

**OVERVIEW****BIG IDEA**

Our health is shaped by a huge number of factors from genetics to environment (both social and physical). Our health choices (behaviors) and our access to health care are also major factors in our overall health outcomes.

OBJECTIVE

1.5 Identify the five determinants of health

AGENDA

1. School health factors
2. Intro to five determinants
3. Discussion & brainstorm
4. Which determinant?

HOMEWORK

Choose a health problem, list risk factors (5-10), & label each risk factor within the five determinants groupings.

LESSON 1.5

Determinants of health

SUMMARY:


This lesson guides students to better understand the variety of factors that influence a person's mental health. First, students will consider their own school, brainstorming and organizing factors within that domain that influence health. Next, students will learn about the five determinants in a short reading. After that, they'll examine a pie chart assigning estimates of how much each determinant influences our health. Finally, students will practice brainstorming specific factors that fit each determinant, in the context of mental health. Finally, they will be assessed through a short set of matching risk factors to their determinant.





UNIT 1: MENTAL HEALTH LESSON 1.5

Determinants of health

PH1.5: Identify the five determinants of health

 Think about our school. What factors within and around the school affect your health? List as many as you can.

 With a partner, share the factors on your list and together come up with a list of CATEGORIES or GROUPS into which these factors might fit.

 **REVIEW:** What is a risk factor? Write the definition below:

Examples--Factors that might affect health:
Mental health: presence of bullying, gangs, & violence in school, discipline system, amount of homework & pressure to get good grades, relationships with teachers, etc.
Physical health: availability of health center in school, availability of mental health workers (counselor, social worker, etc.) for students; healthy foods at lunch, time/length of school day, amount of exercise required (PE classes or athletics requirement?); amount of walking required in school (from class to class); amount of sitting vs. standing/moving in class, etc.

DISCUSS: This may be challenging for students, but making the effort/attempt is important because it will encourage a greater appreciation and understanding of the five determinant categories when they are introduced. If students seem to continue to struggle, the instructor can acknowledge the difficulty and make a point of coming back to their lists once the five determinants are introduced. Students may realize that those five categories are more useful in organizing their lists.

Risk Factor: Any action or condition that increases the likelihood of injury, disease, or another negative outcome



UNIT 1: MENTAL HEALTH

LESSON 1.5

When it comes to our health, the list of factors that influence it can seem endless. In order to improve our health, we need to understand this myriad of factors in order to account for everything that influences us. When health researchers want to study just one or a few of these factors they must acknowledge the many other factors that are also a part of the puzzle. Unfortunately, when it comes to health, we cannot typically isolate our independent variable and control everything. Therefore we must use statistical methods to calculate the associations between various factors.

When we think about improving mental health, we must start by identifying as many factors that influence it as we can. To make our job easier, we will use the five determinants of health. These groupings are identified by the Centers for Disease Control & Prevention (CDC) and World Health Organization (WHO) as logical categories to analyze the risk factors that influence our health.



FIVE DETERMINANTS OF HEALTH: What are these determinants? Read the overview from the CDC below:

Many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact.

Source: <http://www.who.int/hia/evidence/doh/en/>

Determinants of health are factors that contribute to a person's current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral, or social in nature. Scientists generally recognize five determinants of health of a population [2, 3]:

Genes and biology: for example, sex and age

Health behaviors: for example, alcohol use, injection drug use (needles), unprotected sex, and smoking

Social environment or social characteristics: for example, discrimination, income, and gender

Physical environment (or total ecology): for example, where a person lives and crowding conditions

Health services or medical care: for example, access to quality health care and having or not having insurance

NEW INFO: The words determinants and risk factors are fairly interchangeable. However, for the sake of organizing students' thinking the word DETERMINANT will refer to the five main categories of determinants in this lesson, while risk factor will be any examples of more specific factors or conditions that fit within those categories. This will encourage students to understand the five MAIN risk factor groupings but push for more detail in the way they think about specific things that impact health.

NEW INFO: Before students see the pie chart coming up in the reading, it may be thought-provoking to show them the list of determinants and ask them to estimate what percentage of our health each accounts for. They could even draw their own pie chart.

For more information and examples on social environment, see: Wikipedia "Social Determinants"

http://en.wikipedia.org/wiki/Social_determinants_of_health#Commonly_accepted_social_determinants_of_health



Figure 1. Estimates of how each of the five major determinants influence population health [4]. Other factors that could be included are culture, social status, and healthy child development. Figure 1 represents rough estimates of how much each of the five determinants contributes to the health of a population. Scientists do not know the precise contributions of each determinant at this time.

As the figure shows, in theory, genes, biology, and health behaviors together account for about 25% of population health. Social determinants of health represent the remaining three categories of social environment, physical environment/total ecology, and health services/medical care. These social determinants of health also interact with and influence individual behaviors as well. More specifically, social determinants of health refer to the set of factors that contribute to the social patterning of health, disease, and illness.

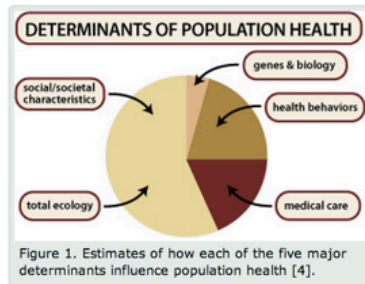


Figure 1. Estimates of how each of the five major determinants influence population health [4].

Source: <http://www.cdc.gov/socialdeterminants/FAQ.html>



With a partner, review Figure 1 again and discuss the following questions:

- 1) Does anything surprise you about these estimates?
- 2) If these estimates are correct, where should we focus time, energy, resources, and policies in order to improve our overall health as a society?



In a group, work together to fill in the following table by listing examples of each determinant in the context of MENTAL HEALTH. One example is provided for you in each box so that you can get a head start.

Determinant	Examples
Genes & Biology	-Family history of mental health illnesses
Health Behaviors	-Alcohol or drug use

DISCUSS: Reinforce that these are ESTIMATES. Scientists do not know exactly how much each determinant impacts human health, and it may vary from person to person. Although expecting an exact answer may not be realistic, grappling with the question of how much each determinant accounts for our health is an important process. It is also a question that scientists and thinkers engage in often—the classic nature vs. nurture debate is a simplification of the same question. This is a great opportunity to introduce students to the nature vs. nurture debate, which they will (or have already) encounter in biology, psychology and other disciplines that study human development.

THINK: Students can draw upon their notes and lists from earlier in the lesson, but should attempt to come up with as many more possible examples (risk factors) as they can.



Determinant	Examples
Social Environment or Social Characteristics	-Quality of relationships with family members
Physical environment (total ecology)	-Space (crowded living conditions)
Health Services or Medical Care	-Regular and high quality physicals with primary care physician



Match each possible risk/protective factor for mental health (from the left side) to the health determinant group (right side):

- | | |
|--|---|
| <input type="checkbox"/> 1. Previous history of abuse | A. Genes & Biology |
| <input type="checkbox"/> 2. Having no health insurance | B. Health Behaviors |
| <input type="checkbox"/> 3. Family history of mental health problems | C. Social Environment or Social Characteristics |
| <input type="checkbox"/> 4. Residential crowding | D. Physical Environment (total ecology) |
| <input type="checkbox"/> 5. Stressful working conditions | E. Health Services or Medical Care |
| <input type="checkbox"/> 6. Supportive relationships | |
| <input type="checkbox"/> 7. Loud exterior noises (ex: airport) | |
| <input type="checkbox"/> 8. Gender | |
| <input type="checkbox"/> 9. Unemployment | |
| <input type="checkbox"/> 10. Low income | |



Choose ANY health problem, illness, or condition you are interested and list risk and protective factors for it. Try to get at least 5-10 factors. Then label them according to which determinant they fit under. You may use the labels above (A-E).

ASSESS ANSWERS:

- | | |
|-------------------------|-------------------------|
| 1. Social environment | 5. Social environment |
| 2. Medical care | 6. Social environment |
| 3. Genes & biology | 7. Physical environment |
| 4. Physical environment | 8. Social environment |
| | 9. Social environment |

ASSESS Note: #8 may be tricky! If it had said “sex” it would fit under “Genes & biology” –the difference is the societal creation of gender vs. the biological reality of being one sex or the other... this may require some brief background explanation because students may not be aware of the difference in the terms sex vs. gender

HOMEWORK: The goal of the homework is for students to practice brainstorming, which is a very important step in problem-solving. Students can be encouraged to use the Internet for research to add to their lists, but it is important for students to begin by thinking and tapping into their own background knowledge and creativity, even if it requires them to take some guesses.

ADDITIONAL NOTE: Since many students may choose physical diseases that may not “seem” to have very many risk factors, it may help to discuss an example together before students attempt the homework. For example, students may know about the breast cancer genes and conclude that there is only one known risk factor: genetics or family history. However, students should be encouraged to think broadly in terms of the whole disease experience since other factors will impact the outcomes faced by an individual woman who has the breast cancer gene. For example, does the woman get regular mammograms as recommended by her doctor? (RF = breast cancer screening or mammograms; Determinant: Medical care & health services). Does the woman have a college education? If so she may be more likely to know how to do breast self-exams. (RF = knowledge of how to do breast self-exams; Determinant: Social environment).