What will the Psychological, Social, and Biological Foundations of Behavior section test?

The Psychological, Social, and Biological Foundations of Behavior section asks you to solve problems by combining your knowledge of foundational concepts with your scientific inquiry and reasoning skills. This section tests your understanding of the ways psychological, social, and biological factors influence perceptions and reactions to the world; behavior and behavior change; what people think about themselves and others; the cultural and social differences that influence well-being; and the relationships between social stratification, access to resources, and well-being.

The Psychological, Social, and Biological Foundations of Behavior section emphasizes concepts that tomorrow's doctors need to know in order to serve an increasingly diverse population and have a clear understanding of the impact of behavior on health. Further, it communicates the need for future physicians to be prepared to deal with the human and social issues of medicine.

This section is designed to

- test psychology, sociology, and biology concepts that provide a solid foundation for learning in medical school about the behavioral and sociocultural determinants of health;
- test concepts taught at many colleges and universities in first-semester psychology and sociology courses;
- test biology concepts that relate to mental processes and behavior that are taught at many colleges and universities in introductory biology;
- test basic research methods and statistics concepts described by many baccalaureate faculty as important to success in introductory science courses; and
- require you to demonstrate your scientific inquiry and reasoning, research methods, and statistics skills as applied to the social and behavioral sciences.

Test Section	Number of Questions	Time
Psychological, Social, and Biological Foundations of Behavior	59 (note that questions are a combination of passage-based and discrete questions)	95 minutes

Scientific Inquiry and Reasoning Skills

As a reminder, the scientific inquiry and reasoning skills that you will be asked to demonstrate on this section of the exam are:

Knowledge of Scientific Concepts and Principles

- Demonstrating understanding of scientific concepts and principles
- Identifying the relationships between closely-related concepts

Scientific Reasoning and Problem Solving

- Reasoning about scientific principles, theories, and models
- Analyzing and evaluating scientific explanations and predictions

Reasoning about the Design and Execution of Research

- Demonstrating understanding of important components of scientific research
- Reasoning about ethical issues in research

Data-Based and Statistical Reasoning

- Interpreting patterns in data presented in tables, figures, and graphs
- Reasoning about data and drawing conclusions from them

General Mathematical Concepts and Techniques

It's important for you to know that questions on the natural, behavioral, and social sciences sections will ask you to use certain mathematical concepts and techniques. As the descriptions of the scientific inquiry and reasoning skills suggest, some questions will ask you to analyze and manipulate scientific data to show that you can

- Recognize and interpret linear, semilog, and log-log scales and calculate slopes from data found in figures, graphs, and tables
- Demonstrate a general understanding of significant digits and the use of reasonable numerical estimates in performing measurements and calculations
- Use metric units, including converting units within the metric system and between metric and English units (conversion factors will be provided when needed), and dimensional analysis (using units to balance equations)
- Perform arithmetic calculations involving the following: probability, proportion, ratio, percentage, and square-root estimations
- Demonstrate a general understanding (Algebra II–level) of exponentials and logarithms (natural and base 10), scientific notation, and solving simultaneous equations
- Demonstrate a general understanding of the following trigonometric concepts: definitions of basic (sine, cosine, tangent) and inverse ($\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$) functions; sin and cos values of 0°, 90°, and 180°; relationships between the lengths of sides of right triangles containing angles of 30°, 45°, and 60°
- Demonstrate a general understanding of vector addition and subtraction and the right-hand rule (knowledge of dot and cross products is not required)

Note also that an understanding of calculus is *not* required, and a periodic table will be provided during the exam.

Psychological, Social, and Biological Foundations of Behavior Distribution of Questions by Discipline, Foundational Concept, and Scientific Inquiry and Reasoning Skill

You may wonder how much psychology, sociology, and biology you'll see on this section of the MCAT exam, how many questions you'll get about a particular foundational concept, or how the scientific inquiry and reasoning skills will be distributed on your exam. The questions that you see are likely to be distributed in the ways described below. These are the approximate percentages of questions you'll see on a test for each discipline, foundational concept, and scientific inquiry and reasoning skill.*
Discipline:

- Introductory psychology, 65%**
- Introductory sociology, 30%
- Introductory biology, 5%

Foundational Concept:

- Foundational Concept 6, 25%
- Foundational Concept 7, 35%
- Foundational Concept 8, 20%
- Foundational Concept 9, 15%
- Foundational Concept 10, 5%

Scientific Inquiry and Reasoning Skill:

- Skill 1, 35%
- Skill 2, 45%
- Skill 3, 10%
- Skill 4: 10%

*These percentages have been approximated to the nearest 5% and will vary from one test to another for a variety of reasons. These reasons include, but are not limited to, controlling for question difficulty, using groups of questions that depend on a single passage, and using unscored field-test questions on each test form.

**Please note that about 5% of this test section will include psychology questions that are biologically relevant. This is in addition to the discipline target of 5% for introductory biology specified for this section.

Psychological, Social, and Biological Foundations of Behavior Framework of Foundational Concepts and Content Categories

Foundational Concept 6: *Biological, psychological, and sociocultural factors influence the ways that individuals perceive, think about, and react to the world.*

The content categories for this foundational concept include

6A. Sensing the environment
6B. Making sense of the environment
6C. Responding to the world

Foundational Concept 7: *Biological, psychological, and sociocultural factors influence behavior and behavior change.*

The content categories for this foundational concept include

7A. Individual influences on behavior
7B. Social processes that influence human behavior
7C. Attitude and behavior change

Foundational Concept 8: *Psychological, sociocultural, and biological factors influence the way we think about ourselves and others, as well as how we interact with others.*

The content categories for this foundational concept include

8A. Self-identity
8B. Social thinking
8C. Social interactions

Foundational Concept 9: *Cultural and social differences influence well-being.*

The content categories for this foundational concept include

9A. Understanding social structure
9B. Demographic characteristics and processes

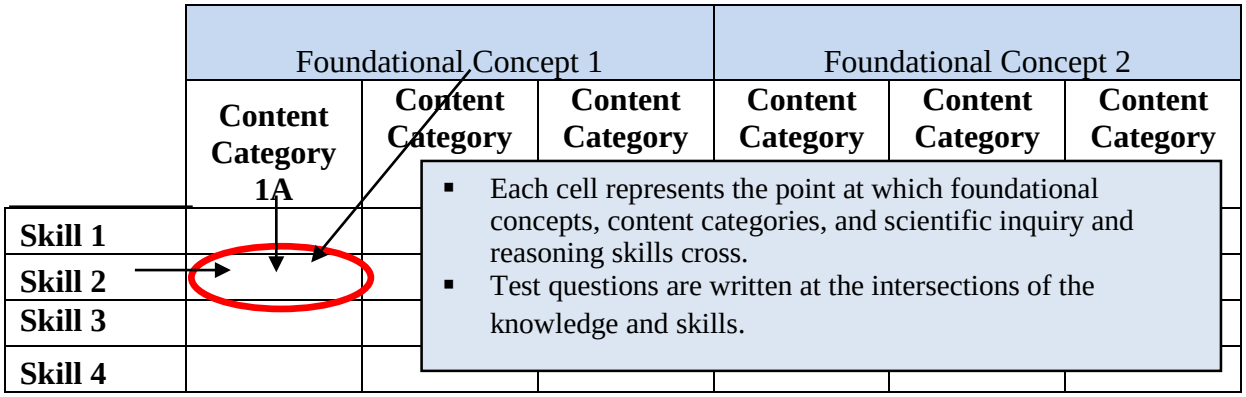
Foundational Concept 10: *Social stratification and access to resources influence well-being.*

The content category for this foundational concept is

10A. Social inequality

How Foundational Concepts and Content Categories Fit Together

The MCAT exam asks you to solve problems by combining your knowledge of concepts with your scientific inquiry and reasoning skills. Figure 1 illustrates how foundational concepts, content categories, and scientific inquiry and reasoning skills intersect to create test questions.



Understanding the Foundational Concepts and Content Categories in the Psychological, Social, and Biological Foundations of Behavior Section

The following are detailed explanations of each foundational concept and related content category tested by the Psychological, Social, and Biological Foundations of Behavior section. As with the natural sciences sections, content lists describing specific topics and subtopics that define each content category are provided. The same content list is provided to the writers who develop the content of the exam. Here is an excerpt from the content list:

EXCERPT FROM THE PSYCHOLOGICAL, SOCIAL, AND BIOLOGICAL FOUNDATIONS OF BEHAVIOR OUTLINE

Self-presentation and Interacting with Others (PSY, SOC) ← **Topic**

- Expressing and detecting emotion ← **Subtopic**
  - The role of gender in the expression and detection of emotion
  - The role of culture in the expression and detection of emotion
- Presentation of self
  - Impression management
  - Front stage vs. back stage self (Dramaturgical approach) (SOC)
- Verbal and nonverbal communication
- Animal signals and communication (PSY, BIO)

The abbreviations found in parentheses indicate the course(s) in which undergraduate students at many colleges and universities learn about the topics and associated subtopics. The course abbreviations are

- PSY: one semester of introductory psychology
- SOC: one semester of introductory sociology
- BIO: two-semester sequence of introductory biology

In preparing for the MCAT exam, you will be responsible for learning the topics and associated subtopics at the levels at which they are taught in the courses listed in parentheses. A small number of subtopics have course abbreviations indicated in parentheses. In those cases, you are responsible only for learning the subtopics as they are taught in the course(s) indicated.

Using the excerpt above as an example,

- You are responsible for learning about the topic Self-presentation and Interacting with Others at the level at which it is taught in a typical introductory psychology course *and* in a typical introductory sociology course.
- You are responsible for learning about the sub-subtopic Front stage vs. back stage self (Dramaturgical approach) *only* at the level at which it is taught in a typical introductory sociology course.
- You are responsible for learning about the subtopic Animal signals and communication at the level at which it is taught in a typical introductory psychology course *and* in a typical introductory biology course.

Remember that course content at your school may differ from course content at other colleges and universities. The topics and subtopics described in this chapter may be covered in courses with titles that are different from those listed here. Your pre-health advisor and faculty are important resources for your questions about course content.

Psychological, Social, and Biological Foundations of Behavior

Foundational Concept 6

Biological, psychological, and sociocultural factors influence the ways that individuals perceive, think about, and react to the world.

The way in which we sense, perceive, think about, and react to stimuli affects our experiences. Foundational concept 6 focuses on these components of experience, starting with the initial detection and perception of stimuli through cognition, and continuing to emotion and stress.

Content Categories

- *Category 6A* focuses on the detection and perception of sensory information.
- *Category 6B* focuses on cognition, including our ability to attend to the environment, think about and remember what we experience, and use language to communicate with others.
- *Category 6C* focuses on how we process and experience emotion and stress.

These are the building blocks medical students need in order to learn about the ways in which cognitive and perceptual processes influence their and others' understanding of health and illness.

Content Category 6A: Sensing the environment

Psychological, sociocultural, and biological factors affect our sensation and perception of the world. All sensory processing begins with first detecting a stimulus in the environment through sensory cells, receptors, and biological pathways.

After collecting sensory information, we then interpret and make sense of it. Although sensation and perception are distinct functions, they are both influenced by psychological, social, and biological factors and therefore become almost indistinguishable in practice. This complexity is illuminated by examining human sight, hearing, touch, taste, and smell.

The content in this category covers sensation and perception across all human senses. The topics and subtopics in this category are the following:

Sensory Processing (PSY, BIO)

- Sensation
  - Threshold
  - Weber's Law (PSY)
  - Signal detection theory (PSY)
  - Sensory adaptation
  - Psychophysics
- Sensory receptors
  - Sensory pathways
  - Types of sensory receptor

Vision (PSY, BIO)

- Structure and function of the eye
- Visual processing
  - Visual pathways in the brain
  - Parallel processing (PSY)
  - Feature detection (PSY)

Hearing (PSY, BIO)

- Structure and function of the ear
- Auditory processing (e.g., auditory pathways in the brain)
- Sensory reception by hair cells

Other Senses (PSY, BIO)

- Somatosensation (e.g., pain perception)
- Taste (e.g., taste buds/chemoreceptors that detect specific chemicals)
- Smell
  - Olfactory cells/chemoreceptors that detect specific chemicals
  - Pheromones (BIO)
  - Olfactory pathways in the brain (BIO)
- Kinesthetic sense (PSY)
- Vestibular sense

Perception (PSY)

- Bottom-up/Top-down processing
- Perceptual organization (e.g., depth, form, motion, constancy)
- Gestalt principles

Content Category 6B: Making sense of the environment

The way we think about the world depends on our awareness, thoughts, knowledge, and memories. It is also influenced by our ability to solve problems, make decisions, form judgments, and communicate. Psychological, sociocultural, and biological influences determine the development and use of these different yet convergent processes.

Biological factors underlie the mental processes that create our reality, shape our perception of the world, and influence the way we perceive and react to every aspect of our lives.

The content in this category covers critical aspects of cognition—including consciousness, cognitive development, problem solving and decision making, intelligence, memory, and language. The topics and subtopics in this category are the following:

Attention (PSY)

- Selective attention
- Divided attention

Cognition (PSY)

- Information-processing model
- Cognitive development
  - Piaget's stages of cognitive development
  - Cognitive changes in late adulthood
  - Role of culture in cognitive development
  - Influence of heredity and environment on cognitive development
- Biological factors that affect cognition (PSY, BIO)
- Problem solving and decision making
  - Types of problem solving
  - Barriers to effective problem solving
  - Approaches to problem solving
  - Heuristics and biases (e.g., overconfidence, belief perseverance)
- Intellectual functioning
  - Theories of intelligence
  - Influence of heredity and environment on intelligence
  - Variations in intellectual ability

Consciousness (PSY)

- States of consciousness
  - Alertness (PSY, BIO)
  - Sleep
    - Stages of sleep
    - Sleep cycles and changes to sleep cycles
    - Sleep and circadian rhythms (PSY, BIO)
    - Dreaming
    - Sleep–wake disorders
  - Hypnosis and meditation
- Consciousness-altering drugs

- Types of consciousness-altering drugs and their effects on the nervous system and behavior
- Drug addiction and the reward pathway in the brain

Memory (PSY)

- Encoding
  - Process of encoding information
  - Processes that aid in encoding memories
- Storage
  - Types of memory storage (e.g., sensory, working, long-term)
  - Semantic networks and spreading activation
- Retrieval
  - Recall, recognition, and relearning
  - Retrieval cues
  - The role of emotion in retrieving memories (PSY, BIO)
  - Processes that aid retrieval
- Forgetting
  - Aging and memory
  - Memory dysfunctions (e.g., Alzheimer's disease, Korsakoff's syndrome)
  - Decay
  - Interference
  - Memory construction and source monitoring
- Changes in synaptic connections underlie memory and learning (PSY, BIO)
  - Neural plasticity
  - Memory and learning
  - Long-term potentiation

Language (PSY)

- Theories of language development (e.g., learning, Nativist, Interactionist)
- Influence of language on cognition
- Brain areas that control language and speech (PSY, BIO)

Content Category 6C: Responding to the world

We experience a barrage of environmental stimuli throughout the course of our lives. In many cases, environmental stimuli trigger physiological responses, such as an elevated heart rate, increased perspiration, or heightened feelings of anxiety. How we perceive and interpret these physiological responses is complex and influenced by psychological, sociocultural, and biological factors.

Emotional responses, such as feelings of happiness, sadness, anger, or stress are often born out of our interpretation of this interplay of physiological responses. Our experience with emotions and stress not only affects our behavior, but also shapes our interactions with others.

The content in this category covers the basic components and theories of emotion and their underlying psychological, sociocultural, and biological factors. It also addresses stress, stress outcomes, and stress management. The topics and subtopics in this category are the following:

Emotion (PSY)

- Three components of emotion (i.e., cognitive, physiological, behavioral)
- Universal emotions (i.e., fear, anger, happiness, surprise, joy, disgust, and sadness)
- Adaptive role of emotion
- Theories of emotion
    - James–Lange theory
    - Cannon–Bard theory
    - Schachter–Singer theory
- The role of biological processes in perceiving emotion (PSY, BIO)
    - Brain regions involved in the generation and experience of emotions
    - The role of the limbic system in emotion
    - Emotion and the autonomic nervous system
    - Physiological markers of emotion (signatures of emotion)

Stress (PSY)

- The nature of stress
    - Appraisal
    - Different types of stressors (e.g., cataclysmic events, personal)
    - Effects of stress on psychological functions
- Stress outcomes/response to stressors
    - Physiological (PSY, BIO)
    - Emotional
    - Behavioral
- Managing stress (e.g., exercise, relaxation, spirituality)

Psychological, Social, and Biological Foundations of Behavior

Foundational Concept 7

Biological, psychological, and sociocultural factors influence behavior and behavior change.

Human behavior is complex and often surprising, differing across individuals in the same situation and within an individual across different situations. A full understanding of human behavior requires knowledge of the interplay between psychological, sociocultural, and biological factors that are related to behavior. This interplay has important implications for the way we behave and the likelihood of behavior change.

Foundational Concept 7 focuses on individual and social determinants of behavior and behavior change.

Content Categories

- *Category 7A* focuses on the individual psychological and biological factors that affect behavior.
- *Category 7B* focuses on how social factors, such as groups and social norms, affect behavior.
- *Category 7C* focuses on how learning affects behavior, as well as the role of attitude theories in behavior and behavior change.

These are the building blocks medical students need in order to learn about behavioral pathways for promoting health and preventing disease, including behaviors that pose a risk to health. Students entering medical school with this knowledge will also be better equipped to learn about interventions that help patients adopt healthy behaviors.

Content Category 7A: Individual influences on behavior

A complex interplay of psychological and biological factors shapes behavior. Biological structures and processes serve as the pathways by which bodies carry out activities. They also affect predispositions to behave in certain ways, shape personalities, and influence the likelihood of developing psychological disorders. Psychological factors also affect behavior, and consequently, health and well-being.

The content in this category covers biological bases of behavior, including the effect of genetics and how the nervous and endocrine systems affect behavior. It also addresses how personality, psychological disorders, motivation, and attitudes affect behavior. Some of these topics are learned in the context of non-human animal species. The topics and subtopics in this category are the following:

Biological Bases of Behavior (PSY, BIO)

- The nervous system
  - Neurons (e.g., the reflex arc)
  - Neurotransmitters
  - Structure and function of the peripheral nervous system
  - Structure and function of the central nervous system
    - The brain
      - Forebrain
      - Midbrain
      - Hindbrain
      - Lateralization of cortical functions
      - Methods used in studying the brain
    - The spinal cord
- Neuronal communication and its influence on behavior (PSY)
- Influence of neurotransmitters on behavior (PSY)
- The endocrine system
  - Components of the endocrine system
  - Effects of the endocrine system on behavior
- Behavioral genetics
  - Genes, temperament, and heredity
  - Adaptive value of traits and behaviors
  - Interaction between heredity and environmental influences
- Influence of genetic and environmental factors on the development of behaviors
  - Experience and behavior (PSY)
  - Regulatory genes and behavior (BIO)
  - Genetically based behavioral variation in natural populations
- Human physiological development (PSY)
  - Prenatal development
  - Motor development
  - Developmental changes in adolescence

Personality (PSY)

- Theories of personality
  - Psychoanalytic perspective

  - Humanistic perspective
  - Trait perspective
  - Social cognitive perspective
  - Biological perspective
  - Behaviorist perspective
- Situational approach to explaining behavior

Psychological Disorders (PSY)

- Understanding psychological disorders
  - Biomedical vs. biopsychosocial approaches
  - Classifying psychological disorders
  - Rates of psychological disorders
- Types of psychological disorders
  - Anxiety disorders
  - Obsessive–compulsive disorder
  - Trauma- and stressor-related disorders
  - Somatic symptom and related disorders
  - Bipolar and related disorders
  - Depressive disorders
  - Schizophrenia
  - Dissociative disorders
  - Personality disorders
- Biological bases of nervous system disorders (PSY, BIO)
  - Schizophrenia
  - Depression
  - Alzheimer's disease
  - Parkinson's disease
  - Stem cell-based therapy to regenerate neurons in the central nervous system (BIO)

Motivation (PSY)

- Factors that influence motivation
  - Instinct
  - Arousal
  - Drives (e.g., negative feedback systems) (PSY, BIO)
  - Needs
- Theories that explain how motivation affects human behavior
  - Drive reduction theory
  - Incentive theory
  - Other theories (e.g., cognitive, need-based)
- Biological and sociocultural motivators that regulate behavior (e.g., hunger, sex drive, substance addiction)

Attitudes (PSY)

- Components of attitudes (i.e., cognitive, affective, and behavioral)
- The link between attitudes and behavior
  - Processes by which behavior influences attitudes (e.g., foot-in-the door phenomenon, role-playing effects)
  - Processes by which attitudes influence behavior
  - Cognitive dissonance theory

Content Category 7B: Social processes that influence human behavior

Many social processes influence human behavior; in fact, the mere presence of other individuals can influence our behavior. Groups and social norms also exert influence over our behavior. Oftentimes, social processes influence our behavior through unwritten rules that define acceptable and unacceptable behavior in society.

Our understanding of groups and social norms is learned through the process of socialization. What we learn about the groups and society to which we belong affects our behavior and influences our perceptions and interactions with others.

The content in this category covers how the presence of others, group decision-making processes, social norms, and socialization shape our behavior. The topics and subtopics in this category are the following:

How the Presence of Others Affects Individual Behavior (PSY)

- Social facilitation
- Deindividuation
- Bystander effect
- Social loafing
- Social control (SOC)
- Peer pressure (PSY, SOC)
- Conformity (PSY, SOC)
- Obedience (PSY, SOC)

Group Decision-making Processes (PSY, SOC)

- Group polarization (PSY)
- Groupthink

Normative and Non-normative Behavior (SOC)

- Social norms (PSY, SOC)
  - Sanctions (SOC)
  - Folkways, mores, and taboos (SOC)
  - Anomie (SOC)
- Deviance
  - Perspectives on deviance (e.g., differential association, labeling theory, strain theory)
- Aspects of collective behavior (e.g., fads, mass hysteria, riots)

Socialization (PSY, SOC)

- Agents of socialization (e.g., the family, mass media, peers, workplace)

Content Category 7C: Attitude and behavior change

Learning is a relatively permanent change in behavior brought about by experience. There are a number of different types of learning, which include habituation as well as associative, observational, and social learning.

Although people can learn new behaviors and change their attitudes, psychological, environmental, and biological factors influence whether those changes will be short-term or long-term. Understanding how people learn new behaviors, change their attitudes, and the conditions that affect learning helps us understand behavior and our interactions with others.

The content in this category covers learning and theories of attitude and behavior change. This includes the elaboration likelihood model and social cognitive theory. The topics and subtopics in this category are the following:

Habituation and Dishabituation (PSY)

Associative Learning (PSY)

- Classical conditioning (PSY, BIO)
  - Neutral, conditioned, and unconditioned stimuli
  - Conditioned and unconditioned response
  - Processes: acquisition, extinction, spontaneous recovery, generalization, discrimination
- Operant conditioning (PSY, BIO)
  - Processes of shaping and extinction
  - Types of reinforcement: positive, negative, primary, conditional
  - Reinforcement schedules: fixed-ratio, variable-ratio, fixed-interval, variable-interval
  - Punishment
  - Escape and avoidance learning
- The role of cognitive processes in associative learning
- Biological processes that affect associative learning (e.g., biological predispositions, instinctive drift) (PSY, BIO)

Observational Learning (PSY)

- Modeling
- Biological processes that affect observational learning
  - Mirror neurons
  - Role of the brain in experiencing vicarious emotions
- Applications of observational learning to explain individual behavior

Theories of Attitude and Behavior Change (PSY)

- Elaboration likelihood model
- Social cognitive theory
- Factors that affect attitude change (e.g., changing behavior, characteristics of the message and target, social factors)

Psychological, Social, and Biological Foundations of Behavior

Foundational Concept 8

Psychological, sociocultural, and biological factors influence the way we think about ourselves and others, as well as how we interact with others.

The connection between how people think about themselves and others is complex and affects social interactions. The interplay between thoughts about ourselves, thoughts about others, and our biology has important implications for our sense of self and interpersonal relationships.

Foundational Concept 8 focuses on the physical, cognitive, and social components of our identity, as well as how these components influence the way we think about and interact with others.

Content Categories

- *Category 8A* focuses on the notion of self and identity formation.
- *Category 8B* focuses on the attitudes and beliefs that affect social interaction.
- *Category 8C* focuses on the actions and processes underlying social interactions.

These are the building blocks medical students need to learn about interacting and collaborating with patients, their families, and other health professionals, as well as the factors that influence patient–provider interactions.

Content Category 8A: Self-identity

The *self* refers to the thoughts and beliefs we have about ourselves. Our notion of self is complex and multifaceted. It includes gender, racial, and ethnic identities, as well as beliefs about our ability to accomplish tasks and exert control over different situations.

Our notion of self develops over time and is shaped by a variety of factors, including society, culture, individuals and groups, and our unique experiences. How we view ourselves influences our perceptions of others, and by extension, our interactions with them.

The content in this category covers the notions of self-concept and identity, along with the role of self-esteem, self-efficacy, and locus of control in the development of self-concept. Identity formation, including developmental stages and the social factors that affect identity formation, is also covered here. Theories are included to provide historical context for the field of identity formation. The topics and subtopics in this category are the following:

Self-Concept, Self-identity, and Social Identity (PSY, SOC)

- The role of self-esteem, self-efficacy, and locus of control in self-concept and self-identity (PSY)
- Different types of identities (e.g., race/ethnicity, gender, age, sexual orientation, class)

Formation of Identity (PSY, SOC)

- Theories of identity development (e.g., gender, moral, psychosexual, social)
- Influence of social factors on identity formation
    - Influence of individuals (e.g., imitation, looking-glass self, role-taking)
    - Influence of groups (e.g., reference group)
- Influence of culture and socialization on identity formation

Content Category 8B: Social thinking

Social thinking refers to the ways in which we view others and our environment, as well as how we interpret others' behaviors. A variety of factors—personality, environment, and culture—factor into the beliefs and attitudes we develop.

Our beliefs and attitudes about others and the environment also shape the way we interact with each other. To interact with others, we need to interpret different aspects of a situation, including our perception of ourselves, the behavior of others, and the environment.

The content in this category covers our attitudes about others and how those attitudes develop, including how perceptions of culture and environment affect attributions of behavior. It also covers how our attitudes about different groups—prejudice, stereotypes, stigma, and ethnocentrism— may influence our interactions with group members. The topics and subtopics in this category are the following:

Attributing Behavior to Persons or Situations (PSY)

- Attributional processes (e.g., fundamental attribution error, role of culture in attributions)
- How self-perceptions shape our perceptions of others
- How perceptions of the environment shape our perceptions of others

Prejudice and Bias (PSY, SOC)

- Processes that contribute to prejudice
  - Power, prestige, and class (SOC)
  - The role of emotion in prejudice (PSY)
  - The role of cognition in prejudice (PSY)
- Stereotypes
- Stigma (SOC)
- Ethnocentrism (SOC)
  - Ethnocentrism vs. cultural relativism

Processes Related to Stereotypes (PSY)

- Self-fulfilling prophecy
- Stereotype threat

Content Category 8C: Social interactions

Humans are social beings by nature. Though the sentiment is simple, the actions and processes underlying and shaping our social interactions are not.

The changing nature of social interaction is important for understanding the mechanisms and processes through which people interact with each other, both individually and within groups. A variety of factors—environment, culture, and biology—affect how we present ourselves to others and how we treat them. For example, perceptions of prejudice and stereotypes can lead to acts of discrimination, whereas positive attitudes about others can lead to the provision of help and social support.

The content in this category covers the mechanisms of self-presentation and social interaction including expressing and detecting emotion, impression management, communication, the biological underpinning of social behavior, and discrimination. The topics and subtopics in this category are the following:

Elements of Social Interaction (PSY, SOC)

- Status (SOC)
  - Types of status (e.g., achieved, ascribed)
- Role
  - Role conflict and role strain (SOC)
  - Role exit (SOC)
- Groups
  - Primary and secondary groups (SOC)
  - In-group vs. out-group
  - Group size (e.g., dyads, triads) (SOC)
- Networks (SOC)
- Organizations (SOC)
  - Formal organization
  - Bureaucracy
    - Characteristics of an ideal bureaucracy
    - Perspectives on bureaucracy (e.g., iron law of oligarchy, McDonaldization)

Self-presentation and Interacting with Others (PSY, SOC)

- Expressing and detecting emotion
  - The role of gender in the expression and detection of emotion
  - The role of culture in the expression and detection of emotion
- Presentation of self
  - Impression management
  - Front stage vs. back stage self (Dramaturgical approach) (SOC)
- Verbal and nonverbal communication
- Animal signals and communication (PSY, BIO)

Social Behavior (PSY)

- Attraction
- Aggression
- Attachment

- Altruism
- Social support (PSY, SOC)
- Biological explanations of social behavior in animals (PSY, BIO)
    - Foraging behavior (BIO)
    - Mating behavior and mate choice
    - Applying game theory (BIO)
    - Altruism
    - Inclusive fitness (BIO)

Discrimination (PSY, SOC)

- Individual vs. institutional discrimination (SOC)
- The relationship between prejudice and discrimination
- How power, prestige, and class facilitate discrimination (SOC)

Psychological, Social, and Biological Foundations of Behavior

Foundational Concept 9

Cultural and social differences influence well-being.

Social structure and demographic factors influence peoples' health and well-being. Knowledge about basic sociological theories, social institutions, culture, and demographic characteristics of societies is important to understand how these factors shape peoples' lives and their daily interactions.

Foundational Concept 9 focuses on social variables and processes that influence our lives.

Content Categories

- *Category 9A* focuses on the link between social structures and human interactions.
- *Category 9B* focuses on the demographic characteristics and processes that define a society.

Medical students will build upon these concepts, learning about the ways in which demographics and social factors influence health care and are determinants of health outcomes. Knowledge of these concepts will prepare students to learn about the ways in which patients' backgrounds and experiences influence their expectations of the healthcare system, interactions with healthcare providers, and responses to treatment.

Content Category 9A: Understanding social structure

Social structure organizes all human societies. Elements of social structure include social institutions and culture. These elements are linked in a variety of ways and shape our experiences and interactions with others—a process that is reciprocal.

The content in this category provides a foundation for understanding social structure and the various forms of interactions within and among societies. It includes theoretical approaches to studying society and social groups, specific social institutions relevant to student preparation for medical school, and the construct of culture. The topics and subtopics in this category are the following:

Theoretical Approaches (SOC)

- Microsociology vs. macrosociology
- Functionalism
- Conflict theory
- Symbolic interactionism
- Social constructionism
- Exchange-rational choice
- Feminist theory

Social Institutions (SOC)

- Education
  - Hidden curriculum
  - Teacher expectancy
  - Educational segregation and stratification
- Family (PSY, SOC)
  - Forms of kinship (SOC)
  - Diversity in family forms
  - Marriage and divorce
  - Violence in the family (e.g., child abuse, elder abuse, spousal abuse) (SOC)
- Religion
  - Religiosity
  - Types of religious organizations (e.g., churches, sects, cults)
  - Religion and social change (e.g., modernization, secularization, fundamentalism)
- Government and economy
  - Power and authority
  - Comparative economic and political systems
  - Division of labor
- Health and medicine
  - Medicalization
  - The sick role
  - Delivery of health care
  - Illness experience
  - Social epidemiology

Culture (PSY, SOC)

- Elements of culture (e.g., beliefs, language, rituals, symbols, values)
- Material vs. symbolic culture (SOC)
- Culture lag (SOC)
- Culture shock (SOC)
- Assimilation (SOC)
- Multiculturalism (SOC)
- Subcultures and countercultures (SOC)
- Mass media and popular culture (SOC)
- Evolution and human culture (PSY, BIO)
- Transmission and diffusion (SOC)

Content Category 9B: Demographic characteristics and processes

In order to understand the structure of a society, it is important to understand the demographic characteristics and processes which define it. Knowledge of the demographic structure of societies and an understanding of how societies change helps us to comprehend the distinct processes and mechanisms through which social interaction occurs.

The content in this category covers the important demographic variables at the core of understanding societies, and also includes concepts related to demographic shifts and social change. The topics and subtopics in this category are the following:

Demographic Structure of Society (PSY, SOC)

- Age
  - Aging and the life course
  - Age cohorts (SOC)
  - Social significance of aging
- Gender
  - Sex versus gender
  - The social construction of gender (SOC)
  - Gender segregation (SOC)
- Race and ethnicity (SOC)
  - The social construction of race
  - Racialization
  - Racial formation
- Immigration status (SOC)
  - Patterns of immigration
  - Intersections with race and ethnicity
- Sexual orientation

Demographic Shifts and Social Change (SOC)

- Theories of demographic change (i.e., Malthusian theory and demographic transition)
- Population growth and decline (e.g., population projections, population pyramids)
- Fertility, migration, and mortality
  - Fertility and mortality rates (e.g., total, crude, age-specific)
  - Patterns in fertility and mortality
  - Push and pull factors in migration
- Social movements
  - Relative deprivation
  - Organization of social movements
  - Movement strategies and tactics
- Globalization
  - Factors contributing to globalization (e.g., communication technology, economic interdependence)
  - Perspectives on globalization
  - Social changes in globalization (e.g., civil unrest, terrorism)

- Urbanization
  - Industrialization and urban growth
  - Suburbanization and urban decline
  - Gentrification and urban renewal

Psychological, Social, and Biological Foundations of Behavior

Foundational Concept 10

Social stratification and access to resources influence well-being.

Social stratification and inequality affect all human societies, and shape the lives of all individuals by affording privileges to some and positioning others at a disadvantage.

Foundational Concept 10 focuses on the aspects of social inequality that influence how we interact with one another, as well as how we approach our health and the healthcare system.

Content Category

- *Category 10A* focuses on a broad understanding of social class, including theories of stratification, social mobility, and poverty.

In medical school, students will learn the ways in which social stratification influences health care and how social inequality can be a determinant of health. Knowledge of these concepts will prepare students to learn about the ways by which patients' social class and living conditions affect their access to health care, interactions with providers, and health outcomes.

Content Category 10A: Social inequality

Barriers to the access of institutional resources exist for the segment of the population that is disenfranchised or lacks power within a given society. Barriers to access might include language, geographic location, socioeconomic status, immigration status, and racial/ethnic identity. Institutionalized racism and discrimination are also factors which prevent some groups from obtaining equal access to resources. An understanding of the barriers to the access of institutional resources, informed by perspectives such as social justice, is essential to address health and healthcare disparities.

The content in this category covers spatial inequality, the structure and patterns of social class, and health disparities in relation to class, race/ethnicity, and gender. The topics and subtopics in this category are the following:

Spatial Inequality (SOC)

- Residential segregation
- Neighborhood safety and violence
- Environmental justice (location and exposure to health risks)

Social Class (SOC)

- Aspects of social stratification
  - Social class and socioeconomic status
  - Class consciousness and false consciousness
  - Cultural capital and social capital
  - Social reproduction
  - Power, privilege, and prestige
  - Intersectionality (e.g., race, gender, age)
  - Socioeconomic gradient in health
  - Global inequalities
- Patterns of social mobility
  - Intergenerational and intragenerational mobility
  - Vertical and horizontal mobility
  - Meritocracy
- Poverty
  - Relative and absolute poverty
  - Social exclusion (segregation and isolation)

Health Disparities (SOC) (e.g., class, gender, and race inequalities in health)

Healthcare Disparities (SOC) (e.g., class, gender, and race inequalities in health care)