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Occupational Mental Health among Hospital Nurses in China and India

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Occupational Mental Health among Hospital Nurses in China and India

- **Research Program**
  - ***Antecendents*** of stress, burnout and work-related depression
    - Role Stressors
    - Working Conditions
    - Personality
  - ***Moderators***
    - Supervisory Support, Perceived Organizational Support
    - Absenteeism, Presenteeism
    - Shift Work
    - Staffing
  - ***Consequences*** of stress, burnout and work-related depression
    - Job attitudes
      - Job Satisfaction, Organizational Commitment, Job Involvement, Intention to Quit
    - Behavioral outcomes
      - Job performance, Organizational Citizenship Behavior

Goals of the Present Study

- Analyze how job stress and emotional exhaustion impact job satisfaction, organizational commitment and intention to quit
- Analyze the potential moderating effect of understaffing on the above relationship
- Analyze whether nurses working fixed and rotating shifts react differently to understaffing

Brief Description of the Concepts

- **Job Stress**
  - Psychological and physical reactions to environmental stressors
- **Emotional Exhaustion**
  - Depletion of psychological and physical resources as a result of repeated exposure to stressors
- **Job Satisfaction**
  - Facets of job satisfaction including both intrinsic and extrinsic facets such as satisfaction with the work itself and satisfaction with pay
- **Organizational Commitment**
  - Identification with the organization
- **Intention to Quit**
  - Psychological withdrawal

Research Design

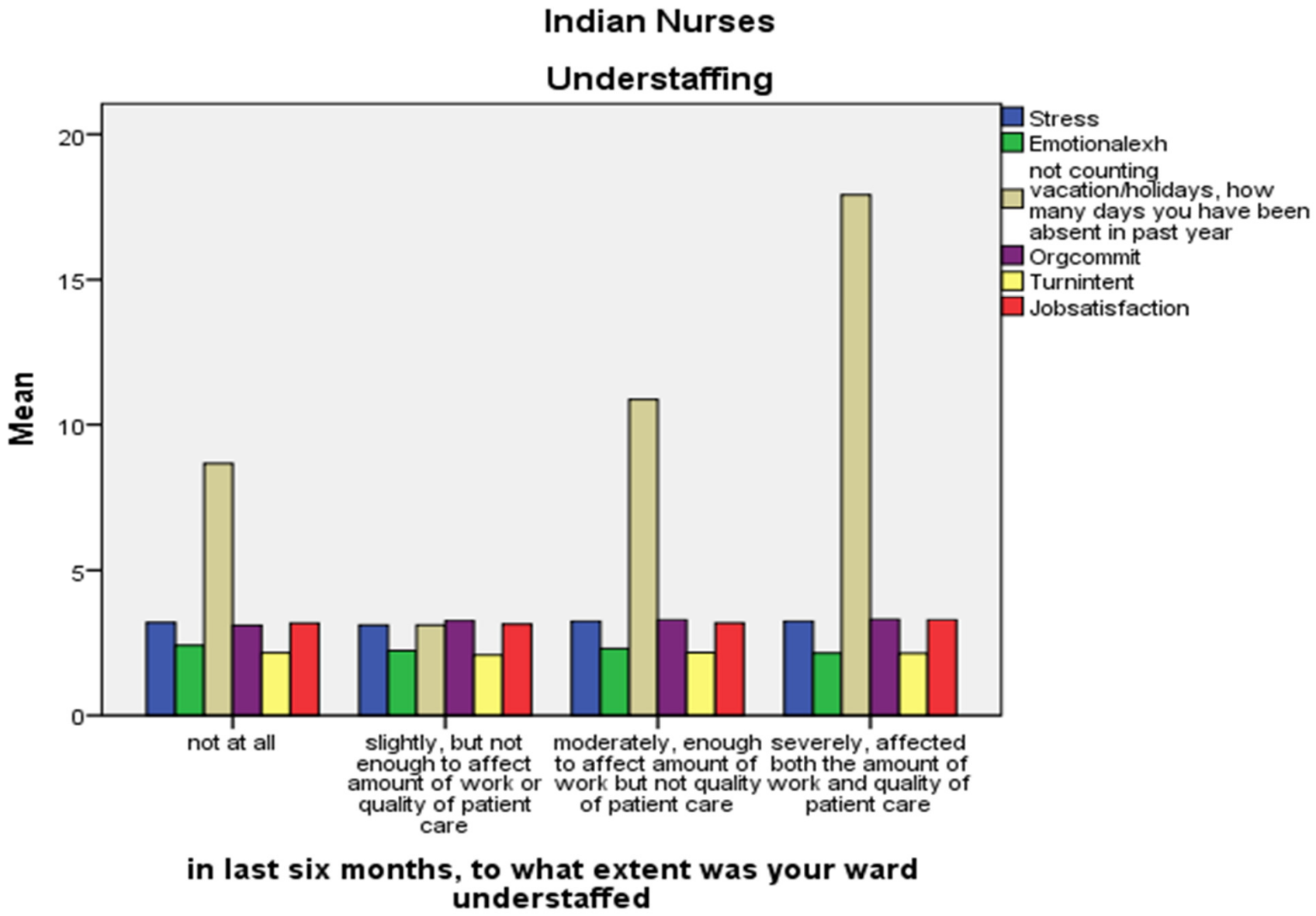
- Cross-sectional study using survey instruments
- Data from 550 Hospital Nurses in China and 683 Hospital Nurses in India
- Measurement
  - Job Stress: Parker & DeCotiis (1983)
    - 13 items (5-point scale from strongly disagree to strongly agree)
  - Emotional Exhaustion: Maslach Burnout Inventory (Maslach & Jackson, 1986)
    - 9 items (5-point frequency scale: from few times a year to every day)
  - Job Satisfaction: Stephen Kerr (See Tourigny et al., 2010)
    - 15 items (5-point scale from very dissatisfied to very satisfied)
  - Organizational Commitment: Mowday, Steers, & Porter (1979)
    - 15 items (5-point scale from strongly disagree to strongly agree)
  - Intention to Quit
    - "How often do you think about quitting your job?"
      - Never, Occasionally, Frequently, Constantly
  - Understaffing
    - "Indicate to which extent your work unit is understaffed"
      - Not understaffed, moderately understaffed, understaffed, severely understaffed
  - Shift
    - Nurses were asked to indicate whether they work fixed day shifts or rotating shifts (including evening and night shifts, and rotation across day, evening and night shifts)
  - Control Variables: Age, number of children and number of days of absence taken in the previous year (not counting vacations or holidays)

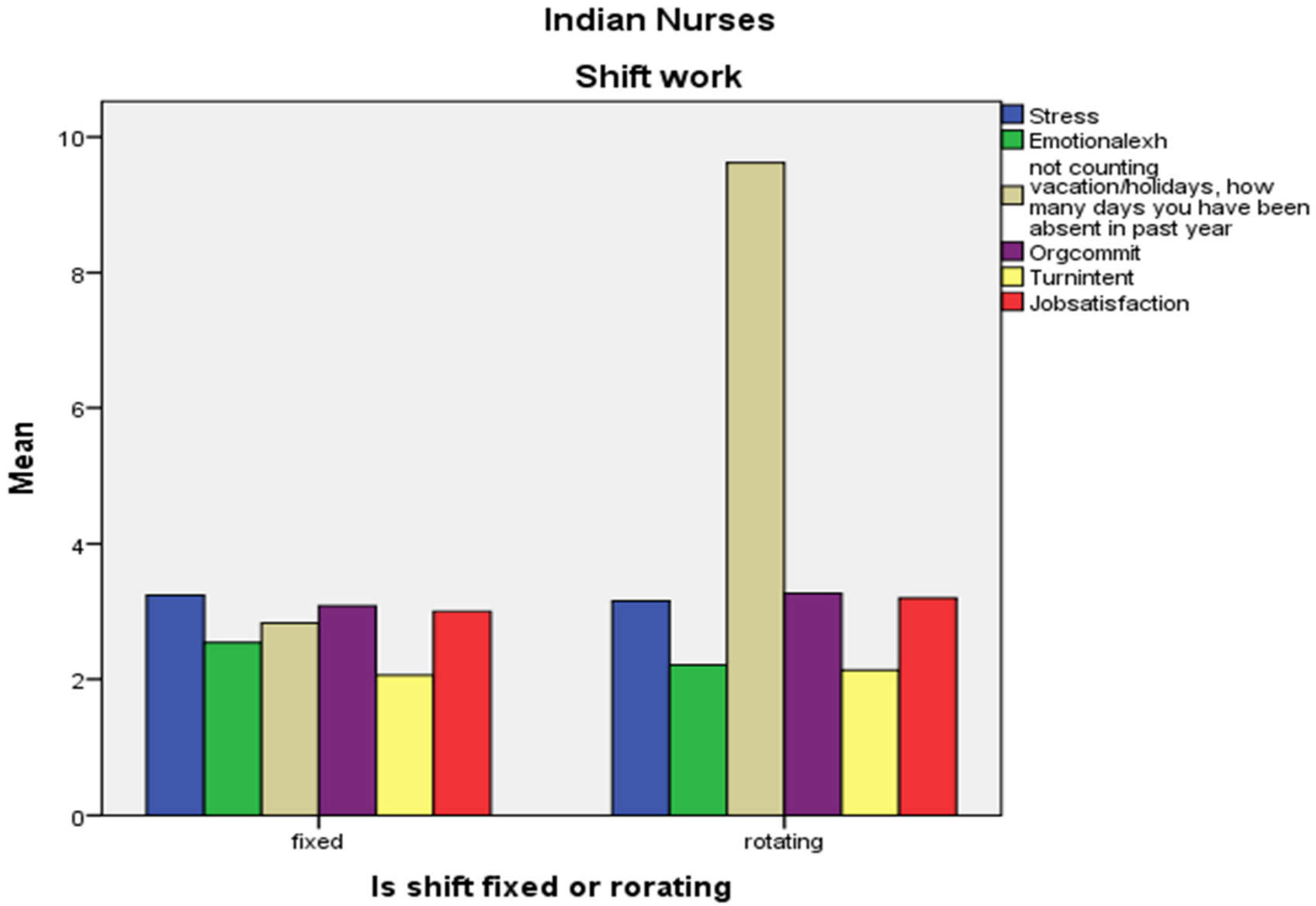
Statistical analysis

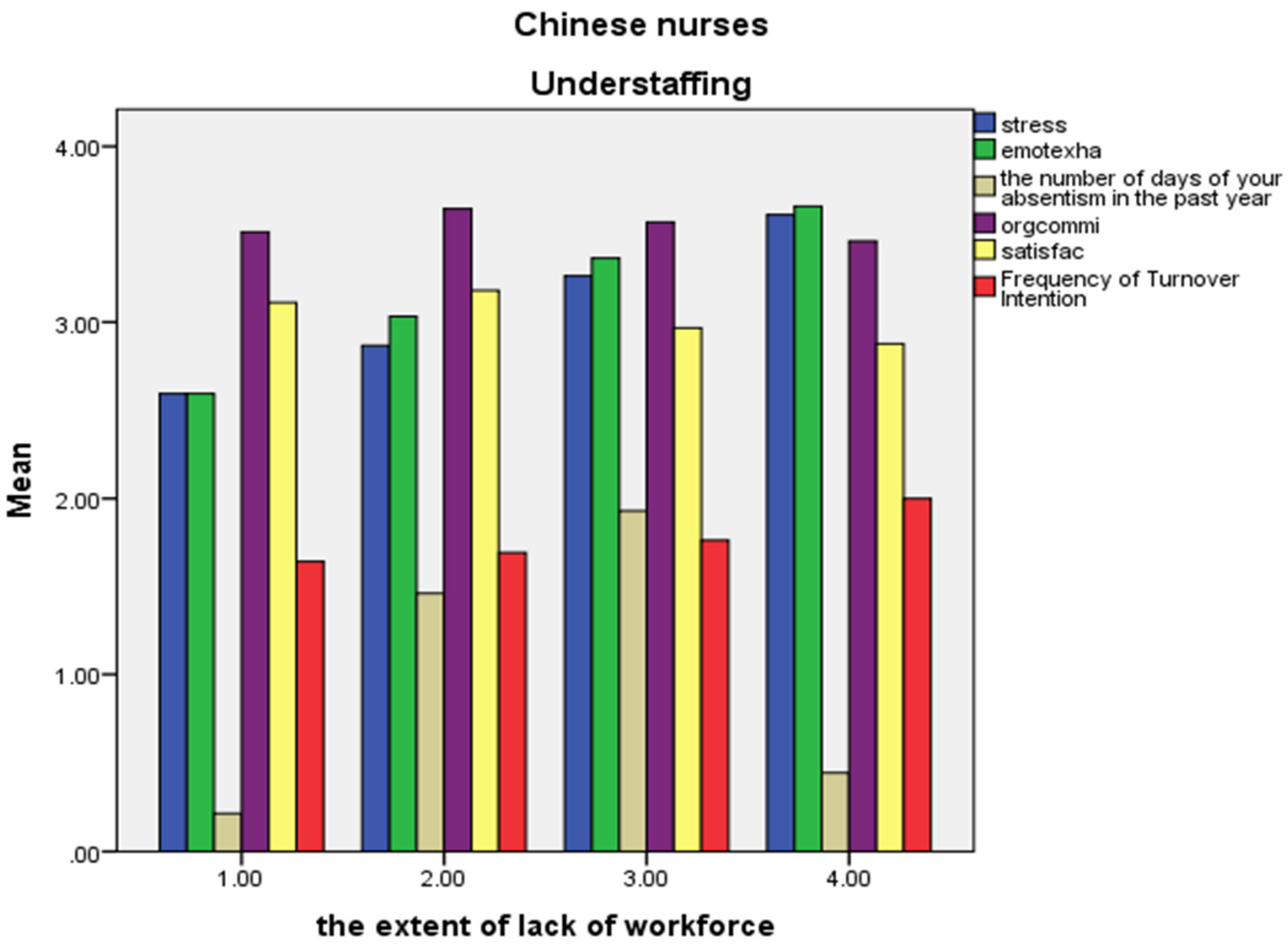
- Correlations, and descriptive statistics
- Hierarchical moderated regression
  - Outcome variables
    - Job Satisfaction
    - Organizational Commitment
    - Intention to Quit
  - Predictors
    - Control variables (Model 1): Age, number of children, and days of absence in the previous 12 months
    - Predictors
      - Understaffing (Model 2)
      - Stress (Model 3)
      - Emotional Exhaustion (Model 4)
      - Interaction Effects (Model 5)
        - » *Stress X Understaffing*
        - » *Emotional Exhaustion X Understaffing*

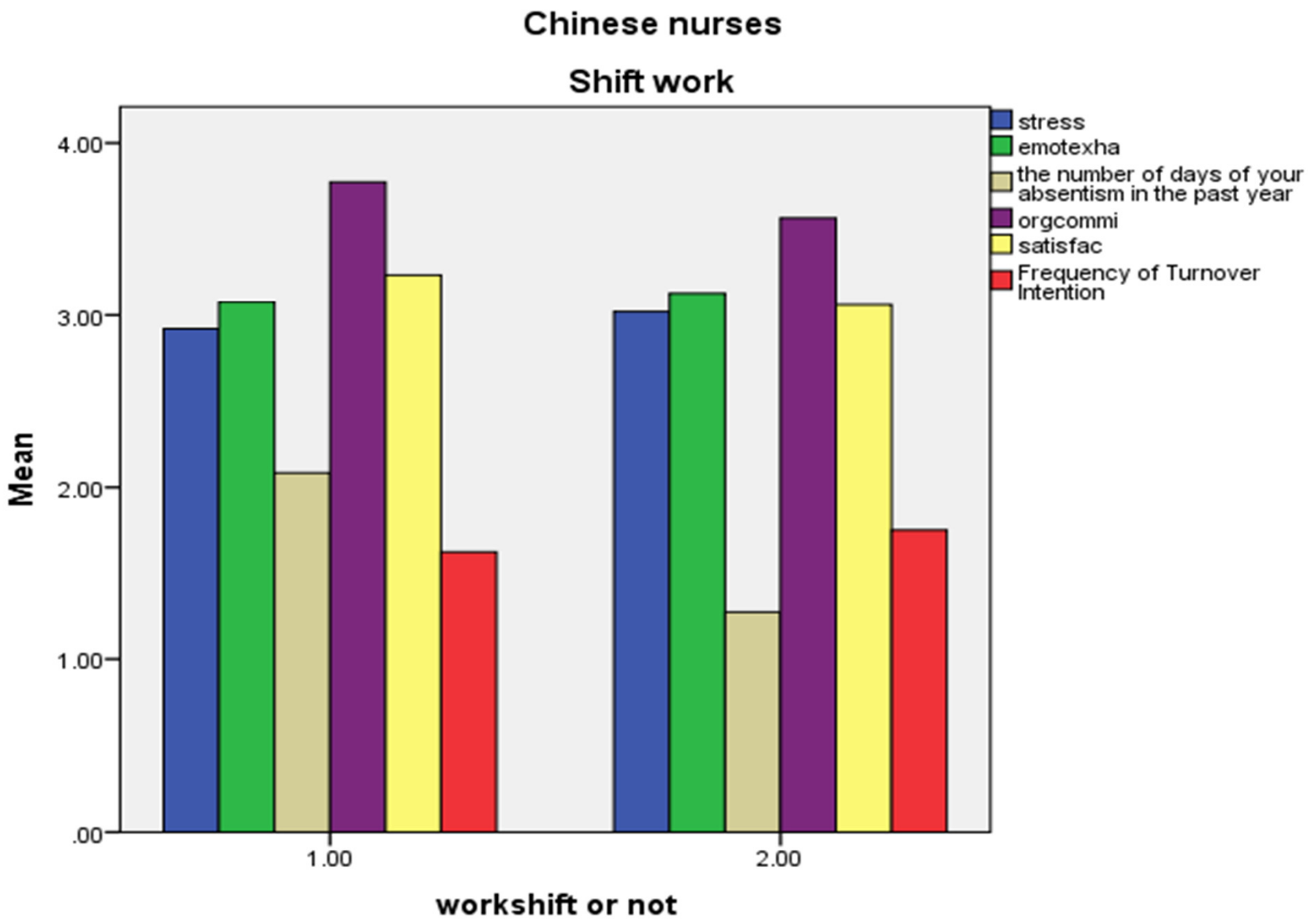
Some Descriptive Figures

- Chinese Nurses
  - 119 fixed shift and 406 rotating shift
  - 354 not understaffed and 176 understaffed
  - Fixed shift: 75 not understaffed, 37 understaffed
  - Rotating shift: 263 not understaffed, 133 understaffed
- Indian Nurses
  - 117 fixed shift and 566 rotating shift
  - 323 not understaffed and 360 understaffed
  - Fixed shift: 55 not understaffed, 62 understaffed
  - Rotating shift: 268 not understaffed, 298 understaffed


Indian Nurses
Understaffing
Mean
20
15
10
5
0
Stress
Emotionalexh
not counting vacation/holidays, how many days you have been absent in past year
Orgcommit
Turnintent
Jobsatisfaction
not at all
slightly, but not enough to affect amount of work or quality of patient care
moderately, enough to affect amount of work but not quality of patient care
severely, affected both the amount of work and quality of patient care
in last six months, to what extent was your ward understaffed


Indian Nurses
Shift work
Mean
10
8
6
4
2
0
fixed
rotating
Is shift fixed or rorating
Stress
Emotionalexh
not counting vacation/holidays, how many days you have been absent in past year
Orgcommit
Turnintent
Jobsatisfaction


Chinese nurses
Understaffing
Mean
4.00
3.00
2.00
1.00
.00
1.00
2.00
3.00
4.00
the extent of lack of workforce
stress
emotexha
the number of days of your absentism in the past year
orgcommi
satisfac
Frequency of Turnover Intention


Chinese nurses
Shift work
Mean
4.00
3.00
2.00
1.00
.00
1.00
2.00
workshift or not
stress
emotexha
the number of days of your absentism in the past year
orgcommi
satisfac
Frequency of Turnover Intention

Results

- **In China**
  - **Fixed shifts**
    - In *Understaffed* Units there is a Negative Relationship between Emotional Exhaustion and Job Satisfaction
    - In *Understaffed* Units there is a Positive Relationship between Emotional Exhaustion and Intention to Quit
    - Emotional Exhaustion has no Impact on Job Satisfaction and Intention to Quit when there is *No Understaffing*
    - Absence, Stress and Emotional Exhaustion are associated with lower Organizational Commitment
  - **Rotating shifts**
    - Understaffing, Job Stress and Emotional Exhaustion Decrease Job Satisfaction
    - Job Stress and Emotional Decrease Organizational Commitment
    - Understaffing, Job Stress and Emotional Exhaustion Increase Intention to Quit
    - There is no interaction effect

Figure 1 Job Satisfaction and Fixed Shift in China

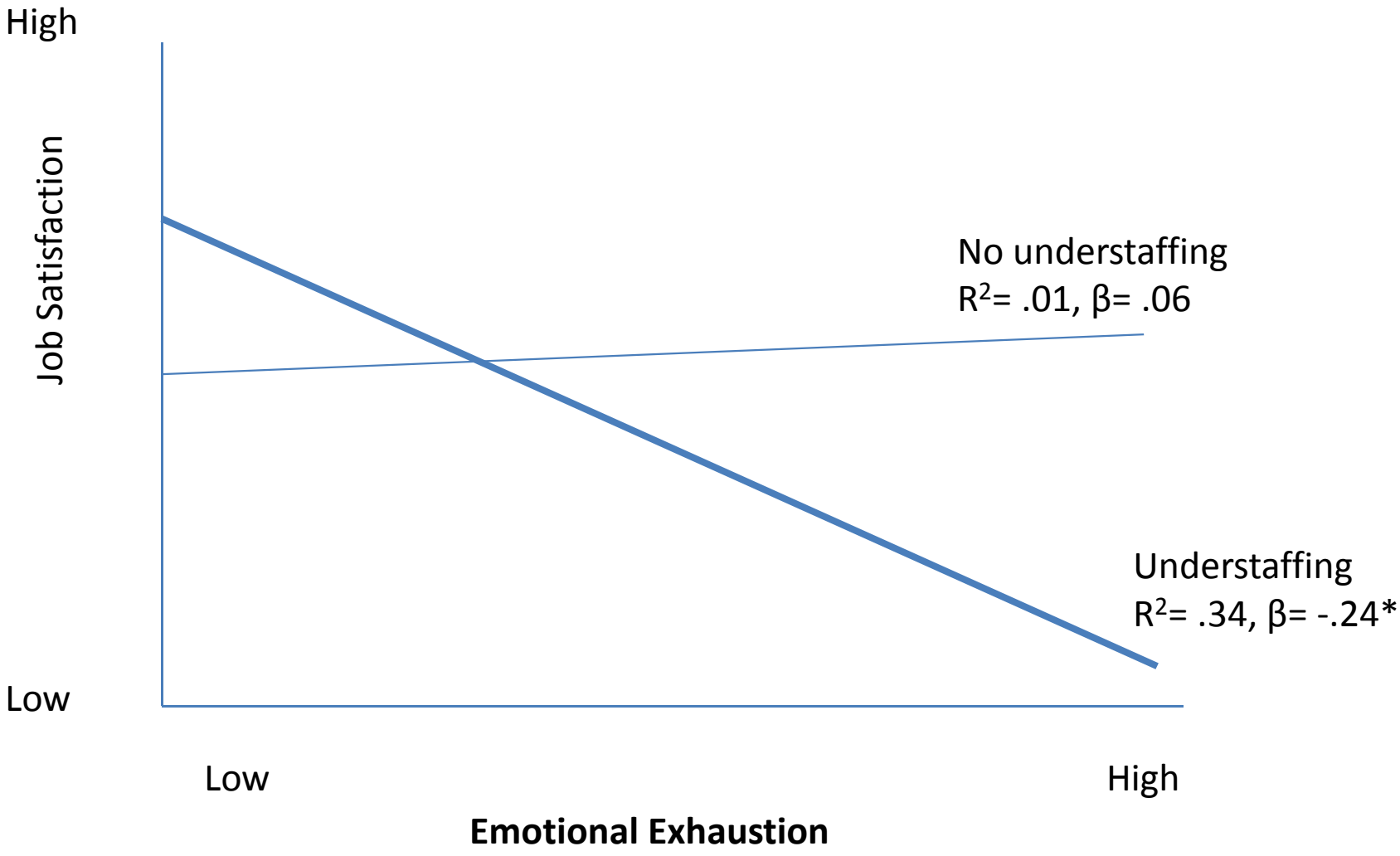
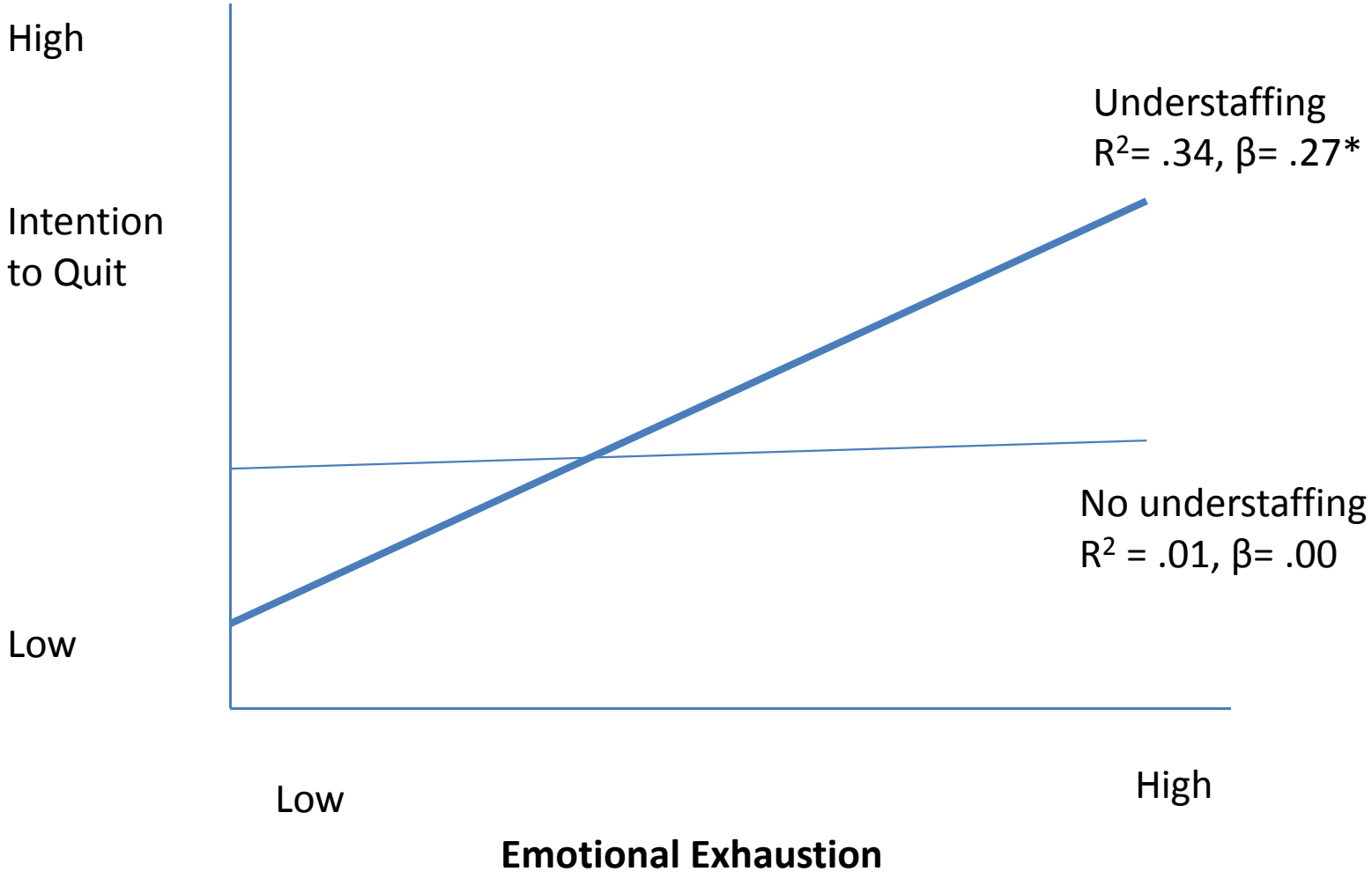


Figure 2 Intention to Quit and Fixed Shift in China



Results (continued…)

- In India
  - Fixed Shift
    - Understaffing: Both Job Stress and Emotional Exhaustion have a Negative Impact on Job Satisfaction
    - Job Stress and Emotional Exhaustion DO NOT Reduce Job Satisfaction when there is No Understaffing
  - Rotating Shift
    - Absence is positively related to Job Satisfaction and Organizational Commitment (counterintuitive)
    - Job Stress reduces Job Satisfaction
    - For both extent of staffing, we observe a slight negative relationship between Job Stress and Job Satisfaction. However, the level of Job Satisfaction is constantly lower in the context of Understaffing
    - Emotional Exhaustion reduces Organizational Commitment in the context of Understaffing

Figure 3 Job Satisfaction and Fixed Shift in India

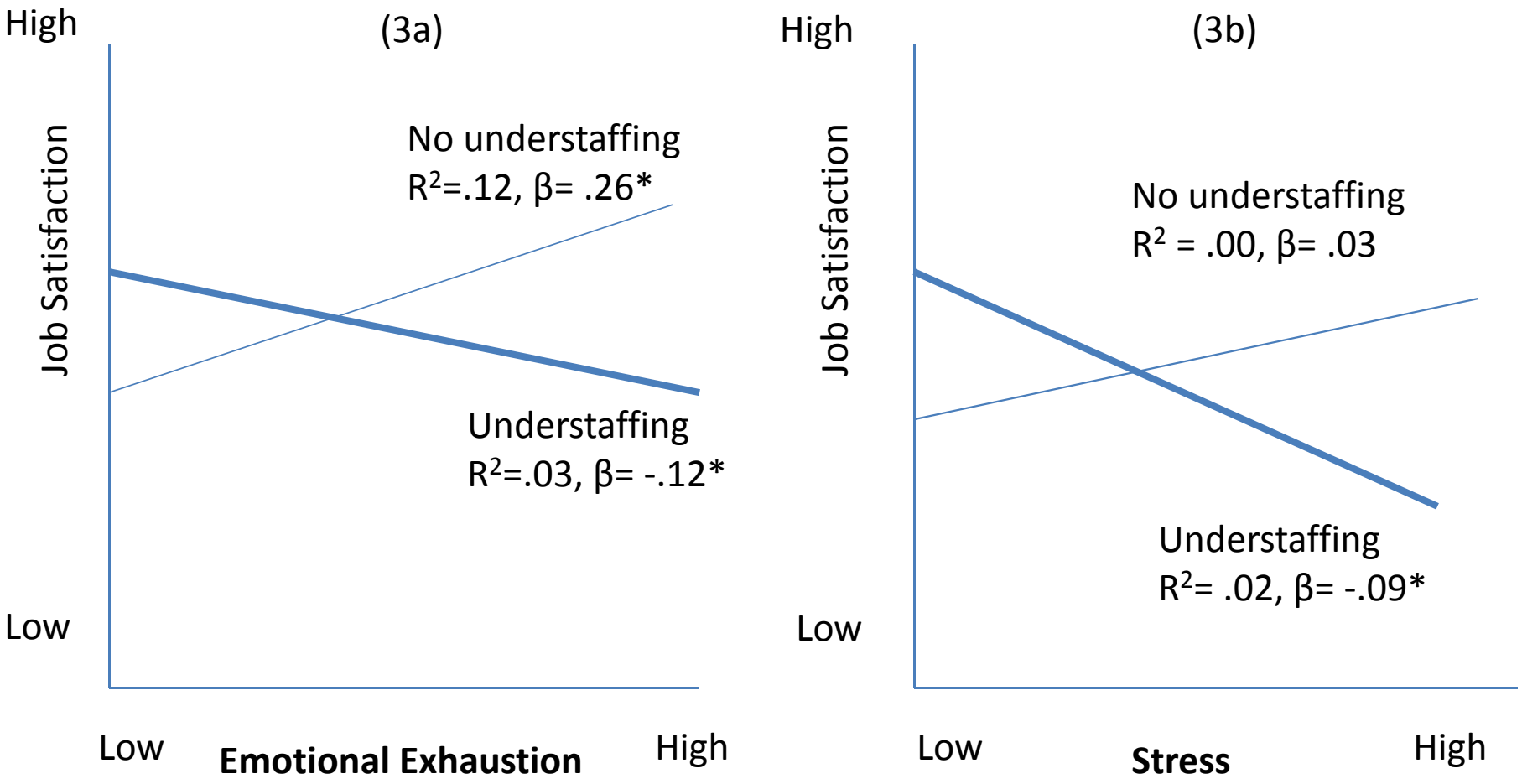


Figure 4 Job Satisfaction and Rotating Shift in India

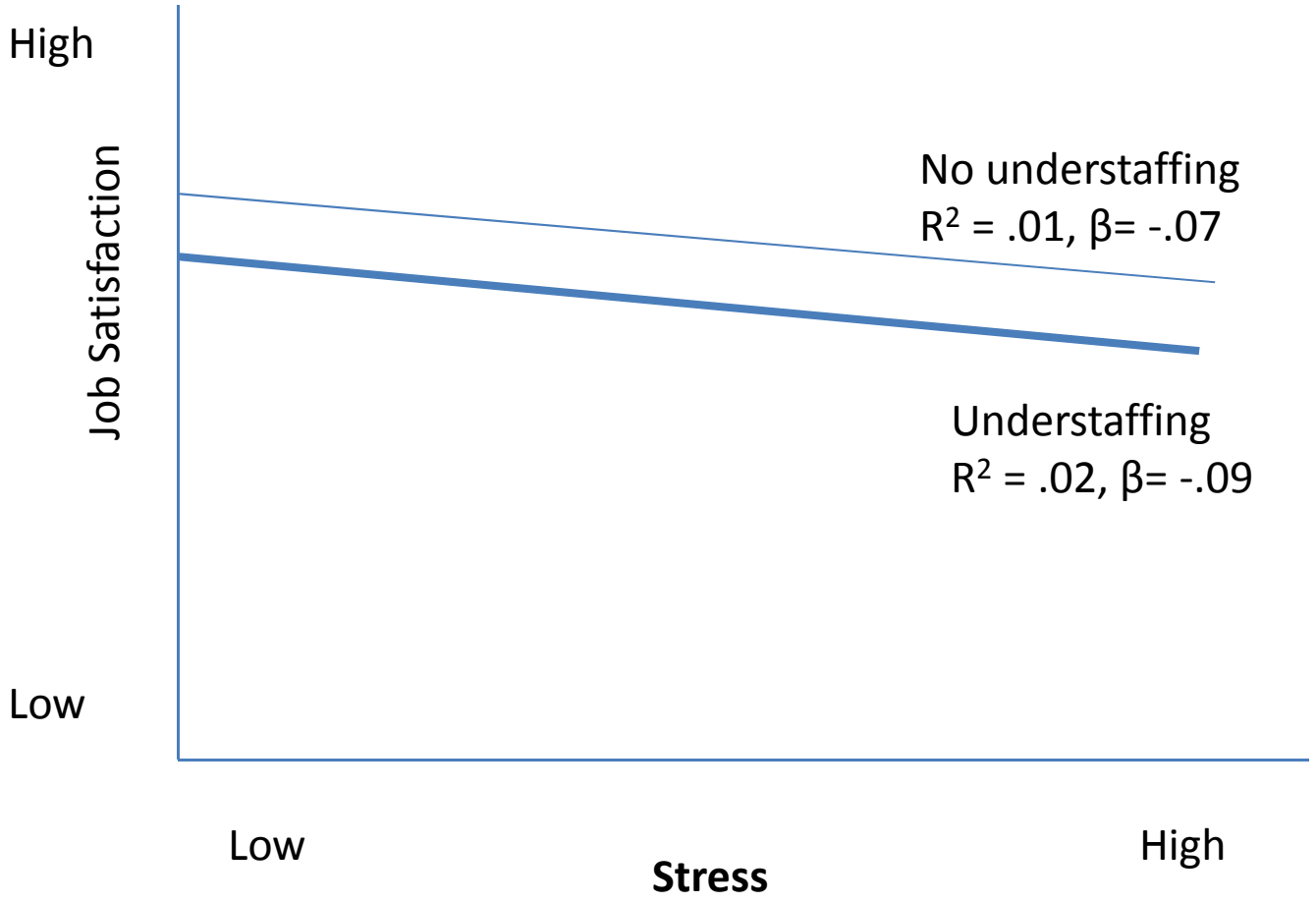
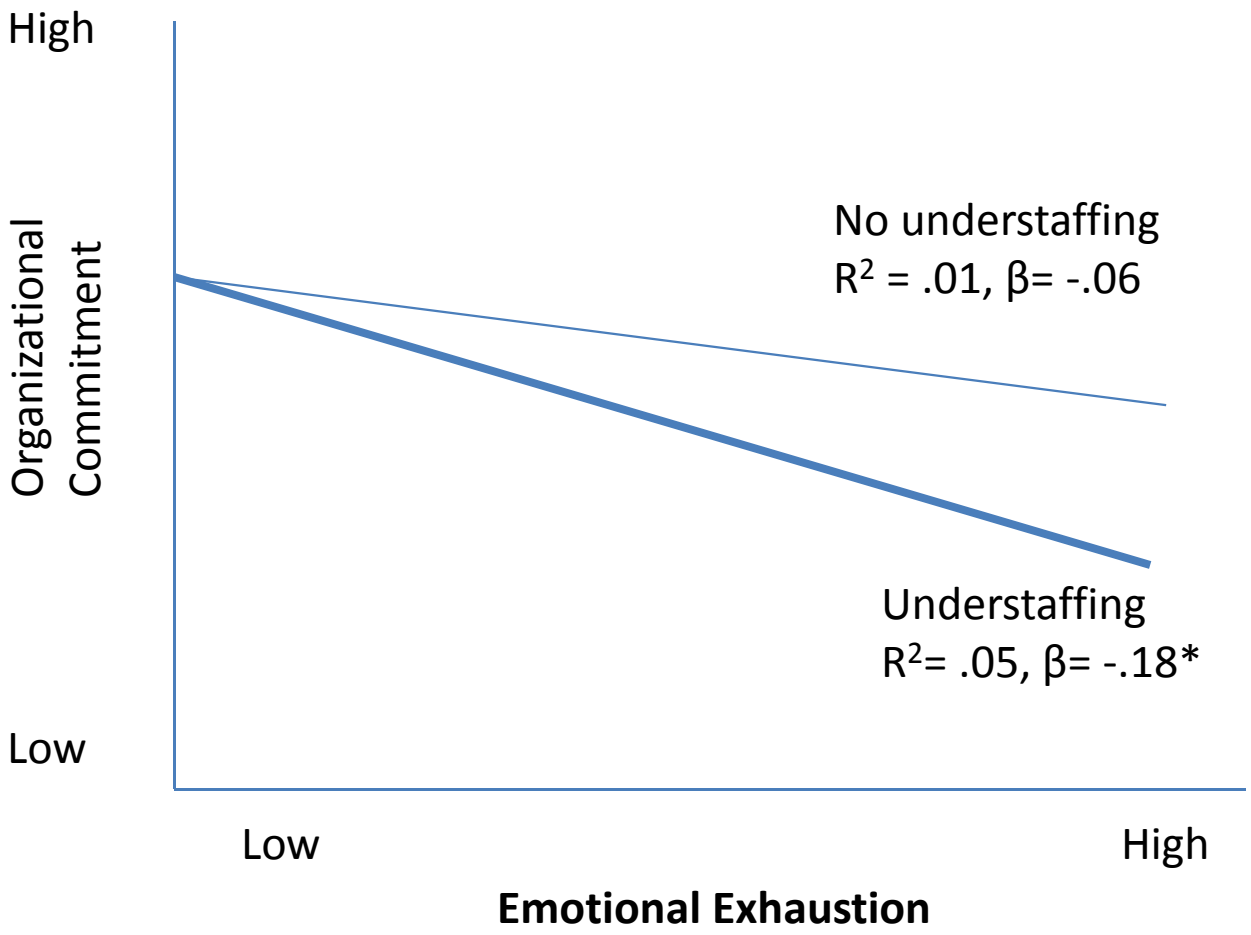


Figure 5 Organizational Commitment and Rotating Shift in India



Conclusions

- The impact of Job Stress and Emotional Exhaustion on Job Attitudes is moderated by the extent to which work units are understaffed
- Shift Work constitutes an important contextual factor
  - In China, we observed significant interaction effects only among nurses working fixed shift
    - If units are not understaffed, there is basically no relationship between emotional exhaustion and job satisfaction, and intention to quit
  - We observed similar findings in India for nurses on fixed shift
    - If units are not understaffed, there is no relationship between emotional exhaustion, job stress and job satisfaction
  - For fixed shift nurses, it does seem that fixing the problem of understaffing nullifies the negative impact of job stress and emotional exhaustion.

Conclusions (continued…)

- For nurses working rotating shift in China the problem seems more complex
  - Job stress and emotional exhaustion can both have a pervasive negative impact on the job attitudes of nurses regardless of the extent of understaffing.
  - It may be necessary to examine other potential moderators such as supervisory support, social support from co-workers, and perceived organizational support
- In India, the interaction effects reveal that understaffing is also an important moderator in the context of rotating shift
  - However, absence was positively associated with both Job Satisfaction and Organizational Commitment
  - Given that absence is not related to Intention to Quit, absence may constitute a means of offering more flexibility to nurses so that they can recuperate from high job demands.
  - There is a need to further examine the role of absence as moderator.

Limitations of the Present Study

- Cross sectional design
- Single source data
- Perceptual measures
- Samples
  - More nurses on rotating shifts
    - However, very significant interaction effects among fixed shift nurses
  - More nurses in understaffed conditions in India and less in China

Strengths of the Present Study

- Measurement
- Samples
  - Culturally and structurally different
- Results
  - Significant interaction effects
  - Highlight the need to focus on shift work and staffing as major factors in the study of stress and burnout in hospitals
  - Highlight the potential effect of shift work and staffing on job attitudes
  - Shows that job stress and emotional exhaustion are less likely to diminish positive job attitudes or increase negative job attitudes when understaffing is not an issue

Discussion

- Necessary to hire new nurses and to increase the retention of nurses in order to reduce understaffing
- In China, nurses who work rotating shifts need particular attention
  - Their job attitudes were impacted by job stress and emotional exhaustion regardless of staffing
- Absence in China was associated with lower Organizational Commitment. However, in India, it was associated with higher Job Satisfaction and Organizational Commitment. It constitutes an avenue for future research.