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Personal Control as a Mediator and Moderator Between Life Strains
and Psychological Well-Being in the Unemployed

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This study surveyed 214 unemployed adults on well-being, the latent (status, social support, activity, time structure, collective purpose) and manifest benefits (financial strain) of employment, and personal control. We tested whether personal control would predict well-being over and above the effects of the latent and manifest benefits, and tested whether it moderated or mediated the relationship between the latent and manifest benefits and well-being. Personal control explained additional variance over and above the latent and manifest benefits; it moderated the effect of both activity and financial strain on well-being; and it mediated the relationship between financial strain, time structure, collective purpose, status and well-being. Implications for theory and practice are discussed.

Research within the unemployment literature has demonstrated the harmful effects of unemployment on the psychological well-being of unemployed individuals (for a review, see Murphy & Athanasou, 1999). Several specific unemployment theories have been proposed to account for this deterioration in well-being, the most influential of which is the latent deprivation model proposed by Jahoda (1981, 1982). This theory is founded on the proposition that people habitually utilize social institutions to meet their psychological needs.

Jahoda (1981, 1982) maintained that employment provides both manifest (associated with financial income) and latent benefits (associated with meeting psychological needs). People pursue employment to attain the manifest

benefits, but while employed, also gain from having the following five primary needs met: having structure in one's day, engaging in meaningful activities, being a part of a collective purpose, having social contact outside of the immediate family, and receiving recognition or status. When people lose their jobs, they experience life demands or strains associated with loss of the manifest and latent benefits but, in particular, according to this theory, it is the strain associated with the loss of the latent benefits of employment that operates to reduce psychological well-being.

Consistent with Jahoda's (1981, 1982) model, researchers have found differences between the employed and unemployed (Evans & Haworth, 1991) and between the unemployed and underemployed (Creed & Machin, 2002) on measures of the five latent benefits. Compared with the employed, unemployed individuals have a less structured day and use their time less purposefully (Jackson, 1999; Wanberg, Griffiths, & Gavin, 1997). They have lower levels of activity (Underlid, 1996), are involved in fewer social activities (Underlid, 1996), and have less social support from close relations and authority figures (Jackson, 1999). Lastly, perceived status and feelings of having a collective purpose or common goals with others have been found to be associated with well-being in unemployed samples (Creed & Macintyre, 2001; Evans & Haworth, 1991; Haworth & Ducker, 1991). The findings from these studies generally support the hypothesis that the unemployed have less access to the latent benefits than do the employed, and that the level of strain produced by this reduced access to latent benefits is associated with poorer well-being.

There is also convincing evidence that strain associated with loss of the manifest benefits of employment (i.e., financial strain) plays a substantial role in the lives of unemployed people. Unemployed people consistently report more financial strain than do employed or student samples (Jackson, 1999). This financial strain has been shown to be negatively related to well-being (Kessler, Turner, & House, 1987; Kokko & Pulkkinen, 1997; Whelan, 1992). Moreover, when the latent and manifest benefits are examined together, financial strain has been shown to be more strongly associated with well-being (Creed & Macintyre, 2001). Evidence from studies in this area indicates that unemployed people experience increased financial strain, and this strain is associated with poorer well-being. Fryer (1995) stated that "unemployment generally results in psychologically corrosive experienced poverty" (p. 270), and it is this experience of poverty that leads to a reduction in psychological well-being.

The latent deprivation model provides an understanding of the environmental factors that contribute to life strain and poorer psychological well-being in the unemployed. However, limited research has examined the latent

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and manifest benefits of employment and their relationship with well-being, in the context of contributions made by personal resources (e.g., expectations, values, previous experiences and temperament; DeNeve & Cooper, 1998; Ezzy, 1993). A widely studied and important personal resource in the area of well-being generally is personal control or mastery (Ryff, 1989; Skinner, 1996). *Personal control* (mastery) is defined as the “extent to which people see themselves as being in control of the forces that importantly affect their lives” (Pearlin, Menaghan, Lieberman, & Mullan, 1981, p. 340; for the complexity related to definitions of control, see Skinner, 1996).

Early on, White (1959) highlighted that one of the primary motives of human beings is the need to control their environment. Personal control has received much attention within psychology, especially within the area of stress, coping, and psychological well-being. This literature has identified the importance of control concerning psychological well-being, suggesting that the perception of personal control results in positive outcomes, whereas the perception of loss of control results in negative consequences to well-being (Burger, 1989; Skinner, 1996).

Maintaining a sense of control or mastery has been found to aid in the ability to cope with stressors, in general (Bandura, 1989; Glass & Singer, 1972; Lachman & Burack, 1993; Skinner, 1996), and in the area of unemployment (Wanberg et al., 1997). Job loss and unemployment can be viewed as stressful life events, with potential long-term consequences on psychological well-being, health, and personal functioning (Price, 1992; Price, Choi, & Vinokur, 2002; Price, Friedland, Choi, & Caplan, 1998). Within the unemployment literature, research has demonstrated that the unemployed are much more likely to feel that they have little control over their lives. For example, Hannan, O’Riain, and Whelan (1997) found that low feelings of control were associated with high levels of psychological distress, arguing that strong feelings of personal control and efficacy help to improve the experience of unemployment by improving well-being. Hannan et al. stated that “not all unemployed become fatalistic, feeling hopeless in the grasp of external circumstances, and such retention of personal confidence and control significantly reduces distress levels” (p. 318).

This^A research highlights the important direct role that the personal resource of control has on psychological well-being for those who are unemployed. Some research (e.g., Hannan et al., 1997; Pearlin et al., 1981; Price et al., 2002) has tested the relationship among financial strain, personal control, and well-being for the unemployed, while omitting the psychological needs identified by Jahoda. The aim of the present paper is to test the

influence of the personal resource of personal control (mastery) with the latent and manifest benefits of employment on psychological well-being in the unemployed.

Control as Mediator/Moderator Between Loss of Benefits of Employment and Well-Being

Research has also been conducted with unemployed people concerning financial strain, personal control, job-search behavior, and mental health (Taris, 2002), depression (Pearlin et al., 1981), and psychological well-being (Hannan et al., 1997; Price et al., 2002). For example, Pearlin et al. tested the disruption to work life that results from being dismissed, laid off, downgraded, or leaving work because of illness. These authors demonstrated that disruption to one's job—which was viewed as a stressful life event as a result of its involuntary, undesired, and unscheduled nature—increased economic strain, which subsequently affected levels of depression by reducing personal control and self-esteem. Pearlin et al. demonstrated a mediating role for personal control between the manifest benefit of financial strain and depression. Similarly, Price et al. showed that financial strain and depression directly influenced personal control, which then affected levels of health and emotional functioning, again highlighting the mediating role of personal control between financial strain and well-being.

Social situation (social status or identity, in Jahoda's^B terms) has been a primary focus within the unemployment literature. Research has examined the role of personal control among the unemployed of low socioeconomic status and individuals considered to be economically disadvantaged. Hannan et al. (1997) found that the effects of unemployment were fully mediated by the individual's "dysfunctional causal attributions, employment commitment, and, in particular, low feelings of control" (p. 318). Moreover, a sense of personal control was found to be of greatest importance for individuals lower in the social status hierarchy. As one descended the social status hierarchy, feelings of control more strongly ameliorated feelings of distress. This finding is consistent with results reported by Whelan (1992), that increments of control have their most dramatic effect among those with low status and resources, again demonstrating a mediating (and moderating in this case as well) role for control between the latent benefit of status and well-being.

In relation to a moderating or buffer role for personal control, Lachman and Weaver (1998) found that those in lower income groups had lower levels of personal control and stronger beliefs in the existence of external constraints in their lives. Those individuals with higher personal control and lower constraints had greater life satisfaction, better health, and lower depression. According to Lachman and Weaver, "Control beliefs appear to serve as a buffer for the negative ramifications of low social status in regard to health and well-being" (p. 771), in that

lower status individuals with high control beliefs demonstrate similar levels of life satisfaction, health, and depression to those with higher status. These authors identified the importance of the sense of personal control as a buffer or resource for the economically disadvantaged, such as those of lower social status or unemployed.

Similar to Jahoda (1981, 1982), Warr (1987, 1999) argued that work provides a variety of features (e.g., interpersonal contact, valued social position, physical safety), which contribute to psychological well-being and are adversely influenced by job loss and unemployment. In Warr's model, opportunity for personal control is listed as one of the key job characteristics within the context of employment and unemployment. Warr's environmental features incorporate characteristics considered important within many of the job stress/well-being theories, such as the job characteristics model (Hackman & Oldman, 1980), the latent deprivation model of employment and unemployment (Jahoda, 1982), and the demand/control model (Karasek, 1979; Karasek & Theorell, 1990).

While Warr (1990) argued that his environmental features have an additive, rather than an interactive effect on psychological well-being, other models, notably the demand-control model (Karasek, 1979; Karasek & Theorell, 1990), hypothesize an interactive effect of job demands (externally generated goals within Warr's model) and decision latitude (opportunity for personal control and skill utilization in Warr's model) on psychological well-being. Like Jahoda's (1981, 1982) and Warr's models, the demand-control model has been applied across different settings, including the work and nonwork lives of healthy employed and unemployed older people (Kamarck et al., 2004) and college students (Cotton, Dollard, & de Jonge, 2002). Particularly salient for the current study is the fact that Kamarck et al. found that "demands associated with the work environment did not appear to be characterized by stronger or unique effects, when compared with nonwork demands" (p. 17).

In brief, the demand-control model proposes that psychological strain (e.g., mental fatigue, lowered psychological well-being) is the combined effect of psychological demands and the range of control available to the individual within a setting. The main prediction of the model is that more adverse reactions occur when psychological demands are high and decision latitude or control is low (i.e., a *high-strain* environment). When demands and control are both high, well-being, learning, and personal growth ensue (i.e., an *active* environment). In support of the interactive role of control in this model, research within the occupational stress, coping, and well-being literature has demonstrated a moderating role for personal control on psychological well-being. In a review of the demand-control literature, Van Der Doef and Maes (1999) identified 15 studies (of 31) that supported an interaction effect.

Where interaction effects have not been found, explanations have been that many studies fail to measure demands that are related to the outcome measure or measures (Beehr, Glaser, Canali, & Wallwey, 2001) and focus on variables characterized at the organizational, rather than the individual level (Kamarck et al., 2004). This has led researchers to recommend the use of context-specific measurements of demands and control that reflect the individual's response as a way to enhance the explanatory power of the model (Jimmieson, 2000; Kasl, 1996).

Casting variables at the individual level within a psychological framework is consistent with existing models of psychological distress. For example, the transactional model of stress (Lazarus & Folkman, 1984) emphasizes the importance of examining the individual's environmental (psychological) demands and perceived resources for coping with them (i.e., decision latitude or control) when attempting to understand psychological well-being. Importantly, control is seen as a protective mechanism (i.e., moderator) in the stress appraisal process. Thus, as well as reflecting characteristics of the workplace, explanations proposed by frameworks such as the demand-control and transactional models can account for important characteristics of the individual's transaction with the environment (Kamarck et al., 2004).

As mentioned earlier, there is evidence that control or mastery is an important variable associated with well-being, and that it can be viewed as an influential variable in its own right, a mediating variable between the psychological demands or strains in the environment (whether this is an occupational or a non-occupational setting) and psychological well-being, and a buffering or moderating variable associated with well-being. Taking into consideration the limitations mentioned previously (i.e., inconsistency among variables; using variables at an organizational level, rather than an individual level), the present study tests the effects of the strain associated with loss of the latent and manifest benefits of employment (which have been identified as important demands associated with reduced psychological well-being in the unemployed) on well-being. In addition, the personal resource of personal control or mastery will be tested for its effects on well-being, and on its possible moderating or mediating effects.

No research to date has tested these variables in combination. Specifically, the present study will test the adequacy of the latent deprivation model—alone and augmented by personal control—as a main, moderating, and mediating effect in predicting psychological well-being in unemployed people. It is expected that the latent and manifest benefits of employment—long with personal control—will account for more of the variance in psychological well-being than the latent and manifest benefits alone. It is also expected that personal control will moderate the

relationship between the latent and manifest benefits of employment and psychological well-being, where, under conditions of high control, this relationship will be weaker than under conditions of low control. Lastly, it is expected that personal control will mediate the relationship between psychological demands from the environment and well-being.

Method

Participants

Participants were 214 unemployed adults (68 female, 146 male) who were registered for work and utilizing the national employment service in mideastern Australia. We did not include respondents in the analyses if they were under the age of 17 or over the age of 50, thus precluding both adolescents who might still be in the care of their parents and older participants who might be retired or semi-retired, though still registered with the employment service. Participants' mean age was 28.9 years ($SD = 8.5$ years). There were 81 participants (37.9%) who indicated completing up to 10 years of formal education; 84 (39.3%) who had completed 11 or 12 years; and 40 (18.7%) who had some form of tertiary training; while 9 (4.2%) failed to report their educational level. The mean length of unemployment reported by the groups was 39.76 weeks ($SD = 61.09$ weeks).

Measures

Psychological distress. The 12-item version of the General Health Questionnaire (GHQ; Goldberg, 1972) was utilized as a global measure of psychological well-being. Respondents were asked to report on how they felt recently on a range of variables (e.g., cognitive processing, anxiety, depression). Sample items include "Have you recently been able to concentrate on whatever you're doing?"; "Have you recently lost much sleep over money?"; and "Have you recently felt that you are playing a useful part in things?" Responses were rated on a 4-point scale ranging from 0 (*better than usual*) to 3 (*much less than usual*). Higher scores indicate greater distress, and thus poorer psychological well-being. Goldberg and Williams (1988) reported a mean internal reliability coefficient of .85. In the present study, the coefficient was .90.

Latent benefits of employment. The five 6-item subscales from the Latent and Manifest Benefit scale (LAMB; Muller, Creed, Waters, & Machin, 2005) were used to measure the latent benefits of time structure, social support, collective purpose, status, and activity. Respondents were asked to indicate the strength of their agreement with bipolar statements on a seven-item response format. Sample items include "*Time usually drags for me/Time rarely drags for me*" (time structure), "*I regularly do things with other people/I rarely do things with other people*"

(social support), “*I usually feel a part of the community/I rarely feel a part of the community*” (collective purpose), “*What I do is important/What I do is not important*” (status), and “*I usually have a lot of things to do/I rarely have a lot of things to do*” (activity). Higher scores indicate less access to latent benefits. Muller et al. reported sound initial psychometric properties for the scales. Internal reliability coefficients for the present study were .81, .95, .90, .91, and .92 for time structure, social support, collective purpose, status, and activity, respectively.

Financial strain. The six-item financial strain subscale from the LAMB scale (Muller et al., 2005) was used to measure this construct. Respondents were asked to indicate the strength of their agreement with bipolar statements on a 7-point response format. A sample item is “*I can usually live on the money I receive/I usually have trouble living on the money I receive.*” Higher scores indicate greater financial strain. Internal reliability coefficient for this scale was .93.

Personal control. The personal control construct, which is defined as the extent to which an individual views life in general as under personal control or as fatalistically determined, was measured by the seven-item Mastery scale (Pearlin et al., 1981). Participants responded on a 4-point Likert scale ranging from ^D (*strongly disagree*) to ^E (*strongly agree*). Sample items are “There is really no way I can solve some of the problems I have” and “I have little control over the things that happen to me.” There were three items that were reverse-scored. Higher scores indicate greater personal control. Support for the reliability and validity of this scale has been provided by Pearlin and Schooler (1978). Internal reliability coefficient for the current sample was .73.

Procedure

The study was cross-sectional and utilized a convenience sample of unemployed people. Participants were approached to complete the survey while utilizing the national employment registry office. The surveys contained the preceding scales and demographic questions concerning age, gender, educational level, and length of unemployment. Participants completed the survey in approximately 15-20 min. Informed consent was obtained, and confidentiality was assured.

Results

Overview of Analysis

Initially, an exploratory factor analysis was conducted to test the independence and factor structure of the scales used in the present study. A hierarchical multiple regression analysis was then conducted to test the effect of the latent benefits (i.e., time structure, social support, collective purpose, status, and activity), manifest benefit (i.e.,

financial strain), and personal control on psychological distress. This analysis was used for logical and theoretical reasons.

Hierarchical regression analyses can determine the relative contributions of the latent benefits, manifest benefit, and personal control in accounting for psychological distress. This analysis can also test the moderating effects of personal control on the relationships between the latent and manifest benefits of employment and psychological distress (using interaction terms), and determine the amount of variance accounted for by the interaction terms. The independent variables that significantly correlated ($p < .05$) with psychological distress were entered at the appropriate steps. The five latent benefits terms (time structure, social support, collective purpose, status, and activity) and the one manifest benefit term (financial strain) were entered at Step 1. Personal control was entered at Step 2. The interaction terms between the latent and manifest benefits and personal control were entered at Step 3. Centered scores were used for the interaction terms to avoid multicollinearity (Aiken & West, 1991).

We used the method proposed by Baron and Kenny (1986) to test for mediation effects. According to this method, (a) the mediator variable (in this case, personal control) is regressed onto the predictor variables (the individual latent and manifest benefits of employment), which must significantly predict the mediator; (b) the outcome variable (psychological distress) is regressed onto the predictor variables, and a significant effect must be present; and (c) the outcome variable is regressed onto the predictor variable and the mediator, the mediator must predict the outcome variable, and the effect of the predictor variable on the outcome variable must be less than in the second regression analysis. *Perfect mediation* holds if the predictor variable has no effect once the mediator is included in the equation. *Partial mediation* occurs when there is a significant reduction in the effect of the predictor variable with the inclusion of the mediator. We used Sobel's (1982) test to determine whether the individual mediators significantly carried the influence of the predictors to the outcome variable.

Independence and Factor Structure of Measures

To examine the independence and factor structure of the scales used in the study, all 55 items were entered into a principal axis factor analysis, using a direct oblimin rotation. The items were from the GHQ (Goldberg, 1972; 12 items); the latent and manifest benefits subscales of time structure (6 items), social support (6 items), collective purpose (6 items), status (6 items), activity (6 items), and financial strain (6 items); and from the Mastery scale (7 items). The Kaiser–Meyer–Olkin measure of sampling adequacy (.89) and Bartlett's test of sphericity, $\chi^2(F, N = 1485) = 8447.72, p < .001$, indicate the suitability of the data for factor analysis (Tabachnik & Fidell, 1996).

There were eight factors rotated to reflect the eight scales that were included in the analysis. All items loaded on their respective factors, although one time structure item and one Mastery scale item had factor loadings less than .30 (.22 and .24, respectively). All items were retained. All factors had eigenvalues greater than 1, with the solution accounting for 64.0% of the variance, demonstrating the independence of the scales used in the study. Descriptive data and bivariate correlations among all variables are reported in Table 1.

-INSERT TABLE 1 ABOUT HERE^G-

Testing Direct and Moderation Effects

A hierarchical regression analysis was conducted to test (a) the contribution of the latent and manifest benefits of employment to predicting psychological distress; (b) whether additional variance was explained by the inclusion of personal control; and (c) whether personal control moderated the relationship between the latent and manifest benefits and psychological distress. All assumptions for the analysis were met. All predictor variables were significantly correlated with psychological distress, indicating their suitability for inclusion (see Table 1). None of the demographic variables (i.e., age, gender, length of unemployment, educational level) were correlated with psychological health, and thus were not included.

The five latent benefits (time structure, social support, collective purpose, status, and activity) and the manifest benefit (financial strain) were entered at Step 1, and accounted for a significant 37% of the variance in psychological distress, $F(6, 207) = 20.42, p < .001$. Individuals who reported greater financial strain ($\beta = .40, p < .001, sr^2 = 16.4\%$) and less status ($\beta = .21, p = .004, sr^2 = 3.9\%$), time structure ($\beta = .16, p = .013, sr^2 = 3.0\%$), and collective purpose ($\beta = .16, p = .017, sr^2 = 2.69\%$) experienced greater psychological distress.

At Step 2, the addition of personal control accounted for a further, significant 3.4% of the variance in psychological distress, $F(1, 206) = 11.70, p = .001$. At this step, individuals who reported greater financial strain ($\beta = .35, p < .001, sr^2 = 14.9\%$), as well as lower personal control ($\beta = -.22, p = .001, sr^2 = 5.4\%$) and collective purpose ($\beta = .14, p = .039, sr^2 = 2.0\%$) experienced greater psychological distress.

The addition of the interaction terms at Step 3 added significantly to the explanation of psychological distress, $F(6, 200) = 2.48, p = .025$. With all variables, a total of 44.7% of the variance was accounted for in psychological distress, $F(13, 200) = 12.42, p < .001$. Greater psychological distress was experienced by individuals

who reported more financial strain ($\beta = .39, p < .001, sr^2 = 17.5\%$), less personal control ($\beta = -.22, p = .001, sr^2 = 5.5\%$), and less access to the latent benefits of time structure ($\beta = .13, p = .039, sr^2 = 2.1\%$) and collective purpose ($\beta = .13, p = .041, sr^2 = 2.1\%$). Two of the interaction terms were also significant predictors: Financial Strain $\times$ Personal Control ($\beta = -.15, p = .016, sr^2 = 2.9\%$) and Activity $\times$ Personal Control ($\beta = .16, p = .044, sr^2 = 2.0\%$). These significant interactions indicate that the relationship between the latent benefit of activity and the manifest benefit of financial strain were conditional upon the level of personal control. Summary data for the hierarchical regression analysis are reported in Table 2.

-INSERT TABLE 2 ABOUT HERE^H-

The significant interactions were probed following the procedures recommended by Aiken and West (1991). The values of the moderator (personal control) were chosen 1 *SD* above and 1 *SD* below the mean to form simple regression equations. Simple regression lines were generated by entering the values of the latent or manifest benefit variable 1 *SD* above and 1 *SD* below the mean in the simple regression equation that was formed in the previous step. The interaction was then plotted for each of the significant interactions terms to demonstrate the moderating effect of personal control on the relationship between activity, financial strain, and psychological distress (see Figures 1 and 2).

-INSERT FIGURE 1 ABOUT HERE^I-

-INSERT FIGURE 2 ABOUT HERE^J-

The significant interaction term for Activity $\times$ Personal Control indicates that for low levels of personal control, increasing levels of activity were associated with decreasing levels of psychological distress. For high levels of personal control, increasing levels of activity were associated with increasing levels of psychological distress. For moderate levels of personal control, no association was found between levels of activity and levels of psychological distress. The significant interaction term for Financial Strain $\times$ Personal Control indicates that when financial strain

was high, psychological distress was higher when personal control was low, and it was lower when personal control was high.

Testing the Mediation Effects

Step 1 of the hierarchical regression analysis reported in Table 2 indicates significant associations between the latent benefits of time structure, collective purpose and status, and psychological distress, and a significant association between financial strain and psychological distress. Consequently, these predictor variables were tested for the mediation hypothesis (see Table 3 for summary data of these analyses). For time structure, the predictor variable (time structure) was significantly associated with the mediator variable (personal control; $\beta = -.32^{K***}$); the predictor variable was significantly associated with the outcome variable (psychological distress; $\beta = .32^{***}$); and when the outcome variable was regressed onto the predictor variable and the mediator, the mediator still significantly predicted the outcome variable ($\beta = -.38^{L***}$), and the effect of the predictor variable on the dependent variable was significantly less than in the second regression analysis ($\beta = .32^{M***}$, as opposed to $\beta = .19^{N**}$; Sobel's $z = 3.92, p < .001$). Sobel's statistic for the remaining predictor variables were as follows: collective purpose, $z = 3.75, p < .001$; status, $z = 4.01, p < .001$; and financial strain, $z = 2.71, p = .007$. This indicates significant partial mediation effects for all variables tested.

-INSERT TABLE 3 ABOUT HERE⁰-

Discussion

Consistent with previous findings (e.g., Creed & Macintyre, 2001; Jackson, 1999), the latent benefits of employment had significant and moderate, bivariate correlations with psychological distress in this sample of unemployed people (Table 1). However, when the latent benefits were assessed together with the manifest benefit of employment (Step 1, Table 2) the level of association for time structure, collective purpose, and status were reduced, and the associations for social support and activity became nonsignificant. These findings do not support Jahoda's (1981) latent deprivation model, which predicts that it is the strain associated with the loss of the latent benefits of employment that leads to a decline in psychological well-being.

Other researchers have identified different latent benefits to be more important. Haworth (1986), for example, found time structure and activity level to be most highly related to well-being; Creed and Macintyre (2001)

identified time structure, activity level, and collective purpose; while Creed and Klisch (2005) found no significant associations between the latent benefits and well-being when other variables were included. Thus, it is likely that different individual latent benefits are important for different groups/individuals who are unemployed; and individual latent benefits need to be considered separately when working at the individual level (e.g., when providing counselling). Having said this, it is still more likely that while the latent benefits have bivariate relationships with well-being, these associations are substantially reduced when more important variables are considered.

In contrast to the latent benefits, the manifest benefit of employment (operationalized in this study as financial strain) emerged as the most important variable. It had a moderate to strong bivariate association with psychological distress, which was maintained when examined with the latent benefits (and when examined with personal control). Again, this is inconsistent with Jahoda's^P proposition that deprivation of the latent benefits of employment has a greater impact than does deprivation of the manifest benefits. This strong association between perceived economic strain and distress is consistent with other studies (e.g., Creed & McIntyre, 2001; Kessler et al., 1987; Kokko & Pulkkinen, 1997; Whelan, 1992) and is more in line with Fryer's (1986) explanation for the deteriorating well-being associated with unemployment.

The inclusion of the personal control variable to the analysis (Step 2, Table 2) produced a significant increase in the variance explained in psychological distress, supporting the expectation that personal control would help to explain psychological distress in the unemployed. Personal control was the second most important variable predicting psychological distress after financial strain. As in previous research (Hannan et al., 1997; Pearlin et al., 1981), the current findings suggest that low feelings of control accentuate levels of psychological distress.

There has been very little research examining the moderating role of personal control on well-being in unemployed people, and no research testing the moderating role in conjunction with the latent deprivation model. The current study was based on theorizing and findings from the stress and coping literature generally, and more specifically on the premises of the demand-control model (Karasek, 1979; Karasek & Theorell, 1990) and its application to nonwork populations (e.g., Cotton et al., 2002; Kamarck et al., 2004) that a moderating effect of high demand and low control would result in adverse psychological reactions. The findings show that the interaction terms did contribute additional explanatory variance in psychological distress, and that personal control did moderate the relationship between one of the latent benefits (activity) and the manifest benefit (financial strain) and psychological distress. These findings indicate that, for this unemployed group, reduced access to activity, under low

conditions of personal control, increased the psychological distress experienced. With financial strain, greater psychological distress was experienced when financial strain was elevated and personal control was low. The moderating effect of personal control on psychological distress has not been demonstrated previously for the latent and manifest benefits of employment variables.

Previous research with the unemployed has examined the mediating role of personal control, focusing primarily on economic strain and well-being or distress (Hannan et al., 1997; Pearlin et al., 1981; Price et al., 2002; Taris, 2002; Vinokur & Schul, 1997), but has not tested the effects of personal control in the context of the latent deprivation model of unemployment. Three of the latent benefit of employment variables (i.e., time structure, collective purpose, status) and the manifest benefit variable (financial strain) predicted personal control, and personal control significantly mediated the relationship between these latent and manifest benefit variables and psychological distress. These results indicate that well-being was directly influenced by economic deprivation and the strain associated with the loss of these three latent benefits, and that well-being was also influenced indirectly via personal control. Thus, those with higher financial strain and less time structure, collective purpose, and status perceived less personal control, which in turn was associated with poorer well-being. The evidence here is that these latent and manifest benefits variables affect well-being directly, as well as by influencing the level of control perceived. Personal control can be considered to mediate their^Q influence on well-being. This is an important finding. It has implications for training and counseling for unemployed people, where increasing personal control might act to reduce the influence of financial strain, low status, poor time structure, and feelings of isolation, as well as reduce psychological distress directly.

The findings from this study have implications for vocational guidance/re-employment counselors, job-seeking and unemployment-intervention programs, and policy development. Awareness that loss of access to latent and manifest benefits for the unemployed will provide guidance and re-employment counselors the opportunity to assess the particular benefits to which the individual has reduced access and to use this as motivation for job seeking and re-employment. Replacing access to these benefits through other activities (e.g., volunteer work) is also likely to assist in improving well-being.

Recognizing the possibility of a moderating and mediating role for personal control, it would also be important for counselors to enhance the unemployed person's resiliency and empower these individuals through strengthening their sense of personal control (mastery) and self-efficacy. This information is also important for job-

search and re-employment interventions. Some interventions for unemployed people (e.g., JOBS project; Vinokur & Schul, 1997) have already incorporated aspects such as locus of control, self-esteem, and job-seeking self-efficacy to promote a generalized sense of mastery in the unemployed. The current research findings support the inclusion of resiliency and mastery-enhancing components, as these also have the potential to enhance psychological well-being during unemployment, as well as to empower the individual to seek re-employment (Vinokur & Schul, 1997). Finally, the implication for policy development is that unemployment has detrimental consequences on well-being and mental health, highlighting the importance of developing policies that promote return-to-work programs and provide increased financial, emotional, and psychological support for these individuals.

Caution is recommended when generalizing the findings of the current study, as it was based on a moderate-size, select group of unemployed individuals from a particular region in Australia. Two implications are that the sample may not be representative of unemployed people in general, and there may be insufficient power for the analyses to detect small effects. Furthermore, all analyses were based on self-report data and may suffer from the bias inherent in such a procedure. As the study was cross-sectional, caution must also be exercised when considering the causal direction of the models used, as longitudinal studies must be conducted to test these fully. For future research, as personal control is a variable contained in many social-cognitive models in psychology (e.g., Ajzen, 1985; Bandura, 1997; Deci & Ryan, 1987), it should now be tested along with other variables in these models (e.g., outcome expectations, goals).

References

- Aiken, L., & West, S. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.). *Action control: From cognition to behavior* (pp. 11-39). Berlin, Germany: Springer.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*, 1175-1184.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.
- 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*, *51*, 1173-1182.
- Beehr, T. A., Glaser, K. M., Canali, K. G., & Wallwey, D. A. (2001). Back to basics: Re-examination of demand-control theory of occupational stress. *Work and Stress*, *15*, 115-130.

- Burger, J. M. (1989). Negative reactions to increases in perceived personal control. *Journal of Personality and Social Psychology*, 56, 246-256.
- Cotton, S. J., Dollard, M. F., & de Jonge, J. (2002). Stress and student job design: Satisfaction, well-being, and performance in university students. *International Journal of Stress Management*, 9, 147-162.
- Creed, P. A., & Klisch, J. (2005). Future outlook and financial strain: Testing the personal agency and latent deprivation models of unemployment and well-being. *Journal of Occupational Health Psychology*, 10, 251-260.
- Creed, P. A., & Machin, M. A. (2002). Access to the latent benefits of employment for unemployed and underemployed individuals. *Psychological Reports*, 90, 1208-1210.
- Creed, P. A., & Macintyre, S. R. (2001). The relative effects of deprivation of the latent and manifest benefits of employment on the well-being of unemployed people. *Journal of Occupational Health Psychology*, 6, 324-331.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53, 1024-1037.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124, 197-230.
- Evans, S. T., & Haworth, J. T. (1991). Variations in personal activity, access to categories of experience, and psychological well-being in unemployed young adults. *Leisure Studies*, 10, 249-264.
- Ezzy, D. (1993). Unemployment and mental health: A critical review. *Social Science Medicine*, 37, 41-52.
- Fryer, D. M. (1986). Employment deprivation and personal agency during unemployment: A critical discussion of Jahoda's explanation of the psychological effects of unemployment. *Social Behaviour*, 1, 2-23.
- Fryer, D. M. (1995, June). Benefit agency? Labour market disadvantage, deprivation, and mental health. *The Psychologist*, 265-272.
- Glass, D. C., & Singer, J. E. (1972). *Urban stress*. New York: Academic Press.
- Goldberg, D. P. (1972). *The detection of psychiatric illness by questionnaire*. London: Oxford University Press.
- Goldberg, D. P., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. Berkshire, ^S: NFER-Nelson.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.

- Hannan, D. F., O’Riain, S., & Whelan, C. T. (1997). Youth unemployment and psychological distress in the Republic of Ireland. *Journal of Adolescence*, 20, 307-320.
- Haworth, J. T. (1986). Meaningful activity and psychological models of non-employment. *Leisure Studies*, 5, 281-297.
- Haworth, J. T., & Ducker, J. (1991). Psychological well-being and access to categories of experience in unemployed young adults. *Leisure Studies*, 10, 265-274.
- Jackson, T. (1999). Differences in psychosocial experiences of employed, unemployed, and student samples of young adults. *The Journal of Psychology*, 133, 49-60.
- Jahoda, M. (1981). Work, employment, and unemployment: Values, theories, and approaches in social research. *American Psychologist*, 36, 1983-1991.
- Jahoda, M. (1982). *Employment and unemployment: A social psychological analysis*. London: Cambridge University Press.
- Jimmieson, N. (2000). Employee reaction to behavioural control under conditions of stress: The moderating role of self-efficacy. *Work and Stress*, 14, 262-280.
- Kamarck, T. W., Muldoon, M. F., Shiffman, S., Sutton-Tyrrell, K., Gwaltney, C., & Janicki, D. L. (2004). Experiences of demand and control in daily life as correlates of subclinical ceratoid atherosclerosis in a healthy older sample. *Health Psychology*, 23, 24-32.
- Karasek, R. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24, 285-308.
- Karasek, R., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York: Basic Books.
- Kasl, S. V. (1996). The influence of the work environment on cardiovascular health. In S. L. Sauter, J. J. Hurrell, & C. L. Cooper (Eds.), *Job control and worker health* (pp. 161-189). Chichester, UK: ^TWiley & Sons.
- Kessler, R. C., Turner, J. B., & House, J. S. (1987). Intervening processes in the relationship between unemployment and health. *Psychological Medicine*, 17, 949-961.
- Kokko, K., & Pulkkinen, L. (1997). Economical and psychological well-being of the unemployed. *Psykologia*, 32, 349-359.

- Lachman, M. E., & Burack, O. R. (1993). Planning and control processes across the life span: An overview. *International Journal of Behaviour Development*, 16, 131-143.
- Lachman, M. E., & Weaver, S. L. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, 74, 763-773.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Muller, J., Creed, P. A., Waters, L., & Machin, M. A. (2005). The development and preliminary testing of a scale to measure the latent and manifest benefits of employment. *European Journal of Psychological Assessment*, 21, 191-198.
- Murphy, G. C., & Athanasou, J. (1999). The effect of unemployment on mental health. *Journal of Occupational and Organisational Psychology*, 72, 83-99.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behaviour*, 22, 337-356.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behaviour*, 19, 2-21.
- Price, R. H. (1992). Psychosocial impact of job loss on individuals and families. *Current Directions in Psychological Science*, 1, 9-11.
- Price, R. H., Choi, J. N., & Vinokur, A. D. (2002). Links in the chain of adversity following job loss: How financial strain and loss of personal control lead to depression, impaired functioning, and poor health. *Journal of Occupational Health Psychology*, 7, 302-312.
- Price, R. H., Friedland, D. S., Choi, J., & Caplan, R. D. (1998). Job loss and work transitions in a time of global economic change. In X. Arriaga & S. Oskamp (Eds.), *Addressing community problems* (pp. 195- 222). Thousand Oaks, CA: Sage.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Skinner, E. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology*, 71, 549-570.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). San Francisco: Jossey-Bass.
- Tabachnik, B. G., & Fidell, L. S. (1996). *Using multivariate statistics*. New York: HarperCollins.

- Taris, T. W. (2002). Unemployment and mental health: A longitudinal perspective. *International Journal of Stress Management*, 9, 43-57.
- Underlid, K. (1996). Activity during unemployment and mental health. *Scandinavian Journal of Psychology*, 37, 269-281.
- Van Der Doef, M., & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work and Stress*, 13, 87-114.
- Vinokur, A. D., & Schul, Y. (1997). Mastery and inoculation against setbacks as active ingredients in the JOBS intervention for the unemployed. *Journal of Consulting and Clinical Psychology*, 65, 867-877.
- Wanberg, C. R., Griffiths, R. F., & Gavin, M. R. (1997). Time structure and unemployment: A longitudinal investigation. *Journal of Occupational and Organisational Psychology*, 70, 75-95.
- Warr, P. B. (1987). *Work, unemployment, and mental health*. Oxford, UK: Clarendon.
- Warr, P. B. (1990). Decision latitude, job demands, and employee well-being. *Work and Stress*, 4, 285-294.
- Warr, P. B. (1999). Well-being and the workplace. In D. Kahneman, E. Diener, & N. Schwarz (Eds.). *Well-being: The foundations of hedonic psychology* (pp. 312-412). New York: Russell Sage Foundation.
- Whelan, C. T. (1992). The role of income, life style deprivation, and financial strain in mediating the impact of unemployment on psychological distress: Evidence from the Republic of Ireland. *Journal of Occupational and Organizational Psychology*, 65, 331-344.
- White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297-330.

Table 1

Means and Bivariate Correlations for Study Measures

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Time structure	21.10	7.61	(.81)							
2. Social support	20.97	10.06	.17*	(.95)						
3. Collective purpose	23.39	8.52	.29***	.44***	(.90)					
4. Status	19.22	8.59	.26***	.44***	.38***	(.91)				
5. Activity	17.75	7.67	.49***	.44***	.45***	.60***	(.92)			
6. Financial strain	31.33	9.46	.14*	.28***	.29***	.09	.09	(.93)		
7. Personal control	20.79	3.71	-.32***	-.31***	-.34***	-.43***	-.32***	-.24**	(.73)	
8. GHQ	26.67	7.26	.32***	.31***	.40***	.35***	.31***	.47***	-.44***	(.90)

Note. $N = 214$. Internal reliability coefficients appear on the diagonal. GHQ = General Health Questionnaire (Goldberg, 1972).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Hierarchical Regression Analysis for Variables Predicting Psychological Distress

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Time structure	.15	.06	.16*	.11	.06	.12	.13	.06	.13*
Social support	.02	.04	.02	.01	.05	.01	-.00	.05	-.00
Collective purpose	.14	.06	.16*	.12	.06	.14*	.11	.06	.13*
Status	.18	.06	.21**	.12	.06	.14	.10	.06	.12
Activity	-.01	.08	-.01	.01	.07	.01	.02	.07	.02
Financial strain	.29	.05	.38***	.27	.05	.35***	.30	.05	.39***
Personal control				-.42	.12	-.22**	-.42	.12	-.22**
Personal Control $\times$ Time Structure							-.02	.02	-.08
Personal Control $\times$ Social Support							.01	.01	.04
Personal Control $\times$ Collective Purpose							-.02	.02	-.07
Personal Control $\times$ Status							-.03	.02	-.12
Personal Control $\times$ Activity							.04	.02	.16*
Personal Control $\times$ Financial Strain							-.03	.01	-.15*
ΔR^2						.03**			.04*
Total R^2			.37***			.41***			.45***

Adjusted R^2			.35***			.39***			.41***
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Note. $N = 214$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Regression Analyses for Testing Mediation Effects

Variable	<i>B</i>	<i>SE B</i>	β	R^2
Time structure				
Analysis 1 Time structure → Personal control	-.16	.03	-.32***	.10***
Analysis 2 Time structure → Psychological distress	.30	.06	.32***	.10***
Analysis 3 Time structure → Psychological distress	.18	.06	.19**	.23***
Personal control → Psychological distress	-.75	.13	-.38***	
Collective purpose				
Analysis 1 Collective purpose → Personal control	-.15	.03	-.34***	.11***
Analysis 2 Collective purpose → Psychological distress	.34	.05	.40***	.16***
Analysis 3 Collective purpose → Psychological distress	.24	.05	.29***	.27***
Personal control → Psychological distress	-.68	.12	-.35***	
Status				
Analysis 1 Status → Personal control	-.18	.03	-.43***	.18***
Analysis 2 Status → Psychological distress	.30	.05	.35***	.12***
Analysis 3 Status → Psychological distress	.17	.06	.20**	.23***
Personal control → Psychological distress	-.70	.13	-.36***	
Financial strain				
Analysis 1 Financial strain → Personal control	-.09	.03	-.24**	.06**
Analysis 2 Financial strain → Psychological distress	.36	.05	.47***	.22***
Analysis 3 Financial strain → Psychological distress	.30	.04	.39***	.34***
Personal control → Psychological distress	-.69	.11	-.35***	

** $p < .01$. *** $p < .001$.

Figure 1. Interaction effects of activity and personal control on psychological distress.

Figure 2. Interaction effects of financial strain and personal control on psychological distress.

^A Page 3—What do you mean by “This research” here? Please clarify your meaning.

^B Page 4—Provide the date or dates for this reference.

^C Page 5—This page number does not apply to Kamarck et al. (2004). Please correct.

^D Page 8—Provide the number that anchors this scale.

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^F Page 9—Provide *df* for this chi-square statistic.

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