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Out of Control Central or Peripheral? Control, Personality, and Depression

Wendy Thomson

Department of Experimental Psychology, Bristol University, 12A Priory Road, Bristol B S8 ITU, UK

***Corresponding author:** Wendy Thomson, Department of Experimental Psychology, Bristol University, 12A Priory Road, Bristol B S8 ITU, UK, Tel: +44(0)117 92 88450; E-mail: wendyrthomson@btinternet.com

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Abstract

Introduction: The following study was part of a larger study designed to try to determine causal mechanisms and to explore in greater detail why premature death due to natural and unnatural causes followed discharge from hospital in a cohort of depressed patients. In this particular report the aim is to examine the specific relationship between depression and control.

Method: The association between perceptions of personal control, personality, and depression, was examined in a sample of 95 subjects. The test group consists of patients referred to a psychiatrist and diagnosed as depressed in an outpatient department.

Results: Clinically depressed subjects had significantly higher ratings on the perceived control item, reflecting more negative appraisals of control. The discrepancy between ideal and perceived levels of control was also significantly higher for clinically depressed subjects. Clinically depressed and normal comparison subjects did not differ significantly with respect to ideal levels of personal control.

Discussion: The more people perceive events as uncontrollable and unpredictable, the more stress they experience, and the less hope they feel able to make changes in their life. Furthermore, people with a pessimistic explanatory style tend to be poor at problem - solving and also tend to demonstrate poor job satisfaction and interpersonal relationship in the workplace. Those with a pessimistic explanatory style also tend to have weakened, and increased vulnerability to minor ailments (e.g. cold, fever) and major illness (e.g., heart attack, cancers), but also have a less effective recovery from health problems. The results suggest that there is an important connection between depression and control which needs to influence the understanding and therefore treatment of patients with depression.

Keywords: Stress; Depression; Personality; Mortality; Morbidity; Bio-psychosocial; Global burden

Introduction

Control personality and depression

In an attempt to understand mediating mechanisms following personal research in Stress and personality and further involvement in a mortality study and it seemed imperative to further elucidate mechanisms involving self-defeating ideation [1-4]. The global socio economic statistics associated with depression, and suicide, not to mention the personal and family suffering and consequences are alarming. The relationship between stress and personality became accepted showing that stress was activated internally by cognition [1]. The mortality following a clinically depressed cohort showed the alarming premature mortality which followed a diagnosis of depression from natural death, particularly in the early years after discharge. While it is widely accepted that unnatural death is associated with premature mortality, it is less accepted that death from natural causes contributes to the total premature mortality following depression [5-8]. Various speculated explanations attempted to justify the results but of course the fact was we really do not know what the mediating mechanisms involved are.

Thomson [9] and Thomson [10] was part of a larger study designed to try to determine causal mechanisms specifically self-defeating ideation. Rather than seen as instances associated with one consequence such as suicide with a million suicides globally it appears that depression, stress, and the morbidity and mortality should be aggregated.

Personal control, personality, and depression, appear to be unlikely bad fellows however if the definition of control is: the ability to exert personal impact on decision making and the behavior, incidences and the circumstances which result, then personal control becomes not just a part of but central to the impact of incidences behaviors and circumstances? If this is so this hypotheses has not just causal but reactive implications. Neuro scientists are making inroads in the understanding of neural mechanisms of inter-temporal decision-making and understanding variability. They discuss a propensity towards immediate gratification and reinforcement which characterizes many psychiatric conditions. These two areas are shown to work together and to be stronger for people who show greater self-control. Jan and Christian [11] via magnetic resonance imaging found

the ventral medial and dorso-lateral prefrontal cortex becomes active when assessing options.

In this particular report the aim is to examine the relationship between depression and control. This may throw more light on why premature death due to both natural and unnatural causes followed discharge from hospital in a cohort of depressed patients. It would be easy to take the view that a medical condition pre-dated the depression in the patients who died but in the patients examined depression was primary.

Psychosomatic mediating mechanisms have been studied as long ago as Cannon [12-16]. Together these researchers have produced a body of evidence which suggests the connection and the influence of psychosocial cognitions on the one hand and internal homeostasis on the other in maintaining and undermining health. Abrahamson, et al. [17] found that although a group of people may experience the same or similar negative events, how each person privately interprets or explains the event will affect the likelihood of acquiring learned helplessness and subsequent depression. The explanatory style-which sees negative events as permanent ("it will never change"), personal ("it's my fault"), and pervasive ("I can't do anything correctly")-are most likely to suffer from learned helplessness and depression [18-20]. An external attribution assigns causality to situational or external factors, while an internal attribution assigns causality to factors within the person [17].

Implications to health were studied by [21,22]. Leading to the conclusion that whatever their origins, people who suffer uncontrollable events reliably see disruption of emotions, aggressions, physiology, and problem-solving tasks. These helpless experiences can be associated with passivity, uncontrollability and poor cognition in people, which can ultimately threaten their physical and mental well-being.

The more people perceive events as uncontrollable and unpredictable, the more stress they experience, and the less hope they feel able to make changes in their life [23]. Henry [23] Welbourne, et al. [24], concluded that people with a pessimistic explanatory style tend to be poor at problem-solving and also tend to demonstrate poor job satisfaction and interpersonal relationship in the workplace (Those with a pessimistic explanatory style also tend to have weakened, and not only have increased vulnerable to minor ailments (e.g. cold, fever) and major illness (e.g. heart attack, cancers), but also have a less effective recovery from health problems [25]. More recent research using meta – analysis of neuropsychological markers of vulnerability to suicidal behaviour in mood disorder showed " a positive relationship between cognitive inhibition deficit and suicide attempts in patients with affective disorders Devantoy et al. [26], Devantoy et al. [27] opening up the causal connection between cognitive inhibition deficit and the consummation of suicide-the ultimate self-defeating act. This paper investigates the role 'control' plays in depression, all mortality, and whether personality is part of the equation.

Methods

Sample

The present study utilized data from 95 participants. A substantial portion of the sample received psychiatric care for depression: 57.4% of the sample received treatment for depression, while the remaining 42.6% of the sample served as normal controls. Females comprised 57% of the sample, while 43% were male. The median age of the study participants was 55 years old. With respect to employment status, 40% of the sample was employed full-time, 25.3% were employed part-time, and 1.1% was self-employed. A further 16.9% were unemployed, 8.4% were disabled, 4.4% were retired, and 4.2% were homemakers. Pre-existing medical conditions were present in 47.8% of the sample.

Procedures

The test group consisted of patients referred to a psychiatrist and diagnosed as depressed in an outpatient department. The questionnaires were enclosed in a stamped addressed envelope and accompanied by an information sheet that explained the purposes of the study. Potential participants were informed that their involvement in the study was voluntary, that they could withdraw from the study at any time after they started, and that responses to the survey would be anonymous. Every patient who was referred as possibly depressed by their General Practitioner was invited to complete a questionnaire while they awaited the consultation with the psychiatrist. Control subjects were not being treated for mental illness.

Instruments

Eysenck personality questionnaire: The Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck 1975 [27]) consists of 90 yes-no items that are designed to measure three dimensions of personality: Neuroticism, Extraversion, and Psychoticism. The measure also includes a Dissimulation scale to screen out respondents who give distorted answers to appear socially desirable. The EPQ scales have shown high levels of reliability, both in terms of internal consistency and test-retest reliability coefficients [27]. Alpha coefficients and test-retest correlations for the EPQ scales are higher than 0.8 across demographic sub-samples. The dimensional structure of the EPQ has proved to be robust in numerous factor-analytic studies. Illustratively, a simple structure factor rotation yields three dimensions that are comprised, respectively, by the Neuroticism, Extraversion, and Psychoticism items [28,29]. Further, these three dimensions appear to underlie the factor structure of many other widely-used personality inventories [30]. Considerable evidence for the external validity of the EPQ dimensions has been provided by numerous studies relating differential performance on experimental tasks, as well as behavioural patterns in real-world settings, to levels of Neuroticism, Extraversion, and Psychoticism [31].

Self-defeating questionnaire (SDQ): The Self Defeating Questionnaire (SDQ) was developed by the author for the purposes of the present investigation. Items for the SDQ were piloted with patients who were undergoing treatment for depression, and were revised in consultation with treating psychiatrists. The SDQ consists of 33 statements describing elements of the respondents' behaviour, attitudes and feelings, and is administered in two parallel forms: one describing the extent to which the statement describes the actual behaviour or feelings of the respondent (the Now form), and the other indicating the Ideal level of each item (the Ideal form). The response scale used was a 100mm line, which represented a continuum of response. Illustratively, the Control item asks participants to indicate how much control they have over "things that made them feel optimistic and content." Participants responded to this item by indicating whether they had Total Control or No Control (Appendix A shows the control question SDQ Now and Ideal items). For a complete example of the SDQ Questionnaire please see?

Subjects were asked to mark their response to each item on the line. Responses were coded from 0 to 100. At the one extreme, the preferential state or behaviour was represented by a score of 0, while a negative response was indicated by a score of 100 scales. The SDQ Now Total is scored by computing the average SDQ Now rating items. The SDQ Ideal Total score is computed as the average Ideal rating of the items. The SDQ Total Discrepancy score is computed by subtracting the Ideal score from the Now score. Higher discrepancy scores indicate a greater difference between Ideal and perceived behaviours and feelings, and are interpreted as an indicator of increased risk for self-defeating ideation. The factor structure of the SDQ will be examined in the present investigation.

Results

Preliminary analyses examined the mean response of subjects to the EPQ scales and SDQ Control items. The main analyses of the present study then proceeded in three stages. The first stage of the analyses examined the association between ratings of perceived and ideal personal control, and ideal-perceived discrepancies, with EPQ personality dimensions. The second stage of the analyses examined the differences in control ratings between individuals who have been diagnosed with clinical depression, and normal comparison subjects. The final stage of analysis examined the unique contributions of personality dimensions and depression to ratings of personal control.

Sample Descriptive

Eysenck personality questionnaire

Of the 95 subjects who participated in the present study, 61 provided complete data on the EPQ. Mean scores for the sample on the EPQ scales are shown in (Table 1). Compared with the EPQ norms, scores on the Neuroticism scale are notably higher, as would be expected in a sample that is comprised predominantly of individuals with clinical depression [28] (Table 1).

Scale	Mean	S.D.
Neuroticism	14.4	5
Extraversion	11.1	5.1
Psychoticism	4.5	11.2
Dissimulation	7.8	3.5

Table 1: Descriptive statistics for EPQ scales.

Control ratings

As part of a wider study of self-defeating ideation and depression, all 95 subjects who participated in this investigation provided valid data on the SDQ Control Item. Mean scores for the SDQ Control items in Now and Ideal forms are shown in (Table 2).

SD Item	Now		Ideal	
	Mean	S.D	Mean	SD
	43.1	28.8	8.8	13

Table 2: Descriptive statistics for the SDQ now and ideal control item.

Control and personality

In order to examine the association between perceptions of control and personality dimensions, Pearson correlation coefficients were computed see (Table 3). Higher ratings on the Control-Now item, reflecting more negative assessments of control, were significantly associated with higher levels of Neuroticism. Greater discrepancies between ideal and perceived levels of control were associated with lower levels of Extraversion and higher levels of Neuroticism. Ratings of ideal levels of personal control were not significantly related with EPQ personality dimensions (Table 3).

SDQ Scale	Psychoticism	Extraversion	Neuroticism	Dissimulation
Control-Now	-0.07	-0.18	.33**	4
Control-Ideal	-0.03	0.21	-0.15	-0.03
Control-Discrepancy	-0.05	-.29*	.39**	0.05
Note: p < .05; ** p < .01; ** p < .001				

Table 3: Correlations between personal control ratings and epq personality dimensions EPQ scale.

Control and clinical depression

Having found significant relationships between ratings of personal control and Neuroticism and dimensions of personality, the next stage of the analyses examined the question of how well control ratings differentiated clinically depressed and normal control subjects. To examine this question, independent group's t-tests were performed on ratings of perceived and ideal control, and the ideal-perceived discrepancy see (Table 4). Clinically depressed subjects had significantly higher ratings on the perceived control item, reflecting more negative appraisals of control. The discrepancy between ideal and perceived levels of control was also significantly higher for clinically depressed subjects. Clinically depressed and normal comparison subjects did not differ significantly with respect to ideal levels of personal control (Table 4).

SDQ Scale	Depressed	Control	
	Mean	Mean	t-value
Control-Now	52.5	30.3	4.05***
Control-Ideal	8.8	9.1	0.09
Discrepancy	43.7	21.3	3.70***
Note: p < .05; ** p < .01; **p < .001			

Table 4: Ratings of Control among Clinically Depressed and Comparison Subjects

Unique effects of depression and personality on control

The analyses conducted so far suggest that the discrepancy between ideal and perceived levels of personal control is associated significantly with personality dimensions (extraversion and neuroticism), and clinical depression. Further exploratory analyses considered the question of the unique relationship between personality traits and depression. Eysenck [31] reports that clinically depressed individuals

characteristically have higher scores on Neuroticism and lower scores on Extraversion. Thus, the discrepancy between ideal and perceived levels of control might be higher among introverts and neurotics because these individuals are more likely to be clinically depressed.

To examine the unique contributions of extraversion and clinical depression to the prediction of ideal-perceived discrepancies, a multiple regression analysis was conducted. In this analysis, the ideal-perceived discrepancy in control was regressed onto two predictors: Extraversion and Depression. Depression was dummy coded (1=Clinically Depressed; 0= Normal Comparison). The standardized beta weights in the resulting regression equation reflect the unique contribution of each predictor after controlling statistically for levels of the other one. Overall, the regression equation accounted for a significant portion of variance in discrepancy scores ($F=5.264$, $df=2$, $p<.01$) A total of 15% of the variance in discrepancy scores was explained by the equation, suggesting a moderately strong effect size. Significant unique effects were found for Extraversion ($t=-2.038$; $p<.05$) and for Depression ($t=2.214$; $p<.05$). Higher discrepancy scores were associated with lower levels of Extraversion (beta =-.249) and higher levels of Neuroticism (beta =.214).

Next, to examine the unique contributions of neuroticism and clinical depression to the prediction of ideal-perceived discrepancies, a multiple regression analysis was conducted. The ideal-perceived discrepancy in control was regressed onto Neuroticism and Depression. Overall, the regression equation accounted for a significant portion of variance in discrepancy scores ($F= 7.018$, $df=2$, $p<.01$) 19.5% of the variance in discrepancy scores was explained by the equation, suggesting a strong effect size. Significant unique effects were found only for Neuroticism ($t= 2.709$; $p<.01$), not for Depression ($t=1.716$; n.s.). Greater discrepancy scores were associated with higher levels of Neuroticism (beta=.333).

Discussion

The results of the present investigation suggest that individuals who are introverted, neurotic, and depressed perceive the levels of personal control in their life to be substantially less than ideal. The personality dimensions of introversion and neuroticism have a robust association with appraisals of personal control. These personality dimensions have a significant association with real-ideal differences in ratings of personal control, even after controlling statistically for levels of clinical depression. The association found between depression and ideal-perceived discrepancies in control, on the other hand, appears to be mediated by levels of neuroticism. The relationship between clinical depression and negative appraisals of control may be explained in part by the fact that depressed patients are more neurotic.

The more people perceive events as uncontrollable and unpredictable, the more stress they experience, and the less hope they feel able to make changes in their life. Furthermore, people with a pessimistic explanatory style tend to be poor at problem - solving and also tend to demonstrate poor job satisfaction and interpersonal relationship in the workplace. Those with a pessimistic explanatory style also tend to have weakened, and not only have increased vulnerability to minor ailments (e.g. cold, fever) and major illness (e.g. heart attack, cancers), but also have a less effective recovery from health problems [25].

Depression results in mortality, morbidity, stress, casting a web of far reaching socio economic consequences: a bio-psychosocial issue. As this research implies focusing on cognition and individual differences throw an interesting light on this concerning global problem. Highlighting control as a potential target for more facts, and greater control in these costly phenomena. Rather than seen as instances associated with one consequence such as suicide with a million suicides globally it appears that depression, stress, and the morbidity and mortality should be aggregated? Treatments targeting learned control as opposed to learned helplessness may be a treatment strategy worth exploring particularly in those patients scoring high in neuroticism.

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