

Chapter 19: Culture, Food, Family, and Stigma

Summary

Gut conditions and mental health conditions are not lived in a lab. They are lived at dinner tables, in classrooms, on team buses, and inside families with their own languages, foods, and beliefs. This chapter explains what stigma is, how it gets inside people's heads, and how it is linked to quality of life and to whether people seek help. It looks at how inflammatory bowel disease has spread around the world and what studies of South Asian migrants show about genes and environment, and it looks at how culture and family shape the way people talk about health, using research on South Asian families as one carefully sourced example. It ends with practical tools: talking with your doctor, getting school accommodations like a 504 plan, finding peer support, and practicing conversations that are both accurate and kind.

Concepts Covered

1. Stigma
2. Self-Stigma
3. Mental Health Stigma
4. Illness Concealment
5. Quality of Life
6. Health Literacy
7. Family Communication
8. Caregiver Role
9. Global IBD Rise
10. Migration and IBD Risk
11. South Asian Health Context
12. Help-Seeking Barriers
13. Talking to Your Doctor
14. School Accommodation
15. 504 Plan
16. Peer Support

Prerequisites

- [Chapter 9: Inflammatory Bowel Disease: Ulcerative Colitis and Crohn's](#) (what IBD is and how it is treated)
- [Chapter 10: IBS and Disorders of Gut-Brain Interaction](#) (what IBS is)
- [Chapter 11: Anxiety, Depression, and the Gut](#) (how common anxiety and depression are in gut conditions)
- [Chapter 15: Food and Mood](#) (what diet research can and can't show)

The hardest part isn't always the biology



Many teens with gut conditions say the toughest moments aren't the cramps. They're the comments, the awkward silences, and the feeling that you can't mention your bowels or your mood. This chapter is about those moments. We'll check the evidence on stigma and culture the same way we've checked everything else, and then you'll get to practice what to say.

19.1 "Just Eat More Ghee and Stop Worrying"

It's a Sunday dinner at Riya's grandparents' house. The table is full: dal, rice, roti, a vegetable dish Riya helped her grandmother make that afternoon. Riya's aunt, visiting from out of town, watches her push some food around her plate. "You're too thin," she says, loudly enough for everyone to hear. "You just need to eat more ghee and stop worrying so much. In our day, nobody had this Crohn's business." (Riya and her family are fictional; Riya appears throughout this book.)

Riya feels her face get hot. Her aunt loves her. Her aunt is also wrong: Riya's Crohn's disease is an immune condition, diagnosed at 14 after months of pain and weight loss, and it's treated with a biologic medicine she injects. No food caused it and no food will cure it. But saying "you're wrong" at her grandmother's table feels impossible. Her mom changes the subject. Riya stares at her plate.

How do you answer someone who loves you and is wrong? That question is harder than any diagram in this book. Sam has his own version: his cross-country coach keeps telling him his stomach problems are "just nerves" and that he should "push through." This chapter is about the science behind moments like these, and about practicing better ways through them.

If you're going through this

If someone you love says something about your condition that hurts or isn't true, it's normal to freeze, get angry, or go quiet; none of those reactions make you a bad person. You don't have to win every conversation, especially at the dinner table. It can help to pick one trusted adult (a parent, your doctor, a school counselor) who can back you up with facts, so you aren't carrying every explanation alone.

19.2 What Stigma Is, and How It Gets Inside

Imagine someone sticks a note on your back that says "dirty" or "weak" or "faking." Other people read it and treat you differently. That's bad enough. Now imagine that after a while, you start to believe the note yourself. That two-step picture is how psychologists describe stigma.

Stigma is a set of negative beliefs and reactions that leads people to label, judge, and treat others as less worthy because of a trait, such as a health condition. In a widely cited 2002 paper, the researchers Corrigan and Watson broke stigma into three parts:

Part of stigma	What it is	Example with a gut condition
Stereotype	A belief about a group	"People who keep running to the bathroom are gross"
Prejudice	Agreeing with the stereotype and feeling negatively about it	Feeling disgust or annoyance toward a classmate with IBD
Discrimination	Acting on the prejudice	Refusing a restroom pass, mocking someone, leaving them out

[Corrigan and Watson](#) described two forms. Public stigma is how the general public reacts to a group. **Self-stigma** is what happens when a person with a condition turns those negative beliefs on themselves ("I'm disgusting," "I'm weak," "I'm a burden"), which can lower self-esteem and confidence.

Mental health stigma is stigma directed at people with mental health conditions or at the act of seeking mental health care, such as the belief that people with depression are weak or that seeing a therapist means you're "crazy." Gut conditions often carry a double load: stigma about bowels and bathrooms, plus stigma about anxiety or depression, which are common in people with IBD and IBS (see [Chapter 11](#)).

Why does a neuroscience book care? Because stigma isn't just hurt feelings. It changes behavior, and behavior changes health, as the next sections show.

19.3 Stigma in Gut Conditions: Hiding, Coping, and Quality of Life

In many classrooms, just saying the word "diarrhea" gets a laugh. Gut conditions involve body functions that many cultures treat as private or embarrassing, which leaves plenty of room for stigma.

How common is it? In 2009, [Taft, Keefer, and colleagues](#) surveyed 211 adults with inflammatory bowel disease (156 with Crohn's disease and 55 with ulcerative colitis). Eighty-four percent reported feeling stigmatized because of their disease. People who perceived more stigma had worse quality of life, more psychological distress, lower self-esteem, and slightly lower rates of taking their medicines as prescribed, even after accounting for how sick they were.

Quality of life is a person's overall sense of well-being across the parts of life that matter to them, including physical health, emotions, relationships, school or work, and daily activities. Health researchers often measure "health-related quality of life" with questionnaires that ask how a condition affects these areas. In the Taft study, perceived stigma explained 10% to 22% of the differences in health-related quality of life scores between people. The authors called these effects small, but comparable to other patient factors that researchers more commonly measure.

A [2016 systematic review](#) by Taft and Keefer pulled together research on IBD stigma and described three angles: how people perceive stigma, whether they internalize it (self-stigma), and whether they actually experience discrimination. They concluded that stigma may affect quality of life, mental health, and medication use, and that research on it still has major gaps.

Hiding symptoms

One of the most common responses to stigma is hiding. **Illness concealment** is keeping a health condition or its symptoms secret from others, for example by making up excuses for missed school, skipping meals to avoid bathroom trips, or not telling a doctor about symptoms that feel embarrassing.

Concealment makes sense in the moment; it protects you from awkward questions. But it has costs. If teachers don't know, they can't help. If friends don't know, they may assume you're skipping. And if a doctor doesn't hear about blood in the stool, bathroom trips at night, or low mood, they can't adjust treatment. Hiding symptoms can make a condition harder to treat, which is why the care team's first job is often making it safe to talk.

Here is the study behind this section's key number, checked with our six questions.

How to read a gut-brain claim: the 2009 IBD stigma survey

Question	This study
Mouse or human?	Human: 211 adults with IBD for at least 6 months (156 Crohn's, 55 ulcerative colitis). About 77% were women and about 97% were White; most were recruited online.
Correlation or cause?	Correlation. It was a one-time questionnaire, so it can't show whether stigma worsens quality of life, poor health makes people feel more stigmatized, or both.
How many?	211 people, a moderate number for a survey.
How long?	A single snapshot; no one was followed over time.
Who paid for it?	The full text has no funding statement. It thanks the Crohn's & Colitis Foundation of America for help recruiting participants.
Is something being sold?	No.

The conclusion: stigma is common among adults with IBD and is linked to worse outcomes. But this sample was almost entirely White adults recruited online, so it tells us little about teens or about families like Riya's. That gap is itself a finding: groups that may face the most stigma are often the least studied.

19.4 Mental Health Stigma and Asking for Help

Think about the last time you felt sick and didn't tell anyone. Maybe you didn't want to make a fuss, or you weren't sure it "counted." Now add the fear that someone will think you're weak, dramatic, or "crazy." That's the extra weight mental health stigma adds.

Help-seeking barriers are the obstacles that keep people from getting care when they need it, including stigma, cost, not knowing where to go, long waits, language differences, and worries about privacy or what family and community will think.

Stigma is one of the biggest. In 2015, [Clement and colleagues](#) reviewed 144 studies with 90,189 participants about mental health stigma and help-seeking. Stigma had a small-to-moderate negative effect on seeking help, and it was the fourth-highest-ranked barrier overall. The most common stigma barrier was worry about disclosure: who might find out. For this book's readers, the review found that stigma held back some groups more than others, including ethnic minorities, young people, and men.

How big is the need among teens? In the CDC's [2023 Youth Risk Behavior Survey](#), 39.7% of US high school students reported persistent feelings of sadness or hopelessness. In the [2025 survey](#), published in October 2026, that figure was 33.3%, about one in three.

The 2025 report also asked students with those feelings whether they had needed counseling or therapy but not gotten it. Overall, 28.8% reported this kind of unmet need. Unmet need was higher among Asian American students (38.4%) and Black students (33.9%) than among White students (27.1%). "Asian American" in that survey is a broad group that includes South Asian students along with many others, and the Asian estimate had a wide margin of uncertainty, but the pattern fits the idea that some communities face extra barriers to care.

If you are struggling right now

If you are thinking about suicide or are in crisis, call or text **988** to reach the 988 Suicide & Crisis Lifeline (in the US), or go to the nearest emergency room. Outside the US, you can find a helpline at findahelpline.com. You can also talk to a parent, school counselor, or doctor.

Asking for help is a skill, not a weakness



I carry signals from the gut to the brain all day, and the brain's job is to respond, not to ignore them. Noticing that you're struggling and telling someone is the same kind of smart signaling, and research shows stigma is what most often gets in the way.

19.5 IBD Around the World: Not a "Western" Disease

Riya's aunt said nobody had "this Crohn's business" in her day. Is she right that IBD is new, or something that only happens in certain places? The research says the story is more complicated than that.

Global IBD rise is the spread of inflammatory bowel disease from a few early industrialized regions to countries around the world over the last century, with rising new cases in many newly industrialized countries. In 2017, [Ng and colleagues](#) published a systematic review in *The Lancet* of 147 population-based studies. They found that more than 0.3% of people had IBD in North America, Oceania, and many European countries. In North America and Europe, most studies showed new cases (incidence) holding steady or falling. But since 1990, incidence had been rising in newly industrialized countries in Africa, Asia, and South America. In Brazil, for example, new Crohn's cases rose by about 11% per year and new ulcerative colitis cases by about 15% per year.

In 2025, [a team in Nature](#) (Hracs and colleagues, part of a global research group) analyzed 522 population-based studies covering 82 regions from 1920 to 2024. They described IBD moving through epidemiologic stages:

1. **Emergence:** few new cases and few people living with IBD.
2. **Acceleration in incidence:** new cases rise quickly, but the total number living with it is still low.
3. **Compounding prevalence:** new cases level off, but the number of people living with IBD keeps climbing, because IBD usually lasts for life and is rarely fatal.

A fourth stage, in which prevalence levels off as the IBD population ages, has been proposed and modeled but not yet observed. Different regions sit at different stages. So Riya's aunt has a point that IBD was less common in many places a few generations ago. What she's missing is that it has been spreading, and that it is now a global disease.

Hype Meter: "IBD only happens in Western countries"

Strong

Moderate

Preliminary

Hype

Verdict: Hype. A 2017 review of 147 studies found rising IBD incidence in newly industrialized countries in Asia, Africa, and South America, and a 2025 analysis of 522 studies across 82 regions showed IBD moving through epidemiologic stages worldwide. IBD was first common in early industrialized regions, but it isn't limited to them. **What would change the grade:** Nothing realistic; the global data are large and consistent. The careful version: "IBD became common first in Western countries and is now rising in many other parts of the world."

What migration studies show

If IBD were purely genetic, moving to a new country shouldn't change your risk much. If environment matters, it should. That makes migrants a natural experiment.

Migration and IBD risk refers to how the risk of developing IBD changes when people move from one country or environment to another, and what those changes suggest about the roles of genes and environment.

The classic studies come from Leicestershire, a county in England with a large South Asian community. In 1992, [Probert and colleagues](#) reported on ulcerative colitis there from 1972 to 1989. South Asians had a relative risk of ulcerative colitis of 2.45 compared with Europeans. In the 1980s, yearly new cases per 100,000 people were:

Group in Leicestershire (1980s)	New ulcerative colitis cases per 100,000 per year
Sikh	16.5
Hindu	10.8
Muslim	6.2

Group in Leicestershire (1980s)	New ulcerative colitis cases per 100,000 per year
European	5.3

First- and second-generation South Asians were at similar risk. A [1993 follow-up](#) by the same team looked at how many people were living with each disease and found a split: ulcerative colitis was more common among South Asians than Europeans (135 vs 90.8 per 100,000), but Crohn's disease was *less* common (33.2 vs 75.8 per 100,000).

Notice how careful the claim has to be. These data come from one county, mostly from the 1970s and 1980s. They show that ulcerative colitis, not IBD in general, was higher among South Asians there. And they don't compare migrants with people still living in South Asia. A 2018 review by Misra and colleagues of 33 studies across countries found that South Asian migrants consistently showed higher and more extensive ulcerative colitis than local populations in individual studies from five countries, but when the numbers were pooled, the difference was not statistically significant, partly because the studies varied so much.

Hype Meter: "South Asian migrants in the UK have higher ulcerative colitis rates than their white neighbors"

Strong

Moderate

Preliminary

Hype

Verdict: Moderate. Studies in Leicestershire found ulcerative colitis about 2.45 times as common in South Asians as in Europeans in the 1970s and 1980s, and higher, more extensive ulcerative colitis has been reported in several countries. But the data are older and regional, Crohn's disease was actually less common in the same group, and a 2018 pooled analysis wasn't statistically significant. **What would change the grade:** Large, recent, population-wide studies in several countries, reporting Crohn's and ulcerative colitis separately for specific South Asian communities, could move it up or down.

What does this mean for Riya? Not much about her personally, since every individual's risk depends on many things. What it means for her family conversation is useful, though: IBD is not a "foreign" disease, not a punishment, and not caused by abandoning traditional food. Researchers think the environment people live in, along with genes, shapes risk, and no single food or culture explains it. The US National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) says researchers have not found that specific foods cause or worsen Crohn's disease symptoms, though a person's care team may suggest changes that fit their symptoms.

Hype Meter: "Eating more ghee (or any single traditional food) will heal Crohn's disease"

Strong

Moderate

Preliminary

Hype

Verdict: Hype. Crohn's disease is an immune-driven inflammatory condition, and according to [NIDDK](#), researchers have not found that specific foods cause or worsen Crohn's symptoms. No trial has shown that ghee, or any single food from any culture, heals Crohn's. The diet treatment with real evidence is different: a special liquid formula that doctors prescribe for some children with Crohn's ([Chapter 9](#)), planned and monitored by the care team. Food still matters for nutrition, growth, comfort, and family connection, and a care team or dietitian can help plan meals that work during flares and remission. **What would change the grade:** Even reaching Preliminary would take controlled studies in people with Crohn's showing that a specific food lowers inflammation on scopes and blood tests compared with a control diet. Moving higher would take large randomized trials.

19.6 Culture, Family, and the South Asian Health Context

Every family has its own unwritten rules about health. In some, you mention a stomachache and get a doctor's appointment. In others, you get a home remedy, a prayer, a lecture, or a change of subject. None of these families is "the right one." But the rules shape what people say out loud.

Family communication is how family members share information, feelings, and decisions with each other, including what topics are open for discussion, who speaks for whom, and how disagreements are handled. In a health crisis, open, honest family communication helps everyone understand the condition and make decisions together.

Caregiver role is the set of responsibilities family members (often parents or grandparents) take on for someone with a health condition, such as managing appointments and medicines, preparing food, giving emotional support, and advocating with schools, along with the stress that can come with it. For teens, the caregiver role often shifts over time: parents start out in charge, and the teen gradually takes on more of their own care.

Riya's grandmother is part of her care team, even though she isn't a doctor. She cooks with Riya, notices when Riya isn't eating, and is the first person Riya told about her anxiety before flares. Her aunt is trying to be a caregiver too; she just has outdated information. Seen that way, the aunt's comment is a caring impulse with a factual error, not an attack.

What research says about South Asian families and mental health

South Asian health context refers to the cultural, family, migration, and health-system factors that can shape how people with roots in South Asia (including India, Pakistan, Bangladesh, Sri Lanka, Nepal, and nearby countries) understand illness, talk about it, and seek care. First, a caution. South Asian communities are enormously diverse, spanning many countries, languages, religions, generations, and incomes. No study

describes "what South Asian families think," and any single family, including Riya's, can look very different from research averages.

With that caution, here is what a few studies report:

- A [2019 literature review](#) by Karasz and colleagues on South Asian immigrant communities in the US described how ideas about what causes mental illness, the stigma of acknowledging it, and acculturation (how people adapt to a new culture over time) all affect whether people get care. The authors called for culturally responsive approaches and pointed to local community organizations as models. The review notes that research in this area is limited.
- A [2017 qualitative study](#) by Islam and colleagues interviewed 10 South Asian youth, aged 15 to 23, in Peel Region near Toronto, Canada. They described pressures from academics and comparisons, conflicts with parents over different cultural values, and family disruptions. Barriers to care included stigma (including worry about what the community would think), few South Asian or youth-focused professionals, long waits, and costs. When shown 22 local mental health resources, they recognized only about a third (36%).
- A [2022 qualitative study](#) by Basri and colleagues interviewed 14 South Asian American college students in Texas. Their themes included family dynamics, cultural dynamics, the campus environment, university resources, and access to help.

These are small studies that describe experiences, not percentages that apply to everyone. The Islam study is Canadian; the other two focus on the US. Still, they line up with the larger Clement review: stigma, worries about disclosure, and not knowing where to go make help harder to reach, and these barriers can weigh more heavily on young people and on minority communities.

A research theme is not a stereotype



"Some South Asian youth in one small study described stigma about mental health" is a careful finding. "South Asian families don't believe in therapy" is a stereotype. Always ask how many people were studied, where, and whether the result fits the specific person in front of you.

These studies also say little about strengths. Many families, South Asian and otherwise, offer deep support through shared meals, multigenerational households, and relatives who show up during hard times. The goal isn't to change a family's culture. It's to connect accurate medical information with the ways that family already shows love.

For families

If someone in your family has a gut or mental health condition, food and advice are often how love gets expressed, and that's a strength. Try asking before advising: "What would help you right now?" Avoid comments about weight, eating, or "worrying too much" at the table, since a teen with IBD may be eating carefully on purpose. If you have questions about remedies from home or about the medicine, bring them to the care team together; doctors can talk through traditional foods and practices and how they fit with treatment.

19.7 Health Literacy and Talking to Your Doctor

Riya's aunt isn't unintelligent. She's working from the information she has. That's a health literacy issue, and it affects everyone, including doctors.

Health literacy is the ability to find, understand, and use health information and services to make decisions for yourself and others. The US government's [Healthy People 2030](#) initiative defines personal health literacy this way, and it also describes organizational health literacy: how well health organizations make it possible for people to find, understand, and use information. In other words, when a family is confused, it's not only their job to learn more. It's also the clinic's job to explain clearly, in the family's preferred language, with time for questions.

Talking to your doctor is the skill of preparing for and taking an active part in medical visits: sharing accurate information, asking questions, and making decisions with your care team. [MedlinePlus](#), from the US National Library of Medicine (updated October 5, 2024), suggests:

- Before the visit, write down your questions and your symptoms, including when they started and what makes them better or worse.
- List every medicine, vitamin, herb, and supplement you take, including home remedies.
- Bring a trusted friend or family member, and ask the office in advance for an interpreter if you need one.
- During the visit, be truthful about your habits and symptoms, even the embarrassing ones.
- Take notes, and keep asking until you understand.

That second bullet matters for families who use traditional remedies. Telling the doctor about a remedy isn't a confession; it's information that helps keep treatment safe. And the fourth bullet is the antidote to illness concealment.

Your doctor has heard it all



Gastroenterologists talk about stool, gas, and bathroom trips all day, so nothing you say will shock them. A useful trick is to write the awkward thing on your phone and show it, or start with "This is embarrassing, but...", which signals that the next part matters.

19.8 School, Accommodations, and Peer Support

School is where stigma and symptoms collide most often: a teacher who won't sign a pass, a test you can't pause, a class full of people who notice every exit.

School accommodation is a change in how a student learns, is tested, or participates in school that removes a barrier caused by a health condition or disability, without lowering what the student is expected to learn. Examples include restroom access, rest breaks, and extra time.

In the US, the main tool for students with chronic conditions like IBD is a **504 plan**: a written plan, developed by the school with the student and their parents or guardians, that lists the accommodations a student with a disability needs to have equal access to education, under Section 504 of the Rehabilitation Act of 1973.

Section 504 is a federal civil rights law that applies to schools receiving federal funding. A [December 2024 fact sheet from the US Department of Education's Office for Civil Rights](#) explains that IBD counts as a disability under Section 504 when it substantially limits a major life activity.

The law treats body functions as major life activities too, and the fact sheet names the digestive system, bowel function, and the immune system. A condition that comes and goes, or is in remission, still counts if it would substantially limit those functions when it is active. Even a student who needs no accommodations is protected from disability-based bullying and harassment, such as teasing about restroom trips.

A 504 plan is not the same as an IEP (individualized education program). An IEP is a plan for students who need special education services, under a different federal law, the Individuals with Disabilities Education Act (IDEA). A student whose chronic health problem limits their strength, energy, or alertness and hurts their schoolwork can sometimes qualify for an IEP under IDEA's "other health impairment" category. For students who mainly need fair access, like restroom breaks and stop-the-clock testing, a 504 plan is the usual tool.

According to a [2021 fact sheet](#) from the Crohn's & Colitis Foundation:

- Each school decides eligibility case by case, usually through its 504 coordinator.
- Commonly requested accommodations include unlimited restroom access, "stop-the-clock" testing (pausing a test's timer during a restroom break), making up work missed for appointments or illness without penalty, tutoring after long absences, and full participation in activities even after missed classes.
- The Foundation recommends having a plan in place at the start of every school year, even during remission, because flares are unpredictable.

- A student doesn't have to be failing to qualify; the plan is about access, not grades.
- Plans usually apply in public schools, and in private schools that receive federal funding. The fact sheet advises creating or updating the plan every year, even if nothing about the student's health has changed.
- The student should help choose the accommodations, because someday they'll need to advocate for themselves.

So the myth that teachers "aren't allowed" to make exceptions is backward: with a 504 plan in place, the school has agreed to them. Sam's IBS isn't the same as Riya's IBD, but students with IBS and other conditions can also ask about accommodations; the school decides case by case.

Not doing it alone

Peer support is help and understanding from people who share a similar experience, such as other teens with IBD or IBS, offered through friendships, support groups, online communities, or camps. Peers can offer something doctors and parents can't: "I've been there." The Crohn's & Colitis Foundation lists resources for young people, including Camp Oasis, a summer camp for kids and teens with IBD, and a website for teens with IBD. Online communities can help too, with one caution from earlier chapters: peers are great for support and terrible as a source of medical claims. When someone in a group swears by a supplement or diet, run it through the Hype Meter and talk to your care team.

Sam's cross-country team turned out to be a kind of peer support. When he finally explained his IBS to two teammates, one of them admitted she gets race-day stomach problems too. Now they warm up together near the restrooms, and nobody makes a big deal of it.

19.9 Practicing the Conversation

Knowing the facts is one skill. Saying them out loud, kindly, under pressure, is another. Here are five moves, drawn from the ideas in this chapter, that can help in tough conversations about health:

1. **Start with the relationship.** Acknowledge the care behind the comment ("I know you want me to feel better").
2. **Give one clear fact, not a lecture.** "Crohn's is an immune condition, and my doctor is treating it with medicine."
3. **Offer a role.** Give the person something helpful to do ("Could you help me find recipes that are easy on my stomach during flares?").
4. **Set boundaries calmly, and in private when you can.** "I'd rather not talk about my weight at dinner."
5. **Bring in backup.** A parent, doctor, or counselor can repeat the facts so you aren't the only messenger.

None of these is a magic script. Sometimes the best choice in the moment is to say nothing and talk later. The MicroSim lets you try different responses and see how each might land.

Diagram: Conversation Practice

Conversation Practice

Read the line, then press Choose A, B, or C below.

Sunday dinner. Riya, 16, has Crohn's disease. Her aunt speaks up in front of everyone.

Aunt says:

"You're too thin. Just eat more ghee and stop worrying. In our day nobody had this Crohn's business."

Riya could say:

A "That's not true. You don't know anything about Crohn's."

B "I know you want me to feel better. Crohn's is an immune condition, and my doctor is treating it with medicine. I still love Nani's cooking."

C (Say nothing and change the subject.)

Aunt at dinner (Riya) ▼

Restart

Choose A

Choose B

Choose C

Next

[Back to Conversation Practice Lesson Plan](#)

Interactive simulation: <https://aaryavvatts-lab.github.io/gut-brain-textbook/sims/ch19-conversation-practice/main.html>

Open the Conversation Practice fullscreen



MicroSim specification: Conversation Practice



Type: microsim **sim-id:** ch19-conversation-practice

Library: p5.js

Status: Implemented

Bloom Level: Apply

Bloom Verb: use

Learning Objective: The learner will use supportive, accurate communication strategies (acknowledge, give one fact, offer a role, set calm boundaries, bring backup) to respond to stigmatizing or mistaken comments about gut and mental health, and explain why each response might help or backfire.

Canvas: 420 px drawing area plus 90 px controls (iframe 512 px); responsive to about 380 px wide.

Controls: Scenario select (Aunt at dinner; Teacher and the restroom; Friend asks about missed school; Coach before a race); Restart; Choose A, Choose B, Choose C; Next.

Rules: Each scenario has two turns. The other person's second line depends on the first choice (branching). After each choice, a feedback card labels how the response might land ("Likely to land well," "Mixed: depends on the moment," or "Likely to backfire") and explains why in one or two sentences. No scores are kept.

Provenance: Section 19.9 strategies; 504 accommodations from the Crohn's & Colitis Foundation fact sheet; all characters are fictional.

Pick **Aunt at dinner** and try each first response. Notice how the aunt's next line changes depending on what Riya says: a sharp reply makes her defensive, while acknowledging her care opens a real question about Riya's medicine. Then try the **Teacher** scenario and notice how mentioning a 504 plan changes the conversation, and the **Coach** scenario, where Sam has to push back on "it's just nerves" without putting himself down.

Look closely at the "Mixed" answers. Saying nothing, or setting a firm boundary, can be the right choice for you in a particular moment; the feedback explains the trade-offs rather than grading you. After trying a few paths, write your own version of the best response in your own words.

What this model leaves out

- Real conversations don't come in three neat options, and people rarely respond the same way twice.
- Tone of voice, timing, body language, and who else is in the room matter as much as the words, and the sim can't show them.
- The sim's feedback is a teaching judgment, not research data; what lands well depends on the specific family, culture, and relationship.
- It covers only four scenarios and two turns each; real misunderstandings may take many conversations to change.
- Language matters: in many families, the most important conversations happen in a language other than English, and the sim is English only.

At the Bedside: Riya's 504 Meeting and a Family Conversation

Meet the patient (fictional)

Riya is 16, a junior at Lakeview High School, with Crohn's disease affecting the end of her small intestine and part of her colon. She takes a biologic medicine and is mostly in remission. After a mild flare in the fall, she missed several days, a teacher refused her a restroom pass during a quiz, and she started skipping lunch so she wouldn't need the bathroom in class. At home, she hasn't told her parents how anxious she's been before flares.

What the doctor checks: At her visit, Dr. Alvarez reviews Riya's symptoms, blood and stool tests, and growth, and asks how she's eating. Riya admits she's been skipping lunch. Dr. Alvarez also asks about mood and sleep using a short screening questionnaire, which shows moderate anxiety symptoms.

Connecting the signals: Skipping meals isn't a symptom of Crohn's itself; it's a way of hiding it, driven by stigma and a lack of school support. Hiding meals risks poor nutrition and makes it harder for her care team to know how she's really doing. Her anxiety may also be making her more alert to every gut sensation, as described in Chapters 8 and 11.

Diagnosis: Crohn's disease, mostly in remission, with anxiety symptoms and illness concealment linked to stigma at school.

Why it happens: Crohn's disease causes unpredictable symptoms, and stigma (from others and from herself) pushes Riya to conceal them. Concealment adds stress, and stress and anxiety can make gut symptoms feel worse, feeding the loop.

The mind-body side: Dr. Alvarez explains that hiding symptoms makes them harder to treat, and that anxiety is common and treatable in teens with IBD. She refers Riya to the clinic's psychologist for brain-gut therapy (see [Chapter 18](#)). With Riya's permission, the clinic social worker helps the family request a 504 plan.

At the 504 meeting, Riya, her mom, the school counselor, and her teachers agree on unlimited restroom access, stop-the-clock testing, a private signal to leave class, and a plan for making up work after appointments. Riya speaks for herself for part of the meeting, which she practiced beforehand.

At home, the family has a harder conversation. Her grandmother asks whether stress caused the disease; her father worries that "seeing a psychologist" will make people think something is wrong with her. The clinic's psychologist, who works with many immigrant families, explains anxiety as a common, treatable part of living with a chronic illness, and invites the grandmother to the next visit. The grandmother asks if she can keep cooking for Riya. The answer is yes.

Treatment today: Crohn's care continues with Riya's biologic medicine and regular monitoring by her gastroenterology team. Some pediatric IBD care teams include psychologists and social workers, and school accommodations like a 504 plan are a standard part of support for students with IBD. Treatment decisions are made individually with the care team.

What's new in research: In 2025, a global analysis of 522 population-based studies in *Nature* (Hracs and colleagues) mapped IBD moving through epidemiologic stages in 82 regions, which helps health systems plan for more patients from more backgrounds. **Evidence grade: Strong** for the global spread of IBD. Research on stigma and culturally responsive care for South Asian and other minority families with IBD remains limited and mostly small, so that part is **Preliminary**.

 Your turn: reason through a variation

Sam's coach says Sam can't have extra restroom breaks during practice because "it's not fair to the team," and Sam doesn't have a formal plan. What would you suggest Sam and his family do?

Answer: Sam could ask his doctor for a short note explaining that IBS is a real condition and what he needs, and the family could ask the school's 504 coordinator whether accommodations can cover athletics; the Crohn's & Colitis Foundation fact sheet notes that 504 plans can include full participation in extracurricular activities for students with IBD, and the school decides eligibility for other conditions case by case. Meanwhile, Sam can explain to the coach calmly that the breaks let him stay on the team, not escape practice.

This is a fictional teaching case. It is not medical advice. If you or someone you know has symptoms like these, talk to a doctor.

Common Misconceptions

Myth: Talking about bowel symptoms is shameful, so it's better to keep them to yourself.

Reality: Bowel symptoms are normal medical information. Hiding them (illness concealment) can make conditions harder to treat, and doctors, nurses, and school staff need accurate information to help.

Myth: Getting mental health help means you're weak.

Reality: Anxiety and depression are common, especially with chronic gut conditions, and treatments like CBT work. A large review found that stigma is one of the main reasons people don't seek help, not a sign that they don't need it.

Myth: One culture's diet causes IBD, or one traditional food can cure it.

Reality: IBD is rising in many countries with very different diets, and NIDDK reports that researchers have not found specific foods that cause or worsen Crohn's symptoms. Genes and environment both contribute, and no single food or culture explains it.

Myth: Teachers aren't allowed to give students with gut conditions special treatment.

Reality: Under Section 504, a school that receives federal funding may be required to provide accommodations, such as restroom access as needed and stop-the-clock testing, to a student whose condition qualifies, usually through a 504 plan. These aren't unfair advantages; they remove barriers so students can learn.

Myth: IBD only affects white people in Western countries.

Reality: IBD is a global disease that's rising in newly industrialized countries, and studies in England found

ulcerative colitis more common in South Asian residents than in their European neighbors.

Your Gut Check

Test yourself. Try each one before you open the answer.

? 1. Claim Check: "Crohn's is a Western lifestyle disease. If you just eat the traditional food your grandparents ate, it will go away." ✓

Grade: Hype. IBD did become common first in Western countries, and environment probably matters, which is a real part of the science. But IBD is now rising worldwide, including in countries with traditional diets, and studies of South Asian migrants suggest that genes and environment work together rather than any one diet being to blame. NIDDK reports that researchers have not found that specific foods cause or worsen Crohn's symptoms, and no trial shows a traditional diet makes Crohn's go away. A careful version: "Environment, including diet, may influence who develops IBD, but once someone has Crohn's, it needs medical treatment."

? 2. Predict: A school sets up an anonymous online form where students can request a restroom pass card without explaining why. Based on this chapter, predict what might happen to illness concealment among students with gut conditions. ✓

Concealment would likely drop for some students, because the biggest stigma barrier in research is worry about disclosure. If students don't have to explain symptoms publicly, they may skip meals less and stay in class more. But some may still hide symptoms from doctors or family, so the form helps with school stigma without solving everything, and a formal 504 plan still offers stronger protection.

? 3. Explain: Riya's grandmother asks why, if IBD runs partly in families, second-generation South Asians in the Leicestershire study had about the same ulcerative colitis risk as first-generation migrants. Explain what migration studies can and can't tell us. ✓

Migration studies compare groups with similar ancestry living in different environments, so they help separate genes from environment. In Leicestershire, South Asians had higher ulcerative colitis rates than Europeans living in the same place, and first- and second-generation South Asians had similar risk, which suggests both inherited factors and the shared local environment could matter. But these are older data from one county, they didn't compare with people in South Asia, and they can't identify which specific factors are responsible.

? 4. Apply: Sam's coach says, "Stomach again? It's just nerves. Push through." Use the five conversation moves from Section 19.9 to write a two-sentence response for Sam. ✓

One good response: "I know you want me to race well, and nerves do make it worse, but I have IBS, which is a real gut condition my doctor is treating. Could I warm up near the restrooms on race days, and could my mom and I talk with you about a plan for meets?" It acknowledges the coach's goal, gives one clear fact, offers a concrete role, and brings in backup.

5. Read the data. In the CDC's 2025 Youth Risk Behavior Survey, students who reported persistent sadness or hopelessness were asked whether they had needed counseling or therapy but not received it ("unmet need"). Selected results:

Group (students with persistent sadness or hopelessness)	Reported unmet need for counseling or therapy
All students	28.8%
Asian American students	38.4%
Black students	33.9%
Hispanic students	29.0%
White students	27.1%

? 5. What does this data show, and what can't it show? ✓

It shows that more than a quarter of struggling students said they needed counseling but didn't get it, and that unmet need was higher among Asian American and Black students than among White students. It can't show why: the survey asked only whether students needed counseling and didn't get it, not what stood in the way, so stigma is only one possible explanation alongside cost, not knowing where to go, and others. "Asian American" lumps together many different communities, including South Asian students, and the Asian estimate had a wide margin of uncertainty, so it can't describe any one community or family. A useful follow-up would survey specific communities separately and ask directly about each barrier.

Exercises

Remember

1. According to Corrigan and Watson, what are the three parts of stigma?



Answer



Stereotypes (beliefs about a group), prejudice (agreeing with the stereotype and feeling negatively), and discrimination (acting on the prejudice).

1. Name three accommodations commonly included in a 504 plan for a student with IBD.



Answer



Any three of: unlimited restroom access, stop-the-clock testing, making up missed work without penalty, tutoring after long absences, and full participation in extracurricular activities after absences.

Understand

1. Explain the difference between public stigma and self-stigma, with an example from a gut condition.



Answer



Public stigma is how other people react to a group, like classmates mocking someone for frequent bathroom trips. Self-stigma is when the person with the condition starts believing those messages, like a teen with IBS thinking, "I'm disgusting and a burden."

1. Explain why illness concealment can make a gut condition harder to treat.



Answer



If a person hides symptoms like blood in the stool, night-time bathroom trips, skipped meals, or low mood, the care team doesn't get the information it needs to adjust treatment, and schools and families can't offer support.

Apply

1. Use the Conversation Practice MicroSim to play the "Friend asks about missed school" scenario three times, choosing a different first response each time. Write down how the friend's reply changed and which path you'd actually choose, and why.
2. Using the MedlinePlus tips in Section 19.7, write a short list Riya could bring to her next appointment, including at least one "embarrassing" item and one question about a home remedy.

Analyze

1. The 2009 stigma survey included 211 adults, about 97% of whom were White. Analyze how this limits what the study tells us about teens like Riya, and design two changes that would make a future study more useful for South Asian American families.
2. Compare the Probert 1992 and 1993 Leicestershire studies with the Misra 2018 review. What does each add, and why does the pooled 2018 result not settle the question?

Evaluate

1. A wellness influencer posts: "South Asians are genetically protected from IBD, so if you get it, you must be doing something wrong." Evaluate each part of this claim using this chapter's evidence, and explain why the second sentence is harmful even apart from being false.
2. Some people argue that teens should keep their gut conditions private at school to avoid stigma. Others argue that openness reduces stigma over time. Judge which approach fits the evidence in this chapter better, and whether there's a middle path.

Create

1. Create a one-page "how to support a friend with a gut condition" guide for your school's health class, using at least three concepts from this chapter (for example, stigma, illness concealment, peer support, and school accommodation).
2. Write a new branching scenario for the Conversation Practice sim: a parent who doesn't want their teen to see a therapist. Include the parent's opening line, three possible teen responses with feedback, and a follow-up line for each.

Key Takeaways

- Stigma combines stereotypes, prejudice, and discrimination; self-stigma happens when people turn those beliefs on themselves, and mental health stigma targets mental illness and care-seeking.
- Most adults with IBD in a 2009 survey (84%) reported feeling stigmatized, and stigma was linked to worse quality of life and distress; hiding symptoms (illness concealment) makes conditions harder to treat.
- Stigma is a major barrier to mental health help, especially for young people and minority groups; in 2025, 33.3% of US high school students reported persistent sadness or hopelessness, and unmet need for counseling was higher among Asian American and Black students than among White students.
- IBD is a global disease that is rising in newly industrialized countries; it is not only "Western," and no single food or culture causes or cures it.
- Migration studies in England found ulcerative colitis (but not Crohn's) more common in South Asian residents than in Europeans, suggesting both environment and inherited factors matter; these data are older and regional.

- South Asian communities are diverse; small studies describe stigma, family dynamics, and access problems as barriers, and family care is also a major strength.
- Health literacy, preparing for doctor visits, 504 plans, and peer support are practical tools; good conversations acknowledge care, give one clear fact, offer a role, set calm boundaries, and bring backup.

You've practiced the hardest kind of science communication



Explaining your body to someone who loves you and disagrees takes real courage, and now you have facts and words to do it. In Chapter 20, the final chapter, you'll pull together every tool in this book to become your own scientist and judge any health claim you meet.

Quiz: Culture, Food, Family, and Stigma

Test your understanding of Chapter 19. Choose the best answer, then click **Show Answer** to check.

Question 1

What is self-stigma?

- A. When the public reacts negatively to a group of people
- B. When a school refuses to give a student accommodations
- C. When a person with a condition turns negative beliefs about that condition on themselves
- D. When a doctor keeps a patient's diagnosis private

 **Show Answer**



The correct answer is **C**. Self-stigma is internalizing stigma, for example a teen with IBS thinking "I'm disgusting." Option A describes public stigma, the other form in Corrigan and Watson's framework.

Concept Tested: Self-Stigma **Bloom's Level:** Remember

Question 2

What is a 504 plan?

- A. A written school plan, under Section 504 of the Rehabilitation Act of 1973, listing accommodations a student with a disability needs for equal access to education
- B. A medical prescription that only a gastroenterologist can write
- C. A special education plan for students with learning disabilities only
- D. A plan that lowers the grades a student needs to pass

 **Show Answer**



The correct answer is **A**. A 504 plan is developed by the school with the student and family and lists accommodations such as unlimited restroom access. Option C is wrong because 504 plans cover students with many kinds of disabilities, including chronic illnesses like IBD. IEPs, which are plans for students who need special education services, fall under a different law, the Individuals with Disabilities Education Act. Option D is wrong because accommodations remove barriers without lowering expectations.

Concept Tested: 504 Plan **Bloom's Level:** Remember

Question 3

In the 2009 survey of 211 adults with IBD, about what share reported feeling stigmatized because of their disease?

- A. 10%
- B. 25%
- C. 50%
- D. 84%

 **Show Answer**



The correct answer is **D**. Eighty-four percent reported perceived stigma. The 10% figure (A) is a mix-up with a different number: stigma explained 10% to 22% of the variation in quality of life scores.

Concept Tested: Stigma **Bloom's Level:** Remember

Question 4

Why can illness concealment make a gut condition harder to treat?

- A. Hiding symptoms makes the immune system more active.
- B. If symptoms are hidden, doctors, schools, and families don't get the information they need to adjust treatment and offer support.
- C. Concealment is illegal under Section 504.
- D. Hiding symptoms always causes a flare within a week.

 Show Answer



The correct answer is **B**. Concealment cuts off information: a doctor can't adjust treatment for symptoms they never hear about. Option A invents a direct biological effect that the chapter doesn't claim.

Concept Tested: Illness Concealment **Bloom's Level:** Understand

Question 5

Which statement best describes the global pattern of IBD, according to the 2017 Lancet review and the 2025 Nature analysis?

- A. IBD became common first in early industrialized regions and is now rising in many newly industrialized countries in Asia, Africa, and South America.
- B. IBD occurs only in Western countries.
- C. IBD rates are falling everywhere in the world.
- D. IBD is equally common in every country and always has been.

 Show Answer



The correct answer is **A**. IBD incidence has leveled off in much of North America and Europe but has been rising in newly industrialized countries since 1990. Option B is the "Western-only" myth the chapter grades as Hype.

Concept Tested: Global IBD Rise **Bloom's Level:** Understand

Question 6

In the Leicestershire studies, first- and second-generation South Asians had similar ulcerative colitis risk, and South Asians had higher ulcerative colitis rates than Europeans living in the same county. What is the most careful interpretation?

- A. South Asians are genetically protected from all forms of IBD.
- B. IBD is higher in South Asians everywhere in the world.
- C. Ulcerative colitis was more common among South Asians in that region and era, which suggests genes and shared environment both may matter, but the data are older and regional.
- D. Traditional South Asian food causes ulcerative colitis.

 Show Answer



The correct answer is **C**. The data show higher ulcerative colitis (but lower Crohn's) in one English county in the 1970s and 1980s. Option B overgeneralizes: the findings don't cover all countries or all forms of IBD, and a 2018 pooled analysis wasn't statistically significant.

Concept Tested: Migration and IBD Risk **Bloom's Level:** Understand

Question 7

Aarav, a 15-year-old with ulcerative colitis, is preparing for a doctor's visit. He has been skipping lunch to avoid restroom trips and drinks an herbal tea his grandfather recommends. Based on the MedlinePlus tips in the chapter, what should he do?

- A. Mention only his main symptom so the visit stays short.
- B. Leave out the tea, since home remedies aren't medicine.
- C. Wait until he has a flare before bringing anything up.
- D. Write down his symptoms and questions, list everything he takes (including the tea), and tell the doctor about skipping lunch.

 Show Answer



The correct answer is **D**. MedlinePlus recommends listing all medicines, herbs, and supplements and being truthful about habits and symptoms. Option B is a common mistake: home remedies are exactly the kind of information that helps keep treatment safe.

Concept Tested: Talking to Your Doctor **Bloom's Level:** Apply

Question 8

At a family dinner, Riya's aunt says, "Just eat more ghee and stop worrying." Which reply best uses the conversation moves from Section 19.9?

- A. "You don't know anything about Crohn's."
- B. "I know you want me to feel better. Crohn's is an immune condition my doctor treats with medicine. Could you help me find recipes that are easy on my stomach during flares?"
- C. "Okay, I'll stop my medicine and try the ghee."
- D. "Crohn's comes from eating Western food, so just eat the way we used to."

 **Show Answer**



The correct answer is **B**. It acknowledges the aunt's care, gives one clear fact, and offers her a helpful role. Option C is dangerous because no one should stop or change a medicine without their care team.

Concept Tested: Family Communication **Bloom's Level:** Apply

Question 9

The 2009 IBD stigma survey found that people who felt more stigmatized had worse quality of life. Which is the strongest limitation of this finding for families like Riya's?

- A. The study used mice instead of people.
- B. The study proved that stigma causes Crohn's disease.
- C. The sample was too large to analyze.
- D. It was a one-time survey of mostly White adults recruited online, so it can't show cause or represent teens or South Asian families well.

 **Show Answer**



The correct answer is **D**. A cross-sectional survey shows correlation, and a sample that is about 97% White adults says little about teens from other backgrounds. Option B reverses the logic: the study looked at stigma and outcomes, not at what causes Crohn's, and couldn't prove cause anyway.

Concept Tested: Quality of Life **Bloom's Level:** Analyze

Question 10

In the 2025 CDC survey, unmet need for counseling among students with persistent sadness was 38.4% for Asian American students and 27.1% for White students. Which conclusion is best supported?

- A. Some groups may face extra barriers to care, but the data can't show which barriers, and "Asian American" combines many different communities.
- B. South Asian families do not believe in therapy.
- C. Asian American students have more depression than any other group.
- D. The difference proves that stigma is the only barrier.



Show Answer



The correct answer is **A**. The survey asked whether students needed counseling and didn't get it, not why, and it used a broad "Asian" category with a wide margin of uncertainty. Option B turns a group statistic into a stereotype about families, which the data can't support.

Concept Tested: Help-Seeking Barriers **Bloom's Level:** Analyze
