

The Role of Sense of Control and Social Support in Mediating the Impact of Psychological Distress: a Test of the Hypothesis of Functional Substitution

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Abstract: The purpose of this paper is to examine the manner in which beliefs relating to sense of control and perceived social support mediate the impact of objective circumstances on psychological distress. In particular it focuses on the nature of the interaction between such variables. The results provide no evidence favouring the displacement hypothesis whereby the benefits of social support involve costs in terms of independence. Consistent support, however, is found for the functional substitution hypothesis. The conclusion is unaffected by the introduction of distinctions relating to types of support and types of power.

I INTRODUCTION

A substantial body of evidence arising from community surveys points to the existence of basic patterns of social distress: in particular, women, unmarried people and those of lower socio-economic status were shown to exhibit higher levels of psychological distress (Mirowsky and Ross, 1986). In previous work we have extended our knowledge of such relationships by examining the impact of, in particular, unemployment and life-style deprivation (Whelan, *et al.*, 1991). In doing so we have sought to

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provide an explanation of the existence of higher levels of distress among respondents from lower social classes in terms of their differential exposure to greater levels of chronic stress.

In this paper we wish to explore explanations of socio-demographic variations in distress which operate at a somewhat different level. The general form of this explanation is one which recognises that objective conditions of social life shape people's beliefs about the nature of society and views levels of distress as a function of such beliefs (Mirowsky and Ross, 1986, p. 25). It is now generally accepted that the levels of distress people exhibit cannot be adequately predicted solely from the intensity of the sources of stress to which they are exposed whether such sources be life events or chronic rôle strains. Instead, people typically confront stress-provoking conditions with a variety of behaviours, perceptions and evaluations that are often capable of mediating the different conditions. Among the elements having a crucial place in the stress process, therefore, are those that are invoked by people in their defence. They are referred to collectively as "mediators". Here we are particularly concerned with the rôle of perceived social support and sense of control.

II THE RÔLE OF SOCIAL SUPPORT AND SENSE OF CONTROL IN MEDIATING PSYCHOLOGICAL DISTRESS

Powerlessness/fatalism, or alternatively mastery, has consistently been identified as the most important belief in affecting an individual's level of distress. Seeman defined powerlessness as "the expectancy or probability, held by the individual, that his own behaviour cannot determine the occurrence of the outcomes or reinforcements he seeks" (Seeman, 1959, p. 784). As Mirowsky and Ross (1986, p. 26) point out, the importance of powerlessness is recognised in a variety of social and behavioural sciences. Thus, in psychology, the concept of powerlessness appears in a number of forms, ranging from "learned helplessness" to "belief in external control".

The distinction between fatalism and psychological disorder follows a well established tradition which both distinguishes, and assumes a causal relationship between fatalism-like concepts and disorder-like concepts (Wheaton, 1980; 1983). The model underlying this approach predicts that, for example, a lower class position will socialise individuals to be more fatalistic in their causal perceptions and that fatalism will increase one's vulnerability to psychological disorder primarily because it undermines persistence and effort in existing situations. The connection between emotional distress and lack of control can be traced back to Seligman's (1974, 1975) laboratory experiments in which dogs were exposed to a series of uncontrollable and inescapable

shocks. The motivational and emotional consequences of these experiences were described as "learned helplessness". Rotter (1966) in developing these ideas stresses that the consequences of particular experiences depend upon whether the individuals see a causal relationship between their own behaviour and the rewards or punishments they experience.

More recently, Mirowsky and Ross (1990) have distinguished between realistic and illusory control. Realistic control is that which can be predicted from an individual's status/resources, while illusory control is defined as the deviation of measured sense of control from predicted control. Thus:

$$\begin{aligned}\text{realistic control} &= \hat{c} = b_0 + b_1 s \\ \text{illusory control} &= (c - \hat{c})\end{aligned}$$

where s represents status/resources.

When we focus on perceived social support as a mediator of distress we are primarily concerned with having access to fulfilling personal relationships. Thus we are emphasising the functional content of social relationships rather than social contact *per se*. One interpretation of how such effects operate, in relation to emotional support, is offered by Thoits (1985). What we describe as the effects of emotional support may be seen to be a by-product of regularised social interaction. Positive feedback from rôle partners affects perceptions of belonging, security, self-esteem and efficacy which in turn are central indicators of well-being. Such an interpretation points to the direct effect of social support on distress levels irrespective of the level of stress being experienced. An alternative perspective suggests that social support enhances psychological health because it buffers the effect of stressful experiences. Perceptions of support may provide the resources which allow one to redefine the potential for harm posed by a situation and/or augment one's ability to cope with increased demands (Cohen and Syme, 1985).

In what follows we will examine the extent to which control and social support can directly mediate the impact of objective situations on psychological distress. However, we wish to go beyond this question in order to examine the manner in which a sense of control and perception of social support interact in influencing levels of mental health.

Perspectives on the Relationship between Sense of Control and Perceived Social Support

Here we wish to focus on two rather different views of the relationship between control and support identified by Ross and Mirowsky (1989, p. 208). The displacement perspective suggests that social support detracts from feelings of control. Social support implies a network of reciprocity and mutual

obligations that may limit independence and foster dependency (Mirowsky and Ross, 1984).

Social support may have costs in terms of reduced autonomy both for those who give support and those who receive it. An illustration of the former situation is given by the fact that higher levels of distress displayed by women is related to the fact that they take more responsibility for personal ties and are more distressed by the undesirable events that occur in the peripheries of their networks (Kessler and McLeod, 1984). An example of the latter situation is provided by the struggle of old people to maintain a sense of independence in the face of lowered income and declining physical stamina. The desire of the elderly to live apart from their children and to maintain an "intimacy at a distance" may be interpreted as an attempt to maintain a sense of control.

Furthermore, membership of a supportive network does not guarantee that the content of network communications will be supportive. The case of a working mother surrounded by "caring others" who deny the legitimacy of her job activity illustrates this point (Ratcliff and Bogdan, 1988). Thus, there is a variety of ways in which support may result in limited autonomy and loss of control over one's life.

The *functional substitution* perspective suggests that sense of control and perceived social support are alternative ways of reducing the impact of stressful situations.

Control provides confidence in one's ability. Support provides confidence in one's worth. (Ross and Mirowsky, 1989, pp. 208-209).

Each factor not only reduces levels of stress through a direct effect but also reduces the stressful consequences which are otherwise associated with the absence of the other factors. If this assumption is correct, control is most beneficial when support is low. Similarly, support has its greatest impact when control is low. One may be substituted for the other.

Major Issues for Empirical Investigation

In the analysis that follows we wish to address the following questions:

- (i) To what extent do sense of control and social support mediate the impact of social background on psychological distress?
- (ii) What is the nature of the relationship between sense of control and support? Do the obligations imposed by participation in social networks limit independence? Does control fill the breach when support is absent and *vice versa*?
- (iii) Is the relationship between sense of control and social support and

psychological distress influenced by variations in type of control or social support?

III METHODS

Sample

In what follows we make use of the data from the Survey of Income Distribution, Poverty and Usage of State Sources carried out by The Economic and Social Research Institute in 1987 in order to assess the relative merits of these approaches.

The survey was designed to provide a representative national sample of all households. Interviews were conducted with all available adults in 3,294 households. Post-sample correction, through reweighting of results to take into account inter- and intra-household non-response, was employed. More detailed discussions of the sampling procedures can be found in Callan, *et al.*, 1989, and Whelan, *et al.*, 1991. For the purposes of the present paper our attention is restricted to the respondents who were married where the full range of variables is available to us.

Measurement

Our choice of socio-demographic variables to be included in the analysis was influenced by the results arising from our earlier work relating to the determinants of psychological distress (Whelan, *et al.*, 1991). In addition to age and gender they include the following variables.

Physical Health Status

Respondents were asked if they "had any major illness, physical disability or infirmity that has troubled you for at least the past year or that is likely to go on troubling you". Respondents are scored "1" if they had such problem and "0" otherwise.

Unemployment

The concept of unemployment adopted in this study, like that in the Census and Labour Force Survey is dependent upon respondents' evaluations of their own employment status. A score of "1" is assigned to the unemployed and one of "0" to all others. Inability to work due to permanent illness or disability is also distinguished and a similar scoring procedure to that for unemployment is then adopted.

Life-Style Deprivation

The measures of financial stress we employ are based on the enforced absence of a range of life-style items. The choice of items to be included in the

study was influenced by the range of indicators employed in other major studies of poverty. Mack and Lansley's items were chosen so as to exclude things which almost everyone has or very few people would miss. The 24 items on which our analysis is based are made up of 17 of the Mack and Lansley pool of items together with 7 additional items.

For each of 20 of the life-style items the head of the households or household manager was asked:

- (i) Whether the household had the item in question;
- (ii) If not, whether they would like to have it but must do without it due to lack of money;
- (iii) Whether they felt the item was a necessity, i.e., "something that every household (or person) should be able to have and that nobody should have to do without"?

In addition to the 20 items employing this format the following set of items were included in the index, bringing the total number of items to 24:

- (i) There was a day during the previous two weeks when the household manager did not have a substantial meal at all — from getting up to going to bed.
- (ii) The household manager has had to go without heating during the last year through lack of money, i.e., having to go without a fire on a cold day, or go to bed early to keep warm or light the fire late because of lack of coal/fuel?
- (iii) Head of household has not had an afternoon or evening out in the last fortnight that costs money, because of lack of resources.
- (iv) Debt Problems:
 - (a) Household is currently in arrears on rent, mortgage, electricity and gas, or
 - (b) Has had to go into debt in the last 12 months to meet ordinary living expenses such as rent, food, Christmas or lack of school expenses
 - (c) Has had to sell or pawn anything worth £50 or more to meet ordinary living expenses.

In our subsequent analysis we distinguish two dimensions of life-style deprivation. The first dimension which we label *primary life-style deprivation* involves the enforced absence of socially defined necessities such as new clothes, two pairs of shoes, a warm overcoat, a roast or its equivalent once a week, a meal with meat, chicken or fish every second day; or living in a household which is experiencing severe debt problems or in which the household manager is experiencing extreme food or heat deprivation. Scores on this

variable range from "0" to "8". *Secondary* deprivation involves the enforced absence of a daily newspaper, a hobby, central heating, car, telephone, annual holidays or being unable to save or afford an afternoon or evening out in the previous two weeks.

Consideration of both parsimony and meaning dictate that primary deprivation should have priority over secondary deprivation. The procedure we adopt is one of semi-partial correlation where the latter variable has a causally prior relationship to primary deprivation taken into account.

Psychological Distress

Psychological well-being was measured using the 12-items version of the General Health Questionnaire and the GHQ scoring procedure (Goldberg, 1972, 1978). In order to make it possible for the GHQ to be administered by interviewers, it was necessary to introduce some changes to the combinations of items and answer formats. The procedure adopted was intended to avoid grouping of "positive" or "negative" items or the need for repeated changes of response format. The approach taken was to divide the items into two groups of 6, each of which was allocated to one of the two possible response formats. The alpha coefficient for the 12-item scale was found to be .82. The split half correlation coefficient between the sub-scales using changed and unchanged response formats was .73. The range of scores is from "0" representing the lowest level of psychological distress to "12" representing the highest.

Control

In measuring control we have employed a set of items which have been fairly widely employed in the literature (Pearlin, *et al.*, 1981). The statements to which respondents reacted were as follows:

- (i) I can do just about anything I set my mind to.
- (ii) I have little control over the things that happen to me.
- (iii) What matters in the future depends on me.
- (iv) I often feel helpless in dealing with the problems of life.
- (v) Sometimes I feel I am being pushed around in life.
- (vi) There is really no way that I can solve some of the problems that I have.
- (vii) There is a lot I can do to change my life if I want to.

The response format ranged from "Strongly agree" to "Strongly disagree". The alpha reliability coefficient is .73. The items are scored so that a high score indicates strong feelings of control or a low score strong feelings of fatalism. The scores were averaged and the variable thus has a potential range of scores going from "1" to "4".

Social Support

In measuring social support we concentrate on the functional content of relationships such as the degree to which they involve flows of affection, emotional concern or instrumental or tangible aid. Emotional support refers to assertions or demonstrations of love, caring, esteem value, empathy, sympathy. Instrumental aid involves actions or materials provided by others that enable the fulfilment of obligations (Thoits, 1985, p. 3). Measures of instrumental support may assess the objective utilisation of support or the objective perception that such aids are or could be available. It is the latter which appears most crucial.

Instrumental support was tapped by asking the head of household and the household manager:

If you were to get into financial difficulty do you think any of your relatives (outside the household) would help out?

With regard to emotional support, respondents were asked:

- (i) If you had very personal problems or worries, who would you turn to first to talk about them?
- (ii) Who is the best person to talk to when you are really upset about things?

The information we obtained, from the head of household and household manager regarding instrumental support, was generalised to all household members; our measure thus becomes whether the individual is a member of a household where either of these informants indicates that it is improbable that relatives would help out in the event of economic difficulties. Respondents were scored as low on *emotional support* if they indicated that their spouse was not the person in whom they would choose to confide in in relation to personal problems, or the best person to talk to when they were really upset. In each, the presence of support is indicated by a score of "1" and its absence by a score of "0".

Our overall measures of *social support* is arrived at by summing the scores on instrumental and emotional support and thus has a range of scores running from "0" to "2".

Results

From the multiple regression equation (i) in Table 1 it is clear that each of our background variables has a significant impact on GHQ score. The results show substantial effects for physical health status and for inability to work due to permanent illness or disability. Married women who are unemployed have GHQ scores .31 units higher than other married women when all of the

other factors in the equation are controlled for. There is, however, a significant interaction between unemployment and gender with unemployed men having GHQ scores 1.16 (.31 + .85) greater than other men while for women the corresponding figure is .31. Among those who are not unemployed, women experience significantly higher levels of distress. Finally both life-style deprivation dimensions, but particularly primary deprivation which involves the enforced absence of basic consumption items, have a substantial impact on mental health levels. The effect of social class is mediated by variables such as unemployment and life-style deprivation which are included in the equation. The effect of unemployment shown in equation (i) is its *direct* effect on distress. It clearly has an additional indirect effect through its influence on life-style deprivation. Overall this set of variables explains 21.5 per cent of the variance in GHQ scores.

Table 1: *Multiple Regressions Illustrating the Rôle of Sense of Control and Sense of Support in Mediating the Impact of Socio-Demographic Background on Psychological Stress*

	(i)	(ii)
Primary Deprivation	.46**	.31***
Secondary Deprivation	.11	.01
Physical Health Status	1.01***	.68***
Unable to Work due to Permanent Illness or Disability	1.09***	.93***
Unemployed	.36	.34
Unemployed x Gender	.75**	.57*
Gender	-.29***	-.12*
Age	-.003	-.012***
Sense of Control		-1.61***
Social Support		-.38***
Intercept	.71	6.09
R ²	.217	.314
p	<.001	≤.001
N	4,213	4,213

***p < .001 **p < .01 *p < .1.

In equation (ii) we add sense of control and social support to the equation. The explanatory power of these variables is reflected in the fact that the proportion of variance explained rises to 31.2 per cent. Both variables are significantly related to level of distress. Of somewhat more interest to us though, are the changes in the size of the coefficients for other variables

produced by the introduction of these additional variables. The impact of physical health status declines by almost one-third with the coefficient dropping from 1.00 to .67. For inability to work due to permanent illness or disability a reduction in the size of the coefficient is observed but the drop is more modest — from 1.09 to .94. The impact of unemployment remains unchanged for women but for men drops from 1.16 (.31 + .85) to .96 (.30 + .67). In the case of gender there is a very substantial reduction in its impact with the regression coefficient declining from $-.29$ to $-.12$. Similarly, the figures for primary life-style deprivation fall from .46 to .11; while that for secondary deprivation is reduced from .11 to effectively zero. By way of contrast, age, which had been insignificant in the original equation, becomes significant when sense of control and social support are taken into account. Level of control and support are lower among older married respondents. When these differences are taken into account it emerges that it is younger married respondents who exhibit higher levels of psychological distress. Thus to summarise, with the exception of secondary deprivation, all the variables which were significant in the first equation continue to be so when the effects of control and support are allowed for. Thus each of the variables has a direct effect on psychological distress. In addition, however, each of the variables has a substantial effect which operated indirectly through its influence on sense of control and perception of social support. The relative size of the indirect effect is most substantial in the case of gender, physical health, status and life-style deprivation, and somewhat more modest for unemployment and inability to work on health grounds. For age, the nature of the indirect effects are such that a significant negative impact emerges when the controls are introduced.

It should be noted that our analysis allows only for the direct effects of control and social support since it does not include terms of interaction between these variables and socio-demographic background. Such an assumption cannot be justified in any general sense and we have devoted a good deal of attention to such effects elsewhere (Whelan, *et al.*, 1991). For the moment, though we wish to direct our attention to the second of our three issues, i.e., the nature of the relationship between sense of control and social support. The displacement perspective, it will be remembered, suggests that social support detracts from feelings of control. In Table 2 we set out the relationship between control and support in order to provide an assessment of the displacement hypothesis.

It is clear from Table 2 that the observed results run in the opposite direction to that suggested by the displacement hypothesis. Level of control rises from 2.49, when both types of support are absent to 2.70 when both are present. Multivariate analysis demonstrates that this positive correlation

between control and social support persists even when we allow for the influence of a variety of background factors. Thus, while there is undoubtedly a variety of situations where the price paid for social support includes reduced autonomy, the hypothesis of a generalised displacement effect must be rejected.

Table 2: *Sense of Control by Level of Social Support*

	<i>Mean Sense of Control</i>
Instrumental and Emotional Support Absent	2.49
Instrumental or Emotional Support Present	2.58
Instrumental and Emotional Support Present	2.70
Total	2.65
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Eta ²	.024
p	< .001
N	4,239

Turning our attention to the functional substitution hypothesis, in Table 3 we provide an explicit test of this hypothesis employing our overall measures of control and social support. The results provide strong evidence in favour of the hypothesis. Both control and social support are associated with significant reductions in levels of emotional distress. The coefficient reflecting interaction of control and support is positive and highly significant.¹ Thus the

1. One of the referees has suggested that the significance of the interaction terms should be tested for by testing for the significance of the increase in the R² when the interaction term is added. We accept that, in *general*, where there is a significant interaction between a categorical variable and a continuous variable, one should test whether the increment in the proportion of variance of Y accounted for by the interaction vectors is significant (Kerlinger and Pedhazur, 1973, p. 251). In this paper in every case where a categorical variable forms a component of an interaction term, it is a dichotomy and is thus represented by a dummy variable. The F-test consequently relates to the increment in R² produced by the entry of *one* additional variable.

Thus in Table 3 if we let:

- Y = GHQ score
- X₁ = control
- X₂ = support
- X₃ = control x support

we can test whether the addition of X₃ adds significantly to the regression by calculating the F ratio.

$$F = \frac{(R^2_{Y.123} - R^2_{Y.12})/k_1 - k_2}{(1 - R^2_{Y.123})/(N - k_1 - 1)}$$

where N = sample size

- K₁ = number of independent variables of the larger R²,
- K₂ = number of independent variables of the smaller R².

However, as Johnson (1963, p.130) shows, one may also test for the "net (additional) effect" of X₃ by means of the t-test since the t-test and the F-test are *exactly equivalent* in this instance. We have opted for concentration on the t-test since it makes it much easier to present our results.

importance of a strong sense of control is greater when social support is absent. Correspondingly, social support plays its most vital rôle for fatalists. Control and support are indeed functional substitutes. When one is absent the other fills the breach.

Table 3: *Multiple Regression of Control and Social Support on Psychological Distress: A Test of the Functional Substitution Hypothesis*

	b
Control	-3.49***
Support	-2.76***
Support x Control	.89***
Intercept	9.04
R ²	.226
p	<.001
N	4,113

***p < .001.

Finally, we wish to address the question of whether the relationship between sense of control and social support and psychological distress is influenced by variation in type of support or type of control. In Table 4 we provide the evidence relevant to an assessment of whether the distinction between instrumental and emotional support has any implications for the functional substitution hypothesis. The results are entirely unambiguous with both components of support interacting with control in precisely the manner required by the hypothesis. Indeed, once we have taken into account sense of control and its interaction with the support variables, the marginal effects of both types of support are remarkably similar.

Table 4: *Multiple Regression of Determinants of Psychological Distress Distinguishing Between Types of Support: A Test of the Functional Substitution Hypothesis Distinguishing between Instrumental and Emotional Support*

	b
Emotional Support	-2.79***
Emotional Support x Control	.84***
Instrumental Support	-2.80***
Instrumental Support x Control	.97***
Control	-3.54***
Intercept	11.02
R ²	.228
p	<.001
N	4,113

***p < .001.

In view of this evidence we proceed to consider the consequence of distinguishing between types of control employing our overall measure of social support. While our earlier analysis has shown that support may substitute for control, the possibility exists that this may hold for illusory control only and not for realistic control. In that case social support would be seen to function as a substitute for optimism but not for power.

We have taken advantage of the range of information available in the Poverty Survey to achieve a measure of realistic control which is likely to be more precise than any employed in the literature heretofore (Whelan, *et al.*, 1991). Our results show that social class, life-style deprivation, education and physical health status are significantly related to feelings of control. In addition, women and older respondents are likely to be more fatalistic. A variety of factors interact with gender. Thus, unemployment reduces sense of control primarily for men. Similarly, being separated or divorced has a particularly negative impact for women. The full set of resource and resource-related variables explains 49 per cent of the variance in feelings of control in the sample as a whole. The predicted value of control \hat{c} arising from this equation becomes our measure of realistic control while the difference between actual control and predicted control is $(c - \hat{c})$ which serves as our measure of illusory control.

In fact, support interacts significantly with both realistic and illusory control. Social support provides an alternative to optimism and power in protecting our emotional well-being and, similarly, optimism and power can reduce the need for social support.

Table 5: *Multiple Regression of Determinants of Psychological Distress Distinguishing Between Realistic and Illusory Control: A Test of the Functional Substitution Hypothesis Distinguishing Between Realistic and Illusory Control*

	b
Realistic Control	-5.17***
Realistic Control x Social Support	1.03***
Illusory Control	-3.02***
Illusory Control x Social Support	.86***
Support	-3.02***
Intercept	15.23
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R ²	.251
p	<.001
N	4,113

*** $p < .001$.

The nature of the interaction between sense of control and perception of social support is consistent with the well documented rôle of social support in

buffering stress. Thus, social support has its most substantial effect among those who experience the greatest sense of powerlessness. It is precisely this group who are likely to experience the greatest exposure to stress. Thus, the functional substitution hypothesis and the stress buffering hypothesis are entirely consistent with each other.

IV CONCLUSIONS

The impact of social background and objective circumstances on psychological distress has been discussed in some detail elsewhere (Whelan, 1991 *et al.*). In this paper though we have been primarily concerned with explaining some of the ways in which such effects are mediated.

Social support and sense of control were shown to be important elements of the intervening process by which social circumstances are translated into psychological experiences. The nature of one's social experiences shape one's beliefs about the nature of one's social world. Beliefs relating to support and control are crucial links between the "external reality" of objective social conditions and the "internal reality" of subjective distress (Mirowsky and Ross, 1986, p. 25). A sense of powerlessness is seen to increase levels of distress both through a direct demoralising effect and by the manner in which it inhibits effective coping. Social support involving love and understanding, or a willingness to provide tangible aid, also serves to reduce levels of distress. Such mediation appears to be particularly important in the case of gender, physical health status and life-style deprivation but is rather less important in relation to being out of work. In the latter case the results are consistent with the evidence, particularly for married men, that the impact of being out of work on mental health is not solely a consequence of the grinding experience of material deprivation. In addition, it is necessary to take into account that those who are out of work are denied the opportunity to undertake rôles which are deemed appropriate by society, and are excluded from valued categories of experience which are associated with employment.

The main focus of our analysis has been on the hypothesis of functional substitution. This hypothesis suggests that control and support are alternative means of dealing with the threat posed by potentially stressful circumstances. Those who feel in control of their lives are less dependent on supportive social relationships to maintain their sense of emotional well-being. Similarly, those who enjoy such support will not feel the need for such high levels of control. These results hold for both realistic control which derives from the advantages associated with higher status or resources and illusory control which reflects an optimism which is independent of such background factors.

In practical terms our results suggest that it may be possible to develop policy interventions aimed at increasing levels of social support and sense of control in order to ameliorate psychological distress. Elsewhere we have warned against the dangers of viewing social support as a panacea, and of viewing motivational deficits in isolation from the objective circumstances which produce such responses (Whelan, *et al.*, 1991). It would be unreasonable, though, to deny the positive implications of the body of work relating to the mediating rôle of factors such as support and control.

What the evidence supporting the functional substitution hypothesis suggests is that intervention aimed at increasing support or control may be viewed as an alternative means of achieving the same objective. If we think about this issue in terms of substituting increased sense of control for social support, the results suggest that it is among those who have least access to supportive social relations that interventions aimed at reducing their sense of powerlessness can have the most positive impact. This result holds for both instrumental and emotional support and is consistent with the idea that social support has its effects, at least in part, by providing a buffer to stress for those who experience the highest risks of exposure. Finally, the fact that the functional substitution hypothesis appears to be valid for both realistic and illusory control raises the issue of whether there are limits to the psychological benefits to be derived from optimism (Mirowsky and Ross, 1991). This is an issue which goes beyond the scope of the current paper but which we have dealt with elsewhere (Whelan, 1991).

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