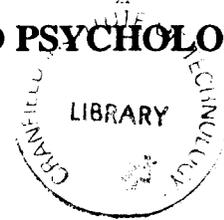




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**SWP 20/92 CONTROL, INFORMATION SEEKING PREFERENCE,
OCCUPATIONAL STRESSORS AND PSYCHOLOGICAL
WELL-BEING**



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ABSTRACT

This study reports a test of the minimax and blunting hypotheses (Miller, 1979a, 1980a, 1980b, 1981). A sample of 221 academic and support staff at a British University were administered a stressor inventory, a measure of psychological well-being, a measure of work related locus of control and a modified version of the Miller Behavioral Style Scale (1987), which measures information seeking preferences. Using moderated multiple regression analysis, no support was gained for either hypothesis. However, the results did support a main effects model of perceived control and psychological well-being.

Keywords. Locus of control, information seeking blunting, minimax.

INTRODUCTION

The concept of control and its relation to stress and well-being has attracted much attention from researchers interested in psychological well-being in the work place. Probably the most widely known explanation of how control in the work place effects health status is Karasek's job demands-control model (see, for instance, Karasek, 1989). This model is interactive and predicts that when the psychological demands of a job are high and control over the job is low, then health status is lowered, such that there are increases in anxiety, fatigue, depression and increased risk of physical illness. When control and demands are high, the individual will experience an increased motivation to perform.

However, independent researchers have found either equivocal evidence for Karasek's model (Landsbergis, 1988), or no evidence at all (Payne and Fletcher, 1983, Spector, 1987, McLaney and Hurrell, 1988, Warr, 1991). Moreover, Karasek's evidence for his model is subject to a number of methodological and operational problems (Ganster, 1989, Ganster and Fusilier, 1989).

Despite evidence to the contrary, the notion that control interacts with stressors to lessen their impact has a certain intuitive appeal. Perceived control and generalized expectancies of control may be important cognitive mediators of actual control (Frese, 1989, Parkes, 1989). Indeed, laboratory research suggests that a belief in control may be

more important than actual control (Ganster and Fusilier, 1989). Therefore it may be instructive to examine belief in control, rather than actual control. Locus of control is a construct that allows one individual's belief in control to be operationalized, since those with an internal locus of control believe that they are the primary determinants of what happens to them, whereas externals believe what happens to them is determined by external forces such as chance and powerful others (Rotter, 1966).

Miller (1979a, 1980a) has put forward the minimax hypothesis as an explanation of how control helps in maintaining the psychological well-being of the individual. This hypothesis states that control allows the organism to reduce the maximum aversiveness of the event to a minimum. However, control is beneficial because the individual attributes the controlling response to a stable internal response. Therefore, control *per se* is not as important as believing in one's control. Moreover, the minimax hypothesis is interactive because it posits belief in control is beneficial in the presence of a stressor.

Newton and Keenan (1990) tested the interactive effects of locus of control and stressors in a longitudinal study of 247 young British graduate engineers. Controlling for initial levels of job stressors and psychological strain, Newton and Keenan found four out of 30 interactions to be significant in the direction suggested by the minimax hypothesis. They also found two interactions to be significant in the opposite

direction. Both these interactions were significant at the less stringent 10% level. Thus the evidence for the minimax hypothesis is equivocal.

Predictability is theoretically related to the concept of control, since control is impossible without predictability. However, it has been found that being able to predict the nature, onset and outcomes of aversive events, without being able to control them, attenuates arousal, both behavioural and physiological (Miller, 1980b, 1981, Miller and Grant, 1979).

The beneficial effects of predictability can be explained by the safety signal hypothesis (Seligman, 1975), which states people and animals will prefer predictable aversive events over unpredictable aversive events, since the absence of a warning signal (predictability) signifies a period safety in which the organism can relax.

Miller (1980b, 1981, Miller and Grant, 1979) has proposed an extension of the safety signal hypothesis, that applies to human subjects who can psychologically remove themselves from the presence of danger, by distracting themselves from the aversive situation. Miller terms this model the 'blunting hypothesis'. Miller calls distracting oneself from a stressor 'blunting', but seeking information about a stressor 'monitoring'. She believes that monitoring and blunting are determined by underlying personality dispositions. Habitual seekers of information are termed 'monitors', habitual distractors are termed 'blunters'.

The blunting hypothesis states that those individuals who are good blunters will attempt to distract themselves from the presence of threat even when environmental conditions do not favour distraction (i.e. there is control and predictability). The blunting hypothesis also states that individuals who are poor blunters (i.e. monitors) will attempt to scan for threat relevant information even when environmental conditions favour blunting (i.e. there is little predictability and little perceived control).

Predictability may be defined as the extent to which the nature, onset and outcome of an event is known before the event. Predictability in the real world is best considered as probabilistic (Seligman, 1975). In this context then, it should be expected that all aversive events that occur to the individual at work will be unpredictable in some way, thus their aversiveness will be accentuated. Therefore, a tendency to monitor, when conditions do not favour monitoring (that is when the individual does not believe in his/her own control, represented by an external locus of control) and when the number of potentially distressful events is high, should lead to impaired psychological functioning.

It should be emphasized that, a main effects model of the effect of locus of control upon psychological well-being is also plausible, and does not exclude the interactive model presented above. For instance, Fisher (1989) suggests that a

belief in control is beneficial for well-being since control increases feelings of competence.

From the arguments presented here, a number of hypotheses may be generated. The minimax hypothesis, which posits an interaction between belief in control and stressors upon well-being suggests:

Hypothesis 1) The interaction between one's belief in control and the number of potentially stressful events perceived in a given period of time should predict psychological well-being, such that a belief in control buffers the effects of a high number of perceived stressful events upon psychological well-being.

The blunting hypothesis introduces a third contingency, that of information seeking preferences. Therefore:

Hypothesis 2) There is a three-way interaction between the frequency of distressful events, low belief in control and high information seeking that predicts poor psychological well-being.

Finally, a main effects model of belief in control suggests:

Hypothesis 3) An internal locus of control is directly associated with psychological well-being.

METHODS

An anonymous, self-administration questionnaire was mailed to 600 academic and support staff at a British University.

Respondents.

Of the 600 questionnaires distributed, 221 completed questionnaires were returned. Twenty-six were returned uncompleted since the targeted individuals could not be found. Thus a response rate of 38.5% was obtained. The sample consisted of slightly more men than women (57% and 43% respectively) and had an average tenure of 8.1 years (standard deviation = 8.2 years). The modal value for age was 30.8% for the 41-50 years group.

Questionnaire design.

The questionnaire consisted of several scales, presented in the following order; the Work Locus of Control Scale (WLCS, Spector, 1988), a scale asking the frequency of various stressors experienced at work devised by the authors, a modified version of the Miller Behavioral Style Scale (MBSS, Miller, 1987) and the twelve item version of the General Health Questionnaire (GHQ12, Goldberg, 1972), plus a demographic section.

The frequency of work stressors scale requires the respondent to rate the frequency with which 16 stressors had been

experienced by the respondent over the past two weeks, ranging from 'Never' through a 5 point scale to 'Very often' . The items were selected from a review of the literature, and included stressors such as role conflict, role ambiguity, adequacy of resources, quantitative and qualitative overload. Since none of the hypotheses outlined above indicate differential effects for different types of stressors, the items were summed to give an overall measure of frequency of work stressors.

Spector (1988) presented the 16 item Work Locus of Control Scale (WLCS), that purports to measure the construct, specifically as it relates to the work context. It has been argued that domain specific measures of attitudes and cognitive functioning have greater predictive power than more general measures (Mischel and Mischel, 1979). High scores represent an external locus of control.

The MBSS (Miller, 1987) consists of four hypothetical uncontrollable and threatening situations. It does not measure coping behaviours. Rather, it is a measure of individual differences in information preferences in the coping process. The respondent is asked to imagine s/he is in each of the four situations in turn. Underneath each of the vignettes are eight statements, representing four monitoring behaviours and four blunting behaviours.. The subject is simply asked to tick each of those statements that might apply to him/her. The blunting scores are reversed, and the items summed, so that high scores represent monitoring.

A situationally specific version of the MBSS was desired, to improve predictive power (Cohen, 1987). It was decided to use one of the vignettes of the MBSS, which relates to a work situation, where the respondent is asked to imagine the possibility of being made redundant due to a drop in sales. The wording of the questionnaire was modified slightly, in order to make it more applicable to a British working population, and was termed the 'Work MBSS' (WMBSS).

The GHQ12 was used as a measure of general psychological well-being. The Likert scoring method was used to score the GHQ12, since this type of scoring reduces skewedness and kurtosis, and is thus a more suitable scoring method for multivariate analyses (Banks et al 1980). High scores represent poor psychological well-being.

RESULTS

The overall mean of the GHQ12 came to 11.30, with a standard deviation of 4.70. The mean score for the WLCS came to 42.48, with a standard deviation of 9.34. Table 1. shows the correlation matrix for all of the variables used in the analysis. The alpha coefficients of reliability are shown on the diagonals.

INSERT TABLE 1 HERE

In order to test the hypotheses, a hierarchical regression equation were constructed to predict GHQ12 from WLCS, WMBSS and stressor scale scores and their interactions. Interactions are calculated from the product of the variables involved (Cohen and Cohen, 1983). For instance, an interaction between WLCS score and stressor scale score is represented by the product of WLCS score and stressor score. Cohen and Cohen (1983) state that interactions should be entered into equations after main effects and lower order interactions. Therefore, demographic variables were entered at the first step of the equation; the WLCS, WMBSS and stressor main effects were entered at the second step; the two-way interaction terms at the third step and the three way interaction at the second step. Since moderated multiple regression was used as the data analysis strategy, the means of the WLCS, WMBSS and stressor scale scores were zeroed to ease interpretation of moderating terms, reduce problems of multicollinearity and prevent the detection of spurious main effects (Cohen and Cohen, 1983, Finney et al, 1984).

Hypothesis 1 predicts a significant interaction between WLCS and stressor scores. Hypothesis 2 predicts a significant three way interaction between WLCS, WMBSS and stressor scores. Hypothesis 3 predicts a significant main effect of WLCS upon GHQ12. The regression equation is shown in table 2. As can be seen from table 2. , only hypothesis 3 gained any support. A significant main effect of stressors upon well-being is also shown.

INSERT TABLE 2 HERE

DISCUSSION

This study tested three sets hypotheses relating psychological well-being to belief in control. Only the third hypothesis gained any clear support. The third hypothesis relates to a main effects model of locus of control. Thus it may be suggested that psychological well-being in the work place may be increased by providing control, which in turn should increase the employees' belief in control (cf. Parkes, 1989). This main effects model may be indicative of a belief in control increasing feelings of competence (Fisher, 1989).

Hypotheses 1 and 2, relating to the stress moderating effects of a belief in control (minimax hypothesis) and information seeking (blunting hypothesis) were not supported by the data. The blunting hypothesis may be relevant for discrete events, such as major life events. The small main effect for the WMBSS on GHQ12 score shown here, may support this conclusion. It is with discrete events such as surgery and other medical procedures that support for the blunting hypothesis has been obtained (Miller and Mangan, 1983). These results indicate that. those who prefer information and who obtain information show less arousal than those who prefer information but do not obtain it. Neither of these groups show less arousal than those who do not prefer information and are not given information. Therefore, the blunting hypothesis may be relevant to psychological reactions to occupational stressors that are discrete, such as redundancy and retirement.

The lack of support for the minimax hypothesis is congruent with results from other studies that have indicated that control does not buffer the effects of stressors upon well-being (Payne and Fletcher, 1983, Spector, 1987, McLaney and Hurrell, 1988, Warr, 1991). However, the results are not compatible with those reported by Newton and Keenan (1990), which do indicate a buffering effect of locus of control.

The inconsistent buffering effects of job control and locus of control may be due to more complex relationships than those specified. It may be possible that an internal locus of control represents a cognitive style that predisposes the individual to make effective use of job control as a coping resource (Daniels, 1992). Thus, job control and locus of control may synergistically buffer the effects of stressors. Some evidence does suggest that internals experience less stressors and have better psychological well-being in occupational environments characterised by high job control (Marino and White, 1985, Arney, 1988). Social support may also allow the individual to exert some control over a stressor (Daniels, 1992). Social support, in conjunction with an internal locus of control, has been found to buffer the effects of stressors upon well-being (Cummings, 1988, 1989, Fusilier et al, 1987, Lefcourt et al, 1984).

According to the view advanced in this section, both cognitive and organizational variables need to be addressed in order to explain the hypothesized stress buffering effects of control

upon wellbeing. This is in contrast to the organizational model presented by Karasek (1989) and the cognitive model presented by Miller (1979a, 1980a), but is consistent with a general transactional model of stress (Cox and MacKay, 1981).

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Table 1. Correlation matrix for GHQ12, WLCS, stressor scale and WMBSS, with alpha coefficients shown on the diagonal.

	1	2	3	4
1.GHQ12	.82			
2.WLCS	.30*	.77		
3.Stressors	.28*	.26*	.71	
4.WMBSS	.19*	.18*	.06	.52

* $p < .01$

Table 2. Hierarchical multiple regression of WLCS, stressor scale, WMBSS and their interactions upon GHQ12.

Step	R ²	(p)	Beta	(p)
1. Demographics	.02	ns		
Sex			-.01	ns
Age			-.17	ns
Tenure			.10	ns
2. Main effects	.15	.001		
WLCS			.20	.01
WMBSS			.15	.05
Stressor scale			.21	.01
3. Two way interactions	.16	.001		
WLCS * Stressors			.01	ns
WLCS * WMBSS			.05	ns
WMBSS * Stressors			-.01	ns
4. Three way interaction	.16	.001		
WLCS * WMBSS * stressors			-.06	ns