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ABSTRACT

Research into the experiential determinants of stress-related health measures has progressed dramatically in the last 10 years. Examination of the relationship between life events and psychological distress has been redirected from an early emphasis on major life events to a focus on minor events, i.e., the positive and negative happenings in day-to-day living. This study examined the relationships between rewards and concerns in the employee role and three health measures: psychological distress; psychological well-being; and self-reports of physical symptoms. Subjects (N=403) were a probability sample of health-care providers, i.e., licensed practical nurses and social workers, who varied in partnership and parental status. Subjects were interviewed in their homes or offices about their major social roles, psychological distress, well being, and physical health. The results indicated that the rewarding aspects of day-to-day life in the employee role have an important effect on health measures and that the relationship of work rewards and work concerns differ both for different health measures and for women in different family-role statuses. Work rewards and work concerns have main effects on psychological distress and physical symptoms, i.e., high work rewards buffered the negative effects of high work concerns on these two measures. For each health measure, the relationship between work rewards and concerns was conditioned by family role status. The effect of work rewards and concerns was conditioned by partnership status; the effect on psychological distress was conditioned by parental stress. (Author/ABL)

Abstract

The relationships between rewards and concerns in the employee role and three health measures (psychological distress, i.e., anxiety and depression, psychological well-being, and self-reports of physical symptoms) were examined in a probability sample of 403 women health-care providers -- licensed practical nurses and social workers -- who varied in partnership and parental status. The sample was a disproportionate, stratified, random sample drawn from the registries of these two professions. Within each occupation, the sample was stratified on race, partnership status, and parental status. Regression analyses were performed to address three questions: (1) do rewards and concerns in the employee role have main or interactive effects on health measures?; (2) do these relationships differ for different health measures?; and (3) do these relationships differ for women in different partnership and parental statuses? The major findings of this study are: (1) the rewarding aspects of day-to-day life in the employee role have an important effect on health measures; (2) the relationship of work rewards and work concerns differs both for different health measures and for women in different family-role statuses. Work rewards and work concerns have main effects on psychological well-being, and interactive effects on psychological distress and physical symptoms, i.e., high-work rewards buffered the negative effects of high work concerns on these two measures. For each health measure, the relationship between work rewards and concerns was conditioned by family-role status. The effect of work rewards and concerns on physical symptoms was conditioned by partnership status; the effect on psychological distress was conditioned by parental status.

This paper examines the relationships between rewards and concerns experienced in the paid-employee role and stress-related measures in a probability sample of employed women who vary in partnership and parental status. Research into the experiential determinants of stress-related health measures has progressed dramatically in the last ten years. To illustrate, examination of the relationship between life events and psychological distress has been redirected from an early emphasis on major life events (Dohrenwend & Dohrenwend, 1974; Holmes & Rahe, 1967) to a focus on minor events, i.e., the positive and negative happenings in day-to-day living (Kanner, Coyne, Schaefer, & Lazarus, 1981; Lewinsohn & Talkington, 1979). This shift in direction has proved fruitful, yielding stronger relationships with stress measures and providing greater theoretical clarity to the stress-illness relationship. The present paper extends this line of inquiry by reporting on the relationship between both negative aspects (concerns) and positive aspects (rewards) associated with a particular social role (i.e., the paid-employee role) and three health measures -- psychological distress, well-being, and physical symptoms.

There is no consensus about the relative contribution of concerns/hassles and rewards/uplifts to health measures[2]. Barnett and Baruch (1985; Baruch & Barnett, 1986) report that the quality of experience in roles, as measured by rewards minus concerns, is a better predictor of well-being and psychological distress than is either rewards or concerns alone. The use of a difference score, however, implies that rewards and concerns have equal weights and that the effects of rewards and concerns do not interact, assumptions that were not tested directly. In contrast, on the basis of several studies, DeLongis,

Coyne, Dakof, Folkman, and Lazarus (1982) drew the counterintuitive conclusion that "there is at present little support for the notion that positive events in any form protect, enhance, restore or damage health" (p. 132).[3] Unfortunately, conceptual and methodological problems in both of the above sets of studies, which are discussed below, limit our understanding of this issue.

Early writings on the relationship between hassles and uplifts posited that uplifts could prevent and/or attenuate the negative effect of hassles (Kanner et al, 1981). In other words, positive experiences might have not only main but interactive effects on stress reactions, whereby in the presence of positive experiences, the effect of negative experiences on stress reactions might be reduced. Although both the main effects and the interactive-effects models were suggested, only the main-effects model, was tested. Kanner et al (1981) report that "hassles ...proved to be a better predictor of symptoms than uplifts in all of the regression analyses generated for the whole sample, and for women and men separately" (p. 18). This conclusion was based on multiple regression analyses, in which only main effects were tested. Given the high correlation (r = .51) between hassles and uplifts, it may not have been possible to fully separate out the effect of hassles from that of uplifts. Kanner et al. (1981) do not address the issue of colinearity between hassles and uplifts, yet because of the correlation between the two, entering them into the same regression model complicates interpretation of the results. Despite these problems, recent studies utilizing the Hassles and Uplifts Scale (DeLongis, 1985) have reported findings only on hassles (see, for example, DeLongis, Folkman, & Lazarus, 1988; Zika & Chamberlain, 1987).

Since the main-effects model has not been adequately tested and the interaction model has never been tested, the nature of the relationship between concerns and rewards and psychological distress, well-being, and physical symptoms remains unclear. Specification of this relationship is of great theoretical and practical interest and is the major focus of this paper.

In addition, previous research suggests that the effect of rewards and concerns on health measures is content dependent. At least for women, rewards and concerns in certain domains of life have more impact on well-being and distress than concerns or rewards occurring in other domains (Baruch & Barnett, 1986; Kandel, Davies, & Ravies, 1985). For example, women who report more concerns than rewards in their role of mother experience higher levels of anxiety than women who report more concerns than rewards in their role as paid employee (Barnett & Baruch, 1985). The rewards and concerns scores analyzed in this paper are based on responses to 25 work rewards and to 25 work concerns.

This approach represents an advance over other scales which reflect total frequency of positive and negative happenings, i.e., the scores are independent of the content. To illustrate, the Hassles and Uplifts Scale (DeLongis, 1985) asks subjects to indicate the degree of hassle or uplift they experienced today in connection with 53 items. These items touch on such matters as work-related woes, social relationships, and difficulties with one's partner/spouse. Total scores are computed across all 53 items. However, the number of items per social role varies enormously. For example, there is only one item, i.e., Your spouse, on which to indicate how much of a hassle or

how much of an uplift your marriage was for you today. Similarly there is only one item, i.e., Your child(ren), to assess the hassles and uplifts associated with being a mother. In contrast, there are seven items that reflect aspects of the paid employee role[4]. Moreover, subjects are asked to respond only to those items for which an uplift or hassle occurred in the last month. Since no attempt is made to adjust the total scores to reflect the number of roles occupied, i.e., the number of items for which it was possible to experience a hassle or an uplift, total scores represent vastly different experiences. For example, a non-employed person would responded to a total of 46 items, whereas an employed person would responded to 53 items. It is not clear what impact these differences have on the general conclusions drawn about the effect on health measures of scores on this scale. However, given these conceptual and methodological problems, theory and research on the stress-illness relationship will be advanced if we assess the effects among role occupants of role-specific rewards and concerns.

Examining role-specific rewards and concerns also allows us examine whether rewards and concerns behave differently in predicting different health measures. To illustrate, concerns may be relatively more important than rewards in predicting distress measures, whereas rewards and concerns may be equally important in predicting well-being measures.

Finally, the study of work rewards and concerns allows us to ask such important questions as: How is the relationship between work-role rewards and concerns and health measures affected by women's partnership and parental status? For example, among employed women with children, who may be experiencing distress due to their parental role, work concerns may have a

more devastating effect on psychological distress than they would have on the psychological distress of employed, childless women.

In sum, this paper has two major aims: to examine, in a sample of employed women, the main and interactive effects of work rewards and work concerns on three health measures -- psychological distress, well-being, and physical symptoms; and to test whether these relationships differ for women who vary in partnership and parental status.

Method

Subjects

The sample consists of 403 women, ages 25 to 55, who were currently employed at least half time and who resided within a 25-mile radius of Boston. Subjects were drawn randomly from the registries of two health-care professions -- licensed practical nursing and social work. These occupations were selected on the basis of three criteria: (1) they were female occupations; (2) they were high-strain occupations, i.e., presumably characterized by high-job demand and low-job control; and (3) they had public licensure records, thereby allowing for the identification of populations from which to draw a random sample. The sample was stratified on race, partnership status[5] and parental status. (See Table One.) Data were collected from the fall of 1985 to the spring of 1986.

Insert Table One about here

Recruitment into the study proceeded in two steps. All potential subjects received a mailing that included a letter from the project directors and a

Table 1

Sample Design

Parental Status	Partnership Status			
	Partnered		Non-Partnered	
	LPN	SW	LPN	SW
Parent	59	64	42	64
Non-Parent	18	57	36	63

Note. N = 403.

description of the study. Potential subjects were then contacted by telephone and screened by a trained interviewer. If a potential subject belonged to a cell that was not already filled and met additional, primarily work-related, criteria she was interviewed for the study. The sampling design consisted of sixteen cells, defined by occupation, race, partnership and parental status. Some cells were filled quickly, e.g., white, licensed practical nurses (LPNs), who were partnered and had children. Other cells were rare in the population and hence, difficult to fill[6]. For example, among LPNs being partnered without children is unusual. If these women are partnered by the age of 25, the overwhelming likelihood is that they are also mothers. The additional work-related criteria included the following: all subjects had to be currently employed at least half-time in their respective field or in a related field, and had to have been working continuously at least half-time for at least a year in that occupation and for at least the past three months in their present job. Recruitment into the sample stopped when all but the rarest cells were filled and the number of potential subjects we could locate for those cells did not justify expenditure of the required resources.

1. Social workers. Recruitment letters were sent to 2288 female social workers within our sampling area. We received notification that 6 were deceased and 48 had moved out of the area. We, therefore, had a target population of 2234. Of these, 364 (16.3%) were never reached, primarily because they moved and had left no forwarding address. Our refusal rate was 2.7% of those contacted.

2. Licensed practical nurses. Recruitment letters were sent to 2720 female LPN's living in our sampling area. We received notification that 28 were

deceased and 47 had moved out of the area. We, therefore, had a target population of 2645. The registry was quite out of date; many of the addresses were from 1983 or earlier. Of these 2645, 49.5% were never reached, primarily because they had moved and left no forwarding address and/or did not have a phone and did not answer our letter requesting that they contact us. (If our recruitment letter was delivered and the screening interviewer was unable to locate a telephone number, two separate letters were sent providing the project's telephone number and often the screener's phone number and requesting that the potential respondent either contact us or provide us with a phone number at which we could reach her. We also went door-to-door to locate LPN's, but abandoned this effort when it became clear that most LPN's had moved and the results of our efforts did not warrant the expense.) Of LPN's with a listed phone number, only 12.2% could not be contacted. Our refusal rate was 4% of those LPN's that we contacted.

Procedures

Subjects were interviewed in their homes or offices by a trained interviewer. The interviews lasted about 2 hours and covered the rewards and concerns in each of the woman's major social roles, i.e., partner/non-partner, mother/non-mother, paid worker, daughter, friend, as well as indices of psychological distress, well-being, and physical symptoms. Data were also collected on such other stress-related topics as social supports, current levels of exercise, and substance use. Respondents were paid a fee of $10 for participating.

Measures

Work rewards and concerns. The rewards and concerns scales were constructed originally from data gathered during extensive interviews with 72 women, ages 35 to 55 (See Baruch & Barnett, 1986 for a full discussion). On the basis of response frequency, equal numbers of rewards and concerns items were used to construct scales. These scales were first used in a study of psychological well-being of women in the middle years, who varied in work and family status[7].

The rewards and concerns scales were modified somewhat for use in the current study. The sample for this project differed from the sample in the original study in several important ways: (a) the age range of the sample in the current study was 25 to 55, that of the original study was 35 to 55; (b) the original sample was all white,; and (c) the original study was not limited to workers in particular occupations. Thus, extensive pilot work was done to assess the adequacy of the items in the original version, and to identify new items for inclusion.

Subjects were instructed to think about their jobs as they are right now and to indicate on a 4-point scale to what extent, if at all, each of the items was rewarding (or of concern). For example, for the role of paid worker, each employed subject was asked how rewarding she found the pay she received and how much of a concern a lack of challenge was. Each subject received two scores for each social role: a reward score and a concern score.

In order to assess the reliability of these scales, both test-retest correlations and Cronbach alphas were computed. To determine test-retest reliability, a random sample of 35 women was reinterviewed by the same interviewer within 1-3 months of the wave 1 interview. For both work rewards and work concerns, the test-retest correlation was $\underline{r}$ = .88. Cronbach alpha for work rewards was .88; for work concerns, it was .89.

Psychological distress. Psychological distress was assessed by the anxiety and depression subscales of the SCL-90-R, a frequency of symptoms measure (Derogatis, 1975). Subjects indicated on 5-point scales (from 0 = not at all, to 4 = extremely) how often in the past week they were bothered by each of 10 symptoms of anxiety and 13 symptoms of depression. The decision to combine the scales into a psychological distress score was based on the high correlation ($\underline{r}$ = .80) between the scales and on the similarity in the pattern of correlations between the anxiety and depression scales and the other variables of interest in the study.

The SCL-90-R has high levels of both internal consistency and test-retest reliability. In this sample, coefficient alpha was .88 for depression and .89 for anxiety. These figures are similar to those reported by Derogatis (1983). Satisfactory test-retest correlations (.82 for depression and .80 for anxiety) have also been reported (Derogatis, 1983).

Psychological well-being. Well-being was assessed by responses to a 14 - item scale developed by the Rand Corporation (Davies, Sherbourne, Peterson, & Ware, 1985). Subjects were asked to respond on 6-point scales (from 0 = not at all to 6 = extremely) to such items as, "How often in the past month did

you feel relaxed and free of tension?" "How often in the past month did you expect in the morning to have an interesting day?"

In this sample, Cronbach's alpha was .94, which is essentially identical with the .96 figure given by Veit and Ware (1983), who also report a one-year test-retest correlation of $r = .64$.

Physical symptoms. Respondents were asked to indicate both how frequently in the past year they have had each of thirty symptoms. e.g., dizziness or feeling faint; chest pain; and respiratory congestion, sneezing or stuffy nose, and how much discomfort they were caused by each symptom in the past year. These scales were derived from measures developed by the Mind-Body Program at the Beth Israel Hospital, in consultation with Jane Lesser, an affiliate of that program. By multiplying the frequency of occurrence by the degree of discomfort for each symptom, we derived a total score for physical symptoms.

Results

Description of the Sample

The mean age of the sample was 39.5 years (sd = 7.4). Approximately half of the sample were partnered (n = 198, 49.1%), and roughly half were mothers (n = 229, 56.3 %). Sixty-two women (15.3%) were black, the remaining 344 (84.7%) were white. On average, the women have been working in their respective occupations for 11 years (range was from 2 to 35 years), and at their current jobs for 6 years. They worked on average 38 hours per week, and 80% worked the same schedule on a regular basis. The mean individual income was $24,400 (sd = $2,700).

Comparison of the two occupational groups indicated no significant differences on the work rewards and work concerns scales. Similarly, there were no significant differences between the two occupational groups on any of the three health measures. Using a dummy variable for occupation, a series of regression models was estimated to test for main and interactive effects of occupation on the three health measures. The main effect of occupation and the interactions between occupation and ses, race, age, and percapita income were non-significant across the three models. The two occupational groups were, therefore, combined for the analyses reported in this paper.

The women in this sample are healthy[8]. They report moderate levels of psychological distress ($\underline{X}$ = 1.3, $\underline{sd}$ = 1.1), moderately-high levels of well-being ($\underline{X}$ = 49.99, $\underline{sd}$ = 12.52), and low levels of physical symptoms[9] ($\underline{X}$ = 27, $\underline{sd}$ = 15).

Overview

The primary goal of the analyses was to test the hypothesis that work rewards, not just work concerns, affect health measures. To this end, with work rewards and work concerns as predictors, I tested both the main-effects of these variables and their interaction. In this way I determined whether the effect of work rewards differed by level of work concerns. The secondary goal was to test the hypothesis that family-role occupancy affected the relationship between work rewards and work concerns and health measures. To pursue this goal, I tested the main effects of partner and parent status and then examined the interaction of the status variables with the work reward and work concern variables. To generate these interaction terms, dummy

variables were created for parental status (0 = non-parent, 1 = parent) and partnership status (0 = non-partner, 1 = partner). In order to control for the relationship between background characteristics and the health measures, all models included the following control variables: socioeconomic status[10], age, race and percapita income.[11] To assess whether the relationship between health measures and work rewards and work concerns differed depending on family-role status, I separately included two three-way interaction terms: parent status x work rewards x work concerns, and partner status x work rewards x work concerns. The aim of these analyses is to determine the effect on health measures of work rewards alone and in interaction with work concerns, for employed women in general and for women who vary in partnership and parental status.

Intercorrelations: Work Rewards, Work Concerns, and the Health Measures

Tables Two and Three present the work-reward and work-concern items, their means and standard deviations. The four work-reward items with the highest

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Insert Tables Two and Three about here

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mean scores were: helping others; the sense of accomplishment and competence you get from doing your job; being able to work on your own; and having an impact on other people's lives. The four work-concern items with the highest mean scores were: having too much to do; having to deal with emotionally difficult situations; having little chance for the advancement you want or deserve; and limited opportunity for professional or career development.

Table 2

Work-Reward Items: Means and Standard Deviations

Item	M	SD
Helping others (24)	3.42	.69
Being able to make decisions on your own (14)	3.30	.72
The freedom to decide how to do your work (20)	3.24	.74
Being able to work on your own (4)	3.24	.75
Having an impact on other people's lives (22)	3.23	.71
Having hours that fit your needs (11)	3.23	.84
Liking the people you work with (1)	3.22	.71
Being needed by others (8)	3.13	.77
Having a variety of tasks (10)	3.12	.79
The sense of accomplishment and competence you get from doing your job (16)	2.99	.79
The job's fitting your interests and skills (18)	2.99	.80
Having the authority you need to get your job done without having to go to someone else for permission (17)	2.98	.86
Your immediate supervisor's concern about the welfare of those under him or her (15)	2.98	.86
Challenging and stimulating work (2)	2.93	.80
Your immediate supervisor's respect for your abilities (7)	2.93	.93
Liking your immediate supervisor (12)	2.92	.92

Table 2 continued

Item	M	SD
The opportunity for learning new things (23)	2.91	.86
The job security (5)	2.80	.90
The appreciation you get (19)	2.75	.80
Having an impact on what happens at your workplace (25)	2.75	.88
Your supervisor's encouragement of your professional development (21)	2.61	.97
Having the resources you need to get the job done to your satisfaction (9)	2.60	.81
The recognition you get (6)	2.53	.83
Making good money compared to other people in your field (13)	2.45	.93
The income (3)	2.31	.80

Note. N = 403.

Table 3

Work-Concern Items: Means and Standard Deviations

Item	M	SD
Having too much to do (11)	2.43	.94
Having to deal with emotionally difficult situations (23)	2.35	.93
Having little chance for the advancement you want or deserve (2)	2.33	1.12
Limited opportunity for professional or career development (22)	2.23	1.04
Having to juggle conflicting tasks or duties (9)	2.22	.88
The job's taking too much out of you (17)	2.15	.93
Being dissatisfied with the income (10)	2.13	.97
The physical conditions on your job (noise, crowding, temperature, etc.) (15)	2.05	.97
Having to do tasks you don't feel should be a part of your job (6)	1.91	.91
The job's not using your skills (3)	1.86	.96
The lack of respect at your workplace for people who do your job (5)	1.76	.91
Other people being dependent on you (8)	1.76	.85
Being dependent on other people to get your own job done (24)	1.76	.79

Table 3 continued

Item	M	SD
Being exposed to illness or injury (7)	1.74	.88
Having to do things against your better judgement (20)	1.74	.72
Your supervisor's lack of competence (that is, your immediate supervisor) (4)	1.66	.95
Lack of support from your supervisor for what you need to do your job (25)	1.65	.88
The possibility of unemployment (16)	1.64	.85
The job's dullness, monotony, lack of variety (1)	1.64	.80
The job s being physically strenuous (21)	1.61	.89
Your work schedule (14)	1.56	.78
Your supervisor's lack of appreciation for your work (12)	1.54	.81
Your supervisor's having unrealistic expectations for your work (18)	1.53	.81
Facing discrimination or harassment because you're a woman (19)	1.32	.62
Facing discrimination or harassment because of your race or ethnic background (13)	1.15	.47

Note. N = 403.

As expected, work rewards and work concerns were negatively correlated ($r = -.57$, $p < .001$)[12]. Thus, women who experienced more rewards in their paid-work role reported fewer concerns in that role, on average, than women who did not experience more rewards.

Before examining the relationship between work rewards and work concerns and the three health measures, it is important to question whether the three health variables are assessing the same or different dimensions. The correlations between the health measures were: -.57 between psychological distress and well-being; -.30 between well-being and physical symptoms; and .35 between psychological distress and physical symptoms. Since these measures assess reasonably independent aspects of physical and mental health, it is feasible to inquire separately about the relationship between each of them and work rewards and work concerns.

As can be seen in Table Four, work rewards and work concerns

Insert Table Four about here

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were correlated in the expected direction with the three health measures (r's ranged from -.31 to .34). Thus, there is a moderate and significant tendency for psychological distress and physical symptoms to be associated with a pattern of high-work concerns and low-work rewards; psychological well-being, in contrast, is associated with the opposite pattern, i.e., low- work concerns and high-work rewards.

Table 4

Correlations Between Work Rewards, Work Concerns and the Three Health Measures

	Psychological Distress	Psychological Well-Being	Physical Symptoms
Work Rewards	-.34***	.33***	-.18***
Work Concerns	.34***	-.31***	20***

Note. N = 403..

*** p < .001.

Multiple Regression Analyses: Work Rewards, Work Concerns, and Health Measures

For each of the three health measures, a series of multiple regression models was estimated using work rewards, work concerns, and the interaction between work rewards and work concerns as predictors.

Psychological distress. As can be seen in Table Five, the main-effects model was significant, ($F(6, 365) = 12.92$, $p < .001$). Both work rewards and work concerns had significant independent effects on psychological distress. The interaction model was also significant, ($F(7, 364) = 11.83$, $p < .001$),

Insert Table Five about here

and the interaction term (i.e., work rewards x work concerns) was significantly associated with psychological distress.[13] Inspection of Figure One shows that the effect of work concerns on psychological distress is a function of the level of work rewards. Under conditions of high-work concerns[14], work rewards buffer the negative effects of work concerns

Insert Figure One about here

on psychological distress: only the combination of high concerns and low rewards is associated with notably elevated psychological distress.

Psychological well-being. The same series of regression models was estimated using psychological well-being as the health variable[15]. As Table Five indicates, the main-effects model was significant ($F(6, 365) = 11.12$, p

Table 5

Main Effects and Interaction Models of Work Rewards and Work Concerns on Health Measures

	Psychological Distress			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]	B	SE
Socioeconomic Status	.20	.29	.23	.29
Age	-.08	.10	-.10	.10
Race	-6.10**	1.97	-6.29**	1.96
Percapita Income	.05	.07	.04	.07
Work Rewards	-5.63**	2.05	4.37*	2.12
Work Concerns	8.77***	2.02	7.88***	2.05
Work Rewards X Work Concerns			-6.59*	3.10
R^2	.18		.19	

Table 5 continued

	Well-Being			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]		SE
Socioeconomic Status	-.80**	.25	-.81**	.25
Age	-.03	.09	-.03	.09
Race	2.91	1.70	2.94	1.71
Percapita Income	.10	.06	.10	.06
Work Rewards	6.22***	1.77	6.06**	1.85
Work Concerns	-5.70**	1.75	-5.58**	1.79
Work Rewards X Work Concerns			.84	2.70
R^2	.16		.16	

Table 5 continued

	Physical Symptoms			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]	B	SE
Socioeconomic Status	-0.000	.000	-0.000	.000
Age	-0.000	.000	-0.000	.000
Race	-0.002	.000	-0.002	.002
Percapita Income	.000	.000	.000	.000
Work Rewards	-.004	.002	-.003	.002
Work Concerns	.004	.002	.003	.002
Work Rewards X Work Concerns			-.007*	.004
R^2	.06		.07	

N = 403.

a Unstandardized regression coefficients.

b Standard error.

* $p < .05$; ** $p < .01$; *** $p < .001$.

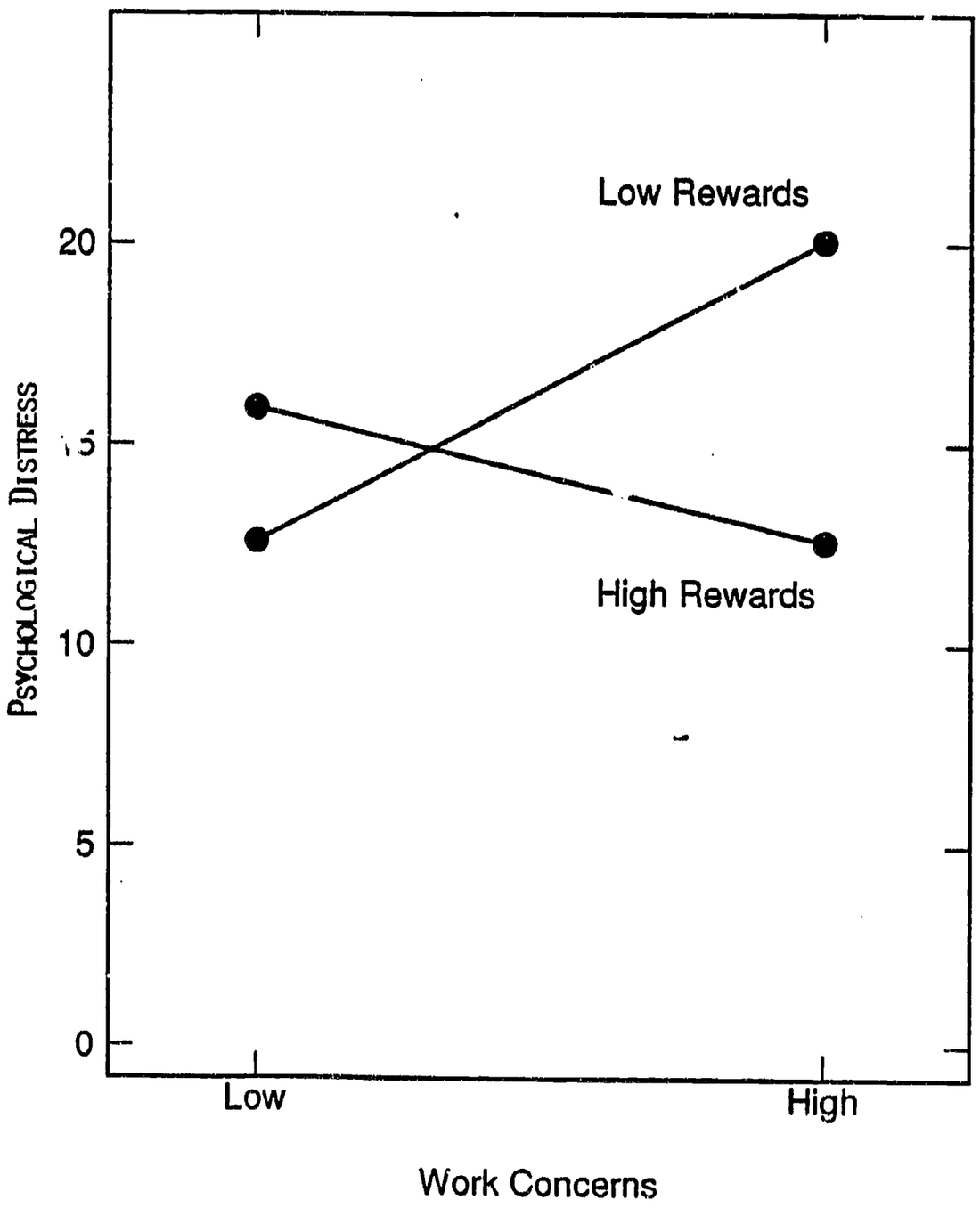

FIGURE 1: WORK CONCERNS, WORK REWARDS, AND PSYCHOLOGICAL DISTRESS

<.001). Work rewards and work concerns were each significantly associated with psychological well-being. As examination of the regression coefficients indicates, the effects of work rewards and work concerns on psychological well-being were roughly equal, but opposite.[16] In other words, well-being can be affected equally by increasing work rewards or by decreasing work concerns. With respect to the interaction model, the interaction term (work rewards x work concerns) was not significant, that is, the effect of work rewards did not differ by level of work concerns.

Physical symptoms. As can be seen in Table Five, the main-effects model was significant, ($F(6, 365) = 3.95$, $p < .001$), however, the significance levels for both work rewards and work concerns failed to reach conventional levels ($B = -3.71$, $p = .11$; $B = 4.46$, $p = .06$, respectively). The interaction model was also significant ($F(7, 364) = 4.00$, $p < .001$), as was the work rewards x work concerns interaction term.[17] Examination of Figure Two shows that, once again, work rewards buffer the negative effects of work concerns on physical symptoms; when work concerns are high[18], low-work rewards are associated with higher physical symptoms than are high-work rewards.

Insert Figure Two about here

The Effect of Family-Role Status on the Relationship of Work Rewards and Work Concerns to Health Measures

Do the relationships between work rewards and concerns and health measures differ by an employed woman's partnership or parental status? In order to

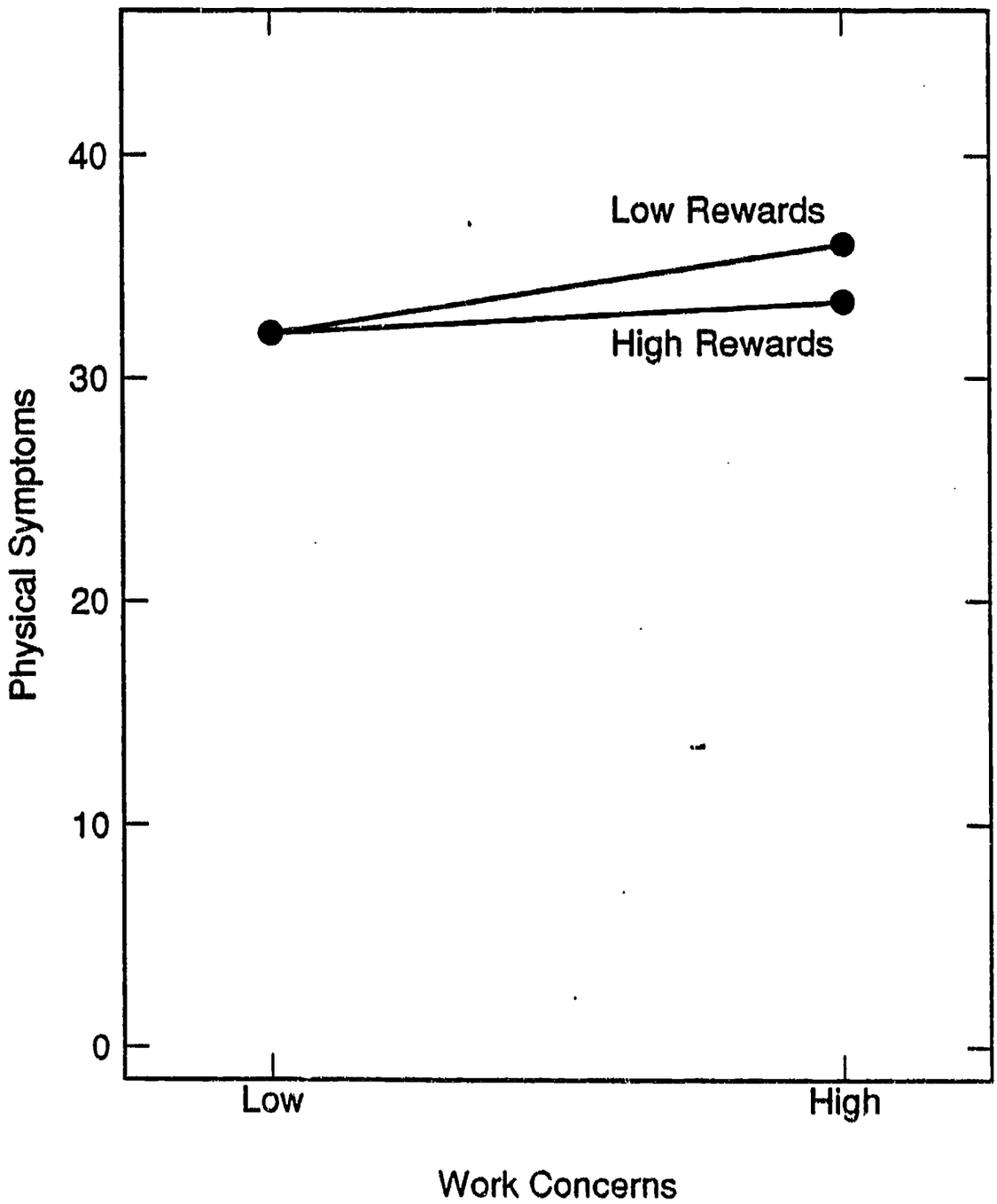

FIGURE 2: WORK CONCERNS, WORK REWARDS AND PHYSICAL SYMPTOMS

answer this question, a series of regression models was estimated for each health measure. The main-effects models included dummy variables for partner and parent status, which were added to the set of predictors included in the previously discussed regression models, namely: SES, age, race, percapita income, work rewards, work concerns, and the interaction term, work rewards x work concerns. In addition to these predictors, the interaction model included four two-way interaction terms as predictors (work rewards x parental status, work rewards x partnership status, work concerns x parental status, work concerns x parental status) and two three-way interaction terms: work rewards x work concerns x partnership status and work rewards x work concerns x parental status[19]. Table Six presents the results.

Insert Table Six about here

Psychological distress. Neither partner status nor parent status were significantly associated with psychological distress. Although not shown in the Table Six, none of the two-way interaction terms between family-role status and the work-role quality scores was significant. However, the three-way interaction term, work rewards x work concerns x parental status, was significant. The effect of work concerns and work rewards on employed women's level of psychological distress depends on whether they have children or not, as can be seen in Figure Three. Among employed women without children, psychological distress is low regardless of work rewards and work concerns. Among employed women with children, however, the relationship between psychological distress and work rewards and concerns is significant and

Table 6

Main Effects and Interaction Models of Partner Status, Parent Status, Work Rewards and Work Concerns on Health Measures

	Psychological Distress			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]	B	SE
Socioeconomic Status	.26	.29	.12	.29
Age	-.14	.16	-.12	.11
Race	-.6.48**	1.98	-5.98**	1.96
Percapita Income	.08	.08	.09	.08
Work Rewards	-.4.38*	2.12	-4.59*	2.11
Work Concerns	7.95***	2.07	7.82***	2.05
Work Rewards X Work Concerns	6.67*	3.10	-4.03	3.19
Partner	-1.16	1.44	.08	1.56
Parent	1.51	1.96	2.87	2.05
Partner X Work Reward X Work Concerns			8.88	5.78
Parent X Work Rewards X Work Concerns			12.02*	5.78
R^2	.19		.21	

Table 6 continued

	Well-Being			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]	B	SE
Socioeconomic Status	-.80**	.25	-.73**	.25
Age	-.04	.10	-.05	.10
Race	3.43*	1.70	3.37*	1.70
Percapita Income	.10	.07	.10	.07
Work Rewards	5.91**	1.83	6.18***	1.82
Work Concerns	-5.14**	1.78	-4.81**	1.78
Work Rewards X Work Concerns	1.15	2.67	.83	2.77
Partner	3.79**	1.24	2.45	1.35
Parent	.71	1.69	1.15	1.77
Partner X Work Reward X Work Concerns			-13.38*	5.43
Parent X Work Rewards X Work Concerns			3.80	5.00
R^2	.21		.19	

Table 6 continued

	Physical Symptoms			
	Main-Effects Model		Interaction Model	
Predictors	B[a]	SE[b]	B	SE
Socioeconomic Status	.000	.000	-.000	.000
Age	-.000*	.000	-.000*	.000
Race	.000	.000	-.003	.002
Percapita Income	-.003	.002	.000	.000
Work Rewards	-.003	.002	-.003	.002
Work Concerns	.004	.002	.003	.002
Work Rewards X Work Concerns	-.007*	.003	-.006	.004
Partner	-.001	.002	.000	.002
Parent	.004	.002	.004	.002
Partner X Work Reward X Work Concerns			.017**	.007
Parent X Work Rewards X Work Concerns			-.004	.007
R^2	.08		.10	

N = 403.

a Unstandardized regression coefficients.

b Standard error.

* p < .05; ** p < .01; *** p < .001.

interactive. For these women, high-work concerns are associated with more distress and high-work rewards buffer the negative effect of work concerns.

Insert Figure Three about here

Well-being. Partner status was significantly associated with well-being, parent status was not. On average, partnered women enjoy higher well-being than non-partnered women. The interaction model was also significant, $F(11, 363) = 7.60$, $p < .001$). Again, none of the two-way interaction terms between parent or partner status and work rewards and work concerns was significant. However, the three-way interaction, partner status x work rewards x work concerns was significant. The data indicate that partner status had an effect on the relationship between work rewards and work concerns only when work rewards were high[20], as can be seen in Figure Four. Both partnered and non-partnered women report high well-being when their jobs are high in rewards

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Insert Figure Four about here

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and low in concerns. However, the well-being of partnered women was also high when work concerns were high. The well-being of partnered compared to non-partnered women is less vulnerable to the negative effects of high-work concerns, provided that their work is experienced as high in rewards. Thus, these employed women enjoy a double mental-health advantage from having a rewarding job. Not only is their well-being high, but their work rewards buffer the negative well-being effects of their work concerns.

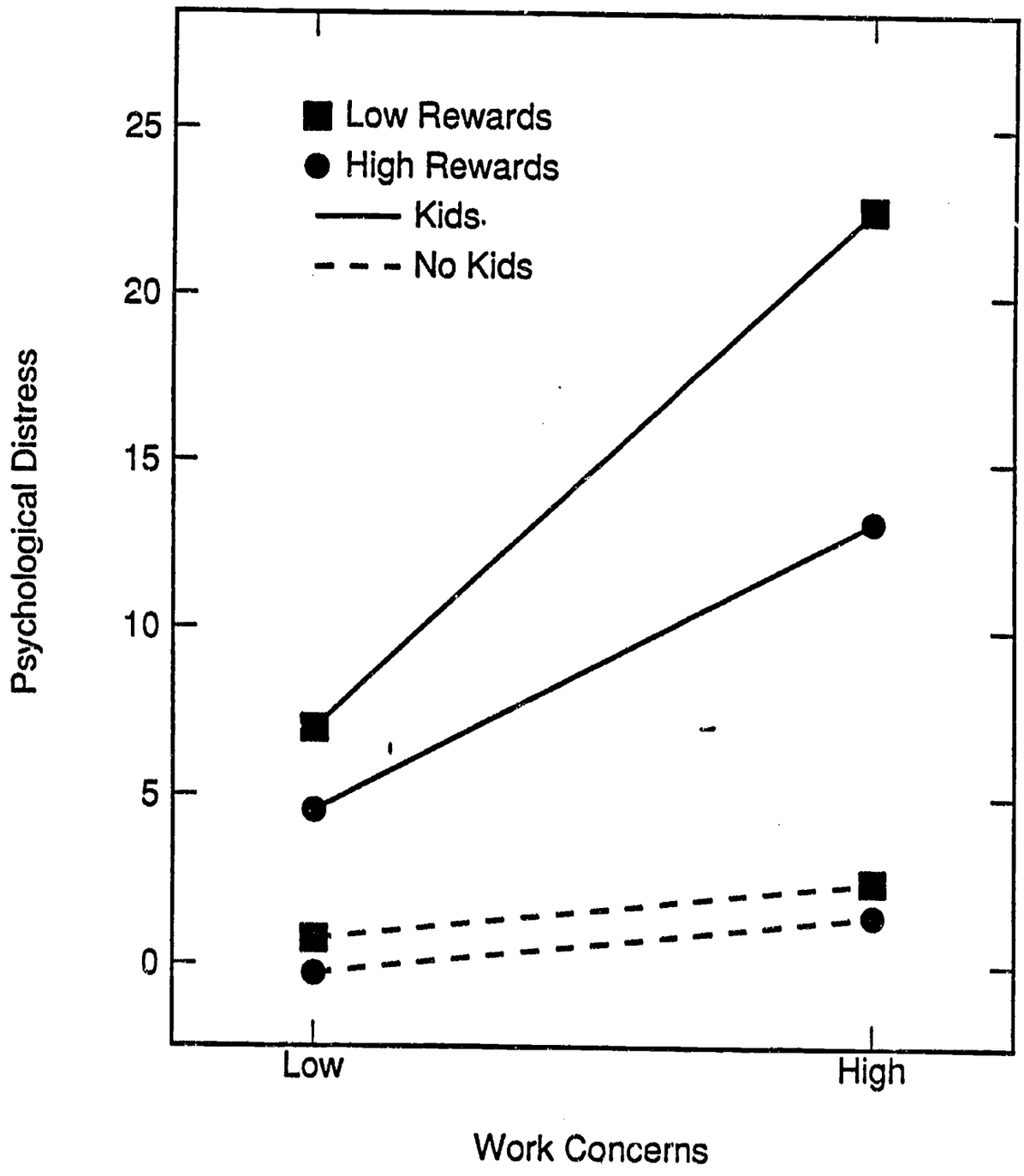

FIGURE 3: EFFECT OF PARENTAL STATUS ON THE RELATIONSHIP BETWEEN PSYCHOLOGICAL DISTRESS, [illegible] REWARDS AND WORK CONCERNS

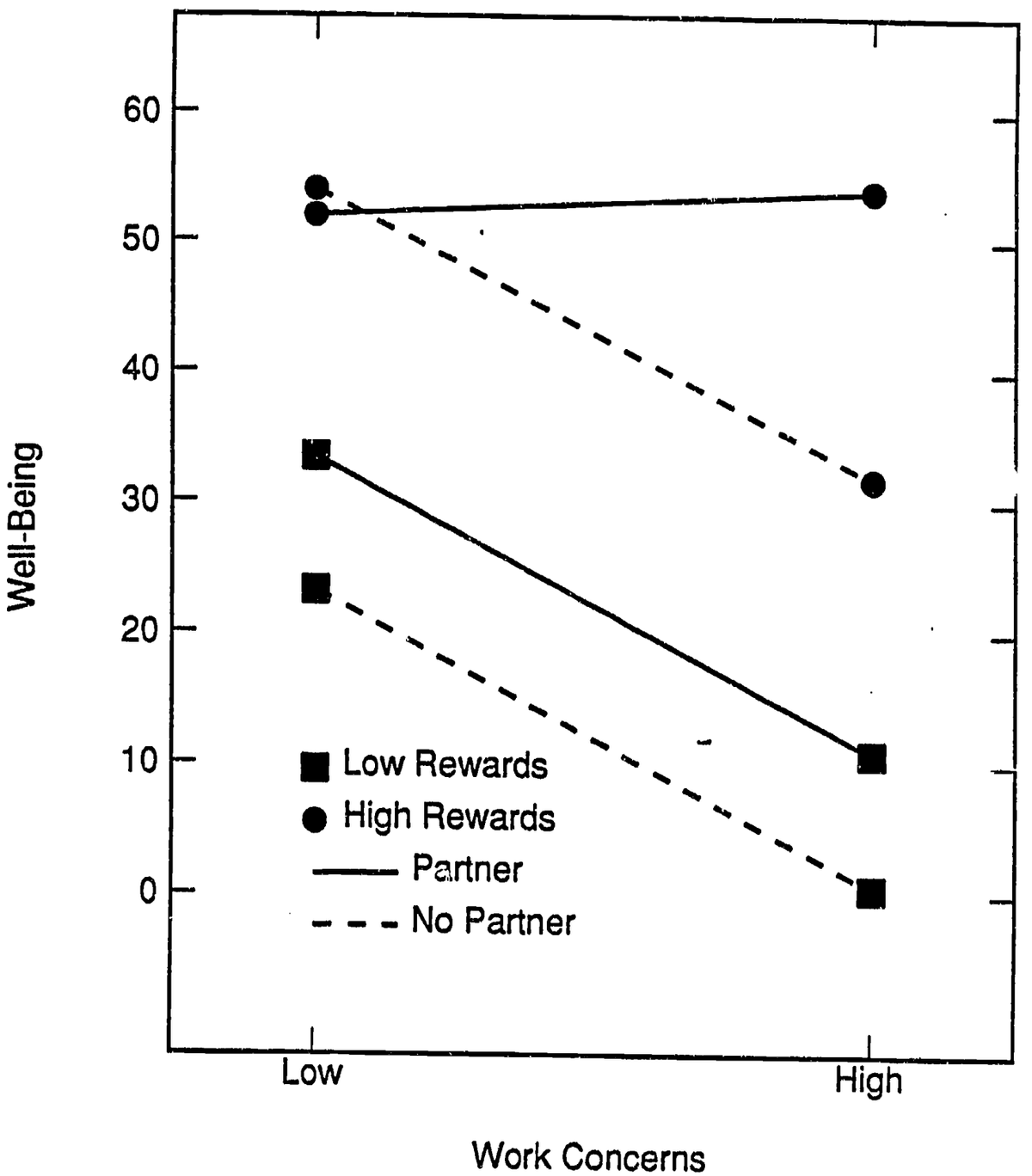

FIGURE 4: EFFECT OF PARTNERSHIP STATUS ON THE RELATIONSHIP BETWEEN WELL-BEING, WORK CONCERNS AND WORK REWARDS

When work-rewards were low, however, there were no significant differences between partnered and non-partnered women in the relationship between well-being and work rewards and work concerns. For women in both partnership statuses, having a job with low-work rewards was associated with low well-being and the relationship was stronger at higher levels of work concerns.

Physical symptoms. Neither partner status nor parent status were significantly associated with physical symptoms. Once again, none of the two-way interaction terms was significant, but the three-way interaction including partnership status (i.e., partner status x work rewards x work concerns) was significantly associated with physical symptoms.

As shown in Figure Five, the level of physical symptoms associated with

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Insert Figure Five about here

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work concerns and work rewards differed by partnership status. Here again, among women who are not partnered, there is hardly any effect of work rewards and work concerns. Among women who are partnered, however, there is an effect of work rewards and work concerns and the effect is interactive. With respect to physical symptoms, employed partnered women are more vulnerable to the differential effects of high-work concerns and low-work rewards than are non-partnered women.

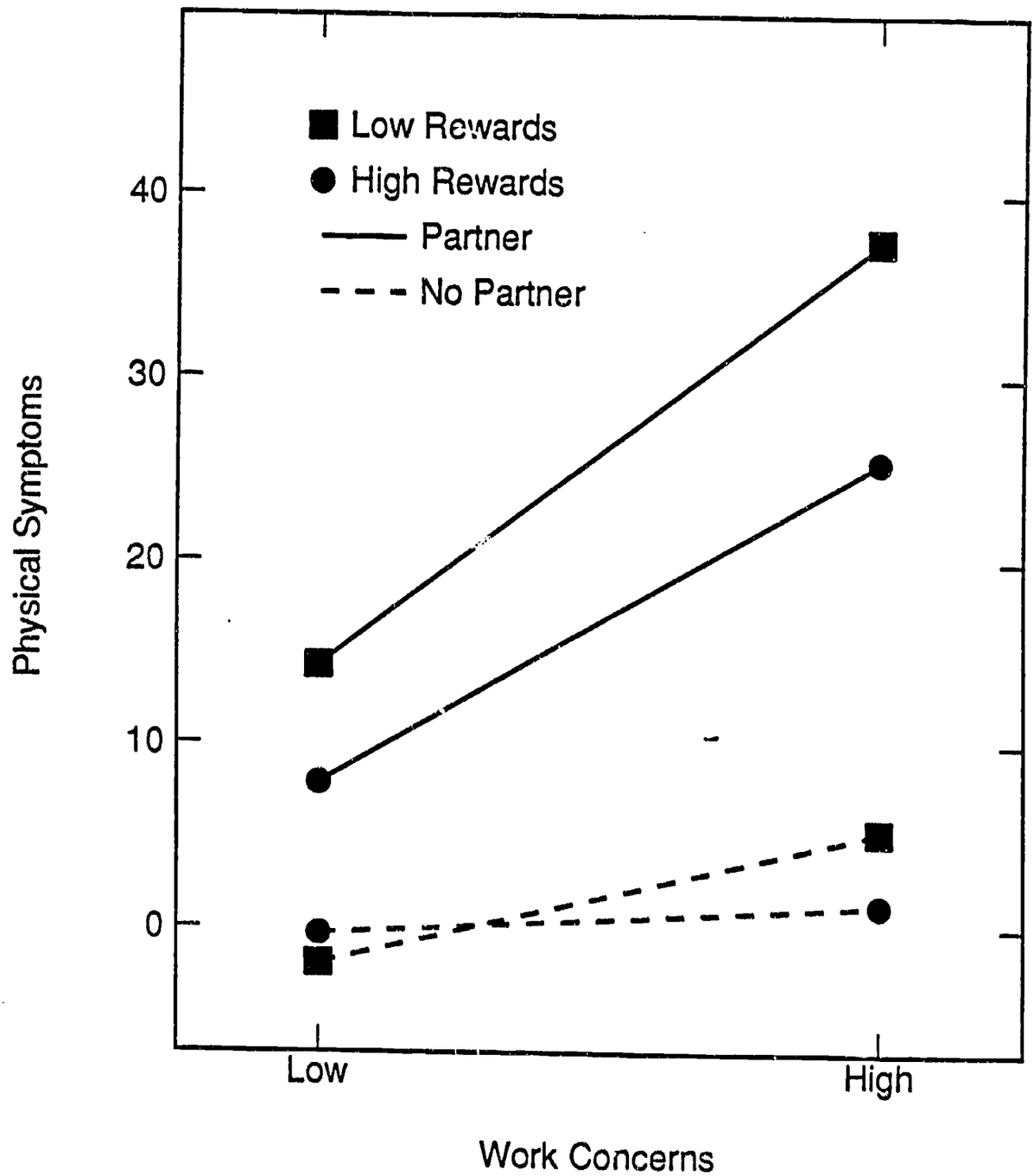

FIGURE 5: EFFECT OF PARTNERSHIP STATUS ON THE RELATIONSHIP BETWEEN PHYSICAL SYMPTOMS, WORK REWARDS AND WORK CONCERNS

Discussion and Conclusions

The major findings of this study are: (1) the rewarding aspects of day-to-day life in the employee role have an important effect on health measures; (2) the relationship of work rewards and work concerns differs both for different health measures and for women in different family-role statuses.

While the specific relationship between work rewards and work concerns differed for each of the three health measures, in all cases the contribution of work rewards was crucial for an understanding of how daily happenings in the employee role related to health variables. Work rewards attenuated the negative consequences of work concerns on psychological distress. Indeed, assessing the effect of work concerns on psychological distress without knowing the level of work rewards can be misleading. High-work concerns were associated with high psychological distress only under conditions of low-work rewards. With respect to psychological well-being, work rewards contributed directly and their effect was of approximately the same magnitude as that of work concerns. And, the interaction of high-work concerns and low-work rewards was associated with the highest level of self-reported physical symptoms. Thus, the nature of the relationship of work rewards and work concerns differs for different health measures.

Family-role status conditioned the relationship between work rewards and work concerns and all three health measures. Consequently, it may be misleading to interpret the effects of work rewards and work concerns without knowing an employed woman's partnership and parental status. With respect to positive-health measures, partnered women derive a double, well-being benefit

from having a rewarding job. Their well-being is high and remains high, even if work concerns are high. In contrast, work concerns appear to be more deleterious to the well-being of non-partnered women. If their jobs are rewarding, women with more "baskets" into which to put their well-being "eggs" are at less risk for lowered well-being. This finding supports the conclusion that the fewer roles a woman occupies, the greater the impact any one role will have on her psychological well-being (Baruch, Barnett & Rivers, 1984).

With respect to psychological distress and physical symptoms, on average, women with family roles seem to experience sufficient distress associated with those roles that incremental stress due to work concerns has larger negative effects on their health than on that of women without family roles. This finding supports the conclusion that women's family roles are a primary sources of stress and need to be taken into account in assessing the effect of workplace stressors on health measures (Barnett & Baruch, 1987).

Being in the role of mother exacerbated the effects of work rewards and work concerns on psychological distress, whereas being a partner heightened the effect of work rewards and work concerns on physical symptoms.[21] The finding that mothers are more reactive to work stress is consistent with other results indicating that the role of mother is a stressor (Barnett & Baruch, 1985; Veroff, Douvan & Kulka, 1981). Women who are under stress associated with the role of mother may have more negative health reactions than non-mothers when confronted with incremental stress associated with paid-worker role. This interpretation is also consistent with the findings of Kandel et al (1985), indicating that motherhood exacerbated the effects of

work stress on depressive symptomatology. The finding that, on average, employed, partnered women's physical health is more vulnerable to work stress than non-partnered women's is consistent with a role-conflict interpretation: among women with both the employee and the partner role, the potential for inter-role conflict due to excessive or incompatible demands is higher than among women who are employed and non-partnered (Aneshensel & Pearlin, 1987). However, this finding is inconsistent with studies indicating that married women enjoy a physical-health advantage over unmarried women (see, for example, Verbrugge, 1983), presumably because they benefit from spousal support.

Some of the inconsistency in interpreting the effect of family-role occupancy might be due to an emphasis on role occupancy rather than on role quality. Women with positive relationships with their partners may be more resilient to the negative effects of work-related stressors, whereas women with poor relationships may be more vulnerable to workplace stressors. This speculation points to the need to assess the rewards and concerns associated with family roles and to study the relationship of health measures to the interaction of family-role quality (i.e., rewards and concerns) and work-role quality.

Finally, the findings of this study were generated on cross-sectional data from a sample of employed social workers and licensed practical nurses. It is not known whether the relationship between work rewards and work concerns and health measures would differ among women in other occupations. Nor is it possible to know the direction of effects. For example, does the combination of high-work concerns and low-work rewards result in high distress or do women

with high-psychological distress experience high-work concerns and low-work rewards?

Although the precise interpretation of the above findings will have to await results of longitudinal analyses, the main and interactive-effects of work rewards on health measures have been established. Work rewards need to be taken into account in assessing the effect of daily happenings on health measures, the relationship between work rewards and work concerns differs for different health measures, and the for women who differ in family-role status.

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Footnotes

1. The data reported in this paper are from the first year of a three-year, longitudinal, interview study, funded by the National Institute of Occupational Safety and Health, #OH0 1968.

I extend my deepest appreciation to my late colleague, Grace Baruch, for her consistent wisdom and help in making this work possible. I also extend my appreciation to research colleague Nancy Marshall, project coordinator Nathalie Thompson, and the interviewers, without whose dedication the project would never have been completed: Carol Anello, Joyce Buni, Krista Comer, Connie Counts, Susan Gates, Marjorie Bahlke Harrison, Michele Meager, Celia Morris, Judith Shangold, Jane Scherban, Sandra Walker, Marcia Wells, Marsha Wise. I am especially grateful to Judith Singer for statistical consultation and to Ingrid Waldron for her careful reading and thoughtful comments.

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2. This conclusion is similar to that reached by Diener (1984). In a review of the literature on subjective well-being, Diener states that "subjective well-being includes positive measures. It is not just the absence of negative factors, as it true of most measures of mental health. However, the relationship between positive and negative indices is not completely understood" (p. 544).

3. In contrast, the work of Watson (1988) suggests that positive affect (which seems intuitively to be at least correlated with uplifts) has a pattern of correlations with health indicators that is distinct from that of negative affect. For example, people high in positive affect socialize more often and more easily.

4. The seven items are: Fellow Workers; Clients, customers, patients, etc.; Your supervisor or employer; The nature of your work; Your work load; Your job security; and Meeting deadlines or goals on the job.

5. Women who were either married or living with a partner in a committed relationship were defined as partnered.

6. Certain cells were especially difficult to fill because of their low frequency in the population. The rarest cell was partnered without children. Only among white social workers were we able to fill this cell. Given that the younger women in this cell, who are in their child-bearing years, may have only recently finished their professional training, the fact that they do not yet have children is not surprising. It may also be that delaying child bearing after marriage or deciding not to have children is a more common pattern in this group. For LPN's this pattern was rare among both whites and

blacks, perhaps because they finish their training well before the age for admission into the study and have already begun their families. In fact we were unable to find any black LPN's in this cell.

7. Parallel scales assessing rewards and concerns in women's other major social roles, e.g., partner, parent, daughter, were also administered in the original study. Findings based on the original scales can be found in Barnett and Baruch (1985) and Baruch and Barnett (1986).

8. Although normative data are provided for both the SCL-90-R and the Rand Well-being Scale, inadequate specification of the demographic characteristics of the samples makes comparisons difficult. For example, normative data on the SCL-90-R anxiety and depression scales are provided for a "random" sample of 494 non-hospitalized adult females. Closer inspection of the available demographics indicates that all the women are "single," moreover, standard deviations are not provided. In neither case were data provided on employment status. Given these problems, it is not possible to know how this sample compared to the normative samples.

9. Normative data are not available on this measure. It is used primarily as a before and after measure to evaluate the effectiveness of medical interventions.

10. Socioeconomic status was determined by summing scores for occupation (1 = social worker, 2 = licensed practical nurse) and education (scores ranged from 1 = high school to 7 = completed a terminal degree).

11. It is noteworthy that analyses using the Hassles and Uplifts Scale do not include controls for demographic variables, which at least in the analyses reported in this paper are significantly related to the outcomes. For example, black women report significantly lower levels of psychological distress than do white women.

12. This finding contrasts sharply with the positive correlation (r = .51) between hassles and uplifts reported by Kanner et al (1981). The authors suggest that this correlation might be due to "a common response style or to a tendency for people who have many hassles to also have many uplifts...: (p. 13).

13. All the predictors were centered and tolerance statistics were computed to determine whether the set of predictors were colinear. The tolerance test indicated no evidence of colinearity.

14. High-work concerns were defined as 1 standard deviation above the mean; low-work concerns, as 1 standard deviation below the mean.

15. All the predictors were centered. The tolerance statistic indicated no evidence of colinearity among the independent variables.

16.This finding lends empirical support to both the balance score model, i.e., that the best predictor of psychological well-being is the difference between the rewards and the concerns associated with social roles (Baruch & Barnett, 1986) and the model underlying the Bradburn Affect Balance Scale (Bradburn, 1986), i.e., that subjective well-being is best assessed by subtracting the sum of negative items from the sum of positive ones.

17. All the predictors were centered. The tolerance statistic indicated no evidence of colinearity.

18. High work-rewards were defined as 1 standard deviation above the mean; low-work rewards, as 1 standard deviation below the mean.

19. I also estimated a series of regression models with the interaction between partnership and parental status as a predictor. The interaction term was significant only with physical symptoms as the health measure. Graphing the results indicated that partnered women with children were at especially high risk for reporting physical symptoms. Interestingly, single mothers did not differ from partnered or non-partnered women without children with respect to reports of physical symptoms. Thus, only employed women who occupied both family roles, i.e., partner and parent, were at high risk for physical symptoms.

20. High-work rewards were defined as 1 standard deviation above the mean; low-work rewards, as 1 standard deviation below the mean.

21. The interpretation is consistent with recent findings that in a sample of 50 normotensive employed, adult women, elevations in blood pressure at work were higher among partnered than among non-partnered women (Pickering, 1988).