

## **Achieving optimal performance in hospital practice**

**The relationship to leadership, teamwork and stress**

**von Sandra C. Buttigieg**

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Hospital employees, who work in an environment with zero tolerance to error, face several stressors that may result in psychological, physiological and behavioural strains, and subsequently, in suboptimal performance. The study is a multilevel investigation of the strain-reducing effects of the social environment on externally-rated unit-level performance based on primary data from 1,137 employees in 136 units and from forty-four external raters in a hospital in Malta. The term "social environment" refers to the prediction of the moderator variables, namely social support and decision latitude/control by transformational leadership and team climate. This study identifies a number of moderating effects that social support and decision latitude/control had on specific stressor-to-strain relationships. The results also show significant mediated stressor-to-strain-to-performance relationships. This research strives to make a significant contribution to the occupational stress and performance literature with a focus on hospital practice.

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**19<sup>th</sup> June 2013**

# What stimulated me to do this research?

Hospital employees, who work in an environment with zero tolerance to error, face several stressors that may result in psychological, physiological and behavioural strains, and subsequently, in suboptimal performance. The study is a multilevel investigation of the strain-reducing effects of the social environment on externally-rated unit-level performance based on primary data from 1,137 employees in 136 units and from forty-four external raters in a hospital in Malta. The term "social environment" refers to the prediction of the moderator variables, namely social support and decision latitude/control by transformational leadership and team climate. This study identifies a number of moderating effects that social support and decision latitude/control had on specific stressor-to-strain relationships. The results also show significant mediated stressor-to-strain-to-performance relationships. This research strives to make a significant contribution to the occupational stress and performance literature with a focus on hospital practice.

Performance in Hospital Practice



**Sandra C. Buttigieg**

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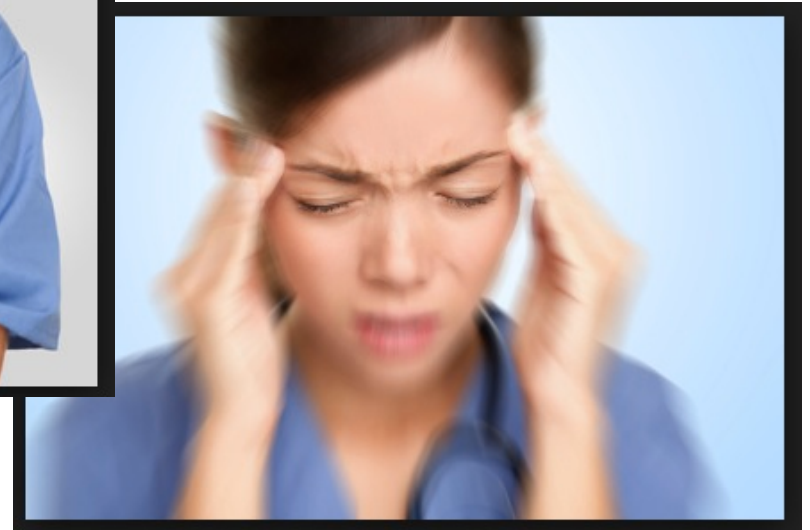
Sandra C. Buttigieg

## Achieving optimal performance in hospital practice

The relationship to leadership, teamwork and stress

**LAP** **LAMBERT**  
Academic Publishing

- Health care professionals face a number of **stressors** during their working life
- The literature refers to **psychological**, **physiological** and **behavioural** strains



- The risk is **sub-optimal performance** and **lower quality of health care** delivery
- Health care organizations are looking for ways to improve the **quality** of the **SOCIAL ENVIRONMENT**
- **ZERO TOLERANCE** to **ERROR** in healthcare





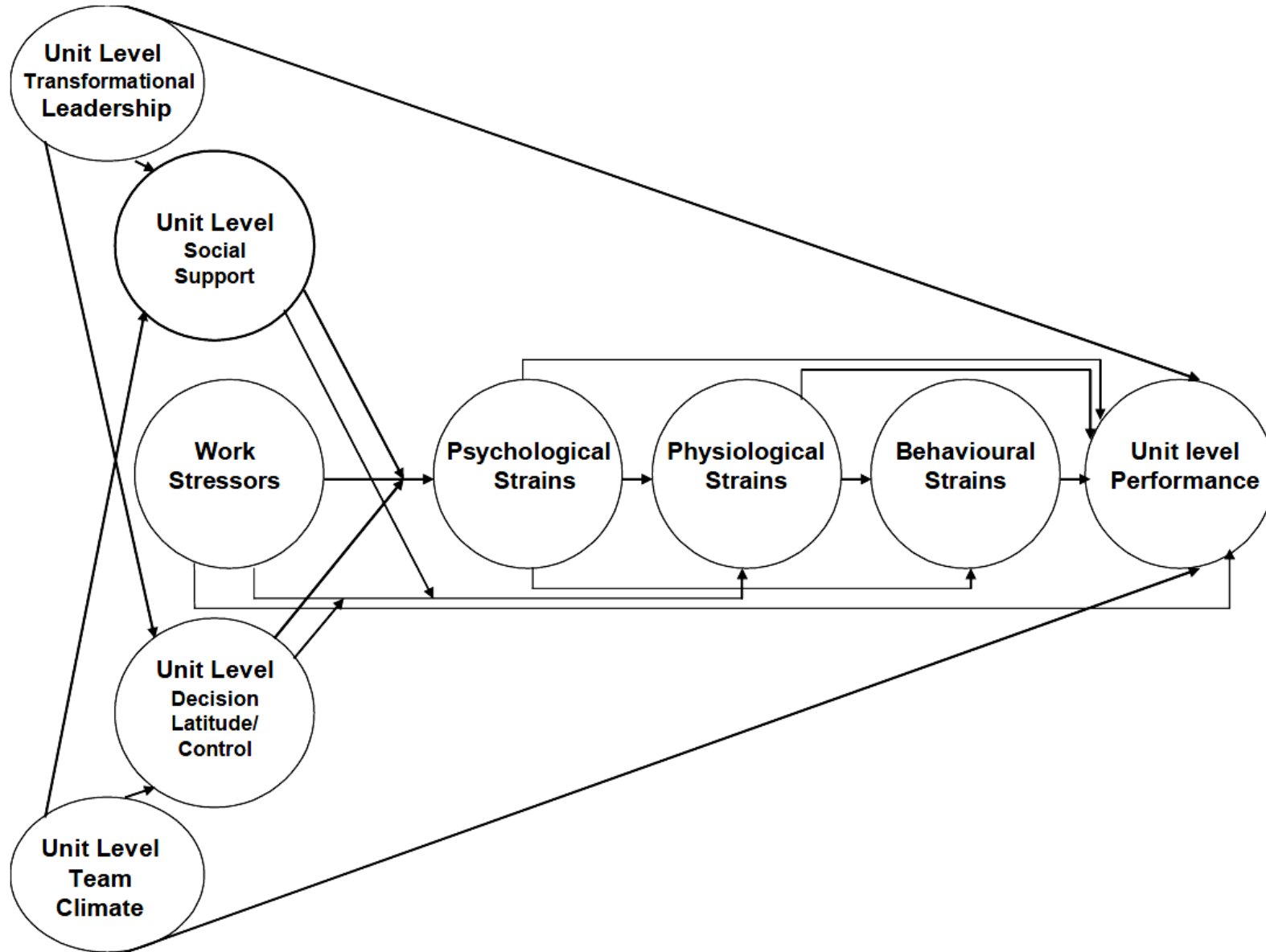
# Research Questions

1. To what extent, and in what ways are work **stressor-to-strain** relationships associated with unit **performance in hospital** practice?
2. To what extent are **unit**-levels of **transformational leadership** and **team climate** associated with **social support** and **decision latitude (control)** within hospital units?

# Research Questions

3. Can the **quality of the social environment**, defined by the perceived levels of **social support** and **decision latitude (control)** within hospital units, buffer health care professionals against these stressors?
4. Are **transformational leadership** and **team climate** associated with unit **performance** in hospital practice?

## Illustration of Hypothesised Relationships



# Theory

- *Transformational leadership* (Rafferty & Griffin, 2004)
- *Team climate for innovation* (Anderson & West, 1998)
- *Social support theory* (House, 1981)
- *Social influence theory* (Van Avermaet, 2001)
- *Interactional work stress models* (Dollard, 2002):
  - *Demand control (support) model* (Karasek & Theorell, 1990)
  - *Structural model of burnout* (Maslach, Leiter & Jackson, 1996)
- *Stressor-to-strain relationship* (Cartwright & Cooper, 1997; Cooper & Quick, 1999; Cooper, Dewe, & O'Driscoll, 2001)

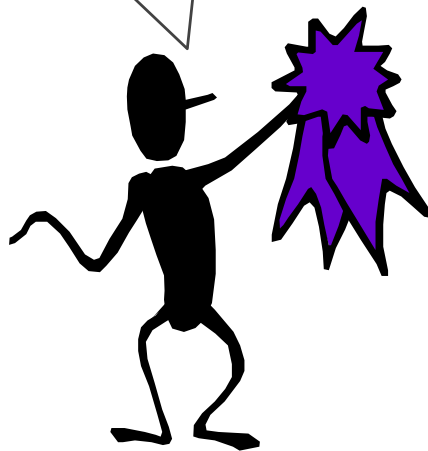




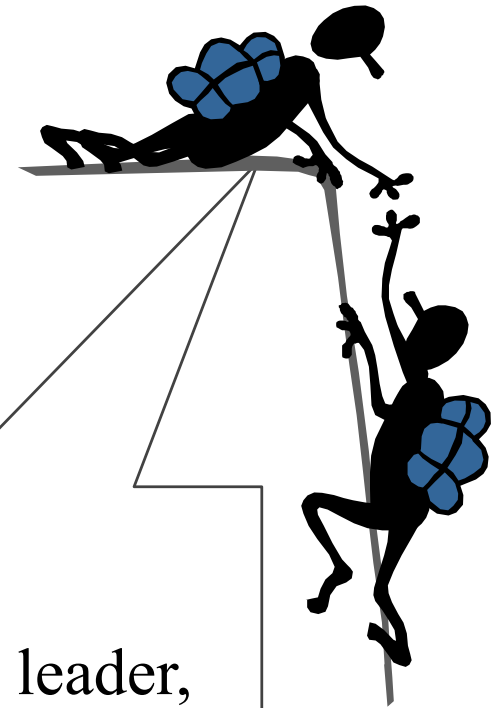
*"I'm sorry, Sir, but God is in a meeting at the moment, would you like to leave a message? God's office, please hold... God's office, please hold..."*

# Transactional & Transformational Leadership

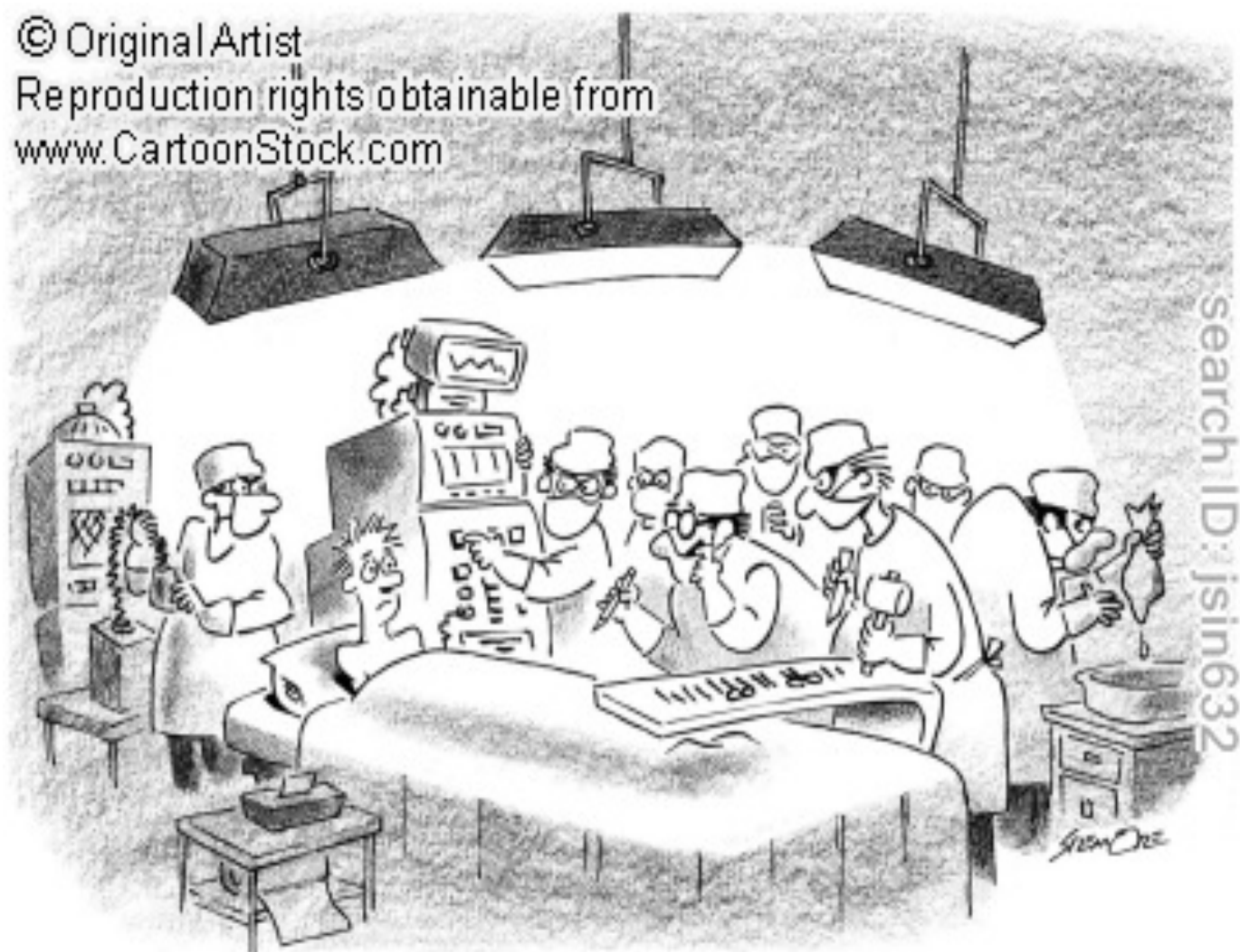
As a transactional leader, I use formal rewards & punishments.



As a transformational leader, I inspire and excite followers to high levels of performance.



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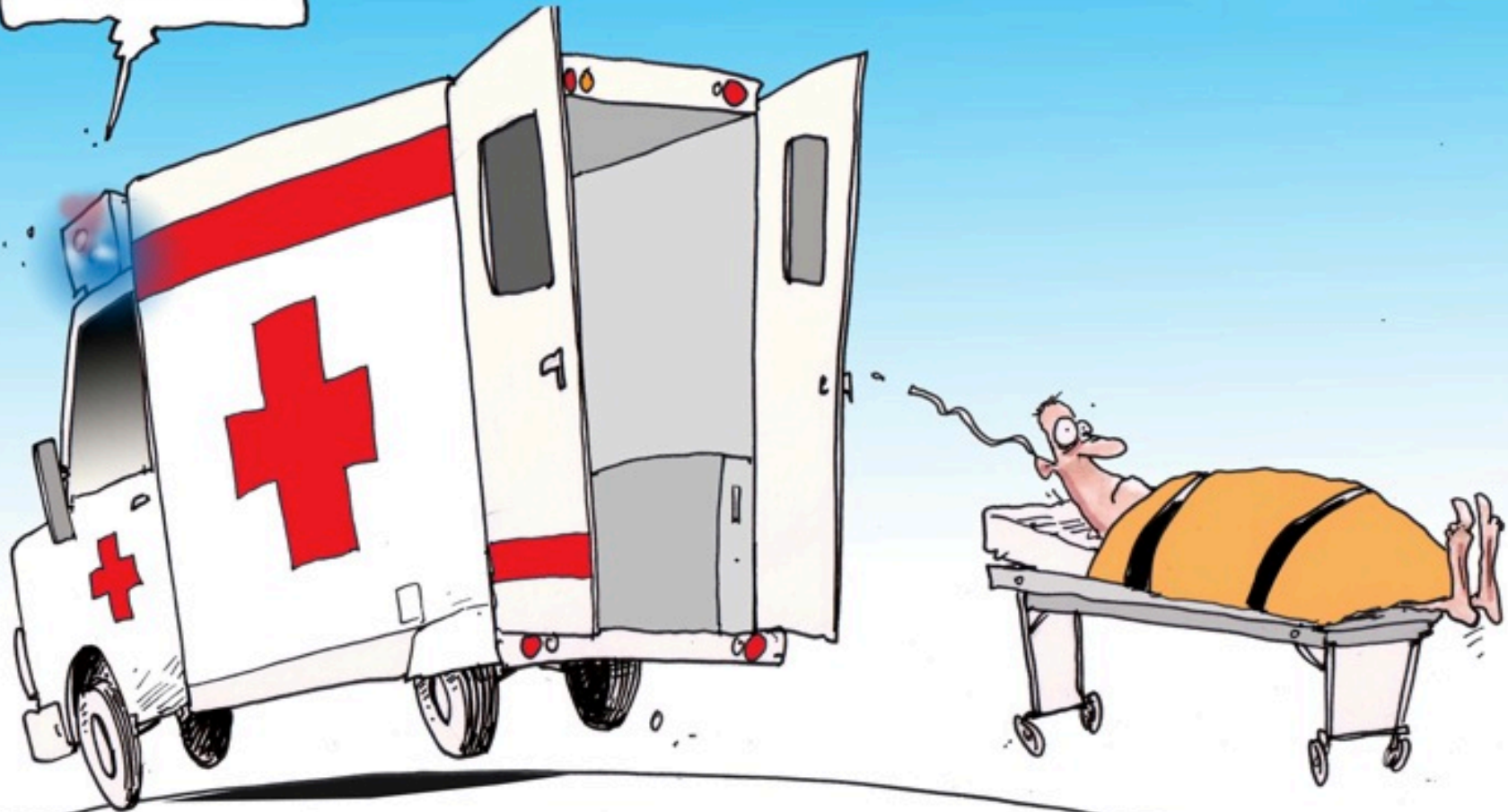


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*"Relax — we're all in this together."*

# ROLE CLARITY

... NO...  
IT'S YOUR  
JOB TO CLOSE  
THE DOORS...





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**“This is a major project of utmost importance, but it has no budget,  
no guidelines, no support staff, and it’s due in 15 minutes.  
At last, here’s your chance to really impress everyone!”**

# The Study

- General hospital in Malta
- Target population: Health care professionals; general management ; top administration; ward clerks
- Unit leaders' perceptions excluded
- Survey – Self-report questionnaire to whole target population: 1,134 Respondents (61% of eligible population), Nested in 124 hospital units
- External raters of unit performance: Forty-four rated 124 units

## Study Design

	FOCUS GROUP	PILOT STUDY	STUDY
Questionnaires from <i>Individual Members</i> of the Target Population, Nested in Units	X	X	X
External Ratings of Hospital <i>Units</i>	X	X	X
Human Resource Department Data		X	X

ASTON UNIVERSITY

A study conducted in collaboration with  
Aston Business School, Aston University, Birmingham, UK  
and supported by the University of Malta and St. Luke's Hospital, Malta

# SURVEY

## How Do You Feel About Your Hospital Job?

This survey is the first of a three-timeframe longitudinal study seeking your personal views about the hospital where you work.

The overall aim is to gather information about work stressors and strains that you

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# SURVEY

## Part Two

### How Do You Feel About Your Hospital Job?

This survey is the **second** of a **three-timeframe longitudinal study** seeking your personal views about the hospital where you work.


**One snapshot will not provide a full picture of what happens to an organisation over time. This is the reason behind collecting data three times.**

The overall aim is to gather information about work stressors and strains that you experience in your hospital job and identify human resource practices that may help to improve your working life and contribute towards better quality of care.

The questionnaires will be distributed to all health care professionals at St. Luke's Hospital throughout March 2006.

Anonymity and Confidentiality will be secured.

**Those who have not participated in the first part of the survey, are still eligible to participate in part two.**



The questionnaire will only take 30 minutes to complete.

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# SURVEY

## Part Three

### How Do You Feel About Your Hospital Job?

This survey is the **third and final part** of a **three-timeframe longitudinal study** seeking your personal views about the hospital where you work.

**One snapshot will not provide a full picture of what happens to an organisation over time. This is the reason behind collecting data three times.**

The overall aim is to gather information about work stressors and strains that you experience in your hospital job and identify human resource practices that may help to improve your working life and contribute towards better quality of care.

The questionnaires will be distributed to all health care professionals at St. Luke's Hospital throughout September - October 2006.

Anonymity and Confidentiality will be secured.

**Those who have not participated in the first two parts of the survey, are still eligible to participate in part three.**

Results of the survey will be published within a year of completion of this research study.

### Participate and Win

By taking part in this survey and successfully completing the three questionnaires, you will be eligible to participate in a lottery draw which will be held on 6 December 2006.

DPL83/05



For more information contact Dr Sandra Buttigieg on 21 244977 or email: sandra.buttigieg@um.edu.mt  
Website: http://home.um.edu.mt/lhc/director/

## SURVEY

### How Do You Feel About Your Hospital Job?

Unique Identification Number

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#### What is the purpose of this survey?

- It is a survey of your views about the hospital where you work. This is not a test. There are **no right or wrong answers**. We want to know **your personal views** on the issues raised in the questionnaire.

#### What is covered in this survey?

The questionnaire consists of six sections:

- Section 1:** Seeks your views regarding the current hospital unit/ward where you work
- Section 2:** Seeks your views about your job and feelings towards your job
- Section 3:** Seeks your feelings about your well-being
- Section 4:** Seeks your views about the move to the NEW Hospital
- Section 5:** Seeks some details about work-life balance at the Hospital
- Section 6:** Seeks some biographical details to enable us to compare the views of different members of staff

#### Who will see my responses?

- The information you give is **totally confidential**. The results of the research will be **completely anonymous** and **no one except the researchers will have access to responses** nor will it be published in any way where the responses of particular units/wards or individuals could be identified.

#### How long will it take?

- The questionnaire will take about 30 minutes to complete

#### How do I fill in this survey?

- Please read each question carefully and respond to the items as accurately as you can.
- Do not spend too long thinking about your responses to an item - usually your first reaction is the best one.
- Most statements ask you to indicate *the degree or extent of your view* by marking the right box on a predetermined scale which best reflects your opinion. *Always mark **one** box for each question or statement.*

For example in the following statement, you would mark the box **Agree** if you "agree" with the statement that as a team "We all influence each other".

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
We all influence each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- Once you have completed the questionnaire, please take a moment to check that you have answered **all the items** and **deposit it in the collection box** that will be **available in the unit/ward where you work**. Please complete it for your current unit/ward, or the unit/ward, you mostly identify yourself with.
- If you work **across two or more units/wards** in the hospital, **please deposit your answer in the collection box in the unit/ward, where you spend most of your time.**
- If you have any questions about this research, my contact details are shown below.

Dr Sandra Buttigieg  
E-mail: sandra.buttigieg@um.edu.mt  
Telephone Number: 21 244977

Kindly **complete** the questionnaire **within two weeks**. Thank you for taking the time to fill in this survey



















# Work Stressors

1. Work demands and workload
2. Interpersonal conflict at work
3. Organizational constraints at work
4. Organizational change (Move to new hospital)
5. Incidents at work

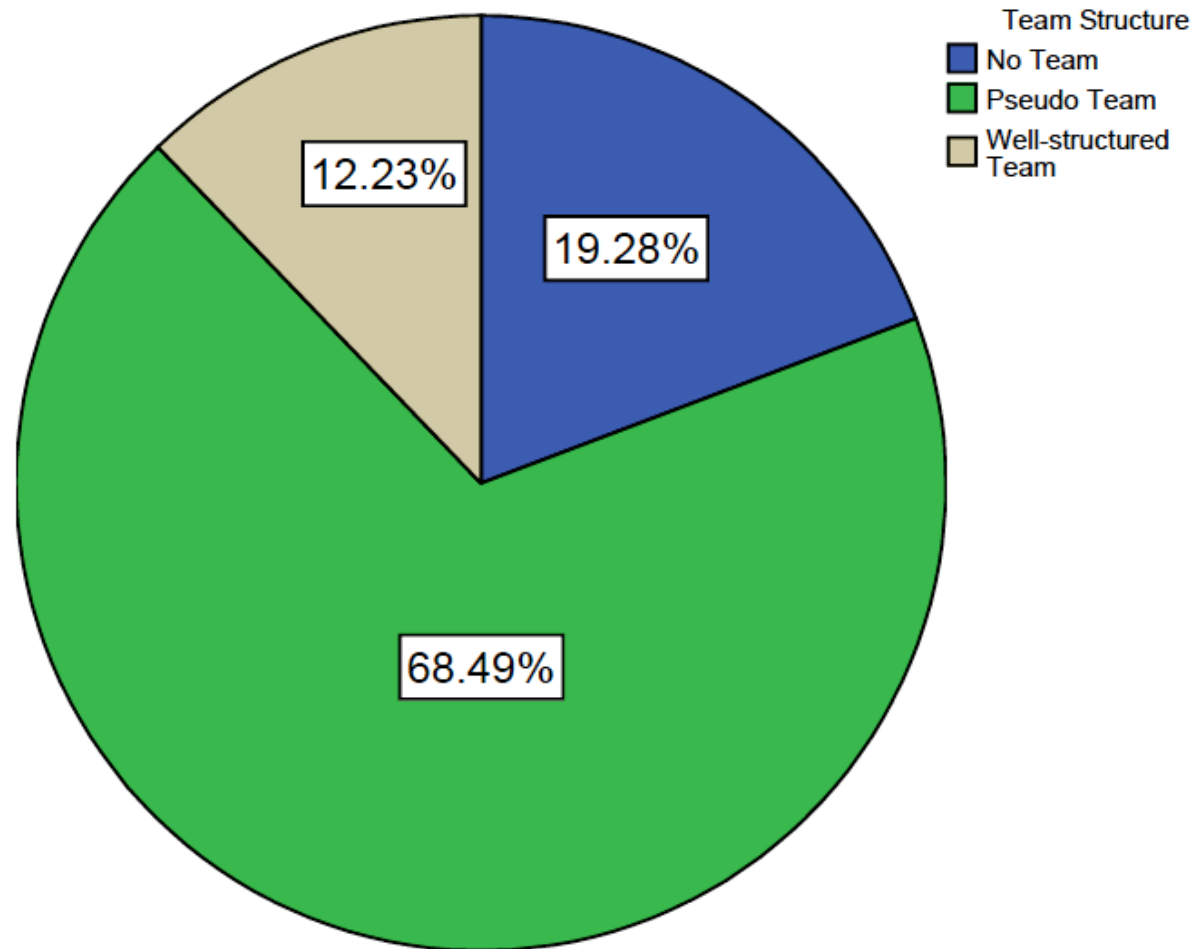
# Psychological Strains

1. Burnout
  - a. Emotional exhaustion
  - b. Depersonalization
  - c. Reduced personal accomplishment
2. Job satisfaction
3. Intention to leave job

## Analytical techniques:

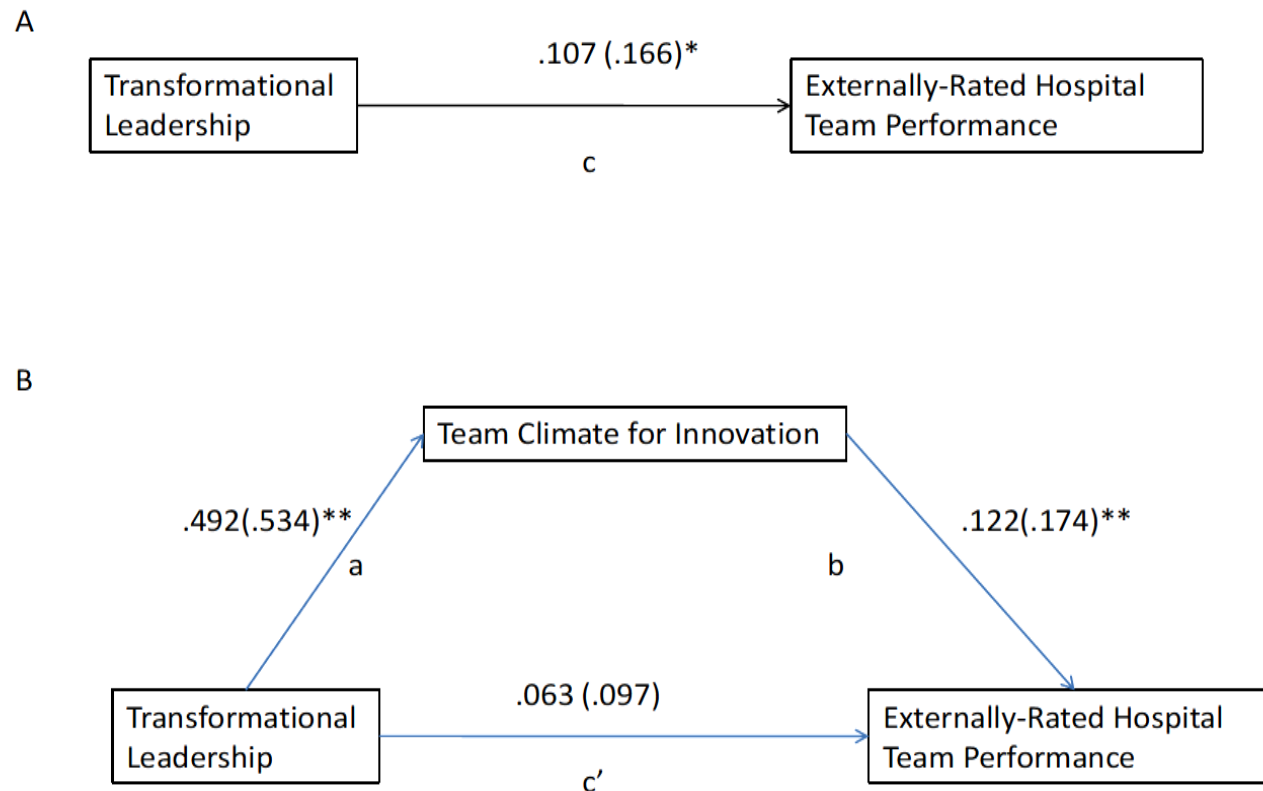
- Multiple Regression (SPSS)
- Structural Equation Modelling (AMOS)
- Hierarchical Linear Regression (HLM)
- Multilevel Structural Equation Modelling (Mplus)

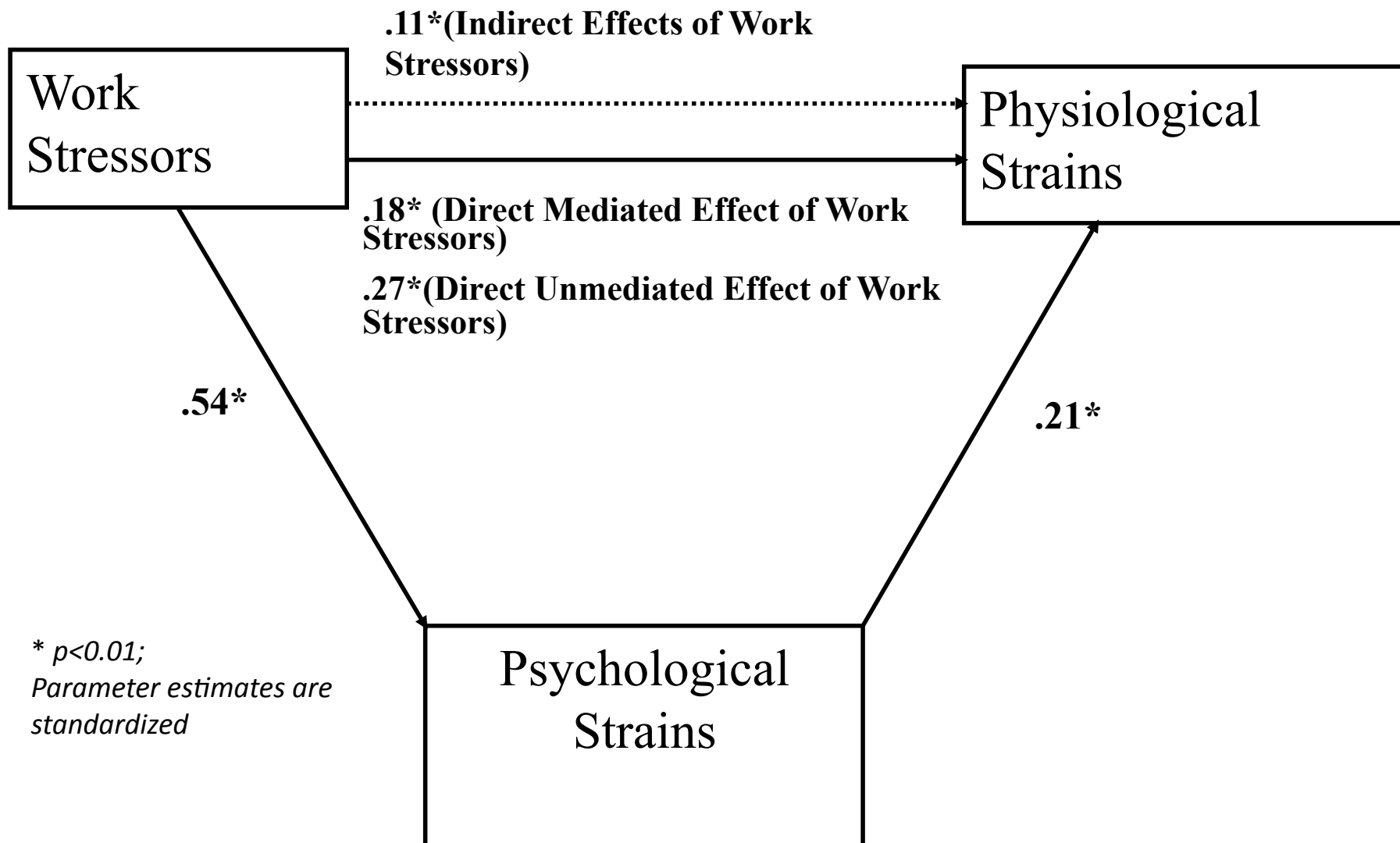
**Pie Chart Showing Team Structure Percentages in the Sample**



## Team climate for innovation mediates the relationship between transformational leadership and team performance.

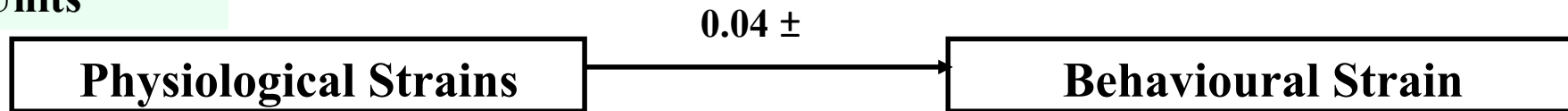
A three-variable mediation model. A: The direct effect model for transformational leadership and team performance. B: The mediation model with team climate for innovation as mediator. Standardized path coefficients are shown, with corresponding unstandardized coefficients in parentheses. N= 124 Hospital Teams.  $**p<0.01$ .





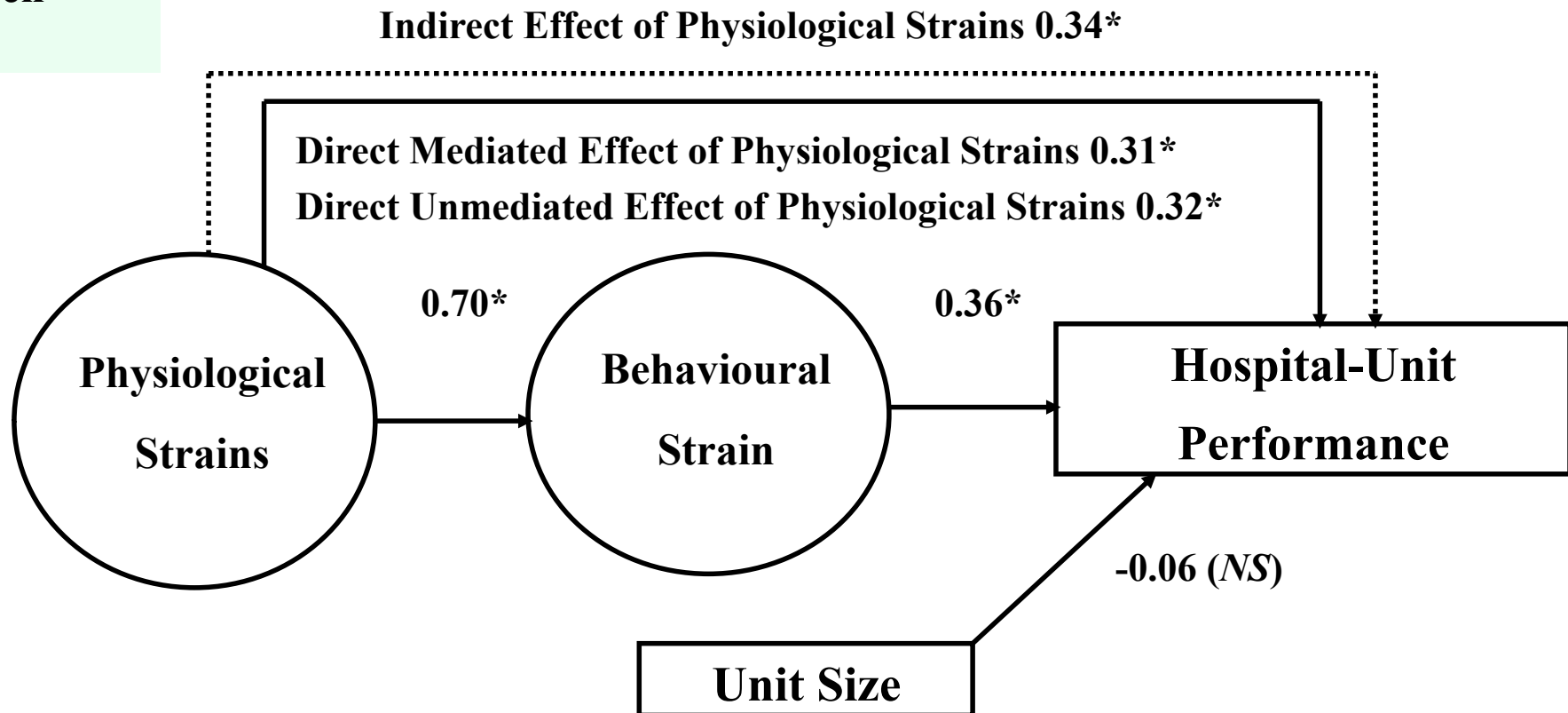


## Within Units



$\pm$  Controlling for age, gender, marital status, employment contract, duration of service in health care and in unit, professional group, and shift work

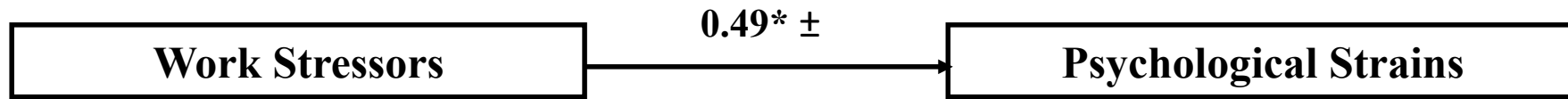
## Between Units



Parameters are standardised estimates

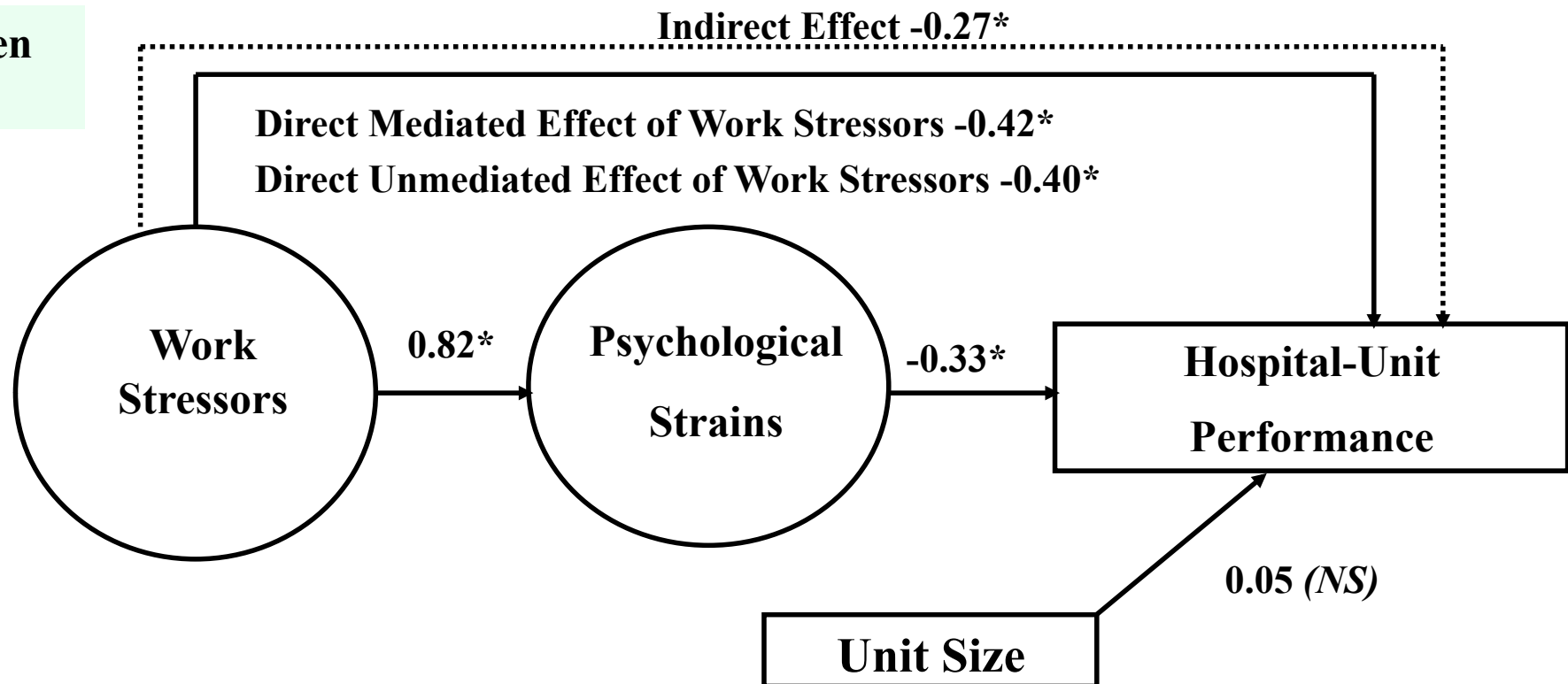
\*  $p < 0.01$  NS = Non-Significant

## Within Units



$\pm$  Controlling for age, gender, marital status, employment contract,  
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and shift work

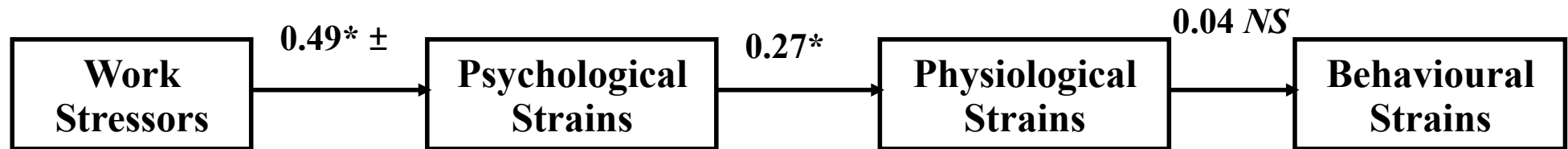
## Between Units



Parameters are standardised estimates

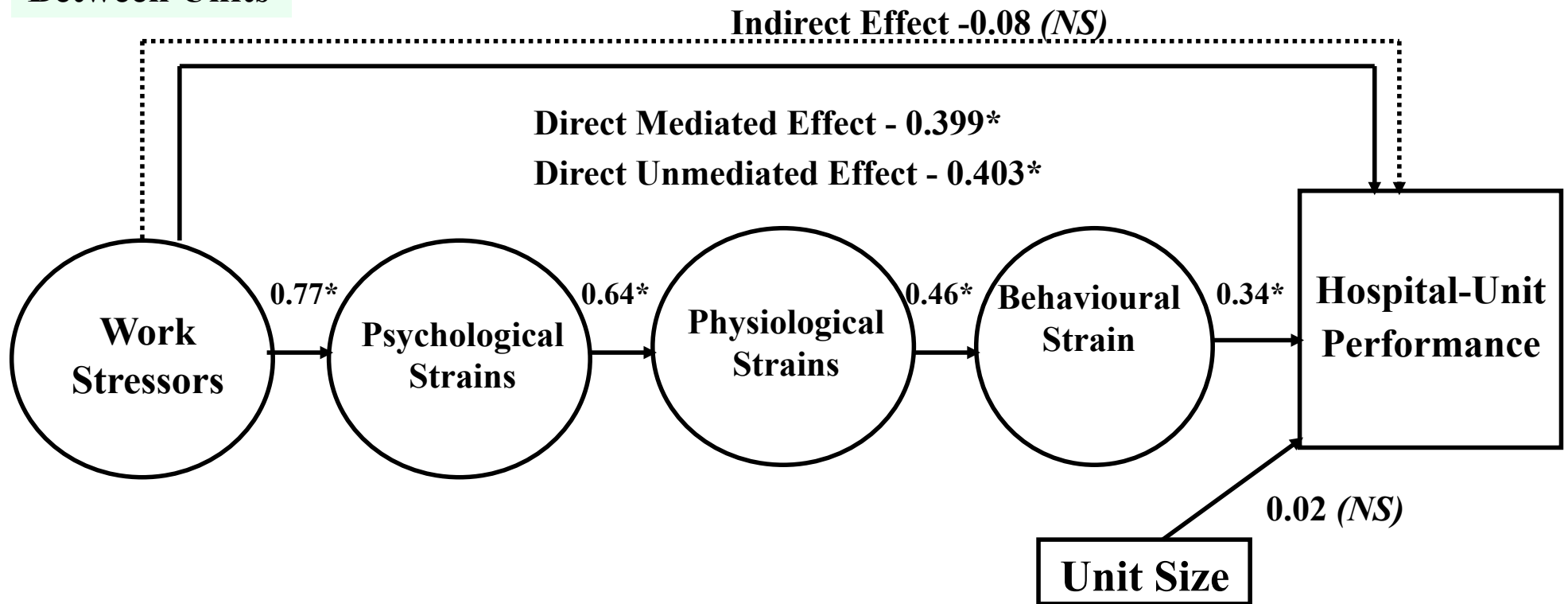
$*p < 0.01$  NS= Non-Significant

## Within Units



± Controlling for age, gender, marital status, employment contract, duration of service in health care and in unit, professional group, and shift work

## Between Units



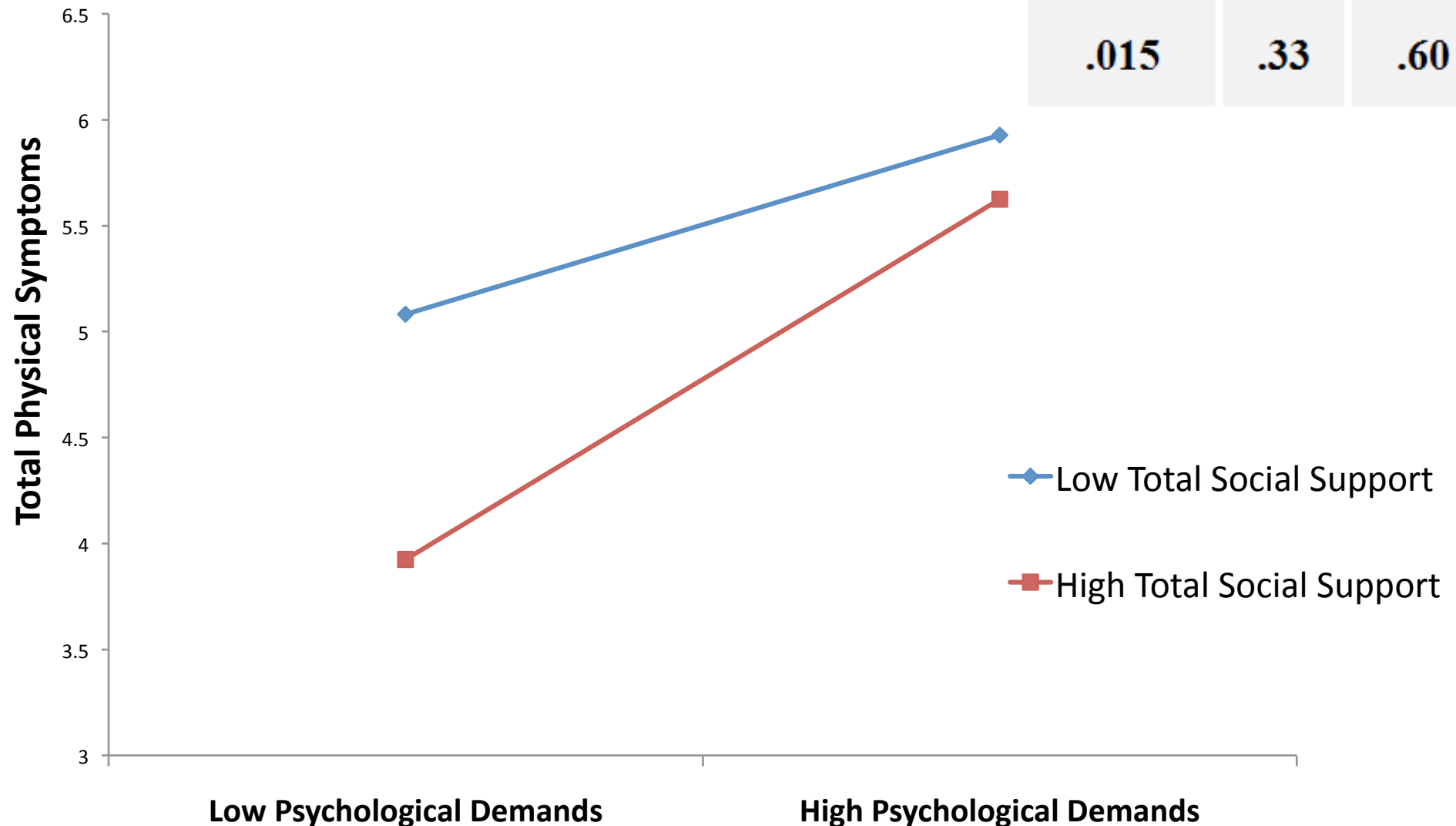
Parameters are standardised estimates

\*  $p < 0.01$  NS = Non-Significant

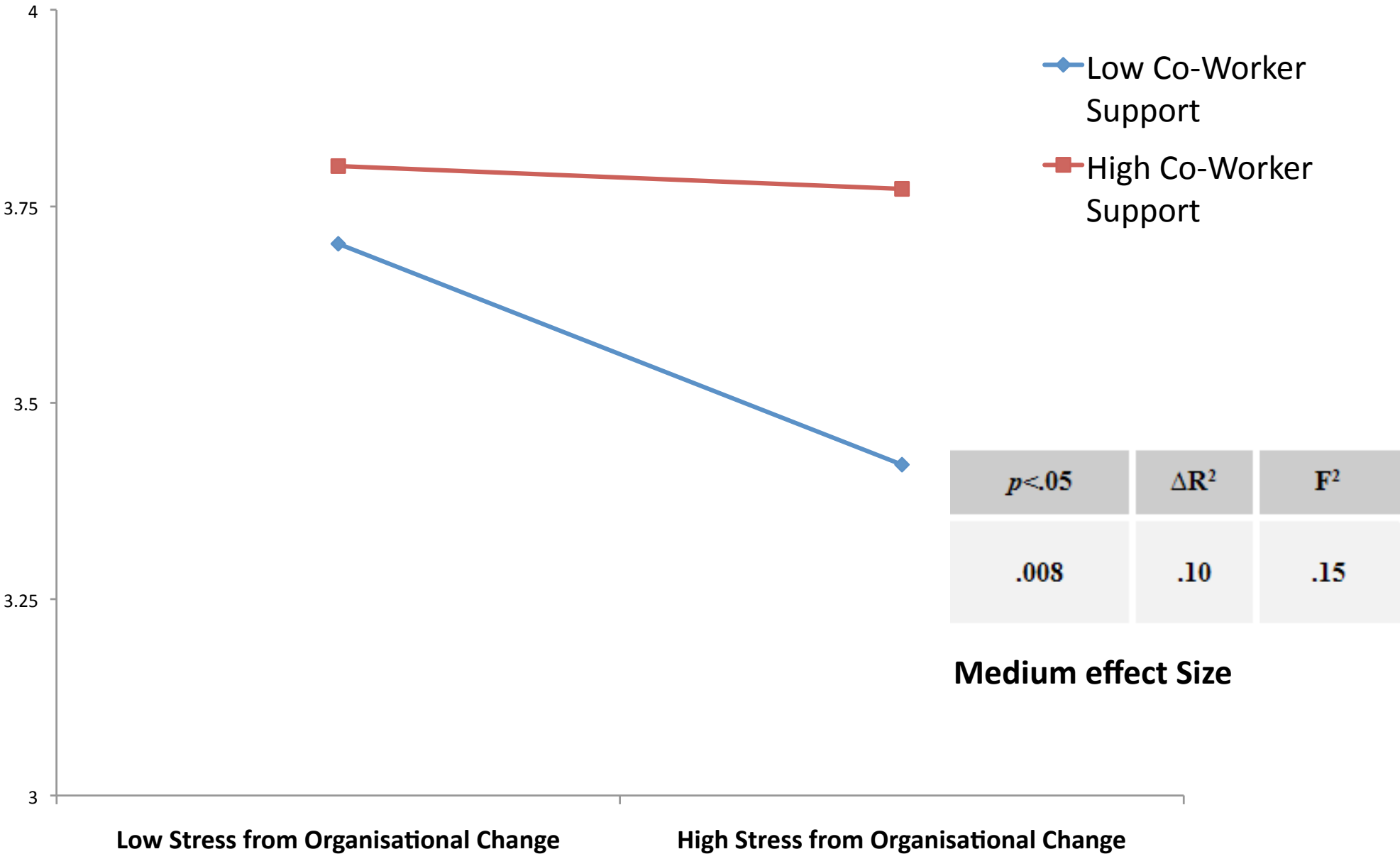
# Moderating Effect of Social Support

Large effect Size

$p < .05$	$\Delta R^2$	$F^2$
.015	.33	.60

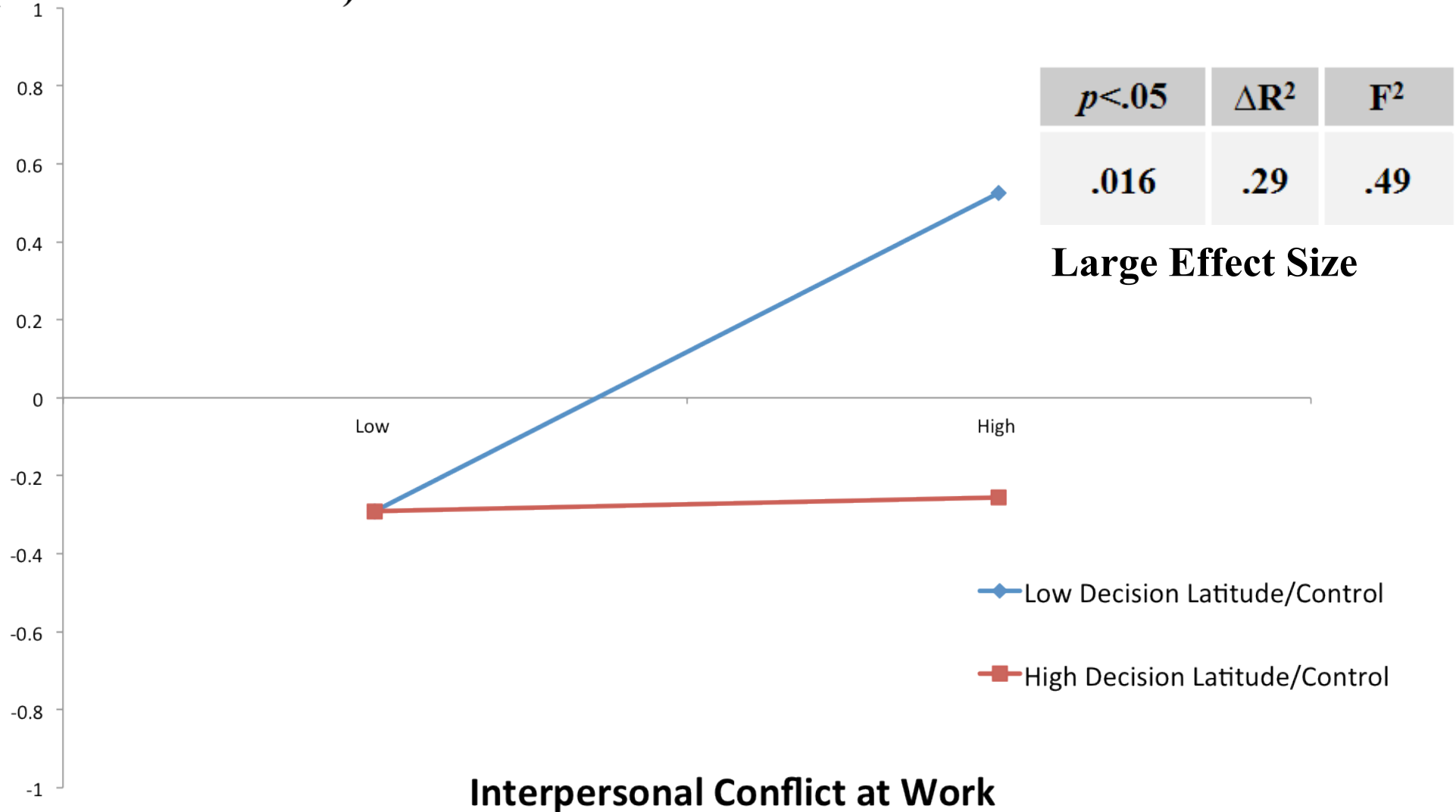


# Personal Accomplishment

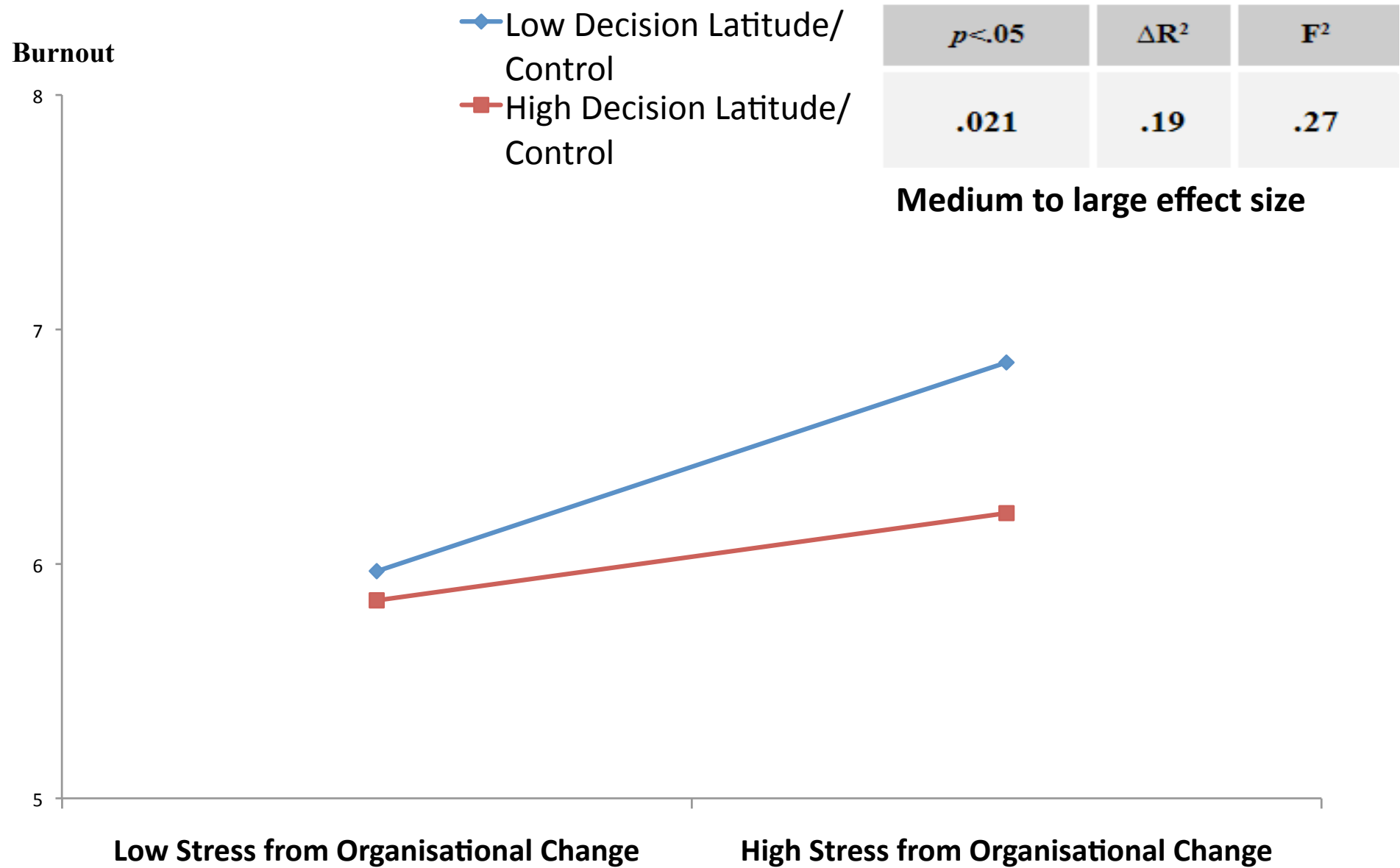


# Moderating Effect of Decision Latitude/Control

**Psychological Strains  
(Standardised Scale)**

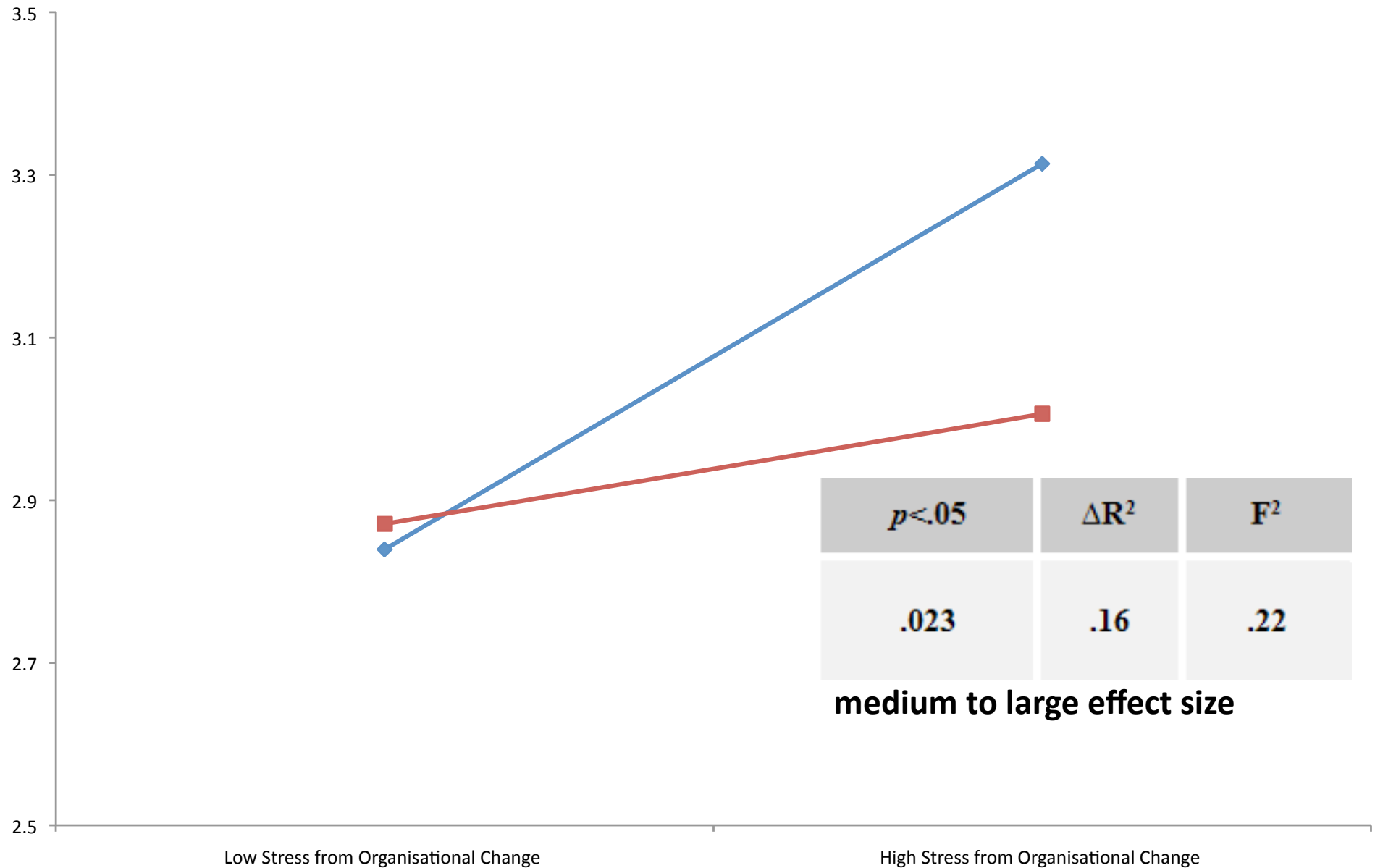




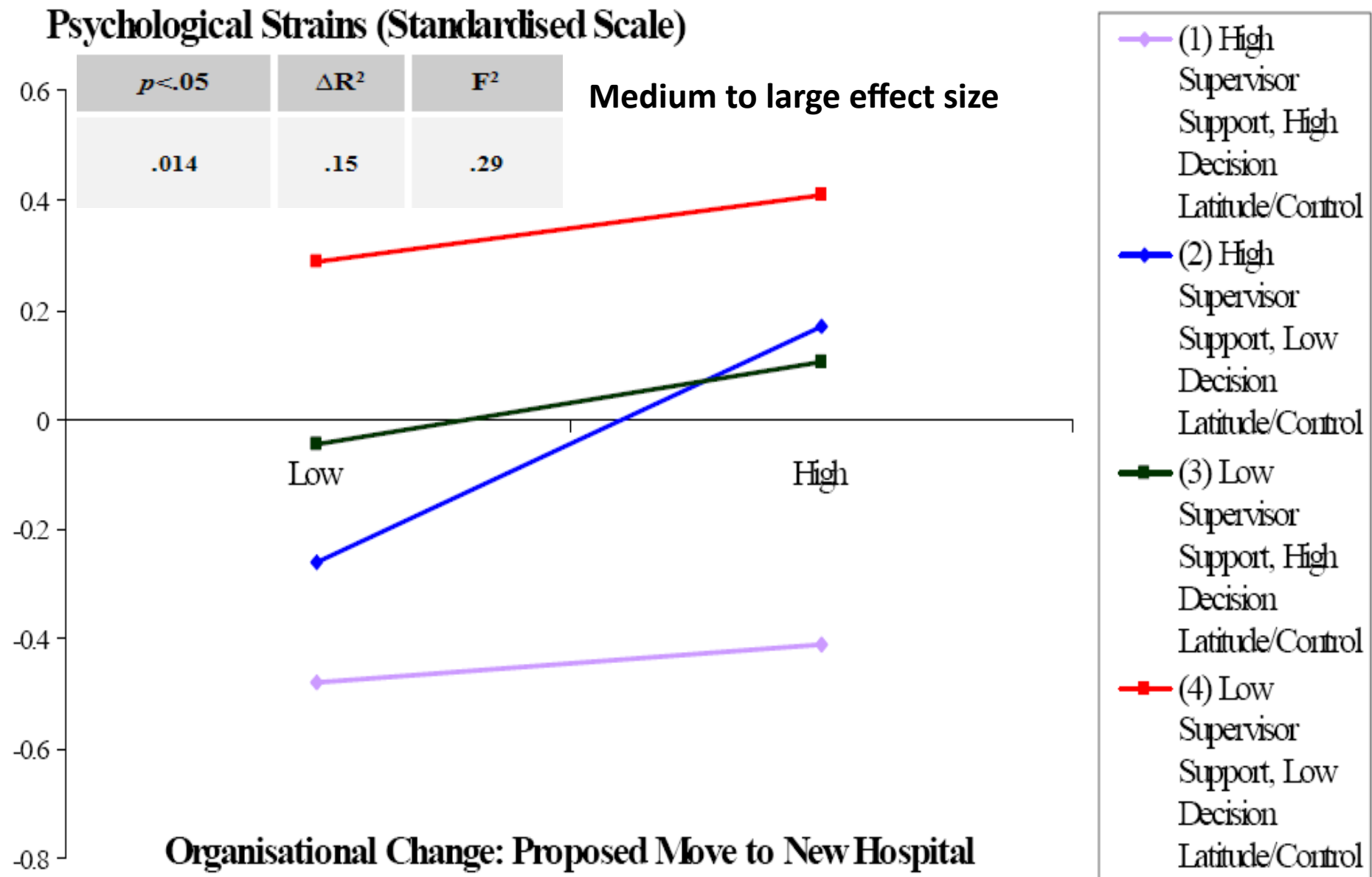


## Emotional Exhaustion

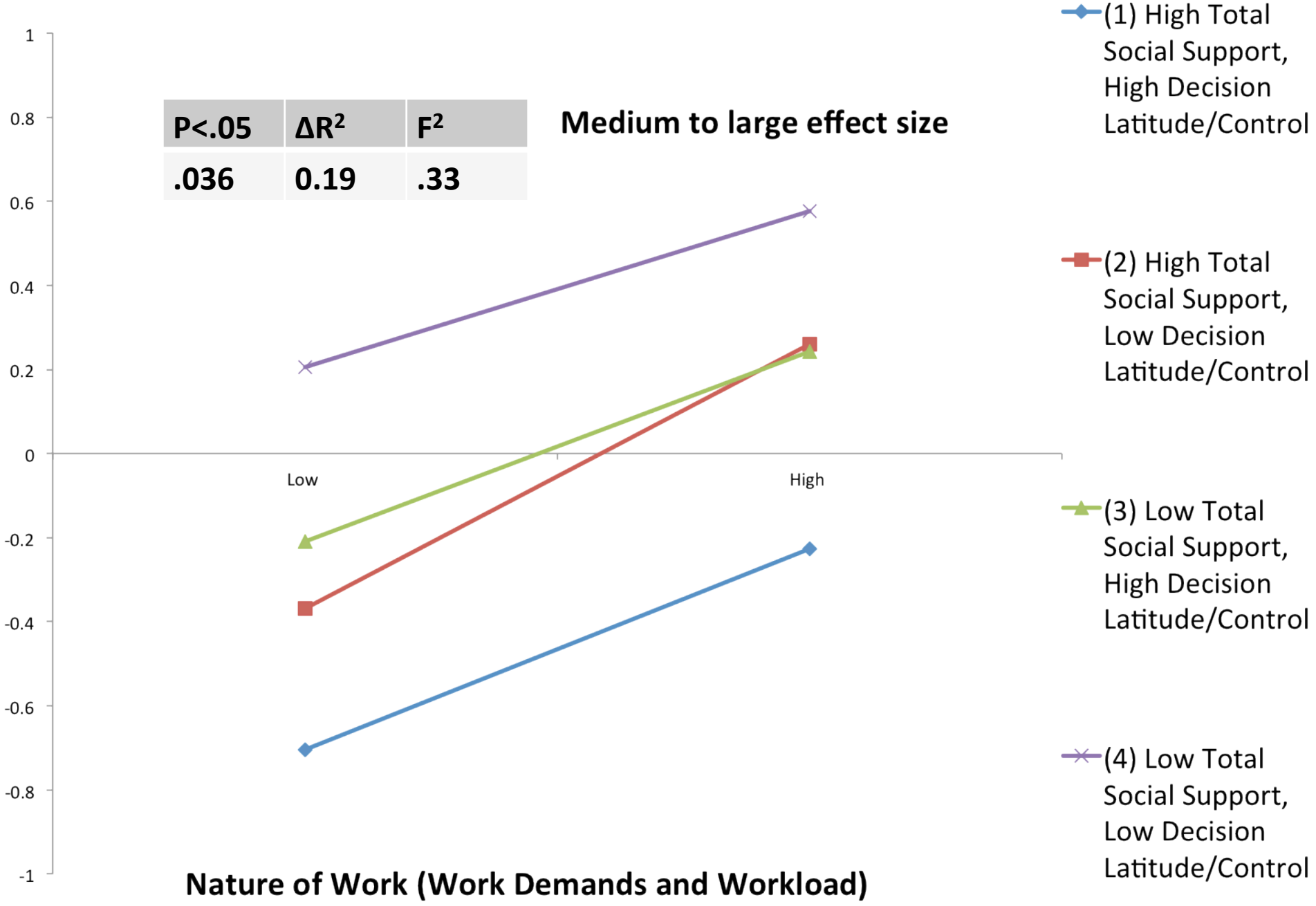
- Low Decision Latitude/Control
- High Decision Latitude/Control



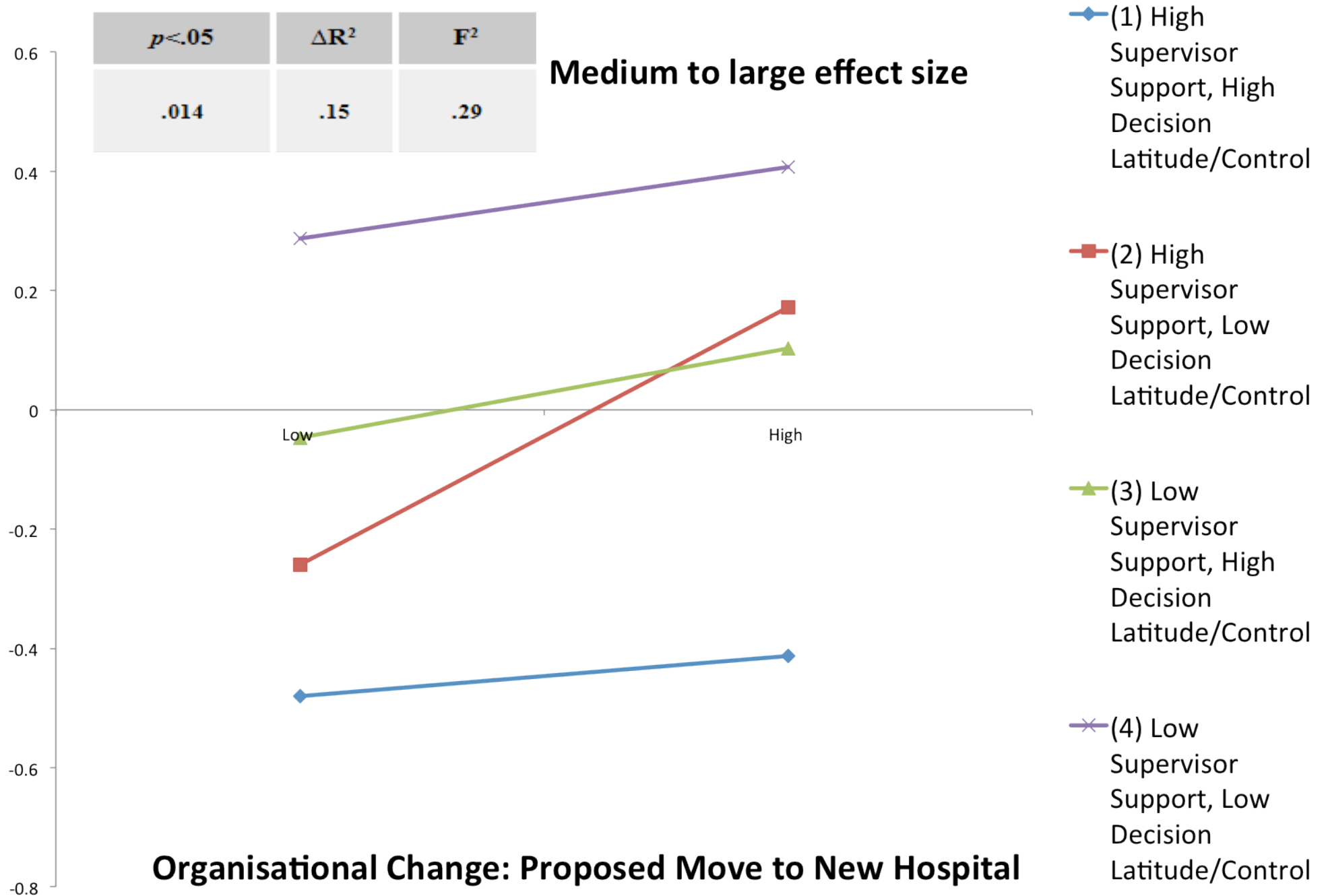
## Three-Way Interaction: Organisational change x Supervisor Support x Decision Latitude/Control with Psychological Strains as Dependent Variable



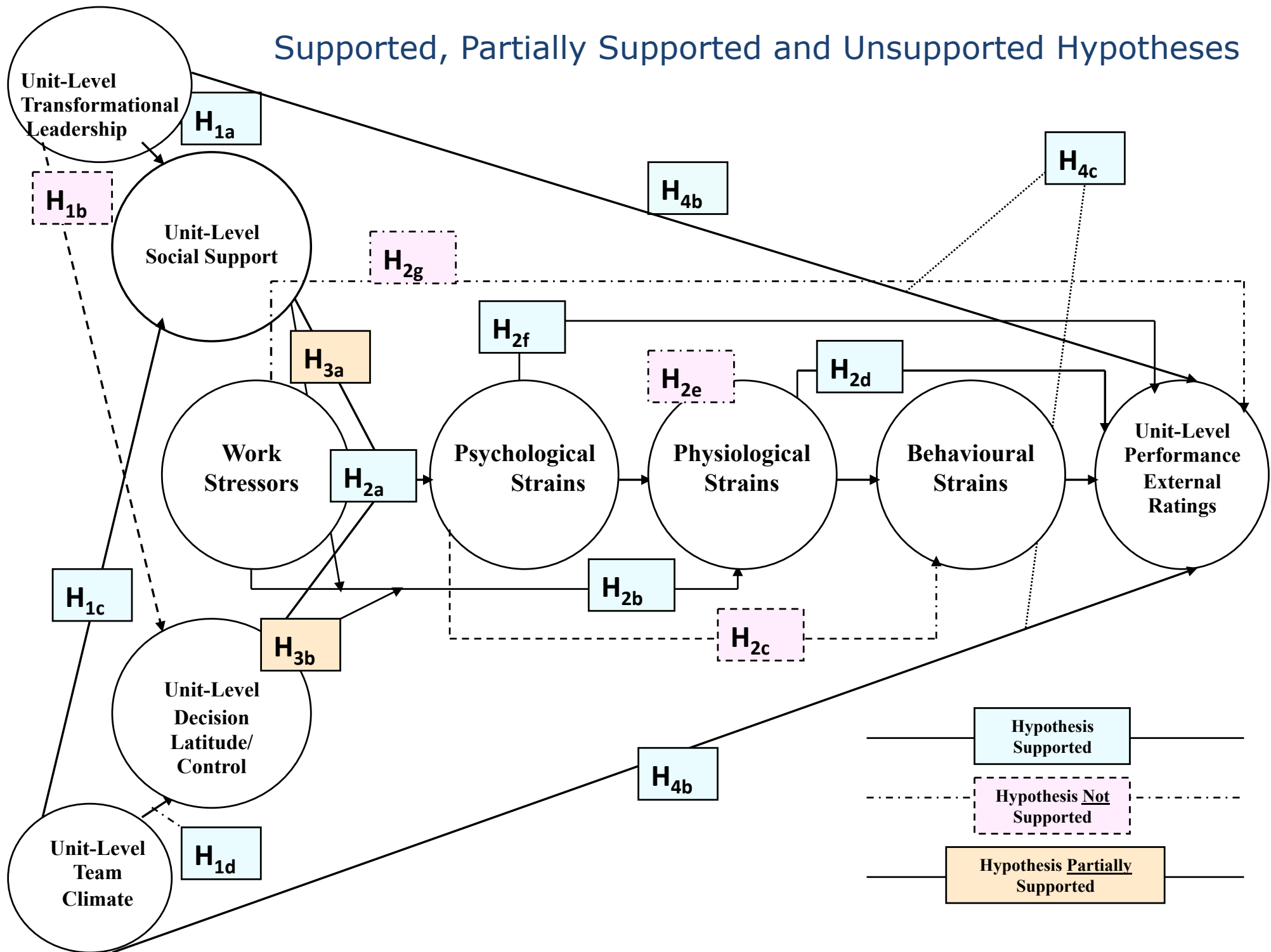
# Psychological Strains (Standardised Scale)



# Psychological Strains (Standardised Scale)



# Supported, Partially Supported and Unsupported Hypotheses

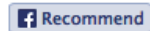




# Major Findings

- Unit-level Transformational Leadership and Team Climate provide within-unit social support and decision latitude (control) that buffer work stressors-to-strains relationships.
- The higher levels of Unit-level Transformational Leadership and Team Climate are associated with higher levels of unit performance. Team Climate mediates the relationship between Transformational leadership and Hospital Unit Performance.
- Behavioural Strain mediates the relationship between physiological strain and unit performance.
- There are statistically significant relationships between different types of strain and unit performance.

- IMPLICATIONS TO  
RESEARCH AND  
PRACTICE



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Email

Print

Sunday, September 5, 2010, 12:45

## Maltese medical team wins best foreign team in European championship

A Maltese medical team led by emergency physician Jonathan Joslin has won the best foreign team and placed fourth overall in the European Emergency Medicine Championship held in Poland.

The Maltese team, which also included emergency physician Michael Spiteri and emergency nurse Victoria Rausi, competed with 40 European teams and a New York guest team in a competition based on scenarios a medical team could face when they called an ambulance in various cases of emergency.





# Thank You

Hospital employees, who work in an environment with zero tolerance to error, face several stressors that may result in psychological, physiological and behavioural strains, and subsequently, in suboptimal performance. The study is a multilevel investigation of the strain-reducing effects of the social environment on externally-rated unit-level performance based on primary data from 1,137 employees in 136 units and from forty-four external raters in a hospital in Malta. The term "social environment" refers to the prediction of the moderator variables, namely social support and decision latitude/control by transformational leadership and team climate. This study identifies a number of moderating effects that social support and decision latitude/control had on specific stressor-to-strain relationships. The results also show significant mediated stressor-to-strain-to-performance relationships. This research strives to make a significant contribution to the occupational stress and performance literature with a focus on hospital practice.

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