CHAPTER IV

MODERATING EFFECTS OF OCCUPATIONAL STRESS AND SELF-EFFICACY

4.1 Introduction

In recent years, self-beliefs have emerged as a prominent component in many theories of human behaviour. This trend can be seen in industrial/organizational psychology as well. Brief and Aldag (1981)\(^1\), pointed out that employees in Banking Services have explicit beliefs and expectations about their performance and suggested that these should be considered when trying to explain organizational behaviour.

4.2 Occupational Stress and Self-Efficacy

Self-efficacy is similar to expectancy, which represents beliefs about the relation between effort and performance. In fact, some authors have used the two interchangeably. Self-efficacy, however, appears to be more general since it could involve either effort or ability, whereas expectancy focuses exclusively on the relation between effort and performance. According to Bandura (1977)\(^2\), self-efficacy beliefs are determined primarily by ‘inactive mastery’, which depends on both perceived and actual prior task performance.

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\(^1\) Aldag, R. J. and Brief, A. P. (1981), Task Design and Employee Motivation, Glenview, Illinois: Scott., Foresman and Company,

Dr. Albert Bandura\textsuperscript{3}, an influential social psychologist, coined the term "self-efficacy" to describe people's internal beliefs about their ability to have an impact on events that affect their lives. An employee’s self-efficacy is his/her belief in their own effectiveness as a person, both generally in terms of managing your life/work, and specifically with regard to competently dealing with individual tasks. In the context of stress, self-efficacy describes your beliefs about your ability to handle stressful situations. A large amount of research has demonstrated quite convincingly that possessing high levels of self-efficacy acts to decrease people's potential for experiencing negative stress feelings by increasing their sense of being in control of the situations they encounter. The perception of being in control (rather than the reality of being in or out of control) is an important buffer of negative stress. When people feel that they are not in control, they start feeling stressed, even if they actually are in control and simply do not know it.

When a given demand (e.g., passing an exam, winning a race) is perceived as something you can handle because you expect you will do well based on preparation or past experience (e.g., because you have studied for the exam or trained for the race), you are likely to perceive the demand as a challenge and as an exhilarating experience. After the event is over, you may even have a resulting boost in self-esteem because you worked hard to meet the demand and succeeded. If, however, the demand seems beyond your abilities, you will likely experience

\textsuperscript{3} Ibid.
distress. Across time, feeling unable to respond effectively to stressful situations can further decrease your sense of self-efficacy, making you even more prone to experience distress in the future.

A person’s experience of stress varies in intensity between high and low. How intensely stressed we feel in response to a particular event has to do with how much we need to accomplish in order to meet the demands of that situation. When we do not have to do much in order to keep up with demands, we do not experience much stress. Conversely, when we have to do a lot, we tend to feel much more stressed out.

Generally, people do not like experiencing the extremes of stress. This is true for each end of the spectrum of stress intensity, both high and low. Few people enjoy the feeling of being overwhelmingly stressed in the face of great change. However, most people do not like a total absence of stress either, at least after a while. There is a word for such a condition (i.e., a lack of stress and challenge) which conveys this negative meaning: boredom. What most people tend to seek is the middle ground; a balance between a lack of stress and too much stress. They want a little challenge and excitement in life, but not so much that they feel overwhelmed by it.

A variety of events and environmental demands cause us to experience stress, including: routine hassles (such as getting the family out the door in the
morning, or dealing with a difficult co-worker), one-time events that alter our lives (such as moving, marriage, childbirth, or changing jobs), and ongoing long-term demands (such as dealing with a chronic disease, or caring for a child or sick family member). Though different people may experience the same type of events, each of them will experience that event in a unique way. That is, some people are more vulnerable to becoming stressed out than others are in any given situation. An event like getting stuck in traffic might cause one person to become very stressed out while it might not affect another person much at all. Even "good" stressors such as getting married can impact individuals differently. Some people become highly anxious while others remain calm and composed.

How vulnerable one is stressed out depends on a variety of factors, including your biological makeup; your perception of your ability to cope with challenges; characteristics of the stressful event (e.g., the "stressor") such as its intensity, timing, and duration; and your command of stress management skills. While some of these factors (such as your genetics and often, the characteristics of the stressor itself) are not under your direct control, some of the other factors are.

4.2.1 Stages of Stress Reaction

**Stage 1: Recognition of environmental demand**

Every event in the environment, from the weather to the ringing telephone, has some sort of impact on us. Some of these events are predictable. Except a few
instances such as the rent/mortgage payment will be due on the first of the month, you will be expected to make small talk if you go to a party, others are entirely unpredictable. It is hard to know when the baby will suddenly wake up sick and cannot go to daycare, when another driver will cut you off in traffic, or when you will spill coffee on your new pants. Regardless of whether we can predict an event or not, the instant we become aware of that event taking place, we have recognized a demand.

**Stage 2: Appraisal of the demand**

Understanding that a demand has occurred does not automatically cause us to experience stress. In over 30 years of research, psychologists Richard Lazarus and Susan Folkman\(^4\) found that it is our lightening fast, and largely unconscious and automatic appraisal or judgment of our ability to meet the demand that determines just how stressful we will experience it to be. The appraisal process partially explains why a particular event may be negatively stressful to one person but not to another.

We appraise a demand by asking ourselves two questions: 1) Does this event present a threat to me? and 2) Do I have the resources to cope with this event? If we come to believe that the event is a threat to our well-being, or if we

come to believe that we lack the means to effectively respond to the event, we then subsequently feel stressed. We will return to a more detailed discussion of the appraisal stage in a later section of this document.

**Stage 3: Mobilization of the nervous system**

If we appraise an event as threatening, one branch of the ANS (Autonomic Nervous System) called the sympathetic nervous system (SyNS) automatically signals our body to prepare for action. During this mobilization phase, the SyNS prepares us for fighting or fleeing (two primary biologically driven and useful means of reacting to a physical threat) by triggering or activating the hypothalamic-pituitary-adrenal (HPA) axis, (sometimes called the brain's 'stress circuit'). The HPA axis involves a complex set of interactions between multiple parts of the brain and nervous system, including the hypothalamus, the pituitary gland, and the adrenal glands. This system controls the body's reactions to stress, and also handles a few other vital functions such as regulating digestion, the immune system, mood, sexual behavior, and the body's overall energy usage.

**Stage 4: Response to the threat**

Once your body has been prepared for action by the various hormones and neurotransmitters described in stage you are ready to respond to the stressor by taking physical action. Physiologists call what happens next the "fight-or-flight" response to highlight the two most common forms that this physical response tends to take. When we fight, we try to influence or neutralize the source of stress by
striking out at it. Alternatively, we can flee and reduce our stress by escaping from
the place where the stress is occurring, leaving the fighting for another day.
Psychologists who conduct research on stress often add a third response possibility
to the classic fight and flight options.

The fight-or-flight response is automatic and fast, which was helpful to our
ancestors because it provided them with automatic responses to threats when they
did not have time to think logically about how best to handle a situation.

The fight or flight response is optimized for responding to physical threats.
It is not very useful with the sort of intangible threats that are most common in
today's world. It is never appropriate to punch your boss in the face, for instance,
no matter how many times he piles work on you, or passes you over for a raise.
Fleeing your workplace would not necessarily help you either, as you still need to
get your paycheck!

**Stage 5: Return to baseline**

Once a stressor has been neutralized (or has been avoided successfully), the
parasympathetic nervous system (PaNS) starts to undo the stress response by
sending out new signals telling your body to calm down. The PaNS slows your
heartbeat and breathing, causes your muscles to relax, and get your digestive juices
flowing again. The PaNS system is designed to promote growth, energy storage
and other processes important for long-term survival.
4.2.2 Factors Influencing the Stress Response

Arousal vs. Anxiety

As described previously, the mobilization of our stress response involves the integration of multiple organs and glands controlling both the nervous and endocrine systems. Ideally, these systems communicate and coordinate to make sure that our bodies are aroused enough to effectively deal with challenges but not so aroused that we become hyper-aroused or otherwise experience incapacitating anxiety. However, this balancing act is a tricky business, and the body and brain do not always get it right.

As we become more aroused in response to stressors, our alertness increases and our attention sharpens. We become increasingly focused on the stressor itself, while other aspects of the environment fade into the background. A narrowed focus of attention towards a threat is typically adaptive, as it allows us to quickly eliminate some of the available responses we might otherwise make. This decreases the likelihood that we will become overwhelmed by choices at a critical time, and allows us (ideally) to choose the best option. For instance, we can quickly move from six possible choices (which could take a substantial amount of time to sort through in our minds) to two (fight or flee). On the other hand, too much arousal may narrow our focus so drastically that we overlook the best options.
Stressful activities that require more concentration will seem overwhelming much sooner than activities we are skilled at and can do without almost automatically. In sports, for example, running is considered a relatively simple activity because it normally does not require much conscious thought. Stress seems to improve running performance for a long period of time before a decline sets in. Other activities, like swinging a golf club, are more complex because they require a good deal of conscious thought. In this case, stress results in a much earlier decline in performance.

Each person's trait or baseline level of anxiety creates their 'zone of optimal performance under stress.' These zones vary from individual to individual; some of us begin a task with higher level of arousal than others, quickly reach our optimal zone and experience an early performance decline. Others take longer to reach their optimal zone, and do not show performance deficits (or enhancements) for a longer period of time.

Our degree of stress and subsequent arousal is also affected by our level of anticipatory anxiety. While most of us worry about our ability to perform well in stressful situations and recognize the possibility of failure, some of us worry more than others. People will typically experience more anxiety if they anticipate a negative outcome occurring rather than a positive one. Also, the less confidence people have in their abilities, the more likely it is that they will have their performance ability disrupted by stress.
Interestingly, people who worry may actually perform better initially, but they are not able to maintain peak levels for long and their performance deteriorates rapidly. This occurs frequently in very high stress emergency situations. For instance, when some anxious people are involved in a car accident, their anxiety may escalate rapidly to the point where they cannot easily give the police officer their name and address. In such a situation, stress will have pushed them past their point of optimal performance.

**Eustress vs. Distress**

Dr. Lazarus (building on Dr. Selye's work) suggested that there is a difference between eustress, which is a term for positive stress, and distress, which refers to negative stress. In daily life, we often use the term "stress" to describe negative situations. This leads many people to believe that all stress is bad for you, which is not true. Eustress, or positive stress, has the following characteristics:

- Motivates, focuses energy
- Is short-term
- Is perceived as within our coping abilities
- Feels exciting
- Improves performance
In contrast, Distress, or negative stress, has the following characteristics:

- Causes anxiety or concern
- Can be short- or long-term
- Is perceived as outside of our coping abilities
- Feels unpleasant
- Decreases performance
- Can lead to mental and physical problems

It is somewhat hard to categorize stressors into objective lists of those that cause eustress and those that cause distress, because different people will have different reactions to particular situations. However, by generalizing, we can compile a list of stressors that are typically experienced as negative or positive to most people, most of the time.

Negative personal stressors include:

- The death of a family member
- The death of a spouse
- Filing for divorce
- Losing contact with loved ones
- Hospitalization (oneself or a family member)
• Injury or illness (oneself or a family member)
• Being abused or neglected
• Separation from a spouse or committed relationship partner
• Conflict in interpersonal relationships
• Bankruptcy/money problems
• Unemployment
• Sleep problems
• Children's problems at school
• Legal problems

Positive personal stressors include:
• Receiving a promotion or raise at work
• Starting a new job
• Marriage
• Buying a home
• Having a child
• Moving
• Taking a vacation
• Holiday seasons
- Retiring
- Taking educational classes or learning a new hobby

Work and employment concerns such as those listed below are also frequent causes of distress:

- Excessive job demands
- Job insecurity
- Conflicts with teammates and supervisors
- Inadequate authority necessary to carry out tasks
- Lack of training necessary to do the job
- Making presentations in front of colleagues or clients
- Unproductive and time-consuming meetings
- Commuting and travel schedules

Stressors are not always limited to situations where some external situation is creating a problem. Internal events such as feelings and thoughts and habitual behaviours can also cause negative stress.

Common internally caused sources of distress include:

- Fears: (e.g., fears of flying, heights, public speaking, chatting with strangers at a party)
- Repetitive thought patterns.
Worrying about future events (e.g., waiting for medical test results or job restructuring).

Unrealistic, perfectionist expectations.

Habitual behaviour patterns that can lead to stress include:

- Over scheduling
- Failing to be assertive
- Procrastination and/or failing to plan ahead

4.2.3 Negative or Positive Stressors

Different factors determine whether a particular demand will cause eustress or distress in a given individual. How we think about a stressor, how we think about our own capabilities and how we think about the specific characteristics of the stressor itself will all collectively determine whether we will experience stress over handling any given situation.

Dr. Lazarus and Dr. Folkman described the importance of the cognitive appraisal process in determining whether stress is positive or negative. According to Lazarus and Folkman, there are two aspects to cognitive appraisal: primary appraisal and secondary appraisal.

5 Ibid.
In primary appraisal, we evaluate whether we have anything at stake in an encounter (e.g., by asking ourselves "Does this matter for me?"). A stressor that is perceived as important is more likely to cause a stress reaction than a stressor that is viewed as relatively trivial.

In secondary appraisal, we evaluate our existing coping resources (e.g., how healthy we are, how much energy we have, whether family and friends can help, our ability to rise to the challenge, and how much money or equipment we have), our available options, and the possibilities we have for controlling our situation. If we believe that we lack the coping resources necessary to deal with the situation, we will perceive it as negative stress. Conversely, if we believe that we have the necessary coping resources, the stressor will not overwhelm us and may instead be perceived as eustress. For example, an adolescent girl with limited social and financial support might view being pregnant as a negative stress, while a middle-aged woman with adequate financial and social support might see pregnancy as an exciting and hopeful time.

4.3 Coping Skills

A coping skill is a behavior or technique that helps a person to solve a problem or meet a demand. Coping skills are problem-solving techniques or tools; they make it possible to solve problems or meet demands more easily and efficiently than might otherwise be possible.
Employees who have learned a variety of different coping skills are able to handle demands and solve problems more easily and efficiently than people who are not as knowledgeable about how to cope. Because they are more easily able to meet demands, people with good coping skills are less likely to experience negative stress reactions than are people with more poorly developed coping skills. In addition, people with well-developed coping skills typically develop a higher sense of self-efficacy than do their peers who have poorer coping skills, and thus are less likely to suffer the negative impact of stress reactions.

4.4 Stressor Characteristics

Coping skills, self-efficacy, and appraisal are all characteristics that people bring to a stressful circumstance. They are internal to the person, meaning that they "reside in" the person who needs to respond to an activating event, rather than being a characteristic of the event itself. In contrast to these internal ways that people may react to stress, there are also characteristics that are inherent to the stressful event itself which have little or nothing to do with appraisals or coping skills. These external aspects of stressful events, which are listed below, also influence people's ability to meet stressful demands.

- **Intensity** has to do with the magnitude or strength of the stressful event.

The actual intensity of a stressful event has a lot to do with the context in
which that stressful event is taking place. A dead cell-phone battery is generally a fairly low-intensity stressor when you have alternative ways of communicating, and/or your actual need to communicate is currently low. When your need to communicate is high, however, and your options for doing so are limited (e.g., if you have been injured in a car accident on a remote highway and need to call for an ambulance), it is an entirely different story. In this later circumstance, the same stressor quickly gains in intensity and ability to cause negative stress.

- **Duration** has to do with how long the stressful event lasts. A short-term stressor such as a weekend house guest will tend to cause less stress than a long-term stressor like needing to become the primary care-taker for an older relative.

- **Number** has to do with the total quantity of stressors occurring in your life at once. A minor stressor might not be much when it occurs in isolation, but it can become a "straw that breaks the camel's back" when you are already coping with several other stressors at the same time.

- **Level of expertise** has to do with how skilled you are in handling stressful situations. It is easier and less stressful to deal with situations and events when we are familiar with handling them. Practice with a particular kind of
stress-provoking situation tends to make that situation easier to deal with. The more you practice a skill, the more automatically you can perform and the less stress you are likely to feel when an event requiring that skill occurs.

Other Sources of information about self-efficacy beliefs include verbal persuasion from others, vicarious learning, and emotional arousal.

Bandura (1982) have suggested that the self-efficacy concept can also be applied to groups, the defined ‘collective’ efficacy as each individual’s assessment of their group’s collective ability to perform job related behavior’s. Unfortunately, compared to the individual level, little is known about either the determinants of consequences of collective efficacy beliefs. It has been implied, however, that the theory of individual self-efficacy can be used to explain individual’s perceptions of groups.

Though not extensive, organizational research has begun to show consistent relationships between self-efficacy beliefs and task performance. As examples, Barling and showed that strong self-efficacy beliefs were associated with high levels of sales performance, and found a similar relation between self-efficacy beliefs and faculty research productivity ‘collective’ efficacy beliefs and task performance.

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Despite this recent progress, one could argue that self-efficacy research to be expended to areas other than job performance. The study of work-related stress, in particular, has been conducted under the assumption that employees are rather passive recipients of stressful organizational conditions. Most stress research has simply examined relations between stressors (i.e., role conflict, role ambiguity, lack of perceived control) and outcomes such as job (dis)satisfaction, anxiety psychosomatic symptoms, absenteeism, and job performance. Intervening processes such as the interaction between stressors and self-beliefs have largely been ignored.

If self-efficacy (both individual and collective) is to be included in the study of work stress, the potential role of self-efficacy in the stress process must be determined. Mainly environmental stressors interact with characteristics of the individual to produce stress reactions. These self-efficacy beliefs can best be conceptualized as a moderator variable. One might predict that individuals who do not believe that they will be able to carry out their job responsibilities (low levels of self-efficacy) would view organizational stressors as being more threatening and show more negative reactions than those who are more confident (high levels of self-efficacy). It is possible that collective efficacy would provide the same moderating effect as individual self-efficacy, although this would be more likely for employees whose jobs require considerable interaction with the work group. It is also possible that the group may be seen as a potential source of social support when stressors occur.
One of the immediate effects of job-related stressors may be to lower one’s level of self-efficacy. Reductions in self-efficacy beliefs, in turn may lead to job-related strains. Self-efficacy would be a mediating variable. Reductions in self-efficacy beliefs lead to more emotion-focused coping, which is generally not as successful as problem-focused coping. This occurs at the individual level, stressors may also decrease collective efficacy perceptions. Decreases in collective efficacy perceptions could lead to strain because such perceptions increase employee uncertainty regarding effort leading to high levels of job performance. Again, this would be most likely for employees whose jobs require considerable interaction with the work group.

4.5 Stressors

The three stressors were role ambiguity, situational constraints, and workload. Role ambiguity was measured by Beehr, Walsh and Taber’s (1976)\(^7\) on a four-item scale. These items are intended to measure the extent to which goals, performance standards, and expectations are clearly specified by one’s supervisor.

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Situational constraints were measured with an 11-item scale developed by Peters and O’ Connor (1980)\(^8\). Items focused on situational constraints in the areas of organizational rules/procedures, availability of supplies, interruptions by other people, and incorrect instructions.

### 4.5.1 Psychological Strain

The four measures of psychological strain were overall (dis) satisfaction, frustration, anxiety and intent to quit. Overall job (dis) satisfaction was assessed by the three-item overall job satisfaction scale of the Michigan Organizational Assessment Scale (Cammann, Fishman, Jenkins and Klesh, 1979)\(^9\).

### 4.6. Self-Efficacy Beliefs

Individual and collective efficacy beliefs were measured with two scales developed by Riggs (1989)\(^10\). The individual efficacy scale considered of 11 items reflecting the degree to which subjects believed they were capable of doing their job well. Examples of items include ‘I have confidence in my ability to do my job’, ‘I doubt my ability to do my job’ and ‘Few people in my line of work can do a better job than I can’. The collective efficacy scale contained 10 items reflecting

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individual subjects’ perceptions of the extent to which their respective departments were capable of functioning effectively. Examples of these items include ‘The department I work for has above average ability’, The members of this department have excellent job skills’ and ‘Departments that can perform their jobs as well as this department are rare’.

Descriptive statistics for all variables are presented below. Included are means, standard deviations, and coefficient alphas. Although not shown, observed ranges for most of the variables covered the entered possible range; thus, restriction of range did not appear to be a problem. One exception was anxiety, which ranged from 12 to 34 out of a possible range of 10 to 48. There also did not appear to any extremely high individual or collective efficacy values’ Coefficient alphas were calculated where appropriate and all were reasonably high, ranging from 0.79 to 0.87.
Table 4.1
Descriptive statistics and inter correlations among all variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>Role ambiguity</td>
<td>0.23</td>
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<td></td>
<td></td>
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<td>Situational Constraints</td>
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<td>Hours</td>
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<tr>
<td>Satisfaction</td>
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<td>-0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Frustration</td>
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<td>0.56*</td>
<td>0.09</td>
<td>-0.32*</td>
<td></td>
<td></td>
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<tr>
<td>Anxiety</td>
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<td>0.43*</td>
<td>0.01</td>
<td>0.30*</td>
<td>0.48*</td>
<td></td>
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<td>Intent</td>
<td>0.36*</td>
<td>0.45*</td>
<td>0.04</td>
<td>0.69*</td>
<td>0.50*</td>
<td>0.14*</td>
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<tr>
<td>Individual efficacy</td>
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<td>0.01*</td>
<td>-0.04</td>
<td>-0.08*</td>
<td>0.14*</td>
<td>0.35*</td>
<td>0.11*</td>
<td></td>
<td></td>
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<tr>
<td>Collective efficacy</td>
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<td>0.56*</td>
<td>-0.08</td>
<td>-0.56*</td>
<td>0.34*</td>
<td>0.37*</td>
<td>0.50*</td>
<td>0.14*</td>
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<td>Mean</td>
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<td>22.1</td>
<td>43.3</td>
<td>14.2</td>
<td>11.1</td>
<td>19.4</td>
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<td>0.80</td>
<td>NA</td>
<td>0.84</td>
<td>0.79</td>
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</tbody>
</table>

*p<0.05: Low Scores on the efficacy scales indicate high levels of efficacy beliefs
Correlations among all variables are also presented in Table 4.1. As can be seen, inter correlations among stressors and strains were moderate. One exception was the strong relation between job satisfaction and turnover intent (0.69). Stressor–strain correlations were similar in magnitude to other studies in which these measures have been used.

Relations between stressors, strains, and the two efficacy measures are presented in the bottom two rows of the correlation matrix. As can be seen, individual efficacy was not significantly related to any of the three stressors. It was however, weakly related to frustration (0.14) and moderately related to anxiety (0.35). Low levels of individual efficacy beliefs are associated with high levels of frustration and anxiety. Collective efficacy was strongly related to both role ambiguity and situational constraints (0.42 and 0.56, respectively). Correlations between collective efficacy and psychological strains were all significant, ranging from −0.56 with satisfaction to 0.34 with frustration. As with individual efficacy, high levels of collective efficacy beliefs were associated with low levels of stressors and psychological strains.

Tests for the moderating effects of both individual and collective efficacy beliefs were carried out using cross-product regression procedures. Table 4.2 summarizes the moderator tests by showing the percentage of variance accounted for by each of the cross-product terms. As can be seen, individual efficacy had no
moderating effects on any of the stressor-strain relations. Collective efficacy, however, moderated the relation between constraints and frustration and the relations between hours and three of the psychological strains (satisfaction, anxiety, intent.) To explore these effects, regression lines for that one standard deviation above and that one standard deviation below the mean on collective efficacy were compared. This comparison revealed that situational constrain had a somewhat stronger relationship with frustration for those with high levels of collective efficacy. This represented a weak effect, although it must be noted that it was contrary to our predictions. Regression of both satisfaction and anxiety on hours, however, did show greater differences as a function of collective efficacy. For those with low levels of collective efficacy, regression slopes representing the effect of hours on satisfaction and anxiety were \(-0.20\), and \(0.29\), respectively. For those with high levels of collective efficacy, slopes were \(0.02\), and \(-0.02\) respectively. Regressions of intent on hours also differed as a function of collective efficacy.
Table 4.2

Variance accounted for by each interaction term relative to the total variance accounted for in each strain measure

<table>
<thead>
<tr>
<th>Interactions</th>
<th>Strains</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Role ambiguity x individual efficacy</td>
<td>0.00/0.10*</td>
</tr>
<tr>
<td>Situational Constraints x individual Efficacy</td>
<td>0.00/0.17*</td>
</tr>
<tr>
<td>Hours x individual efficacy</td>
<td>0.00/0.00*</td>
</tr>
<tr>
<td>Role ambiguity x collective efficacy</td>
<td>0.00/0.28*</td>
</tr>
<tr>
<td>Situational Constraints x collective efficacy</td>
<td>0.00/0.31*</td>
</tr>
<tr>
<td>Role ambiguity x individual efficacy</td>
<td>0.04/0.34*</td>
</tr>
</tbody>
</table>

*p<0.01*<p<0.05.

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The mediated regression analysis examined the change in the effect of stressors on strains when efficacy entered each regression equation. Individual efficacy was not correlated with any of the stressors, thus violating the assumption. Collective efficacy was significantly related to role ambiguity and situational constraints but unrelated to work hours.

Table 4.3 represents the variance accounted for in each of the strain measures when individual and collective efficacy entered each equation after stressors. As can be seen, individual efficacy accounted for unique variance in anxiety, while collective efficacy accounted for a unique amount of variance in job satisfaction and intent.
Table 4.3

Summary of regression analysis testing for the mediating effects of both individual and collective efficacy

<table>
<thead>
<tr>
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<th>Incremental variance accounted for</th>
<th>Incremental variance accounted for</th>
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<tbody>
<tr>
<td></td>
<td>Strains</td>
<td>Step 1 - Stressors</td>
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<tr>
<td>Strains</td>
<td></td>
<td>Step 2 - Collective efficacy</td>
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<tr>
<td></td>
<td>Satisfaction</td>
<td>0.21*</td>
</tr>
<tr>
<td></td>
<td>Frustration</td>
<td>0.38*</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>0.21*</td>
</tr>
<tr>
<td></td>
<td>Intent</td>
<td>0.19*</td>
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*p<0.01.

In addition to contributing unique variance, evidence of mediation is shown by a reduction in the effects of predictors when the mediator enters a regression equation. For anxiety, there was little change in the betas representing the effects of stressors after individual efficacy was entered into the equation. For satisfaction and intent, entering collective efficacy into the equation had little effect on the
betas representing the effect of hours and role ambiguity. Neither of these betas were significantly different from zero when stressors entered the respective equations alone. The betas representing the contribution of situational constraints to the prediction of both job satisfaction and intent, however, were reduced considerably (−0.38, p<0.05 to 0.17, p<0.05 and 0.34, p<0.05 to 0.018, p>0.05, respectively). This is consistent with the fact that stressors did not contribute any unique variance to the prediction of either of these strains when entered after collective efficacy. Thus, collective efficacy could operate as a mediator of the relations between situational constraints and both job satisfaction and intent. It should be noted that these may not represent independent effects, since job satisfaction and intent were do strongly correlated (−0.0.69). Further there was significant inter-correlation between all dependent variables, this could have caused redundancy in the analysis. One should also be cautions when interpreting the separate effects of role ambiguity and situational constraints since they were highly correlated (0.045).

Individual efficacy was moderately related to anxiety, weakly related to frustration, but unrelated to stressors. Collective efficacy was strongly related to two out of three stressors and all of the psychological strains, suggesting that it may be an important variable to be considered in work stress research.
Efficacy is a moderator variable while others have implied that efficacy is a mediator. Individual efficacy appeared to be neither a moderator nor mediator. Collective efficacy moderated four of the Stressor–strain relations. The strongest effects were on the relations between work hour and two of the four strain measures. Working long hours was associated with high levels of anxiety and low levels of job satisfaction when employees did not believe their departments were capable of doing their jobs well. Employees who believed their departments were capable of performing well did not appear to be adversely affected by long hours. It should be noted, however, that the moderator effects observed were quite modest.

Mediator tests showed that individual efficacy again had no effect. Collective efficacy, however, mediated the relation between situational constraints and two of the strain measures (satisfaction and intent), suggesting that the most immediate result in job-related strains. It is possible, however, that since collective efficacy and situational constraints were highly correlated (0.52), they may be confounded.

The correlations involving collective efficacy beliefs were much stronger than those involving individual efficacy. In addition, the correlation between these two measures was quite modest (0.14), though statistically significant. These differences suggest that individual and collective efficacy may be reflecting
different processes. Perhaps individual efficacy beliefs are most consistent across situations than collective efficacy beliefs, since a person’s knowledge of their own ability is more extensive than their knowledge of the work group’s ability.

4.7 Summary

This chapter assesses the relationship between self-efficacy beliefs and both stressors like role ambiguity, situational constrains work hours and psychological strains like anxiety, frustration and intention to quit.