Stress measurement in less than one minute

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STRESS MEASUREMENT IN LESS THAN ONE MINUTE

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We dedicate this book to the memory of the late professor Richard S. Lazarus. In our opinion, he is one of the most outstanding scholars ever in psychology. This book draws heavily on his evergreen theoretical formulations.

1 INTRODUCTION

How are you feeling right now? This is the core question behind this book. But there is a hidden agenda! Before introducing it, we would like to present the Emotional Stress Reaction Questionnaire (ESRQ) right up-front. Read the instruction and start this book by responding to the ESRQ below. It should take less than one minute to complete!

INSTRUCTION

Below is a list of words describing different emotions. Beside each word are four response choices. Circle the choice which best describes how you feel **right now**.

Respond as follows:

1. The word does not correspond to how you feel right now
2. The word partly corresponds to how you feel right now
3. The word fairly well corresponds to how you feel right now
4. The word completely corresponds to how you feel right now

Respond with the alternative that first comes to your mind!

1.	Indifferent	1	2	3	4	8.	Energetic	1	2	3	4
2.	Relaxed	1	2	3	4	9.	Concerned	1	2	3	4
3.	Pleased	1	2	3	4	10.	Uncertain	1	2	3	4
4.	Glad	1	2	3	4	11.	Disappointed	1	2	3	4
5.	Alert	1	2	3	4	12.	Heated	1	2	3	4
6.	Focused	1	2	3	4	13.	Mad	1	2	3	4
7.	Concentrated	1	2	3	4	14.	Angry	1	2	3	4

It may seem unlikely but depending on your responses, a fairly accurate prediction can be made of your psychological action potential in your present situation. The arguments underpinning this claim (part of the hidden agenda!) will be presented later.

The book is an attempt to pursue an idea that one of us (GL) came up with in the mid 1980ies. Although tested successfully on a few occasions with the results being published in scientific journals, the idea more or less went dormant for a couple of decades. In the last five years, however, it has been revived and once more ended up in international journals (all references will be presented). However, it was not until this opportunity came to write a book for Bookboon, that a larger part of the puzzle revealed itself. There are yet many pieces to put together but this is a start.

The target readership for this book is students at basic, advanced or doctoral levels in a broad array of subjects such as business, law, management, medicine, nursing, pedagogics, psychology and sociology. Representing a new theoretical and methodological approach to the assessment of psychological stress, the book could thus, it could be used either in theoretical courses dealing with stress, or in methodological courses illustrating how a conceptual idea can be operationalized and statistically developed into a valid and reliable assessment tool.

Theoretically, the text rests on two psychological evergreens. Firstly, the truth is in the eye of the beholder. This means that it is the way we perceive and appraise what is going on rather than the objective reality which governs our reactions and behaviors. Secondly, these appraisal processes occur at different levels of consciousness and are difficult to observe directly. However, as cognitive appraisal processes tend to effect immediately following emotional reactions, they can be assessed indirectly through our emotions. This line of reasoning is expended in the text, including a presentation of common antecedent conditions such as personality and various situational characteristics.

Methodologically, the text presents the development of a measurement tool called the Emotional Stress Reaction Questionnaire (ESRQ). This questionnaire is based on the theoretical basis described above. The method development is described in detail and includes the operationalization process and a statistical analysis based on structural equation modeling. Further, relationships with different outcome criteria such as performance and satisfaction will be presented.

A key idea behind the ESRQ is that you should be able to respond to it quickly – after a practice session, most people can do it in less than one minute! In a cost-benefit analysis this may be essential as conventional psychological stress measurement tools take much longer time to respond to and to score.

The first part of the book (chapters 1–9) is solely devoted to the ESRQ instrument and its theoretical foundation. The second part (chapters 10–14) provides an illustration of how the presented framework and tool can be practically used in personal coaching focusing on stress management.

2 TELL ME HOW YOU FEEL AND I WILL TELL YOU WHAT YOU THINK

The truth is in the eye of the beholder is one of the evergreens of psychological theory. It implies that the way we cognitively appraise and create meaning in a given situation affects other psychological processes such as emotions and coping. Following from this, the appraisal process may also have an impact on various outcomes such as performance, health, etc (Lazarus 1991, 1999). Thus appraisal, or interpretation, or sense-making processes, are key aspects of human life. They, rather than the objective reality, govern our reactions and behaviors. Nevertheless, as central as these processes are, there is one problem: they can occur at different levels of consciousness and are difficult to observe directly.

Now, if appraisal processes are difficult to observe directly, there is a second best approach. Drawing on Lazarus (1991), it can be claimed that cognitive appraisal processes tend to effect immediately following emotional reactions. This means that each given emotion is preceded by a particular appraisal of the situation which results in a specific emotion.

An example: if you feel glad you have probably appraised the actual conditions as benign-positive. If you feel sad, it is quite likely that the appraisal process has resulted in an evaluation of the prevailing circumstances as overwhelming, including some kind of loss.

This line of reasoning, that a specific appraisal process results in a specific emotion state, is a core theme of this book which will be expanded in the following.

2.1 APPRAISAL AND COPING PROCESSES

Lazarus (1966, 1991, 1999) discusses two kinds of cognitive appraisal processes. They both occur constantly and simultaneously during our waking life and are partly conscious, partly preconscious. They are labeled primary and secondary appraisal respectively, however, it should be noted that this division is only an analytical tool. In reality, "inside the head," they are naturally intertwined.

Primary appraisal concerns the question "Am I OK or in trouble?" It is our way of discriminating between episodes that are irrelevant for us and encounters that are in some way interpreted as having a potential effect on our well-being. The core issue is whether something which is important to us or not is at stake. Lazarus and Folkman (1984) present the following three major primary appraisal categories: irrelevant, benign-positive and stressful. In the last category, the situation can be appraised as challenging, as threatening or as signaling harm or loss. A weather report that predicts rain tomorrow will have little impact if you plan to work indoors the whole day. If you had planned to spend the next day outdoors with your family and friends, the report means a threat to the plan and may cause you to reconsider.

Secondary appraisal focuses on the question: "What can I do?", and concerns an evaluation of the available resources and options for coping with stressful demands and constraints. Returning to the weather report example, the person who planned to stay indoors will just ignore the report and continue whatever he or she was doing. For the second person, the forecast could initiate a series of actions, telephone calls, etc.

Once a person has appraised a situation as stressful, coping processes are initiated to manage the troubled person-environment relationship, and these processes influence the person's subsequent appraisal of the situation. There is a constantly ongoing interplay between appraisal, coping, reappraisal and so forth, coping efforts including thoughts as well as actions. Some of these thoughts and actions are mainly aimed at doing something about the stressful situation. Lazarus and Folkman (1984) label it problem-focused coping. Planning activities and seeking practical help are common illustrations. Other coping efforts are primarily aimed at managing negative emotions, thus they are called emotion-focused coping. Typical examples include positive thinking, distancing, seeking emotional support, tension reduction through exercise, relaxation, shopping, excessive eating, alcohol consumption, etc. Thus, there are cognitive as well as behavioral kinds of both problem- and emotion-focused coping.

Of course, actions taken against stressful conditions can be directly observed. Once again returning to the weather forecast example, the person who planned to take some friends on a sailing trip may decide to cancel and spend the afternoon calling them to tell them the disappointing news. Cognitive coping efforts, that is thoughts on what to do and how to comfort oneself, are similar to appraisal processes in that they cannot be directly observed. This means that in reality it is usually impossible to separate secondary appraisal processes and cognitive coping efforts. They are constantly co-occurring at different levels of consciousness in our minds.

2.1.1 A CLOSER LOOK AT PRIMARY AND SECONDARY APPRAISAL

The key question in the primary appraisal process has been summarized as "Am I OK or in trouble?" The corresponding question of secondary appraisal has been worded, "What can I do?", and be seen as the light version of the theory. In the book *Emotion and adaptation*, Lazarus (1991) analyzes these processes in more detail. An attempt to give an overview of this exploration follows.

In the more elaborated form, each of the two kinds of appraisal consists of three components. A first aspect of primary appraisal is *goal relevance.* This is crucial for all emotions. If there is a goal at stake in a given encounter, one or another emotion will be generated. If there is no goal relevance, there will not be any emotion (Lazarus 1991).

A second component of primary appraising is *goal congruence or incongruence.* This refers to the extent to which a transaction is consistent or inconsistent with what the person wants. In the congruent case, the consequent emotion will be positive. If the goal is incongruent to what the person wants, a negative emotion will follow (Lazarus 1991).

The third and final primary appraisal component is labeled *type of ego-involvement* by Lazarus (1991). It refers to one or more of the following aspects of ego-identity or personal commitments:

1) self- and social esteem, which involves commitment to certain social roles;
2) moral values;
3) ego-ideals;
4) essential meanings and ideas;
5) other persons and their well-being; and
6) life goals." (Lazarus 1991, p. 101)

Each type of ego-identity may be involved in some individual emotions and not in others. To illustrate, guilt requires a threat to one's moral values and shame indicates that the ego-ideals are at stake. Ego-identity is involved in almost all emotions, but in different ways depending on the type of ego-involvement that is focused in a given encounter (Lazarus 1991).

Turning to secondary appraising, one component has to do with *blame or credit*. Knowing who is responsible for something – someone else or oneself – means that one can direct blame or credit externally or internally (Lazarus 1991).

A second aspect of secondary appraisal is *coping potential*. This refers to whether and how the person can manage the demands of a given situation. Coping potential is not actual coping but only an evaluation by a person of the prospects for managing the situation (Lazarus 1991).

The third and final component of secondary appraisal is *future expectancy*. This refers to an evaluation of whether circumstances are likely to change for better or for worse, that is, become more or less goal congruent (Lazarus 1991).

Let us now illustrate how the six appraisal components can be used to explain the occurrence of a single, specific emotion. The emotion *sadness* will be used and the following table comes from Lazarus (1991).

Primary Appraisal Components
1. If there is goal relevance, then any emotion is possible, including sadness.
2. If there is goal incongruity, then only negative emotions are possible, including sadness.
3. If there is a loss to any type of ego-involvement – e.g., esteem, moral value, ego-ideal, meanings and ideas, persons and their well-being, or life goals – sadness is possible.
Secondary Appraisal Components
4. If there is no blame, then sadness is likely; if blame is external or internal, then other emotions such as anxiety, guilt, or shame are likely.
5. If coping potential is favorable, that is, the loss can be restored or compensated for, then sadness may not occur, or will be associated with hope.
6. If future expectations are favorable, then sadness is associated with hope and not hopelessness and depression.

Table 1. Appraisals for sadness. Appraisal components sufficient and necessary for sadness are 1 through 5. (Source: Lazarus 1991, p. 248)

The outcome of the three aspects of primary appraisal indicates that a negative emotion is possible. The specific emotion sadness can only occur if no blame can be specified and no coping potential can be seen. If something can be done, other emotions such as anger, anxiety, guilt and shame will be evoked.

The presented framework looks like a decision-tree. If A, then B, etc. However, Lazarus (1991) emphasizes that this is just for the purpose of clarification. In reality, these appraisals happen very rapidly and perhaps even simultaneously. Consciously and pre-consciously we draw on stored information about the environment and ourselves. It should also be pointed out that we do not have to go through the entire appraisal process every time a new situation is faced. From previous experiences we have learned the relationships between certain conditions and their consequences. Thus, appraisals will then be made on a minimum of cues (Lazarus 1991).

Related to the issue of previous learning is the fact that people tend to develop relatively stable *appraisal styles*. This refers to dispositions to appraise a given type of conditions consistently over time and across situations. This, in turn, reflects relatively stable patterns of commitment and personality traits.

This can be illustrated with a study of policy officers' appraisal and coping processes in acute, time-limited stressful situations (Larsson, Kempe & Starrin 1988). In this investigation 54 Swedish police officers retrospectively reported their thoughts, emotions, and actions during five recent stressful job events. One of the aims was to assess intra-individual appraisal consistency across the five reported episodes.

Primary appraisal in each stressful encounter was mapped with the ESRQ. Secondary appraisal was measured with four items. Participants indicated on a five-point Likert scale the extent to which the situation was one that (1) You could change or do something about, (2) You had to accept, (3) You needed to know more before you could act, and (4) You could reasonably resolve with the available resources. The first three of these items were developed by Folkman and Lazarus (1980) and the fourth item was constructed in the police study. The four ESRQ indices Irrelevant, Benign-positive, Challenge, and Threat or harm/loss were entered into a latent profile analysis (Gibson 1959) together with the four secondary appraisal items.

The outcome of the statistical analysis was four profiles representing different appraisal styles. They were assigned the following labels: Profile 1 – Unpleasant-Unchallenging/nothing to do about; Profile 2 – Positive challenge/take charge; Profile 3 – Threatening/strong need of additional information; and Profile 4 – Average distress/do what you have to do. Correlations between these profiles or appraisal styles and self-rated performance indicated promising results. An appraisal style that is fairly consistent across different settings offers good opportunities for therapeutic or coaching interventions for instance. Given more data, we believe the suggested profiles can be tied to concepts on a more abstract level in the future. It is tempting, for instance, to assume a psychologically defensive pattern in the Freudian sense underlying Profile 1 – Unpleasant-unchallenging/nothing to do about.

An interesting aspect of appraisal styles is the question of the consistency of such patterns across different situations. This was tested in the study of police officers and the results indicated a reasonable degree of intra-individual appraisal style consistency across the five episodes reported by each participant (Larsson, Kempe & Starrin 1988). More research is needed here. Going to the extreme, it would not be surprising if persons with obsessive compulsive disorders reported a high degree of appraisal consistency across different situations. However, when it comes to the huge field of normal psychology, little is still known about appraisal styles.

2.1.2 SUMMARY

A core in the cognitive-meditational approach developed by Lazarus (1991, 1999) is that by knowing how an individual construes a situation, we should be able to predict the kind and intensity of the emotion with which that individual will react. Because observing cognitive appraisal processes at different levels of consciousness is difficult, an alternative is to analyze the chain of causality backwards. This means that by observing an individual's emotional reaction in a given situation, we should be able to reconstruct the meaning he or she has ascribed to it through cognitive appraisal and coping processes. Thus, "tell me how you feel and I will tell you what you think." Reason, in the form of cognitive appraisal and coping processes, is thus linked to emotion in a systematic way. The interdependence between the different aspects has also been stressed. This has sometimes been referred to as reciprocal determinism (Bandura 1978).

2.2 COMPLICATING CIRCUMSTANCES

A number of conditions tend to complicate the pretty straightforward arguments presented above. We will deal with three of them here: change, preconscious appraisal processes, and the question of biological universals versus culture-specific expressions.

2.2.1 CHANGE

The world is constantly changing. This means that each of us continually appraises and reappraises what is going on. Some changes are very rapid. During a heated half-hour discussion in a group of students for instance, each person can experience irritation and anger, shame and guilt, alertness and eagerness, joy and relief, as well as indifference. On the other hand, some changes are slow. An example could be the complicated grief process that may occur when an individual loses a near and dear family member due to a violent act of another person. In this case, the process may take years or a whole life time. The victim's inner life can be dominated by grief and depression alongside anger and hatred, and sometimes also guilt as a result of self-blame appraisals.

The complicating thing is that even if we observe someone's emotional reaction correctly and make valid deductions of the underlying appraisal process, we still do not know how long this emotional state will last. The individual in question may reappraise the situation one second – or one year – later and experience different emotions. Consequences of this for measurement will be discussed later.

2.2.2 PRECONSCIOUS APPRAISING

The straightforward logic that a specific cognitive appraisal evokes a specific emotional reaction sometimes clearly does not apply. In addition to what has been presented above, Lazarus (1991) claims that there are two different modes of appraisal. One is conscious, deliberate, and under volitional control. The other is automatic, preconscious, and uncontrollable. This means that the process of emotion generation involves a mixture of both.

The preconscious, automatic appraisal process can be ultra rapid, but also conscious appraisals can frequently be made very quickly. Fortunately, we do not have to evaluate all possible aspects in every new situation. Based on previous experiences, we often only need a minimum of clues to interpret a new event.

Preconscious appraisals appear to end up in simple categories such as good or bad. Conscious appraising takes longer, uses language, and is more finely graded.

Fact box

Lazarus (1991) suggests a possible anatomical localization of the preconscious appraisal process. The brain contains a number of structures which combined form the limbic system. This is our center for instincts and emotions. From an evolutionary perspective it is also one of the oldest brain structures.

The preconscious appraisal process consists of a sensory in-flow directly from the thalamus, the dominating part of the middle brain, to the amygdala. The latter is the part of the limbic system where, among other things, emotional functions are located. This means that the input short-circuits the cortex, where the conscious appraising takes place.

The preconscious and coarse appraisal process contributes to our survival capacity. When you are out walking in the forest, a small movement or sound can be registered ultra rapidly and signal a potential threat – it might be a snake! When you look closer you see that it was only a bird among the leaves and you do not have to continue with the fight-flight mobilization.

Lazarus (1991) further states that earlier psychological traumatic experiences, wishes, and fantasies can affect the outcome of preconscious appraisal processes. If it is a central theme to the individual, this influence can be so strong that the emotions one experiences in a given situation do not match with the conscious evaluation of the encounter. Thus, one and the same situation can be appraised differently at the conscious and preconscious levels respectively. At the conscious level, it can be appraised as benign-positive and one should feel pleased. However, at the preconscious level, the same situation may be associated with, for example, an earlier experience of loss. This can lead to feelings of sadness although one cannot really understand why. The internal premises are hidden to the person.

2.2.3 BIOLOGICAL UNIVERSALS VERSUS CROSS-CULTURAL VARIATION

The last complicating factor we will briefly point to is the question of the cross-cultural universality of the proposed relationship between cognitive appraising and emotions. As Lazarus (1995) put it: "There are both biological universals and cultural sources of variability in the way emotions are aroused and regulated. The problem is to specify how both sources work independently and interact with each other" (p. 187).

Two questions need to be addressed. Firstly, do people with different biological dispositions, for instance cognitive ability and temperament, appraise a given encounter similarly and, following from this, experience the same emotions? Secondly, do people socialized into different cultures and customs appraise and react emotionally in a similar way? The obvious answer to both questions is no. But this, in turn, creates a theoretical problem. It means that for biological or cultural reasons, two people who appraise a given situation identically may experience different emotions with different intensities. Once again, consequences for measurement will be discussed later in the book (Chapters 6, 9 and 14).

2.3 STRESS

Remember the opening statement of the chapter, "The truth is in the eye of the beholder"? This pointed to the importance of the subjective meaning one ascribes to a given encounter. Drawing on Lazarus' writings, we also noted that one of the main primary appraisal categories is "stressful," which, in turn, can be further subdivided. In this section we will look somewhat deeper into the stress concept. Once again, the text rests on the theoretical framework developed by Lazarus (1984, 1991, 1999).

A common conceptualization is to label sources of stress – 'stressors' – and the outcome of these stressors – 'stress reactions'. However, given the validity of the presented cognitive appraisal approach, this can be misleading. A specific event, giving a lecture for example, may be a stressor for A and joyful for B. Thus, Lazarus (1990) suggests the following definition: "Psychological stress, which results from the interplay of system variables and processes, depends on an appraisal by the person that the person-environment relationship at any given moment is one of harm, threat, or challenge" (p. 4).

Still, much research on stress has taken major life events, such as the death of a spouse, being a crime victim, etc, as the point of departure. It is obviously true that severely demanding life circumstances can result in stress and an array of problems. However, for several reasons, it may not be the best approach. These include that major life events are fortunately relatively rare for most people and that the issue of individual differences in appraising and coping is ignored.

Lazarus and his colleagues have suggested a different research approach, which focuses on the minor ups and downs during our everyday life. The idea rests on the cognitive appraisal framework. The negative events are called "hassles" and the positive ones are called "uplifts." Daily hassles are defined as "experiences and conditions of daily living that have been appraised as salient and harmful or threatening to the endorser's well-being" (Lazarus 1984, p. 376).

Going back to major distressing life events, it could well be that their effect on health, well-being, social functioning, performance, etc, is mediated through hassles and uplifts (Wagner, Compass & Howell 1988). The presence of a major event, a divorce for example, may cause the individuals concerned to perceive their everyday life differently. Many events that previously used to be regarded as routine and small hassles, such as not finding a particular skirt when dressing, being stopped by three consecutive red lights on the road, etc, are all now being noticed. Each of them means a micro physiological and psychological stress mobilization. The positive events, the uplifts, are no longer registered. A negative circle has been created and, accumulated over time, harmful effects may occur.

The research results for daily uplifts are less clear cut, but when it comes to hassles, it seems obvious that disruptions of daily routines, chronic strains associated with social roles, and enduring characteristics of the environment that are appraised as stressful, may have negative effects and constitute a risk factor.

To complicate things, it is not only a matter of additive effects of daily hassles based on their frequency of occurrence and the intensity of the reaction that follows. Hassles also vary in meaning and personal importance. Lazarus (1984) talks about a continuum from central to peripheral hassles, which is related to the core of the primary appraisal process – what an individual interprets is at stake in a given situation. This in turn is related to antecedent personality factors such as patterns of commitment (hierarchies of what one regards as important, more on this Chapter 3). The bottom line here is that daily hassles concerning something which is central to an individual, for example symptoms of illness in his or her children, may be much more troublesome than a series of peripheral hassles.

2.3.1 STRESS REACTIONS

The acute stress reaction involves the whole human being and the following four aspects are often highlighted:

- *Physiological changes* – these include reactions in the autonomous nervous system, the hormone system, and the immune system. The body is prepared for a state of alarm. The stress hormones adrenalin and noradrenalin are extracted into the blood. The heart rate, the blood pressure, and the muscular tension increase when the resources of the body are mobilized to fight or flight activity.
- *Motor behavioral changes* – the increased muscular tension may cause tremor, stiff and twitchy movements, disturbed speech, and bodily posture.
- *Cognitive changes* – the stress reaction includes changes in cognitive functions such as perception, evaluation, problem solution capacity, and social adaptation. Common examples are increased tendencies to generalize from limited data and to jump to conclusions, tendencies to over- or underestimate problems, and tendencies to see things in either/ – or terms, i.e. black or white.
- *Emotional changes* – the stress reaction includes a broad array of emotions reflecting challenge, threat, harm or loss appraisals (see the previous text).

Let us provide an illustration of 'the whole human being' concept from a study of Swedish conscript participants (Larsson & Anderzen 1987). The appraisal of a given stressor as "challenging" co-varied with the emotion-focused coping strategy "positive thinking." This combination in turn co-varied with emotions such as alert and energetic and with a mildly increased extraction of adrenalin. In contrast, the appraisal of the same stressor as "threatening" co-varied with the emotion-focused coping strategy "negative thinking," with emotions like anger and/or disappointment, and with a strong increase of adrenalin extraction.

Long-term stress reactions like psychosomatic disorders, burnout, etc fall beyond the scope of this book and will not be commented on any further.

2.3.2 SUMMARY AND THEORETICAL COMPLICATIONS

Possibly the best way to ascertain the psychological stress level in an individual is to look at the frequency, intensity and centrality of daily hassles and uplifts. This means that hassles and uplifts should not be looked upon as antecedent stimulus conditions. Rather, the importance of the cognitive appraisal process is brought to the foreground. Viewed from this perspective, hassles and uplifts are to be seen as *consequences* of appraisal. Not the other way around. This means that the processes that underlie individual patterns of hassles and uplifts can give us valuable information on what is important and less important to a person. This last-mentioned issue calls for a presentation of some central, person-related psychological characteristics and this will be done in the next chapter.

3 ANTECEDENT CONDITIONS

In the previous chapter, the importance of appraisal processes was highlighted. This, of course, raises a follow-up question: if these processes are that significant, what then are the determinants of these intra-psychic phenomena? Here, the framework of Lazarus rests on one of the most solid and respected paradigms in psychology, is generally labeled the interactional person-by-situation paradigm (Endler & Magnusson 1976). This means that appraisal processes are shaped by an interaction of individual and contextual characteristics.

The presentation of these antecedent conditions will be made in two ways in this chapter. First, some generally valid individual and contextual aspects will be introduced, then, an illustrative example from the field of leadership will be given.

3.1 INDIVIDUAL ANTECEDENT CONDITIONS

Two broad classes of individual characteristics will be presented: physical and psychological.

3.1.1 PHYSICAL RESOURCES

Physical resources consist of the individual's collected physiological status. It affects appraisal and coping in all encountered stressful situations. A person who is healthy and strong obviously has better possibilities to manage demanding episodes than someone who is sick, tired, wounded or weakened in some other way.

3.1.2 PSYCHOLOGICAL RESOURCES

The two most important psychological resources affecting appraisal and coping processes are intelligence and personality. They are both partly genetically determined and partly shaped by environmental factors. There are several definitions of intelligence but the bottom line is about cognitive capacity, or, more simply, how smart we are. Readers are referred to sources such as Eysenck and Eysenck (1985) for a thorough presentation of the intelligence concept.

Personality refers to a stable disposition to think, feel and act in certain ways. Once we have reached adulthood, it is supposed to be fairly stable over time and across different situations. The dominating theoretical model of personality in the last couple of decades is called the Big Five model (Costa & McCrae 1992, McCrae & Costa 2008). It consists of five overarching personality dimensions, each of which is being built up by six personality traits, which in turn are underpinned by countless habits, thoughts, feelings, and behaviors.

The five dimensions can be described as bipolar scales where one of the extreme ends constitutes the name of the dimension. Thus, they are as follows:

- Neuroticism – the opposite pole is emotional stability
- Extraversion – the opposite pole is introversion
- Openness – the opposite pole is rigidity, conventionality
- Agreeableness – the opposite pole is arrogance, cynicism
- Conscientiousness – the opposite pole is sloppy, lack of moral standards

Intelligence and personality obviously affect appraisal processes. A smart person who is emotionally stable, extravert, open, agreeable, and conscientious, will quite likely interpret many situations differently from an individual who has a weak cognitive ability and is neurotic, introvert, rigid, arrogant, and lazy!

3.2 CONTEXTUAL ANTECEDENT CONDITIONS

Contextual conditions include a multitude of aspects such as the air we breathe, the food we eat, the individuals around us, the house we live in, our work, society and its history, our culture, nature and the ecological environment, etc. Some of these conditions are more proximal and affect us more directly, such as the noise level at a work site. Others are more distal and indirect, like biological, geographic, and social environment conditions at large.

Social resources include access to people who can provide emotional, informational and/or tangible support. A social network that provides rich support in these three respects constitutes an example of favorable social resources.

Material resources consist of money and what money can buy: a place to live, cars, and other material assets. Material resources are an asset in most stressful situations. The shear knowledge that one has money or other material resources is often enough to make an individual less vulnerable against external or internal threats. In summary, a person with rich social and material resources will most likely interpret many situations in life differently than someone who is less well off. The core of the person-by-situation paradigm is that it is *the interaction* of individual characteristics like intelligence and personality, and contextual characteristics like social and material resources, that shape psychological processes like cognitive appraisals.

3.3 AN ILLUSTRATION – ANTECEDENTS OF LEADERSHIP

The previous sections pointed to some general individual and contextual conditions that affect how we appraise and cope with major and minor life events. We will now be more specific by providing an example from leadership theory. The model chosen is labeled Developmental leadership (Larsson 2006, Larsson et al. 2003, Larsson & Eid 2012, Larsson & Hyllengren in press) and it has been selected because it explicitly rests on and interactional person-by-situation paradigm. The model will not be presented in full; rather the aim is to illustrate how leadership-specific antecedent conditions shape leadership behaviors.

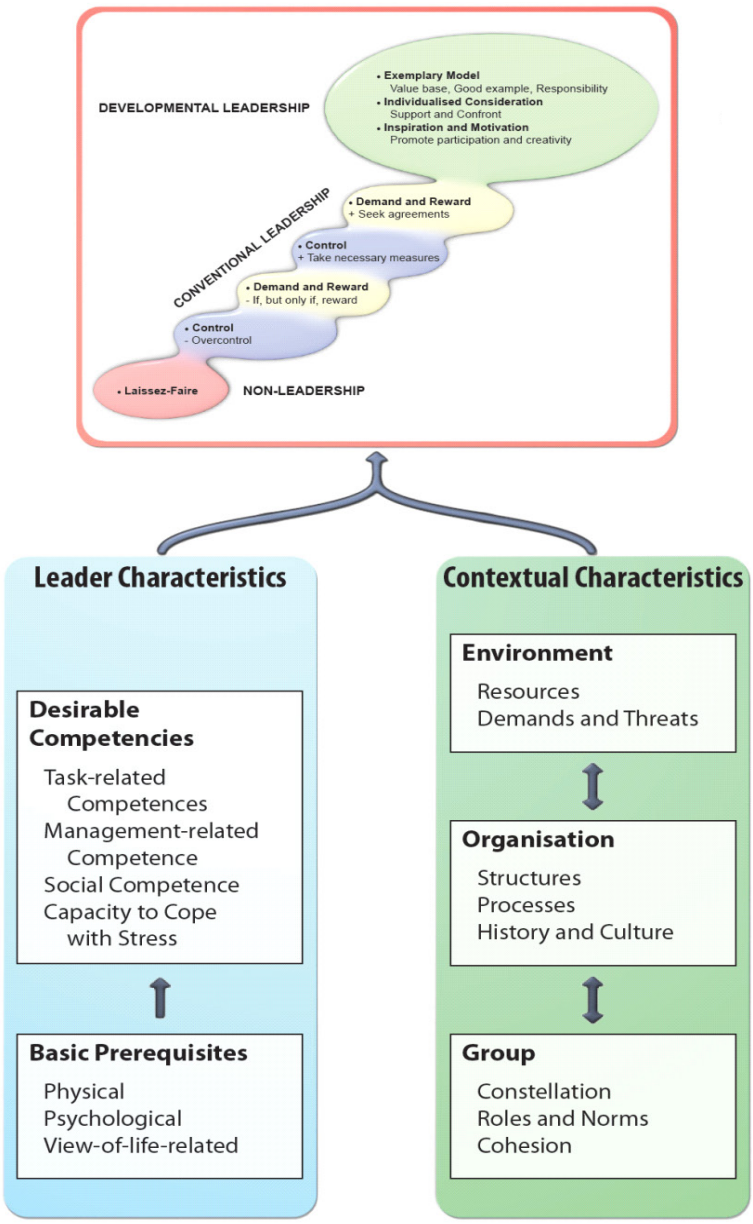

Figure 1. The Developmental Leadership model (adapted from Larsson et al. 2003).

According to the model (Figure 1), leadership can be understood against the background of a number of interacting antecedent factors. Two main classes of leader characteristics are identified: basic prerequisites and desirable competences. The basic prerequisites include aspects such as the aforementioned factors of physical resources, intelligence, and personality. The desirable competencies encompass skills such as task- and management-related competence, social skills, and good capacity to cope with stress. The more favorable basic prerequisites a leader has, the greater the potential to develop the desirable competencies and vice versa.

The model implies that a favorable combination of these two individual-related characteristics is a necessary condition for successful leadership. However, neither is sufficient in itself. They do not constitute a guarantee for successful leadership, because this is also affected by environmental conditions (Larsson 2006).

The contextual conditions shown in Figure 1 should be regarded as *examples* of these kinds of factors. The illustration shows that groups and organizations mutually influence each other. The same holds true for organizations and the external world (see Larsson & Hyllengren in press for a more detailed analysis of contextual conditions).

In conclusion, the example shows how leadership can be understood against the backdrop of a person-by-situation interactional paradigm. We venture to guess that the same holds true for most, if not all, reasonably complex human behaviors.

4 STRESS AND PERFORMANCE

In this chapter, which is based on Larsson (1987), we present an attempt to integrate the cognitive appraisal approach with Yerkes' and Dodson's (1908) classical description of the relationship between level of arousal and performance. This relationship has the shape of an inverted U, which means that there is an optimal arousal level and that performance deteriorates at lower or higher arousal levels. The optimal level of arousal can vary between different kinds of tasks. There are also intra- and inter-individual differences. Some days you can stand more arousal without performing worse and some people can manage stronger intensities than others.

The integration of the two models requires that the two concepts "stress reaction intensity" and "level of arousal" are regarded as equivalent. Further, we rank order the major appraisal categories of Lazarus and Folkman (1984) from low to high stress reaction intensity as follows: irrelevant – benign-positive – challenge – threat, harm or loss. The rank order is designed to reflect a continuous stress reaction intensity variable, which means that the appraisal categories succeed each other without sharp limits. From a performance perspective, the optimal stress reaction intensity level is assumed to correspond to challenge appraisals while the other kinds of appraisal will result in suboptimal performance. Figure 2 provides an illustration.

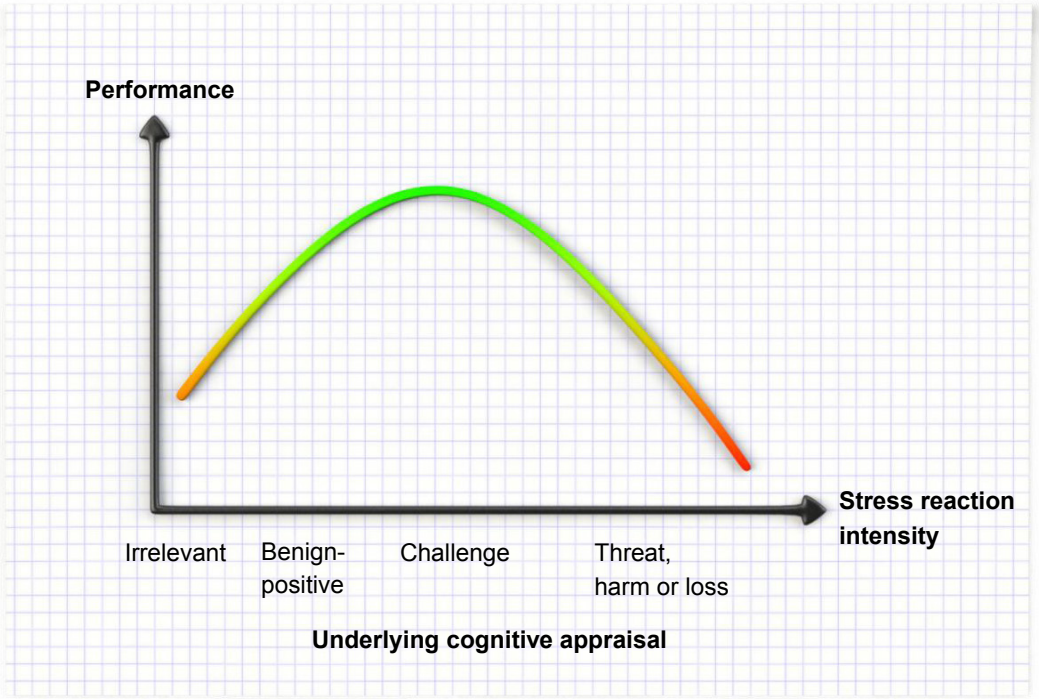

Figure 2. Relationship between stress reaction intensity and performance.

By measuring an individual's stress reaction intensity in a given situation, it should be possible to predict his or her performance in this situation. There will be much more on how-to-do-it later in the book. Strictly speaking, the prediction that can be made based on a psychological assessment of the individual stress reaction intensity, relates to "psychological action potential" rather than to actual performance. The latter may also depend on things like physical, social and material resources, in addition to psychological potential.

It is argued that psychological assessments of stress reaction intensity show the performance ceiling following from psychological factors. This means that the lower degree to which the actual task depends on physical, social, and material resources, the stronger the predictive power of such assessments.

Let us illustrate. Suppose an individual can clear 125 cm in high-jumping when he or she is at peak performance. Let us further assume that this person is very good at coping with stress. If this person was told that he or she would die if he or she did not jump 125 cm, this person would manage the threat, show an optimal level of stress reaction intensity and perform the jump successfully. Let us now assume that a world class high jumper was exposed to the same threat. During favorable conditions he can jump 235 cm. Faced with the threat of death he collapses, shows too strong a stress reaction and "only" manages to jump 200 cm on "back-bone reflexes."

4.1 SUMMARY

The presented assumptions can be summarized as follows: (a) emotions in a given situation reflect how this situation has been appraised; (b) emotional stress reaction intensity can be seen as an indicator of the cognitive appraisal in a given situation; and (c) emotional stress reaction intensity in a given situation, assessed with a psychological tool, allows for a prediction of psychological action potential in this situation.

Fact box

The argumentation balances on the border of being circular and demands an elaboration. The proposed cognitive theory says, for instance, that fear is a consequence of the appraisal that one can not neutralize a threat. Despite the fact that this appraisal is an important part of the fear emotion itself, it not identical with the fear. Emotions include cognitive appraisals but they also include other components such as motoric changes and pure affect (Lazarus 1991). The presented arguments describe part-whole relationships. What one should avoid are whole-whole relationships where the independent and dependent variables are mutually and completely inclusive (Lazarus et al. 1985).

5 FROM THEORY TO A MEASUREMENT TOOL: DEVELOPMENT OF THE EMOTIONAL STRESS REACTION QUESTIONNAIRE

This chapter describes how the theory presented in the preceding chapters was operationalized into a practical assessment tool, the Emotional Stress Reaction Questionnaire (ESRQ). We will first show the development of the basic version (text mainly inspired by Larsson 1987) before describing two later additions. One of which is designed to map moral stress reactions (Nilsson et al. 2011) while the other is intended to capture patients' satisfaction with care (Larsson & Wilde Larsson 2010).

The ESRQ was originally developed with the intention of being used in performance situations such as military operations, stressful police or rescue service missions and athletic competitions, and aims to give a 'snapshot' of the respondent's psychological stress reaction intensity in a given situation. A basic idea was that it should be possible to respond to the questionnaire quickly (in about one minute) in almost any kind of situation where one can give attention to it for this amount of time, or it should be possible to use it retrospectively. In the latter case, individual is asked to respond as he or she felt at that time (in a given situation).

5.1 SELECTION OF ITEMS

As a first step, Svensson's (1978) list of 71 emotion words was shown to six adult participants (researchers and students). They were acquainted with the inverted U-relationship between level of arousal and performance. Each participant received a large paper sheet (size A3) where the reference axes and the inverted U-curve were printed. Their task was to write the position of each emotion word on the curve; i.e. to mark on the curve where they felt they were in terms of stress reaction intensity and performance if they experienced the emotion word "X" etc.

In the next step the 71 emotion words were reduced to 36 for practical reasons, the goal being to retain the highest manageable number of words for the next step. The main reduction criteria was empirical, i.e. to only keep those words for which there was agreement between the six participants regarding where they had placed the words on the curve. The reduction was also partly based on theoretical considerations to ensure that the remaining emotion words corresponded fairly well to the emotional states claimed by Folkman and Lazarus (1985) to be typical of each of the main primary appraisal categories.

The questionnaire consisting of the selected 36 emotion words was administered to a group of military cadets (n = 61; mean age 20.2 years). They were asked to reconstruct from memory how they had felt during two self-selected stressful episodes in the last month. One of the episodes had to involve their feeling that they felt they were "on top," that is they experienced that they performed as well as they possibly could, while the other had to involve their feeling nervous and performing less well than they could. The same response scale was used as in the final ESRQ version (see below).

Fact box

Component analyses based on the correlational matrixes from each of the two episodes were performed, as was a similar analysis was also done on a combination of the episodes. Component analysis was used to unravel the questionnaire ratings in a two-dimensional space (Coombs & Kao 1960). The stimuli (the emotion word items) are presented in this space through projections of the respective vector values on the two strongest components. When these two unrotated components are used as a basis for a plot of the items, the axes are only used as a frame of reference. Thus, this method is different from a factor analytical approach.

A necessary condition for this kind of application of component analysis as a scaling technique, is that the two highest eigenvalues are considerably higher than the rest. In this case the four highest eigenvalues were 4.98, 2.53, 1.36 and 1.10. The two first components accounted for 54% of the total variance. Fairly similar results were found on the separate plots "on top," "nervous," and the combined data set.

The retained words were characterized by having distinct positions on or near the outer curve of the plot, such positions indicating that they have been perceived as clear and unambiguous, as well as representing emotional states described as typical of the main primary appraisal categories (Larsson 1987).

Based on statistical analyses, the number of emotion words was reduced from 36 to 14. As noted above, an intention of the ESRQ is to facilitate a quick response. With 14 words it was found that: (1) all words including an instruction fitted on a single page; (2) after a trial session, it could be filled-in in less than one minute; and (3) an acceptable coverage of the underlying primary appraisal categories was obtained. The appropriate cognitive appraisal category for each of the 14 emotion words is shown in Figure 3.

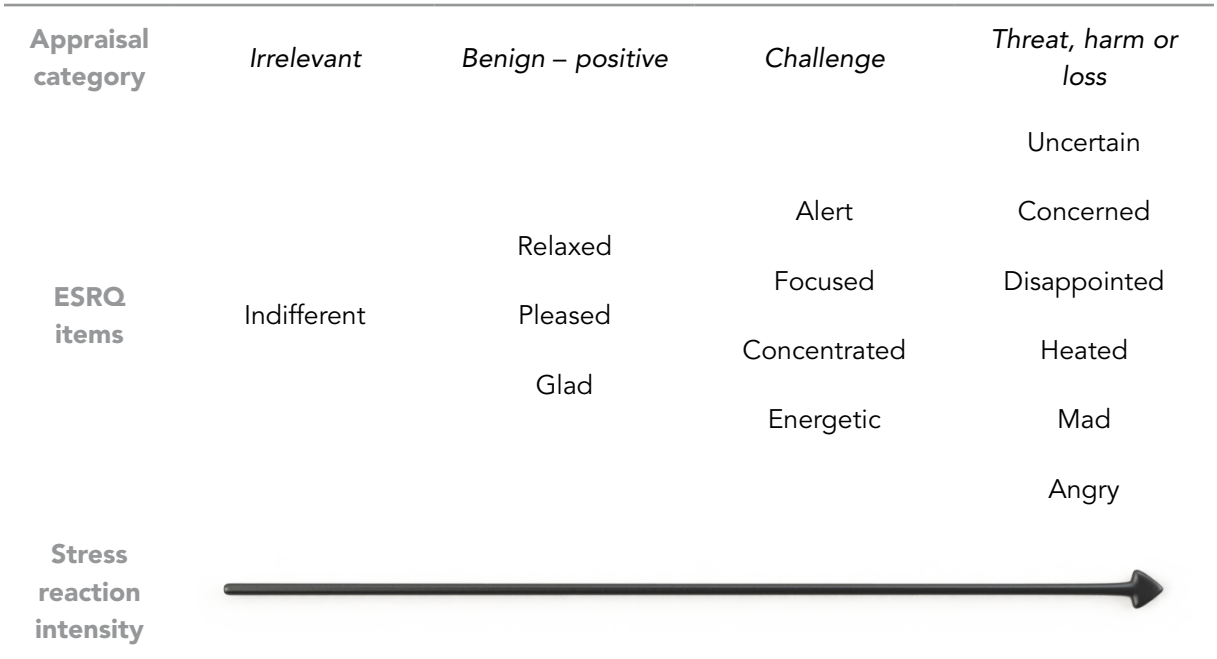

Figure 3. The 14 ESRQ emotion words and the cognitive appraisal categories they are designed to map.

Figure 3 illustrates that the appraisal category "threat, harm or loss" is mapped with six emotion words. Three of these are fear-related ('uncertain', 'concerned' and 'disappointed') and three are aggression-related ('heated', 'mad' and 'angry').

5.2 RESPONSE SCALE

The response format for all 14 items is a four-point Likert scale with the following anchors: The word does not correspond to how you feel right now (1); The word partly corresponds to how you feel right now (2); The word fairly well corresponds to how you feel right now (3); and The word completely corresponds to how you feel right now (4). When the retrospective version is used, "feel right now" is replaced with "felt right then." The instructions are:

"Below is a list of words describing different emotions. Beside each word are four response choices. Circle the choice which best describes how you feel right now ("felt right then" in the retrospective version). Respond with the alternative that first comes to your mind!"

This response format reflects Lazarus' and Folkman's (1984) assumption that almost no cognitive appraisals are completely of a single kind. These authors are hereby pointing out that we usually do not experience just one emotion in a given moment but rather a complex mixture of emotions. Exceptions can be moments of total happiness or complete helplessness.

5.3 SCORING

Scoring of the ESRQ consists of summing the raw scores on items representing each kind of cognitive appraisal category and dividing that sum by the number of items in the category. Thus, the score on each of these scales can range from 1 to 4.

The ESRQ also includes an Appraisal Index. This is designed to be a summary of the respondent's mix of emotions, allowing one to roughly determine the position of the individual on the latent variable; i.e. his or her stress reaction intensity. Based on this position, drawing on the inverted U-relationship between stress reaction intensity and performance level, predictions can be made regarding the individual's psychological action potential in the given situation.

The computation of the Appraisal Index rests on the following argument: the stronger the intensity in the emotions reflecting the appraisals Benign-positive and Challenge, the better from a performance perspective. Similarly, the stronger the intensity in the emotions designed to reflect the appraisals Irrelevant and Threat, harm or loss, the worse from a performance perspective.

Based on this line of reasoning, an Appraisal Index score is computed as follows: a positive emotion sum score is computed by adding the seven items reflecting Benign-positive and Challenge appraisals respectively. A negative emotion sum score is computed by adding the raw scores on the six items reflecting the appraisal category Threat, harm or loss plus the single item measuring Irrelevant. Finally, the negative emotion score is subtracted from the positive emotion score. The resulting measure, the Appraisal Index, can range from -21 (maximum dominance of negative emotions) to 21 (maximum dominance of positive emotions).

On the basis of an individual's score on the Appraisal Index, one can roughly establish his or her position on the latent variable; that is stress reaction intensity. High positive scores on the Appraisal Index correspond to a position near the optimal point on the stress reaction variable when viewed from a psychological action potential perspective. Lower Appraisal Index scores either represent too low or too high stress reaction levels. By going back and observing the scores on the different appraisal categories (see above), one can make a rough estimate of where on the stress reaction intensity variable the individual is positioned.

5.4 ADMINISTRATION OF THE ESRQ

There are two basic versions of the ESRQ. The first aims to map the respondent's here-and-now emotions and is based on the question: "How do you feel right now?" The second version is intended to map situation-specific emotions retrospectively and is based on the question: "How did you feel right then?"

If it is feasible, the respondents should be given the opportunity to familiarize themselves with the questionnaire and its response format by first responding to the "right now" version in a neutral situation. When the ESRQ is presented in a classroom setting, the administrator should read the instruction aloud in a calm manner on the first assessment occasion and make sure that the respondents fully understand them. When repeated measures are used, it is usually not necessary to read the instruction again. It is typically enough to say something like: "And now you can fill in this one like the last time."

The administrator should encourage the respondents to work quickly and spontaneously, if possible, also make sure that they do not miss an item. If a respondent asks questions like "What's the difference between that word and that word?" the administrator is recommended to respond in a friendly but neutral fashion: "That it is how *you* perceive the meaning of the words."

The ESRQ is only applicable among individuals who understand all the emotion words. This means that it cannot generally be used with children under 12–13 years of age, among immigrants with limited language understanding or people with cognitive disabilities.

6 INTERPRETATION OF ESRQ RESULTS

This chapter deals with the interpretation of psychological stress measurement from two perspectives. The first is theoretical and general, the second is more practical and directly related to ESRQ results.

6.1 THEORETICAL MEASUREMENT CONSIDERATIONS

Three aspects will be discussed here: (1) single versus repeated measurements; (2) retrospective assessments; and (3) sum scores versus single item scores.

6.1.1 SINGLE VERSUS REPEATED MEASUREMENTS

A core aspect of single versus repeated assessment is the specificity of the person-environment relationship one wishes to capture. Is it fairly stable over a longer time, such as the first months of a grief process or is it rapidly changing, such as before, during, and after a penalty kick in football? The general rule of thumb should be that the more rapidly the encounter changes, the more desirable it is with several assessments that are related to specific episodes.

Now, there is an ideal and there is a reality. In most cases it is not possible to make as many and as episode-specific measurements as one would like. This means that some kind of episode aggregation must be accepted. Psychological assessments are often a question of compromises. This means that the individual makes a subjective calculus which sums up his or her psychological reactions during a broader time span (Lazarus 1990). Nevertheless, one should be aware of loss of potentially important process information though. A person may feel bad one day and good the next and report "medium" to sum it up.

6.1.2 RETROSPECTIVE ASSESSMENTS

It is generally impossible for the researcher to be present with the study participants often enough, meaning that retrospective assessments need to be accepted. This is, of course, associated with risks of memory loss. Generally speaking, the longer the time gap from an incident to its reporting, the more room there is for personalized appraisals that deviate from what actually happened (Lazarus 1990). On the other hand, and especially considering instruments like the ESRQ, Lazarus and Folkman (1984) claim that memories of emotional states are relatively stable over time, particularly if the situation was experienced as stressful and if it is comparatively easy to reconstruct. Christiansson (1992) came to the same conclusion in a major review of memory research.

6.1.3 SUM SCORES VERSUS ITEM SCORES

From a psychometric standpoint, scores built-up by summing several single items have two distinct advantages over each single item score. First, a sum score is usually more reliable. Second, in order to communicate research results in a comprehensible way, some kind of reduction or aggregation of the data is usually necessary. However, sum scores also have disadvantages. One is that little or no attention is paid to the specificity of psychological reactions. To quote Lazarus (1990): "Knowing, for example, that a person reacts to an adaptational encounter, or to a stable relationship with the world, say, with anger as opposed to anxiety, guilt as opposed to shame, envy as opposed to jealousy, or depression as opposed to euphoria, provides far more valuable information about how a person is relating to the environment (appraisal) and coping with harms and benefits, compared with knowing only about degree of stress." (p. 12)

An additional risk with sum scores is that they are strictly one-dimensional meaning that they vary from low to high values without paying attention to qualitatively different kinds of reactions which may be hidden in a sum score (see also the discussion on aggregated measures above).

6.1.4 TWO SUGGESTED SOLUTIONS

Assessments of phenomena that change over time call for research designs allowing for the mapping of processes. In psychology, this usually means longitudinal study designs where each participant is assessed two or several times. There are practical difficulties with this, of course, and one may have to weigh the pros and cons of such intra-individual designs with adopting more conventional large-scale cross-sectional designs.

A second suggested solution, which can be regarded as being in line with the intra-individual discussion above, is to add qualitative in-depth interviewing to the more standardized questionnaire approach. If done properly, this can shed important light on the problems of preconscious appraising and culturally ingrained response repertoires discussed in Chapter 2. However, superficial questioning will not do. It takes skilled interviewing to reveal and interpret these aspects (Lazarus 1995).

6.2 PRACTICAL MEASUREMENT CONSIDERATIONS RELATED TO THE ESRQ

The basic version of the ESRQ exists in two versions: one "how do you feel right now" and one retrospective "how did you felt right then." Both versions result in 14 individual emotion scores, four appraisal category scores (Irrelevant, Benign-positive, Challenge, and Harm, treat or loss), and the Appraisal Index. Each of these markers can, of course, be used in cross-sectional as well as longitudinal research designs.

So far, all published research with the ESRQ has been cross-sectional where the appraisal category scores and the Appraisal Index have been used. A summary of the obtained results is presented in Chapter 8. In this kind of studies one typically seeks reliable indices rather than single items and the kind of data reduction that follows from using aggregate measures. Conventional statistical guidelines apply when interpreting correlational analyses, subgroup comparisons, etc.

7 TWO ADDITIONAL FORMS OF THE ESRQ

In this chapter we present two recently developed additional versions of the ESRQ. Both rest on international publications. The first is designed to measure moral stress reactions in addition to the original 14 ESRQ items (Nilsson et al. 2011). The second, which involves a major theoretical and methodological development of the ESRQ, aims to measure patients' satisfaction with health care (Larsson & Wilde Larsson 2010). The second version will be described in more detail than the first. However, in both cases, interested readers are referred to the original sources for more details.

7.1 ESRQ-MORAL STRESS

The phenomenon of moral stress is probably as old as mankind. The problems of fulfilling the intentions of good will, doing the rights things and acting accordingly has been convincingly formulated by Saint Paul:

> For I do not do the good I want, but the evil I do not want is what I do. (Rom 7:19 Revised Standard Version)

Recently, Nilsson et al. (2011) explored the issue of moral stress in connection with international humanitarian aid and rescue operations. This particular investigation was a qualitative interview study using a grounded theory methodology. The study resulted in a theoretical model, which in a slightly simplified form is presented in Figure 4.

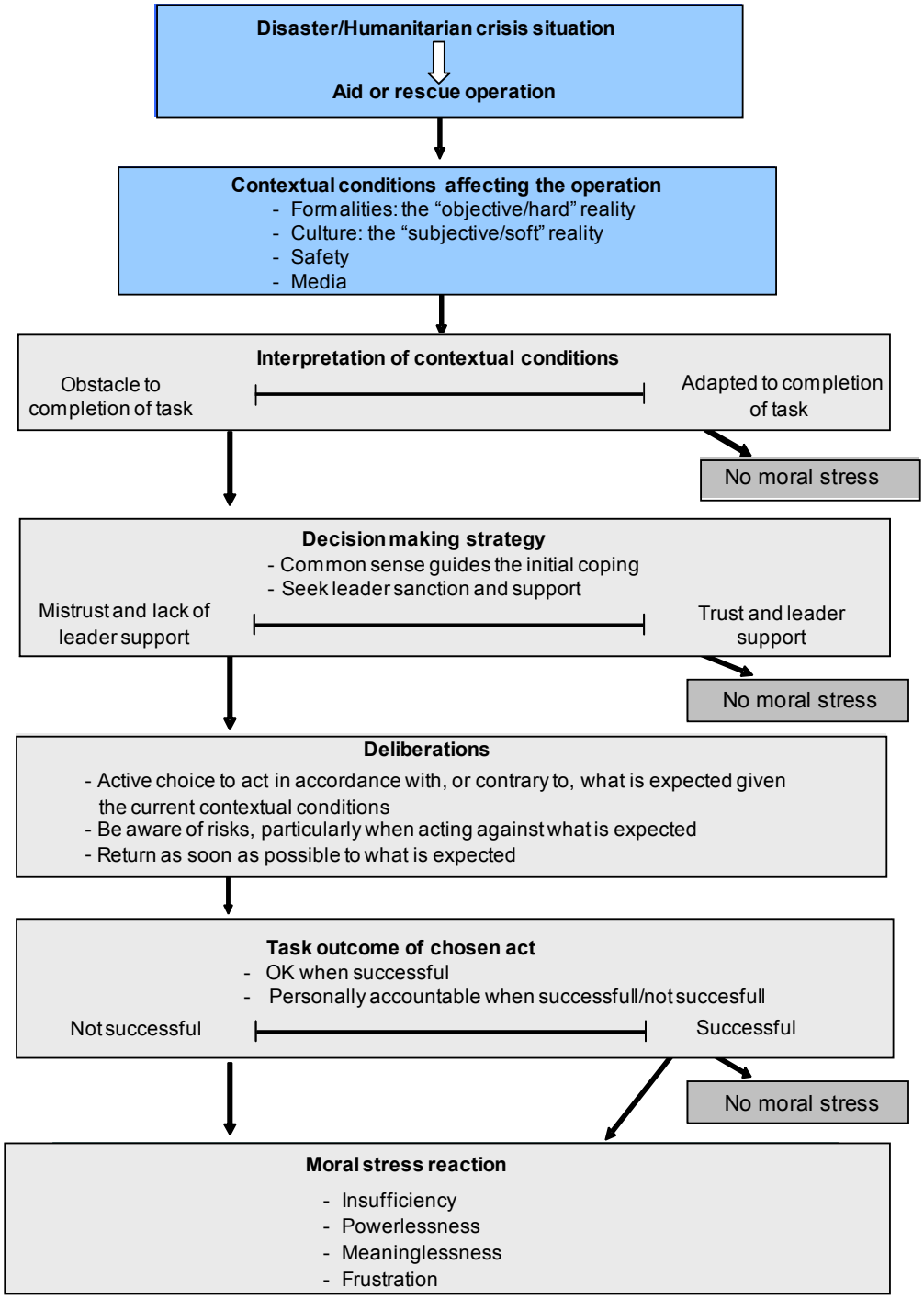

Figure 4. Ethical decision making from a moral stress perspective during acute situations (adapted from Nilsson et al. 2011).

The model illustrates a process that, under certain conditions, may lead to moral stress, shown in ideal typical form elf, such as a disaster or other kind of humanitarian crisis situation. This, of course, is a necessary condition for an aid or a rescue operation and is not further elaborated here.

A number of contextual conditions such as formalities, culture, safety aspects and the media affect the aid or rescue operation. The typical humanitarian assistance professional interprets the meaning of these conditions and the appraisal processes results in a position on a continuum ranging from understanding the situation as compatible with one's inner moral guidelines to evaluating it as having obstacles in these respects. In the first case, there will be no moral stress. When the situation is interpreted as problematic, a morally challenging decision-making process begins. A core initial aspect of this is to seek mandate and support from one's superior. If this received, there will be no moral stress according to this ideal typical model. On the other hand, if such support is not received, the humanitarian assistance professional must make an active choice, be aware of the risks of acting contrary to what is expected given the current contextual conditions.

The next step in the model is task outcome, when the humanitarian assistance professional has acted in accordance with his or her inner moral conviction but contrary to what the contextual conditions suggest. If the outcome is successful, one may avoid moral stress, but this is not self-evident, and in these cases one may suffer from negative stress reactions. When one's choice of action results in a task outcome that is not successful, a stress reaction occurs that can be labeled as moral stress. This is characterized by experiences of insufficiency, powerlessness, meaninglessness, and frustration (Nilsson et al. 2011).

When discussing the findings, we turned to the theoretical framework of Lazarus and wrote the following (Nilsson et al. 2011):

"Four kinds of experiences were brought forward by the informants: insufficiency, powerlessness, meaninglessness, and frustration. According to Lazarus (1991), meaninglessness and frustration (and also helplessness) are regarded as "ambiguous negative states" (p. 83) rather than as emotions. These states are involved in emotions as a preceding appraisal, but they are not emotions themselves. Rather they describe the evaluation of a given person-environment relationship (Lazarus 1991). We suggest that this holds true for insufficiency and powerlessness as well. In further support of this notion, none of the negative states we have identified can be found in the Shaver et al. (1987) extensive cluster analysis of 135 emotion names." (p. 66)

7.1.1 MEASUREMENT OF MORAL STRESS

Based on the above-mentioned study by Nilsson et al. (2011), a special version of the ESRQ was developed, simply composed by adding the four moral stress reaction words, insufficiency, powerlessness, meaninglessness, and frustration to the original 14 ESRQ words. The standard ESRQ response scale is used. Results interpretations may be based on each of the four word separately, or on a sum score. Examples of empirical results where the aggregate moral stress reaction score have been used are presented in Chapter 8.

7.2 ESRQ-CARE

The description of the development of the ESRQ-Care version will begin with a summary of some theoretical considerations, followed by a presentation of the instrument development proper.

7.2.1 ESRQ-CARE THEORY IN BRIEF

At a general level, the cognitive-phenomenological theory tells us that the way a person appraises and copes with a situation causally contributes to his or her emotional reaction (Lazarus 1991, 1999). In turn, the appraisal process is shaped by an interaction of actual, external conditions and person-related conditions. Socio-demographic aspects such as sex, age, social and ethnical background and personality are typical examples of the latter (Jackson, Chamberlin & Kroenke 2001; Linder-Pelz 1982). In a health context, the individual's health condition is obviously another relevant person-related characteristic (Crow et al. 2002). These antecedent conditions affect our system of beliefs and pattern of commitments. This suggested chain reaction is shown in Figure 5.

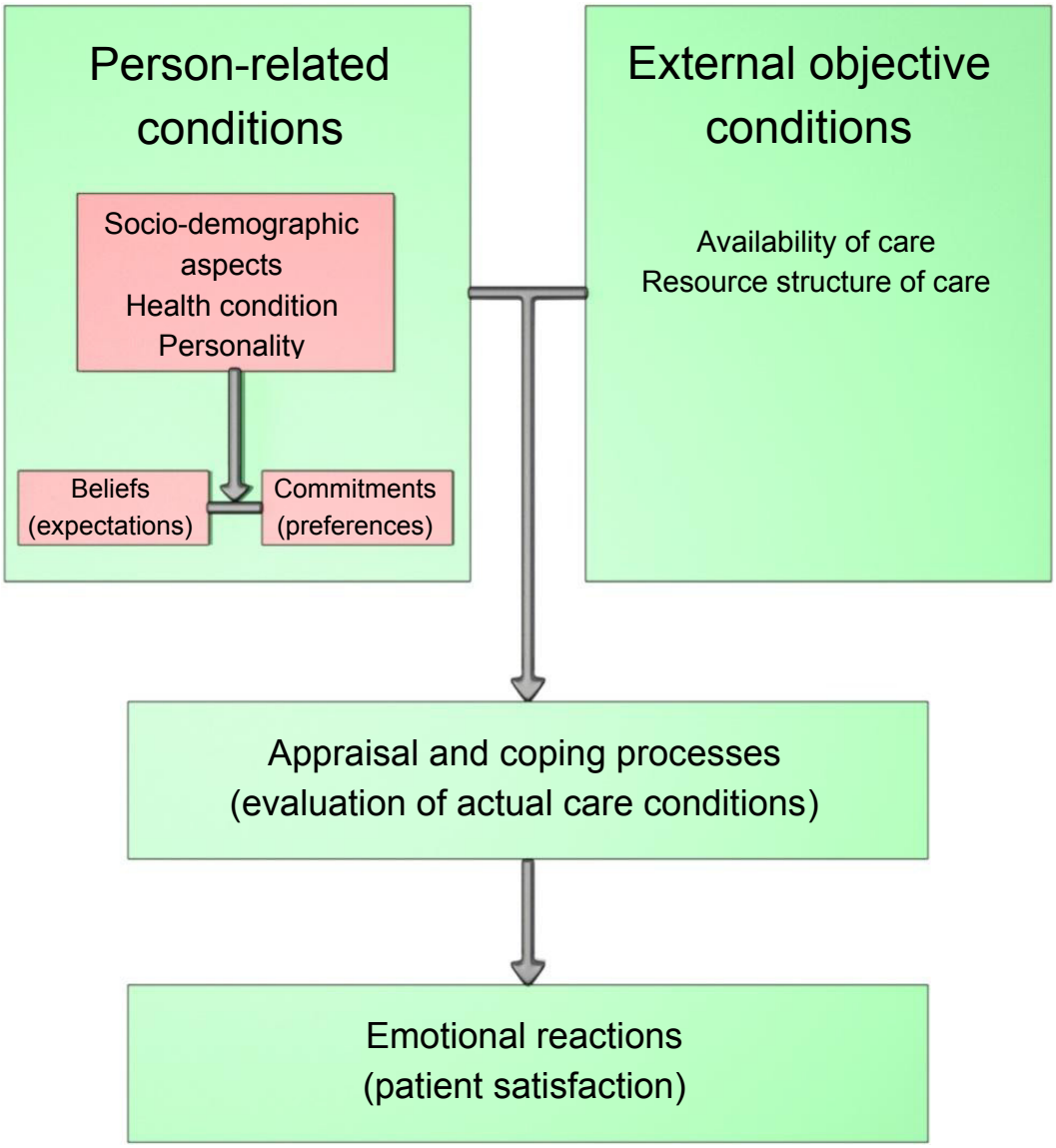

Figure 5. Relationships between person-related conditions, external objective conditions, appraisal and coping processes, and emotional reactions (adapted from Larsson, Wilde Larsson & Starrin 1996 and Larsson & Wilde Larsson 2010).

An application of this model to key quality concepts could tentatively look like this. Socio-demographic characteristics, health condition and personality influence cognitive patterns such as expectations and commitments. *Expectations* can be regarded as so-called cold cognitions – types of beliefs or inner representations of how the world *is*. *Preferences* (subjective importance) can be looked upon as so-called hot cognitions – types of commitments or inner representations of how one *wants* the world to be. Actual evaluation of the quality of care received (*perceived reality* of health service attributes) can be seen as a kind of appraisal and cognitive coping process. Finally, *patient satisfaction* can be regarded as an emotional outcome.

In the majority of existing writings, patient satisfaction is regarded as an attitudinal response related to the degree of fulfillment of expectations (Bowers & Kiefe 2002; Crow et al. 2002). Needs, ideals, and norms are sometimes included in this matching (Sofaer & Firminger, 2005). According to the cognitive-phenomenological approach this represents an inadequate conceptual differentiation. First, in this framework an attitude is regarded not as an emotion but as a disposition to react with one. Second, ideals, norms, and preferences can be embraced by the commitment concept. This includes an enduring motivational quality which is not found in beliefs – expectations; for instance (Lazarus & Folkman 1984). Third, viewing satisfaction as an emotion has an intuitive appeal; you *feel* satisfied/dissatisfied. In the history of the individual, it has developed from sensory pleasure/pain states in the child (Lazarus 1991).

If one accepts that patient satisfaction is largely an emotional phenomenon, as well as Lazarus' thesis that cognitive appraisals largely shape our emotional reactions, then the idea behind the ESRQ could also represent a valid measurement approach in the patient satisfaction context. However, as care contexts can be assumed to differ radically from performance situations such as military operations, a care-context adaptation of the ESRQ was regarded as necessary.

7.2.2 ESRQ-CARE INSTRUMENT DEVELOPMENT IN BRIEF

The study population consisted of all patients visiting one of 16 somatic out-patient clinics at the medical departments of two Swedish county hospitals in March 2008 and who met the following inclusion criteria: 16 years of age or older, able to communicate in Swedish, and willing to participate. Responses were obtained from 624 patients.

In order to adapt the instrument to care contexts, the hierarchical emotion system of Shaver et al. (1987) was used. From the superior emotion Joy, we selected "hopeful," "optimistic," and "relieved." From Surprise we chose "astonished" and "surprised." From Anger we picked "irritated." From Sadness we chose "sad," "insecure," "humiliated," "ashamed," "lonely," "stupid," and "powerless." From Fear finally, we selected "afraid," "tense," and "worried." The selection was based on our judgment of face validity, related to the patients' situation in care contexts, plus an ambition not to make the questionnaire too extensive.

An ESRQ Appraisal Index score was computed as follows in ESRQ-Care. A positive emotion sum score was computed by adding the raw scores of the 10 items reflecting Benign-positive and Challenge appraisals respectively. A negative emotion sum score was computed by adding the raw scores of the 17 items reflecting the appraisal/superior emotion category Threat, harm and/or loss. Finally, the negative emotion score was subtracted from the positive emotion score. The resulting measure, labeled ESRQ Appraisal Index, can range from -58 (maximum dominance of negative emotions) to 23 (maximum dominance of positive emotions). Three emotion words, indifferent, astonished, and surprised, are regarded as neutral and omitted from the calculation of the ESRQ Appraisal Index.

Dimensional analysis of the 30 ESRQ emotion words was made in two ways: explorative factor analysis (principal axis factoring with oblique rotation) and structural equation modeling (SEM) with maximum likelihood estimates, based on the covariance matrix. The explorative factor analysis resulted in a meaningful six-factor solution with 60.3 per cent explained variance. The confirmatory factor analysis, with two exceptions, took the exploratory solution as its point of departure. The first exception was that the model tested in the SEM analysis included a general factor (G-factor) containing all 30 items (no satisfactory solution was obtained without this). The second exception was that one item – "indifferent" – loaded on the same factor as "astonished" and "surprised" in the exploratory case. In the confirmatory analysis "indifferent" was omitted for this factor for face validity reasons. The confirmatory factor analysis resulted in the following factors: General factor, Irrelevant, Benign-positive, Challenge, Surprise, Fear, Shame, and Anger.

Fact box

The statistical goodness-of-fit between the model and the empirical outcome in the SEM analysis was acceptable. An RMSEA of 0.071 was obtained (90% confidence interval 0.068-0.075). Other fit indices included an NFI of 0.954, a GFI of 0.839 and an AGFI of 0.803. However, the chi-square value (1617.56) was high in relation to the degrees of freedom (381; $p < 0.001$).

The G-factor partials out the common-core information from the covariance between all the responses. The remaining covariance between the items of a given subordinate factor then constitutes this factor, for instance, Benign-Positive. The t values of the general and residual factors were statistically significant and the factor loadings of all items were significant except for two items in the Fear factor (lonely and powerless). The model also included a specified covariance between the residual factors Benign-Positive and Challenge.

The proportion of variance explained by an item corresponds to its squared multiple correlation and this can be regarded as information of the internal consistency (reliability) of the item. All items apart from indifferent, relaxed, lonely, and stupid had values above 40% (which is "acceptable to good" according to Aroian and Norris 2005, p. 371). One item – indifferent – had a particularly low reliability. The internal consistency of each ESRQ factor scale was also assessed by Cronbach alpha coefficients and the reliability coefficients are satisfactory.

Two general patterns emerge from a correlation analysis. First, the ESRQ scales co-vary more strongly with ratings of perceived reality of care than with ratings of the subjective importance ascribed to the different aspects of care. Second, in the case of perceived reality ratings, positive correlations are consistently observed for the Benign-Positive, Challenge, and the ESRQ Appraisal Index. Negative correlations are noted regarding the Fear, Shame, and Anger scales.

When "Hesitation to visit the same out-patient clinic again" was used as dependent variable in a hierarchical logistic regression analysis, favorable ratings on the background variables (step 1), the perceived reality ratings of quality of care (step 2), and the ESRQ scales (step 3) made a significant contribution to the odds of reporting "No, no hesitation." Four single variables showed a significant Wald statistic in the final model. Being born outside Sweden and having higher ratings on the ESRQ Fear and Shame scales respectively, contributed to the odds of reporting hesitation. Higher scores on the ESRQ Benign-Positive scale contributed to the odds of reporting "No, no hesitation".

In conclusion, the dimensionality analysis resulted in a clear and meaningful pattern of factors. The two different indicators of reliability (the variance explained by each item in a SEM analysis and Cronbach alpha coefficients respectively) also yielded a satisfactory picture. However, it should be noted in the SEM analysis that an acceptable outcome was only obtained when a hierarchical model with residual factors nested in a general factor was introduced. According to Gustafsson and Balke (1993), this means that the G-factor has an influence on each observed variable. In the present case, we venture to guess that this influence can be understood to a higher degree in terms of a more stable mood or affect level (cf. research on positive and negative affectivity; Watson & Clark 1984; Watson & Pennebaker 1989). It has also been suggested that the G-factor represents a personality-related predisposition for experiencing events within a certain interval on a favorable-unfavorable continuum (Larsson 2001). This assumption finds support in the comparatively strong bivariate correlations obtained between the ESRQ scales and Emotional Stability (the reverse of Neuroticism).

From personal contacts we know that several researchers are now using the ESRQ-Care instrument in a variety of health care settings. Early examples are provided by Abrahamsen Grøndahl and colleagues (2011, in press a, in press b). Following a translation to Norwegian, they used the questionnaire in a number of different hospital wards in Norway.

8 EMPIRICAL FINDINGS

In this chapter we present some empirical findings where ESRQ-scores are related to the key theoretical concept presented earlier. The aim is to explore the relationships between primary appraisal processes as measured by the ESRQ and: (1) antecedent conditions such as personality; (2) secondary appraisal and coping processes; and (3) various outcome indices. The method used, the results, and some comments will be presented in the following (from Larsson 2011).

8.1 METHOD

8.1.1 PARTICIPANTS AND PROCEDURE

The study population consists of five different samples, which are presented in Table 2. In each case the ESRQ was part of a longer questionnaire, but no attempt was made before to specifically analyze the ESRQ responses. All participants are Swedish.

Sample	*n*	Additional scales	Source
1. Civilian first responders (ambulance, police, rescue service) (assessments during the What-is-this-phase and the Gain-control-phase)	386	Secondary appraisal Cognitive coping Self-rated performance	Sjöberg, Wallenius & Larsson (2011)
2. Civilian out-clinic patients	624	Personality Self-rated health	Larsson & Wilde Larsson (2010)
3. Military task force on peace enforcement mission in Chad, 2008 (officers and soldiers)	84	Secondary appraisal Self-rated performance	Unpublished
4. Military task force on peace enforcement mission in the Bay of Aden, 2009 (officers and sailors) (Assessment before and after deployment)	128	Sense of coherence	Unpublished
5. Military (cadets) during stressful exercise at a military academy (assessments at three episodes during the exercise)	112	Secondary appraisal Self-rated performance Moral Stress	Unpublished
Total	1334		

Table 2. Summary of study samples and scales used in addition to the ESRQ.

Sample No. 1 (Sjöberg, Wallenius & Larsson 2011) consists of 386 civilian first responders comprising 33% ambulance personnel, 23% police officers and 43% from the rescue services. The whole sample was made up of 340 men and 46 women. The mode age group was 41–50 years. Participants were asked to report their reactions in a complex and highly stressful rescue operation. Following Fredholm's (1999) suggestion, they retrospectively reported their experience related to two time segments. One was called the What-is-this-phase, covering the time from the alarm to the point where the respondent knew what the incident was about. The second was called the Gain-control-phase. This is the following phase and is characterized by the respondent experiencing that he or she could control the event.

Sample No. 2 (Larsson & Wilde Larsson 2010) consists of 624 patients visiting a Swedish primary health care center. In this group, 295 were men and 329 were women. The mean age was 48.9 years (*SD* = 19.8). They responded on a touch screen computer before leaving the health care center and were asked to report how they felt during the visit.

Samples No. 3 to 5 were military groups (only reported in popular Swedish reports). The third sample consisted of 84 participants from a Swedish peace enforcement force that had just returned from a 6-month mission in Chad. The sample was made up of 78 men and 6 women, with a mean age of 28.4 years (*SD* = 6.7). They were asked to recall the most stressful situation they had experienced during the mission and relate their responses to this.

The fourth sample consisted of 128 participants from a Swedish marine force that had just returned from a six-month mission in the Bay of Aden, with the task of protecting ships from pirates. The group consisted of 119 men and 8 women, with a mean age of 30.8 years (*SD* = 10.2). They were given the same instruction as the one described above for the Chad sample.

The fifth and final sample consisted of 112 military cadets attending the three-year basic officer education at the Swedish National Defence College. The group consisted of 101 men and 11 women, with a mean age of 23.7 years (*SD* = 2.11). During a stressful two-day exercise, they were faced with three demanding tasks, and filled in the questionnaire immediately after each episode.

8.1.2 MEASURES

Personality. Data were collected (civilian out-clinic sample) using the Single-Item Measures of Personality (SIMP) (Woods & Hampson 2005) designed to measure the five dimensions/factors in the Big Five model of personality (Costa & McCrae 1992): Extraversion, Agreeableness, Emotional Stability, Conscientiousness, and Openness. Each factor/item is measured on a bipolar nine-point graded line.

Sense of coherence (SOC) was assessed (military task force Aden Bay sample) with Antonovsky's (1987) short 13-item version. Scores on each item could range from 1 (weak SOC) to 7 (strong SOC). A scale score was calculated by summing the raw scores. The Cronbach alpha coefficients were 0.78 both before and after deployment.

Primary appraisal. The ESRQ, which was used in all nine measurements across the five samples, consists of the following 14 emotion words designed to measure the different cognitive appraisal categories as follows: Irrelevant: indifferent; Benign-positive: relaxed, pleased, and glad; Challenge: alert, focused, concentrated, and energetic; and Harm, threat, or loss: concerned, uncertain, disappointed, heated, mad, and angry (Larsson 1987; Larsson & Wilde Larsson 2010).

Cronbach alpha coefficients on the various ESRQ scales ranged in the total of nine times it was used across the five studied samples as follows: Benign-positive scale: 0.57–0.80, Challenge scale: 0.55–0.89, Threat, harm or loss scale: 0.64–0.83, the positive items in the Appraisal Index scales: 0.74-0.90, and the negative items in the Appraisal Index scale: 0.65–0.84. Altogether, three out of 45 coefficients were below 0.60 and they were all found in the marine task force sample.

Secondary appraisal was assessed with the following single item scale: The situation could be reasonably solved with the available resources. A 5-point response scale from 1 (Do not agree at all) to 5 (Fully agree) was used. Responses were obtained twice from the sample of civilian first responders (related to the What-is-this-phase and the Gain-control-phase respectively), once from the military task force in Chad (self-selected stressful situation) and three times from the military cadet sample (one for each in the three episodes).

Cognitive emotion-focused coping. This was assessed twice in the sample consisting of civilian first responders (What-is-this-phase and Gain-control-phase) using the Self-Statement Questionnaire (SSQ) developed by Larsson (1989). The SSQ contains 36 items designed to measure the inner talk of the respondent immediately prior to a task, at the very onset of the task, and during the task (all items are presented in chapter 11). In the present case, the two first-mentioned time segments were combined in the What-is-this-phase assessment. There are four scales as follows within each time segment: Positive self-talk vs. fear (e.g. Relax now and breath calmly); Positive self-talk vs. anger (e.g. Remember, focus on the task and don't take it personally); Negative self-talk vs. fear (e.g. I will never manage this); and Negative self-talk vs. anger (e.g. What a stupid task). The responses were entered on a 5-point scale ranging from 1 (Not used) to 5 (Used a great deal). The instructions were: "Please read each item below and indicate, by circling the appropriate category, to what extent you used it (during the given time segment). Indices were formed by adding the raw scores of each scale and dividing the sum by the number of items in the scale. Cronbach alpha coefficients ranged between 0.66 and 0.89.

Performance was measured in the civilian first responder sample by an index formed by adding the raw scores on three items (e.g. I am proud of my performance in the operation) with 5-point response scales (ranging from 1 = Do not agree at all to 5 = Fully agree). In the military task force serving in Chad, and in the military cadet sample, performance was measured by a single-item. Participants made self-ratings of their performance in the stressful episode on a scale ranging from 0% to 100%. The instructions were: "Think about the situation again. Consider how well you could have handled it if you had been "on top of your ability," that is, if you had acted like you can in your best moments. Let us call this hypothetical ideal performance 100%. Mark a circle on the scale below how close to this ideal behavior you think you acted in reality." Every tenth per cent was marked (0%, 10%, 20%, etc) making it an 11-point scale in the analysis.

Subjective health condition. Patients in the civilian out-clinic sample gave self-ratings of their health condition in their response to a single question: "How would you describe your present health condition?" using a 5-point scale ranging from 1 (Very poor) to 5 (Very good).

Moral stress was measured in the military cadet sample by the sum score of the four negative ambiguous states identified by Nilsson et al. (2011): Insufficiency, Powerlessness, Meaninglessness and Frustration. The same response scale as in the ESRQ (see above) was used. Cronbach alpha coefficients range from 0.67 to 0.72 in the three episode assessments.

8.1.3 STATISTICS

The main results presentation is based on correlations (Pearson) between the ESRQ scales on the one hand, and the scales designed to measure antecedent conditions, secondary appraisal, cognitive emotion-focused coping, and outcome indices on the other. In addition to this, explorative factor analyses (principal axis factoring with oblique rotation) were performed on the ESRQ items within each sample (not shown).

8.2 RESULTS

The dimensionality of the ESRQ items was analyzed in detail in the aforementioned study by Larsson and Wilde Larsson (2010) using SEM and the question of factor structure was not the main aim of the present study. In summary, explorative factor analyses (principal axis factoring with oblique rotation) in each of the samples, typically resulted in three-factor solutions. One factor contained the items designed to measure the appraisal category Benign-positive. Items intended to reflect the appraisal Challenge loaded high in a second factor. Finally, all items measuring the appraisal Threat, harm or loss were found in a third factor. The correlation between the two first-mentioned factors was usually strong and positive, and they both correlated negatively with the third factor. The item designed to measure the appraisal category Irrelevant (indifferent) usually had low loadings in all factors, although somewhat higher in the Threat, harm or less factor.

8.2.1 RELATIONSHIP WITH ANTECEDENTS

Personality, as well as sense of coherence (Antonovsky 1987), can be regarded as antecedents of primary appraisal processes (Lazarus & Folkman 1984). Available correlation data with indices of these constructs are shown in Table 3.

Sample: Civilian out-clinic patients (n = 624)					
ESRQ scales	**Personality**[1]				
	Extraversion	**Agreeable-ness**	**Emotional stability**	**Conscien-tiousness**	**Openness**
Irrelevant[2]	-0.07	-0.05	-0.02	-0.03	-0.00
Benign-positive[2]	0.11**	0.02	0.26***	0.00	0.07
Challenge[2]	0.17***	-0.03	0.23***	0.09*	0.04
Threat, harm or loss[2]	-0.15***	-0.04	-0.11**	-0.09*	-0.01
Appraisal Index[3]	0.18***	0.02	0.24***	0.08*	0.04

Sample: Military task force Bay of Aden (n = 128)		
ESRQ scales	**Sense of coherence**[4]	
	Before deployment	**After deployment**
Irrelevant[2]	-0.25**	-0.32***
Benign-positive[2]	0.18*	0.25**
Challenge[2]	0.19*	-0.18
Threat, harm or loss[2]	-0.26**	-0.31***
Appraisal Index[3]	0.31***	0.35***

[1]Scores could range from 1 (negative pole) to 9 (positive pole).
[2]Scores could range from 1 (lowest degree) to 4 (highest degree).
[3]Scores could range from -35 (maximum negative balance) to 35 (maximum positive balance).
[4]Scores could range from 13 (lowest sense of coherence) to 81 (highest sense of coherence).
* $p < .05$ ** $p < .01$ *** $p < .001$.

Table 3. Correlations between the ESRQ scales and antecedent variables.

Beginning with personality (civilian out-clinic patient sample), Emotional Stability and Extraversion co-vary consistently with the ESRQ scales (although all correlations with Extraversion are below 0.20). High scores on the positive ESRQ scales correlate positively with these personality dimensions and high scores on the Threat, harm or loss scale correlate negatively. Agreeableness, Conscientiousness and Openness have no correlations with the ESRQ scales exceeding 0.10.

Turning to sense of coherence, a consistent pattern is obtained before and after deployment (military Marine task force sample). The positive ESRQ scales correlate positively with SOC and the negative scales correlate negatively.

8.2.2 RELATIONSHIP WITH SECONDARY APPRAISAL

ESRQ scales	Secondary Appraisal index[1]					
	Civilian first responders What-is-this-phase (*n* = 386)	Civilian first responders Gain-control phase (*n* = 386)	Military task force Chad (*n* = 84)	Military cadets episode 1 (*n* = 112)	Military cadets episode 2 (*n* = 112)	Military cadets episode 3 (*n* = 112)
Irrelevant[2]	0.03	-0.03	-0.06	-0.07	-0.20*	0.03
Benign-positive[2]	0.12*	0.15**	0.18	0.14	0.33***	0.17
Challenge[2]	0.10	0.19***	0.22	0.30**	0.22*	0.48***
Threat, harm or loss[2]	-0.09	-0.24***	-0.19	-0.12	-0.26**	-0.18
Appraisal Index[3]	0.13*	0.26***	0.28*	0.25**	0.38***	0.32*

[1]Scores could range from 1 (lowest degree) to 5 (highest degree).
[2]Scores could range from 1 (lowest degree) to 4 (highest degree).
[3]Scores could range from -35 (maximum negative balance) to 35 (maximum positive balance).
* $p < .05$ ** $p < .01$ *** $p < .001$.

Table 4. Correlations between the ESRQ scales and secondary appraisal.

Table 4 notes an almost consistent pattern regarding the direction of the bivariate associations between the ESRQ scales and the secondary appraisal score. The positive ESRQ scales, and Challenge in particular, correlate positively with perceived coping options, while the negative scales, and especially Threat, harm or loss, correlate negatively. It should be noted that the correlations of the Appraisal Index scale are statistically significant in all six measurements.

8.2.3 RELATIONSHIP WITH COGNITIVE EMOTION-FOCUSED COPING

Sample: Civilian first responders (n = 386)				
ESRQ scales	**Assessment I: "What-is-this-phase?"[1]**			
	Positive self-talk vs fear	**Positive self-talk vs anger**	**Negative self-talk vs fear**	**Negative self-talk vs anger**
Irrelevant[2]	-0.10	-0.05	0.26***	0.25***
Benign-positive[2]	0.17***	0.23***	-0.13*	-0.15**
Challenge[2]	0.17***	0.20***	-0.34***	-0.29***
Threat, harm or loss[2]	0.09	0.08	0.38***	0.44***
Appraisal Index[3]	0.08	0.11*	-0.44***	-0.46***
ESRQ scales	**Assessment II: "Gain-control-phase"[1]**			
	Positive self-talk vs fear	**Positive self-talk vs anger**	**Negative self-talk vs fear**	**Negative self-talk vs anger**
Irrelevant[2]	-0.01	0.02	0.19***	0.18***
Benign-positive[2]	0.06	0.06	-0.13*	-0.05
Challenge[2]	0.08	0.05	-0.29***	-0.26***
Threat, harm or loss[2]	0.15**	0.07	0.26***	0.25***
Appraisal Index[3]	-0.03	0.00	-0.31***	-0.27***

[1]Scores could range from 1 (lowest degree) to 5 (highest degree).
[2]Scores could range from 1 (lowest degree) to 4 (highest degree).
[3]Scores could range from -35 (maximum negative balance) to 35 (maximum positive balance).
* $p < .05$ ** $p < .01$ *** $p < .001$.

Table 5. Correlations between the ESRQ scales and cognitive emotion-focused coping.

Perusal of Table 5 points to three findings. First, the positive ESRQ scales correlate positively with the positive thinking scales and negatively with the negative thinking scales. Second, a reversed pattern on the negative ESRQ scales is nonetheless not found. Thus, the Threat, harm or loss scale co-varies positively with all cognitive emotion-focused coping scales, although the size of the association is weak on the positive thinking scales. The third finding is that the ESRQ scales show stronger associations with the negative thinking scales than the positive. In the former case, 19 out of 20 correlations are statistically significant. In the latter case, only 6 out of 20 reach this level.

8.2.4 RELATIONSHIP WITH OUTCOME VARIABLES

Three kinds of observations were collected which can be regarded as outcome variables: self-rated performance, self-rated health and moral stress reaction.

ESRQ scales	Self-rated performance					
	Civilian first responders What-is-this-phase[1] (*n* = 386)	Civilian first responders Gain-control phase[1] (*n* = 386)	Military task force Chad[2] (*n* = 84)	Military cadets episode 1[2] (*n* = 112)	Military cadets episode 2[2] (*n* = 112)	Military cadets episode 3[2] (*n* = 112)
Irrelevant[3]	-0.02	0.00	-0.07	-0.35***	-0.34***	-0.23
Benign-positive[3]	0.20***	0.28***	0.09	0.24*	0.33***	0.30*
Challenge[3]	0.18***	0.22***	0.32**	0.30***	0.39***	0.30*
Threat, harm or loss[3]	-0.01	-0.10	-0.13	-0.33***	-0.33***	-0.07
Appraisal Index[4]	0.15**	0.24***	0.25*	0.43***	0.49***	0.29*

[1]Scores could range from 1 (worst performance) to 5 (best performance).
[2]Scores could range from 0 (worst performance) to 10 (best performance).
[3]Scores could range from 1 (lowest degree to) 4 (highest degree).
[4]Scores could range from -35 (maximum negative balance) to 35 (maximum positive balance).
* $p < .05$ ** $p < .01$ *** $p < .001$.

Table 6. Correlations between the ESRQ scales and performance.

Regarding self-rated performance, the positive ESRQ scales and the Appraisal Index scale consistently co-vary positively. The negative ESRQ scales show negative correlations with self-rated performance in the military cadet sample but not so in the group of civilian first responders.

ESRQ scales	Self-rated health[1]	Moral stress[2]		
	Civilian out-clinic patients (*n* = 624)	Military cadets episode 1 (*n* = 112)	Military cadets episode 2 (*n* = 112)	Military cadets episode 3 (*n* = 112)
Irrelevant[2]	-0.04	0.13	0.43***	0.01
Benign-positive[2]	0.47***	-0.41***	-0.41***	-0.36*
Challenge[2]	0.48***	-0.26**	-0.40***	-0.40**
Threat, harm or loss[2]	-0.39***	0.65***	0.65***	0.54***
Appraisal Index[3]	0.52***	-0.59***	-0.73***	-0.51***

[1]Scores could range from 1 (very bad) to 5 (very good).
[2]Scores could range from 1 (lowest degree) to 4 (highest degree).
[3]Scores could range from -35 (maximum negative balance) to 35 (maximum positive balance).
* $p < .05$ ** $p < .01$ *** $p < .001$.

Table 7. Correlations between the ESRQ scales and self-rated health and moral stress.

The self-rated health scale (civilian out-clinic patient sample) and the moral stress scale (military cadet sample) show a similar kind of relationship with the ESRQ scales. Thus, the positive ESRQ scales, and the Appraisal Index scale, co-vary strongly with favorable ratings on self-reported health and with low reports of moral stress reactions. The Threat, harm or loss scale shows a reversed pattern.

8.3 DISCUSSION

The main result is that the observed correlations between the ESRQ and the other studied scales appear to be logical. Thus, the Benign-positive and Challenge scales correlate positively with favorable scores on Extraversion, Emotional Stability, sense of coherence, secondary appraisal, cognitive emotion-focused coping, self-rated performance, self-rated health and a low amount of moral stress. The opposite pattern was found for scales designed to measure the primary appraisals Irrelevant and Threat, harm or loss respectively.

We will now turn to a discussion of potential interpretations and implications. For two reasons, the focus will be on the results obtained with the Appraisal Index scale. First, the results were most clear-cut with this scale. Second, the reliability coefficients for this scale were higher. A first observation is that the emotional reaction in a given situation almost always appears to be multi-faceted. In all studied situations, the participants reported a mixture of positive and negative emotions. A second observation is that the specific mixture in a given case, as captured by the Appraisal Index scale, appears to have explanatory power. Although it is a cross-sectional study where no casual conclusions can be drawn, the consistent correlational outcome obtained with this simple scale indicates that it captures something which may prove to be predictive.

This raises a number of questions. One possibility is that all questionnaire responses are influenced by a general factor such as positive and negative affectivity (Watson & Clark 1984; Watson & Pennebaker 1989), and that this can explain the self-report relationships. If objective indices or external ratings on performance had been available for instance, this hypothesis could have been tested.

Another possibility is that the ESRQ scales, and the Appraisal Index scale in particular, capture the core of something which is more or less similar to what would have been the outcome had a more ambitious assessment method been used. This "something" could be an indicator of an individual's psychological action potential in a given situation (Larsson 1987). If this interpretation is valid, it should be noted that the predictive power of the Appraisal Index scale could be assumed to depend on the degree to which the performance of a task requires resources in addition to psychological action potential such as physical ability and material assets.

The somewhat low Cronbach alpha coefficients for the Benign-positive scale in particular should be noted. This scale consists of three items only: relaxed, pleased and glad. Intuitively it seems reasonable to accept that these three emotions must not necessarily occur together. One can feel relaxed without being glad for instance. Nevertheless, the results show that also the Appraisal Index scale should also be favored for reliability reasons.

In all nine instances where the ESRQ was used in the five samples studied, it was used retrospectively. Although it was just a question of minutes in the out-patient and military cadet samples, it cannot be ruled out that what is reported reflects some kind of generalized memory pattern. For this reason, additional studies using the How-do-you-feel-right-now-version of the ESRQ are desirable. This, of course, is associated with other methodological problems as it requires the respondent to stop doing his/her task for about one minute to fill in the questionnaire.

Other limitations of the reported assessments include the following. Single-item measures were used to assess the Big Five personality dimensions, the secondary appraisal process, and the observables designed to measure performance and health. On the one hand, the diversity of the five samples and the kind of episodes studied is a weakness. On the other hand, the consistency of correlational patterns across the samples and situations can be regarded as a strength of the ESRQ instrument. The strong male dominance among the civilian first responders and in the military samples also limits the generalizability of the results.

9 THOUGHTS ON FUTURE USE OF THE ESRQ

In this chapter we will present some ideas on potential future uses of the ESRQ. Some of them are research-related, some have a more practical clinical or coaching focus, and a couple fall somewhere in between.

9.1 RESEARCH SUGGESTIONS

As change and process repeatedly have been pointed out as central in earlier chapters, our main suggestion is to encourage longitudinal studies. If conditions and appraisals could be assumed to change rapidly, frequent measurement occasions are called for and vice versa. If more in-depth research questions are raised, a combination of ESRQ and qualified interviews may be a good approach.

Another research suggestion is to systematically study different groups in different contexts. The cognitive appraisal model rests on an interactional person-by-situation paradigm (Endler & Magnusson 1976). One possibility to avoid an endless series of studies in various contexts is to theoretically sample study objects. By cross-tabulating contextual characteristics (positive and negative), and individual characteristics (positive and negative), four cells are created. The positive-positive and the negative-negative cells are probably of less interest as the research results seem fairly predictable. However, longitudinal studies in settings mainly assumed to be positive-negative or vice versa could hopefully lead to new insights (Larsson & Eid 2012).

9.2 SUGGESTIONS APPLICABLE TO RESEARCH AS WELL AS TO PRACTICAL INTERVENTIONS

It has repeatedly been shown that the ESRQ can be completed by most subjects in about 60 seconds. It has also been demonstrated that it can be completed outdoors in field conditions. It should also be noted that, after some practice, the scale scores, including the Appraisal Index, can be manually computed very quickly. This can be valuable with single participants or in small groups out in field conditions. This is a rare quality among psychological assessment tools which generally have to be completed in calm settings and take longer time.

Moving from manual scoring, a more high-tech suggestion is to administer the ESRQ using the web or touch screens. The latter was actually done in the study where the ESRQ-Care version was developed. An advantage is that people with limited sight find it easier to respond when the text can be enlarged. Who knows, maybe someday soon there will also be an ESRQ "app" possible to download on our mobile telephones, i-Pads, etc.

9.3 PRACTICAL CLINICAL AND COACHING SUGGESTIONS

Use of psychometric tools in practical interventions such as cognitive behavioral therapy or cognitive behavioral coaching is quite common. In this section we will give a couple of examples of how the ESRQ can be used in such settings. These aspects will be further elaborated upon in the remaining chapters.

Let the patient or coachee (both called "client" below) reconstruct his or her emotional state in a given situation, for instance a difficult talk with a subordinate about alcohol problems or an athletic competition. The reconstruction should be made twice. The first should mirror the client's memory of being in the situation and handling it optimally. The second should reflect the memories the client has of the situation at a time when he or she handled it poorly.

The interpretation is based on comparison between the two ESRQ reconstructions. This can be done at the item level as well as at the index level. In some individuals, the deterioration mainly seems to consist of an increase of threat, harm or loss appraisals. If this is the case, one can check if the increase can mainly be found in the aggression-related or fear-related emotion words, or if there is an increase in both. For other clients the deterioration can mainly be explained by lower scores on the items designed to measure benign-positive and challenge appraisals. The implications for therapy and coaching will be different for different kinds of differences between the two reconstructions.

Another way to compare the two ESRQ response patterns is to simply mark the emotion words where the difference is maximized (that is 1 versus 4). In our experience this is usually restricted to three to four items. For about half of the emotion words identical or almost identical responses tend to show up. There are probably large individual differences regarding which emotion words tend to differ maximally. Moreover, this kind of knowledge can be important from a clinical and coaching perspective. The emotional stress reaction is brought to light which should make it more manageable. The client becomes aware that it is often not a question of a great, ambiguous anxiety or nervousness, but a few identifiable emotional states. Such an increased cognitive structure of one's own stress reaction can in itself have a therapeutic effect.

The increased self-awareness argument can also be applied if the ESRQ is used *before* a stressful encounter. The coachee reports his or her anticipated emotional reaction, which then forms a basis for constructive mental preparations.

10 STRESS MANAGEMENT COACHING

This is the first chapter of the second part of the book. Here we present an outline of personal coaching focusing on stress management where the ESRQ tool can be used. Part II has five chapters covering the following themes:

Chapter 10 – Introductory remarks on coaching drawing on Lazarus' theoretical framework
Chapter 11 – Practical tools
Chapter 12 – Three brief case stories
Chapter 13 – Coaching analysis of the three cases
Chapter 14 – Final remarks

Chapters 12 and 13 are inspired by a previous report (Larsson & Hyllengren, 1988).

10.1 INITIAL COMMENTS ON COACHING

There are many approaches to coaching nowadays (see e.g. Palmer & Whybrow 2008) and this is not intended as a textbook on this issue *per se*. Rather, the aim is to present some thoughts on how the theoretical formulations developed by Lazarus (1966, 1991, 1999) can be used as a point of departure in personal coaching sessions focusing on stress management, where the ESRQ and other tools compatible with this framework can be used.

Most definitions of coaching emphasize a facilitative process aimed at helping another individual to grow, learn, and improve his or her performance (Downey 1999; Whitmore 2002). The difference between coaching and psychotherapy is not self-evident. Problems like stress fit well into the coaching realm, but they could also be symptoms related to a psychiatric diagnosis. A common view is that the client group constitutes the biggest difference. According to Grant (2001), the level of mental health is generally high among coaching clients. They can handle the challenges of everyday living and function well in work settings. The situation is generally the opposite in a therapy client group. Their mental health level is low and they have problems coping with life and work challenges.

A common denominator in coaching and therapy is that the personal characteristics of the leader – that is the coach or the therapist – appear to have great importance to the outcome. This has been a classical question in psychotherapy research and results from recent coaching research indicate similar results (Gyllensten & Palmer 2007; O'Broin & Palmer 2006). From the perspective of the person who seeks help, the key element appears to be *trust*. As many psychotherapy programs, as well as coaching programs, tend to be fairly short compared to the classical long-term psychoanalytic treatments, it is important that trust develops rapidly. Recent research on quick development of trust in leaders of temporary groups in working life may provide valuable insights here.

10.1.1 QUICK DEVELOPMENT OF TRUST IN LEADERS

These days, temporary groups occur in numerous work and organizational settings. Considering the fast pace of work in many organizations, there is often little time to develop trust in traditional long-term ways. This has led to the coining of a new concept – swift trust (see e.g. Ben-Shalom, Lehrer & Ben-Ari 2005; Dirks 1999; Harrison 2010; Larsson 2005; Lester 2006; Meyerson, Weick & Kramer 1996) – which appears to be relevant in a number of short-term constellations including many coaching programs.

Popa (2005, p. 9) has summarized swift trust as "an individual's willingness to take risks in a temporary group and it has a behavioural manifestation that involves the actual act of risk-taking. Swift trust deals with issues of vulnerability, uncertainty, risk, and expectations, all characteristics of temporary systems." Short-term coaching programs typically fit into this picture. The brief format makes it necessary for the coachee to quickly develop trust in the coach so that he or she is willing to take the risk of opening up to another person.

In a Scandinavian military context, Hyllengren et al. (2011) recently explored what factors benefit or do not benefit the development of trust towards leaders in temporary groups. A model emerged, according to which the aspects which contributes to swift trust (or lack thereof) can be summarized in two broad superior categories: individual-related characteristics and relationship-related characteristics respectively. Typical components of the former superior category are personal characteristics such as sex, age, physical attributes, emotional stability and energy. Experience- and competence-related aspects such as specialist knowledge and previous experience of similar tasks are also included here. Relationship-related aspects involve communication and social skills and leadership and management skills (Hyllengren et al. 2011).

Looking at the outcome theoretically, personal characteristics can easily be related to the Five factor model of personality (McCrae & Costa 2008) and the area "desirable competencies" in the Developmental leadership model (Larsson et al. 2003, see Figure 1). Regarding relationship-related characteristics, resemblances to the authentic and transformational leadership models are apparent (Bass & Bass 2008; Bass & Riggio 2006; Gardner, Avolio & Walumbwa 2005).

The similarities between what contributes to trust in leaders of temporary groups on the one hand, and core aspects of major theories of personality and leadership on the other, is interesting. Given the assumption that quick development of trust is crucial in coaching contexts, it means that the perquisites of coaching skills can be understood against the backdrop of well-established theoretical frameworks.

Having pointed to the importance of a quick development of trust in short-term personal coaching programs, we will now present a theoretical framework for short-term personal coaching focusing on stress management. The presentation takes its point of departure in Lazarus's (1991, 1991) theory and standard versions of cognitive behavioral modification (see e.g. Meichenbaum & Cameron 1983).

10. 2 A GENERAL FRAMEWORK FOR STRESS MANAGEMENT INTERVENTIONS

There is plentiful literature in the field of stress management particularly in regard to different links between stress and health (see, for example, Ekman & Arnetz 2002; Währborg 2002). It falls outside the scope of this book to go into more detail on this however. The aim here is rather to show the main steps of cognitive change models. Hopefully, these can be useful when it comes to equipping individuals to better handle stressful leadership situations.

The presentation below is based on an integration of Lazarus's (1991, 1999) cognitive phenomenological theory (see Chapter 4) and standard versions of cognitive behavior modification (see, for example, Meichenbaum & Cameron 1983). While it is possible to carry out much of what is presented on your own, it may also be constructive to receive competent help from a coach. Even though it is not about therapy when we talk about stress management, the requirements for such coaches should be high (for example, psychologists) and relates to formal competence. Nevertheless, it is imperative that the relationship between the coach and the person being helped is based on confidence (Cormier & Cormier 1998). The presentation of the cognitive behavior modification model is largely based on Larsson (1985, 2010), and Larsson and Setterlind (1994/2002).

10.2.1 PHASE 1: MAPPING, CONCEPTUALIZATION, AND INSIGHT

The aim of this phase is to collect data so that the client and the coach mutually understand the problem. It is also important to train the ability of the person being helped to self-analyze through improved collection and interpretation of data.

The more detailed the identification of the stress factors and reactions to stress of the person being helped, the better.

Attempts can be made to find the following through *discussion*:

- easy and difficult situations
- factors that make problems better or worse
- effects of instrumental and socially dysfunctional behavior
- personal "tricks" of the person being helped
- access to social support

Through *self-observation* the person being helped can observe details of his or her psychological, muscular, cognitive, and emotional reactions to stress in different situations. To support this, several, checklists are included in the next chapter. It is especially important to find *early signs* that a stress reaction is about to be triggered. These signs then become "triggers" that set off constructive stress management responses. It is also important to assess the stress management ability of the person being helped. The failures in real situations are thus due to either a lack of ability (for example, that a manager is able to remain calm when an employee becomes angry), or that the person has the ability but cannot use it (manager X may, for example, stay calm with older employees, i.e., he or she has the ability, but not with younger employees).

The client and the coach integrate everything that has emerged from the mapping regarding stress factors and reactions to stress. Some of this integration forms a task-related analysis of effective stress management and methods. Situations are specified in which changes are desirable in the person being helped, and, through analysis, helpful ways are found to manage each situation.

When a detailed picture of the facts begins to emerge, the client and the coach can discuss a theoretical model (for example, Lazarus's) together. This gives the person being helped a linguistic way of expressing and improving his or her chances of understanding the aim of the data collection, the logic of the program, and his or her own experiences.

10.2.2 PHASE 2: COGNITIVE RESTRUCTURING AND LEARNING OF STRESS MANAGEMENT TECHNIQUES

The aim of this phase is to teach the client more practical ways of perceiving and handling stressful situations. If the mapping revealed a lack of skill, this ability has to be learned. It then has to be practiced so that it is integrated naturally in the appraisal and behavior patterns of the person being helped.

Cognitive problem-focused stress management. This type of learning is primarily about learning effective problem-solving routines and analyzing how reactions to stress (physiological, muscular, cognitive, and emotional) affect problem-solving ability. The learning can include improving the ability to identify early signs of problems, formulating realistic goals in the given situation, identifying different options for actions, and making rational choices. Problems seen as big and difficult to manage can be *segmented* so that each part becomes a smaller and more controllable episode. The client can in different ways mentally exercise management of the stress of each segment. Failures during the exercise can be seen as feedback to start the problem-solving process again.

Behavioral problem-focused stress management. If the mapping (Phase 1) indicates that the person who is being helped lacks the behavioral skills required to meet the demands of the situation, then behaviorally-oriented training is required. Some people find it difficult to manage time, for example, and may need help from coaches to structure their time better and then to practice it.

Cognitive emotion-focused stress management. This type of stress management is particularly suited to stressful situations that cannot be influenced. One technique is *to put it into perspective*. Undesirable objective elements are often made subjectively worse by the individual. By putting a situation into perspective, reactions to stress are reduced.

Examples of these types of thoughts:

- "The problem is time limited"
- "Negative results – unwelcome but bearable – won't kill you"
- "There are other values in life"

Another cognitive emotionally-oriented stress management technique is *attention diversion*. Thoughts of problems are pushed away by, for example, concentrating on ongoing tasks that have to be done anyway.

One cognitive emotionally-oriented stress management technique that is not just intended for situations that have to be accepted but also for those that can be influenced is *deliberate internal monologue*. This is about quietly "talking to oneself in one's head." Positive thinking is one example. The aim is to link a real stress situation or inhibiting thought, for example, the thought that "it is easier not to argue my cause and just to agree," to a set of internal monologues that counteract inhibiting internal monologues and also to trigger effective stress management reactions. This is not just about calming rhymes but can be seen as an active problem-solving method. The practice of internal monologues must be tailored to the individual. The lists in chapter 11 can be of help here. They illustrate positive and negative inner talks.

Behavioral emotion-focused stress management. Here are three examples:

1) Consciously influencing muscular reactions to stress. This may be partly about general relaxation with a choice of method and partly about differential relaxation based on the mapping in Phase 1, for example, the muscles in the forehead, back of the neck, and shoulders. Exercises such as calm breathing and balanced posture can be practiced.
2) Finding suitable forms of expression for emotion, for example, what is acceptable in verbal aggression in a certain type of provocation from a higher manager or employee.
3) Seeking social support. Individuals who are ashamed of asking for help can discuss this with their coach. The latter can ask the person how he or she thinks people who are important to the manager would see him or her if he or she were to ask for help. This illustrates what is called *work of worrying* with regard to feelings of shame (practicing changing these unpleasant feelings).

10.2.3 PHASE 3: APPLICATION AND FOLLOW-UP

The aim of this phase is to get the person who is being helped to make changes in his or her everyday life and to work to make these permanent. The training may include deliberately inducing stress using the imagination or role play. The task of the person who is practicing is then to use the newly acquired skills, for example, quick relaxation on his or her command, and a positive internal monologue to master the stress and solve the task. The ability to gradually master stronger stress factors and regulate the reaction to stress often has a beneficial effect on self-confidence. This makes it easy to apply the techniques later in real situations.

If the person who is practicing fails in real situations and blames him- or herself, there is a great risk that he or she will not continue to use the learned stress management techniques. The coach and the person practicing should therefore identify high-risk situations, and they should train failure (*planned failure, programmed relapse*) and develop suitable ways of managing these, which counteract the tendency to give up. Gradually, fewer and shorter contacts will be needed with the coach before they are stopped altogether. Larsson and Setterlind (1994/2002) wrote: "It is important to stress that this is about a process that will take more time for some individuals and less time for others." (p. 47) With this, we end the section on general stress management. It is not meaningful in this context to describe different techniques and exercises in more detail as such material is so widely available.

11 PRACTICAL TOOLS

This chapter presents some practical tools that can be used in addition to the ESRQ in connection with psychological coaching with a focus on stress management. Most shown aspects can be used both in a written self-report fashion and as an interview guide. The aim of the tools is twofold: (1) to increase the coachee's self-awareness and (2) to provide the coach with valuable background information. All presented aspects can easily be related to stress theory in general and Lazarus's framework in particular. The following exercises and scales will be shown:

- Life story line
- Relationship map
- External and internal stressors
- Cognitive coping patterns
- Acute stress reactions
- Long-term stress reactions

11.1 LIFE STORY LINE

Helping the client to gain deepened self-knowledge is central in psychological coaching. Basically, self-knowledge consists of the answers the person gives himself or herself to the question "Who am I?" Personal narratives are people's identities because the life story represents an inner model of "who I was, who I am and who I might become" (Shamir & Eilam 2005).

According to Gergen and Gergen (1986), self-narratives "refer to the individual's account of the relationships among self-relevant events across time. In developing a self-narrative, the individual attempts to establish coherent connections among life events. Rather than seeing one's life as simply 'One damned thing after another' the individual attempts to understand life events as systematically related. They are rendered highly intelligible by locating them in a sequence or 'unfolded process'. One's present identity is thus not a sudden and mysterious event, but a sensible result of a life story" (p. 255).

A practical tool based on the life story narrative approach is "The life line," developed by Bennis and Thomas (2002). The coachee is instructed to "draw a line that begins with your birth and ends at a point ten years in the future from now. On that line, place an 'X' at the points in your life that to you represent major turning points in defining who you are" (p. 201). In practice, we have found it valuable to list private life events above the line and important work-related issues below the line.

The life line task can be performed by the coachee between coaching sessions. When reviewing it during up-coming coaching sessions, the coach can use open-ended questions such as the following, inspired by Bennis and Thomas (2002):

- What kind of experiences were these turning points?
- How did you experience them?
- What did you learn from them?
- Where will you be as a person/leader in five years?

In our experience, the life line can be used in several sessions. It can help the coachee to organize life events into gestalt structure and provide him or her with a 'meaning system'.

11.2 RELATIONSHIP MAP

The relationships to the people around us are important in a systematic stress analysis. When we reflect upon our personal relationships we often think about them one at a time: I enjoy being with my husband/wife, my boss often misunderstands me, etc. The relationship map (Larsson 1983) aims to increase one's awareness of *the total network* of significant relationships. The task consists of the following two steps shown in Figure 6:

1. List the most important people in your life just now!

_____

_____

_____

_____

2. Place the people on the target board below by writing their names so that:
- the more important the person is to you, the closer to the center you place him/her
- the more you think that two or more people "belong together," the closer to each other you place them.

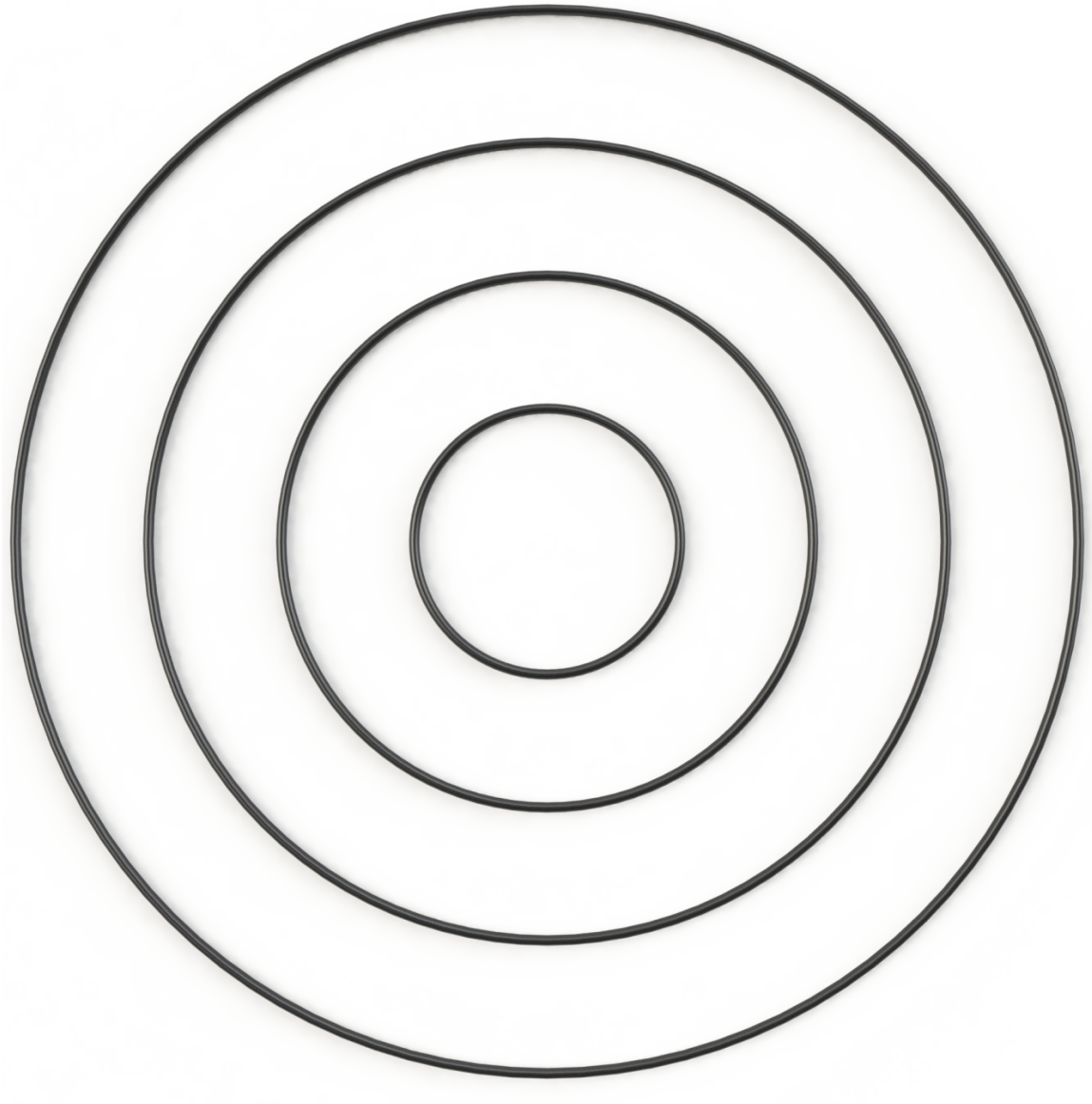

Figure 6. The Relationship map (from Larsson 1983).

11.3 EXTERNAL AND INTERNAL STRESSORS

External stressors refer to environmental conditions that contribute to a stress reaction. The task is to reflect upon what such aspects one perceives to be stressors. To facilitate the reflection, some common *example* areas are presented within the three broad areas work, home and family, and spare time. Take your time and note which external stressors *apply to you!*

Sample external stressors

Work

Work load

Opportunity for control

Work content

Leadership

Peers

Salary, regulations, administrative issues

Physical work environment

Home & family

Relationships

Physical home environment

Finances

Spare time

Amount of spare time

Availability of things you are interested in

Relationships

Finances

Internal stressors refer to personal thoughts and fantasies that contribute to a stress reaction. The realm of internal stressors is obviously multifacetted and can include anything from minor worries to complicated neurotic and psychotic reactions. This guide aims to highlight two common kinds of internal stressors. The first constitutes *guilt feelings*, i.e. when you feel inadequate in relation to your own internal standards and expectations. The second kind constitutes *feelings of shame*, i.e. when you feel inadequate in relation to your perception of what others think and expect of you. List what sometimes or often causes you to feel guilt and shame. Take your time!

11.4 COGNITIVE COPING PATTERNS

This section describes an inventory designed to map cognitive emotion-focused coping strategies – The Self-Statement Questionnaire (SSQ; Larsson 1989). The SSQ has already been briefly introduced in Chapter 8. It represents an attempt to operationalize Meichenbum's (1985) concept of inner talk or self-statements within the framework of Lazarus's (1991, 1999) writings on emotion-focused coping. Basically, the SSQ contains items designed to reflect positive and negative inner talk before a given task, at the very onset of the task, and during the completion of the task. Half of the items are related to fear emotions and half are focusing on anger.

Eighteen items represent self-talk typical of positive thinking (e.g. "One thing at time, you can handle the situation"). These items resemble what has previously been referred to as "anger controlling" (Larsson, Kempe & Starrin 1988), "comforting cognitions" (Mechanic 1962), "coping self-statements" (Meichenbaum 1985), "emphasizing the positive" (Folkman & Lazarus 1985), "positive reappraisal" and "self-controlling" (Folkman et al. 1986). Eighteen items represent self-talk typical of negative thinking (e.g. "Typical me not being able to handle this"). These items represent what has previously been referred to as "acting out" (Larsson, Kempe & Starrin 1988), "escape-avoidance" (Folkman et al. 1986), "self-blame" and "wishful thinking" (Folkman & Lazarus 1985).

The response scale is as follows: "No, I did not think like that at all" (1); "Yes, partly corresponds to what I was thinking" (2); and "Yes, corresponds well with what I was thinking" (3). Twelve separate subscales can be computed by adding the three items designed to measure positive and negative thinking respectively before, at the onset and during the task. Sum scores of positive and negative thinking can also be computed. All individual items are shown in Table 8 below.

Positive self-statements
Versus fear – before the task
You can make a plan to handle this. Take it easy.
Just think about what you can do about it. That's better than becoming nervous.
Don't worry: worries won't help
Versus fear – at the onset of the task
One thing at a time. You can handle the situation.
Don't think about what might go wrong, just think about what you have to do.
Relax, you're in control of the situation. Take a slow deep breath. Ah, good!
Versus fear – during the task
When the worries come, just stop and take a break.
Keep your thoughts in the present, what is it that you have to do?
It's normal to be worried by this.
Versus aggression – before the task
This is a tough situation, but you know what to do.
You can make a plan to handle this. Take it easy.
Remember, focus on the task and don't take it personally.
Versus aggression – at the onset of the task
As long as you stay calm, you're in control.
You don't have to show off. Don't make more out of this than you have to.
It's no use becoming angry, just think about what you have to do.
Versus aggression – during the task
Your muscles are tensed. Relax and take it easy.
Take a deep breath. Let's take it step by step.
He/she/they probably want's you to be mad but you just keep to the facts.
Negative self-statements
Versus fear – before the task
I will never manage this.
I will make a fool of myself.
Why did I get into this?
Versus fear – at the onset of the task
What am I doing?
Typical me not being able to handle this.
Now I'm bound to make an obvious mistake, and then its all over.
Versus fear – during the task
This is one of the worst things I've had to do.
There, you see? You could not cope with this.
I wish it was all over.

Versus aggression – before the task
Typically me getting involved.
What a stupid task.
Damned idiots, they don't understand anything.
Versus aggression – at the onset of the task
The others don't understand anything.
Why do I always attract trouble?
No, now I'm getting mad.
Versus aggression – during the task
The others are real whinge bags.
Now they have messed it up for me
No, now I get really mad at myself.

Table 8. Items included in the Self-Statement Questionnaire (SSQ; Larsson 1989).

11.5 STRESS REACTIONS

Stress reactions vary from individual to individual and the following schemes are designed to assist in the mapping of the specific reaction pattern in a given case. Two different time perspectives are focused upon: acute stress reactions and long-term stress reactions. The former refers to reactions immediately before, during and after a stressful situation (external stressor) or a distressing thought (internal stressor). The latter includes everything from a few months to several years. Review the examples in the check-lists and reflect upon your own particular stress reaction!

11.5.1 ACUTE STRESS REACTIONS

Four aspects of acute stress reactions are included. Each one may or may not be relevant in your case.

Physiological changes. Common examples include increased transpiration, blushing, diuresis, lax fecal, stomach ache, dry mouth, palpitations, etc.

Muscular conditioned behavioral changes. Some examples: tremor, tensed tone of voice, clamped jaws, tucked shoulders, stiff and jerky movements, too tight a grip on things such as the telephone, the steering wheel, pencils, etc.

Cognitive changes. Common examples: concentration difficulties, problems remembering what you have just seen or heard, difficulties in making evaluation and decisions, naive wishful thinking, etc.

Emotional changes. Examples include irritability or aggressiveness or feelings of insecurity, helplessness, etc.

11.5.2 LONG-TERM STRESS REACTIONS

Two aspects of long-term stress reactions are included: health-related and action competence-related. Once again, each one may or may not be relevant in your case.

Health-related aspects. Some examples are frequent headaches, stomach problems and sleeping difficulties.

Action competence-related aspects. A couple of illustrations: difficulties getting along with other people and generally worsened capacity to solve tasks.

12 A NOT SO ORDINARY TEACHERS' SEMINAR

This chapter presents a snapshot picture of the work and life situation of three imagined high school teachers. A stress theoretical analysis of the three cases is provided in the two following chapters.

Let us transport you to a medium-sized high school in a medium-sized town in Sweden, in the middle of winter. Acting on the initiative of the school nurse and four teachers with an interest in health issues, Garden Rose High School has decided to organize a 'health day' devoted to stress and relaxation for all the staff. In keeping with this theme, the health team has arranged a quiet and secluded location for the course at a manor house it has borrowed from a retired teacher. The house is secluded: the last 12 miles leading up to it along an isolated forest road. This is where the staff at Garden Rose gather for their seminar on stress and relaxation.

A lecturer is invited to speak on the subject, and the staff tries out a few different relaxation exercises. At the end of the day, they return home content and that much the wiser. Three of the teachers stay behind for a while, however, to clean up. It is these three teachers that the story is really about.

The other staff leaves the house at about 5pm, and it takes the three who stay behind about half an hour to tidy up. When they get into the car to drive home, they discover that the lights have been left on all day, and the battery and the engine are completely dead. You can picture the rest. There is nothing to do but to go back into the house and call for help. This is when the next misfortune strike and is more difficult to accept. The telephone is as dead as the car engine. It's about -4º F (-20º C) outside and the nearest telephone is about 12 miles away. The teachers realize that they will probably have to stay the night at the house.

We will now introduce the three teachers, starting with the youngest, Eric, a 25-year-old Physics and Chemistry teacher. It is Eric's first term as a full-time teacher. He did some substitute teaching while he was studying, so he knew roughly what to expect when he started at Garden Rose. Eric likes his job as a teacher. He is open, handles teenagers well, and is popular with the students. It is also worth mentioning that Eric is very fit, running for about 15 hours a week, and he aspires to a place on the national orienteering team – he's a top-level sportsman in other words. Eric is single but has been going out with Helen for a few months. Most of Eric's time is spent preparing lessons and training.

The next teacher, Lily, is 40 years old and teaches Social studies and Psychology. Lily also enjoys being a teacher and gets along well with the high school students. Lily has been divorced for some time and now lives with her two daughters. Lily is a political radical and has been involved in a range of social issues for many years. Like Eric, Lily finds it difficult to find time for everything. Lily is a very experienced teacher, but she always tries hard to link her lessons to topical problems. This, combined with the fact that she has sole responsibility for her children and the home and that she has taken on a number of jobs in an environmental organization, means that she often feels under pressure.

The third and last teacher, Elizabeth, is 55 years old. Elizabeth teaches Swedish and History and sees herself as a classical humanist. Languages and literature are close to her heart, although teaching them has never really appealed to her. Elizabeth has always kept her distance from the students, who often see her as 'stuck up'. Elizabeth comes from a well-off family and has had a comfortable life. She and her husband, who is a judge, have a son who is currently studying in the USA to become an economist. Elizabeth has always kept a low profile on the teaching staff. She is respected by everyone, but socializes almost exclusively with a language teacher of the same age during breaks, free periods, etc.

So, here they are one February evening, all the three of them wanting to go home. What can they do? They don't know each other very well, not even Lily and Elizabeth, even though they have been colleagues for almost 15 years. Eric looks at the other two. Lily, he thinks, is really quite nice, but one of those tiresome social types. He quite likes her and Elizabeth, who has helped him find his way a couple of times and has been kind, although he finds her a little 'superior'.

Lily and Elizabeth are also thinking about the other two. Lily thinks Eric is a nice, straightforward colleague, although in her opinion, he is a bit one-track with his orienteering and, politically he is much too naively unaware. She has never liked Elizabeth much but she doesn't exactly dislike her either: they are just too different really. Lily sees her mostly as a typical representative of the old-fashioned women's role in an old-fashioned society. Nevertheless, as colleagues, they have never had cross words.

Elizabeth is probably the one who feels most uncomfortable in the situation. Without really being able to put it into words, she feels more threatened than relaxed in the others' company. Eric is probably a nice young man, but his athletic interests and the huge training bag he's always carrying around makes her think of him as a bit shallow. She doesn't know him of course, as she admits to herself. With Lily it's different, her confident manner at teachers' meetings and the like, and her openly radical views put Elizabeth on her guard. Elizabeth is a little apprehensive of Lily. It's Lily who breaks the silence.

"Oh, I can't take it anymore. I'm sitting here in a desolate house in the country, and the kids are alone at home and don't know anything. They must be really worried by now. I can't take it," she continues, "I don't care about the cold; I'm going out to try and call home and get hold of someone."

"You'll never make it in this weather," Elizabeth starts, but Eric interrupts her.

"I agree with you, we'll give it a try. Stay here Elizabeth, and Lily and I'll go and try and get help. It's half-past six now, it's at least a 12-mile walk – well, you would have to expect it to take about four to five hours before anyone can come and get us," he continues. "Stay here and take it easy, you can eat some of what's left from earlier. Come on Lily, let's go!"

Just as they are on their way out, the phone rings. They are all so surprised by the sudden ringing they jump. Eric runs over to the phone and eagerly picks up the receiver. A relieved smile spreads across his face.

"It was Barbara, the school nurse," he says, "one of your girls, Lily, managed to get hold of her somehow, and was wondering if she knew where you were. And then she tried calling here."

"Thank goodness," exclaims Elizabeth, "is anyone coming here now?"

"Yes, Barbara's coming, but she thought it would take at least four hours because a tree has blown down, blocking the road right by the entrance to the forest road. Her husband told her as he was going to take the main road past the entrance, but he was forced to turn around. People are out trying to clear the road, but it will probably take some time."

Relieved, Lily phones her girls and Elizabeth talks to her husband. They take out some of the leftover food and drink and look at each other, laughing.

"Listen," says Eric, "we have a few hours before we get collected. Can't we use that time to talk a bit more about stress and what the psychologist was talking about earlier?"

"Ok, what do you mean?" the other two ask.

"Well, if I take myself, I think much of what he said is spot on really. Take the thing about stress factors and pressure, for example. I think the last few months have been tough to be honest. Take lesson preparation. Maybe it's different for you if you have been here for a while, but for me, a rookie, I think it's hard."

"How much time do you spend then?" Lily asks.

"It varies, but probably three to four hours every evening."

"And how much time does all your training take up?" she continues. Eric looks down, almost as if he is embarrassed, and then he explains that he usually gets up at about five every morning to fit in a training round of about 45 minutes.

"And then there's usually about one or two hours training after school."

"That's madness," adds Elizabeth, "Do you have to train that much?"

"Well I don't really have to. But if you want to stay at the top, you probably need to. Most of the competitors probably train even more," he says. He doesn't bother to justify his training further, thinking that neither of them have been involved in sports so they wouldn't understand anyway.

"It really started to get tough at the beginning of the fall," he continues, "I met this girl, her name is Helen, and we've been together since then. Imagine, all the preparation, and you don't want to be a bad teacher either, and all the training, and then have time to be with her too."

"Yes, it sounds like a difficult equation to solve," said Lily. "What are you going to do about it? By the way, couldn't you use free periods for preparation?"

"Well, I've tried a bit, but there aren't that many free periods and, if the truth be told, I haven't really wanted to either."

"Why not?"

"Well," he says and looks down again, "you know what it's like when you start at a new school. You don't know anyone and you don't want to seem overambitious or anything."

"Does it feel like that when you sit down on your own and prepare class?"

"Well, a little, I suppose," Eric confesses.

"But how do you really manage all this?" Elizabeth asks. "Can you really cope with it? It makes me tired just thinking about it."

'"I suppose that's my point, I've actually felt quite restless and irritated for no reason recently and started having problems sleeping. That has never happened to me before. It's like a vicious circle. When I'm preparing lessons I think I should be training. And when I'm training I think I ought to be preparing lessons. And when I'm with my girlfriend, I think about missing preparation and missing training."

"And then you kick the cat and can't go to sleep at night," adds Lily.

"Yes, exactly," Eric laughs. "It's exactly like that. But, I don't know what to do about it," he says, almost helplessly.

"It sounds obvious to me," says Lily. "To use the words of the psychologist, you are simply overloaded with external and internal demands to perform. The only solution I can see is that you reduce your load."

"Yes, but how?"

"You could, for example, reduce your working hours, or you could stop orienteering, or you could break up with Susanne. Clear and to the point don't you think?" she said with a glint in her eye.

"Helen," Eric says. "Yes, I suppose it will have to be something like that," he adds vaguely, "but which one and how?"

While they continued to discuss Eric's situation, without thinking about it, all three have moved their chairs a little closer to the table and temporarily forgotten about their predicament.

Elizabeth then unexpectedly takes the initiative and says that she too had had trouble sleeping over the past few months.

"Do you have too much to do too?" asks Eric.

"No, maybe not quite like you, but I worry about so many things nowadays. Our son who is studying in the United States, for example, and – well a bit of this and that."

She hesitates and goes quiet; it's as if she needs help from the others to continue. Lily detects this, looks at her and says, "Is there anything else that's worrying you, something weighing on your mind?"

"Oh, no, I don't know, but you remember that thing about the Type A that he mentioned in the lecture before? I have a friend who is a psychiatrist and she says that my husband has a typical Type A personality. And he's had a heart attack too; it was last winter."

Elizabeth goes quiet again and looks at Lily who continues.

"But you said you had had trouble sleeping this past month. Is there anything particular that has happened recently?"

"About me, my friend says I am a Cancer-type person," she continues, "You know, kind and amenable, controlling my feelings."

"But that doesn't give you cancer," interjected Eric.

"No, I don't know," she says slowly, "but over the last month – I haven't said this to anyone, not even my husband," she says, tears swelling up in her eyes.

No one says anything. Elizabeth pulls herself together and says she thought she had felt a lump in her left breast several weeks ago. Lily leans forward and takes her hand.

"But haven't you gone for an examination?"

"No. I haven't dared. There is so much you start to think about, I feel so scared, and then I lie and worry about it at night and can't sleep. Have you got any good advice for me Lily?" she says, attempting a laugh.

Lily asks her if she has had any other symptoms recently.

"No, nothing special. I've always been in good health. But I've started to get tense. I noticed that in the relaxation exercises today. Yes, I think I've started to tense up unnecessarily, and I easily become irritated, like you described Eric."

"I don't know much about breast cancer," says Eric, "but I think you need to see a doctor. And you really should tell your husband, shouldn't you?"

"Yes, I suppose I should", she adds quickly. It sounded so obvious when he said it.

They continued to talk about it for a while. Lily is persistent and makes Elizabeth promise to book an appointment with the doctor the very next day.

"Isn't it odd that we're sitting here talking," Elizabeth says suddenly.

After the short silence that follows, Lily sits up in the chair and says smiling, "I suppose it's my turn now then!"

After a tentative introduction (she was leading the conversation earlier, but now that it concerns her, it is more difficult), she confirms that she too feels tense, often falls asleep late, finds it difficult to get up in the morning and often feels tired.

"And why is that?" she continues in a self-critical tone, "Well, partly it's that it's quite demanding to have sole responsibility for the home and children and finances and all the practical things and that. Both of the girls are pubescent too, and sometimes they are just hopeless."

Eric and Elizabeth sat quietly and Lily continues.

"And then there are all my commitments here and there. But you have to do something sensible with your life and, anyway, I've started cutting down a bit on that. I turned down a few jobs as well. No, seriously, I think I'm quite aware of how much I can cope with, without feeling unwell from it."

"So, what is it that's making you tired?" wonders Eric, "Are you getting burned out and fed up with work?"

"No, I don't think so. Of course, sometimes it feels a bit pointless to hear yourself stand there and rattle off the same things term in, term out, but no – I'm usually quite satisfied and I really don't feel burned out. Do I look like I do?" she says laughing.

"No, you're quite attractive really, if I dare say so."

"Thank you very much!"

Then she becomes serious and says that she thinks it's mainly down to her own insecurity.

"I never thought that about you," says Elizabeth. "You, if anyone, seem to be so sure of yourself, know what you think and want."

"Yes, maybe, when it comes to factual matters at school. But, that's not what I meant. No, I suppose it's the famous midlife crisis", she laughs.

"What do you mean by that?" asked Eric.

"No, I don't really know what to say. I really don't know. But if you think about self-image and that, and the internal stress factors that we heard about today. Do you remember?"

The others nod.

"Do you remember that he talked about differences between your ideal and real self-image and that such a difference could lead to feelings of guilt? I don't really know if a difference like that is my problem; these are such difficult things to identify. But something hurt in my stomach when he talked about it. I've thought about it all day since then, but I think that my problem is rather that I don't know what my ideal self-image is. Do you know what I mean?"

"I'm not really sure I understand," Elizabeth says. "Compared with the rest of us, you always seem to know what you want, have clear ideas, if you want to put it like that."

"Yes, well, that's right, it's true when it comes to factual matters. No, I don't really know what I mean myself; it's probably more of a diffuse feeling of emptiness I sometimes get when I think about my life. What kind of a mother I am, my relationships with men, who I seem to scare away from getting really close – and then my relationship with my mother. My father died in a car crash more than ten years ago, and my mum has been in a wheelchair since then. She has lots of help, but it still feels as if I ought to be there for her more. Yes, and a few other trivial problems like that", she says with a laugh.

"But do you have anyone to talk to about things like that?" asks Elizabeth.

"Yes, thank goodness. I meet up with a few girls sometimes and we sit and talk about stuff like that." Lily is quiet for a while and looks straight ahead. She doesn't want to continue the discussion about herself.

"So, what should we do with me then?" she urges. "Should I marry again, start exercising or do relaxation exercises? Do you have a good recipe for me?"

They don't, but Eric thinks she could start with some relaxation exercises anyway.

"Because the self-image thing doesn't seem that easy. We all have problems like that, but you seem to have thought more about it than most. But it wouldn't do any harm to try and control the tension symptoms more directly, so to speak. What do you think?"

Lily agrees. She would happily consider practicing relaxation. The exercises had felt good before. They continued chatting for a while and are surprised to discover that they have been sitting there like this, for almost four hours.

"Barbara should be here soon," Eric says, and walks over to the window.

They soon see a couple of light beams in the darkness and two cars approach. It's Barbara, the school nurse, and she has Lily's girls in the car. And then there is Elizabeth's husband. They turn off the lights and go out to the cars.

This is where we leave our three main characters to review the basic elements of their discussions: theories on the causes of their stress, reactions to stress and stress management. We will then return to them and analyze the situation for each of them, using the theory.

13 APPLYING THE STRESS THEORY TO THE THREE TEACHERS

After presenting the three teachers and then summing up the psychological stress theory, it is now time to try to put the parts together, using the theory to look at the situation for each of the teachers. The chapter outline is shown in Figure 7.

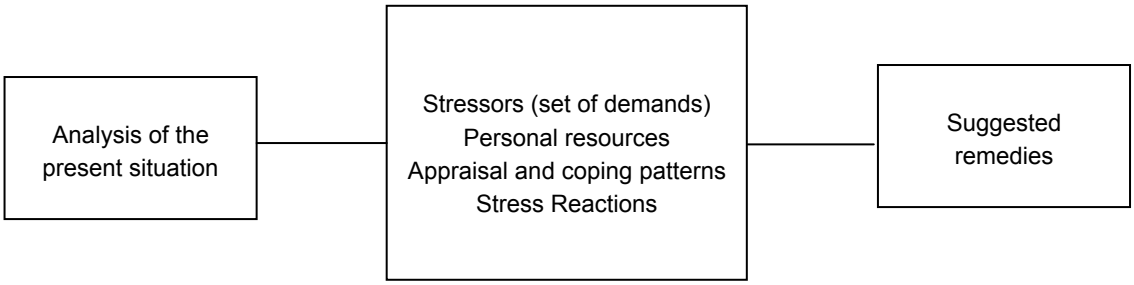

Figure 7. Model of the application of the stress theory in the situation of the three teachers.

As shown in Figure 7, for each of the teachers, an analysis of the present situation is conducted and a list of suggested actions drawn up based on the concepts of "stressors," "personal resources," "appraisal and coping patterns," and "stress reactions." By way of introduction, however, let us establish that this division is motivated primarily by pedagogic and analysis technique reasons. In reality, these relationships are interlaced in patterns that are complex and difficult to catch. Observant readers will probably find it hard to keep separate the details under the concepts of stressors, self-image, and mental stress reactions. The schematic analysis is applied in full to the first teacher, Eric. To avoid repetition, the analyses of Lily's and Elizabeth's situations are more selective.

13.1 TEACHER 1: ERIC

13.1.1 ANALYSIS OF THE PRESENT SITUATION

Eric's situation is characterized by irreconcilable external demands that he is finding increasingly difficult to master, despite good personal resources. A few mild reactions to stress have begun to appear. Let us examine his situation in more detail.

13.1.1.1 Stressors

External stressors. In Eric's case, a few obvious external stressors can be pointed out. First, the requirement of his teaching job to prepare for lessons is a clear reality for Eric who is newly qualified. Second, his ambition to compete with the world's elite in orienteering demands a significant amount of time and energy, and, third, he needs to meet the demands and expectations of his girlfriend. Let us add to these three a few stressors that are characteristic of many people in Eric's situation. These could be problems finding suitable accommodation, making the finances stretch to cover student loans, household goods, and so on, managing all the household duties single-handedly, etc. His insecure job situation is a further source of stress: Eric has a substitute position for two terms. Although he can expect to continue, as there is a shortage of science teachers, this still leads to some worry for Eric. However, none of these is a particularly great source of stress compared to the demands put by the combination of work preparations, top-level sports and family life.

Internal stressors. Tendencies towards two internal stressors can be discerned from the conversation. First, it appears that Eric makes great demands on himself in different contexts, i.e., has a demanding ideal self-image. Second, he seems to be socially insecure and feels the need not to deviate in other people's eyes (e.g. feelings of shame for being overambitious if he prepares lessons during free periods).

13.1.1.2 Personal resources

Physical resources. Eric has good physical resources: he is young, healthy, and strong. His tough training regime makes him vulnerable to some strain injuries but he has never had any serious injuries or illnesses.

Self-image. The above description of "internal stressors" mentioned two aspects of self-image: Eric's demanding ideal self and social insecurities. Let us establish, however, that he otherwise seems to have a coherent and stable self-image. Central needs are to perform well, be popular, and help others. He is clearly controlled more from the inside than the outside.

Problem-solving ability and social ability. Eric is intellectually active and usually skillful at analyzing different situations. His social abilities are valuable in his work as a teacher. He is virtually never completely passive or unable to act.

Material and social resources. We do not know much about his material resources; let us assume that they are fairly normal. Through his good social abilities, among other things, Eric has developed a rich social network of contacts. The most important pillars of support are his parents, girlfriend, and sport colleagues. He does not normally suffer from a lack of social support, be it emotional, informative, or practical.

13.1.1.3 Appraisal and coping patterns

Appraisal of stressors. Through his good personal resources, Eric interprets most everyday stressors as positive challenges rather than overwhelming threats. Judging from the dialogue, there has been some change recently. Eric has started to see his stressors as increasingly demanding and many everyday events as irritating.

Problem-focused coping with stress. Eric's abundant resources and competence mean that he is normally good at tackling stressful situations rationally. His greatest practical failing as a teacher is his lack of routine and properly prepared lessons.

Emotion-focused coping with stress. Eric finds it easy to think positively and to use social support in stressful situations. He also tends to become angry more often than sad, and he usually directs his anger at himself (self-blame) rather than outwardly at his surroundings. He very rarely makes use of any real escapist strategies.

13.1.1.4 Stress reactions

Physical stress reactions. We are not aware of any obvious physical reactions to stress, although Eric has felt some muscle tension around his eyes and in his lower legs in connection with top-level orienteering competitions. There are no other more permanent problems of a psychosomatic nature.

Mental and behavioral stress reactions. Restlessness, irritability, and some sleeping problems are present but no serious 'mental problems'.

13.1.2 PROPOSED MEASURES

13.1.2.1 Stressors

External stressors. The situation is characterized by obvious external demands that appear irreconcilable internally. In theory, three general measures exist: escape, adapt, or change. For Eric, the escapist strategy appears unlikely. The adaptation strategy, to accept the situation as it is, would probably make him dissatisfied as a teacher, a poor orienteer, and frustrated partner. This leaves the change strategy: Eric is a man of action.

How should Eric change the external set of demands? In the discussion, Lily pointed out three possible actions: to reduce his job requirements, to stop orienteering, or to break up with his girlfriend. Eric's actions will probably be determined by the structure of his needs or commitments. Let us assume that he really does want to reach the top as an orienteer. Taking his age into account, he probably has two or maybe three years to achieve this goal. If he prioritizes orienteering, an action plan of working fewer hours for maybe the next two years could be a partial solution. The downsides of this option are primarily financial and career losses. If, on the other hand, Eric prioritizes his work as a teacher, he will probably have to stop participating in top-level sports. If Eric actively wants to break the vicious circle that he has ended up in, he will probably have to either reduce his workload or give up his ambitions of being a top sportsman.

Internal stressors. The problem of high performance requirements and feelings of social insecurity are not great enough for extensive therapy measures to be required. By raising his awareness of the problems, Eric will probably be able to reduce this internal source of stress. To reduce demands to perform, he could, for example, critically consider the different situations he faces as a teacher, orienteer, etc. He will probably find that the excessive demands are unequally distributed over different situations, i.e., in certain situations he makes more unreasonable demands on himself than on others. By identifying a small group of excessive demand situations, he can continue and try to define more reasonable demands for himself in these. When it comes to social feelings of insecurity, Eric's social ability may play a role. If he can receive honest feedback from close friends on how they see him, he reduces the risk of evoking feelings of shame by painting an unrealistically negative mirror self-image (e.g. when he works during free periods).

13.1.2.2 Personal resources

Eric's physical, psychological, social, and material resources are generally good. Provided there are no obvious changes in these respects, measures should not be directed here.

13.1.2.3 Appraisal and coping patterns

Eric mostly interprets and copes with the events around him satisfactorily. His tendency in stressful situations to apply the strategy of "self-blame" may indicate certain inhibitions in showing outward aggression (which may be linked to his feelings of social insecurity and need to be accepted). The problem does not appear to be too extensive and the same reasons as those given for his performance demands also ought to apply here, i.e. by being aware of this tendency, he can work to change it himself.

13.1.2.4 Stress reactions

There are no universal solutions to different forms of reaction to stress, but in Eric's case, it appears that muscular tension, restlessness and sleeping problems could be reduced or eliminated through relaxation training. As a sportsman, he already has a well-developed knowledge of his body and can probably quickly assimilate the techniques.

13.2 TEACHERS 2 AND 3: LILY AND ELIZABETH

13.2.1 ANALYSIS OF THE PRESENT SITUATION

13.2.1.1 Stressors

External stressors. As a single parent with extensive voluntary involvement, Lily is often faced with demands that are difficult to reconcile. In school she regularly tries to influence unsatisfactory situations such as bullying, shortages of teaching aids, and the poor standard of school food. A lack of involvement in social school issues by some colleagues is another source of stress. Lily does not hold back from open conflict in teacher discussions and similar. She does not have much time for teachers who narrow-mindedly concentrate on knowledge requirements and do not see the whole individual, "broken youth from broken families" as she calls it.

In Elizabeth's case, two obvious external sources of stress can be pointed out: relationship problems and the threat that she may have developed breast cancer. The relationship problems rarely take the form of open conflict. She is more likely to give in to others. Elizabeth finds contact difficult with adults as well as students, and she often suffers from feelings of loneliness.

Internal stressors. Lily does not have any obvious internal stress factors. She is mainly "controlled from the inside", and she has a realistic and coherent self-image. The problems that are of an existential nature that she mentioned during the evening are complex and multifaceted and will not be discussed further here.

Elizabeth worries too much, but we do not know what is behind this tendency to worry. In cases like hers, ordinary conditions with regard to "self-image" are low self-confidence (a negative "real self-image") and exaggerated sensitivity to feelings of shame towards those around her (a negative "mirror self-image"). If this applies to Elizabeth, she probably finds it difficult to express her feelings openly, especially negative ones (e.g. anger or disappointment). Combined with contact difficulties with others, this means that she often represses these feelings and bottles them up. Elizabeth then receives little feedback from those around her with regard to how they actually see her. She is consequently trapped in a pattern in which she represses her own impulses to give a good impression and avoid feelings of shame. At the same time, Elizabeth worries and thinks that people around her look down on her.

13.2.1.2 Personal resources

Lily's personal resources are mainly good. Elizabeth's situation, however, needs to be examined more closely.

Physical resources. Elizabeth has good physical resources. Apart from the threat of cancer, she is healthy and has not mentioned any obvious worsening of her physical abilities. She is diet and exercise conscious and is exemplary in these regards.

Self-image. A lack of harmony in Elizabeth's self-image has already been noted in the section "Internal stressors." Central needs or commitments consist of not exhibiting any problems outwardly and becoming involved in literature. Elizabeth is clearly "controlled externally". Through her poor self-confidence, she often thinks it is best to follow others (e.g. her husband and her teaching colleagues) rather than to act of her own accord.

Problem-solving ability and social ability. Elizabeth has good intellectual ability and is usually good at analyzing situations. When it comes to practical problems, she sees herself as "completely impractical", however. Her biggest resource failing is her poor social ability. As stated above, Elizabeth is inhibited and distanced towards others, a difficult situation for a teacher.

Material and social resources. Elizabeth has good financial and material resources, but her social resources are lacking.

13.2.1.3 Appraisal and coping patterns

Lily mostly interprets and copes with events around her satisfactorily. Like Eric, she becomes angry more often than upset in stressful situations, but her anger is often aimed at someone around her rather than at herself. There is motivation to look more closely at Elizabeth's situation again.

Appraisal of stressors. Due to the shortcomings in her personal resources, Elizabeth interprets many of her everyday events as threatening rather than beneficial or challenging. Elizabeth often feels that she is not in a position to solve everyday problems, "I'll never manage this," she thinks.

Problem-focused coping with stress. Elizabeth's social inability and internal worries clearly affect her way of rationally coping with stressful situations. With her long experience she has developed an approach that works reasonably well, withdrawing and distancing herself, which allows her to handle most situations that arise at school.

Emotion-focused coping with stress. In stressful situations, Elizabeth tries to control herself and not show if she is upset, an example of the coping strategy of 'self-control'. She also often uses the strategies of 'self-blame', 'wishful thinking' and 'escapism'.

13.2.1.4 Stress reactions

Physical stress reactions. Lily has never suffered a serious illness. She usually also gets away lightly with problems of a more temporary nature, such as flu and colds. In stressful situations, Lily tends to tense her muscles markedly in her upper arms and the whole of her upper body. With Elizabeth, we are not aware of any physical reactions to stress other than some general tension.

Mental and behavioral stress reactions. The boundaries are fluid, and whether tiredness and sleeping problems should be considered part of mental stress or be seen as "physical reactions to stress" will be left unsaid. Ever since her divorce two years earlier, Lily has suffered from these problems several times a month. Periodically, but rarely for more than two or three consecutive days, she feels depressed. In the last month, Elizabeth has suffered from sleeping problems. Worry and depression are also part of her reactions to stress.

13.2.2 PROPOSED MEASURES

13.2.2.1 Stressors

External stressors. Lily's external demands appear mainly manageable, thanks to her good personal resources. Added to these personal resources, she has the social ability to say "no". Lily feels that she knows roughly how much she can cope with. There are therefore no obvious requirements for change when it comes to external stress factors. In her case, the same can be said with regard to "internal stress factors," "personal resources," and "interpretation and coping patterns."

Elizabeth's relationship problems appear to be due more to herself than to those around her. A change could be achieved by her developing her social ability (see "Personal resources" below).

Internal stressors. Elizabeth's worries are partly due to a lack of social ability and the insufficient social support she thereby receives. Her problems of lack of self-confidence and her own "mirror self-image" probably require professional help and are not covered further here.

13.2.2.2 Personal resources

Elizabeth's physical and material resources are good. The mental resources have already been discussed (see "Internal stress factors" above). What Elizabeth can and ought to remedy with regard to personal resources is her social ability. For people with Elizabeth's disposition, what could best be called "relationship training programs" have been developed. The techniques are well documented, and with Elizabeth's intellectual ability and self-discipline, she would probably improve on her own with the help of literature.

13.2.2.3 Appraisal and coping patterns

Elizabeth's tendency to often interpret everyday events as threatening is strongly linked to her self-image and relationship problems discussed above. When it comes to coping strategies, a second field emerges in which Elizabeth can begin to change the situation herself (relationship training is the first). Through greater insight into her tendency to exaggerate the repression of stress (through, for example, self-control, self-blame, and self-denial in social relations), Elizabeth can, instead, start to practice expressing stress. Even if this initially occurs with low frequency and low intensity, it is an important change.

13.2.2.4 Stress Reactions

Like Eric, it seems that Lily could alleviate her reactions to stress through relaxation training. By relaxing more, she will probably sleep better at night. Lily could also take short, effective rests to counteract her tiredness. In Lily's case, general relaxation exercises ought to be complemented with extra training of the upper arms and upper body to reduce the tension she has observed there.

Elizabeth would probably also benefit from relaxation training. However it should be pointed out that this training must not become a stressful necessity. For people with a high level of self-discipline and a near-obsessive tendency to follow pre-determined programs when it comes to diet, exercise, and relaxation, these programs risk becoming a source of guilt. Instead of the release of stress that, for example, exercise and relaxation are expected to give, the result could be the opposite.

13.2.3 CONCLUDING COMMENT REGARDING LILY

In Lily's case, the answer with regard to action, i.e., relaxation training to reduce reactions to stress, may look weak. The reason, however, is that as long as her personal resources are sufficient to handle the demands placed on her, nothing else is needed. Lily does not appear to waste her resources either, through irrational interpretation and coping processes. Devoting further energy to individual "stress management" would, in Lily's case, mean reducing her involvement in issues that are central to her.

14 FINAL REMARKS

The previous chapter was devoted to a stress theoretical analysis of the situation of the three presented teachers. In this final chapter we will comment on how the ESRQ and the instruments introduced in Chapter 11 could have been used in a coaching program aimed at assisting the three cases to manage stress better.

Beginning with the ESRQ, Table 9 illustrates estimated ESRQ scale scores related to the teachers' general life situation. This means that the responses have been related to a broader time span than that previously used in the book. In this case the wording might have been something like "circle the choice which best describes how you have been feeling *during the last month*."

ESRQ scale	Eric	Lily	Elisabeth
Irrelevant	1	1	2
Benign-positive	3	2.5	2
Challenge	3	3.5	2
Threat-fear	2	1.5	3
Threat-aggression	2	2.5	1.5
Appraisal Index	8	8.5	-1.5

Table 9. Estimated ESRQ scale scores related to the three teachers' general life situation.

Perusal of Table 9 shows that both Eric and Lily have a high psychological action potential (high Appraisal Index), while Elisabeth has a much lower one. The reported scale scores indicate that Elisabeth has a lower activation level (higher on Irrelevant and lower on Challenge). Her situation is also to a higher degree dominated by negative fear-related appraisals and a lower tendency to appraise events as benign-positive. Eric has a tendency to react with more fear-related emotions and with less aggression-related emotions, while Lily exhibits the opposite pattern.

Turning to the instruments presented in Chapter 11, the Life line chart and the Relationship map could obviously be used in coaching sessions with all three teachers. A more detailed analysis of external and internal stressors and acute and long-term stress reactions than the one presented in the last chapter could also be made. If the Self-Statement Questionnaire was used, interesting differences between Lily and Elisabeth would emerge. Lily would be advised to practice positive self-statements directed against aggression, while Elisabeth should be encouraged to use positive self-talk directed against fear-related emotions.

To end with the ESRQ, it can obviously be used in multiple ways in a series of coaching sessions. More specific time frames than "in the last month" are generally recommended. Typical examples are "right now," "at the beginning/end of the last session," "when you last met X and handled it well/poorly," etc.

In conclusion, we hope that you find the ESRQ useful and get inspired by the theory behind it. From personal experience we know that it can be used in multiple ways, both professionally and in private life. So, if you feel eager to start using it now, just do it! It takes less than a minute…

REFERENCES

Abrahamsen Grøndahl, V, Karlsson, I, Hall-Lord, ML, Appelgren, J & Wilde-Larsson, B 2011, 'Quality of care from patients' perspective: Impact of the combination of person-related and external objective care conditions', *Journal of Clinical Nursing,* vol. 20, no. 17–18, pp. 2540–2551.

Abrahamsen Grøndahl, V, Wilde-Larsson, B, Hall-Lord, ML & Karlsson, I in press a, 'A pattern approach to analysing patients' satisfaction and quality of care', *Person-Centered Medicine*.

Abrahamsen Grøndahl, V, Hall-Lord, ML, Karlsson, I, Appelberg, J & Wilde-Larsson, B in press b, 'Exploring patient satisfaction predictors in relation to a theoretical model', *International Journal of Health Care Quality Assurance.*

Antonovsky, A 1987, *Unraveling the mystery of health: How people manage stress and stay well,* Jossey-Bass, San Francisco.

Aroian, KIF & Norris, AE 2005, 'Confirmatory factor analysis', in Munro, BH (Ed.), *Statistical methods for health care researchers*, pp. 351–375, Lippincot Williams & Wilkins, Philadelphia, PA.

Bandura, A 1978, 'The self-system in reciprocal determinism', *American Psychologist,* vol. 33, no. 4, pp. 344–358.

Bass, BM & Bass, R 2008, *The Bass handbook of leadership: Theory, research, and managerial applications,* 4th edition, Free Press, New York.

Bass, BM & Riggio, RE 2006, *Transformational leadership, 2nd edition,* Erlbaum, Mahwah, NJ.

Bennis, WG & Thomas, RJ 2002, 'Crucibles of leadership', *Harvard Business Review,* vol. 80 no. 9, pp. 39–45.

Ben-Shalom, U, Lehrer, Z & Ben-Ari, E 2005, Cohesion during military operations: A field study on combat units in the al-Aqsa intifada,' *Armed Forces and Society,* vol. 32, no. 1, pp. 63–79.

Bowers, MR & Kiefe, CI 2002, 'Measuring health care quality: Comparing and contrasting the medical and marketing approaches', *American Journal of Medical Quality,* vol. 17, no. 4, pp. 136–144.

Christiansson, SÅ 1992, 'Emotional stress and eyewitness memory: A critical review', *Psychological Bulletin,* vol. 112, no. 2, pp. 284–309.

Coombs, CH & Kao, RC 1960, 'On a connection between factor analysis and multidimensional unfolding', *Psykometrika,* vol. 25, no. 3, pp. 219–231.

Cormier, S & Cormier, B 1998, *Interviewing strategies for helpers: Fundamental skills and cognitive behavioural interventions,* Books/Cole Publishing Company, Pacific Grove, CA.

Costa, PT Jr & McCrae, RR 1992, *Neo PI-R: Professional manual,* Psychological Assessment Resources, Odessa, FL.

Crow, R, Gage, H, Hampsen, S, Hart, J, Kimber, A, Storey, L & Thomas, H 2002, 'The measurement of satisfaction with health care: Implications for practice from a systematic review of the literature', *Health Technological Assessment,* vol. 6, no. 32, pp. 1–244.

Dirks, KT 1999, 'The effects of interpersonal trust on workplace group performance', *Journal of Applied Psychology,* vol. 84, no. 3, pp. 445–455.

Downey, M 1999, *Effective coaching,* Orion Business Books, London.

Ekman, R & Arnetz, B 2002, *Stress: Molekylerna – individen – organisationen – samhället* [Stress: The molecules – the individual – the organization – the society], Liber, Malmö, Sweden.

Endler, NS & Magnusson, D 1976, 'Toward an interactional psychology of personality' *Psychological Bulletin,* vol. 83, no. 5, pp. 956–974.

Eysenck, HS & Eysenck, MW 1985, *Personality and individual differences: A natural science approach, Plenum Press, New York.*

Folkman, S & Lazarus, RS 1980, 'An analysis of coping in a middle-aged community sample', *Journal of Health and Social Behavior,* vol. 21, no. 2, pp. 219–239.

Folkman, S & Lazarus, RS 1985, If it changes it must be a process: Study of emotion and coping during three stages of a college examination', *Journal of Personality and Social Psychology,* vol. 48, no. 1, pp. 150–170.

Folkman, S, Lazarus, RS, Dunkel-Schetter, C, DeLongis, A & Gruen, RJ 1986, 'Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes', *Journal of Personality and Social Psychology,* vol. 50, no. 5, pp. 992–1003.

Fredholm, L 1999, 'Ledarskap i tidspressat och kritiskt läge' ['Leadership in a time-critical situation'], in Larsson, G (Ed.), *Ledarskap under stress* [Leadership under stress] pp. 35–38, Swedish National Defence College, Karlstad, Sweden.

Gardner, WL, Avolio, BJ & Walumbwa, FA 2005, *Authentic leadership theory and practice: Origins, effects and development,* Elsevier, Oxford.

Gergen, KJ & Gergen, MM 1986, 'Narrative form and the construction of psychological science', in Sarbin, TR (Ed.), *Narrative psychology: The storied nature of human conduct,* pp. 27–44, Praeger, New York.

Gibson, WA 1959, 'Three multivariate models: Factor analysis, latent structure analysis, and latent profile analysis, *Psychometrika,* vol. 24, no. 3, pp. 229–252.

Grant, A 2008, 'Past, present and future: The evolution of professional coaching and coaching psychology' in Palmer, S & Whybrow, A (Eds.), *Handbook of coaching psychology: A guide for practitioners,* pp. 23–39, Routledge, London.

Gustavsson, J-E & Balke, G 1993, 'General and specific abilities as predictors of school achievement', *Multivariate Behavior Research,* vol. 28, no. 4, pp. 407–434.

Gyllensten, K & Palmer, S 2007, 'The coaching relationship: An interpretative phenomenological analysis, *International Coaching Psychology Review*, vol. 2, no. 2, pp. 168–177.

Harrison, CW 2010, *Transformational leadership and its relationship to trust and behavioural integrity.* Saybrook Graduate School and Research Center, San Francisco.

Hyllengren, P, Larsson, G, Fors, M, Sjöberg, M, Eid, J. & Kjellevold Olsen, O 2011, Swift trust in leaders in temporary military groups', *Team Performance Management,* vol. 17, no. 7/8, pp. 354–368.

Jackson, JL, Chamberlin, J & Kroenke, K 2001, 'Predictors of patient satisfaction, *Social Science & Medicine,* vol. 52, no. 4, pp. 609–620.

Larsson, G 1983, 'Identity changes following public labelling in late adolescence: The case of military psychiatric exemptions', *Department of Applied Psychology, University of Göteborg,* Research report, vol. 8, no. 1.

Larsson, G 1985, *Kompendium på Meichenbaums och Camerons (1983) Stress inoculation model* [Summary of Meichenbaum's and Cameron's (1983) Stress inoculation model], (FOA PM 55:78), Försvarets forskningsanstalt, Institutionen för beteendevetenskap.

Larsson, G 1987, 'Snabb mätning av individuell stressreaktionsstyrka: Utveckling av den emotionella stressreaktionsenkäten (ESE) – reviderad version' [Measurement of individual stress reaction level: Development of the Emotional Stress Reaction Questionnaire (ESRQ) – Revised version'], *FOA Report C 50050–5.3,* National Defence Research Institute, Stockholm, Sweden.

Larsson, G 1989, 'Personality, appraisal and cognitive coping processes, and performance during various conditions of stress', *Military Psychology,* vol. 1, no. 3, pp. 167–182.

Larsson, G 2001, 'Structural equation modelling: A new tool for psychologists', in Columbus, F (Ed.), *Advances in Psychology Research, volume IV,* pp. 131–149, Nova Sciences Publishers, Inc., New York.

Larsson, G 2005, 'Snabb tillit den nya framgångsrika faktorn? [Swift trust: The new factor for success?], in Larsson, G (Ed.), *9 noter om NBF* [9 notes on NBF], pp. 61–74, The Swedish National Defence College, Stockholm.

Larsson, G 2006, 'The Developmental Leadership Questionnaire (DLQ): Some psychometric properties' *Scandinavian Journal of Psychology,* vol. 47, no. 4, pp. 253–262.

Larsson, G 2010, *Ledarskap under stress* [Leadership under stress], Liber, Malmö, Sweden.

Larsson, G 2011, April, 'The Emotional Stress Reaction Questionnaire (ESRQ): Measurement of stress reaction level in field conditions in 60 seconds', Proceedings of *NATO HFM-205 Mental Health and Well-Being Across the Military Spectrum,* Bergen, Norway. Retrieved from http://myrto.rto.nato.int/hfm-205/default.aspx

Larsson, G & Anderzen, I 1987, 'Appraisal, coping, catecholamine excretion, and psychomotor performance during calm and stressful conditions', *Scandinavian Journal of Sports Sciences,* vol. 9, no. 1, pp. 47–51.

Larsson, G, Carlstedt, L, Andersson, J, Andersson, L, Danielsson, E, Johansson, A., Johansson, E, Michel, P-O & Robertson, I 2003, 'A comprehensive system for leader evaluation and development', *Leadership & Organization Development Journal,* vol. 24, no. 1, pp. 16–25.

Larsson, G & Eid, J 2012, 'An idea paper on leadership theory integration' *Management Research Review*, vol. 35, no 3/4, pp. 177–191.

Larsson, G & Hyllengren, C 1988, *Individuell stressminskning för lärare* [Individual stress reduction for teachers], Report from Psykologiservice i Värmland AB, Karlstad, Sweden.

Larsson, G & Hyllengren, P in press, 'Contextual influences on leadership: Theoretical modelling and empirical tests', *International Journal of Organizational Analysis.*

Larsson, G, Kempe, C & Starrin, B 1988, 'Appraisal and coping processes in acute time-limited stressful situations: A study of police officers' *European Journal of Personality,* vol. 2, no.3/4, pp. 259–276.

Larsson, G & Setterlind, S 1994/2002, *Om konsten att hantera sitt liv: Handbok i stresshantering* [On the art of life management: Handbook of stress management], Vårdförbundet, Stockholm/ Studentlitteratur, Lund, Sweden.

Larsson, G & Wilde Larsson, B 2010, 'Quality of care and patient satisfaction: A new theoretical and methodological approach', *International Journal of Health Care Quality Assurance,* vol. 23, no. 2, pp. 228–247.

Larsson, G, Wilde, B & Starrin, B 1996, 'Patients' views on quality of care: Theory-based assessment', in Edvardsson, B, Brown, SW, Johansten, R & Scheving, EE (Eds.), *QUISS: Advancing service quality: A global perspective,* pp. 164–168, St John's University, New York.

Lazarus, RS 1966, *Psychological stress and the coping process,* McGraw-Hill, New York.

Lazarus, RS 1984, 'Puzzles in the study of daily hassles', *Journal of Behavioral Medicine,* vol. 7, no. 4, pp. 375–389.

Lazarus, RS 1990, 'Theory-based stress measurement', *Psychological Inquiry,* vol. 1, no. 1 pp. 3–13.

Lazarus, RS 1991, *Emotion and adaptation,* Oxford University Press, New York.

Lazarus, RS 1995, 'Vexing research problems inherent in cognitive-mediational theories of emotion: And some solutions', *Psychological Inquiry,* vol. 6, no.3, pp. 183–196.

Lazarus, RS 1999, *Stress an emotion: A new synthesis,* Free Association Books, London.

Lazarus, RS, Delongis, A, Folkman, S & Gruen, R 1985, Stress and adaptational outcomes: The problem of confounded measures', *American Psychologist,* vol. 40, no. 7, 770–779.

Lazarus, RS & Folkman, S 1984, *Stress, appraisal, and coping,* Springer, New York.

Lester, PB 2006, *Swift trust: Examining the development and acceleration of follower trust in leaders in temporary group context,* University of Nebraska, Lincoln, NE.

Linder-Pelz, S 1982, 'Social psychological determinants of patient satisfaction: A test of five hypotheses', *Social Science & Medicine,* vol. 16, no. 5, pp. 583–589.

McCrae, RR & Costa, Jr., PT 2008, 'The five-factor theory of personality', in John, OP, Robins RW & Pervin, LA (Eds.), *Handbook of personality: Theory and research*, pp. 159–181, The Guilford Press.

Mechanic, D 1962, *Students under stress,* Free Press, New York.

Meichenbaum, D 1985, *Stress inoculation training,* Pergamon, New York.

Meichenbaum, D & Cameron, R 1983, 'Stress inoculation training: Towards a general paradigm for training coping skills,' in Meichenbaum, D & Jaremko, ME (Eds.), *Stress reduction and prevention*, pp. 115–154, Plenum Press, New York.

Meyerson, D, Weick, KE & Kramer, RM 1996, 'Swift trust and temporary groups', in Kramer, RM & Tyler, TR (Eds.), *Trust in organizations: Frontiers of theory and research,* pp. 166–195, SAGE Publications, Thousand Oaks, CA.

Nilsson, S, Sjöberg, M, Kallenberg, K & Larsson, G 2011. 'Moral stress in international humanitarian aid and rescue operations: A grounded theory study', *Ethics & Behavior,* vol. 21, no. 1, pp. 49–68.

O'Broin, A & Palmer, S 2006, 'The coach-client relationship and contributions made by the coach in improving coaching outcome', *The Coaching Psychologist,* vol. 2, no. 2, pp. 16–20.

Palmer, S & Whybrow, A (Eds.) 2008, *Handbook of coaching psychology: A guide for practitioners,* Routledge, London.

Popa, CL 2005, *Initial trust formation in temporary small task groups: Testing a model of swift trust,* Kent State University, Kent, OH.

Shamir, B & Eilam, G 2005, 'What's your story? A life-stories approach to authentic leadership development,' *The Leadership Quarterly,* vol. 16, no. 3, pp. 395–417.

Shaver, P, Schartz, J, Kirson, D & O'Connor, C 1987, 'Emotion knowledge: Further exploration of a prototype approach', *Journal of Personality and Social Psychology,* vol. 52, no. 6, pp. 1061–1081.

Sjöberg, M, Wallenius, C & Larsson, G 2011, 'Leadership in complex, stressful rescue operations: A quantitative test of a qualitatively developed model', *Disaster Prevention and Management,* vol. 15, no. 4, pp. 570–584.

Soafer, S & Firminger, K 2005, 'Patient perceptions of the quality of health services', *Annual Review of Public Health,* vol. 26, no. 1, pp. 513–559.

Svensson, E 1978, 'Mood: Its structure and measurement', *Department of Psychology, University of Göteborg*. Research report volume 8, no. 6.

Wagner, BM, Compass, BE & Howell, DC 1988, Daily and major life events: A test of an interactive model of psychosocial stress', *American Journal of Community Psychology,* vol. 16, no. 2, pp. 189–205.

Watson, D & Clark, LA 1984, 'Negative affectivity: The disposition to experience aversive emotional states', *Psychological Bulletin,* vol. 96, no. 3, pp. 465–490.

Watson, D & Pennebaker JW 1989, 'Health complaints, stress and distress: Exploring the central role of negative affectivity', *Psychological Review*, vol. 96, no. 2, pp. 234–254.

Whitmore, J 2002, *Coaching for performance. Third edition*, Nicholas Brealey, London.

Woods, SA & Hampson, SE 2005, 'Measuring the Big Five with single items using a bipolar response scale', *European Journal of Personality,* vol. 19, no. 5, pp. 273–390.

Währborg, P 2002, *Stress och den nya ohälsan* [Stress and the new ill health] Natur och Kultur, Stockholm.

Yerkes, RM & Dodson, JD 1908, 'The relation of strength of stimulus to rapidity of habit-formation', *Journal of Comprehensive Neurology and Psychology,* vol. 18, no. 5, pp. 459–482.