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MODERATED EFFECTS OF JOB INSECURITY ON WORK ENGAGEMENT AND DISTRESS

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Understanding the effects of job insecurity in order to prevent or counterbalance them is a current topic for scholars and practitioners alike. In particular, this study investigated the possible moderators of job insecurity, an analysis that has always been carried out in a fragmented and erratic way, in relation to outcomes such as work engagement and psychological distress. The survey was carried out on a sample of 536 Italian workers. Through multiple hierarchy regression used to verify the interaction between insecurity and some potential moderators identified in the literature, it was found that marital status had a moderated effect on engagement while readiness and self-efficacy showed a moderated effect on psychological distress. According to the literature, neither occupational status nor union membership acted as moderators. Results were discussed in relation to the existing literature and from the practitioner's point of view.

Key words: Job insecurity; Work engagement; Psychological distress; Employability; Moderation.

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INTRODUCTION

Economies worldwide are still dealing with the effects of the crisis started in fall 2007 because of subprime collapse. A number of statistics can be cited on its consequences such as the mass of people still unemployed and the continuing occupational precariousness. According to Eurostat (2012), the rate of unemployment in the euro area, which had declined steadily until the first quarter of 2008 (amounting to 7.5%), recovered quickly to reach 10% in the first quarter of 2010 and 9.8% in November 2011. In Italy, we have moved from a low of 6.1% in 2007 to the current 8.6% (a figure that would be higher taking into consideration the "cassintegrati" — workers on temporary income support — and much higher in the Southern Italian regions). An additional, and often underestimated, factor with significant repercussions on the perception of precariousness and insecurity of the working population is the constant increase of atypical forms of working contracts. CNEL (2009), reworking Eurostat data, illustrated that in all European countries there has been an increasing trend of such contractual arrangements in relation to total employment; the most extreme case being Spain, which presents percentages around 30%. Italy increased this percentage from 5% in 1990 to about 12% in 2005; considering only the population aged 15-24 years (one of the segments which are known to encounter more difficulty entering the labor market), it rose from 20% in 2000 to over 30% in just five years.

Of course, phenomena such as the rising of unemployment or of atypical working contracts should be assessed in relation to a number of other organizational and socio-economic factors. First of all, every year, millions of workers worldwide are involved in corporate restructurings characterized by mergers and acquisitions, closure of entire manufacturing facilities and reorganization (both qualitative and quantitative) of the workforce (Probst, 2002). This is done through the re-engineering of jobs from full-time to part-time, the relative increase of temporary and atypical job positions (Tetrick & Barling, 1995), and, of course, more or less massive layoffs, without considering, finally, those who "remain" (i.e., the non-redundants) suffering from the so-called "survivor syndrome" in which the persistent job insecurity is associated with feelings of guilt, rupture of the psychological contract, etc. (Brockner, Wiesenfeld, Reed, Grover, & Martin, 1993). In addition to the organizational phenomena mentioned earlier, some scholars, including Burchell, Ladipo, and Wilkinson (2002), focused on macro-factors, especially economic ones, which negatively influence workers' perceptions of job insecurity, for example: globalization and the increasing economic competition, the pressure in privatizing the public sector, the influence of stock markets on short- and medium-term management strategies, the declining influence of unions, the deregulation of labor law.

The present study aims were twofold: first, to survey the levels and effects of job insecurity on a sample of Southern Italian workers; second, to propose an exhaustive analysis of the interactions between job insecurity and its possible moderators in respect of individual outcomes, considering that in previous studies the analysis of moderated relations was always contingent and partial. The choice of focusing the study on a sample from Southern Italy was deemed to be particularly relevant if we consider that it is an economically depressed area with high levels of unemployment (ISTAT, 2007), job insecurity (Dell'Aringa, 2009), and black market labor (ISTAT, 2008), not to mention that this had not yet been a subject for the study of job insecurity.

MODERATORS OF JOB INSECURITY

Job insecurity, which refers to employees' perceptions and concerns about potential and involuntary job loss (Silla, De Cuyper, Gracia, Peirò, & De Witte, 2009), has generalized negative effects on both the individual (Barling & Kelloway, 1996; Bussing, 1999; De Witte, 1999; Hellgren & Sverke, 2003) and the organization (Borg & Elizur, 1992; Rosenblatt & Ruvio, 1996).

This study was based on the integrated model proposed by Sverke and Hellgren (2002) in which the moderators play a primary role as intervening variables between job insecurity (as an antecedent) and its outcomes. According to Cohen, Cohen, West, and Aiken (2003, p. 458), "moderators *are those* variables that modify relationships among other *two* variables" and moreover "if […] a variable M […] moderates the relationship of another variable X to the criterion, then it is appropriate to plot regression of Y on X at meaningful values of the moderator M" (p. 269). Moderation is different from mediation; in fact, according to Baron and Kenny (1986), "a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion" (p. 1176). In conclusion, while mediators are associated and depend upon their predictor (both in the end influencing the criterion), moderators are independent variables not associated with the predictor but significantly affecting its relationship with the criterion.

Sverke, Hellgren, and Näswall (2002) suggested that associations between job insecurity and its outcomes can be influenced by a set of potential moderators. Greenhalgh and Rosenblatt

(1984) had already theorized the existence of these moderators in their model. Despite recommendations by Sverke and colleagues (2002), the analysis of potential moderators on job insecurity has always been conducted extemporaneously and on diverse samples. Hardly any published research has been specifically devoted to the in-depth examination of all the potential effects of moderation (in particular regarding socio-demographic variables) of job insecurity in one single sample; an objective we set out in this study.

Regarding gender, results are controversial. Ferrie, Shipley, Marmot, Stansfeld, and Smith (1995) recorded lower association between insecurity and health among women. De Witte (1999) observed a higher increase in levels of distress as a result of an increase in job insecurity among men. Rosenblatt, Talmud, and Ruvio (1999) evidenced higher negative effects of job insecurity on some variables (for example perceived performance, perceived organizational support) among women. Kinnunen, Mauno, Natti, and Happonen (1999) verified higher levels of job insecurity among men. Finally Cheng, Chen, Chen, and Chiang (2005) observed greater negative effects of job insecurity among men. Though contradictory, these results indicate a prevalence of negative effects of job insecurity among men. One plausible explanation may lie in Role Theory (De Goede & Maasen, 1988) which states that work is a fundamentally social role for men, while women are able to draw on other roles (such as that of wife and/or mother), concluding that a man will experience greater suffering when his work is threatened. It seems necessary to specify that, according to a series of Southern Italian traditional and cultural aspects, more than in the North, work is predominantly seen as a male activity, from which it ultimately follows that men feel more responsible for the security and economic stability of their family. This phenomenon can condition the relation between gender and effects of job insecurity. On the basis of this evidence, the following hypotheses were proposed:

H1a: job insecurity will show a stronger positive association with psychological distress among men;

H1b: job insecurity will show a stronger negative association with work engagement among men.

As for marital status (single/unmarried vs. married/cohabiting) even though the empirical evidence is scarce, a positive effect can be derived from having a partner (as a result of the social support received). Lim (1996), studying the role of support not linked to the professional world (on the part of friends and family), found a buffering effect in the relation between job insecurity and life dissatisfaction. Even in this case, the so-called socio-economic factors may have a role to play — for example, the growing phenomenon of young adults continuing to live at home due to the pervasive insecure conditions of their own professional future, which has greater significance in Southern Italy than in the rest of the country because of the coexisting particularly negative economic factors. Therefore, the following was proposed:

H2a: job insecurity will show a stronger positive association with psychological distress among single/unmarried individuals;

H2b: job insecurity will show a stronger negative association with work engagement among single/unmarried individuals.

As regards occupational status (manual/blue-collar workers vs. intellectual/white-collar workers), a heated debate has raged among contrasting positions. De Witte (1994) noted that blue-collar workers reacted more negatively to job insecurity, even though subsequently (1999) he was unable to replicate the same results. From a theoretical point of view, the “hypothesis of

status inconsistency" by Schaufeli (1992) confirmed that, among white-collar workers (who require a longer training period), the contrast between, on one hand, higher levels of education (not to mention the greater expectations of career progression) and, on the other, the possibility of losing one's job, can result in higher levels of stress. Orpen (1993) did not detect any difference between blue-collar and white-collar workers in respect of the relation between job insecurity and negative outcomes such as anxiety and depression. Sverke and colleagues (2002) noted more negative effects among blue-collar workers as regards the relation between job insecurity and a deterioration in work performance, as well as the propensity for turnover, while not finding any effects related to distress and work engagement. On the basis of this empirical conflicting evidence, the following was proposed:

H3: job insecurity will not show any significant difference regarding its association with psychological distress or work engagement relating to occupational status.

The kind of contractual arrangement (open-ended vs. fixed-term contracts) has not yet been taken into much consideration as a significant moderator despite its plausible importance, given the increase in flexible or temporary contracts registered — particularly in Italy — in the last few years. Mauno, Kinnunen, Makikangas, and Natti (2005) found that in situations of job insecurity, the negative effects on job satisfaction, work engagement, and tiredness were greater among workers with open-ended contracts compared with those on fixed-term contracts; similar findings were obtained in many other studies (De Cuyper & De Witte, 2005, 2006, 2007; De Witte & Naswall, 2003). One possible reason is that temporary workers are more adaptable and flexible when faced with job insecurity and the loss of work. More recently, De Cuyper et al. (2008) provided a comprehensive review about temporary employment highlighting, among other things, the differential effects of job insecurity among permanent and temporary workers. The authors cited a number of studies reporting higher negative effects of job insecurity among permanent workers which could be explained taking into account the differences in expectations: permanent workers have higher expectations about the continuity of their jobs, therefore the rising of job insecurity may have more adverse effects on them; a phenomenon that is related to the violation of their psychological contract with the organization. The following hypotheses were proposed:

H4a: job insecurity will show a stronger positive association with psychological distress among permanent workers;

H4b: job insecurity will show a stronger negative association with work engagement among permanent workers.

Being part of a union has often been considered a less important factor in the lessening of effects on job insecurity (Sverke & Hellgren, 2001). Dekker and Schaufeli (1995) observed that being members of a union did not moderate the relation between job insecurity and well-being. Not even Shaw, Fields, Thacker, and Fischer (1993) found any buffering effect. Because from the theoretical viewpoint there is no justification for the possible moderating effects of belonging to a union on the negative effects of job insecurity, the following hypothesis ensued:

H5: job insecurity will not show any significant difference related to its association with psychological distress and work engagement as a result of belonging to a union.

Regarding employability, Kuhnert and Vance (1992) defined it as the individual evaluation of the probability of finding work at the same level of the current role even in the event of being fired/made redundant. These authors noted there to be a significant interaction between job security and occupational mobility in a sample of blue-collar workers in reference to psychologi-

cal unease (depression and anxiety). Later, Sverke and colleagues (2002) underlined the possible role buffer employability has in toning down the negative effects of job insecurity. In fact, workers perceiving they have greater occupational opportunities would be less worried about losing their jobs in that they would have less difficulty in finding a new role. More recently, Silla and colleagues (2009) recorded that employability moderates the relation between job insecurity and life satisfaction, but not between job insecurity and psychological distress. Based on such contrasting evidence, the following hypotheses were proposed:

H6a: job insecurity will show a stronger positive association with psychological distress among workers with lower perceived employability;

H6b: job insecurity will show a stronger negative association with work engagement among workers with lower perceived employability.

Readiness and self-efficacy refer to levels of proactivity and confidence to successfully carry out the associated behaviors of career planning and management. According to a series of evidence related to the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2008), self-efficacy (as a personal resource) is positively associated with work engagement and negatively with strain. On the other hand, readiness has not yet been considered as a potential intervening variable in the JD-R model, but according to a number of studies (Gan, Yang, Zhou, & Zhang, 2007; Griva & Anagnostopoulos, 2010) which demonstrated its positive association with optimism (a variable considered as a personal resource in the JD-R model) we believe that it can be considered a potential moderator as well. Thus, we hypothesized that these variables can counteract the negative effects of job insecurity:

H7a: job insecurity will show a stronger positive association with psychological distress among workers with lower readiness and self-efficacy scores;

H7b: job insecurity will show a stronger negative association with work engagement among workers with lower readiness and self-efficacy scores.

It appears paramount to make a last consideration on the possible role of moderators that employability, readiness, and self-efficacy could have; in fact, there are geographical differences between the North and the South of our country on the propensity for entrepreneurship and work mobility generated by a non-homogeneous labor market and welfare policies. Over the years, these policies and the associated fundings have been directed mostly to Southern Italy and have created an expectation of assistance for stable and predictable careers (Rutelli, Agus, & Caboni, 2007) with obvious repercussions on individual perceptions on the probability of re-employment, the perception of self-sufficiency and the motivation to manage potential career transitions as a result of job loss.

METHOD

Participants

Data were collected among Southern Italy employees via a self-report questionnaire. The sample taken was one of convenience with questionnaires distributed to all employees of participating organizations. It was difficult to provide a balance based on the type of organization (e.g., private vs. public, manufacturing vs. service) as the majority of organizations contacted refused to take part in the study. This certainly was reflected have been reflected in the quality of the

data; for example, we may assume that organizations refusing to participate may have higher levels of job insecurity among staff, or at least have management practices that would make it difficult for staff to have their say via a questionnaire. The last point became evident during preliminary presentations of the study, and the questionnaires received contained responses from workers with a more positive attitude toward their current job. The questionnaires were distributed to employees in paper form in sealed envelopes, accompanied by a letter outlining the aims of the study. The collection of questionnaires was undertaken using sealed boxes placed in the workplace or with selected partners.

One thousand six hundred and thirty questionnaires were issued, 570 returned (35% of the total) but only 536 of those returned were used in the final statistical analysis (34 were incomplete or completed incorrectly). The average age was equal to 37.5 years (*SD* = 10.5 years; min. 18, max. 67), average tenure was 12.7 years (*SD* = 9.7 years; min. 1, max. 45). Of the 536 persons interviewed, 299 were male, 293 were married/cohabiting (13 declined to answer), 300 were on open-ended contracts, 379 were employed in white-collar positions, 200 belonged to a union.

Measures

Only Cronbach's alpha for each scale will be reported as the Italian adaptation and the respective psychometric and factorial characteristics of each scale have already been referenced in previous studies.

Job insecurity was assessed with a five-item scale by Sverke et al. (2004; Italian version), measuring workers' perceptions of whether they would be able to keep their current job (e.g., "I fear I will lose my job"). The response scale was on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach's alpha was .85.

The following variables were treated as moderators in the following analyses.

Employability (see Appendix) was measured using a five-item scale initially provided by Isabelle Hansez (University of Liege; personal communication), and used in other studies (Lo Presti, 2008; Scarpuzzi, 2009) that refers to the individual perception about the probability of getting a new job (e.g., "How likely are you to find an acceptable job outside your company?". Responses were on a 5-point Likert scale (1 = *no probability*; 5 = *100% probability* [certain]). The reliability estimate was .90.

Readiness is a 13-item subscale taken from the Career Transition Inventory by Heppner, Multon, and Johnston (1994; Italian adaptation by Lo Presti, 2008) assessing how willing the individual is to do things necessary to achieve goals (e.g., "Each day I do something on this career transition process, I would say I'm motivated") and can be considered as a measure of career planning proactivity. This subscale is on a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*). Internal consistency reliability was .83.

Self-efficacy is another subscale (10 items; one was deleted due to unsatisfactory loading) from the Career Transition Inventory (Heppner et al., 1994; Lo Presti, 2008) which measures the individual belief in her/his ability to successfully perform career planning activities (e.g., "I feel confident in my ability to do well in this career transition process") and can be considered as an indicator of career planning self-efficacy. Cronbach's alpha was is .73.

The following two variables were treated as outcomes (dependent variables) in the following analyses.

Work engagement, as measured by the Utrecht Work Engagement Scale (nine-item version) by Schaufeli, Bakker, and Salanova (2006; Italian version), is considered a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (e.g., "At my work, I feel bursting with energy"). This response scale is on a 7-point Likert scale (0 = *never*; 6 = *always/every day*). The reliability estimate was .89.

Psychological distress was assessed using the 12-item version of the General Health Questionnaire (Goldberg, 1979; Piccinelli, Bisoffi, Bon, Cunico, & Tansella, 1993) which detects non-psychiatric health symptoms. Items are scored on a 4-point Likert scale. Internal consistency reliability was .87.

Finally, some biographical variables were recorded: a) gender (male vs. female); b) marital status (single vs. married); c) occupational status (manual vs. intellectual); d) kind of contract (permanent vs. fixed-term); e) union membership (yes vs. no); f) age, g) tenure. Variables a to e were treated as moderators in the following analyses.

DATA ANALYSIS

First, descriptive statistics were used to account for results: the association between variables was described through zero-order correlations. Multiple hierarchical regression method following the Cohen and colleagues' (2003) procedure was used to identify possible interactions between couples of predictors. Continuous variables were standardized and, subsequently, job insecurity and a single moderator at a time were entered into the first step regression equation, while the interaction term was added at the second step. When the interaction term was statistically significant (providing additional significant variance), ModGraph software (Jose, 2002) was used to calculate and graphically represent the interaction.

RESULTS

Means, standard deviations, scales reliabilities, and zero-order correlations among variables are presented in Table 1.

TABLE 1
Means, standard deviations, and correlations between study variables

	M	*SD*	1	2	3	4	5	6	7
Age	37.48	10.53	–						
Job insecurity	2.42	1.12	–.03	–					
Employability	2.77	0.96	–.18**	–.07	–				
Readiness	4.23	0.78	–.06	.11*	.26**	–			
Self-efficacy	3.91	0.74	–.08	–.29**	.34**	.35**	–		
Work engagement	4.16	1.12	.09*	–.15**	.16**	.28**	.09*	–	
Psychological distress	22.89	6.63	–.03	.17**	.02	–.09*	–.37**	–.13**	–

**$p < .01$. *$p < .05$.

Age was negatively associated with employability and positively with work engagement. Job insecurity was positively associated with readiness and psychological distress, and negatively with self-efficacy and work engagement. Employability appeared to be positively associated with self-efficacy, readiness, and work engagement. Readiness was positively associated with self-efficacy, work engagement, employability, and job insecurity, negatively with psychological distress. Self-efficacy was negatively associated with psychological distress and job insecurity, positively with work engagement, readiness, and employability. Finally, psychological distress turned out to be negatively associated with work engagement, self-efficacy, and readiness, and positively with job insecurity.

Prior to computing possible interactions between different predictors (job insecurity on one side, biographical variables, employability, readiness, and self-efficacy on the other) on outcomes (work engagement and psychological distress), simple mean differences between groups were analyzed drawing on student *t* tests and analysis of variance (ANOVA).

Regarding variables means, no significant difference was observed between men and women. But married workers (M = 4.29) feel significantly more engaged in their work — $t(1, 521) = -2.94$, $p < .01$ — than their single counterparts (M = 4.01).

Participants between 30 and 50 years old[1] are significantly — $F(2, 526) = 4.44$, $p < .02$ — more insecure (M = 2.56) than their younger (M = 2.34; LSD post-hoc, $p < .042$) or older (M = 2.18; LSD post-hoc, $p < .006$) colleagues. Moreover, workers over 50 years of age — $F(2, 526) = 3.68$, $p < .03$ — feel more engaged (M = 4.45) than those between 30 and 50 years old (M = 4.05; LSD post-hoc, $p < .008$) and the youngest workers (M = 4.12; LSD post-hoc, $p < .022$). Finally, employability decreases significantly — $F(2, 526) = 8.12$, $p < .01$ — over time ($M_{<30} = 2.94$; $M_{30\text{-}50} = 2.76$; $M_{>50} = 2.46$).

Permanent workers are significantly — $t(1, 534) = 2.62$, $p < .01$ — more engaged in their work (M = 4.28) than their fixed-term colleagues (M = 4.02).

There are no differences between workers according to the nature of their work (manual vs. intellectual).

Finally, unionized workers result significantly — $t(1, 532) = -2.19$, $p < .03$) less ready in their career planning activities (M = 4.14) than their non-unionized colleagues (M = 4.29). Moreover, they perceive to have far fewer — $t(1, 532) = -2.71$, $p < .01$ — job opportunities (M = 2.63) than their non-unionized counterparts (M = 2.86).

Thus, two-way interactions between job insecurity, other continuous and biographical variables as moderators, on work engagement and psychological distress (as stated in the hypotheses) were tested through hierarchical multiple regressions. First, job insecurity and each single predictor were entered in the regression equation, and then each interaction term resulting from the multiplication of job insecurity and the specific predictor.[2]

The first set of interactions to be calculated was between job insecurity and biographical variables with reference to work engagement and psychological distress.

As regards work engagement, two significant interactions between job insecurity and two biographical variables were found. No significant interactions were detected concerning psychological distress.

The first interaction was identified between job insecurity and marital status (Figure 1); job insecurity ($\beta = -.55$, $p < .01$), marital status ($\beta = .12$, $p < .01$), or the interaction term ($\beta = .43$, $p < .01$) presented significant association with work engagement (additional $R^2 = .02$, $p < .01$; overall $R^2 = .054$).

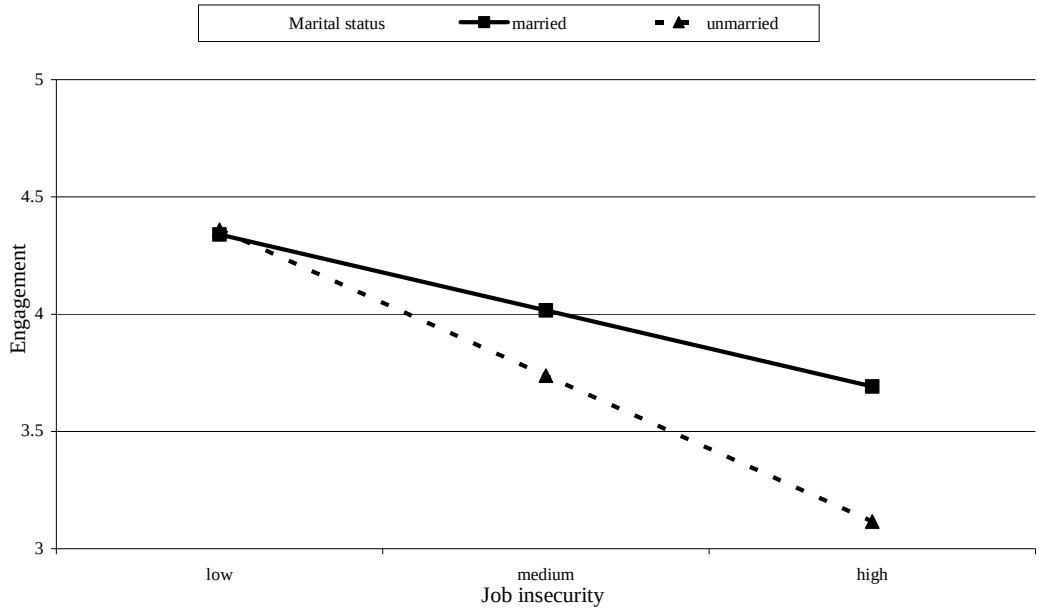

FIGURE 1
Work engagement as a function of job insecurity and marital status.

The second interaction was found between job insecurity and kind of contract (Figure 2); job insecurity (β = –.43, $p < .01$), kind of contract (β = –.11, $p < .01$), or the interaction term (β = .30, $p < .02$) displayed significant association with work engagement (additional $R^2 = .01$ $p < .02$; overall $R^2 = .043$).

The second set of interactions was calculated between job insecurity and the other continuous predictors (employability, readiness and self-efficacy) with respect to psychological distress and work engagement; as regards psychological distress, we noted two significant interactions.

The first was observed between job insecurity and readiness (Figure 3); job insecurity (β = .19, $p < .01$), readiness (β = –.16, $p < .01$), or the interaction term (β = –.16, $p < .01$) showed significant association with psychological distress (additional $R^2 = .02$, $p < .01$; overall $R^2 = .062$).

The second interaction was detected between job insecurity and self-efficacy (Figure 4); while job insecurity (β = .05, $p < .23$) did not have a significant association, both self-efficacy (β = –.36, $p < .01$) or the interaction term (β = –.09, $p < .03$) showed significant association with psychological distress (additional $R^2 = .01$ $p < .03$; overall $R^2 = .146$).

As regards work engagement, the only significant interaction was found between job insecurity and self-efficacy (Figure 5). Job insecurity indicated a significant association (β = –.18, $p < .01$) but self-efficacy did not (β = .03, p < .50), while the interaction term was significant (β = –.25, $p < .01$). The interaction term explained an additional R^2 equal to .06 ($p < .01$; overall $R^2 = .084$).

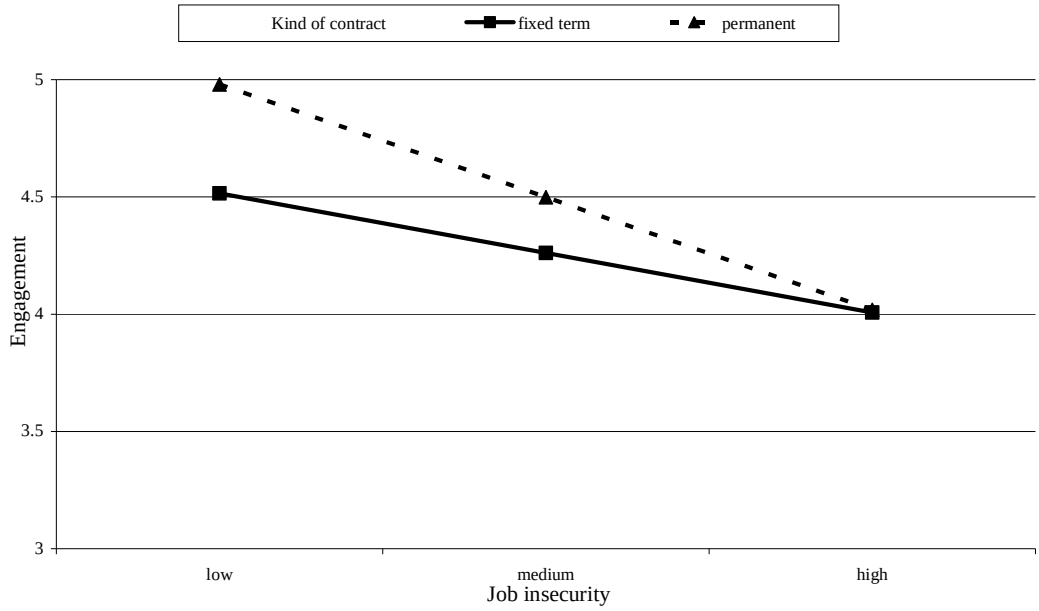

FIGURE 2
Work engagement as a function of job insecurity and kind of contract.

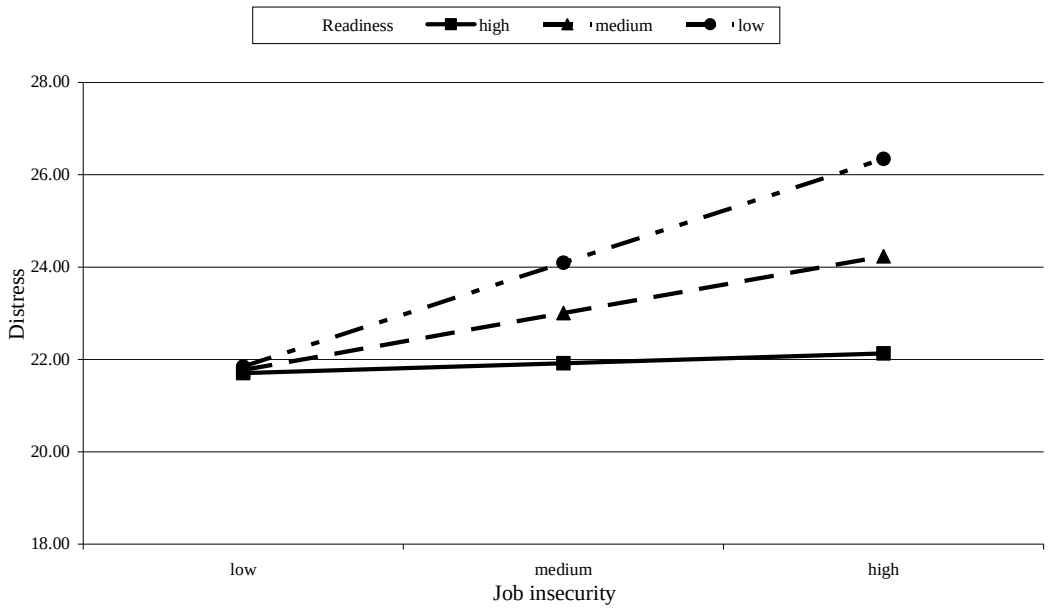

FIGURE 3
Distress as a function of job insecurity and readiness.

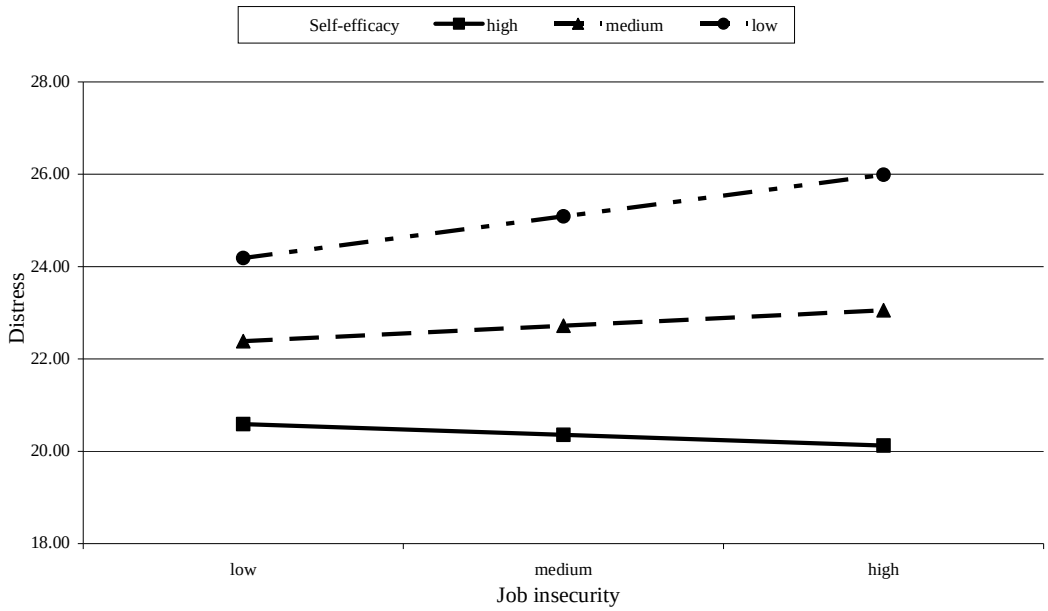

FIGURE 4
Distress as a function of job insecurity and self-efficacy.

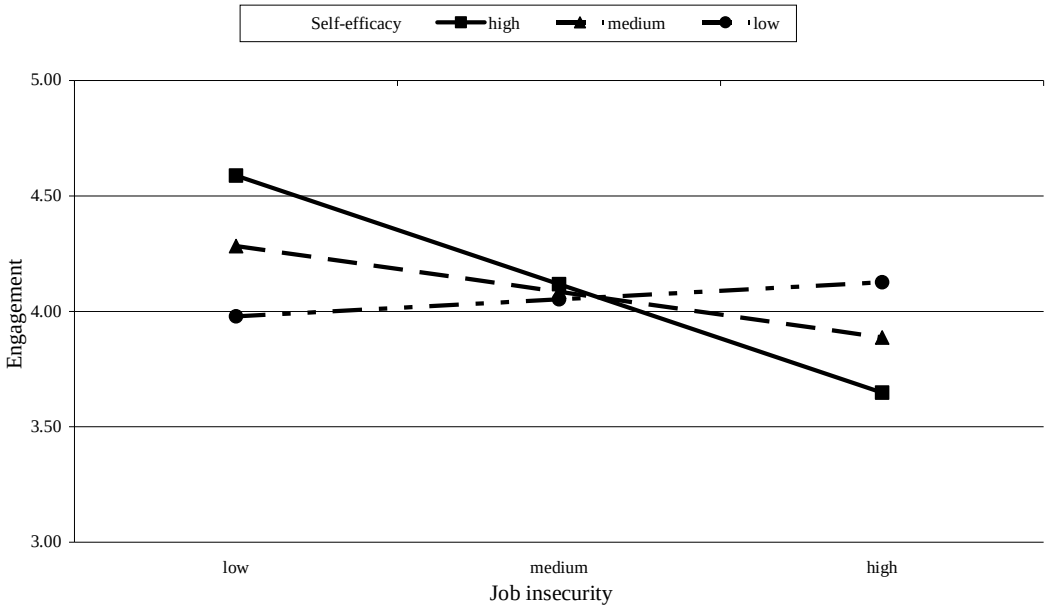

FIGURE 5
Work engagement as a function of job insecurity and self-efficacy.

SUMMARY AND COMMENTS

The analyses produced several significant results even though some hypotheses were not confirmed. Hypotheses 1a and 1b were in relation to the possibility that the negative effects of job insecurity on work engagement and psychological distress were greater among men. The analysis of the interaction did not produce any significant results, requiring a rejection of both hypotheses. Job insecurity showed only a slight positive association with psychological distress and a negative association with work engagement, consistent with the literature and our expectations.

Hypotheses 2a and 2b concerned the potential buffer effect that being married/cohabiting has upon the negative effects of job insecurity. The results which emerged, in accordance with Lim (1996) who highlighted the buffering effect of receiving support from partners, made it possible to only accept hypothesis 2b. In fact, while at low levels of insecurity there were no significant differences in the scores for work engagement in relation to marital status, unmarried or non-cohabiting workers with higher levels of insecurity displayed a more significant decrease in engagement at work (Figure 1). On the other hand, hypothesis 2a could not be accepted.

Hypothesis 3 postulated that occupational status would not moderate the link between job insecurity and the outcomes of psychological distress and work engagement. The results, in line with Orpen (1993) and De Witte (1999) did not reveal any effect; allowing the hypothesis to be accepted.

Hypotheses 4a and 4b anticipated that the negative effects of job insecurity would be greater in workers with open-ended contracts. Hypothesis 4b was not verified although we detected a significant interaction (Figure 2), in fact workers with open-ended contracts showed higher levels of work engagement in conditions of low insecurity, but when the perception of job insecurity increased, the levels of work engagement decreased and became similar to that of workers on fixed-term contracts. Thus, we could not accept hypotheses 4a and 4b.

On the basis of results achieved by Shaw and colleagues (1993) and Dekker and Schaufeli (1995), hypothesis 5 predicted that belonging to a union would not moderate the effects of insecurity. In effect, no significant interactions were noticed so this hypothesis was accepted.

Hypotheses 6a and 6b postulated that employability would tone down the negative effects of job insecurity in line with the theory maintained by Kuhnert and Vance (1992) and Sverke and colleagues (2002), according to which the perceived possibility of finding new work would lessen the negative effect deriving from the threat to the continuation of the current work. Those interactions were not significant and therefore both hypotheses had to be rejected.

Hypothesis 7a proposed that readiness and self-efficacy would have a positive influence on the relationship between job insecurity and psychological distress. Both interactions turned out to be significant. The hypothesis could be accepted. In fact, while the level of psychological distress in workers with higher levels of readiness tended to remain constant, independently of the levels of job insecurity, workers who displayed a lower degree of readiness registered an increase in the levels of psychological distress when job insecurity increased (Figure 3). Moreover, workers with lower self-efficacy (Figure 4) displayed higher levels of psychological distress compared to colleagues having higher levels of self-efficacy, furthermore the difference in relation to job insecurity scores became even more marked.

Finally, hypothesis 7b postulated that self-efficacy and readiness would act as a buffer toward the negative effects of job insecurity on work engagement. Only the interaction between

job insecurity and self-efficacy (Figure 5) had a significant result, yet this hypothesis could not be accepted. The interaction was antagonistic: while having lower levels of job insecurity, more self-confident individuals tended to be more engaged in their jobs. The situation was reversed with higher levels of job insecurity and workers scoring higher on self-efficacy being less engaged (while individuals with lower self-efficacy had constant and independent levels of job insecurity. A plausible explanation can be a type of anticipated psychological separation that concerns workers who feel they are more self-reliant in the management of their careers and that, in perceiving a threat to their work, reduce their levels of work engagement with a view to decreasing the effects of cognitive dissonance derived from the engagement in a job which they may, soon, no longer have.

CONCLUSIONS

Consistently with the literature (Cheng et al., 2005; De Witte, 1999) job insecurity turned out to be negatively associated with work engagement and positively with psychological distress. Self-efficacy, readiness, and employability are all moderately positively correlated, proving that feeling more employable is accompanied by more readiness and self-efficacy in career planning activities, and viceversa.

We observed that workers between 30 and 50 years old feel more insecure (and less engaged) than their younger and older colleagues; a possible explanation being that this segment of population is more affected by precariousness, organizational restructurings, and the like. Moreover, employability seems to decrease over time.

Interactions were calculated and those significant explained a range of additional variance of the criteria between 1 and 6%. This evidence is supported by such authors as Evans (1985) who underlined how these effects are generally underestimated and Chaplin (1991), who considered an acceptable variance to be between 1 and 3% minimum/at least.

This study may be considered a first contribution for a more exhaustive examination of the effects of moderation of the relationships between job insecurity and traditional outcomes such as psychological distress and work engagement, even though other outcomes may be included in the future, such as life satisfaction, organizational commitment, and turnover intentions.

Consistent with evidence already published, which revealed a buffering effect by marital status (Lim, 1996), an interaction between job insecurity and marital status has been found on work engagement while neither occupational status (De Witte, 1999; Orpen, 1993) nor belonging to a union (Dekker & Schaufeli, 1995; Shaw et al., 1993) have moderated the effects of job insecurity.

Variables related to career planning, such as self-efficacy and readiness, have showed to act as interesting intervening variables. In respect of psychological distress, higher self-efficacy and readiness scores compensate for the effects deriving from an increase in job insecurity, while in terms of work engagement, only the role of self-efficacy can be noted, which brings about decreasing levels of work engagement (with an increase in job insecurity) probably with the aim of managing anticipated psychological separation from current work which follows a more proactive management of careers with a view to a possible new job search.

The results obtained have implications from both a theoretical and a practical point of view. From a theoretical standpoint, this research provides an exhaustive and comprehensive

analysis of the moderators of job insecurity, in particular those of a socio-demographic and psychological nature (employability, self-efficacy, and readiness), systematizing for the first time the sparse evidence of several studies. With regard to practitioners, whether these are managers involved in organization restructuring/mergers, or counselors involved in supporting/guiding their clients, this study is an invitation to keep in consideration the variables which amplify or lessen the effects of job insecurity: on one hand, to consider marital status and type of contract as potential factors in the moderation of job insecurity, and on the other hand, to concentrate on the fostering of the skills needed for the autonomous management of workers' career, of which self-efficacy and readiness can be considered to be valid indicators, especially as they act as a buffer with reference to the negative effects deriving from an increase in the feelings of insecurity.

Among the limitations of this investigation, it is worthwhile highlighting that the sample was involved using conventional methods, restricting the possibility of generalizing the results achieved to the whole Italian context. Furthermore, the exclusive use of a self-report type instrument may have altered the breadth of the relationships between some of the variables. In addition, we certainly would have obtained greater sense and significance if the quantitative research phase had been preceded by a qualitative phase through interviews or focus groups with key stakeholders in the context of the firms sampled. Finally, the inclusion of other socio-demographic variables, such as number of dependent children, partners' employment status, financial hardship, etc., may have provided further significant evidence.

NOTES

1. Prior to computing ANOVAs, workers were divided into three age groups: below 30 years old (N = 193), between 30 and 50 years old (N = 248), and over 50 years old (N = 88). This distinction was made in order to distinguish between newcomers (< 30 years), mid-career (> 30 < 50 years), and late-career workers (> 50 years).
2. Only significant interactions will be reported. Data regarding other interactions will be available on request.

REFERENCES

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*, 209-223. doi:10.1108/13620430810870476

Barling, J., & Kelloway, K. E. (1996). Job insecurity and health: The moderating role of workplace control. *Stress Medicine*, *12*, 253-259. doi:10.1002/(SICI)1099-1700(199610)12:4<253::AID-SMI710>3.0.CO;2-2

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *6*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Borg, I., & Elizur, D. (1992). Job insecurity: Correlates, moderators and measurement. *International Journal of Manpower*, *13*, 13-26. doi:10.1108/01437729210010210

Brockner, J., Wiesenfeld, B. M., Reed, T., Grover, S., & Martin, C. (1993). Interactive effect of job content and context on the reactions of layoff survivors. *Journal of Personality and Social Psychology*, *62*, 187-197. doi:10.1037/0022-3514.64.2.187

Burchell, B., Ladipo, D., & Wilkinson, F. (Eds.) (2002). *Job insecurity and work intensification*. New York: Routledge.

Bussing, A. (1999). Can control at work and social support moderate psychological consequences of job insecurity? Results from a quasi-experimental study in the steel industry. *European Journal of Work and Organizational Psychology*, *8*, 219-242. doi:10.1080/135943299398339

Chaplin, W. F. (1991). The next generation of moderator research in personality psychology. *Journal of Personality*, *59*, 143-178. doi:10.1111/j.1467-6494.1991.tb00772.x

Cheng, Y., Chen, C., Chen, C., & Chiang, T. (2005). Job insecurity and its association with health among employees in the Taiwanese general population. *Social Science & Medicine, 61*, 41-52. doi: 10.1016/j.socscimed.2004.11.039

CNEL (Ed.) (2009). *Il lavoro che cambia* [The changing work]. Roma: Author.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

De Cuyper, N., de Jong, J., De Witte, H., Isaksson, K., Rigotti, T., & Schalk, R. (2008). Literature review of theory and research on the psychological impact of temporary employment: Towards a conceptual model. *International Journal of Management Reviews, 10*, 25-51. doi:10.1111/j.1468-2370.2007.00221.x

De Cuyper, N., & De Witte, H. (2005). Job insecurity: Mediator or moderator of the relationship between contract type and well-being. *SA Journal of Industrial Psychology, 31*, 79-86.

De Cuyper, N., & De Witte, H. (2006). The impact of job insecurity and contract type on attitudes, well-being and behavioural reports: A psychological contract perspective. *Journal of Occupational and Organizational Psychology, 79*, 395-409. doi:10.1348/096317905X53660

De Cuyper, N., & De Witte, H. (2007). Job insecurity among temporary versus permanent workers: Effects on job satisfaction, organizational commitment, life satisfaction and self-rated performance. *Work and Stress, 21*, 65-84. doi:10.1080/02678370701229050

De Goede, M., & Maassen, G. (1988). *Beleving van niet-werken: een onderzoek werk-lozen, arbeidsongeschikten en hun partner* [Perception of non-work: An investigation on the unemployed, the disabled and their partners]. Culemborg/Amsterdam: University of Utrecht.

Dekker, S., & Schaufeli, W. B. (1995). The effects of job insecurity on psychological health and withdrawal cognitions. *Australian Psychologist, 30*, 57-63. doi:10.1080/00050069508259607

Dell'Aringa, C. (2009). I lavori temporanei e le transizioni verso il lavoro stabile [Temporary jobs and transitions towards permanent employment]. In CNEL (Ed.), *Il lavoro che cambia* (III, pp. 1-32). Roma: CNEL.

De Witte, H. (1994). ('t is geen) Leven zonder werk: Een overzicht van recente literatuur over de psychische gevolgen van werkloosheid [(It's no) Life without work: A review of recent literature on the psychological consequences of unemployment]. *Welzijnsgids, 12*, 1-23.

De Witte, H. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology, 8*, 155-177. doi:10.1080/135943299398302

De Witte, H., & Naswall, K. (2003). Objective versus subjective job insecurity: Consequences of temporary work for job satisfaction and organizational commitment in four European countries. *Economic and Industrial Democracy, 24*, 149-188. doi:10.1177/0143831X03024002002

Eurostat (2012). *Unemployment statistics.* Retrieved January 19, 2012, from http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Unemployment_statistics=teilm020&tableSelection=1&plugin=1

Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes, 36*, 305-323. doi:10.1016/0749-5978(85)90002-0

Ferrie, J., Shipley, M., Marmot, M., Stansfeld, S., & Smith, G. (1995). Health effects of anticipation of job change and non-employment: Longitudinal data from the Whitehall II study. *British Medical Journal, 311*, 1264-1269. doi:10.1136/bmj.311.7015.1264

Gan, Y., Yang, M., Zhou, T., & 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. doi: 10.1016/j.paid.2007.02.009

Goldberg, D. (1979). *Manual of the General Health Questionnaire.* London: NFER Nelson.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *The Academy of Management Review, 9*, 438-448.

Griva, F., & Anagnostopoulos, F. (2010). Positive psychological states and anxiety: The mediating effect of proactive coping. *Psychological Report, 107*, 795-804. doi:10.2466/02.20.PR0.107.6.795-804

Hellgren, J., & Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior, 24*, 215-236. doi:10.1002/job.184

Heppner, M. K., Multon, K. D., & Johnston, J. A. (1994). Assessing psychological resources during career change: Development of Career Transitions Inventory. *Journal of Vocational Behavior, 44*, 55-74. doi:10.1006/jvbe.1994.1004

ISTAT (2007). *Annuario statistico italiano* [Italian annaul statistics]. Roma: Author.

ISTAT (2008). *La misura dell'occupazione non regolare nelle stime di contabilità nazionale, anni 1980-2005* [The measurement of irregular employment as estimated by the National accounts, years 1980-2005]. Roma: Author.

Jose, P. E. (2002). ModGraph. A computer program to graphically display moderation [Computer software]. Retrieved January 8, 2012, from http://www.victoria.ac.nz/psyc/paul-jose-iles/modgraph/modgraph.php.

Kinnunen, U., Mauno, S., Natti, J., & Happonen, M. (1999). Perceived job insecurity: A longitudinal study among Finnish employees. *European Journal of Work and Organizational Psychology*, *8*, 243-260. doi:10.1080/135943299398348

Kuhnert, K. W., & Vance, R. J. (1992). Job insecurity and moderators of the relation between job insecurity and employee adjustment. In J. C. Quick, L. R. Murphy, & J. J. Hurrell (Eds.), *Stress and well-being at work: Assessments and interventions for occupational mental health* (pp. 48-63). Washington, DC: American Psychological Association.

Lim, V. (1996). Job insecurity and its outcomes: Moderating effects of work-based and nonwork-based social support. *Human Relations*, *49*, 171-194. doi:10.1177/001872679604900203

Lo Presti, A. (2008). *Nuovi orientamenti di carriera e qualità del lavoro: un contributo di ricerca* [New career attitudes and quality of employment]. Unpublished doctoral dissertation, University of Bologna, Italy.

Mauno, S., Kinnunen, U., Makikangas, A., & Natti, J. (2005). Psychological consequences of fixed-term employment and perceived job insecurity among health care staff. *European Journal of Work and Organizational Psychology*, *14*, 209-237. doi:10.1080/13594320500146649

Orpen, C. (1993). Correlations between job insecurity and psychological well-being among white and black employees in South Africa. *Perceptual and Motor Skills*, *76*, 885-886. doi:10.2466/pms.1993.76.3.885

Piccinelli, M., Bisoffi, G., Bon, M. G., Cunico, L., & Tansella, M. (1993). Validity and test-retest reliability of the Italian version of the 12-item General Health Questionnaire in general practice: A comparison between three scoring methods. *Comprehensive Psychiatry*, *34*, 198-205. doi:10.1016/0010-440X(93)90048-9

Probst, T. M. (2002). Layoffs and tradeoffs: Production, quality, and safety demands under the threat of job loss. *Journal of Occupational Health Psychology*, *7*, 211-220. doi:10.1037/1076-8998.7.3.211

Rosenblatt, Z., & Ruvio, A. (1996). A test of a multidimensional model of job insecurity: The case of Israeli teachers. *Journal of Organizational Behavior*, *17*, 587-605. doi:10.1002/(SICI)1099-1379(199612)17:1+<587::AID-JOB825>3.0.CO;2-S

Rosenblatt, Z., Talmud, I., & Ruvio, A. (1999). A gender-based framework of the experience of job insecurity and its effects on work attitudes. *European Journal of Work and Organizational Psychology*, *8*, 197-217. doi:10.1080/135943299398320

Rutelli, P., Agus, M., & Caboni, R. (2007). *Lavoro e identità psicosociali. Sicurezza, flessibilità e precarietà* [Work and psychosocial identities. Security, flexibility, and precariousness]. Milano: Franco-Angeli.

Scarpuzzi, P. (2009). *Carriere professionali: aspetti psicosociali delle transizioni* [Professional careers: Psychosocial aspects of transitions]. Unpublished doctoral dissertation, University of Bologna, Italy.

Schaufeli, W. B. (1992). Unemployment and mental health in well and poorly educated school-leavers. In C. Verhaar & L. Jansma (Eds.), *On the mysteries of unemployment: Causes, consequences and policies* (pp. 253-271). Dordrecht, The Netherlands: Kluwer Academic Publishers.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. A cross-national study. *Educational and psychological measurement*, *66*, 701-716. doi:10.1177/0013164405282471

Shaw, B., Fields, W. M., Thacker, J. W., & Fisher, C. D. (1993). The availability of personal and external coping resources: Their impact on job stress and employee attitudes during organizational restructuring. *Work and Stress*, *7*, 229-246. doi:10.1080/02678379308257064

Silla, I., De Cuyper, N., Gracia, F. J., Peirò, J. M., & De Witte, H. (2009). Job insecurity and well-being: Moderation by employability. *Journal of Happiness Studies*, *10*, 739-751. doi:10.1007/s10902-008-9119-0

Sverke, M., & Hellgren, J. (2001). Exit, voice, and loyalty reactions to job insecurity in Sweden: Do unionized and non-unionized employees differ? *British Journal of Industrial Relations*, *39*, 167-182. doi: 10.1111/1467-8543.00195

Sverke, M., & Hellgren, J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied psychology: An international review*, *51*, 23-42. doi: 10.1111/1464-0597.0077z

Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, *7*, 242-264. doi:10.1037/1076-8998.7.3.242

Sverke, M., Hellgren, J., Näswall, K., Chirumbolo, A., De Witte, H., & Goslinga, S. (2004). *Job insecurity and union membership: European unions in the wake of flexible production*. Brussels, Belgium: P.I.E.-Peter Lang.

Tetrick, L. E., & Barling, J. (Eds.) (1995). *Changing employment relations: Behavioral and social perspectives*. Washington, DC: American Psychological Association.

APPENDIX

Employability scale (Italian version)

Per ciascuna delle seguenti affermazioni, indichi quanto ritiene probabile che accada, tenendo presente che: [State how likely you consider each of the following affirmations to be bearing in mind that]

1 = *nessuna probabilità* [no probability]
2 = *25% di probabilità* (poco probabile) [25% probability (little likely)]
3 = *50% di probabilità* (abbastanza probabile) [50% probability (somewhat likely)]
4 = *75% di probabilità* (molto probabile) [75% probability (very likely)]
5 = *100% di probabilità* (sicuro) [100% probability (certain)]

1) Qual è la probabilità di trovare un altro lavoro accettabile al di fuori della sua azienda? [How likely are you to find an acceptable job outside your company?]
2) Se nel corso del prossimo anno cercasse un altro lavoro, qual è la probabilità di trovarne uno accettabile? [If during next year you were to look for a new job, how likely are you to find an acceptable one?]
3) Tenendo in considerazione la sua età, il suo livello di istruzione e le condizioni economiche generali, quali ritiene siano le probabilità di trovare un altro lavoro accettabile al di fuori della sua azienda? [Considering your age, education, and the economic situation, how likely are you to find an acceptable job outside your company?]
4) Se lo volesse veramente, quali ritiene siano le probabilità di trovare un altro lavoro accettabile al di fuori della sua azienda? [If you really wanted to find a new job, how likely do you think you would be to find an acceptable one outside your company?]
5) Quali ritiene siano le probabilità di trovare un lavoro migliore di quello che svolge attualmente nella sua azienda? [How likely are you to find a better job than the one you right now have in your company?]