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Work Stress and Social Support
Among Women In Helping
Professions: A Longitudinal
Study

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WORK STRESS AND SOCIAL SUPPORT AMONG WOMEN IN HELPING PROFESSIONS: A LONGITUDINAL STUDY

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Abstract

The role of social support in alleviating the impact of work stress on mental health was examined in a random sample of 371 women employed as social workers and licensed practical nurses. Using three waves of data on this sample, we modeled individual change over time in work stress, social support and mental health. We found that there was no relationship between change over time in work stress and change over time in perceived social support. Change in social support over time was directly related to change in mental health -- as social support improved, psychological distress declined. However, change in social support did not moderate the relationship between change in work stress and change in psychological distress. The authors discuss the implications of these findings for coping among women working in the helping professions.

There is increasing recognition that the helping professions are highly stressful occupations (c.f., Karasek, Triantis & Chaudry, 1982; Cherniss, 1980; Jayaratne & Chess, 1984; Jayaratne, Chess & Kunkel, 1986; Gray-Toft & Anderson, 1985; Tetrick & LaRocco, 1987; Fimian, Fastenau & Thomas, 1988; Revicki & May, 1989; Karasek & Theorell, 1990). With this growing awareness comes an interest in those factors, both organizational and personal, that can reduce the impact of work stress on the health and well-being of those in the helping professions. For some years now, social support has been viewed as a resource that can not only provide direct benefits to the individual, but can also protect or buffer the individual from the negative consequences of work stress (Cohen & Wills, 1985). House (1981) defines a pure buffering effect as one in which the impact of stress on health is non-existent under conditions of high support, and is more adverse as support decreases. When support has a direct effect on health, the relationship between stress and health is the same at all levels of social support. In this paper, we use longitudinal data from a sample of social workers and licensed practical nurses to explore the relationship between work stress and social support among women in the helping professions. Specifically, we examine the following research questions:

1. Is change over time in job experiences related to change over time in social support?

2. Is there a direct relationship between change over time in social support and change over time in psychological distress?

3. Does change over time in social support buffer the relationship between change over time in job experiences and change over time in psychological distress? That is, is there no relationship between change in job experiences and change in distress under conditions of high support, while, under conditions when support decreases over time, increasingly stressful work is associated with increasing psychological distress?

METHODS

The Sample

A representative random-sample of 403 Massachusetts women, ages 25-55, employed at least half-time as social workers (N = 248) or licensed practical nurses (N = 155), was initially recruited in 1985-86. Three waves of data, each one year apart (1985-86, 1986-87, 1987-88), were collected on this sample. The respondents were randomly selected from their respective professional registries. It is important to note that, in Massachusetts, individuals with the job title of social worker are not required to be registered. By limiting our sample to registered social workers, our sample over-represents social workers with bachelor's and master's level training in social work. Details on the sampling procedures are available in Marshall, Barnett, Baruch & Pleck (forthcoming).

The mean age of the sample was 39.5 years (SD = 7.4). The sample was restricted to women who were employed at least 20 hours a week at the time of the first interview. In addition, respondents had to have been employed in their field for at least one year, and in their current job for at least three months, to avoid tapping those strains unique to entry into an occupation or a new job. Potential respondents were also ineligible if they were primarily self-employed or if they worked rotating or night shifts, since these populations

tend to experience unique stressors. On average, the women had been working in their respective occupations for 11 years (the range was from 2 to 35 years), and at their current jobs for 6 years.

The sample included white (85% of the sample) and black women (15%), women who were single (never married, separated or divorced) or partnered (a woman was considered partnered if she was married or living with a romantic partner), and women with and without children. In the first year, 30% of the respondents were married or partnered and had children, 27% were single parents, 18% were married or partnered and did not have children, and 25% were single and did not have children. The respondents were interviewed face-to-face for about two hours each year, about various aspects of their work and family lives.

In the second wave of data, collected one year later in 1986-87, 4 of the respondents had moved out of the area and 11 refused to be interviewed. In the third wave, collected in 1987-88, 3 respondents had moved out of the area and 2 had died; 11 refused to participate. Of the 403 women in the first wave of data, fully 92% (371) were interviewed in all three years. The analyses reported in this paper are based on the 305 respondents who were employed in all three years, and did not experience a major life transition, such as becoming a parent or getting divorced.

Measures

Work stress. Research on job stress requires measures that assess those aspects of a job that may or may not be related to the outcomes under investigation. Most of the measures currently in use were developed at a time when manufacturing dominated the economy. As a result, they do not adequately assess occupations in the growing service economy (Cain & Treiman, 1981). The Job Role Quality Scales, developed by Barnett, Baruch and Marshall (Marshall, Barnett, & Sayer, 1990) address this gap.

The Job Role Quality Scales were originally developed based on data from extensive interviews with 72 women, ages 35 to 55. The scales were then modified and expanded, drawing on psychometric data from a sample of 238 women, focus groups with an additional 30 women employed as licensed practical nurses or social workers, as well as the work of other researchers. There are two 25-item Job Role Quality Scales: one to assess the rewards of a role, the other to assess the costs or concerns.

To assess work concerns, we asked each respondent how concerned she was, on a 4 point scale from not at all to extremely concerned, about a series of job conditions. The five factors that comprise this scale, their composite items, the mean score for each factor, and the Cronbach alphas, are shown in Table 1. The five factors are: Overload; Dead-End Job; Hazard Exposure; Poor Supervision; and Discrimination. (The factor structure of this and the following scale was confirmed using LISREL for confirmatory factor analysis. For details, see Marshall, Barnett & Sayer, 1990).

Table 1: Job Concern Factors

Factor	Cronbach's Alpha	Average Score[a]
Overload	.72	2.3

1. Having too much to do
2. The job's taking too much out of you
3. Having to deal with emotionally difficult situations

Dead-End Job	.82	2.0

1. Having little chance for the advancement you want or deserve
2. The job's not using your skills
3. The job's dullness, monotony, lack of variety
4. Limited opportunity for professional or career development

Hazard Exposure	.66	1.8

1. Being exposed to illness or injury
2. The physical conditions on your job (noise, crowding, temperature,etc.)
3. The job's being physically strenuous

Poor Supervision	.85	1.6

1. Lack of support from your supervisor for what you need to do your job
2. Your supervisor's lack of competence
3. Your supervisor's lack of appreciation for your work
4. Your supervisor's having unrealistic expectations for your work

Discrimination	.48	1.2

1. Facing discrimination or harassment because of your race/ethnic background
2. Facing discrimination or harassment because you're a woman

[a] Scores ranged from 1=not at all concerned to 4=extremely concerned.

On average, the respondents were most concerned about the sense of overload on their jobs -- "having too much to do, the job's taking too much out of you, and having to deal with emotionally difficult situations".

To assess work rewards, we asked each respondent how rewarding a part of her job she found each of a series of job conditions. The six factors that comprise this scale, their composite items, the mean score for each factor, and the Cronbach alphas, are shown in Table 2. The six factors are: Helping Others, Decision Authority, Challenge, Supervisor Support, Recognition and Satisfaction with Salary.

In this sample, Cronbach's alpha for the Job-Reward Scale was 0.88, for the Job-Concern Scale, 0.89. The test-retest correlations over a three-month period were .87 for the Reward Scale and .81 for the Concern Scale. To measure overall Job Role Quality, we add the Job-Reward Scale score with the inverse of the Job-Concern Scale score.

Social support. The measure of social support used in this study is a measure of perceived availability of support. Various researchers (c.f. Cohen & Wills, 1985) have found that perceived availability of support, or of the adequacy of support, is the most consistent predictor of adult functioning. The measure is a 15-item scale, scored from 1 to 4 (Not at all true to Extremely true). Respondents are asked to what extent each of the 15 items is true of their network of important others. The items were based on Weiss's (1974) conceptualization of the functions of social relationships: sharing of concerns, intimacy, opportunity for nurturance, reassurance of worth and assistance/guidance. The Cronbach's alpha for this scale is .91. The items comprising this scale are shown in Table 3.

Psychological distress. Psychological distress was assessed by the depression and anxiety subscales of the SCL-90-R (Derogatis, 1975). We combined the depression and anxiety subscales because they were correlated .80 with each other, and showed similar patterns of relationship to other variables of interest. The SCL-90-R has high levels of both internal consistency and test-retest reliability. In this sample, Cronbach's alpha was .88 for depression and .89 for anxiety.

Longitudinal Analysis Procedures

As in most research in the social sciences, studies of work stress and social support have relied primarily on cross-sectional analyses. While this work has advanced our understanding of social support, a longitudinal research design offers a more rigorous test of our theoretical models, by examining the relationship between change in one variable, and change in another variable.

While there has been considerable debate about the best statistical techniques for measuring change, statisticians have recently begun to agree that the proper characterization of change over time had to be preceded by the adoption of an individual growth model perspective (Bryk & Raudenbush, 1987; Rogosa, et al., 1982; Rogosa & Willett, 1985;

Table 2: Job Reward Factors

Factor	Cronbach's Alpha	Average Score[a]
Helping Others	.69	3.2
1. Helping others		
2. Being needed by others		
3. Having an impact on other people's lives		
Decision Authority	.82	3.1
1. Being able to make decisions on your own		
2. Being able to work on your own		
3. Having the authority you need to get your job done without having to go to someone else for permission		
4. The freedom to decide how you do your work		
Challenge	.78	3.1
1. Challenging or stimulating work		
2. Having a variety of tasks		
3. The sense of accomplishment and competence you get from doing your job		
4. The job's fitting your interests and skills		
5. The opportunity for learning new things		
Supervisor Support	.87	2.8
1. Your immediate supervisor's respect for your abilities		
2. Your supervisor's concern about the welfare of those under him/her		
3. Your supervisor's encouragement of your professional development		
4. Liking your immediate supervisor		
Recognition	.68	2.6
1. The recognition you get		
2. The appreciation you get		
Satisfaction with Salary	.72	2.4
1. The income		
2. Making good money compared to other people in your field		

[a] Scores ranged from 1=not at all rewarding to 4=extremely rewarding.

Table 3: Perceived Availability of Social Support Items

1. The people I care about make me feel that they care about me.

2. The people important to me accept me as I am.

3. I enjoy the time I spend with the people who are important to me.

4. The people I care about seem interested in how I'm doing.

5. The people I care about come through for me when I need them.

6. When something's on my mind, just talking with the people I know can make me feel better.

7. The people who are important to me encourage me when I feel discouraged or down.

8. I enjoy talking about everyday kinds of things with the people I care about.

9. The people I know are good sources of useful information when I need it.

10. The people I care about help me out.

11. When I need someone to help me out, I can usually find someone.

Scores ranged from 1=not at all true to 4=extremely true

Willett & Singer, 1989). This perspective uses two stages of analyses. First, within-individual analyses are conducted to estimate the change over time in a given variable, for each individual respondent. Then these estimates of within-individual change are used in regression analyses to investigate whether change in the independent variables is associated with changes in the outcomes.

RESULTS

Characteristics of Jobs in the Helping Professions

Most of the licensed practical nurses in this sample worked in hospitals or nursing homes. Social workers were employed in various subareas of social work practice, including child protective services, psychiatric social work, medical social work, and work in the schools, community mental health centers, the courts or with the elderly. The social workers and licensed practical nurses in this sample described their jobs as offering limited opportunities for advancement, and involving heavy workloads and overtime hours. Many social workers had to deal on a regular basis with families in crisis, incidents of child abuse, individuals with severe emotional problems, suicidal clients, or families responding to the illnesses or deaths of loved ones. Licensed practical nurses were involved in physical caretaking of individuals in hospitals and nursing homes. They often had to deal with issues of death and dying, and with the emotional needs of their patients and of their families. Both social workers' and licensed practical nurses' jobs sometimes provided limited resources, restricted their decision authority, or involved unsupportive supervisors, discrimination, or exposure to illness or injury.

Is Change Over Time in Job Experiences Related to Change Over Time in Social Support?

To examine this question, we fit a regression model for predicting change over time in the availability of social support, with change over time in job role quality and the availability of support in year one as the predictors. The model was significant ($R^2 = 0.06$; $p < 0.01$). We found that social workers and nurses who had lower levels of support in year one were more likely to show an increase in social support over the course of the study. This may be partially an artifact of the availability of social support scale, since about 10% of the sample received the highest possible score, and had nowhere to go but down, while no respondent received the lowest possible score.

More importantly, we found that there was no relationship between change over time in job role quality and change over time in social support, after considering the effects of support in year one.

Is There a Direct Relationship Between Change Over Time in Social Support and Change Over Time in Psychological Distress?

To examine this question, we fit a regression model for predicting change over time in psychological distress, with change over time in job role quality, change over time in the availability of social support, level of psychological distress in year one, and socioeconomic

status (SES) as the predictors. We included level of psychological distress in year one as a predictor because there is a significant relationship between distress in year one and change over time in distress. We included SES as a predictor, because we have found SES to be associated with psychological distress (Barnett, Marshall, & Singer, forthcoming).

As Table 4 indicates, we found that change in the availability of social support is related to change in psychological distress, after controlling for change in job role quality, distress in year one, and SES (R^2 = .37, p < .01).

Does Change Over Time in Social Support Buffer the Relationship Between Change Over Time in Job Experiences and Change Over Time in Psychological Distress?

To examine this question, we added the interaction of change over time in job role quality and change over time in the availability of social support to the model tested in Table 4. If change in social support acts as a buffer of the relationship between change in job role quality and change in psychological distress, then adding this interaction term would result in a significant increment to R^2 between the first model and the second model. As Table 5 indicates, adding the interaction term did not result in a significant increment to R^2 (R^2 = .38; Change in R^2 = .01, ($F_{(1,285)}$ = 2.69, NS).

If we examine the t-test of the parameter estimate for the interaction term, we find that the term approached significance at p = .10 (not shown). However, when we examine the nature of the relationship between these three variables (see Figure 1), we find that social support does not act as a buffer. Instead, we find that, when support decreases over time, psychological distress increases slightly, regardless of the change in job role quality. When support increases over time, improving job role quality is associated with greater reductions in psychological distress.

IMPLICATIONS

In this paper, we have examined the perceived availability of social support from one's network of important others. We also examined the quality of one's experiences at work, which include concerns about workload and hazard exposure, as well as rewards from challenging work and the opportunity to exercise decision authority, and the rewards and concerns about one's supervisor. We found that change over time in job role quality was unrelated to change over time in the perceived availability of social support. We suspect this reflects the importance of one's family and friends, rather than one's supervisors or co-workers, to the perception of social support. Relationships with family and friends are less likely to change as a function of one's experiences on the job than might relationships with supervisors and co-workers.

When we turned to the question of the relationship between change in social support and change in distress, we found that change in the availability of social support was significantly related to change in psychological distress. For social workers and LPNs, increases in the availability of social support is associated with decreases in psychological

Table 4: Relationship Between Change in Social Support and Change in Psychological Distress

Predictors	B^a	SE^b	B^c
SES	-.05	.07	-.04
Initial Level of Psychological Distress	-2.49^{**}	.25	-.47
Change in Job Role Quality	-1.02	.57	-.08
Change in Social Support	-6.21^{**}	1.04	-.29

$R2 = .37$

Note. N = 291 with non-missing data on all variables.

a unstandardized regression coefficients

b standard error of unstandardized regression coefficients

c standardized regression coefficients

** $p < .01$

Table 5: Interaction-Effects Model of

the Relationship Between Change in Social Support

Change in Job Role Quality and Change in Psychological Distress

Predictors	B^a	SE^b	B^c
SES	-.05	.07	-.03
Initial Level of Psychological Distress	-2.45^{**}	.25	-.47
Change in Job Role Quality	-1.19^{*}	.58	-.10
Change in Social Support	-5.93^{**}	1.05	-.27
Change in Job Role Quality x Change in Support	-5.97	3.64	-.08

$R2 = .38$; Change in $R^2 = .01$ ($F_{(1,285)} = 2.69$, NS)

Note. N = 291 with non-missing data on all variables.

a unstandardized regression coefficients

b standard error of unstandardized regression coefficients

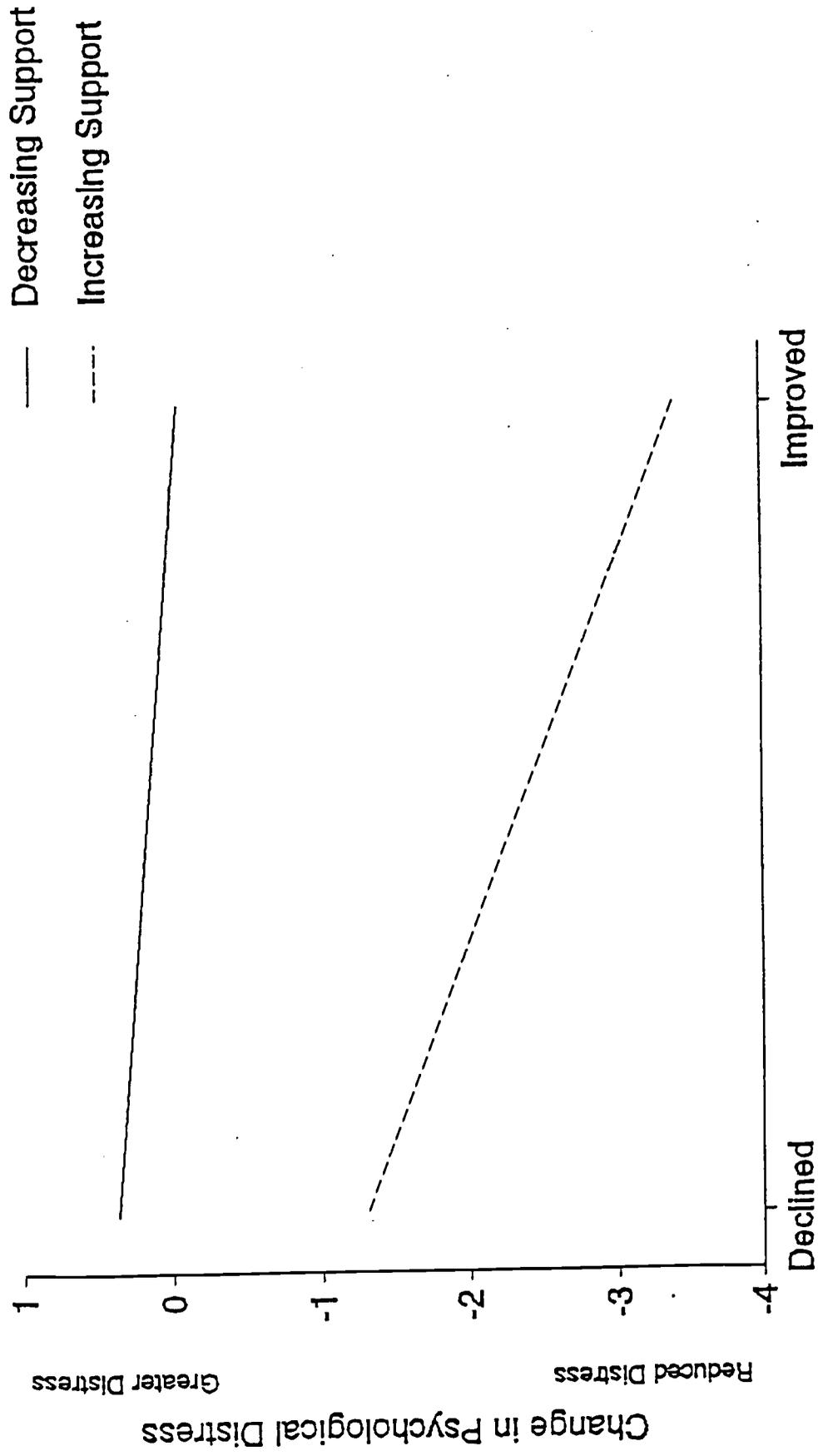c standardized regression coefficients

* $p < .05$; ** $p < .01$

Figure 1: Change Over Time in Psychological Distress, Job Role Quality and Social Support

distress. However, we did not find that change in social support acts as a buffer of the relationship between change in job role quality and change in psychological distress. Even if we accept a finding that only approaches significance, we still find that the relationship between these three variables is not that of a buffer. Rather, we found that declining social support is so powerful that change over time in job role quality (which, in general, is associated with change in distress) has little relationship to change in psychological distress. However, when both social support and job role quality improve, there is a synergy effect, so that the positive impact of each on distress is enhanced.

These findings are interesting in light of the body of research on work stress and social support. A series of studies on work stress and work-related support (House & Wells, 1978; LaRocco, House & French, 1980) among men did find a buffering effect for social support. It is possible that, in the analyses presented in this paper, we have found only direct effects because we are measuring the perceived availability of social support from one's network of important others, rather than work-related support. However, using the same measure of work-related support used by House and colleagues, we found only direct effects among this same sample of social workers and LPNs (Marshall & Barnett, forthcoming). It seems more likely that the role of social support isdifferent for men and women, or that the role of social support is different for women in the helping professions, which emphasize the relationship between worker and client or patient. Further research will be necessary to shed light on these questions.

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