IV Semester – HEALTH PSYCHOLOGY
Unit III - A

STRESS, COPING AND PAIN

A. What is stress?; Theories of stress (Selye, Lazarus); Stress and health; sources of stress; coping

What is stress?

Stress is a negative emotional experience accompanied by predictable biochemical, physiological, cognitive, and behavioural changes that are directed either toward altering the stressful event or accommodating its effects (Baum, 1990).

Stress comes from the Latin word *strictus,* which means 'tightened'. Several other terms like strain, pressure, hassle, frustration, irritation, tension, anxiety, worry, etc., are commonly used to refer to stress. When people feel pressure due to something happening to them or around them, they normally refer to it as stress. What causes stress may be different for different people; the intensity and impact may also differ. For students it may be the heavy syllabus, home assignments, examination performance and less leisure time. For parents, it may be their career, bringing up children, running the house and managing finances. For teachers, it could be preparing for classes, maintaining class discipline, completing the curriculum, evaluating exam papers etc. Thus, everyone experiences stress, only the stressor (cause of stress) and the magnitude of stress vary. Although mild amount of stress is necessary and acts as a motivator and help us to perform better, it is the acute and prolonged stress that has a debilitating effect on us.

Stress is a consequence of a person's appraisal processes: the assessment of whether personal resources are sufficient to meet the demands of the environment. Stress, then, is determined by **person-environment fit** (Lazarus & Folkman, 1984; Lazarus & Launier, 1978). Stress results from the process of appraising events as harmful, threatening, or challenging; of assessing potential responses, and of responding to those events.

Theories of stress

1. Hans Selye's General Adaptation Syndrome

Early research on stress examined how an organism mobilizes its resources to fight or flee from threatening stimuli. Hans Selye (1956, 1976) based on this model proposed the General Adaptation Syndrome, arguing that reactions go through three phases – alarm, resistance and exhaustion. *Selye in an attempt to study sex hormones effect on the physiological functioning, he became interested in the stressful impact his interventions seemed to have. Accordingly, he exposed rats to a variety of stressors – such as extreme cold and fatigue – and observed their physiological responses. He found that all stressors, regardless of type, produced essentially the same pattern of physiological changes. They all led to an enlarged adrenal cortex, shrinking of the thymus and lymph glands and ulceration of the stomach and duodenum.*

According to Selye, when an organism confronts a stressor, it mobilizes itself for action. The response itself is nonspecific with respect to the stressor; that is, regardless of the cause of the threat, the individual will respond with the same

physiological pattern of reactions. Overtime, with repeated or prolonged exposure to stress, there will be wear and tear on the system.
The general adaptation syndrome consists of three phases. In the first phase, the organism becomes mobilized to meet the threat. In the second phase, resistance, the organism makes an effort to cope with the threat as through confrontation. The third phase, exhaustion, occurs if the organism fails to overcome the threat and depletes its physiological resources in the process of trying.

Selye's model continues to have an impact on stress research as it provides a way of thinking about the interplay of physiological and environmental factors. It also posits a physiological mechanism for the stress-illness relationship. Selye believed that repeated or prolonged exhaustion of resources is responsible for the physiological damage that lays the groundwork for diseases such as cardiovascular disease, arthritis, hypertension and immune-related deficiencies.

However, Selye's model has also been criticized on several grounds:-

a) It assigns a very limited role to psychological factors as many researchers now believed that psychological appraisal plays an important role in the determination of stress;
b) In terms of the uniform physiological response to stress, it has been now believed that how people respond to stress is substantially influenced by their personalities, perceptions and biological constitutions.
c) Selye assessed stress as an outcome; however, people experience many of the debilitating effects of stress while a stressful event is going on and even in anticipation of its occurrence.

2. Cognitive Appraisal Theory

According to Richard Lazarus and his colleagues, stress involves an assessment process, which they call Cognitive Appraisal. Cognition is defined as the process that involves thinking, reasoning, and deciding. It also include attention, perception, memory, problem solving and creativity and is associated with intelligence. It is a mental process that people use, when faced with a stress-causing stimulus. People tend to evaluate the situation by taking into consideration two main factors:

a) Primary appraisal – When people face a potentially stressful event, they first assess and evaluate it from the point of view of their wellbeing. They try to mentally calculate whether it will affect their happiness, security, health, comfort, prestige, interests or anything else that they value. Primary appraisals seek answers to these questions. Events therefore may be perceived as positive, neutral or negative in their consequences. Negative or potentially negative events are further appraised for their possible harm, threat, or challenge.

b) Secondary appraisal – When people experience stress, they assess the resources available for coping with the situation. They search their social network to find people who can help, assess their physical condition and financial position that may come handy in overcoming the situation. In other words, secondary appraisal is the assessment of one's coping abilities and resources; whether they will be sufficient to meet the harm, threat and challenge of the event.

Ultimately, the subjective experience of stress is a balance between primary and secondary appraisal. When harm and threat are high and coping ability is low, substantial stress is felt. When coping ability is high, stress may be minimal. *Potential responses to stress are many and include physiological, cognitive, emotional and behavioral consequences. Some of these responses are involuntary reactions to stress, whereas others are voluntarily initiated in a conscious effort to cope.*

Cognitive responses to stress include beliefs about the harm or threat an event poses and beliefs about its causes or controllability. They also include involuntary responses such as distractibility and inability to concentrate, disruptions on cognitive tasks, and intrusive, repetitive, or morbid thoughts.

Potential emotional responses to stressful events range widely; they include fear, anxiety, excitement, embarrassment, anger, depression and even stoicism or denial. Emotional responses can be quite insistent, prompting rumination over a stressful event, which, in turn, may keep biological stress responses elevated.

Potential behavioral responses are virtually limitless depending on the nature of the stressful event.

Sources of Chronic Stress

Usually people can adapt to mild stressors, but severe stressors may cause chronic problems for health and mental health. Stress can have disruptive aftereffects, including persistent physiological arousal, psychological distress, reduced task performance, and, over time, declines in cognitive capabilities. Various populations – such as children, the elderly, and the poor – may be particularly adversely affected by stress. Stress researchers are coming to the conclusion that the chronic stressors of life may be more important than major life events in the development of illness.

1. Post-traumatic stress disorder – One type of chronic stress results from severely traumatic or stressful events whose residual effects may remain with the individual for years. Childhood sexual abuse, rape, and exposure to natural and human-made disasters may produce chronic mental and physical health effects that maintain the virulence of the initial experience.
2. Long -term effects of early stressful life experiences – The long term effects of early stressors, including those experiences in early childhood, has been shown to have high correlation with disease developed later in life . Chronic physical or sexual abuse in childhood or adulthood has long been known to increase a broad array of health risks because it results on intense, chronic stress that taxes physiological systems. It has also been shown by research studies that 'risky families' i.e. families that are high in conflict or abuse and low in nurturance and warmth – produce offspring

with problems in stress regulatory systems leading to a broad array of diseases including depression, lung cancer, heart disease, and diabetes.

3. Chronic stressful conditions – Chronic stress such as living in poverty, being in a bad relationship, remaining in high stress job, stress relating with parenting, household functioning, finances, and even as mundane as commuting can be an important contribute to psychological distress and physical illness.
4. Chronic stress and health – Chronic stress has been shown to have a strong relation with illness. Research studies have shown that poverty, exposure to crime, and other chronic stressors vary with socioeconomic status (SES) and are tied to risk of poor health.
5. Stress in the workplace –
   (i) Work and sedentary lifestyle – Many jobs today have lesser requirement for physical energy, which thereby leads to a decline in the amount of exercise one gets from work-life. Because activity level is related to health, this nature of work creates the possibility of vulnerability to illness.
   (ii) Overload – Work overload is a chief factor in producing high levels of occupational stress. Workers who feel required to work too long and too hard at too many tasks feel more stressed, practice poorer health habits, sustain more health risks than do workers not suffering from overload. Work overload is a subjective as well as an objective experience. The sheer amount of work that a person does is not consistently related to poor health and compromised psychological well-being. The perception of work overload shows a stronger relationship to physical problems and psychological distress.
   (iii) Ambiguity and role conflict – Role ambiguity occurs when a person has few clear ideas of what is to be done and no idea of the standards used for evaluating work. It occurs when a person received conflicting information about work tasks or standards from different individuals. Chronically high blood pressure and elevated pulse, as well as other illness precursors, have been tied to role conflict and role ambiguity.
   (iv) Social relationships – The inability to develop satisfying social relationships at work has been tied to job stress, to psychological distress at work, and to poor physical and mental health. Conversely, men and women who are able to develop socially supportive relationships at work have enhanced well-being.
   (v) Control – Lack of control over work has been related to a number of stress and illness indicators, including heightened catecholamines secretion, job dissatisfaction, absenteeism, and the development of coronary artery disease.
   (vi) Unemployment – Unemployment can produce a variety of adverse outcomes such as psychological distress, physical symptoms, physical illness, alcohol abuse, difficulty achieving sexual arousal, low birth weight of offspring, and compromised immune functioning.

COPING WITH STRESS

Since stress causes physical and emotional distress, natural tendency of people is to somehow reduce or eliminate it. Stress occurs when there is a mismatch between the demands of the environment and the resources available with the individual to deal with it. Therefore, the actions that are taken by the individual to manage the mismatch are what coping strategies are made of. People use many different ways to tackle the perceived mismatch and the same person may use different methods to tackle problems at different times.

Coping is defined as the thoughts and behaviours used to manage the internal and external demands of situations that are appraised as stressful. Coping has several important characteristics. First, the relationship between coping and a stressful event is a dynamic process. Coping is a series of transactions between a person who has a set of resources, values, and commitments and a particular environment with its own resources, demands, and constraints (Folkman & Moskovitz, 2004). Thus, coping is not a one-time action that someone takes but rather a set of responses, occurring over time, by which the environment and the person influence each other. A second important characteristic is its breath wherein coping efforts are moderated by the resources available to the individual; and so therefore in emotional reactions even anger and depression can be a part of the coping process.

According to Folkman and Lazarus (1980), coping has been defined as all cognitive and behavioral efforts to master, reduce, or tolerate demands that could be external or internal. Internal demands may reflect the outcome of cognitive appraisals or emotional conflicts. According to this definition, there are two types of coping – *Instrumental coping* such as problem solving that is directed at the source of threat and *palliative coping* such as emotional regulations that is achieved through cognitive reappraisal of the situation which alters the meaning of an event or tries to reduce the emotional pain and distress that the event causes. In essence, coping can serve as two main functions. It can either alter the problem causing the distress or it can regulate the emotional response to the problem.

Coping Styles

Coping style represents specific individual differences in how people respond to stress. It is a general propensity to deal with stressful events in a particular way. As an example, some people may deal with stress by talking a lot about it; however some other may deal with it by keeping their problems to themselves. Coping styles have their origin both in genes and personal experiences.

1. **Approach Versus Avoidance** – Some people cope with a threatening event by using an avoidant (minimizing) coping style, whereas others use an approach (confrontative, vigilant) coping style, by gathering information or taking direct action. Approach related coping is most successful when one can focus on the information present in the situation rather than on one's emotions and if specific actions can be taken to reduce the stressor. Whether avoidant or approach related coping is successful depends on how long tern the stressor is. People who cope with stress by minimizing or avoiding threatening events may deal effectively with short-term threats. However, if the threat is repeated or persists over time, a strategy of avoidance is not so successful. Substantial evidence have now indicates that approach coping is generally associated with beneficial outcomes, such as less psychological distress and lower stress-related

biological responses, whereas avoidance is typically associated with adverse psychological and health outcomes.

2. **Problem-focused Versus Emotion-focused coping** – Problem-focused coping targets the causes of stress and practically, it involves directly dealing with the stressful situation. It involves attempts to do something constructive about the stressful conditions that are harming, threatening, or challenging an individual. Emotion-focused coping involves efforts to regulate emotions experienced because of the stress. It is used when it is not possible to change the situation, and is more used by women than men. Problem-focused coping skills appear to emerge during childhood; emotion-focused coping skills develop somewhat later, in late childhood or early adolescence. Typically, people used both types of coping style during stressful events; however, the nature of the event also contributes to what coping strategies will be used. Situations in which something constructive can be done will favor problem-focused coping, whereas those situations that simply must be accepted favor emotion-focused coping. Emotion-focused coping includes two kinds. One involves emotional distress, as may be experienced in rumination (negative recurrent thoughts) and the other type is emotional-approach coping, which involves clarifying, focusing on, and working through the emotions experienced in conjunction with a stressor. This type of coping improves adjustment to many chronic conditions, including chronic pain, cancer and medical conditions such as pregnancy.

Although different coping styles have been highlighted, when the stresses of life comes, we use several of these coping styles at different times and in various combinations. Certain coping styles become our typical personalized responses. Some individual coping style may prove to be effective while some others are found to be counterproductive. And what works as 'effective coping' may be different for different people, so it helps to know what makes individuals differ in their coping strategies and style.

Individual difference in Coping

Research has found that factors like personality, attitudes towards events, and tolerance of stimulating experience as well as gender play a significant role in coping efficacy of people.

1. **Personality** – Personality traits and types not only predetermine the individual's response to stress but also the way he/she would cope with stress. An aggressive and excitable person, for example, may be more prone to stress and also have inadequate coping skills. A shy person who is chronically low on self-esteem may respond with undue biological arousal when forced to work with a group of people and the coping style adopted would be to choose jobs that lets him/her be alone, which in itself may prove to be maladaptive. On the other hand, more sociable and optimistic persons by virtue of being exposed to more people and situations may experience more stress in dealing with relationships and their optimism may undermine actual dangers and land them in more distressed situations. Yet, optimism becomes a buffer against stress making them perceive stress as short lived and hence more tolerable and their sociable nature helps them to cope by seeking social support from their social network. It has also been found that people high in negative affectivity or

neuroticism express distress, discomfort and dissatisfaction across a wide range of situations. They are also more prone to heavy drinking, depression and engage in suicidal gestures or even suicide. Neuroticism has a high correlation with poor health including diabetes, kidney problems, liver problems and stomach or gallbladder problems.

2. **Psychological hardiness/Resilience** – Suzanne Kobasa (1979) developed the concept of hardiness, which refers to a personality construct of a person's typical, stable, characteristic way of responding to life events. Although stressful life events increased illness, both hardiness and exercise brought down incidents of illness. Resilience is a term frequently used to mean hardiness. Hardiness involves three interlinked components namely commitment, control and challenge:
   a) Hardy people have a deep sense of commitment to their values, beliefs, sense of identity and work life and are willing to make sacrifices and deal with situations. And as such, the hardships they face do not seem as stressful as others might view it.
   b) Hardy people feel they are in control of the situation and their lives. This sense of personal control reduces the impact of stressful situations.
   c) Hardy people perceive stress causing events as challenges that need to be faced rather than a problem to be feared. They are often viewed as an opportunity for personal growth and therefore, their thinking is more flexible and are able to adjust to various situations.
3. **Tolerance for stimulation –** Some people crave for new experiences and variety in situations in order to experience more challenges, making them achieve a sense of happiness, while there are others who find even a minor shift from familiar routine distressful. It has been found that people with high need for stimulation cope better with stressful life events than people who have low need for stimulation. This may be because stressful life events bring to the forefront their self-efficacy which enables them to see the event as less stressful than they really are. It may also be possible that the regular unpredictability in such people's lives make them more experienced in dealing with such situations and thus better able to cope with stress.
4. **Attributional style –** Attributions for stress are reasons people give for a particular stressful situation to have occurred. Pessimistic attributional style has been linked to heightened illness and such people may have reduced immune-competence and thus be vulnerable to diseases. Optimistic personality predisposition, on the other hand, has the ability to cope with stress effectively and thereby reduce their vulnerability to illness. Optimists experience more positive emotions and moods which may lead to a state of resilience and allow them to use healthy coping strategies such as problem-focused coping and seeking social support. An optimist seems to be protected against the risk of coronary disease in older men; they have a faster rate of recovery during hospitalization as well. Pessimism has been linked to the onset of depression in middle age, and to cancer mortality in older population.
5. **Learned helplessness –** learned helplessness is a sense of giving up and perceiving that nothing can be done about the situation. When situations

are not under our control, we perceive more stress. When an individual fail to bring some control over a situation even after repeated efforts, one tends to give in to a feeling of helplessness. Learned helplessness has several health implications. According to Maier & Seligman (1976), helplessness occurs in three specific spheres;

a) **Motivational –** an individual stops putting efforts and does not have the drive to change the outcome of a situation.
b) **Cognitive –** individual fails to learn new ways that could help in avoiding negative events and protect them in future.
c) **Emotional –** depression sets in when the individual resigns to his/her fate or destiny.

6. **Sense of coherence –** There has been several incidences where people who have faced terrible oppressive situation managed to cope well and maintain their physical and psychological health. According to Antonovsky (1998), stressful life events are not inherently negative; they may cause a state of tension, however, the physical outcome of that tension is dependent on the tension management ability of the person. Sense of coherence is a significant determinant of the ability to maintain healthy life and avoid illness. People with sense of coherence valued life on a deep emotional level, sought to find meaning in life and mostly believed that the problem and demands brought by life were worth trying and investing one's energy in.
7. **Gender and Coping –** The type of stress faced by men and women are different and so are their reactions to stress. Women are more likely than men to engage in nearly all coping strategies such as seeking support, rumination and positive self-talk. Because of cultural expectations of men to be brave and bold, they are encouraged to react aggressively when faced with life's frustrations and difficulties. However, when they feel inadequate to live up to such expectations, they often resort to alcohol or drug dependency. Women are however expected to be more fearful and sad, and are freer to express their emotions. Thus they develop a trait of dependency which serves as an effective coping strategy. Stress response has been described as 'fight or flight' from earlier times; however, this applies more to men, and women's response can be described as 'tend and befriend'. Women seeking social support is indicative of this kind of coping strategy.

Goals of coping

Coping is not just about taking some actions in response to a problem that has cropped up, but it is aimed at achieving certain long term goals. Coping efforts consists mainly of the following five tasks:

1. To soften the harmful environmental conditions and enhance the prospects of recovery.
2. To tolerate or adjust to negative events or realities.
3. To maintain a positive self-image.
4. To maintain the emotional equilibrium.
5. To continue satisfying relationship with others.

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