Unit VIII - Answer Key
Motivation, Emotion, and Stress

Module 37 - Motivational Concepts

While You Read

37-1

1. They define motivation as a need or desire that energizes and directs behavior. It arises from the interplay between nature and nurture.

2. Instinct theory (evolutionary perspective) focuses on genetically predisposed behaviors for all members of a given species. Drive-reduction theory focuses on the motivation to maintain homeostasis by satisfying basic biological needs.

Arousal theory focuses on finding the right level of stimulation in order to have optimal performance. Abraham Maslow's hierarchy of needs describes how some of our needs take priority over others. Finally, incentive theory describes how external rewards can impact behavior.

3.

Perspective/Theory	**Key Terms**	**Key Contributors**	**Summary**
Instinct/Evolutionary	innate reflexes; unlearned fixed patterns which occur in all member of a given species.	Charles Darwin	Instinct theory proposed that behavior stemmed from inborn drives. Evolutionary theory assumes that genes predispose

			species-typical behavior that aids survival.
Drive-Reduction	physiological needs; homeostasis	*none mentioned* Clark L. Hull	A physiological need such as food, water or sleep creates an aroused tension state (a drive) that motivates an organism to satisfy the need. Low hydration creates a thirst that drives a person to find water.
Arousal	optimal arousal; Yerkes-Dodson law	Yerkes and Dodson	It may be more than need that drives behavior—even with all needs met, organisms will still exhibit behavior. Human motivation aims to seek optimum arousal. Difficult tasks often necessitate a lower level of arousal, while easier tasks necessitate higher levels of arousal to bring about our best performance.

Hierarchy of Needs	physiological; safety; belongingness and love; esteem; self-actualization; self-transcendence	Abraham Maslow	Once our lower-level (fundamental to survival) needs are met, we are prompted to satisfy our higher-level needs.

4. The instinct theory became too cumbersome as over 5000 behaviors came to be labeled as instincts. However, it does still offer an explanation for some behaviors in various species which are likely to be learned rather than inborn.. The drive-reduction and evolutionary theories explain the behaviors that lead to physical survival but not those such as curiosity or living up to potential—these are explained by the arousal theory and in portions of Maslow's hierarchy The arousal theory indicates that different levels of arousal will lead to optimal performance, but this will change depending on the person completing the task (risk takers might need a higher level of arousal for their best performance). Maslow`s hierarchy explains both physiological and psychological motivation but does not address why some individuals deprive themselves of food for a higher cause or put their belonginess needs in front of their own needs for safety.

5. The need is physiological (low potassium or salt in the body).

The need creates a drive (a hunger or craving).

The drive creates a behavior (choosing a food that is high in salt or potassium).

6. The body maintains homeostasis by regulating body chemistry (such as blood glucose) to trigger behaviors such as eating or cessation of eating.

Answers will vary; however, an acceptable response may be fore student to explain that they sleep in order to feel refreshed and alert the following day.

7. Incentives which exist in the environment are positive or negative stimuli that lure or repel us. The aroma of good food or a food ad placed on TV just around dinner time can encourage eating behavior even if we were not hungry and there was not a drive to eat.

8. In order to perform well on difficult tasks, it has been found that a low level of arousal is most useful. Imagine a brain surgeon who is really agitated and pumped up—her shaking hands and adrenaline might actually be a drawback. We'd like our brain surgeons to be cool, calm and focused.

The graph shows, however, that high arousal on easy tasks leads to high performance. For example, If a student is studying for an exam for many hours straight and does not find the material very interesting, they may drink a cup of coffee to help them remain focused.

9.

Maslow's Need	**My Example**
physiological	Answers will vary; however, a sample answer might be that "I am motivated to pack my lunch and several snacks so I can meet my hunger needs at any time throughout my school day."
safety	Answers will vary. However, a sample answer might be that, "I live in a safe neighborhood where I do not have to worry about walking down the

	street at night alone."
belongingness and love	Answers will vary. However, a sample answer might be that, "I reach out to other in order to make friends and have a group of people with whom I enjoy spending time and have common interests."
esteem	Answers will vary. However, a sample answer might be that, " I work hard on my homework assignments so that I can be proud of my work and put forth my best effort."
self-actualization	Answers will vary. However, a sample response might be that, " I have practiced violin for hours a day since the age of three, in order to become the best violin player possible."
self-transcendence	Answers will vary. However, a sample response might be that, "I try to understand social justice and work to make the lives of other better even if I do not directly know them."

After You Read

Module 37 Review

1. c. arousal theory

2. a. hierarchy of needs

3. d. instinct theory

4. b. drive-reduction theory

5. **d.** incentive theory

6. **b.** low

Module 38 - Hunger Motivation

While You Read

38-1

1. Walter Cannon swallowed a balloon attached to a recording device and timed his stomach contractions. He and Washburn found that Cannon's stomach contractions coincided with his self-reported hunger pangs.
2. Glucose is a blood sugar that is a major source of energy. When you are low on glucose, your stomach, intestines, and liver will signal your brain to motivate eating, which then triggers your hunger.
3. When an appetite-enhancing center of the hypothalamus is stimulated electrically, well-fed animals begin to eat. If the area is destroyed, even starving animals have no interest in food. The opposite occurs when an appetite-suppressing area is stimulated: Animals will stop eating. Destroy this area and animals will eat and eat and become extremely fat.
4. When the body falls below the set point—or the point at which an individual's "weight thermostat" is supposedly set—an increase in hunger and a lowered metabolic rate may act to restore the lost weight. This may explain why individuals who are dieting often feel "sluggish" and have less energy than normal.
5. A biologically fixed set point, according to some researchers, doesn't address slow sustained changes in body weight that can alter a person's set point causing them to either gradually gain or lose weight.

   To increase the basal metabolic rate, become more active. Often those who maintain a healthy body weight are more active and have more energy than those who are obese.

6.

Appetite Hormone	Location of Secretion	Effect on Hunger
Insulin	Pancreas	Controls blood glucose.
Ghrelin	Stomach	Sends "I'm hungry" signals to the brain.
Orexin	Hypothalamus	Triggers conscious hunger.
Leptin	Fat cells	Causes brain to increase metabolism and decrease hunger.
PYY	Digestive tract hormones	Sends "I'm not hungry" signals to the brain.

38-2

1. As time passes, we think about eating again, and those thoughts trigger feelings of hunger. Those with severe amnesia would eat again after a 20-minute interval even though they had recently consumed a meal. This demonstrates that physiological cues for hunger or satiation are not the only factors driving eating behaviors.

2. Our preferences for sweet or salty foods are genetic, but our culture teaches us that some foods are acceptable while others are not—for example, camel, horse, dog, rat—all animals Americans and Europeans may find offensive to eat, but that are prized as delicacies elsewhere.

3. In hot climates where food spoils readily, recipes often include spices that inhibit the growth of bacteria (India averages nearly 10 spices per meat recipe, Finland only 2).

4. In Japan people enjoy natto a fermented soy dish but do not understand Europeans preferences

for foul smelling cheeses.

5. Group size: The presence of others tends to amplify our natural behavior tendencies, such as eating.

   Portion size: When given a larger portion, we consume far more calories.

   Food variety: When presented with many different kinds of foods or desserts, we tend to eat more than when we have to take a portion from just one option.

38-3

1. Answers will vary, but might include:

   social—lower psychological well-being, increased risk of depression, higher likelihood of being bullied, etc.

   physiological—increased risk of diabetes, high blood pressure, heart disease, gallstones, arthritis, and increased risk for certain types of cancer.

2. Once we become fat, we require less food to maintain our weight than we did to attain it. When an overweight person's body drops below the set point, the person's hunger increases and metabolism decreases, often leading those who have lost a significant amount of weight to return to their previous weight.

3. Genes do play a role in our body weight. People's weights resemble those of their biological parents (even when they live with adoptive parents), and identical twins have closely similar weights.

4. Environmental factors play a pretty important role: Those who suffer from sleep loss are more vulnerable to obesity, and we are more likely to become obese when a friend is obese, and/or we are eating more and moving less.

After You Read

Module 38 Review

1.

Hormone	Being Secreted Yes No Location
Ghrelin	Yes empty stomach
Orexin	Yes hypothalamus
Leptin	No fat cells
pyy	No PYY, digestive tract

2. As blood glucose decreases , hunger increases.

3. As body weight rises, hunger decreases and energy expenditure increases.

4. As food intake decreases, basal metabolic rate decreases and energy expenditure decreases.

5. When an overweight or obese person's body weight drops below its set point, the person's hunger increases and metabolism decreases .

Module 39 - Sexual Motivation

While You Read

39-1

1. When secretion of estrogen peaks during ovulation, females become more sexually motivated and responsive.

Testes manufacture the hormone testosterone; because these levels are usually kept more constant, they do not easily manipulate the sexual behavior of males. However, castrated male rats who have lost their ability to produce testosterone gradually lose much of their interest in receptive females.

2. Men have higher levels of testosterone than women, but women have higher levels of estrogen and progesterone than men.

3. In prenatal development, hormones direct development towards male or female. In puberty, hormones surge, bringing about sexual maturity and in the adult years, hormones facilitate sexual behavior.

39-2

1. They recorded physiological responses of volunteers who masturbated or had intercourse (382 females and 312 males). They monitored or filmed more than 10,000 “sexual cycles” and described the four stages of the sexual response cycle: excitement phase, plateau phase, orgasm, and resolution phase (where males enter a refractory period).

2.

Stage of Sexual Response Cycle	**Physiological Changes**
Excitement Phase	Men's and women's genital areas become engorged with blood, a woman's vagina expands and secretes lubricant, a woman's breasts and nipples may enlarge.
Plateau Phase	Breathing, pulse, and blood pressure rates continue to increase. The penis becomes fully engorged and some fluid may appear at its tip. Vaginal secretions increase.
Orgasm	Muscle contractions all over the body accompanied by increases in breathing, pulse, and blood pressure rates. A woman's uterus positions to receive sperm.
Resolution Phase	The body gradually returns to its unaroused state and genital blood vessels release their accumulated blood. A male`s refractory period will generally last much longer than a female`s with some men not able to experience another orgasm from between two minutes and a few days.

39-3

1. Biological factors, such as sex hormones, interact with psychological factors, such as exposure to stimulating conditions, and also interact with sociocultural factors, such as family and religious values and media representations, to impact sexual motivation.

2. Many studies confirm that men and women become aroused when they see, hear, or read erotic materials. Research indicates that sexually explicit materials can have adverse effects—viewing images of sexually attractive men and women may lead people to devalue their own partners and relationships.

3. Those is committed relationships claim to be more satisfied and happy with the sexual component of the relationship than those who are in sexual but non-committal relationships.

After You Read

Module 39 Review

1. c. excitement, plateau, orgasm, resolution

2. b. High levels are demonstrated to lead to higher interest in sexual activities.

3. b. estrogens peak during ovulation

4. e. the refractory period.

5. b. repeated exposure may be related to increased acts of sexual aggression.

Module 40 - Affiliation and Achievement

While You Read

40-1

1. Answers will vary but should discuss the human motivation to belong and feel connected to others.
2. Social bonds enhanced chances of survival and cooperation. Self-esteem rises and sense of well-being is increased.
3. Being ostracized or socially excluded brings on loneliness and even social pain. This makes it more likely that the person will engage in self-defeating behaviors and underperform on aptitude tests. It also interferes with empathy for others—even social violence, depression or aggression against others.
4. Gaertner et al. (2008) and Twenge et al, (2001) told some students that they were the type to end up alone later in life or were not wanted in a group. They told other students they would have rewarding relationships. Those excluded became more likely to engage in self-defeating behaviors and underperform on aptitude tests.
5. When ostracism is recreated in research studies the anterior cingulate cortex is active which is the same area of the brain that responds to physical pain.

40-2

1.
   a. False: Teens with cell phones send roughly 30 texts a day and cannot imagine their life without a cell phone (Newport 2015; Saad 2015).
   b. True: Those who spend more time online are less likely to draw help from their real-world neighbors for help in times of need .

c. True: In both Taiwan and the United States, excessive online socializing and gaming have been associated with lower grades; Kaiser Family Foundation, (2010).

In one US survey, 47 percent of the heaviest users of the Internet and other media were receiving mostly C grades or lower (Kaiser Family Foundation, 2010).

d. False: When used in moderation these can be useful ways to connect with others or keep in touch with those who are far away. Moderate use of social networking predicts longer life.

e. True: Those who score high on narcissism are especially active on social networking sites. They collect more superficial "friends" and offer more staged, glam photos (Buffardi and Campbell, 2008, Weisser, 2015).

2. Answers will vary, but may include: Monitor time online, monitor feelings while online, hid when necessary, check phone and e-mail less often when studying, refocus by taking a short walk.

40-3

1. Achievement motivation is the desire for significant accomplishment, for mastery of skills or ideas, of control, and for attaining a high standard. Answers will vary, but an example could be students who work hard to earn good grades or master the content area of a specific course because they would lie to pursue a career in a related field.

2. The most successful were more ambitious, energetic and persistent. As children they had more active hobbies and as adults they participated in more groups and sports.

3. She believes that passion and perseverance in the pursuit of long-term goals, may be more important to success that one`s natural born talent.

4. Answers will vary on the goal but should involve making the resolution, announcing it to friends or family, develop and implementation plan, create short-term goals that support the end goal, monitor and record progress and create a supportive environment.

After You Read

Module 40 Review

1.

Part I:

Pro	Con
Sample answers: • Our need to affiliate or belong is thought to be a basic human motivation. • Bonding and affiliating is adaptive. • Happiness seems to be correlated with belonging. • Check in or miss out. • Friendships may deepen through electronic disclosure of thoughts and feelings.	Sample answers: • Cell phones can be addictive. • She may spend more time on the device and less with friends in the real world. • Selective attention can only be in one place at a time, and cell phones distract. • Heavy cell-phone use is correlated with lower grades. • Lonely people spend greater time online.

Part II: Answers will vary but should emphasize the reasons for either allowing their daughter to begin using social media or not.

2. Angela Duckworth believes that Kelsey`s passion for the sport will be an important asset and that she will have to work hard even in the face of setbacks if she wants to improve her game. If she exhibits these components of grit, she may even have a better chance of making the team than those who are naturally more talented that Kelsey.

Module 41 - Theories and Physiology of Emotion

While You Read

41-1

1. Stimulus, physiological arousal, bodily response, emotion
2. Stimulus, physiological arousal, bodily response and emotion (arousal and bodily response occur simultaneously).
3. Responses may vary however as sample answer might include, the stimulus of seeing your loved one produces a feeling of love. The James-Lange theory would suggest that upon seeing the loved one, the bodily response of racing heart, perspiration, and increased body temperature would cause the emotion of love. The Cannon-Bard theory would dispute that. It would suggest that the increased physiological responses occur separately but simultaneously, so the heart pounding occurs as the love feeling is experienced.

41-2

1. Cognitive appraisal—how we interpret the physiological response—was added.

   Answers will vary: A sample response may emphasize that our physiological response is not very different for intense emotion such as love or hate, rather it is the setting and our cognitive appraisal of the setting that determines our emotion.
2. stimulus, physiological arousal, cognitive label, emotion
3. College men were injected with epinephrine, which triggers feelings of arousal. They go into a waiting room where an accomplice is acting either euphoric or irritated; as they observe this person, they begin to feel their heart race, body flush, and breathing increase. Those who had been told of the epinephrine effects attributed the physiological changes to the drug.

Those who had NOT been told of epinephrine effects attributed the physiological changes to the euphoric or irritated mood/vibe in the room. Arousal fuels emotion, cognition channels it.

4. Potential Response: Schachter and Singer injected the participants with epinephrine and told them that it would improve their eyesight. This involves deception and the potential of placing the participants at risk. If I were a member of the IRB board, I would not approve the study for these reasons. It may be important to note that the actual study was conducted in 1962 and ethical guidelines today are much more clearly defined.

5. They suggest a "low-road" pathway that bypasses the cortex. They suggest that in some instances, especially with simple likes, dislikes, and fears, our emotional response occurs before any intellectual cognition takes place.

6. Answers will vary.

41-3

1. The sympathetic nervous system mobilizes the body, and the parasympathetic system gradually calms it.

2. Sympathetic nervous system: pupils dilate, salivation decreases, skin perspires, respiration increases, heart accelerates, digestion inhibits, adrenal glands secrete stress hormones, immune system functioning is reduced.

Parasympathetic nervous system: pupils contract, salivation increases, skin dries, respiration decreases, heart slows, digestion activates, adrenal glands decrease secretion of stress hormones, immune system functioning is enhanced.

41-4

1. Compared with those watching angry faces, those watching fearful faces show more activity in their amygdala.

When experiencing negative emotions such as disgust, the right prefrontal cortex is more active than the left.

Depression-prone people and those with generally negative personalities show more right frontal lobe activity.

The insula is activated when we experience various social emotions such as lust, pride, and disgust.

2. The amygdala is active in response the viewing fearful face, this may occur because the amygdala is located in the limbic system which is known as "the emotional center of the brain".

Physiological arousal is much the same from one emotion to another.

41-5

1. Physiological arousal is much the same from one emotion to another: Anxiety, irritation, and guilt all produce similar physiological reactivity. These factors make it difficult to determine those who are lying from those who may simply be nervous.

Many innocent people respond with heightened tension due to the situation.

2. There is not a clear way to identify who is lying from those who are telling the truth, the polygraph tests provide us with a decisive answer (pass or fail), even if these may not always be correct.

As the text describes, new interrogation techniques such as the Concealed Information Test

and others like these may be more accurate measures of those who are guilty and perhaps these will eventually make the use of polygraph testing obsolete.

3. They measure emotion-linked changes in breathing, cardiovascular activity, and perspiration and overall level of arousal.

After You Read

Module 41 Review

JL **1.** Shelby had tears streaming down her cheeks and became sad.

SS **2.** Daneen was out walking in a strange neighborhood at night when a man turned the corner and began walking toward her. Daneen recognized that her breathing and heart rate were accelerating and she remembered that she was in a dangerous neighborhood, so decided she must be afraid. Fearfully, she crossed over to the other side of the street.

SS **3.** The next day, Daneen was out walking in her own neighborhood when a man turned the corner and began walking toward her. Daneen recognized that her breathing and heart rate were accelerating and decided after thinking about the situation that she must be excited. She screamed with delight as she ran to greet her father who just arrived from a long trip.

CB **4.** Ji-hoon is walking between classes at school when he encounters a student who has been bullying him. Immediately, his pulse increases and he begins to sweat as he is overwhelmed by fear simultaneously.

JL **5.** Angelo noticed that his heart was racing and began to experience fear.

Use the following scenario to answer questions 6 through 10.

You are hoping to ask a girl in your next class if she will accompany you to the school dance. You are very nervous and excited. Address the impact the autonomic nervous system will have on each of the bodily processes described below as you enter the room to pop your question.

6. It will pour glucose into the bloodstream in order to provide additional energy.
7. Lungs increase respiration in order to burn the sugar.
8. Digestion slows at this time so that energy can be diverted to your muscles.
9. Pupils will dilate to let in more light in case you need clearer vision.
10. Sweat glands will secrete fluid or perspiration to help cool your body as all these processes produce additional energy.

Module 42 - Expressing Emotion

While You Read

42-1

1.

a. A firm handshake communicates an outgoing, expressive personality.

b. A gaze, an averted glance, or a stare communicate intimacy, submission, or dominance.

c. In a series of subliminal words, we more often sense the presence of negative ones, such as *snake* or *bomb.*

2. A Duchenne smile activates muscles under the eyes and raised cheeks, which indicates a natural smile. A feigned smile is frozen in place for several minutes and then suddenly switched off. True smiles tend to be briefer and fade more gradually.

3. The behavioral differences between liars and truth-tellers are too small for most people to detect.

4. Answers will vary.

42-2

1. Some studies suggest that when given "thin slices" of behavior to observe, women surpass men at reading emotional cues.

2.

a. The "A-OK" sign given by President Nixon was a crude insult to Brazilians; the middle finger given by captured Navy officers was thought to be a good luck sign by the North Koreans.

b. Facial expressions tend to be similar around the world.

3. Facial muscles speak a universal language. A smile is a smile around the world, and so is anger. We tend to share more emotion, be it happy or angry, when we have companions around.

4. While facial expressions may be universal, display rules in different cultures impact how emotion is expressed because of different display rules which dictate appropriate behavior and vary between cultures.

Western Europe, Australia, New Zealand and North Americans tend to display visual emotions, while those in Japan or China have less visible emotional displays.

42-3

1. It is the tendency of facial muscle states (such as smiling) to trigger feelings such as happiness (or fear or anger, etc.).
2. Going through the motions awakens the emotions. Acting and behaving in a certain manner can elicit emotions that would be appropriate to those behaviors (slumped body, shuffling steps = downcast and sullen emotion).

   One possible reason why it is counterintuitive that facial expressions can influence emotion is that we have learned to view facial expressions as the indicators of emotions, not the originators. To think that we can create or influence an emotion from our outward facial expressions is counterintuitive.
3. By paralyzing the muscles in the face so that one cannot frown may decrease brain circuits for depression. Many depressed patients report feeling better after these injections.

4. When people stand with shoulders hunched over and looking down at the ground, they tend to feel more negative emotions than if they walk straight ahead and take long strides. While the

facial muscles can control the internal response of the body, so can the physical stance and gait of the body impact one`s emotional response.

After You Read

Module 42 Review

1. The facial feedback effect indicates that if Patrick smiles and arranges his face in a pleasing, open manner, people encountering him will act likewise and he will be more likely to make friends. Patrick will also be more likely to report feelings of happiness.
2. Matsumoto and Ekman showed that basic facial expressions such as happiness, surprise, fear, sadness, anger, and disgust seem to be the same worldwide. Hakim need not worry—a smile is a smile the world around.
3. Duchenne described the natural smile as being one that activates muscles under the eyes and raises the cheeks—it engages the facial muscles of a natural smile. The smile the models are making abruptly switches off and does not reflect in the eyes.
4. Electronic communications provide impoverished nonverbal cues. Gestures, facial expressions, and voice tones, absent in written communication, convey important information. Without the vocal nuances that signal whether a statement is serious, kidding, or sarcastic, your friend misunderstood your text.

Module 43 - Stress and Illness

While You Read

43-1

1. Answers will vary. however, a sample response would be that a stressor is an upcoming exam for a student, the terror one feels when thinking of the exam is the stress reaction and the stress is a result of the connection made between the events (exam) and the appraisal of that event (I am not prepared).
2. When short-lived or when perceived as challenges, stressors can have positive effects. Personal examples of stressors will vary. However, a sample response may be that if a student athlete has qualified for the state competition, they may be very nervous and excited about the event which causes them stress, but they are happy for the experience.
3. Extreme or prolonged stress can harm. Chronic disease, circulatory, digestive, respiratory, and infectious diseases can result. Personal examples of negative effects of stress will vary but may include examples such as a lack of attention because the person is overwhelmed by all of the obligations they have, or they may have experienced an illness shortly after a romantic break-up.
4. Answers will vary but should reflect the three main types: catastrophes (unpredictable large-scale events), significant life changes (life transitions), daily hassles (small, daily irritations).

43-2

1. The sympathetic nervous system either prepares to stay and face the stressor at hand (fight) or to remove themselves from a stressful situation (flee)

2. The three main phases of the GAS are: Phase 1: alarm, where the stressor occurs and our resistance to the stress dips and we mobilize our resources. Phase 2: resistance, enables our body to cope with the stressor and our resistance to the stress is high for a while. This can

only last so long before Phase 3, exhaustion, sets in and our reserves are depleted and our resistance to the stressor is low. Examples will vary but should reflect the three phases.

3. When stress persists, we find lowered resistance to infections and other threats to mental and physical well-being. The brain's production of new neurons slows and some neural circuits degenerate. Prolonged stress also seems to accelerate the aging process with stressed cells which look much older than their chronological age.
4. Under stress, people often (more often women) provide support to others and bond with and seek support from others.

43-3

1. Health psychology is psychology`s contribution to behavioral medicine. Psychoneuroimmunology refers to the emphasis on mind-body interactions. This field examines how external events may cause internal changes and vice versa.

2.

Immune Cell	**Action Against Invaders**
B lymphocytes	Release antibodies to fight bacterial infections.
T lymphocytes	Attack cancer cells, viruses, and foreign substances.
macrophage cells	Identifies, pursues, and ingests harmful invaders and worn-out cells.
natural killer cells	Pursue diseased cells.

3. When ill, it takes energy to track down invaders, produce swelling, and maintain fevers. Therefore, your body reduces muscular energy and increases sleep. Stress does the opposite, and renders you more vulnerable to illness.

4. An overactive immune system may attack the body`s own tissues as in the disorder multiple sclerosis in which the body gradually destroys the myelin sheath which covers the axons of neurons.

In an underactive nervous system, the body cannot respond to fight off infection or viruses and is therefore more prone to sicknesses such as AIDS or colds.

5. Stress weakens a person's ability to fight off cancer. Some studies suggest that people are at an increased risk for cancer within a year after experiencing depression, helplessness, or bereavement. However, other studies have not found a link, and indeed, concentration camp survivors and former prisoners of war (both considered highly stressful situations) have not experienced higher rates of cancer.

43-4

1. High blood pressure, a family history of heart disease, smoking, obesity, an unhealthy diet, physical inactivity and high cholesterol.

2. Cortisol

3.

a. Reactive, competitive, hard-driving, impatient, time-conscious, supermotivated, verbally aggressive, and easily angered. They are most likely to be highly stressed and therefore susceptible to illness.

b. Easy-going and relaxed people. They are less likely to suffer heart attacks and hypertension.

4. Depression substantially increases the risk of death, particularly by unnatural causes and heart disease. Researchers found more than a doubled rate of heart attack among those women who initially scored as depressed. Many more studies show an increased rate of heart attacks among those facing significant work stress, and it seems that heart disease and depression may both result when chronic stress triggers persistent inflammation.

5. Pessimists are more likely to suffer from heart disease, while optimists are more likely to be healthy and outlive their pessimistic counterparts.

6. Catharsis poses that releasing one`s aggressive energy will reduce the level of anger and aggression that one feels. Research suggests that rather than reduce levels of aggression, catharsis may actually create more anger.

7.

1. Wait
2. Find a healthy distraction or support
3. Distance yourself
4. Answers will vary

After You Read

Module 43 Review

1. c. T lymphocytes and natural killer cells

2. b. be more susceptible to colds and other illnesses.

3. a. Punch a pillow as a way to release one`s anger.

4. b. Stress creates cancer cells.

5. d. Pamela is a Type A personality and more likely to have a heart attack.

Module 44 - Health and Happiness

While You Read

44-1

1. Optimists tend to believe that they have more control over situations in their lives than do pessimists. They respond to setbacks with a more hopeful attitude which leads to increased grades, more satisfaction in relationships and better overall health.
2. Identical twins often share similar levels of optimism and the hormone oxytocin increases feelings of trust and social connections with others.
3. Those with strong social networks and close friends and family have been found to live longer than those who are more socially isolated. The key to this success seems to be having quality relationships with those who genuinely care for a person.
4. In studies in which Holocaust survivors and rape victims and ambulance drivers disclosed their traumatic experiences with others, their health was better in the months following the disclosures. Written disclosures may also be successful.

44-2

1. Aerobic exercise is the sustained, oxygen-consuming exertion that leads to increased heart and lung fitness.

Aerobic exercise can increase blood flow, lower blood pressure, decrease chances of experiencing obesity or type 2 diabetes and allow us to manage stress better.

2. Vigorous exercise can directly increase mood, decrease tension and raise energy levels. It helps aid in sleep and promotes the production of the neurotransmitters norepinephrine, serotonin and endorphins.

44-3

1. Men who has survived heart attacks participated in a program in which they learned to relax by walking, talking and eating more slowly, laugh at themselves and renew their religious faith significantly decreased (by 50%) their likelihood of suffering another heart attack.
2. Meditation has been found to be effective in improving sleep, interpersonal relationships and immune system functioning. It may do this by activating brain regions associated with reflective awareness and calming activation in emotional situations.

44-4

1. Healthy behaviors, social support and positive emotions such as hope and optimism.

44-5

1. The happiest 20-year-olds were more likely to marry. And less likely to get divorced, they also made significantly more money than their less happy peers.
2. The feel-good, do-good phenomenon suggests that when we are in a good mood, we are more likely to recall happy events and do nice things for others. Answers will vary but may include examples such as, “When I am in a good mood, I help my parents with housework” or, “When I am in a good mood, I help my friends with their psychology homework.”
3. Positive psychology uses scientific methods to study human flourishing. This relates to subjective well-bring because well-being relates to our sense of satisfaction with life.

4. 1 Positive well-being

   2.Positive character

   3.Positive groups, communities and cultures

5. Posts contained more positive posts on the weekend. The early days of the week, (Monday-Wednesday) were the least happy posts. Friday saw the most optimistic posts and Wednesday the least.

6. We adjust to a level that becomes "normal" for use, so even those who are severely handicapped or those who win the lottery eventually become accustom to their day-to-day life experiences and rate their levels of happiness compared to their "typical" day.

7. Relative deprivation occurs when we compare ourselves with others who have more money, advantages, freedoms or perceived privilege than ourselves which often has the effect of leaving us disappointed that we somehow have "less" than others. By comparing ourselves to others who face larger challenges than ourselves we can keep our perspective. We can also create gratitude journals which emphasize what we have in our lives to be thankful for, rather than what we lack.

44-6

1. They are more optimistic, outgoing, and have higher self-esteem. Happier people have lasting relationships and are more likely to belong to a religious organization. They enjoy work and leisure activities that engage their skills and they sleep and exercise better and more often than pessimists.

2. Identical twins report similar levels of happiness which may indicate that there is a high heritability factor for happiness. In addition, culture impacts happiness based on the

emphasis they place in individual achievement or the degree of wealth disparity in a country.

3. Answers will vary but may include: getting more sleep, exercising more often, or focusing on helping others.

After You Read

Module 44 Review

1. **e.** Cannon-Bard
2. **c.** T lymphocytes and natural killer cells
3. **b.** catch colds more often than nonstressed people.
4. **a.** Ghrelin
5. **d.** Pamela is a Type A personality and more likely to have a heart attack.
6. **c.** drive-reduction theory
7. **b.** He can sacrifice sleep to excel in school.

✓ Check Yourself

- Drive-reduction theory

  The drive-reduction theory will motivate her to seek out food sources when hungry or thirsty to achieve homeostasis.

- Glucose

  The glucose released into her bloodstream will regulate her hunger. More glucose = less hungry.

- Affiliation needs

Her need to affiliate or belong with others is likely what is driving her to hike to the west side of the island.

- Schachter and Singer two-factor theory

  The Schachter and Singer two-factor theory of emotion will come into play as she encounters new animals and has to cognitively appraise their threat or usefulness to her in determining how she will feel about them.

- Universal emotions

  As she travels to the west side of the island she may be comforted knowing that most basic human emotions are expressed the same, so if she does encounter another human, she will likely be able to let them know she is friendly by smiling.

- Stress impact on the immune system

  The stressor of being on the island alone may be impacting her immune system and she may be more vulnerable to colds or other illnesses.

✓ Check Yourself

The stressor is not having enough money to attend college. Ethan's physical (cold) and emotional (grouchy) responses are the stress reaction. How Ethan responds or appraises this problem is stress.

GAS:

Phase 1: alarm reaction—The stressor occurs: not having enough money to pay for college, and the mobilizing of resources begins: Ethan loads his plate with college courses and high-level athletic play in hopes of getting a scholarship.

Phase 2: resistance—He continues this load all semester, although he is gradually losing sleep.

Phase 3: exhaustion—Ethan is beginning to get sick with a cold as he is more vulnerable to illness now that his body's reserves have begun to run out. His grades are slipping as he can't keep up with the demands any longer.