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The Full Mediator Role of Job Satisfaction in Relationship between Job Characteristics and Health Outcomes in Hospital Nurses: A New Conceptual Model

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Abstract

The purpose of the present study was to investigate the effects of job characteristics on the mental and physical health considering to mediating role of job satisfaction. Survey respondents include 311 hospital nurses from 6 units that were selected by simple random sampling method. Results using structural equation modelling (SEM) showed that job satisfaction (JR) is the full mediator of relationship between job characteristic and mental and physical health. While, by removing job satisfaction effect, these relations will be meaningfulness. These findings highlighted the job satisfaction role as a key occupational attitude that can change the effects of job characteristic on the health outcomes of hospital nurses. Discussion and implications of the results are presented in the study.

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Keywords: job satisfaction, job characteristics, mental health, physical health, nurses;

1. Introduction

Recently occupational health professionals, work psychologists, and human resource professionals are paying more attention to the work of employees who are not absent but do suffer from health problems (Gartner et al., 2010). This is because new working practices and rapid technological advances are changing the nature of many jobs and employees are regularly being required to work well beyond their contracted hours, often unwillingly, as organizations struggle to meet tight deadlines and targets (Faragher et al., 2005). Work practices are becoming more automated and inflexible, leaving employees with less and less control over their workload (Shannon et al., 2001).

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These changes in the industrial structure have led till the mental as well as physical health status of workers has received considerable attention (Suda, Nakayama and Morimoto, 2007). Concerns have been raised that both physical and psychological might be influenced by job characteristic. People who dislike their job (or job characteristics) could experience adverse health outcomes. These outcomes include both physical symptoms and psychological problems (Spector, 2000). Moreover, Palmore (1969) believe that job dissatisfaction decreases lifespan (Ahadi, 2009). On the perspective of job characteristic theory, job characteristic are recognized as important antecedents of job satisfaction but we are looking for to know whether job characteristics can be recognized as antecedents' mental and physical health as well or this impact is mediated by job satisfaction.

2. The present study and hypotheses

The purpose of the present study was to in line to previous researches investigate the direct effect of job characteristics (task significance, task variety and autonomy) on mental and physical health of nurses. An important part of this focus comes from the research of Kelloway and Barling (1991) that stated certain job characteristics influence mental well-being (especially job dissatisfaction, job strain and burnout) and possible interventions to counteract these negative outcomes. We base our predictions on several streams of research and theorizing. Regarding to the job characteristics model and new directions about this model we predicted the following hypotheses:

H1: Autonomy will be positively related to mental health.

H2: Task Variety will be positively related to mental health.

H3: Task Significant will be positively related to mental health.

Research on the relationship between job characteristics and health has not remained without criticism and a large amount of intervening variables (mediator and moderator) have been found that affect the results between job characteristics and health. Some examples of intervening variables that have been found to influence results are: socioeconomic situation, perceptual and affective reactions, health behaviors (like smoking, obesity, dietary fat intake, and inactivity) and sex (Spector and Jex, 1991; Hellerstedt and Jeffery, 1997). Faragher et al. (2005) go as far to state that this can make the evidence easily appear to be both contradictory and inconclusive and recently job satisfaction. Thus, in line with the previous research, another aim of this study was to investigate the mediating role of job satisfaction related to job characteristics and health outcomes:

H4: job satisfaction will mediate the relation between autonomy and mental health.

H5: job satisfaction will mediate the relation between task variety and mental health.

H6: job satisfaction will mediate the relation between Task Significant and mental health.

Most of this research is based on the Hackman and Oldham model (1976), which describe that five job characteristic (variety, identity, significance, autonomy and feedback) influence three key psychological states (experienced meaningfulness of the work, experienced responsibility for the outcomes of the work and knowledge of the results of the work activities) (Hackman and Oldham model, 1976). The figure 1 is showing our proposed model.

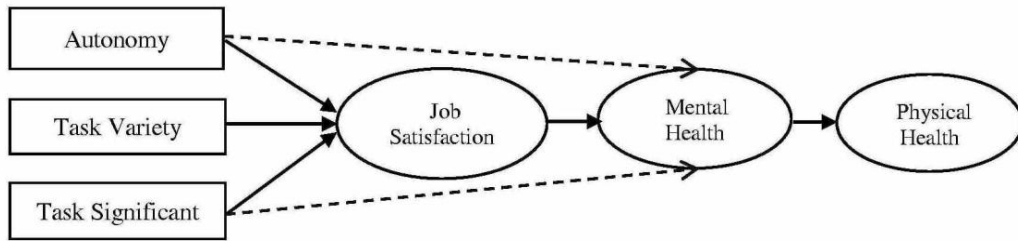


Figure 1. Proposed model of the relationship between research variables.

3. Methods

1.3. Participants

The data for this study were collected as part of a larger research project about designing and testing a new model of the most important predictors of mental and physical health in nurses. Participants include 311 nurses of six-hospital unit's area of southwest in Iran, who were selected by simple random sampling method. For this sample 69.5% were men, 73% were married, the average age was 34.72 years, and the mean organizational tenure was 10.66 years. The range of ages was from 21 to 57 ($M = 33.19$ and $SD = 7.03$). Most of them were married or living as married ($n = 191$). The majority had at least a bachelor degree ($n = 223$). Also, organizational tenure records was from 1 to 30 years ($M = 9.41$ and $SD = 6.08$).

1.3. Measures

Job characteristics. JR was measured by a 7-item scale (1= strongly disagree to 7= strongly agree) developed by Hackman and Oldham job characteristic survey (Hackman & Oldham, 1980). Reviewing literature showed that three components have the greatest effect on mental and physical health including, task significance (2 items), autonomy (2 items) and skill variety (3 items). Therefore, we used from these components to investigate the direct and indirect effects of job characteristics on the health outcomes. The alpha coefficients in this study were from 0.70 to 0.90.

Mental & Physical health. This tool consists of 36 items (*never, rarely, sometimes, often, and always*) developed by Veir et.al (2007) and can measure mental and physical components separately. The alpha coefficients of mental and physical health were 0.91 and 0.90 respectively

Job satisfaction. JIG was assessed by 18 items (Irenson et. al, 1989). Participants have to choose one of these options: agree, disagree, no idea. The alpha coefficient was 0.88.

4. Results

4.1 Descriptive statistics

Means, standard deviations, and correlations among the variables are presented in table 1. The results for correlations showed that all variables were significantly related to each other.

Table 1. Means, standard deviations and simple correlations among study variables

		2	3	4	5	6	M	SD
1	Task significance	.02*	.35**	.29**	.25**	.25**	10.86	2.49
2	Autonomy	-	.11	.32**	.29**	.26**	10.72	3.28
3	Task variety	-	-	.27**	.12*	.13*	9.97	2.72
4	Job satisfaction	-	-	-	.40**	.29**	41.39	8.55
5	Mental health	-	-	-	-	.71**	45.29	9.92
6	Physical health						59.82	11.97

* $P < .05$. ** $P < .001$.

4.2. Structural model.

The initial analysis of the structural equation modelling (SEM) achieved a good model fit (CFI= 0.99, TLI= 0.98, NFI= 0.98, and RMSEA= 0.03). The results showed that autonomy significantly related to mental health, that providing support for hypothesis 1 (.001). In support of hypotheses 2 and 3, Task variety and Task significance influenced health outcomes (.001). Moreover, Bootstrapping procedure was used to test the indirect effects. Tables 2, 3 and 4 indicate the results for bootstrapping analysis. The results showed that job satisfaction is a significant mediator in the relationship of autonomy with mental health (H4), task variety with mental health (H5) and task significance with mental health (H6).

Table 2. The results of bootstrapping analysis for indirect effect of JR on mental health

	Data	Boot	Bias	Se	Lower limit	Upper limit
Autonomy & mental health	3400.0	3359.0	0041.-0	0721.0	2148.0	5071.0

Table 3. The results of bootstrapping analysis for indirect effect of JR on mental health

	Data	Boot	Bias	Se	Lower limit	Upper limit
Task variety& mental health	3427.0	3433.0	0006.0	0984.0	1741.0	5553.0

Table 4. The results of bootstrapping analysis for indirect effect of JR on mental health

	Data	Boot	Bias	Se	Lower limit	Upper limit
Task significance & mental health	4212.0	4175.0	0037.-0	1035.0	2408.0	6472.0

5. Conclusion & limitations

This study examined the mediating effect of job satisfaction on the relationship between job characteristics and health outcomes. The findings revealed that job characteristic (Autonomy, Task variety & Task significance) positively influence health outcomes. Review of the theories on the relationship between job characteristics and health identified two models capable of explaining such relationships, the job demand control & support model and the vitamin model. Both models have their origin in the Hackman and Oldham model. The models postulate that certain job characteristics can have detrimental effects on health, where the JDCS model assumes this relationship is linear and the vitamin model assumes a curvilinear relationship. Both models also differ on the amount of job characteristics included in the model and the mechanism by which strain is caused. Increasing amounts of job autonomy, task significant, skill utilization and salary were hypothesized to have positive effects on health. While increasing amounts of job demands, physical demands and job insecurity were hypothesized to have a detrimental effect on health.

Our hypotheses regarding the mediating role of job satisfaction in the relationship of job characteristics with health outcomes were significant. Consistent with Hackman and Oldham model, the existence of job characteristics will satisfy the job satisfaction needs such as need to autonomy and job significance and leading employees to feel self-worth and competence and decrease their stress.

On the basis of the Karasek's job demand control & support model (JDCS model), assumes that strain especially results from the combination of high job demands, low decision latitude and low social support (Warren et al., 2002). Thus, by setting proper job characteristics we will be able to improve job satisfaction and decrease job demands and subsequently strains. The final consequence of these actions will promote the health outcomes of hospital nurses.

This study has some limitations. First, we drew our samples from hospital nurses. This limits the generalization of our results to other samples. Second, given the cross-sectional design of this study, causal relationships among the variables cannot be established. Longitudinal studies should be employed to test the hypotheses. Finally, all the scales which we used in this study were self-reports. It is better to use a combination of self-report scales and objective assessments.

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