Predictors of Job Stress and Job satisfaction among Indian and Norwegian Nurses

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Abstract

The present study is an attempt to cross-culturally compare the predictors of job stress and job satisfaction among Indian and Norwegian nurses. Sample consists of 328 Norwegian and 136 Indian nurses. The results indicate that the predictors of Job stress and job satisfaction are different between Norwegian and Indian nurses. For Norwegian nurses low flexibility in working hours, WIF, self reported physical health and high job demands were predictors of job stress. For Indian nurses high FIW, low social support at work and self reported physical
health at work were predictors of job stress. For Norwegian nurses, none of the variables predicts the job satisfaction, while for Indian nurses high Job control and subjective wellbeing at work predicts job satisfaction.

Key Words: Job stress, Job satisfaction, subjective well-being, physical health, WIF, FIW.

1. Introduction

Research on Job stress and job satisfaction of nurses rarely takes culture into account. Cultures are comprised of people who share values, beliefs, assumptions, norms, and meaning of events or words that are learned over a period of time and often taken for granted by the people living within them (Early & Singh, 1995; Tayeb, 1994). Laungain (1993) reported that job stress depend to a certain extent on peoples cultural back ground. Keeping cultural in back ground mind the present study focusing on the predictors of job stress and job satisfaction of Indian and Norwegian nurses. Studies conducted on role stress in nurses suggest that minimum research has
taken place in Asian countries (Lambert et al., 2004). The literature support that there are work place factors and family factors related to job stress and job satisfaction among employees (Leong et al., 1996, Fairbrother & Warn, 2003).

1.1 Job stress and sources of nurse’s job stress:

Job stress can result from series of factors. While job stress exists in all professions, health care professionals appear to be at particular risk because they face demands that those other occupations do not (Quine, 1998). Stress in nursing profession is one of the worldwide ongoing problems. Among all the health care professionals nurses have been found to have especially high level of stress (Bourbonnais, Comeau, Vezina, & Guylaine, 1998; Butterworth, Carson, Jeacock, White & Clements, 1999, Pal & Saksvik, 2008). Work place stress has effects on nurses physical and mental health (Burnardetal., 2000; Hannigan et al., 2000; Lambert et al., 2004a). Greenhaus and Parasuramana (1986) developed a work and non-work interactive model that explained stress as a psychological state in which a person is faced with demands, constrains, or opportunities with important but uncertain outcomes. Historically, a large number of job characteristics have been proposed as stressors (Beher
and Newman, 1978). The present study focusing on the demand, control, and support model of Karasek and Theorell, 1990). The model was developed by Karasek (1979) and mentioned that the job demands and job control related to the occupational stress of the employees and then added another job component as work social support in 1980 and finally know as the model of JDCS model of karasek and Theorell (1990). Some of the issues relevant to the study of social support in the workplace are illustrated by the job demands, control model of stress (karasek & Theorell, 1990). The model predicts that high job strain results from the combination of low social support, high demand, and low control. Several authors have pointed out that the job demand, control and social support (JDCS) model of Karasek and Theorell (1990) is very suitable to study health care professionals. In addition, it has rarely been attempted to apply the Job demands, control and support model to the work situation of health care workers (de Jonge, Janssen & van Breukelen, 1996). In this study I attempted to study the impact of these psychosocial work environment variables on the Indian and Norwegian nurses job stress.

1.2 Sources of nurse’s job satisfaction
Job satisfaction is a complex phenomenon. Locke (1969) defined job satisfaction as the extent to which the expectations that an individual hold for a job match what one actually receives from the job. The same author (Locke, 1976) defined job satisfaction as a “pleasurable positive emotional state resulting from the appraisal of one’s job or job experiences” (p. 1300). Job satisfaction can be characterized as an attitude concerning the extent to which people like or dislike their jobs (Spector, 1997). Few studies, however have addressed cross-cultural aspects of role stress among nurses from Asian culture countries (Aiken et al., 2002). There are studies from job satisfaction of nurses from Canada, Scotland, England, Canada and Germany (Aiken et al., 2001). Similarly the nurses’ job satisfaction studies from British nurses perceived themselves to be more dissatisfied than Australian nurses (Adamson et al., 1995). A review of work and family conflict (WFC) and work and family literature (Allen et al., 2000; Kossek & Ozeki, 1998) suggests that more precise understanding of the relation between WFC and job satisfaction is needed. According to Role theory, the expected relation between WFC and job satisfaction is such that as WFC increases, job satisfaction decreases (Khan et al., 1964). Several studies found the co-relation between job satisfaction and WFC (Kossek and Ozeik, 1998; Allen et al., 2000). Most research studies have not used how the direction of WFC (like work interfering with family and family interfering with
work) may vary in their relation to their job satisfaction. For example as noted by Frone, Yardley, and Markel (1997), prior research typically has related outcomes such as job satisfaction as a single global measure of work and family conflict. Frone, Russell, & Cooper (1992) conceptualized work family conflict has two directions works interfere with family (WIF) and family interfere with work (FIW). The present study will find out how these two directions of work and family put impact on job satisfaction. Different measurements regarding nurse’s job satisfaction show various sources of satisfaction. The finding derived from different studies using the same scales is more valuable providing comparative information. So the present study will focus the role of Culture in interpreting the predictors of Job stress and job satisfaction among Indian and Norwegian Nurses.

**Hypothesis**

Based on these findings, the objective of the current study was to investigate the effect of WFC, FWC, job demands, control, social support and flexibility in working hours, SWB on job stress and job satisfaction among Norwegian and Indian nurses. The following hypotheses were derived.

*Hypothesis 1* FWC is negatively related to job stress and Job satisfaction
Hypothesis 2 WFC is negatively related to job stress and job satisfaction

Hypothesis 3 High job demands, low job control and low social support have main effects on job stress and job satisfaction

Hypothesis 4 SWB is positively related to job satisfaction and negatively related to job stress

Hypothesis 5 Self reported physical health negatively related to job stress

Hypothesis 6 Employees in western and eastern countries differ in their predictors of job stress and job satisfaction.

Method

Participants

The participants in this study were nurses from Norway and India. The Norwegian sample consists of 328 nurses and Indian sample consists of 136 nurses. The same questionnaire was used in two Norwegian and two Indian hospitals. In Norway the questionnaire was translated into Norwegian, with back translation conducted to
maintain the accuracy of the original instrument. The questionnaire was distributed to the head nurses at each department who set up a special room for members of general nursing staff to fill out the questionnaire. Nurses on sick leave received the questionnaire by mail and were given the opportunity to return the questionnaire directly to the researcher. In India the original English version was used and the questionnaire were distributed by the researcher and also collected by the researcher after 15 days. The questionnaire and a prepaid return envelope addressed to the researcher were sent out to people on sick leave at their work address.

**Measures:**

Standard scales were used, but scale reduction was performed to reduce the total length of the questionnaire, and thus make it less time consuming in order to secure a high response rate. To guarantee the reliability and validity of the original scale, several studies are performed to ensure the final selection of Items used (Landsbergis et al., 2002a, 2002b; Saksvik, Nytro, & Hammer, 2001). All the shortened scales had been used in several other studies on work stress and WFC, among them Hammer et al., (2004).

*Demographic variables* included were gender, age, formal education, and hours of work per week.
Job stress was measured with three items constituting the subscale “Work” from the Cooper Stress Check (1981) (“Amount of work”, “Time pressure and time limits”, and “The impact of work on private life”). The response categories were given on a six point scale ranging from 1 (no stress) to 6 (very much stress). Scale reliability in the total sample was .75.

Work-to-family conflict (WFC) was measured with two items from the Whitehall II study questionnaire (Marmot et al., 1991). WFC items were: “My job reduces the amount of time I can spend with the family” and “Problems at work make me irritable at home.” Scale reliability in the total sample was .74. Family to-work conflict (FWC) was measured with one item: “Family worries or problems distract me from my work.” The response categories for both WFC and FWC items were given on a five-point scale ranging from 1 (totally disagree to 5 (totally agree).

Job demands were measured with four items from the JCQ-scale (Karasek, 1985) (“My job requires rapid and continuous physical activity”; “My job is very hectic”, “My job requires working very fast”, and “My job requires periods of intense concentration on the work”). The response categories were given on a five-point scale ranging from 1 (very seldom) to 5 (very often). Scale reliability in the total sample was .73.
Job control was measured with two further items from the JCQ-scale (Karasek, 1985) (“My job allows me to make a lot of decisions on my own” and “On my job I have freedom to decide how I do my work”). Scale reliability in the total sample was .81.

Social support was measured with four items from the JCQ-scale (Karasek, 1985) (“People I work with are helpful in getting the work done”, “I feel accepted in my work group”, “It is high solidarity in my work group”, and “My co-workers offer their service for me”). Scale reliability in the total sample was .72 (the response categories for these items were the same as for all JCQ-derived items).

Flexibility in working hours was measured with three items with “no” or “yes” as response categories. The three questions in this section were designed especially for this study. The questions were as follows: “Do you have the opportunity to take two days a month off by doing overtime work?”, “Do you have the opportunity to take longer periods off by working more/overtime?”, and “Are you satisfied about the flexibility you have in your working hours?” Scale reliability in the total sample was .61. Low scores mean low flexibility in the working hours.
Subjective well being was measured with seven items from the scale developed by Torvatn (2001). (“Yes, because it keeping me in shape physically”, “Yes, because it gives me security and confidence”, “Yes because the work involves learning”, “Yes, because the climate at work is good”, “Yes because the job gives social status”, “Yes the job organize my day”, and “Yes because I do meaningful work”). The response categories were given on a five point scale ranging from 1 (Totally disagree) to 5 (Totally agree). Scale reliability in the total sample was .74.

Self-reported physical health was measured with the second European survey of working conditions (European Foundation, 1997) (“Yes my work has given me backache”, “…headache”, “…overall fatigue”, “…pains in the upper limbs”). The response categories were given on a four point scale ranging from 1 (seriously affected) to 4 (not affected). Scale reliability in the total sample was .70.

Job satisfaction was measured by Hackman, Oldham, and Karasek (1980). “All in all how satisfied you are with your paid job”, “would have taken this job today”, “and would have recommended it for others”. Scale reliability in the total sample was .71.

Statistical analysis
First, a communality analysis was conducted to investigate the factor structure of the work family conflict (WFC), job demands (JD), job control (JC), social support (SS), job stress (JS), physical health (PH), Job stress (JS), Subjective well-being (SWB) and Job satisfaction (JSAT) for the Norwegian and Indian data separately. The principle component analysis (PCA) method with Varimax rotation was used. Second, hierarchical multiple regressions were carried out for Norwegian and Indian nurses separately. Job stress and job satisfaction were used as criterion variables, and the method entered was stepwise. In Step 1, hours of work per week and flexibility in working hours were entered as predictor variables. In Step 2 WIF, and FIW variables were entered. In step 3 job demands, control, and social support variables were entered. Finally, in step 4, SWB, and physical health variables were entered.

Results

The communality analysis showed a few differences between the factor solutions of the Norwegian and Indian data. In the Norwegian sample, the item “My job requires working very fast” had a loading of .03 on the job
demands scale, while the same item had a loading of .83 in the Indian sample. In the Norwegian sample the item “The impact of work has on my private life” had a loading of .11 on the job stress scale; the same item had a loading of .76 in the Indian data. In the Indian sample, the item “My job is very hectic” had a loading of .31 on the job demands scale, while the item “People I work with are helpful in getting the work done” had a loading of .38 on the social support scale. In the Norwegian data, these items had loadings of .70 and .59 respectively. Given the ambiguity of these four items, it was decided to perform the statistical analysis of the proposed model using two different versions of the job stress, job demands, and social support scales: the first one with the originally proposed job stress, job demands and social support scales and the second one without the ambiguous items. Since both analyses yielded the same results, we report the results of the analysis that included the ambiguous items of the scales.

The means, standard deviations and intercorrelations of all the study variables of the Norwegian data are presented in Table 2 and for the Indian data in Table 3. The Norwegian and Indian samples differ significantly on the variables WFC, FWC, job control, social support, flexibility in working hours, hours of work per week, and job
stress. In the Indian sample, we found significantly higher WFC (t (600) = 14.40, p < .001) and FWC (t (601) = 6.02, p < .001) than in the Norwegian sample. The Indian sample also reported significantly higher job demands than the Norwegian sample (t (586) = 11.39, p < .001). The Norwegian sample reported significantly higher job control (t (596) = -6.34, p < .001) and social support (t (571) = -1.23, p < .05) than the Indian sample, and the Indian total sample reported significantly more flexibility in working hours than the Norwegian total sample ($\chi^2 (3, 556) = 44.62, p < .001$). The Indian doctors and nurses were working more hours per week than Norwegian doctors and nurses (54.36 vs. 33.25 hours). The Norwegian total sample reported significantly higher job stress than the Indian total sample (t (594) = -2.16, p < .001). In the Norwegian data there were positive and significant correlations between the dependent variable job stress and WFC, FWC, job demands and flexibility in working hours. In the Indian data, there were positive and significant correlations between the dependent variable job stress and formal education, WFC, FWC and flexibility in working hours. There was a negative and significant correlation between job stress and social support in the Indian data.
A summary of the regression results: For Norwegian nurses, flexibility in work ($B = .10, t = 2.02, p < .05$), WIF ($B = .24, t = 3.84, p < .001$), self reported physical health ($B = .29, t = -5.38, p < .001$), job demands ($B = .25, t = 5.20, p < .001$) were predictors of job stress. For Indian nurses, FIW ($B = .36, t = 3.54, p < .01$), low social support ($B = -.14, t = -1.93, p < .05$), and self reported physical health at work ($B = -.15, t = -2.10, p < .05$) predicted job stress. For Norwegian nurses, none of the variables predicts the job satisfaction, while for Indian nurses Job control ($B = -.15, t = -2.10, p < .05$) and SWB ($B = .16, t = -2.03, p < .05$) did so.

Discussion

The result from this study suggests that Norwegian and Indian nurses differ significantly in their predictor of job stress and job satisfaction. This may be due to the difference in the nature of job stress among employees with different cultural and national backgrounds (Liu, 2003, Narayanan et al., 1999). In summary, the regressions show differences between the predictors of job stress and job satisfaction among Indian and Norwegian nurses. Seeking social support was identified as a positive predictor of mental health and decrease stress. The research of Bourbonnais et al., (1999) suggests that social support has a positive influence on one’s sense of well-being. WFC
is one of the predictor of job stress for Norwegian nurses. WFC is likely to occur because specific aspect of work makes it difficult to

Although this study has some strength, it has some methodological limitations which need to be addressed. First, there is a possibility of methodological problems confronted by a cross-cultural study like this. Ratner and Hui (2003, p. 67) stated that although cross-cultural psychology has advanced our understanding of cultural aspects of psychology, it is marred by theoretical and methodological flaws. These flaws include misunderstandings of the impact of cultural issues on the perception of the job. Second, the number of Norwegian doctors in the sample was small. This was due to a lower interest by the Norwegian doctors to participate. Since Norwegian doctors have fixed working hours in their main position, there is ample opportunity for extra work, e.g. working at the municipal casualty clinic, with ambulatory outpatient care, undertaking assessments for insurance or private practice (Sæther, 2003). The generalizability of our findings to other physician populations requires more attention. In our data, the Indian nurses sample represents only women nurses. Anderson and Leslie (1991); Burley (1991); and Loscocco (1997) demonstrated that women experience greater interference from family to
work than men. That may be a reason why FWC was a predictor of job stress among Indian nurses. Thirdly, the study relied exclusively on self-report measures that could increase the problem of common method variance. But several studies have reported that common method variance may not be that important (Hammer et al., 2004; Semmer, Zapf, & Greif, 1996). Spector (1994) reported that “the cross-sectional self report method has provided interesting and valuable data concerning many OB questions in the past, and it will undoubtedly continue to make a valuable contribution to knowledge in future” (p. 30).

**Policy Implications**

Few cross-cultural researchers have addressed the issue of job satisfaction and job stress of nurses across countries and cultures. To our knowledge, this may be the first study that attempts to compare nurses from Western/Eastern (and, in an economic sense, developed/developing) countries, and their predictors of job satisfaction and job stress. Ultimately, reliable knowledge about stress factors among nurses will help hospitals to function more effectively and to give better service to their patients by ensuring the nursing staff’s own health.

**FINDINGS**
The results from this study suggest that Norwegian and Indian and nurses differ significantly in their predictors of job stress and job satisfaction. These data have several implications for our understanding of job stress and job satisfaction. We believe that the cultural discrepancies between the two subsample the primary reason behind these differences.
References


