MECHANISMS BEHIND THE POSITIVE EFFECTS OF SOCIAL SUPPORT AND ITS PROTECTIVE EFFECTS AGAINST WORKPLACE STRESS

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ABSTRACT

Direct benefits of social support are well established, yet its stress-buffering effects are inconsistent. Relational regulation theory (RRT) may better explain this inconsistency beyond the demands-control support (DCS) model, though RRT has yet to be applied to organisations. RRT proposes that 'everyday' interactions help individuals self-regulate their thoughts and feelings, and organisational justice appears similar to RRT. The study investigates direct and interactional influences of support on mental wellbeing and work-related outcomes in relation to DCS, RRT and justice. Respondents were 269 (59%) administration staff across a medium-sized Australian hospital. Results extend RRT to organisations, and indicate that support benefits all employees, not just those with work-related stress.

Key words: Workplace stress, social support, organisational justice, wellbeing, job attitudes

INTRODUCTION

Stress buffering theory proposes that social support protects against the negative effects of stress [1], as outlined by the demand-control-support (DCS) model [2]. The positive direct effects of social support are well documented, yet evidence for buffering effects is less consistent [3] [4]. Stress buffering theory and the DCS model do not fully account for this inconsistency. Relational regulation theory (RRT) [4] may explain these results, and proposes that the direct effects of social support are due to ordinary, everyday social interactions through which individuals manage their feelings, cognitions and behaviours. RRT has yet to be applied to an organisational setting and work related outcomes. The current study investigates the influence of social support on mental health and work-related outcomes in relation to the DCS model and RRT.

The DCS model and buffering theory

The DCS model proposes that job demands, control and social support interact to predict employee outcomes. However, these variables may exert independent effects on outcomes and/or have interaction effects [5] [6].There are different implications depending on the nature of these effects [7]. For example, interaction effects suggest that increasing social support improves coping with high stress, whereas independent effects suggest that high social support is beneficial by itself but may not help to deal with stress.

According to the DCS model, high demands/low control are the most stressful conditions, and high demands/high control may be beneficially challenging. Thus, the interaction between demands and control, rather than independent effects, is important. In addition, social support may buffer the effects of high demands and low control [8], and positive effects of social support are therefore unlikely to emerge except in the presence of stress. The independent effects of DCS variables are well demonstrated in the literature, though interaction effects are less consistent [3] [5]. Therefore, the stress buffering hypothesis does not appear to completely account for relationship between social support and mental health.

The inconsistent results may also be attributable to non-linear relationships causing artifactual interaction effects [9]. Curvilinear relationships are of additional interest because, despite a heritage of curvilinear relationships between work characteristics and stress outcomes (e.g. Selye's U-shaped stress curve) [10], most DCS research has assumed linear relationships [7] [11]. The present study will examine linear, curvilinear, and interaction effects of the DCS variables.

Relational Regulation Theory

Relational regulation theory (RRT) seeks to explain the frequently-observed independent effects of social support [4]. RRT proposes that the effects of social support are exerted in everyday social interactions, and that individuals need ongoing relationships to maintain wellbeing. Specifically, individuals regulate themselves through social interactions, and social support is perceived when this regulation is successful through interacting with others who share similar attitudes or experiences. Therefore, the benefits of social support may emerge in stressful situations, where regulation is needed more greatly (as the stress buffering hypothesis would suggest) and quality social interactions should predict better wellbeing irrespective of stress levels. However, RRT is rarely applied to organisational contexts. Some forms of organisational justice regarding interpersonal relationships appear conceptually similar to RRT.

Organisational justice

As many as four dimensions of organisational justice have been suggested by Colquitt [12]: procedural (procedures), distributive (pay, rewards), informational (quality and frequency of information), and interpersonal (respectful treatment). Organisational justice has been related to job strain over and above the DCS model [13] [14] [15], though much of this research used only two dimensions: procedural and distributive. The four-dimension conceptualisation of organisational justice is particularly interesting within the context of examining the RRT with its focus on interpersonal relationships. The degree of justice experienced by an employee is an indicator of the quality of social interaction experienced between an employee and, particularly, their supervisor. Given the crucial role of interpersonal interaction in RRT, it is likely that justice, and more specifically interpersonal justice (i.e. being treated with fairness, sincerity and respect by an interaction partner) would result in successful affective regulation. Thus, organisational justice can be seen as indicative of the kind of interpersonal behaviours which, according to RRT, drive the positive effects of social support.

The study

The study primarily examines the buffering and independent effects of social support within the framework of DCS and RRT. If RRT has utility in the organisational context, social support and organisational justice (particularly interpersonal) should exert independent effects on outcomes, whereas the utility of the stress buffering theory will be indicated by the moderation effects of social support regarding job demand and control. This study also extends RRT to organisational variables. The study will also explore whether organisational justice affects outcomes over and above DCS variables. Non-linear effects of DCS and justice variables will also be accounted for in analyses.

METHOD

Participants and procedure

Questionnaires along with reply-paid envelopes were distributed across a number of sites at a medium-sized Australian hospital facility. Two hundred and sixty-nine administration staff responded to the questionnaire representing a response rate of 59%. The majority of respondents were female (85.3%), 49 years or younger (67.4%) and had worked for the organisation for nine years or fewer (79.3%).

Materials

Demands. In order to measure demands an 11-item scale developed by Caplan *et al.* [16] was used. This scale has demonstrated good psychometric properties [16]. Consisting of two sections, this scale first required participants to rate on a five- point scale how often different work aspects pertaining to work load and time constraints occurred in their job. The second section asked how relevant aspects pertaining to work load and time constraints were to their job. These were also rated on a five-point scale.

Job Control. Job control was measured using a scale developed by Karasek [17] which has demonstrated acceptable internal consistency [18]. Consisting of nine items, participants indicated the degree to which they agreed with the statements on a five-point scale.

Social Support. Support consisted of three sub-scales: Supervisor support, co-worker support and support from family and friends. Developed by Caplan *et al*. [16], each sub-scale has been shown to have good psychometric properties. Each sub-scale consists of four items with participants selecting the amount of support they felt they received from each of the sources of support.

Organisational Justice. The eleven-item scale developed by Colquitt [12] consisted of four sub-scales: procedural justice (7 items), distributive justice (4 items), interpersonal justice (4 items) and informational justice (5 items). Participants were required to rate the extent to which, on a five-point scale, each of the statements aligned with their experience of the organisation. This scale has been shown to have good internal and discriminant validity [12].

Wellbeing. The General Health Questionnaire-12 developed by Goldberg [19], which has shown good psychometric properties [20], was used to assess wellbeing. This twelve item measure required participants to rate on a four-point scale how often over the past month they experienced issues relating to wellbeing.

Organisational Commitment. Allen and Meyer's [21]Affective Commitment Scale was utilised for assessing organisational commitment. This eight-item scale has demonstrated good internal consistency [21], and required the participants to rate on a five-point scale the degree to which statements reflected their point of view.

Job Satisfaction. A shortened version of Brayfield and Rothe's [22] satisfaction scale was used to assess job satisfaction. This scale consists of statements which participants are to rate on a five-point scale according to the extent to which the statements align with their own experiences at the organisation. This scale has been shown to have sound psychometric properties [23].

RESULTS

SPSS 19 was used for screening data and multiple regressions. For each of the analyses participants missing over a third of items from any scale, summed zero for a support sub-scale, or were univariate or multivariate outliers were excluded [24]. This resulted in $n = 215$ for wellbeing, $n = 213$ for organisational commitment, and $n = 216$ for job satisfaction. Further analyses found that the excluded participants did not differ from other participants in age, gender, length of employment at the organisation, type of employment, or the location and type of facility at which they worked. Assessment of normality revealed support from family and friends was negatively skewed with an inverse square root transformation correcting the violation [24]. For each of the variables the means and standard deviations were calculated along with correlations as presented in Table 1.

Hierarchical multiple regressions consisted of entering the variables in the following blocks: (a) DCS variables, (b) squared DCS variables, (c) DCS two-way interaction terms, (d) DCS three-way interaction terms, (e) Justice variables, (f) squared justice variables and (g) the justice interaction term. When creating interaction terms the variables were centred to reduce issues with multicollinearity [24]. Results of the regressions are presented in Table 2.

The predictors explained a significant amount of variance in wellbeing ($R^2_{adj}=.158$, $F[29, 214] = 2.39$, $p<.001$), organisational commitment ($R^2_{adj}=.283$, $F[29, 212] = 3.90$, $p<.001$), and job satisfaction ($R^2_{adj}=.215$, $F[29, 215] = 3.03$, $p<.001$). Regarding the DCS variables, workload significantly predicted wellbeing, and job control and support from family and friends significantly predicted job satisfaction. None of the squared DCS variables were significant predictors of any of the outcome variables. Regarding the DCS interaction variables, the interaction between demands and supervisor support explained a significant amount of variance in wellbeing. Interpersonal justice was the only justice variable to predict any of the outcome variables as it a significant predictor of organisational commitment. Organisational commitment was also predicted by the interaction between procedural justice and distributive justice.

Table 1. Means, standard deviations, reliability coefficients and correlations between all variables.

	M	SD	1	2	3	4	5	6	7	8	9	10	11
(1) Job control	31.65	5.66	0.83										
(2) Workload	42.04	7.13	.26**	0.89									
(3) Supervisor support	12.10	3.27	.28**	-.11	0.88								
(4) Co-worker support	11.83	2.59	.16*	-.08	.45**	0.81							
(5) Outside work support	13.82	2.48	-.01	.02	.12	.27**	0.77						
(6) Procedural justice	21.32	7.06	.42**	-.07	.45**	.23**	.09	0.92					
(7) Distributive justice	11.20	4.72	.24**	-.23**	.24**	.24**	.03	.54**	0.94				
(8) Interpersonal justice	16.21	4.05	.36**	.01	.46**	.35**	.09	.63**	.47**	0.96			
(9) Informational justice	17.86	5.61	.30**	-.10	.51**	.38**	.15*	.71**	.56**	.81**	0.95		
(10) Wellbeing	23.09	5.94	.11	-.13	.30**	.26*	.13	.25**	.22**	.30**	.28**	0.91	
(11) Organisational commitment	26.38	6.71	.27**	.00	.37**	.27**	.12	.37**	.29**	.50**	.44**	.37**	0.87
(12) Job satisfaction	20.83	5.24	.41**	.13	.31**	.19**	-.02	.29**	.23**	.33**	.32**	.38**	.58**

Note. The alpha reliability coefficients for each variable are displayed on the diagonal. The reliability coefficient for job satisfaction was 0.90.

*p<.05 **p<.01

Table 2. Regressions of DCS and justice predicting wellbeing, organisational commitment, and job satisfaction.

	Wellbeing		Organisational commitment		Job satisfaction	
	b	β	b	β	b	β
(1) Job control	.04	.04	.03	.03	.25	.27**
(1) Workload	-.15	-.19*	-.08	-.08	.06	.08
(1) Supervisor support	.20	.12	.11	.06	.19	.12
(1) Coworker support	.12	.06	.16	.06	.05	.03
(1) Outside work support	.00	.00	-.10	-.04	1.14	.19*
(2) Job control^2	.00	.00	.01	.05	.00	.01
(2) Work load^2	-.01	-.07	-.01	-.13	-.01	-.09
(2) Supervisor support^2	-.02	-.06	-.01	-.03	-.01	-.03
(2) Coworker support^2	-.03	-.05	.03	.04	.03	.06
(2) Outside work support ^{2}	-.05	-.09	-.08	-.14	-.05	-.11
(3) Job control x Workload	.00	-.03	.00	.02	.00	.03
(3) Job control x Supervisor support	-.01	-.02	-.03	-.08	-.01	-.04
(3) Job control x Coworker support	-.01	-.01	.01	.02	.04	.11
(3) Job control x Outside work support	-.02	-.03	.01	.02	.00	-.01
(3) Work load x Supervisor support	-.05	-.19*	.00	.01	.01	.04
(3) Work load x Coworker support	-.02	-.08	-.02	-.06	-.01	-.03
(3) Work load x Outside work support	.00	.01	-.02	-.04	.01	.04
(4) Job control x Workload x Supervisor support	.00	-.05	.00	.06	.00	.03
(4) Job control x Workload x Coworker support	.00	.01	.00	-.07	.01	.17
(4) Job control x Workload x Outside work support	.00	-.01	.01	.09	.00	.00
(5) Procedural justice	.02	.03	.06	.06	-.02	-.03
(5) Distributive justice	-.04	-.03	.02	.01	.09	.08
(5) Interpersonal justice	.36	.25	.68	.41*	.00	.00
(5) Informational justice	.00	.00	.02	.01	.19	.20
(6) Procedural justice^2	.00	.03	-.02	-.14	.01	.06
(6) Distributive justice^2	-.01	-.06	-.03	-.11	.00	.01
(6) Interpersonal justice^2	-.02	-.09	-.01	-.04	-.04	-.20
(6) Informational justice^2	.03	.19	.02	.10	.02	.17
(7) Procedural justice x Distributive justice	.02	.13	.06	.30*	.00	.03

$^*p < .05.$ $^{**}p < .001$

DISCUSSION

The study examined the role of social support in predicting job specific and general wellbeing. More specifically, it compared two mechanisms of social support's effects on wellbeing: the stress buffering hypothesis [1] and RRT [4]. The former predicts that social support buffers against stress, whereas the latter proposes that ordinary social interactions are important regulators of affect and are directly associated with positive outcomes.

Relational regulation theory

The results provide evidence for independent effects of social support, consistent with RRT. Support from family and friends predicted job satisfaction., which supports the notion that social support exerts positive effects regardless of stress. In addition, organisational commitment was predicted by interpersonal justice. Interpersonal justice is a measure of the fairness and respect with which an individual is treated by the organisation [12], and thus provides a measure of the quality of social interactions. These results show that the quality of interpersonal relationships predicts outcomes independent of job demands and control, and is consistent with RRT. Furthermore, these effects were found for organisational commitment, suggesting that RRT is not just applicable to general mental health, but also organisational outcomes.

Stress buffering

Despite the independent effects of social support and interpersonal justice, some evidence was also obtained for a buffering role of social support. The interaction between job demands and supervisor support was a significant predictor of wellbeing, showing that social support does have some role in buffering the effects of high work demands, although the three-way interaction between demands, control and support was not detected for any of the outcomes. The nature of these results provides some support for the optimal stress-support matching model [25], which proposes that the effect of social support depends upon the source of support and its match to the type of stressful event encountered. In this case, the stressful effects of job demands are buffered by support from a directly related source i.e. one's supervisor. Rather than providing a general emotional buffer against stressful situations, social support is most effective (as a moderator) in a more practical sense; for example, supervisors providing an environment conducive to meeting a high level of work demands. Although stress buffering theory cannot account for the numerous independent effects of support and interpersonal justice, in certain conditions (i.e. a similar source of stress and support) a buffering effect of support may still be observed.

Interestingly, these results do not seem to support a proposed extension of the optimal stress-support matching model to include a match with outcomes [26] [27]. One expects that the buffering of work demands by supervisor support would primarily effect work-related wellbeing; however, aspects of mental wellbeing were affected.

Supervisor support

The most prominent result from this study was that, regardless of whether it was an independent or interaction effect, by far the most consistent result observed was that support from one's supervisor predicted more positive outcomes. The effects of supervisor support (assuming interpersonal justice largely captures the relationship with one's supervisor) were

observed for three of the four outcomes in this study, with job satisfaction being the exception. Thus, supervisor support affected both job specific and general wellbeing. Numerous authors have argued that different sources of support should be examined [e.g. 28, 29] rather than treating support as a single, general variable; a view emphasised in both RRT and the optimal stress-support matching model. These results underscore this perspective and provide further evidence that the specific provider of support is an important variable in social support research.

The specific pattern of results shows that supervisor support was an important predictor of subjective wellbeing and a more cognitive evaluation of the workplace (organisational commitment), but not an evaluation of the workplace with a greater affective component (job satisfaction).

Organisational justice

In addition to the significant effects of interpersonal justice described above, the role of organisational justice as a predictor of wellbeing over and above the DCS was supported. The interaction between procedural and distributive justice was a significant predictor of organisational commitment. This result is consistent with previous research showing a significant procedural-by-distributive justice effect on measures of job-specific wellbeing [30] [31], and supports the notion that even if distributive outcomes are perceived as unfair, the impact of that perception can be buffered by a perception that the process of decision making was just [32].

These findings suggest that organisational justice can be an important source of initiatives to improve the wellbeing of employees. Consistent with RRT, improving interpersonal relationships between employees and supervisors can provide an important source of positive affect and wellbeing independent of other workplace characteristics. In addition, it would appear that making decision processes fair can buffer against the possible negative effects of other workplace characteristics. The utility of expanding DCS research to include justice can also be seen from the relatively small number of significant main effects of demands and control in this study. Expanding the range of workplace characteristics investigated may allow for more precise predictions of the most important factors in producing employee wellbeing. Justice has also been conceptualised as a buffer against stressful workplace situations [33], and future research may wish to consider organisational justice as a moderator of the effects of other workplace characteristics such as those contained within the DCS.

Summary

Overall, the results of this study suggest that social support can exert both additive and interactive effects. Consistent with RRT, interpersonal interactions and relationships with a variety of sources were associated with enhanced wellbeing regardless of stress and other workplace characteristics. Thus, increasing social support appears to benefit *all* employees, not just those dealing with stressful situations. Nevertheless, social support did exert some buffering effects against high work demands. Given that this interaction was only observed for support from supervisors, support from different sources may be more or less relevant to different kinds of stressors. This suggests that increasing support can be used as a means of protecting against the deleterious effects of high job demands, but that this may only be effective if the source of that support is the same as the source of the stressful event.

RRT is shown apply to organisational and general mental health and suggests a reappraisal of how social support interventions may operate. However, stress buffering theory is still relevant, though buffering may occur primarily where the source of stress and the source of support are the same. Future research may consider this possibility further by testing the effects of various stressors and corresponding sources of support.

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