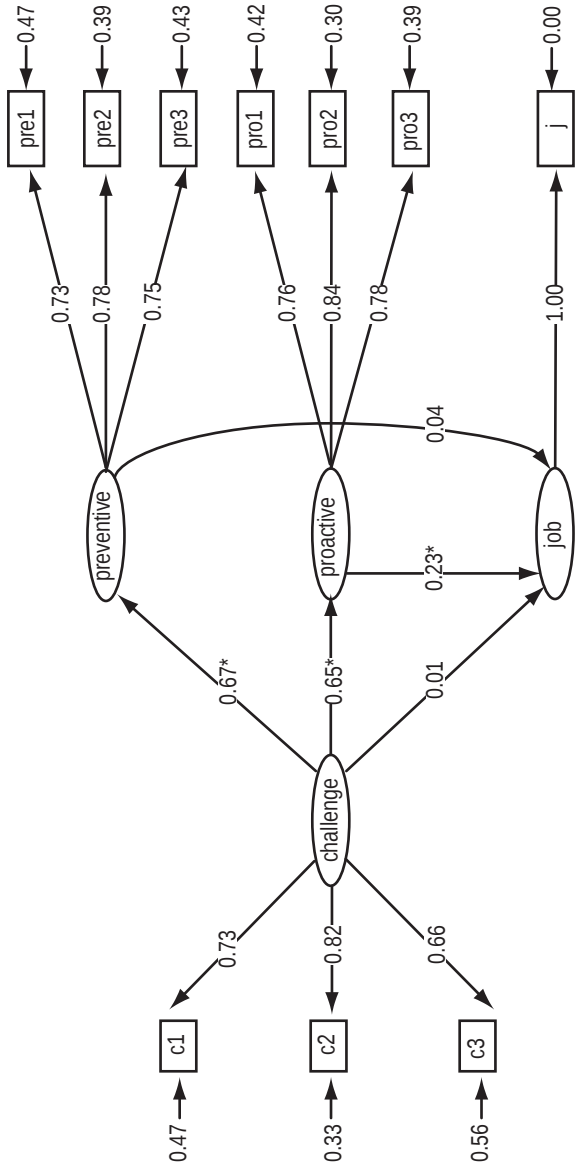

Figure 5. Parallel model of successful job hunting. *Note*. $\chi^2 = 75.47$; $df = 31$; $p = 0.00001$; RMSEA = 0.082.

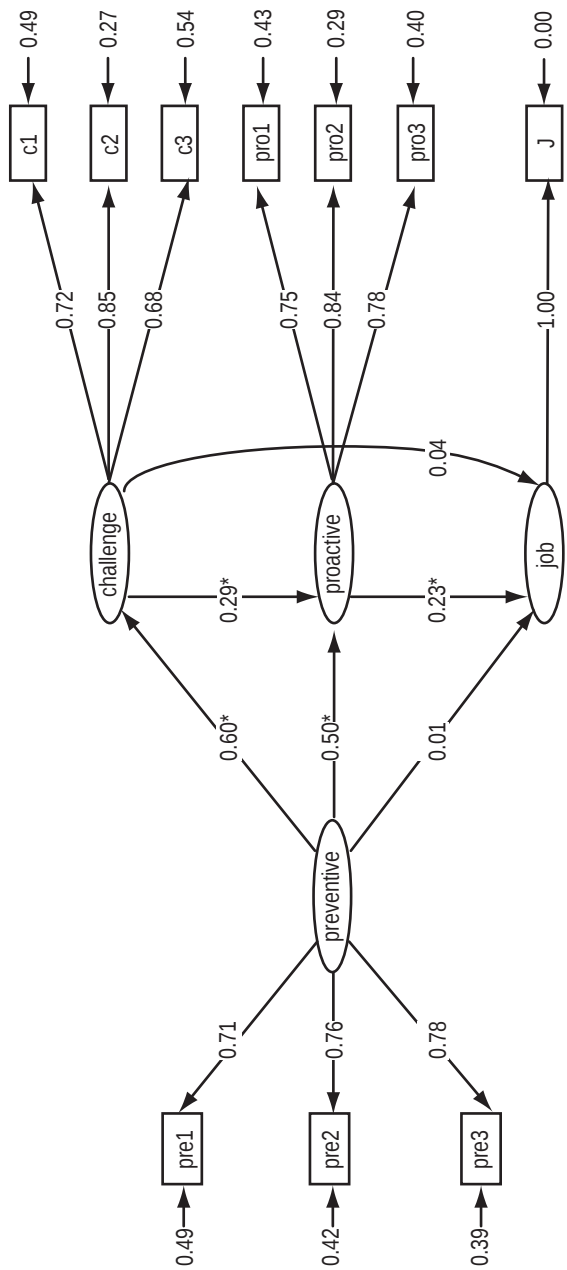

Figure 6. Sequence model of successful job hunting. *Note.* $\chi^2 = 54.17$; $df = 30$; $p = 0.00441$; RMSEA = 0.061.

Table 3
Items and Loadings of Two Behavioral Factors

Items	Factor 1	Factor 2
Attend job interview	.83	−.12
Modify resume	.73	−.09
Involve friends and family	.70	.07
Search job information	.65	−.20
Hunt on Web	.64	.00
Fill application form	.62	.17
Read job-hunting guide books	.60	.20
Send resume	.42	.14
Join international exchange program	−.17	.75
Study double or minor degree	−.17	.68
Get vocational credentials	−.16	.61
Organize college club	.13	.59
Turn to career center	.06	.57
Work as intern	.04	.53
Attend contest	.22	.51
Ask stagers for feedback	.22	.49
Plan about career	.28	.44

The correlations between hunting behavior, preparing behavior, and other related variables are shown in Table 4. Hunting behavior was positively correlated with proactive coping ($r = .35$, $p > .05$) but not with preventive coping ($r = .26$, $p < .05$). Preparing behavior was positively correlated with both proactive coping ($r = .36$) and preventive coping ($r = .32$). Both hunting behavior and preparing behavior negatively correlated with perceived pressure, $r = -.36$, $r = -.33$, $p < .05$. However, considering the objective outcome of job hunting, people with a job offer ($M = 27.55$, $SD = 4.06$) employed more hunting behavior than people without an offer ($M = 24.35$, $SD = 4.30$), with $t(41) = 2.63$, $p < .01$. Their preparing behavior had no difference ($M = 21.68$, $SD = 6.21$; $M = 19.32$, $SD = 4.08$), with $t(39) = 1.46$, $p > .05$.

Table 4
Correlation Between Behavior and Other Variables

	1	2	3	4	5
Hunting behavior	1				
Preparing behavior	.32*	1			
Proactive coping	.35*	.36*	1		
Preventive coping	.26	.32*	.44**	1	
Perceived pressure	−.36*	−.33*	−.56**	−.45**	1

Note. $n = 50$.
*$p < .05$. **$p < .01$.

Discussion

This study investigated how Chinese college students cope with the stress arising from job hunting. The positive role of future-oriented coping in this process was supported, and the sequence model between proactive coping and preventive coping was preferred rather than the parallel model.

Future-Oriented Coping and Job Hunting

The first and second hypotheses in the introduction were fully supported. This study indicated that future-oriented coping is associated with positive outcomes of job hunting, either the internal psychological feeling or the external result of hunting. Both proactive coping and preventive coping were negatively correlated with the perceived pressure of job hunting. Students with job offers employed more proactive coping and preventive coping than those without. The result was consistent with other research on future-oriented coping, which found that both proactive coping and preventive coping have positive effects on self-efficacy, cardiac rehabilitation adherence, and so on (e.g., Lee, 2007). The result was also in line with the study in the same field conducted by Brown et al. (2007), which demonstrated a significant correlation between proactive personality and job search success ($r = .22$). The relationship between proactive coping and proactive personality will be discussed later. In short, this study extended the practical scope of future-oriented coping as a concept of positive psychology.

This study also attempted to compare the effect of proactive coping and preventive coping on job hunting. All evidence supported the viewpoint that proactive coping is more important than preventive coping. Proactive coping has a significantly larger correlation with perceived pressure. In the mediation model, it is closer to and has a direct effect on outcomes. And it is correlated with both preparing behavior and hunting behavior, which was suggested to positively influence the result of hunting, whereas preventive coping only correlated with preparing behavior. The findings were consistent with Gan et al. (2007), who found that proactive coping, compared with preventative coping, had a significantly larger effect on student engagement and freshmen adjustment (Gan, Hu, & Zhang, 2010).

However, Hypothesis 3, which proposed that both preventive coping and proactive coping were related to challenge appraisal, was not proved, which provoked us to reconsider the relationship between proactive coping and preventive coping. Maybe they are not two distinct processes arising from either challenge or threat appraisal of target events, as Schwarzer and Taubert (2002) suggested. We discuss this in detail in the next section.

Proactive Coping and Preventive Coping

Based on previous theories of proactive coping and preventive coping (Aspinwall & Taylor, 1997; Schwarzer & Taubert, 2002), we proposed two alternative models, the parallel model and the sequence model. If proactive coping and preventive coping are two separate processes, they should follow two parallel processes. On the contrary, if they are two sequential stages of one process, the sequence model should be supported. The results of this study supported the sequence model. The effect of preventive coping on job hunting was mediated by proactive coping. Moreover, the cluster analysis suggested that participants either scored higher on both proactive coping

and preventive coping or lower on both, which means proactive coping and preventive coping are highly covariant.

It is possible that the covariance is due to one common personality trend, for example, future temporal orientation (Ouwehand, de Ridder, & Bensing, 2008) or proactive personality. As Brown et al.'s (2007) study indicated, proactive personality impacts job search outcomes through the mediating effect of behavior. And coping is defined as thoughts and behaviors in the face of stressful events (Lazarus & Folkman, 1984). Perhaps proactive personality is the distal antecedent of proactive coping. Based on this assumption, as well as the findings of the present study, we can try to describe how an individual with proactive characteristics copes with future stress. At first, when the target stressful event is uncertain, he initiates preventive coping (accumulates resources, etc.). Then, because the event is approaching, he evaluates the situation and appraises it as a challenge. Next, he invokes proactive coping (creates opportunities, etc.), and finally, he rides out the stress.

Theoretical and Practical Implications

The present study explored the relationship between proactive coping and preventive coping. After comparison with the parallel model, the preferred sequence model supported the stage theory (Aspinwall & Taylor, 1997) and integrated preventive coping and proactive coping into this process, which may contribute to the integration of future-oriented coping theory.

In terms of practice and application, this study introduces future-oriented coping into the field of job hunting. In this research field, most researchers have focused attention on job lay-offs and reemployment (Caplan, Vinokur, Price, & Van, 1989; Wanberg, Watt, & Rumsey, 1996, 1997), which deal with stressors (e.g., financial hardship) that have already happened. Graduates' job hunting is different in that they have a long period of preparation before they begin their search. Some researchers have investigated this situation, considering variables such as biographical information, gender, social class background, and job search strategies (Keenan & Scott, 1985). This study contributes the idea that future-oriented coping also influences job hunting. Compared with the study on proactive personality and job hunting (Brown et al., 2007), examining proactive coping serves the purpose of intervention. Proactive personality is something rather stable that cannot be easily changed with time, whereas proactive coping could be taught, learned, and shaped in a given situation. Thus, proactive coping may be a particularly good candidate for inclusion in psychoeducational interventions (Folkman & Moskowitz, 2004). For example, career counselors could instruct students to forecast future stressors, recognize them as challenges, make preparations, and actively take constructive behavior. Under the current global financial crisis, taking a future perspective and preparing earlier seem increasingly important in graduates' job hunting.

Limitations and Future Directions

This study investigated some objective variables such as job offers and hunting behaviors to eliminate common method bias and made model comparisons to increase the reliability of analysis. However, some limitations need to be pointed out. First, it is a pity that the measure of threat appraisal was psychometrically unacceptable, which resulted in some

hypotheses remaining untested. Further study with improved measures is needed. Second, the sample of this research was limited to students from top universities in China. They are dominant groups in job hunting compared to students from non-key colleges. So, although we did not detect a difference between the 2007 sample and the 2009 sample, it does not mean that Chinese college students' job hunting was not impacted by the economic crisis. Investigations on a broader population are need. Third, this study was cross-sectional and correlational in design. Any causal conclusion should not be inferred from the current data. This is in particular a problem because mediation was supposed to be tested by SEM, but mediation is always understood to be causal (Maxwell & Cole, 2007). If longitudinal data could be collected first in the early years of college and then in the graduating years, a more credible conclusion could be made.

References

AKAIKE, H. (1973). Information theory as an extension of the maximum likelihood principle. In V. Petrov & F. Csaki (Eds.), *Second international symposium on information theory* (pp. 267–265). Budapest: Akailseoniai Kiudo.

ASPINWALL, L. G., & TAYLOR, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin, 121,* 417–436.

BROWN, D. J., COBER, R. T., & KANE, K. (2007). Proactive personality and the successful job search: A field investigation with college graduates. *Journal of Applied Psychology, 91,* 717–734.

CAPLAN, R. D., VINOKUR, A. D., PRICE, R. H., & VAN, R. M. (1989). Job hunting, reemployment, and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology, 74,* 759–770.

COHEN, S., KAMARCK, T., & MERMELSTEIN, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 385–396.

FENG, J. H. (2003). College grads feel a chill in the employment market. *Beijing Review, 46*(8), 16.

FOLKMAN, S., & MOSKOWITZ, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology,* 55, 745–774.

GAN, Y., YANG, M., ZHOU, Y., & ZHANG, Y. (2007). The two-factor structure of future-oriented coping and its mediating role in student engagement. *Personality and Individual Differences*, *43,* 851–863.

GAN, Y., HU, Y., & ZHANG,Y. (2010). Proactive and preventive coping in adjustment to college. *Psychological Record, 60,* 643–658.

GREENGLASS, E., SCHWARZER, R., JAKUBIEC, S. D., FIKSENBAUM, L., & TAUBERT, S. (1999, July). *The Proactive Coping Inventory (PCI): A multidimensional research instrument.* Paper presented at the 20th International Conference of the STAR (Stress and Anxiety Research Society), Cracow, Poland.

HEPPNER, P. P., NEAL, G. W., & LARSON, L. M. (1984). Problem-solving training as prevention with college students. *The Personnel and Guidance Journal,* May, 514–519.

HU, L., & BENTLER, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–5.

KEENAN, A., & SCOTT, R. S. (1985). Employment success of graduates: Relationships to biographical factors and job-seeking behaviors. *Journal of Occupational Behavior, 6,* 305–311.

LAZARUS, R. S., & FOLKMAN, S. (1984). *Stress appraisal and coping.* New York: Springer.

LAZARUS, R. S., & FOLKMAN, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality,* 1, 141–169.

LEE, C. K. (2007). *Emotional intelligence and coping skills as predictors of counselor self-efficacy with genetic counseling graduate students* (Doctoral dissertation, University of Minnesota). Retrieved from http://gateway.proquest.com/openurl%3furl_ver=Z39.88-2004%26res_dat=xri:pqdiss%26rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation%26rft_dat=xri:pqdiss:3227

LEVINSON, D. J. (1978). *The seasons of a man's life.* New York: Ballantyne.

MAXWELL, S. E., & COLE, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods, 12,* 23–44.

MCCARTHY, C. J., & LAMBERT, R. G. (1999). Structural model of coping and emotions produced by taking a new job. *Journal of Employment Counseling, 36,* 50–66.

OUWEHAND, C., DE RIDDER, D. T. D., & BENSING, J. M. (2008). Individual differences in the use of proactive coping strategies by middle-aged and older adults. *Personality & Individual Differences, 45,* 28–33.

ROESCH, S. C., ALDRIDGE, A. A., HUFF, T. L. P., LANGNER, K., VILLODAS, F., & BRADSHAW, K. (2009). On the dimensionality of the Proactive Coping Inventory: 7, 5, 3 factors? *Anxiety, Stress & Coping, 22,* 327–339.

SCHWARZER, R., & KNOLL, N. (2003). Positive coping: Mastering demands and searching for meaning. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 393–409). Washington, DC: American Psychological Association.

SCHWARZER, R., & TAUBERT, S. (2002). Tenacious goal pursuits and striving toward personal growth: Proactive coping. In E. Fydenberg (Ed.), *Beyond coping: Meeting goals, visions and challenges* (pp. 19–35). London: Oxford University Press.

SOHL, S. J., & MOYER, A. P. (2009). Refining the conceptualization of a future-oriented self-regulatory behavior: Proactive coping. *Personality & Individual Differences, 47,* 139–144.

STEVENS, N. D. (1973). Job-seeking behavior: A segment of vocational development. *Journal of Vocational Behavior, 3,* 209–219.

SUPER, D. E. (1983). Assessment in career guidance: Toward truly developmental counseling. *The Personnel and Guidance Journal,* May, 555–562.

SUPER, D. E, & HALL, D. T. (1978). Career development: Exploration and planning. *Annual Review of Psychology, 29,* 333–372.

WANBERG, C. R., WATT, J. D., & RUMSEY, D. J. (1996). Individuals without jobs: An empirical study of job-seeking behavior and reemployment. *Journal of Applied Psychology, 81,* 76–87.

WANBERG, C. R. (1997). Antecedents and outcomes of coping behaviors among unemployed and reemployed individuals. *Journal of Applied Psychology, 82,* 731–745.

YANG, T., & HUANG, H. (2003). An epidemiological study on stress among urban residents in social transition period. *Chinese Journal of Epidemiology, 24,* 760–764.