

# Receiving Instrumental Support at Work: When Help Is Not Welcome

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Although the role of social support in promoting employees' health and well-being has been studied extensively, the evidence is inconsistent, sometimes even suggesting that social support might have negative effects. The authors examined some psychological processes that might explain such effects. On the basis of the threat-to-self-esteem model, the authors tested the hypothesis that receiving imposed support elicits negative reactions, which are moderated by someone's need for support. The authors distinguished 3 different reactions: (a) self-related, (b) interaction-related, and (c) physiological. The results of an experiment with 48 temporary administrative workers generally confirmed the hypothesis. Imposed support elicited negative reactions, except when there was an unsolvable problem, but even then the effect of imposed support was not positive but neutral.

Over the past decades, a substantial number of studies have examined the role of social support at work in promoting and maintaining the health and well-being of employees (for recent examples see De Jonge et al., 2001; Mendelson, Catano, & Kelloway, 2000; Peeters & LeBlanc, 2001; Sargent & Terry, 2000; Rau, Georgiades, Fredrikson, Lemne, & De Faire, 2001; Tetrick, Slack, Da Silva, & Sinclair, 2000). In these studies, social support has generally been conceptualized as the particular functions that interpersonal relationships at work can serve, for example, providing emotional, informational, appraisal, or instrumental support (cf. House, 1981; Stroebe, 2000). These functions have been measured by assessing the individual's perceptions of either the availability of others who provide these functions (i.e., *perceived support*) or of the actual receipt of these support functions (i.e., *received support*; Stroebe, 2000). In the present study we focused on received support, in particular instrumental support that has been received from others (i.e., help). In accordance with Sarason, Sarason, and Pierce (1990) we defined received social support as actions of others that are either helpful or intended to be helpful.

Although the overwhelming majority of studies have reported positive associations between social support at work and measures of health and well-being (cf. Viswesvaran, Sanchez, & Fisher, 1999;

Buunk, De Jonge, Ybema, & De Wolff, 1998), a substantial minority of studies also have reported negative associations, especially those that have assessed received support. For instance, high levels of received support at work appear to be correlated with high levels of negative affect (Buunk, Doosje, Jans, & Hopstaken, 1993), high levels of emotional exhaustion (Ray & Miller, 1994) and depersonalization (Iverson, Olekalns, & Erwin, 1998), frequent and long spells of absenteeism (Rael et al., 1995), and high levels of physical symptoms (Hahn, 2000). In addition, other studies have found that under stressful conditions, the receipt of social support is positively correlated with burnout (Ray & Miller, 1994), negative affect (Peeters, Buunk, & Schaufeli, 1995; Yang & Carayon, 1995), mental health complaints (Iwata & Suzuki, 1997), depression (Dormann & Zapf, 1999; Frese, 1999), physical symptoms and post traumatic stress disorder (Stephens & Long, 2000), and dissatisfaction (Yang & Carayon, 1995; Ducharme & Martin, 2000).

Although these findings may merely indicate that the more employees are stressed, the more they are likely to seek or receive support, they could also point to a negative impact of social support at work on employee health and well-being. We conducted the present study to address this issue and to examine if and when well-intended instrumental support at work might be perceived as unhelpful by the recipient. To avoid the problems of previous research, we used an experimental design to rule out ambiguities with regard to causal interpretations of our findings, and we used both psychological and physiological outcome measures to avoid common-method variance. Finally, we used a theory-driven approach that is based on the threat-to-self-esteem model (Fisher, Nadler, & Whitcher-Alagna, 1982; Nadler & Fisher, 1986).

## Reactions to Receiving Social Support: Threat to Self-Esteem

The focus of research on social support and occupational stress has been primarily on relationships with superiors and colleagues.

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Especially in social relationships at work, the receipt of instrumental support may evoke feelings of incompetence and, as a consequence, support may not always be perceived as helpful (cf. Buunk et al., 1993; Peeters et al., 1995). The idea that receiving instrumental social support at work will sometimes have a negative effect because of feelings of inferiority and incompetence reflects the basic tenet of the threat-to-self-esteem model (Fisher et al., 1982; Nadler & Fisher, 1986). This model asserts that self-related consequences of receiving help (i.e., instrumental support) are critical in determining the recipients' reaction to being helped. An important premise of the model is that receiving help is neither all good nor all bad; it is the relative degree of self-threat and self-support that ultimately determines the recipient's reaction to received help. The model further predicts that help that is perceived as self-supportive will elicit positive reactions, whereas help that is perceived as self-threatening will elicit negative reactions.

Because being helped with one's work constitutes the receipt of instrumental social support, the threat-to-self-esteem model predicts that employees who feel that their self-esteem is threatened by the receipt of instrumental support from others will react negatively (cf. Fisher et al., 1982). In the present study we distinguished between three different types of negative reactions. In accordance with Fisher and Nadler (Fisher et al., 1982; Nadler & Fisher, 1986) we included self-related reactions (i.e., emotions: negative and positive affect, evaluations: competence-based self-esteem) and interaction-related reactions (i.e., evaluation of the support exchange: appropriateness of support, and sympathy for the support provider). Furthermore, we also wanted to focus on physiological reactions (i.e., physical reactions to negative situations, heart rate [HR] and respiratory sinus arrhythmia [RSA]). From the perspective of the threat-to-self-esteem model, it can be argued that the receipt of social support at work may sometimes induce feelings of stress. To assess this, we measured HR and RSA. HR reflects mainly sympathetic activations because of stress. Vagal activity, as measured with RSA, is suggested to be specifically sensitive for the affective aspects of situations (Porges, 1998).

To examine the potential negative effects of social support, we focused on some factors that might determine whether the receipt of instrumental support is perceived as self-threatening. One such factor is restriction to freedom of choice (J. W. Brehm, 1966; S. S. Brehm & Brehm, 1981; Fisher et al., 1982; Nadler & Fisher, 1986). The threat-to-self-esteem model predicts that receiving help that threatens the freedom of choice of the recipient will elicit negative reactions (Brehm & Brehm, 1981; Fisher et al., 1982). Such a situation is likely to arise in a work setting when instrumental support is imposed on the employee by a colleague or a superior. Imposed support is provided without asking if the recipient wants or needs that support. Because it will be difficult or even impossible to refuse the support, the employee will no longer be able to work independently. This might imply that even the absence of support will be perceived as more positive than will instrumental support that is imposed because the former is less restrictive to the freedom of choice of the employee than is the latter and consequently will lead to less negative reactions.

However, one factor not mentioned by the threat-to-self-esteem model that is likely to moderate the extent to which individuals react negatively to imposed social support is their need for support.

Individuals are less likely to react negatively to imposed social support if they believe that they could not have completed a task without help from others. It seems plausible that when employees encounter unsolvable problems (i.e., problems they cannot solve on their own), they will experience a stronger need for support than when they are confronted with problems that they can solve themselves (or when they have no problems at all). Consequently, it is likely that receiving imposed support in cases of unsolvable problems will, despite restrictions to freedom of choice, be less detrimental than in cases of solvable problems or when no problems at all occur. Accordingly, the main hypothesis of the present study is that in comparison with receiving no support, receiving imposed instrumental support will elicit negative reactions, which will be moderated by the individual's need for support. Reactions to imposed support will be less negative the more a person is in need of support (i.e., confronted with an unsolvable problem).

## Hypotheses

In comparison with receiving no support, receiving imposed support will lead to more negative self-related reactions (negative affect and competence-based self-esteem) and more negative physiological reactions (HR and RSA) in a no-problem or a solvable-problem situation than in an unsolvable-problem situation (Hypothesis 1). Clearly, the interaction-related reactions (e.g., appropriateness of the support) are not relevant in situations in which social support is absent. Therefore, only the imposed support condition is considered as far as the interaction-related reactions are concerned. With regard to the imposed support condition, we hypothesized that receiving imposed support in a no-problem or a solvable-problem situation would lead to more negative interaction-related reactions (appropriateness of support and sympathy for support provider) than in an unsolvable problem situation (Hypothesis 2).

## Method

### *Participants and Design*

These hypotheses were tested in a 3 (problem: none, solvable, unsolvable)  $\times$  2 (support: none, imposed) factorial design. Participants were 48 temporary administrative assistants (11 male, 37 female) with a mean age of 28.1 years ( $SD = 8.56$ ) who had volunteered to participate in the experiment. In return for their cooperation, they received the equivalent of about \$10 in U.S. currency. The participants were recruited via flyers that were distributed among several temporary employment agencies. In the flyer, the research was presented as a study on job stress. Those who were interested could contact the researcher (Janna T. Deelstra). Individuals were randomly assigned to the different conditions.

### *Procedure*

The study was conducted in a laboratory, which was equipped like any normal office of a modern organization to increase ecological validity. That is, there were computers, telephones, and Internet connections, and the room was furnished with desks, chairs, and office cabinets. Participants worked in the simulated office for half a day (4 hr) in which they had to accomplish two tasks: (a) prepare travel plans for speakers at a conference by using a computerized travel-planner program and (b) book hotel rooms for all participants of the conference by using a computerized database. This database contained all necessary information about the participants of

the conference, such as their preferences with regard to number of days they were to stay, the kind of hotel, and the kind of room. The first task was intended to get the participants familiarized with the situation and to make the simulation of a work situation as realistic as possible. The second task was the actual experimental task. As trained administrative assistants, all participants were familiar with these kinds of tasks and were experienced users of the computer programs that were used in the experiment. After the completion of the second task, participants were asked to fill out a questionnaire.

Each session had two individuals participating in the experiment: the actual participant and a female confederate. The confederate was introduced as a research participant and behaved also as if she had come to the lab for the first time. The confederate received the same introduction as the actual participants and was also connected to the physiological equipment. During the experiment, the confederate worked on comparable tasks as the actual participants and was instructed to keep social interactions with the actual participants to a minimum. In the problem conditions, the participants were confronted with a problem when they were halfway through the task. In the imposed support conditions, the confederate was instructed to impose support on the participant halfway through the second task (in the no-problem condition) or right after a problem had appeared (in the problem conditions).

### *Independent Variables (Manipulations)*

Problem (none, solvable, unsolvable) was manipulated by presenting participants with a database in which all necessary information was available (no-problem condition) or in which information on five participants of the conference was lacking halfway through the task (solvable-problem and unsolvable-problem condition). Both in the no-problem and in the solvable-problem condition, participants were told before they started the task that they could also find the information they needed in a file in the office cabinet. In the unsolvable-problem condition this file was not mentioned. Every time participants entered a name in the database for whom information was lacking, a hard beep went off and a window appeared that said: "No information is available for this participant."

Support (none, imposed) was manipulated by either no relevant interaction between the confederate and the participant (no support) or an interaction in which the confederate imposed her help on the participant. In the imposed-support condition, the confederate said in a friendly tone, but without asking the participant whether help was needed or wanted, that she would help. The confederate took the file with information out of the cabinet and filled out the necessary information on the required form (paper and pencil). If the participant protested against this action, the confederate was instructed to disregard this protest in a friendly manner. When she had filled in five names she stopped her help and returned to her own task.

### *Dependent Measures*

#### *Self-Related Measures*

Two kinds of self-related measures were assessed: negative and positive affect and competence-based self-esteem (Fisher et al., 1982).

*Negative and positive affect.* Negative and positive affect were measured with a 12-item scale developed by Warr (1990). Participants were asked to indicate to what extent during the task they experienced feelings like being tense, worried, depressed, or optimistic (6 positive affect items and 6 negative affect items) on 5-point scales varying from 1 (*not*) to 5 (*very strongly*). It was demonstrated that negative and positive affect are distinctive dimensions that reflect separate underlying psychological systems (Watson, Wiese, Vaidya, & Tellegen, 1999). Therefore, we used two separate measures: positive affect and negative affect, instead of one sum score of the negative and positive affect items.

*Competence-based self-esteem.* To assess competence-based self-esteem (i.e., state self-esteem with regard to own capacities), we asked participants to evaluate themselves ("Indicate how you would describe yourself during the task") on scales defined by eight pairs of bipolar adjectives, based on the scales of Stake (1979) and Nadler, Fisher, and Ben-Itzhak (1983). The adjective pairs were separated by 5-point Likert-type scales, ranging from 1 (*dependent, insecure, incapable, irresponsible, incompetent, inefficient, not assertive, and unproductive*) to 5 (*independent, self-confident, capable, responsible, competent, efficient, assertive, and productive*) respectively.

#### *Interaction-Related Measures*

Two kinds of interaction-related measures were assessed: appropriateness of the support and sympathy for the support provider (Nadler et al., 1983). Obviously, these measures could be assessed only in the imposed-support condition.

*Appropriateness of the support.* To assess the appropriateness of the support, we asked research participants to evaluate the received support ("How would you describe the received support") on scales defined by five pairs of bipolar adjectives, based on the scale of Nadler et al. (1983). The adjective pairs were separated by 5-point Likert-type scales, ranging from 1 (*inappropriate, not effectual, not useful, ineffective, and unnecessary*) to 5 (*appropriate, effectual, useful, effective, and necessary*) respectively.

*Sympathy for the support provider.* To assess the sympathy for the support provider, we asked participants to evaluate the support provider ("Indicate how you would describe your colleague after the received support") on scales defined by six pairs of bipolar adjectives based on the scale of Nadler et al. (1983). The adjective pairs were separated by 5-point Likert-type scales, ranging from 1 (*impatient, incompetent, unpleasant to work with, incapable, enforcing, and unfriendly*) to 5 (*patient, competent, pleasant to work with, capable, not enforcing, and friendly*) respectively.

#### *Physiological Measures*

Autonomic activity during the experimental session was recorded with the use of an ambulatory monitoring device (VU-AMD; De Geus & Van Doornen, 1996; Groot, De Geus, & De Vries, 1998). The VU-AMD records the electrocardiogram and thoracic impedance. The electrocardiogram is used to measure HR. Digital filtering of the impedance signal delivers a respiration signal. An automatic scoring program marks the beginning and end of inspiration and expiration. We computed RSA by using the peak-to-trough method. This method combines the respiratory time intervals and the interbeat intervals to obtain the shortest interbeat interval during HR acceleration in the inspiration phase and the longest interbeat interval during HR deceleration in the expiration phase (see De Geus & Van Doornen, 1996, for further details).

*Heart rate.* The HR response to the manipulations was defined as the difference in HR during Period 2 of the experimental task minus the HR during Period 1. Period 1 was defined as the period from start of the task until support was provided or a problem appeared and Period 2 was defined as the period from when support was provided or a problem appeared until the end of the task. In the case that no problem appeared and no support was received, Period 1 served as the first half of the task and Period 2 served as the second half.<sup>1</sup>

*Respiratory sinus arrhythmia.* RSA is the change in heart period corresponding to the inspiratory and expiratory phases of respiration cycles

<sup>1</sup> HR in Period 1 varied between 51.88 and 98.24 heartbeats per minute ( $M = 76.21$ ); HR in Period 2 varied between 56.96 and 101.50 heartbeats per minute ( $M = 78.69$ ). Period 1 and Period 2 varied somewhat in duration. Period 1 varied between 8 and 10 min and Period 2 varied between 10 and 15 min. Maximum difference in duration of both periods was 5 min, whereas the minimum difference was 0 min.

(Bertson, Cacioppo, & Quigley, 1993). The RSA response to the manipulations was defined as the difference in RSA during Period 2 of the experimental task minus the RSA during Period 1. Period 1 and 2 were defined in the same way as for the HR response.

**Manipulation Check**

The effectiveness of the problem manipulation was assessed by three items. Participants had to rate on 5-point scales from 1 (*not at all*) to 5 (*very strongly*), the questions: "To what extent did you find you needed support?," "To what extent did you find you had a problem with the task at hand?," and "To what extent did you know how to solve problems independently when in the database information was lacking?"

**Results**

**Descriptive Statistics**

In Table 1 the reliability coefficients of the dependent measures and the correlations between the variables are presented. Reliabilities of all scales appear to be sufficient. With regard to the correlations between the outcome measures, it appears that positive affect does not correlate with any of the other outcome measures, except for negative affect. In contrast, negative affect appears to correlate with all the other measures. Furthermore, the moderate correlation between positive and negative affect confirms the idea that they reflect two rather different dimensions. Finally, the high correlation between the two interaction-related reactions suggests that they both refer to one underlying construct: the overall evaluation of the support exchange.

**Manipulation Check**

To assess the effectiveness of our manipulations, we conducted several analyses of variance (ANOVAs) on the manipulation checks. The analysis of the problem manipulation checks showed, as expected, that individuals had a stronger need for support in the solvable-problem and unsolvable-problem situation than in the no-problem situation,  $F(2, 45) = 5.76, p < .01$  ( $M_{no} = 1.25$  vs.  $M_{solvable} = 1.69$ );  $F(1, 30) = 5.44, p < .05$  ( $M_{solvable} = 1.69$  vs.  $M_{unsolvable} = 2.25$ ),  $F < 1$ . In addition, individuals found the unsolvable-problem situation more problematic than the no-problem and solvable-problem situation. They also found the solvable-problem situation more problematic than the no-problem situation,  $F(2, 45) = 35.65, p < .01$  ( $M_{no} = 1.31$  vs.  $M_{solvable} = 2.25$ ),  $F(1, 30) = 32.77, p < .01$  ( $M_{solvable} = 2.25$  vs.  $M_{unsolvable} =$

3.00),  $F(1, 30) = 12.27, p < .01$ . Furthermore, individuals indicated that they knew better how to solve problems with the database in the no-problem and solvable-problem situation than in the unsolvable-problem situation,  $F(2, 45) = 12.20, p < .01$  ( $M_{no} = 3.94$  vs.  $M_{solvable} = 3.84$ ),  $F < 1$  ( $M_{solvable} = 3.84$  vs.  $M_{unsolvable} = 2.00$ ),  $F(1, 30) = 20.05, p < .01$ . In conclusion, these results indicate that the manipulation of the problem level was effective.

**Hypotheses Testing**

To test our hypotheses, we conducted several ANOVAs on the dependent variables. With regard to these dependent variables, we expected an interaction effect between support and problem for the self-related and physiological measures. With respect to the interaction-related measures, we expected a problem main effect.

**Self-Related Measures**

First, we tested Hypothesis 1 with respect to the self-related measures (negative affect, positive affect, and competence-based self-esteem). A 2 (support)  $\times$  3 (problem) multivariate ANOVA (MANOVA) conducted on the self-related measures yielded, as expected, a significant Multivariate Support  $\times$  Problem interaction effect,  $F_{multivariate}(6, 82) = 12.31, p < .01$ . Subsequent univariate tests showed that this interaction effect was significant for negative affect,  $F_{univariate}(2, 42) = 29.90, p < .01$  and for competence-based self-esteem,  $F_{univariate}(2, 42) = 14.30, p < .01$ . No significant interaction effect was found for positive affect,  $F_{univariate} < 1$ . As graphically presented in Figure 1, the simple effect tests showed that in comparison with receiving no support, receiving imposed support elicited more negative affect in the no- and solvable-problem situation than in the unsolvable-problem situation (no problem:  $M_{no} = 1.29$  vs.  $M_{imposed} = 2.92, t[14] = -9.02, p < .01, d = 4.53$ ; solvable problem:  $M_{no} = 1.73$  vs.  $M_{imposed} = 2.44, t[14] = -8.58, p < .01, d = 4.30$ ; unsolvable problem:  $M_{no} = 2.13$  vs.  $M_{imposed} = 2.14, t[14] < 1, d = .04$ ). The effect size between two means is reflected by the *d* statistic. Effect sizes larger than .50 are generally considered as medium effects, and effect sizes larger than .80 are generally considered as large effects (Cohen, 1992).

As can be seen in Figure 2, the simple effect tests for competence-based self-esteem showed that both in the no-problem and in the solvable-problem situation, individuals had lower

Table 1  
Dependent Variables: Means, Reliability, Coefficients, and Intercorrelations

Dependent variables	M	SD	Negative affect	Positive affect	Self-esteem	Appropriateness	Sympathy
Negative affect	2.10	.59	.77				
Positive affect	1.89	.79	-.37*	.91			
Self-esteem	3.84	.71	-.70*	.25	.94		
Appropriateness	3.03	1.37	-.69*	.36	.58*	.97	
Sympathy	3.44	.92	-.68*	.34	.60*	.80*	.92

Note. Reliability coefficients are presented on the diagonal. Appropriateness = appropriateness of support; Sympathy = sympathy for support provider.

\*  $p < .01$ .

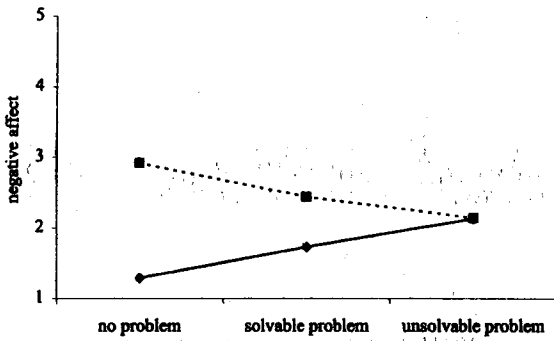


Figure 1. Problem  $\times$  Support interaction effect for negative affect. A solid line indicates no support; a dashed line indicates imposed support.

competence-based self-esteem after they received imposed support than when they received no support at all (no problem:  $M_{no} = 4.73$  vs.  $M_{imposed} = 2.97$ ,  $t(14) = 12.97$ ,  $p < .01$ ,  $d = 6.52$ ; solvable problem:  $M_{no} = 4.16$  vs.  $M_{imposed} = 3.44$ ,  $t(14) = 3.64$ ,  $p < .01$ ,  $d = 1.89$ ). In the unsolvable problem situation, no difference in competence-based self-esteem was found between receiving no support and imposed support ( $M_{no} = 3.87$  vs.  $M_{imposed} = 3.89$ ),  $t(14) = -.05$ ,  $ns$ ,  $d = .03$ . Thus, with regard to the self-related measures, our first hypothesis was supported as far as negative affect and competence-based self-esteem were concerned.

### Physiological Measures

Second, we tested Hypothesis 1 with respect to the physiological measures (HR and RSA). A 2 (support)  $\times$  3 (problem) MANOVA that we conducted on the physiological measures yielded, as expected, a significant Support  $\times$  Problem interaction effect,  $F_{multivariate}(4, 82) = 8.11$ ,  $p < .01$ . Subsequent, univariate tests showed that this interaction effect was both significant for the HR response,  $F_{univariate}(2, 42) = 7.08$ ,  $p < .01$ , and for the RSA response,  $F_{univariate}(2, 42) = 15.43$ ,  $p < .01$ . As graphically presented in Figure 3, compared with individuals who received no support at all, those who received imposed support in the no-problem and in the solvable-problem situation showed a stronger increase in HR (no problem:  $M_{no} = .31$  vs.  $M_{imposed} = 4.22$ ,  $t(14) = -4.32$ ,  $p < .01$ ,  $d = 2.32$ ; solvable problem:  $M_{no} = 1.29$  vs.

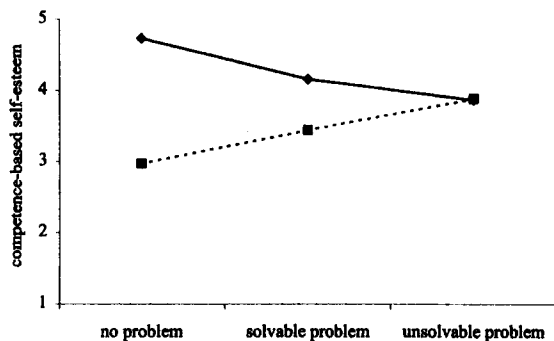


Figure 2. Problem  $\times$  Support interaction effect on competence-based self-esteem. A solid line indicates no support; a dashed line indicates imposed support.

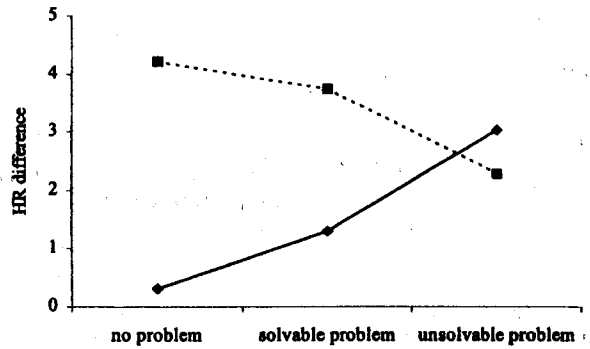


Figure 3. Problem  $\times$  Support interaction effect for difference in heart rate (HR). A solid line indicates no support; a dashed line indicates imposed support.

$M_{imposed} = 3.74$ ,  $t(14) = -2.70$ ,  $p < .05$ ,  $d = 1.52$ ). In the unsolvable-problem situation, no difference in HR was found between receiving no support and imposed support ( $M_{no} = 3.03$  vs.  $M_{imposed} = 2.28$ ,  $t(14) = .86$ ,  $ns$ ,  $d = .43$ ).

As can be seen from Figure 4, the simple effect tests on the RSA response showed that in the no-problem situation individuals exhibited a stronger decrease in RSA after receiving imposed support than when they received no support ( $M_{no} = 0$  vs.  $M_{imposed} = -11.05$ ),  $t(14) = 5.13$ ,  $p < .01$ ,  $d = 3.50$ . In the solvable-problem situation, no difference was found between no support and imposed support ( $M_{no} = -6.41$  vs.  $M_{imposed} = -9.88$ ),  $t(14) = 1.72$ ,  $ns$ ,  $d = .90$ . In the unsolvable-problem situation, individuals showed a stronger decrease in RSA when they received no support than after receiving imposed support ( $M_{no} = -7.82$  vs.  $M_{imposed} = -2.20$ ),  $t(14) = -2.54$ ,  $p < .05$ ,  $d = 1.62$ . Thus, with regard to the physiological measures, the results of both the HR response and the RSA response supported our first hypothesis. However, the analysis of the RSA response showed some additional results, namely that in the unsolvable-problem situation, individuals showed a greater decrease when they received no support at all than when they received imposed support.

### Interaction-Related Measures

Finally, we tested Hypothesis 2 with regard to the interaction-related measures (appropriateness of support and sympathy for

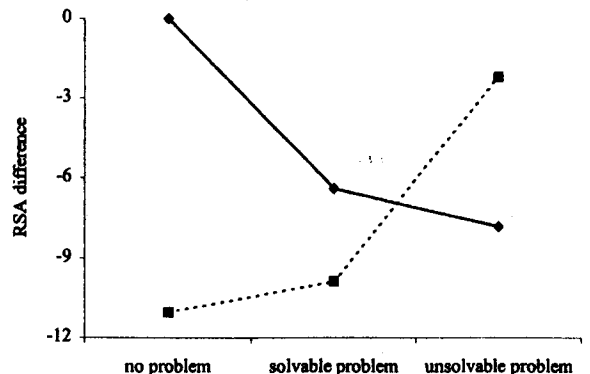


Figure 4. Problem  $\times$  Support interaction effect on difference in respiratory sinus arrhythmia (RSA). A solid line indicates no support; a dashed line indicates imposed support.

support provider). Because the interaction-related measures could be assessed only in the imposed-support conditions, no comparison was made with receiving no support. The ANOVA of the interaction-related measures showed, as expected, both a significant problem main effect for appropriateness of support,  $F(2, 21) = 19.77, p < .01$ , and sympathy for support provider,  $F(2, 21) = 24.27, p < .01$ . The simple effect test showed that individuals found the imposed support less appropriate in the no-problem and in the solvable-problem situation than in the unsolvable-problem situation ( $M_{no} = 1.77$  vs.  $M_{unsolvable} = 4.42$ ),  $t(14) = -6.35, p < .01, d = 3.17$  ( $M_{solvable} = 2.90$  vs.  $M_{unsolvable} = 4.42$ ),  $t(14) = -3.66, p < .01, d = 1.83$ . In addition, individuals found the support also less appropriate in the no-problem situation than in the solvable-problem situation ( $M_{no} = 1.77$  vs.  $M_{solvable} = 2.90$ ),  $t(14) = -2.59, p < .05, d = 1.29$ . Furthermore, individuals found the support provider less sympathetic after receiving imposed support in the no-problem and solvable-problem situation than in the unsolvable-problem situation ( $M_{no} = 2.70$  vs.  $M_{solvable} = 3.15$ ),  $t(14) = -1.55, ns, d = .78$  ( $M_{solvable} = 3.15$  vs.  $M_{unsolvable} = 4.47$ ),  $t(14) = -5.02, p < .01, d = 2.58$ . Thus, with regard to the interaction-related measures the results of both the appropriateness of the support and sympathy for the support provider supported our second hypothesis.

### Discussion

The findings of this study provide the first experimental demonstration that, under well-defined conditions, instrumental support at work can have negative effects. Our results strongly support the hypotheses derived from the threat-to-self-esteem model (Fisher et al., 1982; Nadler & Fisher, 1986) that (a) employees react more negatively to imposed support than to receiving no support at all and (b) that their negative reactions are moderated by the extent to which they need support. Receiving imposed support was perceived as somewhat less negative when employees had a high need for support because they could not have finished the task without outside help. However, even under these conditions, imposed support was not experienced as positive but only as neutral. Furthermore, it seems that receiving imposed support is even more stressful than being faced with an unsolvable problem. This effect appears to be significant for negative affect,  $t(14) = -4.11, p < .01$ , as well as for competence-based self-esteem,  $t(14) = 3.72, p < .01$ .

That these results emerged from a study in which both the receipt of social support as well as the need for support were manipulated experimentally removes the ambiguity about causal direction that plagued previous (correlational) research. Moreover, that the predicted pattern was confirmed not only with self-report measures but also with two physiological measures supports the validity of our findings. Furthermore, our findings correspond with the observation that robust effects on cardiovascular parameters emerge with experimental manipulations of social support, as compared with the association of general support measures on physiological reactivity to laboratory stressors (Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Finally, the fact that these results were found with a relatively small sample size indicates that these effects are large, which is also reflected by the large effect sizes of the significant effects (all above 1.00).

Thus, the present study shows that under certain circumstances, the receipt of instrumental support can be stress-inducing rather than stress-alleviating. However, the extent to which these results can be generalized to other forms of social support (e.g., emotional, informational, and appraisal support) remains an open question. In addition, it is debatable whether these results can provide an explanation for the negative results found in prior studies. Because, on balance, in these studies global perceptions of received support and well-being were measured (cf. Dormann & Zapf, 1999) instead of reactions to specific support interactions, no firm conclusions to this matter can be drawn from our results. Nevertheless, our results do indicate that, from a theoretical point of view, one can argue that receiving social support may lead to negative effects. More specifically, we found evidence for the negative effects of imposed support. Future studies should be conducted to examine under what other conditions negative effects of received social support may be observed.

We found evidence for the assumption that reactions to receiving support depend not only on a possible restriction to freedom of choice but also on the need for support. This finding suggests a modification of the threat-to-self-esteem model (Fisher et al., 1982; Nadler & Fisher, 1986), which assumes that support that constitutes a restriction to the freedom of choice of the receiver produces negative effects, irrespective of the circumstances. The results of the present study suggest that the extent to which individuals need instrumental support to continue their work acts as a moderator of the negative reactions elicited by imposed support.

### Future Research

Despite the promising findings, this study also left us with some unanswered questions. First, we have compared imposed support with no support at all. Although no support can be considered as nonrestrictive to the freedom of choice, it would be interesting to compare imposed support with support that is really nonrestrictive (e.g., offered support). Because by offering support the receiver has an opportunity to accept or reject the support, unlike when support is imposed, this could provide a more solid test of the hypothesis that social support that is a threat to the freedom of choice leads to negative reactions.

Second, it might be relevant to consider characteristics of the support provider (cf. Sarason et al., 1990). In the present study, the confederate who provided the support was a female and was introduced as a colleague with the same level of expertise. The question is whether our results would have been different if someone with more expertise on the task, or if a male, or a supervisor had provided the support. The threat-to-self-esteem model predicts that receiving support from a comparable person is more threatening to the self-esteem of the receiver than that from a noncomparable person (Fisher et al., 1982; Nadler & Fisher, 1986). This stems from the fact that support provided by a comparable person will elicit more feelings of inferiority and incompetence as a result of a negative social comparison. Thus, it might be that reactions to receiving imposed support will be less negative when received from someone with more expertise on the task (noncomparable) than from someone with a similar level of expertise (comparable).

Additionally, it might also be that reactions to receiving imposed support will be more negative when received from a colleague (comparable) than from a supervisor (noncomparable). Supervisors are supposed to be attentive to the needs of their employees in terms of help, encouragement, feedback, and advice (cf. Buunk, 1990). In contrast, imposed support from a supervisor might be more threatening because employees depend on their supervisors for promotions and therefore may not feel free to disclose feelings that might make them look incompetent.

Furthermore, several studies suggest that gender of the support provider, as well as of the support recipient, influences the effect of receiving social support (Edens, Larkin, & Abel, 1992; Kamarck, Manuck, & Jennings, 1990; Uchino et al., 1996). In general, these studies indicate that gender incongruity between support provider and receiver elicits more negative reactions than gender congruity. However, because in our study most participants were female (77%) just like the confederate, we could not check for such gender effects. Future research should reveal how the characteristics of the support provider and the support receiver may influence the effects of receiving social support.

### Practical Implications

This study indicates that in some situations, providing support might improve employees' performances by helping them to solve a problem that they could not solve on their own but that this might come at a cost to their self-esteem. Therefore, colleagues, but probably also supervisors, should critically consider whether employees actually need support. Furthermore, they have to realize that it is important that the employee needs an opportunity to reject the support. Otherwise, it may have negative consequences for the employees' well-being. It seems possible that employee frustration also contributes to these negative reactions. Having problems but also receiving imposed support can be considered frustrating situations, which consequently can evoke several kinds of negative emotions and cognitions.

Finally, one of the most important themes in occupational psychology constitutes designing strategies for improving psychosocial conditions at work (cf. Theorell, 1999). Because the general finding is that social support has positive effects on the health and well-being of employees, it is often argued that providing more support to employees may be an effective strategy to improve their health and well-being. However, our results indicate that this suggestion should be treated with caution. Although, generally speaking, social support might be positive, not every social support interaction will be perceived as equally positive.

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