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10

EMOTIONS

When we meet our friend after a long time we feel happy; when a baby clings to her mother she displays love, when we are praised by our parents or teachers we feel proud of ourselves. Similarly joy and sorrow, excitement and disappointment, love and fear and many more emotions are experienced by us in our daily lives. In this lesson you will study what is an emotion, how these emotions are expressed and how emotions direct our behaviour.

OBJECTIVES

After studying this lesson, you will be able to:

- describe what is an emotion;
- describe the relationship of emotion with cognition and motivation;
- describe the physiology of emotional experience; and
- describe various expressions of emotions.

10.1 NATURE OF EMOTION

The term 'emotion' is derived from the Latin word 'emovere' which means to stir up, agitate, excite or move. Emotions are generally referred to as a stirred up condition involving subjective experience and affective reactions. They may be pleasant or unpleasant. Pleasant emotions are the sources of joy whereas unpleasant emotions are related to disturbing mental states like aggression, fear, anxiety etc. Each emotion has three basic aspects.

(i) **Cognitive aspect:** It involves thoughts, beliefs and expectations that are involved when we experience emotions. For example – your friend may find a novel rich in descriptions of people and places whereas you may find it unrealistic.

(ii) **Physiological aspect:** It involves physiological activation. When you experience emotions such as fear or anger, you experience an increase in pulse rate, blood pressure and respiration. You may also perspire.

(iii) **Behavioural aspect:** It includes various forms of emotional expressions. If you observe your father or mother during anger and happiness you will notice that facial expressions, bodily postures and tone of voice vary with anger, joy and other emotions.

List what you do when you are

Happy	Sad	Afraid
_____	_____	_____
_____	_____	_____
_____	_____	_____

10.2 THEORIES OF EMOTION

Psychologists have tried to explain the phenomenon of emotion in different ways. William James and Carl Lange stated that physiological changes give rise to emotional experience. According to them first you cry then you feel sad, first you run then you feel afraid. This sequence is presented in Figure 10.1.

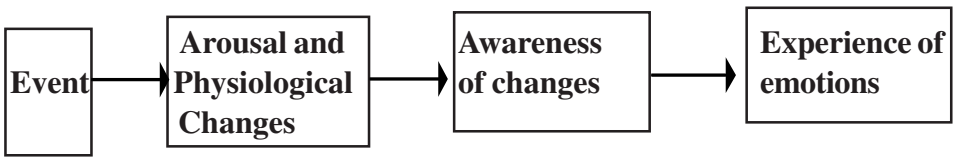

Fig. 10.1: *James-Lange theory of emotion*

Cannon and Bard said that when we face an event we feel physiological changes and perception of emotion together.

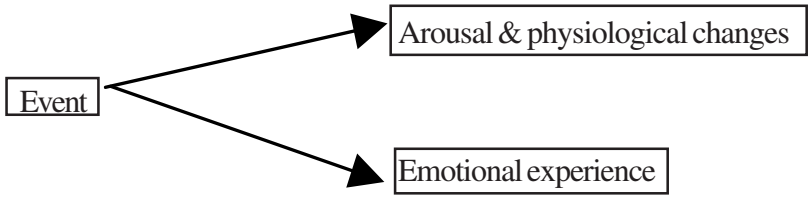

Fig. 10.2: *Cannon-Bard Theory of Emotion experience*

S. Schachter and J.E. Singer suggested that cognitive processes play a major role in the experience of emotion. According to them if you are aroused by an outside stimulus you will notice the arousal and look toward the environment to find out why the arousal has occurred. After that you will label which emotion you are experiencing. Like a man startled by a dog shall label his state as fear whereas a student excited by success in the examination labels his state as happiness.

When we are excited by an event or stimulus, it provides the basis for an emotional experience. This excitement is shaped into a specific emotion by an attribution process. Suppose your heart starts beating rapidly and fingers tremble. Is it fear, anger or joy or a touch of flu? If you have been insulted by your friend you will interpret these reactions as 'anger'. You will experience fear if you suddenly face a snake and start running very fast but when you are in a race you will attribute these feelings to excitement and will be motivated to run faster in order to win. Thus it is seen that in each case your body will be in an excited state and depending on the situation and attribution of causes the different emotions are experienced.

10.3 DIMENSIONS AND DEVELOPMENT OF EMOTIONS

Recent studies across different cultures have shown that emotions can be placed along two dimensions i.e., *Arousal* and *Valence*. Thus one can have high or low degree of arousal and positive or negative (e.g. pleasant vs. unpleasant) emotional experience.

Although the general ability to respond emotionally is present at birth, emotional development is due to maturation and learning. Infants show emotional responses like crying, smiling etc. With the growth of imagination and understanding a child is able to differentiate family members from strangers and the fear of strangers develops.

Children learn to express their emotions by imitating their parents, siblings and other family members. For example the expressions of anger and happiness are frequently observed in social interactions and a child starts expressing them. The role of learning in emotional development becomes clear if we notice emotional expressions peculiar to some cultures. For example in Indian culture, fathers don't show their affection openly to children because its not welcomed in society whereas there are no such inhibitions in Western culture. Learning is responsible for conditioning of fear of darkness, lightening, certain animals or objects.

Activity

Ask your friend to observe you and then stick your tongue out towards him. How will your friend interpret it? Then you clap your hands and ask for his interpretation. Do you know that your friend's interpretation of these acts may be completely different from that of a Chinese. Chinese people clap their hands when they are worried but for us clapping is a sign of happiness. They stick out their tongue to show surprise but you may interpret it as teasing.

Certain Important Features of Emotions

(i) You will experience an emotion when any of your basic needs are not satisfied or challenged. You also experience positive emotion on satisfaction of a need.

(ii) Under the influence of an emotion you experience physiological changes such as facial expressions, gestures, change in the rhythm of the heartbeat, blood pressure, and breathing pattern.

(iii) Your thinking, reasoning, memory and other psychological functions are affected by emotions.

(iii) During an emotional state tremendous amount of energy is released which helps facing critical situations. For example if a dog runs after you, you run at a much higher speed than the normal speed.

(iv) Both maturation and learning play an important role in development and expression of emotions.

(v) When you have pleasant emotional experiences you will be in a happy, good or positive mood. In contrast, unpleasant emotional experiences would lead to sad or negative moods.

(vi) The experience of emotion can first increase your performance to some extent but if heightened and prolonged it will decrease the level of performance.

10.4 RELATIONSHIP BETWEEN MOTIVATION AND EMOTION

You must have realized in the course of the preceding discussion that emotion and motivation are closely related. Motivation is present along with emotion in every day experience in our life. When you are afraid of a mad dog running after you, you cry for help. In this situation fear is an emotion which leads to goal directed behaviour (running) and therefore acts as a motive. The emotion of fear is also a

result of the need for safety. The dog threatens your safety and you become afraid and run. Thus motive leads to emotion and emotion further motivates to act consistent with the original motivation.

You are motivated to do things which give pleasant emotional experiences and avoid doing things which make you unhappy or sad. Emotions provide energy for motives. The stronger the emotion, the greater will be the level of motivation. The more you get angry the more you fight.

INTEXT QUESTIONS 10.1

1. Fill in the blanks with appropriate words:

   (i) Emotion is _____ state of an individual.

   (ii) The term emotion is derived from the Latin word _____.

   (iii) _____,_____ and _____ are basic components of each emotion.

   (iv) Emotions provide _____ for motives.

   (v) _____ and _____ highlighted the importance of cognitive process in emotional experiences.

2. Mark the following statements as True and False

   (a) Maturation and learning play an important role in the development of emotions.

   (b) Emotions have no effect on our thinking and reasoning.

   (c) Pleasant emotional experiences lead to good mood.

   (d) Cannon and Bard stated that physiological changes and perception of emotion occur together.

10.5 EMOTION AND PHYSIOLOGY

During emotional experience a number of physiological systems are involved. The physiological activity is controlled largely by the autonomic nervous system's sympathetic (arousing) and parasympathetic (calming) divisions. You may refer to the lesson on biological basis of behaviour (Lesson 3) for details of the involvement of these systems.

Physiological changes that take place during emotional state are produced by the activities of all the internal organs and nervous system. However, the organs which are closely related with emotional experiences are hypothalamus, autonomic nervous system, and adrenal gland. Let us study more about them:

(i) **Adrenal Glands :** These glands are located near the kidneys. They secrete a hormone called adrenalin. The various physiological changes that occur under emotional arousal are produced by the secretion of *adrenalin.* They include dialation of air passage of lungs, increase in heart beat and blood pressure and slowing down of digestive process. These glands play a significant role in preparing the organism for emergency reactions, when we are charged with emotions. These are stimulated by hypothalamus through sympathetic nervous system to release greater amount of adrenalin.

(ii) **Autonomic Nervous System:** It consists of many nerves leading from the brain and spinal cord to various organs of the body. The Autonomic Nervous System has two parts as given below.

Sympathetic System: This system is active during aroused states and prepares the body for mobilisation of actions needed in various situations. It brings about the dilation of the pupil, increased sweating and heartbeat, dryness of mouth etc.

Parasympathetic System: This system is active when we are calm and relaxed. Activation of this system decreases the heart rate and blood pressure and increases digestive activity. All the changes caused by sympathetic system during emotional arousal are brought back to a normal state of functioning of this system.

(iii) **Hypothalamus:** The physiological expressions during emotion are activated by hypothalamus. It sends impulses to muscles and glands. The individual whose hypothalamus is injured becomes incapable of experiencing any emotion.

Arousal: When we are emotional we often feel excited. This excited state is an aroused state. The degree of arousal is measured by heart rate, blood pressure, breathing pattern, pupil size and skin conductance.

A little arousal is good because it keeps us working and alert. When we become highly aroused (as in anger or fear) our performance decreases. Similarly very low level of arousal leads to poor level of performance.

INTEXT QUESTIONS 10.2

(1) Fill in the blanks with suitable words:

i) The two parts of autonomic nervous system are _____ and _____.

ii) When we are _____ sympathetic system is active.

iii) A little arousal _____ the performance.

(2) What is an arousal? How can it be measured?

_____

_____

_____

Activity

Try to *agitate your friend by opposing his/her ideas and rejecting the suggestions. When s/he becomes angry observe closely. Do you notice any change in the facial experessions, voice, colour of the face?*

Now you try to make him/her feel happy and again observe the change in expressions and voice etc. Was there a difference in these two situations?

Organism Functioning During Emotional Arousal

Physical Changes

Facial expressions change during emotional experience. When we are angry our face becomes reddish, nostrils and jaws stiffen, and our voice becomes loud high-pitched and hoarse. When we are afraid our eyelids are widely open and face turns pale, and knees may tremble.

Physiological Changes

When we experience an emotion there are changes in internal activities too. Increase in heartbeat and blood pressure occurs and some times slight stomach ache is also felt. When we are angry or afraid our digestive activity stops, our mouth becomes dry and pupils of the eye enlarge. Sweat glands become active. The conductivity of our skin to electrical current increases.

Psychological Changes

Under strong emotions such as anger or fear, our thinking and memory get affected adversely. We face difficulty in learning and concentration becomes poor. Our perception gets distorted and memory gets inhibited.

It may, however, be noted that all these changes (physical, physiological and psychological) differ from individual to individual.

10.6 EXPRESSION OF EMOTIONS

We reveal our felt emotions not only in bodily responses but also in expressive behaviours. Look at the faces give below. Try to identify the emotions displayed by these facial expressions.

Fig. 10.3: *Facial expression showing irritated, happy and angry emotional states*

Facial expressions are important for the communication that takes place non verbally. For instance we can communicate intimacy, submission and dominance by a gaze or an averted glance, or a stare. We are quite good at reading nonverbal cues to decipher various emotions. Some of us are more sensitive than others to such non-verbal cues.

The gestures are found to differ across cultures. However, researchers have shown certain universal facial language for basic emotions. In collectivist cultures like India where inter-dependence is valued, intense display of negative emotions is infrequent. The expressions made by people not only communicate but also intensify the felt emotion. They signal the body to respond accordingly. In this way emotions arise from an interplay of cognition, physiology and bodily expressions.

In India the expressions of emotions have been studied systematically by Sage Bharata some time during fifth century. In Natyashastra he has described eight major emotions with could be effectively translated into 'rasa' which means aesthetic relish. Some of them are depicted in the figure given at the end of this lesson. The figure shows various 'rasas' through facial expressions during Bharatnatyam Dance. Try to identify the 'rasa' and corresponding emotion portrayed by the dancer in those figures.

The key forms of emotional expression include the following:

(i) Startle Response: Walk quietly upto your friend when he or she is deep in thought and yell "Boo!" You will notice rapid closing of eyes and widening of the mouth. The chin tilts up and the arms and legs are bent. This response is an inborn response.

(ii) Facial Expressions: Each emotion has its characteristic facial expression. The eye, nose lips and forehead twist and twitch and take different shapes. The facial expressions show three dimensions of emotional expression.

Pleasantness-unpleasantness: The facial expressions represent feeling of pleasantness (e.g. smile and laughter) or unpleasantness (a sad look).

Attention-Rejection: Attention is expressed by wide open eyes and an open mouth. Rejection shows contraction of eyes, lips and nostrils.

Sleep-Tension: It refers to the level of relaxation and tenseness or excitement as found when you sleep and when you are angry and anxious.

(iii) Vocal Expressions : People express emotions with the help of voice also. You must have noticed that your voice trembles and breaks when you are sad, you groan when you are in pain, your voice is loud and high pitched in anger.

(iv) Gestures and Postures : The gestures and postures that you display during joy differ from those that happen during sorrow. In sorrow you slump your face down. In joy you hold your head high and take an upright posture. In fear you either run or are rooted to the spot. We learn gestures and postures from the people around us. Therefore societies may have different ways of expressing emotions.

INTEXT QUESTIONS 10.3

(1) What are the important changes that occur in an emotional state?

_____

_____

_____

(2) Fill in the blanks with appropriate words:

(i) During sadness one's voice _____ and _____.

(ii) Under strong emotions thinking and reasoning get affected _____.

(3) State whether the following are True or False

(i) We learn gestures from our society and culture. True/False

(ii) When you are sad your voice will become loud. True/False

(iii) We learn gestures and postures from our society. True/False

10.7 MAJOR EMOTIONS

We develop a number of emotions while dealing with different persons and objects in the environment. They can be negative emotions like fear and anxiety or positive emotions like pleasure and love. Let us study these emotions in some detail.

(i) **Fear :** Fear is caused by situations which are perceived as physically threatening. The situations that produce fear change with age. During early childhood we are afraid of strange objects and persons, loss of support, darkness and devils etc. During adolescence fears are mostly social in nature (e.g. fear of authority, parental criticism, peer rejection, fear of failure).

Maturation and personal experiences contribute to the development of fear. Children learn emotional reactions by imitating their parents, and other family members. That is why a one or two year old child would have no fear of snakes, whereas older children feel quite afraid. Fear can also be developed through conditioning. That is why each person's fear will be somewhat different from that of others. For example if during childhood somebody was lost in crowd he or she may develop a fear of crowd. You must have noticed other similar types of fear among your friends such as fear of lizards, darkness etc. When such fears become very strong, they are called phobias. They are unfounded fears. Usually people try to escape fearful situations by running away from them.

(ii) **Anxiety:** Anxiety is a state of painful discomfort of mind. During anxiety a vague fear or apprehension occurs. You may feel anxious if you don't know the exact cause. The difference between fear and anxiety often refers to the

involvement of present situation. You can recognise the cause of fear in your present circumstances whereas anxiety may arise due to an anticipated or imaginary situation.

You will become anxious when you anticipate any harmful or threatening event. The sense of anxiety can be an unconscious memory of fear arousing stimulus. We may forget the particular unpleasant situation in which we learned a fear. When we face similar situation we feel anxious without knowing why do we feel so. High level of anxiety is destructive for our performance and health. In extreme cases anxiety may take the form of a mental disorder.

(iii) Pleasure: Pleasure or happiness is a positive emotion which gives satisfaction to the person who experiences it. Pleasure is the reaction to the satisfaction of a need or attainment of a goal. When we are happy we smile and laugh and there is a clear expression of satisfaction on our faces. An infant expresses pleasure by babbling. They learn to express happiness in socially approved ways. People derive pleasure from different sources during different stages of life. The babies derive pleasure from physical well being, tickling etc. whereas adults experience pleasure by the experiences like being successful in different situations. Children whose home, school, and neighbourhood environments are pleasant have more happy experiences than those who must live, work and play in unpleasant environments.

(iv) Affection: It is a pleasant emotional reaction directed towards a person, an animal or an object. It is built up as a result of pleasant experience. The most primitive basis of affection is associated with warmth of mother's body, and being fondled and cuddled. Learning plays an important role in determining the persons or objects to which child's affection becomes attached. Children indiscriminately show affection towards members of the family, pets and toys. As adolescence approaches, affection is diverted more towards people than pets. Affectionate responses are shown in an outgoing striving and approach behaviours. Affection is expressed by patting, hugging, verbal expression, protecting and helping the loved one.

INTEXT QUESTIONS 10.4

Fill in the blanks with suitable words:

(i) The situation which produces fear changes with _____.

(ii) Fear is _____ emotion whereas love is _____ emotion.

(iii) Anxiety arises due to _____ or _____situation.

(iv) Cause of anxiety could be _____ memory of a fear arousing stimulus.

Emotional competence

In recent years the gap between cognition or rationality and emotions is being bridged. It is considered that emotional competence, emotional maturity and emotional intelligence are important for the growth of a person. Thus one needs to understand one's own and other's emotions and learn to express, control and manage emotions in social situations. Promotion of emotional competence has been found central to the overall competence of a person.In recent years researchers have taken interest in improving emotional intelligence.

WHAT YOU HAVE LEARNT

- Emotion is a stirred up state which directs human behaviour in important ways. Motivation and emotion are closely related. The autonomic nervous system and hypothalamus play an important role in experience and expression of emotions.
- There are subjective, physiological and psychological changes which accompany emotional states for example changes in heartbeat, breathing pattern etc.
- There are several theories to explain the phenomenon of emotion. The James-Lange theory suggested that emotion is the recognition of changes in some bodily states. The Cannon-Bard Theory suggests that a stimulus event gives rise to both physiological changes and perception of emotions. These events occur close in time. The Schacter-Singer theory proposes that a person is aroused by an external stimulus, evaluates the arousal state with respect to the environment and labels the emotion.
- The undifferentiated arousal is shaped into specific emotions by the attribution process. This then motivates people to act according to different emotions.
- The expressions of emotions can be understood by observing an individual's facial and vocal expressions, gestures and postures.
- Fear and anxiety are two important negative emotional patterns. Fear arises from a present situation, whereas anxiety comes from an imaginary situation. An intense persistent fear can lead to phobia. Anxiety, when low, can be good but when high can be destructive.

- Pleasure and affection are examples of positive emotions. Pleasure is a reaction to the satisfaction of a motive and is expressed by smiling and laughing. Affection is an emotional reaction of pleasant experiencess directed towards a person, an animal or an object. It is expressed by taking care of the loved one, patting, hugging, protecting and verbal admiration.
- In order to live and grow in an effective manner, development of emotional competence is necessary. One must understand one's own and other's emotions and regulate them properly.

TERMINAL EXERCISE

(i) What is emotion? Give examples of positive and negative emotions?

(ii) Briefly describe general characteristics of an emotion?

(iii) Explain how emotion is related to motivation.

(iv) Discuss the role of physiological processes in emotional behaviours.

(v) Describe facial and vocal expressions of emotion.

(vi) What is emotional competence?

ANSWER TO INTEXT QUESTIONS

10.1

(1) (i) Stirred up (ii) emovere

(iii) cognitive, physiological and behavioural

(iv) pleasant (v) energy

(2) (a) True (b) false (c) true (d) true

10.2

(1) (i) sympathetic system, parasympathetic system

(ii) excited (iii) increases

(2) The feeling of excitement in an emotional state is known as arousal. It can be measured through one's heart beat, blood pressure, breathing, pupil size and skin conductance.

10.3

(1) The changes that occur in an emotional state are physical, physiological and psychological.

(2) (i) trembles, breaks (ii) adversely

(3) (i) True (ii) False (iii) True

10.4

(i) age (ii) negative and positive

(iii) imaginary or anticipated (iv) unconscious

HINTS TO TERMINAL EXERCISE

1. Refer to section 10.1
2. Refer to section 10.3
3. Refer to section 10.4
4. Refer to section 10.5
5. Refer to section 10.6
6. Refer to section 10.7