CHAPTER 3

STRESS IN THE WORKPLACE

3.1   Introduction

Stress is a natural part of everyday living. Individuals experience varying levels of stress in and outside the workplace. In the workplace stress results in lost productivity due to absenteeism, work related accidents, stress claims, a demotivated work force, sabotage and even bankruptcy (Schell, 1997: 5). Schell (1997:4) reports that in Japan 60% of the approximately 120 million adults employed claim to be adversely affected by excessive job stress. The collective cost of stress to U.S. organizations for absenteeism, reduced productivity, compensation claims, health insurance, and direct medical expenses has been estimated at approximately $150 billion per year in the 1980's (Karasek & Theorell in Cartwright & Cooper, 1997: 2).

In the United Kingdom, stress-related absences were 10 times more costly than all other industrial relations disputes put together. In terms of sickness, absence and premature death or retirement due to alcoholism, stress costs the U.K. economy a staggering £2 billion per annum. Heart disease, the single biggest killer, is estimated by the British Heart Foundation to cost an average U.K. company of 10 000 employees 73 000 lost working days each year; additional costs include the annual death of 42 employees between 35 and 64 years of age and lost value in products or services of more than £2.5 million. Of all absence for sickness in the United Kingdom, 21% was due to stress-related heart disease. Similarly, in Norway, the economic costs of work-related sickness and accidents amount to more than 10% of the gross national product (GNP) (Lunde-Jensen, in Cartwright and Cooper, 1997: 2).

3.2   Models of stress

A number of different approaches to the conceptualisation of stress can be found of which the response-based or medico-physiological approach, the stimulus-based or engineering approach, the more psychological-based approach exemplified by transactional, and cybernetic theories of stress are relevant to the conceptualisation and definition of stress (Cox, 1978:3; Cox & Mackay, 1981: 94; Cummings & Cooper, 1998: 101).

3.2.1   *Response-based model*

The response-based approach regards stress as a response or a pattern and is treated as a dependant variable (Cox, 1978: 3; Cox & Mackay, 1981: 94; Sutherland & Cooper, 1990: 11). The study of stress tends to be concerned with the response of an individual when the individual is

exposed to an environmental stimulus or demand. The focus of the model is the manifestation of stress.

The response-based approach to stress is exemplified in the writing of Hans Selye who was one of the first researchers to attempt to explain the process of stress-related illness in terms of the general adaptation syndrome (GAS) (Cox & Mackay, 1981: 94; Cartwright & Cooper, 2002: 48). The response-based model of stress is represented schematically below (Figure 3.1).
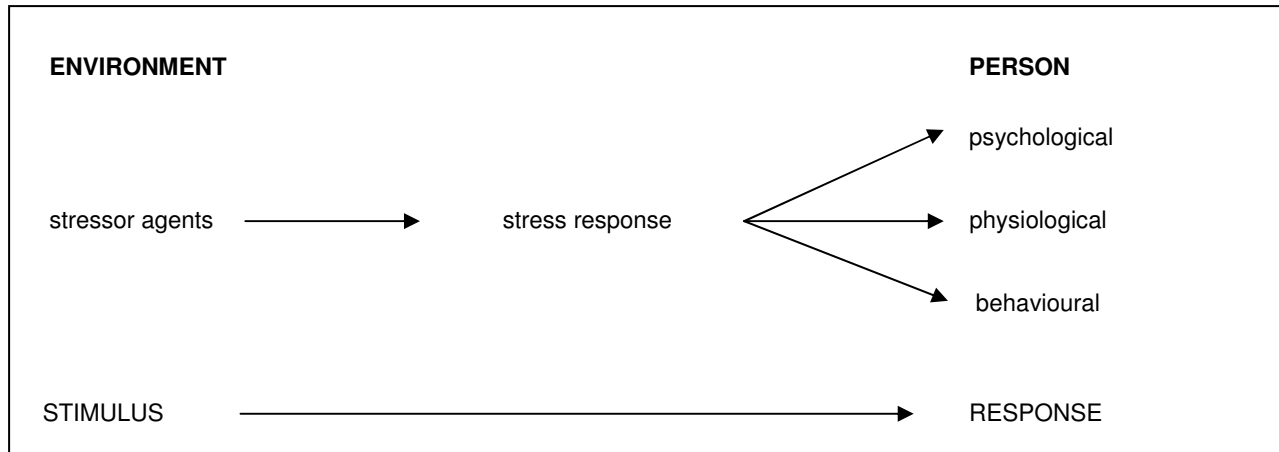

Figure 3.1: A response model of stress (Sutherland & Cooper, 2000: 47)

3.2.2 *The general adaptation syndrome*

Endocrinologist Hans Selye, widely considered the father of stress research, during his search for a new sex hormone discovered that a wide range of stimuli, such as exposure to temperature extremes, physical injury, or injection of toxic substances resulted in tissue damage in laboratory rats (Selye, in Schell, 1997: 131; Wainwright & Calnan, 2002: 38). He found that the cortex of the adrenal gland became enlarged; the thymus and lymphatic structures in turn became involuted; and deep-bleeding ulcers developed in the stomach and intestines.

He called this non-specific response to harmful stimuli the general adaptation syndrome (GAS). About a decade later he introduced the term "stress" in his writings. In 1910, Sir William Osler investigated the connection between stress and strain-causing disease when he found a relationship between angina pectoris and a hectic pace of life (Hinkle in Cartwright & Cooper, 1997: 4). In the early 1900s Cannon (in Quick *et al*, 1997: 6; Wainwright & Calnan, 2002: 35) had described an emergency reaction exhibited by an organism when it was confronted with a threat or danger. This reaction prepares the organism to respond to a threat by either facing it (fighting) or by avoiding it (fleeing). The reaction has become known as the "fight or flight" response. This response

involves the arousal of the autonomic nervous system, which is associated with secretion of adrenaline by the adrenal glands. The sympathetic aspect of the autonomic nervous system mobilizes a number of reactions throughout the body (Table 3.1) (Guyten, in Cotton, 1990: 40).

Table 3.1: Examples of the effects of the autonomic (sympathetic) arousal on organs.

Organ	Effect
Eye	Pupil dilates; ciliary's muscle relaxes
Glands – including • Nasal • lacrimal • parathyroid • submaxillary • gastric • pancreatic	Vasoconstriction and slight secretion
Sweat glands	Copious sweating
Heart muscle	Increased rate, increased force of contraction
Lungs: • bronchi • blood vessels	Dilated Mildly constricted Decreased peristalsis and tone in lumen
Gut	Increased sphincter tone
Liver	Glucose released
Kidney	Decreased output
Blood	Coagulation increased, glucose increased
Basal metabolism	Increased up to 100%
Adrenal cortical secretion	Increased
Skeletal muscle	Increased strength
Piloerector muscles	Excited

Murphy (1996: 113) states that the response includes "elevated heart rate and blood pressure, a redistribution of blood flow to the major muscle groups and the brain and away from the distal parts, and a decrease in vegetative functions". In this way the organism prepares to deal with a threat. Selye (in Cotton, 1990: 41) incorporated some of Cannon's ideas into his physiological model of stress, the general adaptation syndrome (GAS). The question that Selye posed in the 1930's was that what would happen to living systems if they could not cope with the stressor either by flight or fight (Schell, 1997: 131). Selye described the GAS as occurring in three distinctive phases:

Phase 1: The alarm reaction

This stage is activated when the individual is exposed to sustained and excessive stress. In the alarm phase the body's defensive forces are 'called to arms' and has two sub- phases for dealing with the impact of the stressor, the phase itself and the counter-shock phase (Carson, Butcher & Mineka, 2000: 129; Cotton, 1990: 41; Schell, 1997: 132).

- Shock phase: this phase is immediate and is associated with outward signs of distress such as loss of muscle tone, decreased body temperature, and decreased blood pressure.
- Counter-shock: this phase immediately follows upon the shock phase and is associated with the release of adrenaline and noradrenaline. These are secreted to ensure that energy is made available from the body stores, the pulse rate is increased, the blood pressure is increased with a corresponding increase in the rate at which the blood circulates through the body, and to stimulate the central nervous system.

Phase 2: Resistance stage

After the alarm reaction subsides and the stress continues a decrease in adrenocortical secretions occur. Most of the changes that take place during the alarm reaction are reversed. This is associated with an increase in cortisol secretion with concomitant heightened metabolism, increased muscle strength, decreased swelling and inflammation and decreased immunity. Although this stage is viewed as a stage at which coping and adaptation occurs, the individual's capacity to resist stressors is limited. The body's resources are depleted and the body's defence mechanisms will weaken if the stress is not removed. Schell (1997: 133) states that it is often argued that the resistance stage is associated with the development of psychosomatic disorders, gastric ulcers, hypertension, colitis, asthma, migraine headaches and arthritis in some cases.

Phase 3: Exhaustion stage

When the stressor is excessive and prolonged, the individual's adaptive resources are depleted. High levels of cortisol begin to have detrimental effects that become noticeable as psychological, physiological, and behavioural maladaptation such as chronic depression, lowered resistance to infection and alcoholism. In most extreme cases, it may lead to death. The general adaptation syndrome is presented schematically (Figure 3.2).
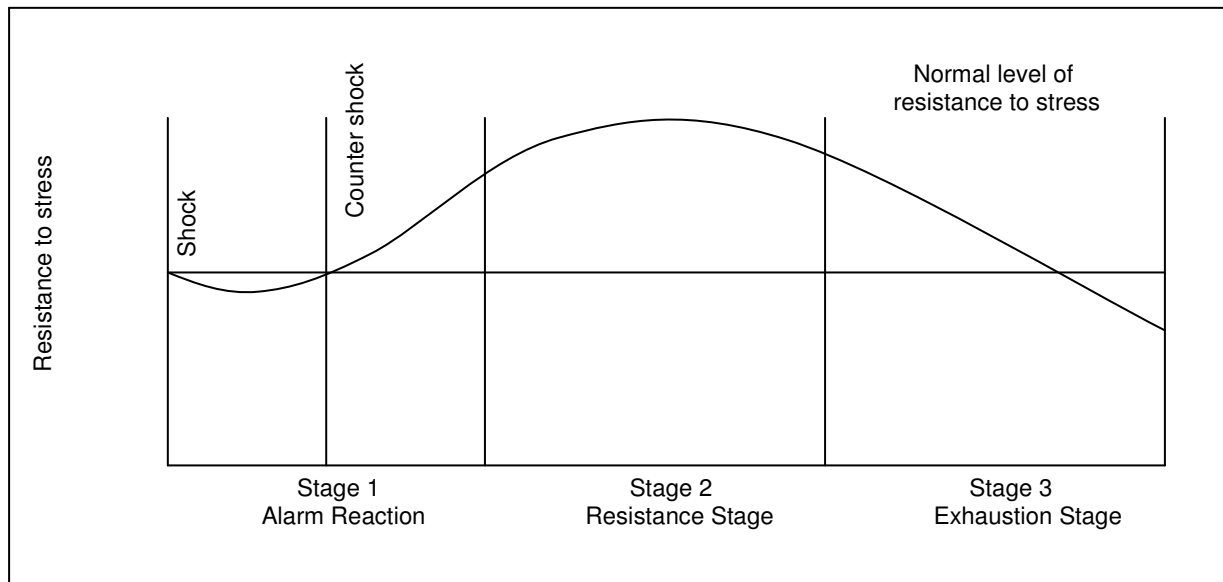
Figure 3.2: The General Adaptation Syndrome

3.2.2.1 Physiological processes

Selye (in Schell, 1997: 132) states that during the counter shock phase the 'presence of a distressor' signals the hypothalamus, a complex bundle of nerve cells in the brain, to act as a crisis-survival bridge between the brain, the endocrine system (which releases life-saving hormones into bloodstream to help body organs adapt to the crises), and the autonomic nervous system (which regulates the cardiovascular, respiratory, temperature, and water regulatory subsystems at all times), specifically the sympathetic nervous system.

To aid the body in coping with the crises, a complex series of biochemical and body changes are stirred into action (Cotton, 1990: 41). Quick *et al* (1997: 43) call this the stress response. For example, the resulting nervous signals reach certain neuroendocrine cells in the hypothalamus, where they are transformed into a chemical messenger for releasing corticotrophin hormones. A message is relayed to the pituitary gland (a small, rounded gland at the base of the brain, causing a discharge of adrenocorticotrophic hormone (ACTH) into the bloodstream. Upon reaching the adrenal cortex, ACTH triggers the conversion of cholesterol to steroid hormones and the secretion of glucocorticoids, particularly cortisol. Many anti-inflammatory corticoid hormones supply a readily available source of energy for meeting the demands made by the stressor, facilitate other adaptive enzyme responses, and suppress immune reactions and inflammation, thereby helping the body to temporarily coexist with the presenting distressor. Usually secreted in lesser amounts, the proinflammatory corticoid hormones stimulate the reactivity of the body's connective tissue, protecting the body against possible physical invasion by the stressor. The major effect of cortisol is

to increase the supply of glucose and fatty acids in the bloodstream by stimulating the liver to release glucose and fat cells to release fatty acids.

Several short-loop and long-loop biofeedback mechanisms existing within the body continually monitor the existing levels of hormones and compare these levels to those required for adaptation. If it finds that there is abundance of for example ACTH, a short-loop feedback mechanism returns some of it to the hypothalamus-pituitary axis, which stops further ACTH production. Parallel to these processes, the catecholamines, primarily adrenaline and noradrenaline, are liberated as another means of adaptation. Catecholamine release has a direct, activating effect on the central nervous system particularly the reticular activating system (RAS). This leads to an increase in alertness through sharpening of the sensory processes.

Selye (in Schell, 1997: 135) recognized that stressors affect individuals differently. The ways in which individuals respond to these stressors depend upon many endogenous factors, such as genetic and hereditary predispositions, gender, age, and early childhood conditioning and patterning. Exogenous factors such as food intake, physical environment, health and safety also play a role in determining which system, whether respiratory, cardiovascular, mental for example, may be affected. Henry and Stephens (in Schell, 1997: 135) showed that the perceived inability of the individual to control the stressor/s caused the human system to move into the resistance phase. Animal research studies that they did, indicated that when living systems could control the environment and the stressor found in it, they showed increased activity, showing aggression with activation of the adrenergic system. However when they could not exert control, they showed a withdrawal response, with activation of the adrenocortical hormones. Critics of Selye's research say it ignores both the psychological impact of stress on an individual and the individual's ability to recognize stress and act in various ways to change his or her situation (Cartwright & Cooper, 1997: 4).

3.2.3   Stimulus-based model

The stimulus approach views stress as an independent variable whereas the response-based approach does not. Thus the stimulus characteristics of the environment are considered as disturbing or disruptive in some way (Cox, 1978: 12; Cox & Mackay, 1981: 97; Sutherland & Cooper, 1990: 15).

This model is essentially an engineering one incorporating Hooke's Law of Elasticity from physics. Hooke's Law states that a load or a demand (the stress), which is exerted on the metal, causes a

strain resulting in deformation in the metal. Each material has an elastic limit and if the strain produced by a given stress falls within this limit, when the stress is removed, the metal will return to its original condition. Only when the strain is greater than the given elastic limit then permanent damage will occur.

Applying this analogy to humans it implies that different individuals have different breaking points. Individuals are able to tolerate certain levels of stress but once this is exceeded permanent damage, either physiological or psychological will occur. The stimulus-based approach is shown (Figure 3.3).
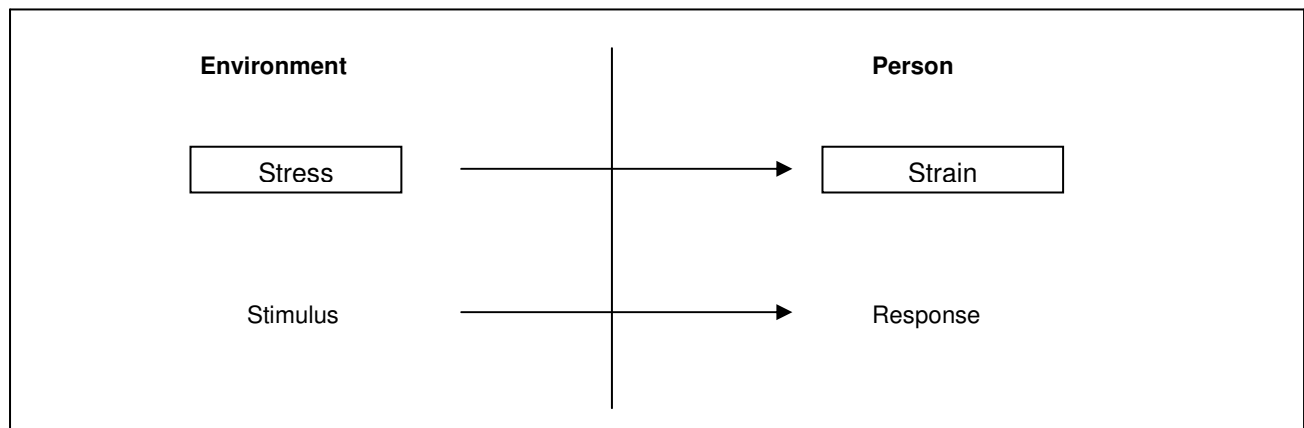

Figure 3.3: Cox's stimulus-based model of stress

The research based on this model includes identifying the sources of stress in the work environment. Common sources involve extremes of sensory stimulation, such as noise, heat, cold, humidity, isolation and crowding and extreme workloads, such as overwork, underwork and boredom (Cox, 1978: 15).

When studying stressful life events, Dohrenwend *et al* (in Cotton, 1990: 87) as well as Holmes and Rahe (in Cotton, 1990: 31), based their work on the stimulus-based model. They viewed stressors as discrete life events that when experienced in sufficient amounts, gave rise to serious effects on both psychological and social wellbeing. A good example is Holmes and Rahe's Social Readjustment Rating Scale (in Schell, 1997: 75), which showed that life changes had a very stressful impact on people.

The stimulus-based approach has a number of weaknesses. Cox (1978: 17) asserts that "the major one is that of identifying with some surety what is stressful about particular real-life situations". In some cases it is easy to see why a situation is stressful, for example stoking a blast furnace, but in others such as teaching it may not be as obvious. Also the methodology to study these real-life

situations, for example the first case is relatively easy, but in other cases such as the second example, is doubtful as it often is based on retrospective verbal reports, which is often inaccurate. Also a real-life situation may be viewed as stressful by some and not by others.

3.2.4 Psychological-based approaches

The psychological models of stress emphasize the role of perceptual and cognitive characteristics, which are important in explaining individual differences regarding their response to stress (Cox & MacKay, 1981: 99). A psychological model of stress is given (Figure 3.4).
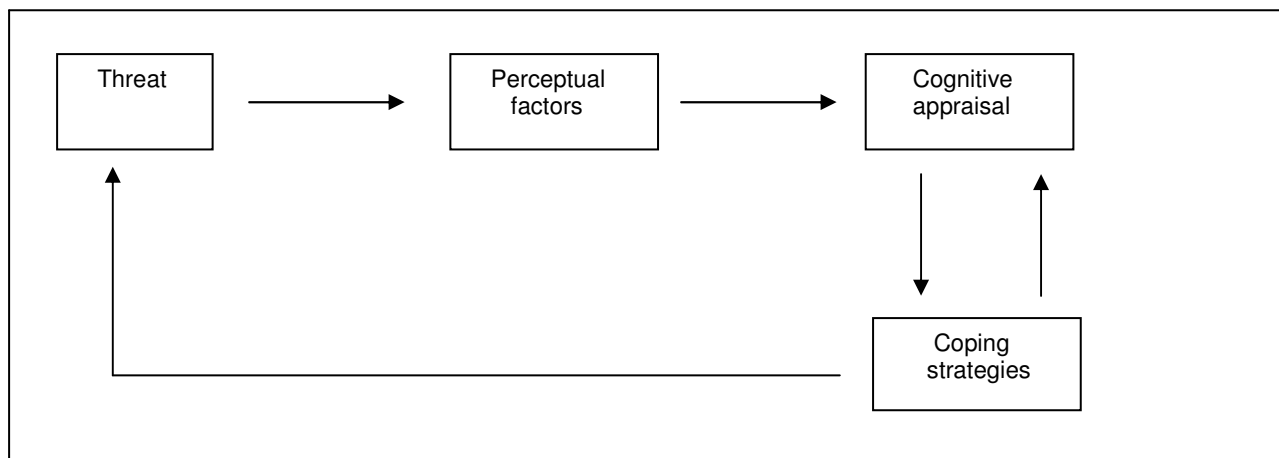

Figure 3.4: A psychological model of stress with the emphasis on perceptual and cognitive processes
(Cox & MacKay, 1981: 99)

The transactional (Cox & MacKay, 1981: 101) and cybernetic models of stress (Cummings & Cooper, 1998: 101) further exemplify the psychological-based approaches to stress.

3.2.4.1 Transactional models of stress

Two variations of the transactional models of stress will be discussed, namely Lazarus's and Cox's models. Cox and MacKay's transactional model is used as the framework by the developers of the Experience of Work and Life Circumstances Questionnaire.

1)   Lazarus's transactional model of stress

Lazarus (in Cox & MacKay, 1981: 99; Cummings & Cooper, 1998: 105) has developed an important psychological model of stress in which he suggests that 'stress occurs when there are demands on the person that tax or exceed his adjustment resources'. Thus if the individual views the situation as stressful it is due to his or her cognitive appraisal of the environment.

The objective characteristics of the situation are not considered. Lazarus and Folkman (1984: 53) have identified three kinds of cognitive appraisal: primary, secondary, and reappraisal where primary appraisal consists of the judgment that an encounter is irrelevant, benign-positive, or stressful, secondary appraisal refers to a judgment concerning what might and can be done and reappraisal is when the appraisal is changed based on new information from the environment and/or the person. Stress is not induced but is viewed as a process between the individual and his or her environment in which threat and coping play a role. Questions that a person may ask are such as "What choices do I have?"; "Can I implement a particular option?"; and "Will it work?" (Wainwright & Calnan, 2002: 61). The process of appraisal explains why some individuals are able to cope or even thrive under stressful conditions, whereas others won't.

2)   Cox and MacKay's transactional model of stress

Cox and MacKay (Cox, 1978: 18; Cox & MacKay, 1981: 101) have outlined another important psychological model of stress in which they define stress as an individual phenomenon and the 'result of a transaction between the person and his situation'. Cox uses the word transaction to 'emphasize the active and adaptive nature of the process'. Thus stress is described as 'part of a complex and dynamic system of transactions between the person and his environment' (Cox, 1978: 18).

This model includes both the response-and stimulus-based definitions of stress and emphasizes that stress is 'an individual perceptual phenomenon rooted in psychological processes' (Cox, 1978:18). Emphasis is also placed on the feedback aspects implying that the system is cyclical rather than linear. The system consists of five stages.

Cox (1978: 19) describes the first stage as representing 'the sources of demand relating to the person' and it forms part of the individual's environment. These demands are either external, derived from the environment, or internal in the form of psychological and physiological needs, the fulfilment of which determines the individual's behaviour.

The second stage consists of the individual's perception of the demands and his or her ability to cope with the demand. Cox (1978: 18) states that 'stress may be said to arise when there is an imbalance between the perceived demand and the person's perception of his capability to meet the demand'. It is important to realize that the important balance or imbalance is between the perceived demand and the individual's perceived capability and not between the demand and the individual's actual capability. The individual's cognitive appraisal of the potentially stressful situation and his or

her capability to cope is important here. When a high demand is made on an individual, he or she will not experience stress until he or she has reached his or her limitations. At this point the individual realizes he or she cannot cope anymore and then experiences stress due to the recognition of his or her limitations and the imbalance between the demand and capability. This imbalance will be experienced on a subjective or emotional level coupled with changes on a physiological level as well as cognitive and behavioural attempts to 'reduce the stressful nature of the demand' (Cox, 1978: 20). The third stage is associated with the psychophysiological stages, which correspond to the response to stress. Cox (1978: 20) feels that 'these responses are sometimes thought of as the end point of the stress process' and 'should be regarded as methods of coping available to the person'. The fourth stage which Cox (1978: 20) feels is frequently ignored and is 'concerned with the consequences of the coping responses', whether actual or perceived. The fifth and last stage of the model revolves around feedback and is found to occur at all of the other stages determining the outcome at each of the stages.

Cox (1978: 20) states that 'inappropriate and ineffective response strategies will invariably prolong or even increase the experience of stress'. If inappropriate coping occurs at this point it can result in further physiological and psychological damage. This model, according to Cox (1978: 20), 'treats stress as an intervening variable, the reflection of a transaction between the person and his environment' and 'it is part of a dynamic cybernetic system'.

3.2.4.2 Cybernetic theory of organizational stress

Cummings and Cooper (1998: 101) present a cybernetic theory of stress derived from the framework and concepts of cybernetics or systems control. They state that 'the basic premise of this theory is that behaviour is directed at reducing deviations from a specific goal-state'. They use Miller's application of cybernetics to living systems, which explains how living systems, whether plants or animals, maintain themselves in steady states or homeostasis (Cummings & Cooper, 1998: 102). Homeostasis is maintained by keeping a variety of variables in balance such as those that have to do with the import, transformation, and export of matter/energy and information. When homeostasis is disrupted from either inside or outside the system by forces, they are counteracted so as to restore the original balance.

Stress as well as threat incorporates environmental factors affecting the individual, the resultant effects, and the individual's reactions (Appley & Turnbull, in Cummings & Cooper, 1998: 104). The environmental factors refer to those factors that impact the individual's normal functioning. Cummings and Cooper (1998: 104) feel that stress 'signifies those external factors that are

currently affecting the person', while threat in turn 'represents those conditions that the individual perceives are likely to affect him or her in the future'. The example they give is when 'a person's present employment status may not affect his or her behaviour adversely; yet the rumour that company downsizing is likely to occur and may result in job loss' which can be stressful.

The immediate effects or disruption is seen as a strain within the individual and his or her attempt to reduce it is termed the individuals adjustment process. Strain includes indicators such as rapid pulse rate or job dissatisfaction, whereas adjustment processes include behaviours such as smoking, excessive drinking or long-term effects of ineffective coping such as raised blood pressure or high cholesterol levels. Stress or threat can be viewed as the independent variable, strain as the intervening variable and the adjustment process as the dependant variable.

Cummings and Cooper (1998: 104) state that cybernetic theory allows stress to be depicted as an information-feedback cycle. This process or stress cycle has four distinct phases, the detection of strain, choice of adjustment processes, implementation of adjustment processes, and affects of adjustment processes on the stress or threat situation.

3.3   Main causes and sources of workplace stress

There are a number of approaches to discussing the main causes and sources of workplace stress (Luthans, 2002: 397; Cartwright & Cooper, 1997: 13; Quick *et al*, 1997: 21). The categories most often alluded to include extraorganizational stressors, organizational stressors, group stressors, and individual stressors (Luthans, 2002: 397)

3.3.1   *Extraorganizational causes and sources of stress*

Luthans (2002: 398) feels that people often ignore the important role, which factors outside the organization can play in workplace stress. When the organization is viewed as an open system, then it can be expected that forces outside of the organization will contribute towards workplace stress, affecting individuals inside the organization. These are societal/technological change, globalisation, the family, relocation, life changes, and race, sex, and social class (Luthans, 2002: 398).

3.3.1.1 Rate of social and technological change

The rate at which social and technological change is taking place all over the world, has and is having a great impact on the way people live, which in turn has an impact on their work (Luthans, 2002: 398). Political change and the introduction of affirmative action programmes affect the

individual in the workplace increasing their levels of reported stress (Van Zyl, 1998: 24). The fast pace of modern living has 'increased stress and decreased personal wellness' where wellness refers to 'a harmonious and productive balance of physical, mental, and social wellbeing brought about by the acceptance of one's personal responsibility for developing and adhering to a health promotion program' (Reiter, in Luthans, 2002: 398). Due to the 'rat-race' and the fast pace of life, wellness has deteriorated and the potential for stress occurring in the workplace has increased.

3.3.1.2 Family

An individual's family situation, which can include crises such as a squabble or illness of a family member or a strained relationship with the spouse or one or more of the children, has the capacity to generate stress for employees (Luthans, 2002: 398). Employees may find it increasingly difficult to balance work and family due to longer working hours and late-night shifts (Atkinson, 1999: 57) thus putting more strain on work-family relationships (Carlson & Perrewé, 1999: 521; Sutherland & Cooper, 2000: 105). In firms with strong work performance norms conflict due to family-work demands led to job stress (Hammer *et al*, 2004: 89). The co-ordination of work and vacation schedules, and the search for child and elder care has become prominent and highly stressful (DeFrank & Ivancevich, 1998: 57). Dual-career couples may experience stress due to conflict with society's expectations concerning family roles resulting in feelings of guilt (Cartwright & Cooper, 1997: 148). Social support plays an important role in moderating the effects of time demands and role stressors in both the family and work domain reducing the level of work-family conflict (Carlson & Perrewé, 1999: 528).

Other factors that contribute to the employee's experience of stress due to the family situation include life changes such as a divorce, the general economic situation in the country, facilities at home, social situations, and status, amongst others.

3.3.1.3 Relocation

Relocation of the family due to a transfer or a promotion can lead to stress (Cartwright & Cooper, 1997: 153; Luthans, 2002: 398). The labour force is becoming more mobile, which is particularly the case for managers and other professionals (Cartwright & Cooper, 1997: 15). It is estimated that managers in the U.K. change jobs about once every three years. Moving can be traumatic and stressful because the individual has to give up his or her job, family, and outside activities. Further the age, qualifications, job skills, and the personality of the individual influences the way the move is viewed and interpreted. According to the U.S. Department of Labor, the 'typical American family' consisting of a working husband, a homemaker wife, and an average of two children, represents

only 7% of the families in the U.S.A. In Britain, nearly 65% of all women work, mostly full-time (Cartwright & Cooper, 1997: 21). Not only do dual-career families affect women but also men, as part of their career, are expected to be mobile and move to different localities, whether within their country or abroad. If the man was the sole breadwinner, this may have occurred more easily. Now, such a decision will create problems for both working members of the family (Cartwright & Cooper, 1997: 22). Expatriate managers may experience a culture shock when assigned to a foreign country for a specific length of time and when they return to their home country after their contract has expired they may experience isolation, both significant sources of stress (Sanchez, Spector, & Cooper, 2000: 103).

3.3.1.4 Life changes

Changes that an individual may experience over the life span may be slow such as getting older or may be sudden such as the death of a spouse (Luthans, 2002: 398). Age is something that creeps up on a person and suddenly he or she becomes aware that 'old' is no longer a label that applies to others but now applies to him or herself (Cartwright and Cooper, 1997: 64). Certain life events remind one of one's own mortality such as the loss of one's parents, the death of a member of one's peer group or the birth of a grandchild.

Cartwright and Cooper (1997: 65) state that 'the most vulnerable group are executives in their late 40s and 50s, who are likely to be abusing alcohol and coping with alienated children, aging parents, and extensive financial commitments'. There is a definite correlation between the extent of these life changes and the quality of the individual's health (Rahe & Holmes, in Cotton, 1990: 32). The greater the number of life changes, the greater the risk of illness or accident attributable to stress becomes, which in turn may impact on the work situation. Divorce is one life change that interferes with work more than any other life change, especially in the first three months after the one spouse has left the other (Crosby, in Luthans, 2002: 398).

3.3.1.5 Race, sex, and social class

Sometimes minority groups may experience more stressors than majority groups (Luthans, 2002: 398). Stress-inducing issues include differences in beliefs and values, differences in opportunities with regard to rewards and promotions, and perceptions by minority employees that they are being discriminated against or lack of fit between them and the organization (Schneider & Northcraft, 1999: 1451). Individuals are likely to avoid contact with others they perceive as different (Brewer, in Schneider & Northcraft, 1999: 1452). Those that do not fit in become alienated and may decide to leave.

Affirmative action may cause high level of stress when individuals are promoted to high level positions when they have not been adequately trained for these positions (Moerdyk in Van Zyl, 1998: 22).

A review of 19 studies showed that women seem to experience more psychological distress than men, whereas men are more susceptible to severe physical illness (Jick & Mitz, 1985: 418). Professional women experience stressors similar to those of men, such as role, job and environmental demands (for example physical setting), interpersonal demands (relationships with superiors), and extraorganizational demands (e.g., relationships with spouse and children). Unique stressors specific to professional women include discrimination, stereotyping, conflicting demands of both marriage and family with work and career, as well as social isolation (Nelson & Quick, 1985: 207).

Social class is recognized as playing a large part in shaping individual's health behaviours including stress (Chin, Monroe, & Fiscella, 2000: 318). Behavioural risk factors such as smoking, high fat diet, inadequate physical activity, drug and alcohol use, and unsafe sexual behaviour are strongly associated with lower social class.

3.3.2 *Organizational stressors*

Not only does the individual have to contend with potential stressors outside the workplace, but also with those that are generated within an organization. These stressors are unique to the organization and occur at the macrolevel dimension of the organization (Luthans, 2002: 399). The macrolevel comprises four categories of potential stressors, which include administrative policies and strategies, organizational structure and design, organizational processes, and working conditions (Figure 3.5).

Cartwright and Cooper (1997: 14-21), Luthans (2002: 399), Moorhead and Griffin (1989: 197-201; Quick *et al*, 1997: 21; Sutherland & Cooper, 2000: 101) focus on a number of factors within the organization that may cause stress. These include task demands, physical demands, role demands, interpersonal demands, and career stress.

3.3.2.1 Task demands

Task demands refer directly to the specific job an individual is performing and includes the type of occupation, job security, workload, and new technology. Moorhead and Griffin (1989: 198) state that 'some occupations are simply more stressful than others' and mention occupations such as

that of a surgeon, air traffic-controller, and professional football coach being more stressful than occupations such as a general practitioner, airplane baggage-loader, and team trainer. Shift work (Cartwright & Cooper, 1997: 15) is a common occupational stressor that influences metabolic rate, blood sugar levels, and work motivation amongst others.

ADMINISTRATIVE POLICIES AND STRATEGIES

Downsizing
       Competitive pressures
       Merit pay plans
       Rotating work shifts
       Bureaucratic rules
       Advanced technology

ORGANIZATIONAL STRUCTURE AND DESIGN

Centralization and formalization
       Line-staff conflicts
       Specialization
       Role ambiguity and conflict
       No opportunity for advancement
       Restrictive, untrusting culture

JOB STRESS

ORGANIZATIONAL PROCESSES

Tight controls
       Only downward communication
       Little performance feedback
       Centralized decision making
       Lack of participation in decisions
       Punitive appraisal systems

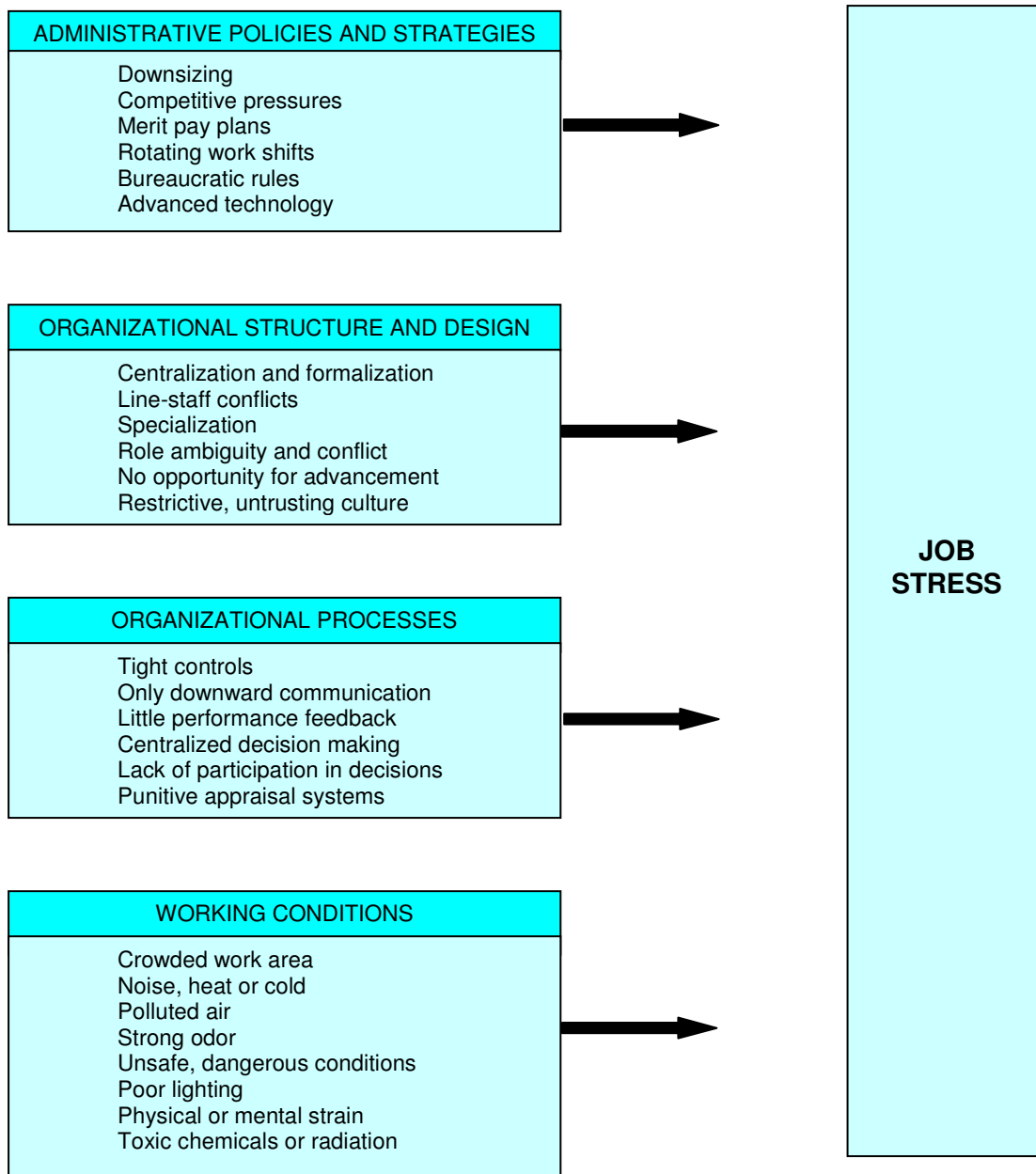| WORKING CONDITIONS |
| --- |
| Crowded work area
       Noise, heat or cold
       Polluted air
       Strong odor
       Unsafe, dangerous conditions
       Poor lighting
       Physical or mental strain
       Toxic chemicals or radiation |

Figure 3.5: Macrolevel stressors of an organization (Luthans, 2002: 399)

Job security also can influence an individual's perception of stress. Moorhead and Griffin (1989: 199) feel that someone 'in a relatively secure job is not likely to worry a lot about losing that job', whereas if 'job security is threatened, stress can increase dramatically' due to layoffs or immediately following a merger. Reengineering, restructuring, and downsizing have become

regular occurrences in order to stay competitive in a global market (DeFrank & Ivancevich, 1998: 56). Research on downsizing has been shown to be highly stressful for employees (Jick in Sutherland & Cooper, 2000: 10). Survivors often 'experience tremendous pressure from the fear of future cuts, the loss of friends and colleagues, and an increase in workload' (DeFrank & Invancevich, 1998: 57). Armstrong-Stassen (2002: 10) observed that when an employee was declared redundant but remained in the organization after the downsizing was complete, she reported a significant increase in organizational trust, commitment, and job satisfaction.

Workload can be perceived as either too much or too little, for example work-underload or work-overload. Work-underload often refers to routine jobs 'that demand too little in terms of demonstration of skills or use of knowledge and experience' and are as stressful as jobs with high role overload and that required high levels of responsibility (Quick *et al*, 1997: 27). This is often associated with boredom, apathy and lack of motivation to work (Sutherland & Cooper, 2000: 174). Work-overload 'occurs when a person simply has more work to do than he or she can handle' (Moorhead & Griffin, 1989: 199). This can refer to too many tasks to do or to little time to complete the tasks in (quantitative overload), or the subjective feeling that the individual may feel incompetent to do the job (qualitative overload). Quantitative overload leads to long working hours which may take a toll on employee health (Cartwright & Cooper, 1997: 15). Research has established a link between extended shifts and deaths due to coronary disease (Breslow & Buell, and Russek & Zohman, in Cartwright & Cooper, 1997: 15).

The introduction of new technology 'has required management and workers alike to continually adapt to new equipment, systems, and ways of working' (Cartwright & Cooper, 1997: 16). Keeping up with new technology in order to maintain technological superiority or having a boss trained in the "old ways" or not adapting to new technology is a great source of pressure at work. A new term was coined for the adverse reactions some individuals show when confronted with new technology: it is called technostress (Genco, 2000: 42). These individuals feel inadequate and frustrated because they are not up-to-date with the new technology. The stress they experience leads to feelings of helplessness, loss of motivation, mood swings, and even depression.

3.3.2.2 Physical demands

Physical demands refer to the working conditions, which include the physical surroundings, and the design or physical setting of the workplace (Cartwright & Cooper, 1997: 14; Moorhead & Griffin, 1989: 199; Quick *et al*, 1997: 21).

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Physical surroundings refer to aspects such as noise, humidity, lighting, smells, and temperature. Excessive noise, vibrations, heat, cold, humidity dry air, poor lighting, extremely bright lighting or other rays such as ultraviolet light and electromagnetic radiation can result in stress. The design or physical setting of the workplace may be another source of stress. A poorly designed office could make it difficult for individuals to have privacy, or could result in too much or too little social interaction (Moorhead & Griffin, 1989: 200). Too much interaction may distract the individual from the task at hand, while too little could result in boredom or even loneliness. Typical managers in organizations mainly function within an office environment and are therefore not being exposed to hazardous situations and noxious agents that blue-collar workers are subjected to.

3.3.2.3 Role demands

Role demands refer to a set of behaviours associated with a particular position or particular role the individual has in a group or organization (Moorhead & Griffin, 1989: 200). When these are clearly defined and understood and the individual experiences expectations as clear and non-conflicting, stress should be at a minimum (Cartwright & Cooper, 1997: 16). Although individuals bring different roles into the organization the most important role they have at work is their organizational one (Luthans, 2002: 408). An individual may experience stress as a result of role ambiguity and conflict, and responsibility for others.

1)   Role conflict and ambiguity

Role conflict and ambiguity develops when an individual is uncertain about his or her job definition, work objectives, co-workers' expectations, and responsibilities of his or her job (Cartwright & Cooper, 1997: 17; Luthans, 2002: 408). Role conflict and ambiguity may result in lowered self-esteem, depressed mood, life dissatisfaction, low motivation to work, and job turnover.

Role conflict can be experienced as incongruence between two or more roles (Moorhead & Griffin, 1989: 200) or when an individual experiences conflicting job demands (Cartwright and Cooper, 1997: 17). Role ambiguity can be defined as a lack of clarity regarding the exact nature of a particular role (Moorhead & Griffin, 1989: 250). This can result from having a poor job description, obtaining unclear instructions from the supervisor, or unclear cues from fellow workers.

The literature on organizational development describes three different types of role conflict often experienced by both mangers and their fellow workers (Luthans, 2002: 408):

- Interrole conflict, which can happen when a person experiences conflict among two or more roles that must be played at the same time. Work roles and non-work roles are often found to be the cause.

- Intrarole conflict may be created by contradictory expectations as to how a given role should be played. Luthans (2002: 408) gives the example of a manager, who is unsure whether he or she should be autocratic or democratic when dealing with his or her subordinates.

- Person-role conflict may result from a basic incongruence between the person and the expectations of the role. Moorhead and Griffin (1989: 251) illustrate this by a peace activist working for a weapons factory, although it goes against this person's beliefs.

Chen and Spector (1992: 179) gathered self-report data from 400 white-collar employees found in a number of different occupations. Among the variables measured they found that work stressors such as role ambiguity and role conflict gave rise to interpersonal aggression and sabotage.

2)   Responsibility for others

According to Cartwright and Cooper (1997: 17) there are two types of responsibility, one for people and one for things such as budgets, equipment, and buildings. Individuals taking responsibility for people would have to spend more time dealing with people, going to meetings, and trying to meet deadlines, were more likely to experience stress than those not working with people.

3.3.2.4 Interpersonal demands

Interpersonal demands refer to pressures, which are experienced by individuals as exerted by co-workers. Group pressures and relationships at work create demands on the individual resulting in an increase in stress (Moorhead & Griffin, 1989: 200; Cartwright & Cooper, 1997: 18).

1)   Group pressures

Group pressures according to Moorhead and Griffin (1989: 200) 'include such things as pressure to restrict output, pressure to conform to the group's norms', as well as exerting pressure on individuals to conform. If the individual varies from the group's expectations, he or she may experience high levels of stress.

2)   Relationships at work

Relationships at work may also be a major source of stress. When poor relationships exist between colleagues, this may lead to irritation which over time leads to a decrease in self-esteem and an

increase in anxiety (Mohr in Dormann & Zapf, 2002: 34). Anxiety leads to depressive symptoms further impacting self-esteem. Social isolation may occur exacerbating the depressive symptoms. Psychosomatic complaints may also be reported. Cartwright and Cooper (1997: 18) mention that emotional problems may result 'when the relationship between a subordinate and a boss is psychologically unhealthy for one reason or another'. Employees that experienced high levels of work stress also had a negative perception of the group that they worked in (Jex & Thomas, 2003: 166) and thus possibly impacting on group effectiveness.

Buck (in Cartwright & Cooper, 1997: 18) found that 'when a boss was perceived as "considerate", the subordinates felt that there was "friendship, mutual trust, respect, and a certain warmth" between boss and subordinate". Those subordinates that felt that their bosses were inconsiderate experienced more job pressure. The reverse also holds true. Relationships with subordinates can also be stressful particularly for those in managerial positions with technical and scientific backgrounds as they may lack people skills (Cartwright & Cooper, 1997: 18). Competition and personality conflicts among co-workers may also result in stress (Cartwright & Cooper, 1997: 19; Moorhead & Griffin, 1989: 200). Abrasive, hard-driving individuals cause stress for co-workers because they ignore the others' feelings and their way of interacting (Levinson, in Cartwright & Cooper, 1997: 19).

3.3.2.5 Career stress

For many individuals a career spanning a lifetime is of great importance. Being promoted, gaining increased status, getting higher salaries, and finding better opportunities has all been associated with career development (Moorhead & Griffin, 1989: 638). Today however, lack of job security, fear of job loss, and obsolescence or retirement are common features of working life (Cartwright & Cooper, 1997: 19). Job opportunities are becoming scarce due to downsizing to create smaller, flatter and more effective organizations. Organizational downsizing is associated with a significant decline in job satisfaction (Ashford, Lee & Bobko in Campbell-Jamison *et al*, 2001: 42), as well as motivation and loss of commitment towards the organization (Campbell-Jamison *et al*, 2001: 42). The resultant job insecurity is experienced as highly stressful. Uncertainty about future career possibilities may be another source of career stress (Möller & Spangenberg, 1996: 348). A study conducted on stress and coping amongst South African dentists found that nearly half of the respondents were uncertain about their future career direction and options.

3.3.3 Group stressors

The group is a great potential source of stress, which includes the lack of group cohesiveness and social support.

Lack of group cohesiveness refers to the sense of "togetherness" the employee's experience, especially at the lower levels of the organization. When the employee does not experience a sense of cohesiveness, it can lead to high levels of stress (Luthans, 2002: 400). Cohesiveness is very important to employees, specifically at the lower levels of the organization. If the employee cannot be part of the group due to either the task design, the supervisor preventing it, or when other members of the group shut the individual out, a lack of cohesiveness can be experienced as highly stressful. Lack of social support can be very stressful, as the individual cannot share their ups and downs with others. Quick *et al* (1997: 197) conclude that there is a strong connection between social support and health. For example, socially isolated individuals are less healthy both physically and psychologically and they are more likely to die (House *et al* in Quick *et al*, 1997: 196). In a cohesive group this is not expected to happen.

3.3.4 Individual stressors

Individual dispositions tend to moderate the affect that stressors have on the person (Luthans, 2002: 401; Schell, 1997: 222; Quick *et al*, 1997: 47). These include individual dispositions such as Type A and B personalities, learned helplessness, self-efficacy, psychological hardiness and optimism.

3.3.4.1 Type A and B personalities

Type A personality refers to an individual that Friedman and Rosenman (in Luthans, 2002: 401) define as 'an action-emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and if required to do so, against the opposing efforts of other things or other persons'.

Schell (1997: 226) describes them 'as individuals that walk fast, talk fast, think fast, have relatively loud voices, are job- and task-fixated, use sarcasm, have forced rather than natural smiles, and talk over others if others take too long to come to the point'. They are highly competitive, work under constant pressures such as deadlines, are easily frustrated and unable to relax (Schell, 1997: 226; Luthans, 2002: 402). Type A personalities are associated with cardiovascular disease, specifically heart attacks. Most modern thinking associates type A personalities with anger and hostility that

leads to cardiovascular disease (Baron & Byrne, 2003: 449; Luthans, 2002: 402; Schell, 1997: 226). Type B personalities are in a sense the opposite to Type A, in that they are less competitive, less concerned about time, are more patient, have a lower sense of urgency, are more relaxed, and not typically associated with anger and hostility (Baron & Byrne, 2003: 449; Luthans, 2002: 402; Quick *et al*, 1997: 49).

3.3.4.2 Learned helplessness

Learned helplessness is a concept coined by Seligman (Luthans, 2002: 403) based on research over the feeling of loss of control initially conducted on dogs. Seligman and his colleagues have expanded this research to explaining individuals' sense of lack of control. Individuals are more likely to experience a sense of helplessness when they perceive the cause of loss of control:

- To be related to something about their personal characteristics (as opposed to outside, environmental forces;
- As stable and enduring (rather than just temporary);
- To be global and universal (cutting across many situations, rather than in just one sphere of life) (Luthans, 2002: 403).

When individuals feel that they do not have the ability to control their work situation, they will experience stress (Jackson, 1983: 17). When they are included in decision-making that affects them, their work stress decreases because their sense of control over their work environment increases. Any organizational change, such as a merger, is perceived as highly stressful as it is a situation over which the employee feels he or she has no control (Cartwright & Cooper, 1997: 33).

3.3.4.3 Self-efficacy

Self-efficacy refers to the individual's self-perception of his or her controllability over action and a specific perception of one's capacity to execute a particular task (Bandura in Maddi, 1996: 458). This disposition plays an important role in the ability to handle stress (Luthans, 2002: 311). Bandura *et al* (1985: 412) found that individuals with high self-efficacy had a relatively low physiological arousal level displayed by low epinephrine and norepinephrine secretion, whereas those individuals experiencing high levels of stress had high physiological arousal levels and displayed high catecholamine reactivity. Therefore those individuals with a high self-efficacy tended to remain more in control when faced with a stressful situation.

3.3.4.4 Psychological hardiness

When individuals are faced with extreme stressors, some may disintegrate at the slightest provocation, whereas others seem unfazed (Luthans, 2002: 403). Those individuals, who can cope well with extreme stressors, are viewed as being hardy. Kobasa (in Kobasa *et al*, 1982: 174) proposed that hardiness is a constellation of personality characteristics that function as a resource of resistance in the encounter with stressful life events and involves a commitment disposition, a control disposition, and a challenge disposition. A study of middle- and upper–level managers who were under considerable stress found that the hardy executives had a lower rate of stress-related illness and were found to be more involved in what they were doing (Kobasa *et al*, 1982: 174). They were committed, they viewed change as normal and challenging, and they felt that they could influence the events around them, giving them a sense of control.

3.3.4.5 Optimism

Optimism and pessimism reflect alternative styles of peoples' expectations of the future (Carver & Scheier, 2002: 231). People use these styles to predict whether future outcomes will be good or bad. The expectancies people have generally pertain to their entire life. Optimistic people expect to have positive outcomes even when circumstances are difficult. Pessimistic people expect negative outcomes under the same circumstances. Quick *et al* (1997: 52) state that optimists moderate stress by realizing that bad events and hard times 'are temporary, limited, and caused by something other than they them self'. Optimism is related to emotional wellbeing, quality of life and to lower levels of depression. Optimism was also related to problem-focused coping especially when the situation was viewed as controllable (Scheier, Weintraub, & Carver in Carver & Scheier, 2002: 235). Furthermore it was to the use of positive reframing and with the ability to accept the reality of the situation when the situation was viewed as uncontrollable.

3.4 Conclusion

Stress is a phenomenon that is here to stay. Since Selye first coined the term 'stress' in 1956, researchers find it a term that is not easily defined and conceptualised. The sources and causes of stress are many and varied, whether found within or without the organization, which were discussed extensively in this chapter. They include amongst others job insecurity, work-hours, control at work, managerial style, physical and role demands, as well as group stressors and career stress.

Stress is not necessarily bad for the individual but depending on the ability of the individual to cope with the perceived stressors, it may have detrimental consequences for both the individual and the organization. The ability to deal with the stressor effectively is mediated by the personality characteristics of the individual, which may for example include factors such as A type personality, hardiness, learned helplessness, and self-efficacy. For those individuals that appraise stress as harmful and difficult to cope with, their inability to do so has dire consequences for them, such as affecting him or her on a physical, psychological, and behavioural level. Cardiovascular disease and chronic bouts of depression are two of the main consequences of chronic work stress. Other stress-related disorders include short-term depression, anxiety, insomnia, migraine headaches, stomach ulcers, asthma, arthritis, and substance abuse. Stress may give rise to a demotivated workforce, absenteeism, work-related accidents, frequent or prolonged sick leave, decreased productivity, and costly disability claims costing the organization millions of Rand.

Organizations need to be aware of the hazards and stressors that may exist in the workplace and to take measures, that allows the organization to manage these effectively so as to protect the wellbeing of the employee but also to cover themselves against any potential legal action from affected employees. By taking appropriate measures organizations may enhance not only employee well being but also employee commitment and performance.

The present research makes use of the stimulus-response approach to stress in which workplace stress is viewed as a transaction between the individual and his or her environment. Although the stimulus-response approach allows for the use of different models, the present study will use Cox and McKay's five stage model (see section 3.2.4.1). The reason for this choice was that according to this model stress is described as a dynamic process in which the physical as well as the psychological characteristics of the individual play a role. Furthermore, the focus is on the important role of specific demands and the individual's ability to deal with them.

Cox (1978: 19) describes the first stage as representing 'the sources of demand relating to the person' and it forms part of the individual's environment. The demands and stressors impacting on the individual both within and without the organization will be measured. The second stage consists of the individual's perception of the demands and stressors and his or her ability to cope with these. When a high demand is made on an individual, he or she will not experience stress until he or she has reached his or her limitations. Thus the experience of stress whether high or low will again be assessed. The third stage is associated with the physical changes as well as cognitive and behavioural responses. These purport to reduce the immediate impact of the demands and stressors. Here the role of coping through social problem solving will be assessed. The fourth stage

focuses on the consequences of the coping responses, whether actual or perceived. These include the effect of the response both on a cognitive and behavioural level. In terms of the study this would include the experience of anxiety, depression, worry as well as expressions of workplace aggression. The fifth and last stage of the model revolves around feedback and is found to occur at all of the other stages influencing the outcome at each of the other stages.

The changing demographics and the corresponding changes occurring within organizations in South Africa necessitates continuing research on the causes and consequences of stress in the workplace. As the major causes of stress have been discussed affecting the individual in the workplace some of the specific consequences need to be discussed in more depth. Research on the phenomenon of aggression in the workplace has only mushroomed recently and no research at the time of writing has been reported in South Africa.

CHAPTER 4

AGGRESSION IN THE WORKPLACE

4.1   Introduction

In Pretoria a male walks into one of the offices at his workplace. He shoots and kills three of his female colleagues before he kills himself with a 7.65 pistol (Beeld, 22 August 1997).

Likewise similar incidences in other countries such as the United States of America, have been the focus of the media. Baron and Neuman (1996: 162) report that each week, on average of 15 people are murdered at work. However it must be noted that not all individuals who are murdered are as a result of an angry employee who shoots and kills his co-workers or supervisors. Instead, it usually occurs when outsiders enter the workplace for criminal purposes and attack workers. Workplace homicides were the second leading cause of death in the workplace for all employees by 1993 in the United States (Bureau of Labor Statistics in Neuman & Baron, 1998: 392). Other harmful but less dramatic aggressive acts occur with substantially greater frequency but are often not reported. Aggression as well as any form of violence in the workplace, whether physical or psychological in nature, is capable of causing harm to both the individual and the organization (Leather *et al*, 1998: 162).   The true extent of workplace aggression is often underacknowledged (Randall, in Leather *et al*, 1998: 162) and the extent of its consequences is understated (Barling, in Leather *et al*, 1998: 162).

Baron and Neuman (1996: 162) state that very limited numbers of individuals report that they have been threatened with physical harm or actually experienced such incidences by others at work. These researchers report incidences of 3% and 7%, respectively. Violence in the workplace may be sensational but is actually part of a greater problem, namely that of workplace aggression. Although some employees may be the victim of physical violence resulting in bodily harm and even death, most employees are the targets of less dramatic forms of aggression, such as 'aggression that is verbal in nature, or physical actions that are far less extreme than attacks with deadly weapons' (Baron & Neuman, 1996: 163).

Workplace aggression has been the focus of research over the last two decades with the majority of articles published after 1994 (Neuman & Baron, 1998: 392) with the emphasis on workplace homicides perpetrated by outsiders. The focus of this study is on acts of aggression that can be called covert (for example writing an anonymous letter, withholding of co-operation, spreading of rumours) and overt (for example consistent arguing, intense arguments with supervisors or co-workers, physical fights, destruction of property).

No literature at the time of writing could be found on aggression in the workplace for the South African context.

4.2   Aggression

The term aggression is firmly established in everyday language and in the 'technical vocabulary' of psychologists (Krahé, 2001: 10). Aggression comes from the Latin *aggressio* meaning to attack (Reader's Digest Complete Wordfinder, 1997) and is defined by the dictionary as 1) the act or practice of attack without provocation, especially beginning with a quarrel or war; 2) an unprovoked attack; 3) self-assertiveness; forcefulness; and 4) psychologically a hostile or destructive tendency or behaviour. This definition overlaps with the general definition given by Buss (in Geen, 2001: 2), which states that aggression is 'a response, that delivers noxious stimuli to another organism'. Aggression as used in ordinary day-to-day language does involve 'aversive stimulation of some sort and intensity, whether it be in the form of a bullet, a bomb, a physical blow, or some subtle act like an insult or an undeserved criticism' (Geen, 2001: 2). However some critics assert that this definition is too broad as it includes many forms of behaviour that should not be categorized as aggression, such as what is called "good aggression", and some assert it is too narrow as it excludes all non-behavioural processes, such as thoughts and feelings (Krahé, 2001: 10). Aggression is more complex as a purely behavioural definition would indicate. Additional elements need to be added to arrive at a more balanced definition. The first element that needs to be included is the intent to harm the victim, which, in turn presupposes the expectancy that the action will lead to a specific outcome (Geen, 2001: 2; Krahé, 2001: 10). The second element considers the motivation of the victim to avoid the harmful treatment. A person might tolerate, and even want to be punished to atone for guilt. This helps to exclude aggression, which is self-directed as in suicide or as a result of an injury inflicted in the context of sadomasochistic sexual practices. In the context of the discussion the definition that takes these elements into account is that proposed by Baron and Richardson (1994: 7), which states that aggression is 'any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment'. It leaves sufficient room for a range of factors that characterize different forms of aggression (Krahé, 2001: 11) (Table 4.1).

Often researchers classify aggressive behaviour according to two categories, hostile or affective aggression, and instrumental aggression. The former refers to the harming of the target as the main motive for the act, and the latter which 'may or may not involve strong emotions' (Geen, 2001: 4) refers to 'the aim to reach an intended goal by means of the aggressive act (Krahé, 2001: 11).

Table 4.1: Factors that characterize different forms of aggression

Aspects of a typology of aggressive behaviour	
Response modality	Verbal vs. physical
Response quality	Action vs. failure to act
Immediacy	Direct vs. indirect
Visibility	Overt vs. covert
Instigation	Unprovoked vs. retaliatory
Goal direction	Hostile vs. instrumental
Type of damage	Physical vs. psychological
Duration of consequences	Transient vs. long-term
Social units involved	Individuals vs. groups

Aggression has long been an extensively researched topic in social psychology (Edwards, 1999: 129). A number of theories have been developed to try and answer the question why individuals aggress against one another. These include the instinct theories, biological theories, drive theories, social learning theories, cognitive theories, and personal causes of aggression. The role of anger in aggression will also be discussed and the difference between aggression and violence will be highlighted.

4.2.1   Instinct theories

Instinct theories are the oldest and possibly the best-known explanation for human aggression, which states that 'human beings are somehow programmed for violence by their basic nature,' (Baron & Byrne, 2003: 435). Aggression is therefore viewed as part of ones physical nature (Edwards, 1999: 133). Freud (Baron & Byrne, 2003: 435) suggested that aggression stems mainly from the death wish or instinct, which he called Thanatos. This instinct inherent in all people is initially aimed at self-destruction, but to prevent that, it is redirected outward, towards others. If the hostile impulses that are generated over a period of time are not released and reach high levels, it could lead to dangerous acts of violence.

Konrad Lorenz (Baron & Byrne, 2003: 436; Edwards, 1999: 138) held that aggression was derived from a 'fighting instinct' common to both human beings and many other species. This instinct probably 'developed during the course of evolution because it yielded important benefits–for example, dispersing populations over a wide area'. He explained aggression as behaviour triggered by specific external stimuli following a progressive accumulation of aggression-specific energy (Geen, 2001: 10, Krahé, 2001: 29). Aggression will be released followed by a new build-up of energy. If the energy level becomes too high without prior release by an external stimulus, it will overflow, with spontaneous aggression the outcome. Lorenz (Baron & Byrne, 2003: 436) also saw aggression as closely related to mating as it assured that the 'strongest and most vigorous individuals' would 'pass their genes on to the next generation'. Sociobiologists view aggression as an aid to the male of the species in obtaining mates. Higher levels of aggression, at least among males, would increase the chances of passing on its genes

to the next generation thus favouring the principles of natural selection (Baron & Byrne, 2003: 436).

Lorenz's application of animal studies to human aggression has been criticised on conceptual and empirical grounds. Mummendey (in Krahé, 2001:29) believes that it is impossible to measure the amount of aggressive energy found in an individual at a given time. This assertion is debatable as the Szondi test may be used to measure the amount of aggressive energy (Szondi, 1972: 307-311). The assumption that the available energy is used up in an aggressive act is also problematic, as it would imply that it is not possible to trigger another aggressive response before the reservoir is sufficiently filled. Research has shown that humans can act aggressively in quick succession as the first aggressive act precipitates further acts of aggression.

4.2.2   Biological theories

Biological theories view the role of biological factors as important in the understanding of aggressive behaviour (Baron & Byrne, 1997: 394; Edwards, 1999: 133). Brain functions have been studied in animals, which show the limbic system is associated with fragments of aggressive acts (Edwards, 1999: 134). However it is difficult to study human brain function in the same manner and the only information is typically obtained from accidents, disease, and exploratory surgery. Neuroscientists have shown that the amygdala, found in the limbic system is associated with emotions such as anger, rage and the fight or flight response (LeDoux in Goleman, 1996: 16).

Neurotransmitters, hormones, and chemical poisoning are believed to play a role in aggression (Baron & Byrne, 1997: 394; Edwards, 1999: 135). Neurotransmitters that are thought to be associated with acts of aggression are serotonin, norepinephrine, and dopamine, when present in high concentrations in the limbic system. However no direct link between neurotransmitters and aggressive acts has been found. Higher levels of serotonin have been found in persons that attempted suicide and those who were institutionalised since childhood because of extremely high levels of aggression (Baron & Byrne, 1997: 395).

Sexual hormones are thought to be associated with aggressive acts (Edwards, 1999: 136). Men are more likely to be aggressive and violent than women. This difference is thought to be due to the relative proportions of male and female sex hormones. In a meta-analysis of 45 independent studies Book *et al* (2001: 581) found a weak positive relationship between testosterone and aggression which was consistent with past meta-analysis (Archer in Book *et al*, 2001: 581). They also found that two variables moderated this relationship. The one variable referred to the age of the participant, where the effect size was largest in the 13- to 20-year old males and it

declined with age. The other variable was the time of day the testosterone was measured as this influenced the reliability of the testosterone levels. For males, the observed relationship between testosterone and aggression was highest in the afternoon with the measurement being the most reliable.

Chemical poisoning that is induced by abnormal brain chemistry is sometimes found to be associated with aggression (Edwards, 1999: 136). Some individuals with low blood sugar (hypoglycaemia) behave aggressively whereas others may become depressed and withdrawn. Alcohol in some individuals may weaken their moral and social controls and they may act aggressively.

These findings indicate that biological factors do play a role in human aggression but are mediated by social and cognitive factors. Baron and Byrne (1997: 395) put it aptly stating 'where human aggression is concerned, biology may be important, but it is definitely *not* destiny'.

4.2.3   Drive theories

Drive theories of aggression view that aggressive acts stem from the presence of a drive called aggression (Edwards, 1999: 142). The most well known of these theories is the frustration-aggression hypothesis, which proposes that when people become frustrated, because their ongoing, goal-directed behaviour is blocked or thwarted, a strong motive to respond aggressively is aroused (Baron & Byrne, 2003: 436; Dollard *et al.*, in Huessmann, 1994: 3). The aggressive behaviour is directed towards the person or object perceived as the cause of the frustration, with the intent to harm (Baron & Byrne, 2003: 436; Edwards, 1999: 142; Krahé, 2001: 34). However, research shows that not all kinds of frustration lead to aggression, and that aggression sometimes does not stem from situations that are frustrating. Sometimes frustrated individuals may rather withdraw from the situation or become depressed.

Miller modified the original theory (in Krahé, 2001: 34) and converted it from a deterministic relationship between frustration and aggression into a probabilistic one, which states that 'frustration produces instigations to a number of different types of response, one of which is an instigation of some form of aggression'. Aggression is not the only response to frustration, but one a number of possibilities.

Whether or not frustration will lead to an aggressive act will depend on the role of moderating variables (Krahé, 2001: 35), for example fear of punishment for overt aggression or the unavailability of the frustrator will inhibit aggression. In some instances the aggression is "displaced" away from the frustrator onto a more easily accessible or less intimidating target.

4.2.4 Social learning theory

The social learning theory views that aggression is mainly learnt either through direct experience or by observing and modelling aggressive behaviours (Baron & Byrne, 1997: 396; Martinko & Zellars, 1998: 2). Bandura (in Eron, 1994: 5) proposed that an understanding of aggressive acts was dependant on how they were learnt and maintained through direct or vicarious experiences and the effect that factors such as role-reinforcement contingencies and punishment had on this learning. Eron (1994: 5) mentions that he demonstrated in his research that aggressive behaviours are learnt by "training" from 'various socializing agents, specifically parents, teachers, and peers'. Baron and Byrne (1997: 396) also mention that through both direct and vicarious learning, individuals learn who or what to direct their aggression towards, what actions by others justify or require an aggressive response, and when an aggressive response is called for or not.

4.2.5 Cognitive theories

Cognitive theories focus on cognitive factors that help determine how an individual will react towards environmental events impacting on him or her (Baron & Byrne, 1997: 396; Eron, 1994: 7). The first factor that plays a role is what Huesmann (in Eron, 1994: 7) described as cognitive scripts, likened to programs for social behaviour that developed during an individual's early development. These programs are stored in memory and act as guides for behaviour.

Another cognitive factor that influences behaviour is how the individual interprets the situation. This interpretation consists of an initial appraisal of the situation, which occurs very fast to assess if malice was intended, and which may be followed by a reappraisal, taking a little longer to assess the consequences if one responds in various ways (Anderson, in Baron & Byrne, 1997: 397).

Baron and Byrne (1997: 397) mention another factor that plays a role, namely the individual's current mood. Unpleasant or aversive experiences result in negative affect, which in turn influences a person's cognitive processes. This affect is associated on a primitive level with fight or flight tendencies, but also to thoughts and memories related to similar experiences which could result in aggressive behaviour (Berkowitz, in Edwards, 1999: 144). Baron and Byrne (1997: 398) summarize the complex interplay between cognitive appraisals, present moods, and the thoughts and memories associated with these experiences that may lead to aggressive behaviour (Figure 4.1).
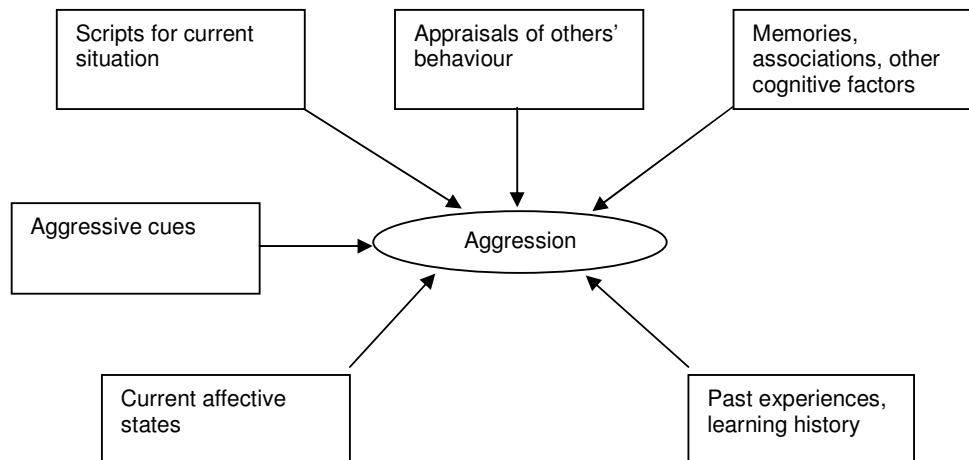
Figure 4.1: Cognitive theories of aggression

Modern theories of aggression do not focus on a single factor to explain the main cause of aggression and instead draws upon the advances in many fields of psychology. Anderson (in Lindsey and Anderson, 2000: 535) has proposed such a model of aggression, the general affective aggression model (GAAM), which depicts aggression as triggered by a wide range of input variables. It outlines the interplay of affective states, cognitive processes, and behavioural choices that lead to an aggressive act (Figure 4.2).
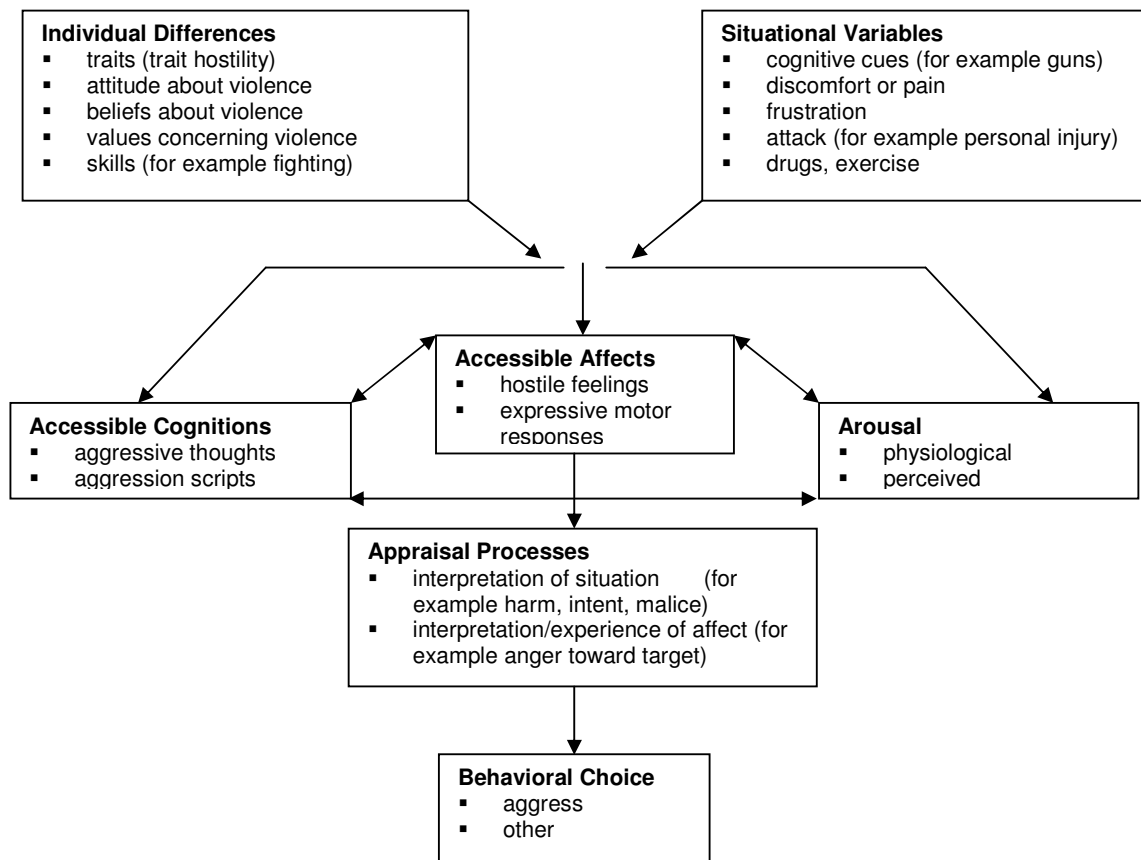

Figure 4.2: The General Affective Aggression Model

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4.2.6 *Personal causes of aggression*

Research has shown that certain personal characteristics inherent in an individual may predispose him or her to engage in aggressive acts (Baron & Byrne, 1997: 411; Geen, 2001: 70; Krahé, 2001: 54). Type A personalities, hostile attribution bias, the "Big Five" dimensions of personality, antecedents of aggression, i.e., irritability, emotional susceptibility, and dissipation-rumination, and gender differences all are thought to play a role.

4.2.6.1 Type A personality

Type A, and B personalities have been discussed previously (see section 3.3.4.1.). Type A personalities tend to be more aggressive than type B personalities associating them with hostility and anger (Baron & Byrne, 2003: 449; Luthans, 2001: 402; Schell, 1997: 226). Type A personalities are more likely to engage in hostile aggression, in which the main goal of the A-type person is to inflict some kind of harm on the victim (Strube *et al* in Baron & Byrne (2003: 450). However, they are not more likely to engage in instrumental aggression than other personality types.

4.2.6.2 Hostile attribution bias

Hostile attribution bias refers to the individual's habitual tendency to interpret the actions or intentions of others as hostile even when there is no evidence for this (Baron & Byrne, 2003: 451; Krahé, 2001: 56). Dodge and his colleagues (in Baron & Byrne, 1997: 412) showed in their research with adolescents and adults in a prison setting that the 'tendency to perceive malice in the actions of others, even when it doesn't exist, is one personal characteristic closely related to high levels of aggression against others'. Krahé (2001: 56) notes that attribution style not only affects the way in which individuals interpret actions directed at them, it also shapes their social perceptions in general. She quotes Dill *et al* (Krahé, 2001: 56) who describe them as people who 'tend to view the world through tinted glasses'.

4.2.6.3 Antecedents of aggressive behaviour

Caprara *et al* (in Geen, 2001: 70) have found that a number of personality variables may act as antecedents of aggressive behaviour. Their research was able to delineate three constructs, namely irritability, emotional susceptibility, and dissipation versus rumination. Irritability refers to the habitual 'tendency to react impulsively, controversially, or rudely at the slightest provocation or disagreement'. Individuals that were habitually irritable showed increased levels of aggression compared to non-irritable individuals. When these individuals had been previously been frustrated the level of aggression was more pronounced.

Emotional susceptibility is defined as a tendency 'to experience feelings of discomfort, helplessness, inadequacy, and vulnerability' (Caprara *et al*, in Geen, 2001: 70). It is thought to be indicative for a generally higher readiness for aggressive behaviour. Individuals that were emotionally susceptible showed more aggressive behaviour, and similarly to irritability, more pronounced after being frustrated. These two constructs are examples of hostile or affective aggression (Krahé, 2001: 55).

Dissipation versus rumination refers to a tendency to 'retain or augment feelings of anger over time following provocation, as opposed to a tendency to dissipate such feelings and become less angry' (Caprara in Geen, 2001: 70). Individuals that are high dissipaters but low ruminators get over a provocative or hostile encounter in a short time without spending much time and effort in thinking about the encounter. However ruminators remain cognitively pre-occupied with the provocative or hostile encounter and are likely to retaliate.

Caprara and his colleagues (in Baron & Byrne, 1997: 413) found that certain characteristics including irritability, emotional susceptibility, and rumination were all related to aggression, which in turn were related to two dimensions of the "Big Five", i.e. agreeableness and emotional reactivity.

4.2.6.4 *"Big Five" dimensions of personality*

Research in recent years has shown that there are only five basic personality dimensions with respect to the human personality (Costa & McCrae, and Funder & Sneed, in Baron & Byrne, 1997: 413), which Baron and Byrne (1997: 413) describe as follows:

- Extraversion: A dimension ranging from sociable, talkative, fun-loving, affectionate, adventurous at one end to retiring, sober, reserved, silent, and cautious at the other.
- Agreeableness: A dimension ranging from good-natured, gentle, co-operative, trusting, and helpful at one end to irritable, ruthless, suspicious, unco-operative, and headstrong at the other.
- Conscientiousness: A dimension ranging from being well organized, careful, self-disciplined, responsible, and scrupulous at one end to being disorganized, careless, weak-willed, and unscrupulous at the other.
- Emotional Stability: A dimension ranging from being poised, calm, composed, and not hypochondriacally at one end to being nervous, anxious, excitable, and hypochondriacally at the other.
- Openness to Experience: A dimension ranging from being imaginative, sensitive, intellectual, and polished at one end to being down-to-earth, insensitive, crude and simple at the other.

The five-factor model is a version of trait theory, which asserts that individuals differ in their enduring emotional, cognitive, and behavioural styles along a mental-health continuum ranging from low to high (Schell, 1997: 211).

4.2.6.5 Gender differences

Gender differences regarding aggression are thought to be complex (Baron & Byrne, 1997: 414). It appears that males are more likely to perform aggressive acts and to be the recipients of such acts (Bogard & Harris, in Baron & Byrne, 1997: 414). Males, more than females, are more likely to aggress against others although not having been provoked in any way (Bettencourt & Miller, in Geen, 2001: 63). When provocation does occur, gender differences tend to disappear. Males are more likely to than females to be involved in physical acts of aggression such as hitting, punching, kicking, and use of weapons, amongst others. Females tend to be involved in verbal and various forms of indirect aggression that make it difficult for the victim to identify the aggressor or to even to realize that they have been the target of aggressive behaviour (Lagerspetz *et al*, in Björkqvist, Österman, & Lagerspetz, 1994: 31).

4.2.7 Anger

Anger is defined as 'extreme or passionate displeasure' (Reader's Digest Oxford Wordfinder, 1997) and is linked, but not always, to aggression. Aggressive acts are often associated with angry people, but some aggressive acts occur in the absence of anger (Edwards, 1999: 145). Anger is thought to be the result of brain activity specifically in the limbic system and specifically the amygdala (Edwards, 1999: 146; Goleman, 1996: 15). Edwards (1999: 146) explains that 'sensory information of events comes from cortex processing and is compared with space-time memories in the hippocampus and compared with affective meaning in the amygdala'. The amygdala can trigger an emotional response, which has a survival value such as the fight or flight response (Goleman, 1996: 299). Anger prepares the body from a physiological point of view for vigorous action by enabling blood to flow to the hands so as grasp a weapon or strike at an enemy, to increase the heart rate and to release hormones such as adrenaline.

Anger produces elevated levels of testosterone for men, and also epinephrine, norepinephrine, and cortisol (McKay *et al*, 2003: 21). Within a social context, anger can function as a way to correct violations of social rules (Edwards, 1999: 146). Averill (in Berkowitz, 1994: 14) found that individuals became angry when they were frustrated only to the extent that they regarded the behaviour of the person thought causing the frustration as unjustified. The frustrations were primarily unwarranted and violated some social rule.

The way anger is actualised by an individual is varied and can either be retained or projected outward (Schell, 1997: 153). Buss and Durkee (in Schell, 1997: 153) have outlined seven classes of anger and hostility:

- Assault: presents as physical violence against others. This outward sign of anger includes getting into fights with others but not destroying objects.
- Indirect Hostility: presents as both roundabout and undirected aggression. Roundabout aggression, like malicious gossip or practical jokes, is indirect in the sense that the "hated object" is not attacked directly but by devious means. Undirected aggression, like temper tantrums and door-slamming, consists of a discharge of negative affect against no one in particular; it is a diffuse kind of rage that has no target or direction.
- Irritability: presents as a readiness to explode with negative affect at the slightest provocation. This kind of aggression includes quick temper, grouchiness, exasperation, and rudeness.
- Negativism: presents as oppositional behavior, usually directed against authority. This kind of aggression involves a refusal to co-operate that may vary from passive non-compliance to open rebellion against rules or conventions.
- Resentment: presents as jealousy and hatred of others. This kind of aggression refers to a feeling of anger at the world over real or fantasized "mistreatment."
- Suspicion: presents as projection of hostility onto others. This kind of aggression varies from merely being distrustful and wary of people to beliefs that others are being derogatory or are planning harm against them.
- Verbal Hostility: presents as negative affect expressed in both the style and content of speech. Style includes arguing, shouting, and screaming. Content includes threats, curses, and being overcritical.

4.2.8   Violence

It is necessary to distinguish between aggression and violence as these two terms are often used interchangeably in ordinary language. Aggression is described as the actual act or process, whereas violence is seen as the consequence or outcome of the aggressive act (O'Leary-Kelly *et al*, 1996: 227). Violence is considered an extreme form of physical aggression and defined as 'the infliction of intense force upon persons or property for the purposes of destruction, punishment, or control' (Geen in Krahé, 2001: 13). The actions of an individual who attempts to physically injure a co-worker would be seen as aggression, whereas the resulting injury would be defined as violence. Tobin (2001: 100) defines violence as 'a severe, extreme, negative, and harmful disturbance to person or property, which includes violation of the rights of those involved.' He views the action taken at this level as 'terminal by the individual.' Mattaini *et al* (in Krahé, 2001: 13) identified six potential functions of violent behaviour:

- Change of, or escape from, aversive situations.
- Positive reinforcement, i.e., attainment of a particular goal.
- Release of negative affective arousal.
- Resolution of conflict.
- Gaining of respect.
- Attack on a culturally defined "enemy', i.e., a member of a devalued outgroup.

4.3   Aggression in the workplace

O'Leary-Kelly *et al* (1996: 228) propose a distinction between aggressive acts that are "organization motivated" and those that have their bases in factors outside the organization. They define organization-motivated aggression as 'attempted injurious or destructive behaviour initiated by either an organizational insider or outsider that is instigated by some factor in the organizational context'. Adopting this position allows the underlying motivation for an act to be the defining issue instead of the specific location where the act occurs, and this approach puts the focus on the individuals presently or previously, employed by the organization thereby limiting the nature of the relationship between the aggressor and the victim. Neuman and Baron (1998: 393) conclude that all forms of intentional harm doing in organizations would qualify as workplace aggression. The term violence would describe only serious instances of physical assault. They define workplace aggression as efforts by which 'individuals' harm others with whom they work, or have worked, or the organizations on which they are presently, or were previously, employed'.

An extensive body of research has become available over the past two decades investigating aggression in the workplace. Baron *et al* (1999: 282) write that less than 50 articles on workplace violence were published during the period 1987-1993, whereas more than 200 were published in the period 1994-1996 alone. Flannery (1996: 57) has reviewed a number of research studies published in the period 1970-1995 focusing on physical forms of violence such as homicide, assault, and rape, as well as exposure to danger and man-made disasters and their impact on psychological health. These incidents of violence do not typically occur between fellow workers but occur when individuals from outside the workplace attack the employees. Considerably fewer studies have investigated less extreme forms of aggression taking place between co-workers, producing mainly psychological damage (Kaukiainen *et al*, 2001: 367). These types of aggressive actions may permit the aggressors to conceal their identity and in some instances their malevolent intentions (Baron *et al*, 1999: 282).

Björkqvist *et al* (1994: 31) conclude that aggressors generally seek behaviours that maximize the harm done to victims, while at the same time minimizing the danger to themselves. Physical aggression, for example, is effective but also risky, and if unsuccessful, the aggressor him- or

herself may get hurt. The effect/danger ratio describes the aggressors' subjective estimates of these two aspects. Generally aggressors prefer a large effect/danger ratio. This tendency of aggressors to disguise their identity and intentions has been described as covert, where as aggressors who do reveal their identity and their aggressive intentions have been called overt.

A number of factors in the workplace tend to further strengthen a high effect/danger ratio. Firstly, individuals in a given work environment are generally in repeated and prolonged contact with one another over an extended period of time. This may increase the probability of retaliation from these individuals Secondly, individuals in work settings often get to know one another well, and as they have to co-ordinate their activities, they often pay close attention to each other's behaviour (Baron & Richardson, in Neuman & Baron, 1998: 395). Anonymity, which has been shown to increase aggression, is found to be absent (Prentice-Dunn & Rogers, in Baron *et al*, 1999: 282). Thirdly, work settings have many potential witnesses who may observe aggressive actions. This may encourage aggressors to use forms of aggression that may conceal their identity from intended victims and other individuals so as to avoid disapproval of such behaviours. These reasons may motivate the aggressors to use covert forms of aggression rather than overt forms. Combining these three dichotomies, results in eight types of aggression, which can be applied to the workplace (Table 4.2).

Table 4.2: Types of aggression in the workplace

Types of aggression	Examples
Verbal-Passive-Indirect	Failing to deny false rumours about the target. Failing to transmit information needed by the target.
Verbal-Passive-Direct	Failing to return the target's phone calls. Giving the target the silent treatment.
Verbal-Active-Indirect	Spreading false rumours about the target. Belittling the target's opinions to others.
Verbal-Active-Direct	Yelling, shouting, making insulting remarks. Flaunting status or authority; acting in a condescending, superior manner.
Physical-Passive-Indirect	Causing others to delay action on matters of importance to the target. Failing to take steps that would protect the target's welfare or safety.
Physical-Passive-Direct	Purposely leaving a work area when the target enters. Reducing targets' opportunities to express themselves (for example scheduling them at the end of a session so that they don't get their turn).
Physical-Active-Indirect	Theft or destruction of property belonging to the target. Needlessly consuming resources needed by the target.
Physical-Active-Direct	Physical attack (for example pushing, shoving, hitting). Negative or obscene gestures toward the target.

A framework was developed by Buss (in Baron & Neuman, 1996: 163) to describe covert aggression. According to Buss (in Baron & Neuman, 1996: 163) aggressive acts can be classified in terms of three dichotomies: verbal-physical, direct-indirect, and active-passive. Verbal forms of aggression refer to efforts by the aggressor to inflict harm on others through

words rather than deeds, where as physical forms of aggression refer to overt actions with the intention to harm the recipient in some or other manner. Direct forms of aggression refer to aggressive acts in which harm is delivered directly to the victim, where as indirect forms of aggression seek to deliver harm through the actions of agents or through assaults on people or objects valued by the target. Active forms of aggression describe the harm achieved through the performance of some act, whereas passive forms of aggression describe the harm resulting from withholding of some action.

Research done by Baron and Neuman (1996: 169) using the eight combinations within the Buss framework showed that respondents reported witnessing verbal forms of aggression more frequently than physical forms. They also reported witnessing more passive forms of aggression than active forms, and indirect forms more than direct forms of aggression.

Exploratory factor analysis of this data revealed 33 variables subsumed by three dimensions, which were expressions of hostility, obstructionism, and overt aggression (Baron *et al*, 1999; 286; Neuman & Baron, 1998: 397). Expressions of hostility include behaviours that are primarily verbal or symbolic in nature (for example gestures, facial expressions, and verbal assaults) and occurred more often than any other form of aggression. Obstructionism includes actions that are aimed at impeding an individual's ability to perform his of her job or interfere with an organization's ability to achieve its objective. These tend to be passive or covert forms of aggression such as withholding some behaviour or resource. Obstructionism was significantly more prevalent in work settings than overt aggression. Overt aggression refers typically to workplace violence, which includes workplace homicide, but also non-fatal physical or sexual assault. However, the vast majority of employees never witness or experience these forms of assault. Sabotage and vandalism which includes property damage, destruction of machinery and goods, passing on defective work, flattening of tyres, scratching cars, planting computer viruses, deletion of important computer records, and writing on company furniture, as well as theft may also occur.

Kaukiainen *et al* (2001: 363) measured four types of observed and experienced aggression: direct overt, indirect manipulative, covert insinuating, and rational-appearing aggression. They found that indirect manipulative and rational-appearing aggression was perceived to be the most widely used aggression styles in the work place. These studies support the view that much of the aggression found in the workplace is covert rather than overt in nature.

4.3.1 *Causes of workplace aggression*

Aggression stems from the complex interplay of social, situational, and individual or personal factors (Douglas & Martinko, 2001: 548; Neuman & Baron, 1998: 402). These same factors may

be applied to organizational settings to understand workplace aggression and aid in the development of models of workplace aggression.

4.3.1.1 Social determinants of workplace aggression

Neuman and Baron (1998: 402) examined the potential effects of several social factors that seem especially relevant to aggression in the workplace. They included unfair treatment, frustration-inducing events, increased workforce diversity, and aggression-related norms of behaviour. The perception of unfair treatment, depending on the circumstances, is associated with conflict (Cropanzano & Baron in Neuman & Baron, 1998: 402), workplace aggression (Baron *et al*, 1999: 289), employee theft (Greenberg in Neuman & Baron, 1998: 402) and negative reactions to employee layoffs (Brockner *et al*, 1994: 402). Frustration-inducing events refer to the interference of ongoing, goal-directed behaviour (Neuman & Baron, 1998: 405). Frustration has been found to be positively correlated with aggression against others, interpersonal hostility, sabotage, strikes, work slowdowns, stealing, and employee withdrawal (Spector in Neuman & Baron, 1998: 403; and Storms & Spector in Neuman & Baron, 1998: 403).

Increased workforce diversity refers to the fact that the workplace is becoming increasingly diverse (Neuman & Baron, 1998: 403). This increased diversity may lead to heightened tension and interpersonal conflict because it places individuals with many differences such as age, gender, ethnicity, culture, and physical and/or mental capabilities, in close proximity of one another. When these differences are perceived as repulsive, it may generate feelings of negative affect, resulting in decreased levels of interpersonal attraction and increased potential for aggression. Aggression- related norms of behaviour refer to normative behaviour and norm violations that occur in an organization such as the wide held belief that aggression is just a normal part of the job, the fostering of a contentious organizational climate or the promotion of the appearance of toughness (Neuman & Baron, 1998: 403).

4.3.1.2 Situational factors

Over the last several years many organizations have undergone far-reaching changes, and a number of these changes appear to contribute to increased levels of workplace aggression. Some of the most important changes include downsizing and concomitant layoffs, mergers and acquisitions, restructuring, reengineering, budget cuts, pay cuts or freezes on salary increases, technological change, change in management, increased diversity in the workforce, implementation of affirmative action policies, computer monitoring of employee performance, increased use of part-time workers, and job sharing (Arnold, 1997: 21-28; Baron & Neuman, 1996: 168; Cartwright & Cooper, 1997: 25,31,47; Luthans, 2002: 12). When downsizing and layoffs occur, both the victims and the survivors experience considerable general distress,

anxiety and stress (Greenglass & Burke, 2001: 3), depression, resentment, and hostility (Catalano *et al* in Neuman & Baron, 1998: 404) as well as uncertainty (Pollard, 2001: 25) and low morale (Campbell-Jamison *et al*, 2001: 53). Downsizing, layoffs, budget cuts, pay cuts or freezes, change in management, restructuring, and reengineering are significantly related to expressions of hostility and obstructionism (Baron & Neuman, in Neuman & Baron, 1998: 404). Computer monitoring of employees has been linked to increased levels of stress (Aiello & Shao in Neuman & Baron, 1998: 404). Evidence suggests that the use of part-time workers and job-sharing are associated with workplace aggression (Baron & Neuman, 1996: 169). Environmental conditions such as hot temperatures, high humidity, extreme cold, poor lighting and air quality, high noise levels, and overcrowding, have all been linked to an increase of aggression (Geen, 2001: 32; Neuman & Baron, 1998: 404).

4.3.1.3 Individual differences

Douglas and Martinko (2001: 547) feel that although a number of frameworks have been put forward discussing individual and situational factors as antecedents to workplace aggression (e.g, Neuman & Baron, 1998: 401; O'Leary-Kelly *et al*, 1996: 233) they point out that 'there are some inconsistencies as to the importance of individual differences as independent predictors of aggressive workplace behavior'. Mainly organizational or group level factors as predictors of workplace aggression, although not thoroughly articulated, are emphasized.

Douglas and Martinko (2001: 547) state that the literature on aggression describe numerous individual differences associated with workplace aggression, which include but is not limited to trait anger, emotional susceptibility, negative affectivity, impulsivity, self-control, perceived controllability, hostile attribution bias, Type A behaviour, emotional reactivity, attitudes towards revenge, egotism, agreeableness, anxiety, gender, and past history. Baron *et al* (1999: 289) studied perceived injustice (for example unfairness) and Type A behaviour as these two factors seemed relevant to aggression in the workplace. They did find that perceived injustice was related to aggression in the workplace, whether being the aggressor or being the victim of workplace aggression. Those individuals that exhibited Type A behaviour were found to engage in a higher frequency of workplace aggression than Type B. Interestingly Type As were also more frequently the target of workplace aggression than Type Bs.

Neuman and Baron (1998: 405) add self-monitoring behaviour and hostile attribution bias to their list of factors that contribute to individual differences. They use the classification of self-monitoring by Snyder and Gangestad (in Neuman & Baron, 1998: 405) that states that 'persons classified as high in self-monitoring possess considerable social sensitivity and alter their words or deeds to produce favourable impressions on others. When individuals are low in self-monitoring, they seem less aware of others' reactions or for that matter less concerned with them. They behave in a manner 'consistent with their lasting attitudes and values and do not

readily adjust their actions to changing situational conditions' (Snyder, in Neuman & Baron, 1998: 405). Neuman and Baron (in Neuman & Baron, 1998: 405) found a significant relationship between self-monitoring and obstructionism. Hostile attribution bias occurs when individuals interpret another person's behaviour as hostile, feel aggrieved and retaliate. Some may perceive hostile intent by others even when this is not the case. They may develop an expectancy that others will respond to them in hostile ways before any interaction has taken place and are therefore more likely to behave aggressively in response to even minor provocations (e.g., Dodge & Coie in Neuman & Baron, 1998: 405).

Douglas and Martinko (2001: 548) in their research design, selected trait anger, attitude toward revenge, negative affectivity, self-control, attribution style, and past history as they felt it was based on theory and research and it appeared to have a reasonable possibility of accounting for a significant proportion of the variability in the incidence of workplace aggression. They did find that in general the variables they selected accounted for more than 60% of the variance. Neither negative affectivity nor low self-control could be independently associated with workplace aggression. They conclude that individual differences are as important in predicting workplace aggression as organizational or group level variables. It should be kept in mind that it is impossible to determine which types of variables account for more variability in predicting the incidence of workplace aggression. They argue that both individual differences and situational causes should be included in any model of workplace aggression.

4.3.1.4 Models of workplace aggression

A number of models have been developed to understand aggression in the workplace that is based on contemporary theories of aggression. The first theoretical model that will be outlined is that put forward by Neuman and Baron (1998: 401). It combines social factors, situational factors, personal determinants, internal states, and cognitive appraisal, which may lead to either an aggressive or a non-aggressive response by the individual (Figure 4.3).

Social factors, situational factors, and personal factors (individual differences) have been discussed previously (confer 4.3.1.3.). Internal states includes unpleasant feelings and hostile or aggressive thoughts. Neuman and Baron (1998: 406) state that regardless of the source, negative affect may evoke unpleasant thoughts and memories, which may lead to irritation, annoyance, and anger. Further, the converse is also true. Aggression-related thoughts and memories might elicit unpleasant feelings and arousal. Thus both subtle feelings and thoughts may predispose individuals to particular forms of behaviour. Cognitive appraisal describes the response to internal stimulation, which is an attempt to understand these thoughts and feelings. It may happen that especially in an ambiguous situation, a person may be incorrect in his or her causal attribution. Neuman and Baron (1998: 406) give an example based on Zillmann (in Neuman & Baron, 1998: 406) where an individual may misattribute a state of physiological

arousal to an unpleasant interaction with a co-worker when it was really due to the extra cup of coffee he or she had at breakfast. Further cognitive appraisal occurs upon having made an hostile attribution, which may result in either an aggressive or a non-aggressive response.
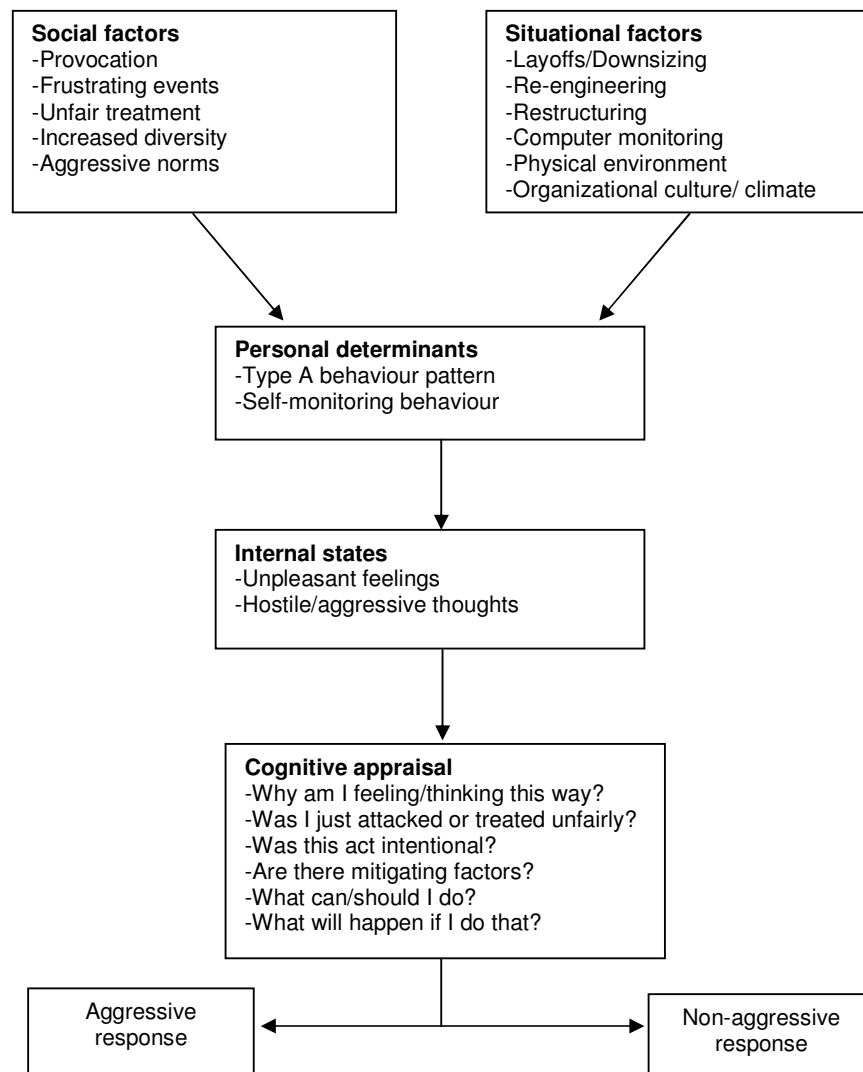

Figure 4.3. Neuman and Baron's theoretical model of workplace aggression

Baron (2004: 36) has proposed the extension of the General Affective Aggressive Model (GAAM, confer 4.2.5) which has been used as a framework to understand human aggression in general. But because the workplace is a very specific setting it differs from many other settings in which aggression may occur. Work settings differ from public places such as bars, parks, sports arenas, or beaches in which acts of aggression often occur between strangers. In a work context the employees know each other well and are part of an organizational culture which may differ somewhat from society at large. Baron (2004: 36) feels 'whereas the same basic processes are at work, these occur against a background of *contextual* factors that are relatively specific to workplaces, or at least loom larger in them than in other settings'.

The proposed model he calls the General Workplace Affective Aggression Model (GWAAM, Figure 4.4). It divides situational factors into categories, namely organization related situational factors and general situational factors. Furthermore it divides individual difference factors into two similar categories, namely organization related and general categories. Baron (2004: 36) includes under organization related situational factors organizational culture, abusive supervision, organizational politics, and reward systems. Under organization related factors he includes individual difference factors relevant to the workplace, such as stress tolerance, machiavellianism, and sensitivity to fairness. The GWAAM also includes the possibility that when aggression occurs it can be directed against other working in the organization or against individuals outside the organization, or even against the organization itself.
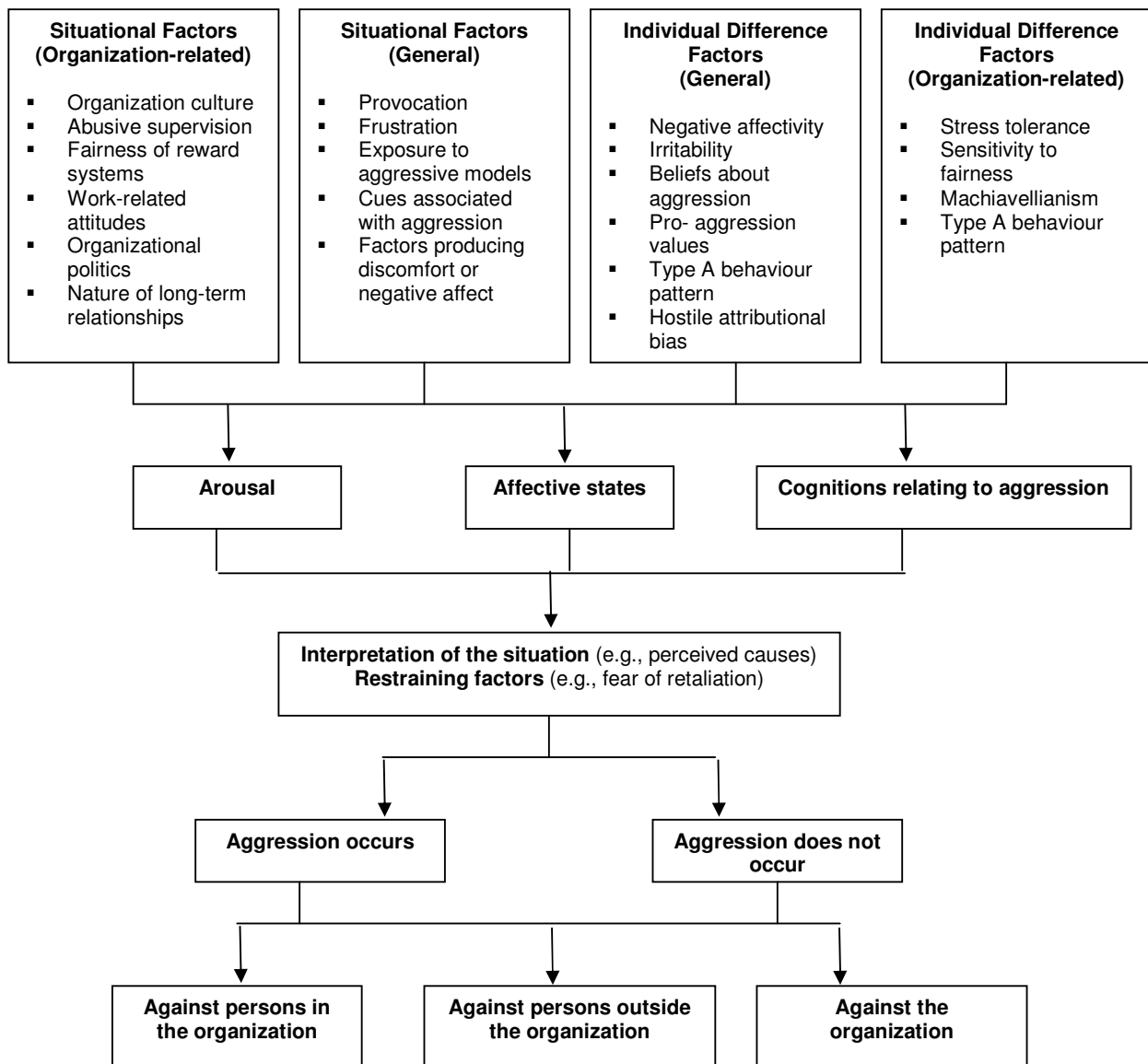

Figure 4.4. Baron's General Workplace Affective Aggression Model

Martinko and Zellars (1998: 5) have developed a cognitive appraisal model of workplace aggression based on cognitive appraisal theories developed amongst others by Smith and Lazarus (in Martinko & Zellars, 1998: 7) and Weiner (in Martinko & Zellars, 1998: 7), Bandura's theory of aggression (in Martinko & Zellars, 1998: 7) and their knowledge of the literature regarding workplace aggression (Figure 4.5).

Their model has been designed in the form of a path diagram. The arrows in the model depict the causal sequence that represents the hypothesized model that would be most appropriate for testing. The researchers refer to workplace violence and workplace aggression as to 'retaliatory aggression by an employee or former employee of an organization against individual(s) within the organization, with the intent to do harm'. Further they explain that 'the onset of violent behaviour is often triggered by a specific negative outcome such as being fired or severely disciplined. This outcome results in a primary appraisal that increases the individual's overall level of arousal and a causal search is initiated. This search (for example, secondary appraisal) is influenced by the organizational context and individual difference factors that affect the probability of specific causal attributions. If the specific cause is internal such as lack of effort or ability, it usually leads to an emotional response such as shame or guilt and a non-violent response is likely. On the other hand, if the cause is attributed to an external cause which is perceived to be stable, controllable, and intentional, without mitigating circumstances, anger is likely and aggression or violence may occur'.

They feel that the cognitive appraisal, thus the attribution interpretation of the outcomes in the workplace, play a critical role in determining both the emotions and behaviours associated with acts of aggression. As the model only refers to retaliatory aggression, the black box has been included to allude to instrumental and other forms of aggression not mentioned in the model and which lead directly to violent behaviours.

4.4   Conclusion

Aggression and violence in the workplace has become an important topic over the last two decades. Workplace aggression may be defined as actions by individuals that "harm others with whom they work, or have worked, or the organizations on which they are presently, or were previously, employed'. Although the media highlights acts of violence such as homicide, it is clear that the vast majority of aggressive acts in work environments do not involve aggressive acts that are overt, such as physical or sexual assaults, but are covert, verbal and passive in nature.

Organizational context
-Authoritarian leadership
-Numerous rules and procedures
-Adverse physical conditions
-Inflexible policies
-Culture of aggression
-Stimulus similarity
-Proximity and association
-Policies discouraging
aggression
-Discipline for aggression
-Grievance procedures
-Social sanctions

Nonviolence and nonaggression

No anger

Unstable/Specific cause

Decreased expectations of triggers

Uncontrollable

Mitigating circumstances

Trigger event
Typical frustrating events
-Disciplinary hearings
-Job termination
-Multiple reprimands
-Poor annual appraisal
Repetition of frustrating events

Emotional arousal

Causal attribution

External

Controllable

No Mitigating Circumstances (Intentionality/ responsibility

Individual differences
-Negative affectivity
-External locus of control
-Hostile attribution style
-Impulsivity
-Extreme control
-Gender/Male
-Personal history
-Emotional susceptibility
-Aggressive culture
-Reinforcement of
aggression
-Aggressive role models

Anger

Stable/Global cause
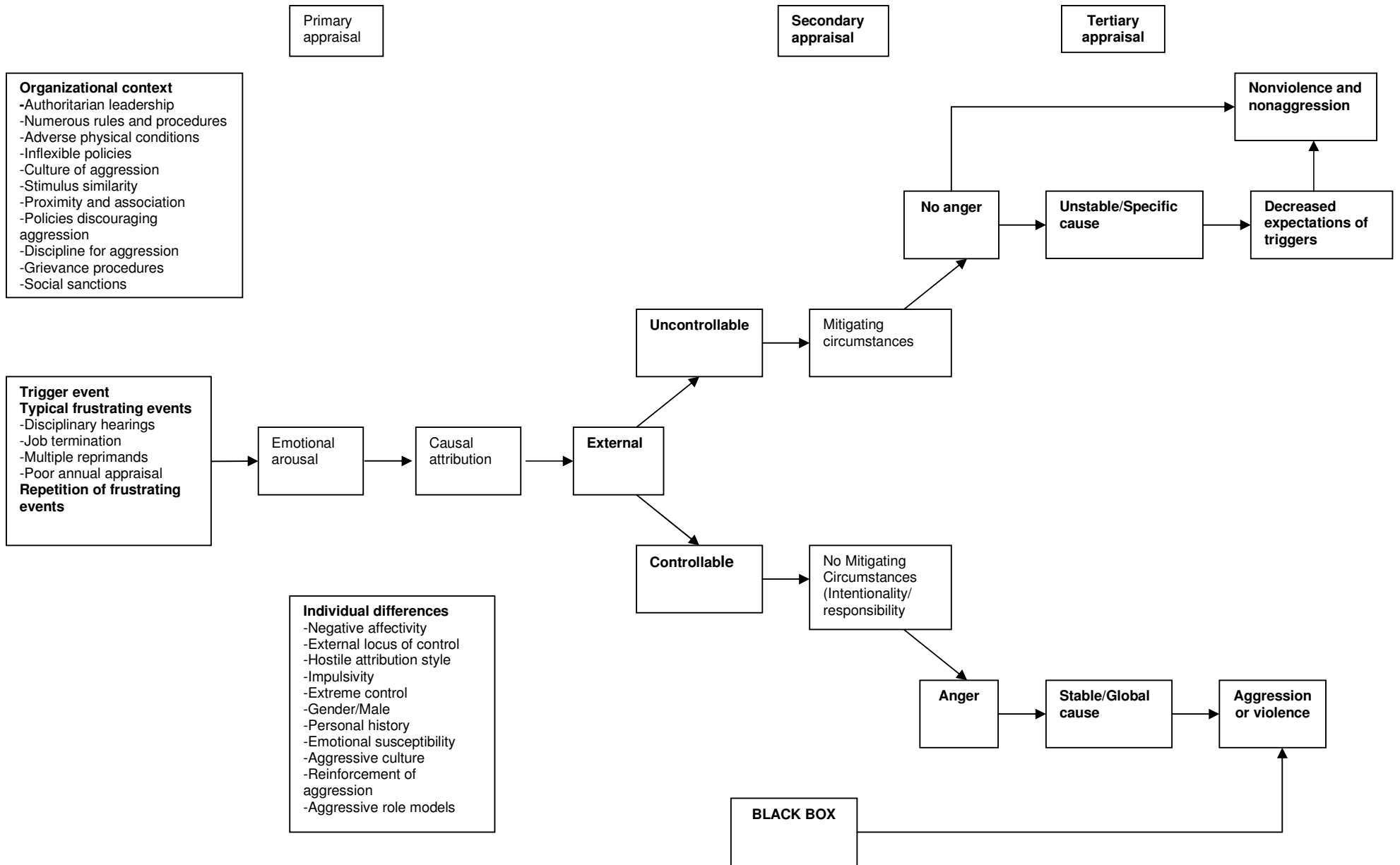
Aggression or violence

BLACK BOX

Figure 4.5: A cognitive appraisal model of workplace aggression

Baxter (in Duvenhage, Rapport, Sunday 10 February 2002) states that a study in the USA showed that 10% of the workers have seen the use of force in their work environment, nearly half feel that workers shout at one another, and 30% state that they experience sleep disturbances as a result of the tension at work.

The present research is concerned with the potential causes of workplace aggression, which are numerous. They include social determinants (for example frustration, unfair treatment), situational factors (for example downsizing, increased workforce diversity), and individual differences (Type A personality, attribution style). The purpose of the present research is to determine the role that stress generated outside and within the organization has on the individual in terms of both overt and covert aggression in the workplace. Little evidence currently exists that relates sources of stress to aggression in the workplace. The research is also aimed at presenting empirical evidence on the different forms and relative frequency of workplace aggression within the South African context based on the work of Baron and Neuman (1996: 161).

Research of stress experienced in the workplace has repeatedly shown negative psychological reactions by the employees, which include anxiety, worry, and depression. The next chapter will focus on these three factors and the role they play in the lives of individuals affected by stress.