

Cortisol and counseling: Connecting the two

The counseling field has become more integrated with and connected to neuroscience, creating both excitement and confusion around how to talk effectively about the brain in a therapeutic setting. Additionally, accreditation bodies such as the Council for Accreditation of Counseling and Related Educational Programs have highlighted the importance of counselor trainees better understanding the neurobiological aspects of counseling. Although this may require counselors to pursue additional reading, training and continuing education, it also means learning and interacting with new material that can greatly benefit our clients.

One of these integrated endeavors revolves around the implications of physiological processes that manifest in psychological symptoms for our clients. Or, to state it another way, how physical experiences affect, create or maintain mental health symptoms and experiences. Stress is one of the most common experiences that people report in life (and in counseling). Take college students, for example. The American College Health Association National College Health Assessment found that out of 31 factors (including issues such as alcohol/drug use, finances, homesickness and mental health), stress was cited as the top factor affecting students' academic success. Although this revelation isn't necessarily surprising, it does highlight the current social climate and prevalence of stress among college students.

Similarly, we are a society that lives, breathes and perpetuates stressful experiences and thoughts. *Did I leave my iron on? What do people think about me? Am I a good partner?*

Luckily, as a society, we have become more comfortable expressing and acknowledging our stress experiences as a part of life. However, we are still not creating a deeper dialogue that focuses on understanding how stress can create havoc on both physiological and mental health. The experience and expression of stress

revolves around a hormone called cortisol, so let's dive a little deeper into its purpose.

Cortisol, the brain and the body

We know that our brain is responsible for communicating with our body. The same holds true when it comes stress. The brain assesses external information in the environment and alerts the body about threats that may be present. In part, this is good news because our brain can warn us when we are in danger and need to get out. This becomes tricky, however, when we *believe* that we are in a life-threatening situation even when we are not, causing our brain and (as a result) our body to also *believe* that we are in danger.

Continuing with the theme of college students, let's say that an undergraduate student is thinking, "Oh my gosh, if I don't pass this test, then I will fail my class, and then I will have to drop out of college completely." This thinking might just be a bit of catastrophizing, but the intensity of the cognitions can make the brain and body believe that failing a test is actually a life-or-death situation.

To create better understanding of what is happening inside the brain for our clients, it is helpful to talk about some neurobiological processes. In general, our reactions to stress stem from the autonomic nervous system, which is responsible for starting or stopping physiological responses through two additional systems: 1) the sympathetic nervous system (SNS) and 2) the parasympathetic nervous system (PNS).

The SNS becomes activated during *actual* or *perceived* crises. This results in the brain sending signals to other bodily organs, prompting reactions such as a racing heart, decreased salivation, diminished digestive processes, dilated pupils, and the release of adrenaline or epinephrine. The activation of the SNS is also responsible for triggering the fight-flight-freeze response. I'll offer a personal example: My partner decided it would be a good idea to jump out and scare me in our apartment. My immediate

reaction (without even thinking) was to punch him. My SNS activated, and that "fight" response was engaged as my brain perceived the situation as threatening. My partner has not jumped out at me since.

In contrast, the PNS slows down physiological processes, resulting in a calmer state. Thus, the PNS slows heart rate, constricts the pupils and encourages helpful digestion.

The hypothalamic-pituitary-adrenal (HPA) axis also plays a central role in stress. The HPA activates the release of corticotropin and glucocorticoids, which are major cortisol-based hormones released during the stress response process. In this process, stress and stressors can play a detrimental role in the development and preservation of mental health disorders. In other words, when individuals experience increased levels of stress (and increased levels of cortisol), psychological issues such as depression and anxiety are more likely to emerge. For more detailed information about stress and the stress cycle, I recommend reading the book *Why Zebras Don't Get Ulcers* by Robert M. Sapolsky. It is full of helpful anecdotes and information.

The good and the bad of cortisol

In a general sense, higher levels of cortisol typically equate to more psychological issues (such as anxiety and depression) and physiological difficulties. For example, chronic experiences of heightened cortisol levels weaken the immune system, making individuals more susceptible to colds and other illnesses. High cortisol levels can also play a role in more difficult menstrual cycles and impairment in cognitive processing.

However, appropriate cortisol levels are needed to function effectively and to feel well. Cortisol typically follows the human body's circadian rhythm, which influences the creation and release of cortisol throughout the day. The cortisol awakening response (CAR) of humans means that we have higher levels of

cortisol within the first 30 to 50 minutes of being awake. This helps the body get ready and prepared for the day. As our day progresses, cortisol levels typically decline, continuing to do so into the evening hours. If individuals are experiencing chronic stress, however, the CAR may become overly active or inactive.

Cortisol also assists in appropriate fetus development and helps in regulating blood sugar and forming memories. So, cortisol is needed and necessary for overall functioning. However, chronic experiences of stress can make increased levels of cortisol detrimental to mental health. The question is, how do we approach the importance of cortisol with our clients?

Integrating cortisol into counseling

Helping clients understand cortisol and its role in both emotional and physical health can be an important catalyst toward self-understanding and acceptance. The initial focus of successfully integrating cortisol into the counseling session rests on the therapeutic relationship and psychoeducation. In the remainder of this article, I present a framework and ideas for how to approach counseling through cortisol-based exploration and action.

Phase 1: Inviting clients to understand cortisol (psychoeducation)

It is important to have buy-in and openness from clients about the integration of cortisol into the therapeutic process. One way to implement this process is by using creative and inviting methods to provide psychoeducation. This can include verbal dialogue about cortisol topics (e.g., CAR, SNS, the benefits of cortisol), the use of videos, and the use of creative arts (e.g., ask clients to draw what their stress looks like or what they think cortisol looks like in their brain). Using various methods of psychoeducation can help counselors gain a better understanding of their clients' knowledge around cortisol and stress. It is also an effective approach for "meeting them where they are" through various mediums of disseminating and gathering information.

While exploring cortisol on a general level through psychoeducation, clinicians can also begin sharing about the physical implications of stress. For instance,

counselors can provide examples of physical and cognitive manifestations of stress, including difficulties in memory-making and memory recall (whether with short-term or long-term memories), and increases in heart rate and muscle tension.

Phase 2: Identifying physical and emotional experiences of stress and making connections

After exploring cortisol through psychoeducation, it is beneficial to look at the emotional and physical implications of individual experiences of stress and cortisol. This involves helping clients reach a better understanding of how, exactly, stress and cortisol influence their own *personal* functioning.

During this phase, there is a need to assess and gather information. By incorporating a specific, descriptive physical health section in the intake process (i.e., questions that ask about fatigue, body aches, nausea, etc.), clinicians can gather much of this information early on. However, if clients are not aware of their physical experiences and the possible connections to their mental health, they may be less likely to endorse this during the intake process. Similarly, some clients are likely to be more anxious during the intake process and may feel less safe in sharing personal details.

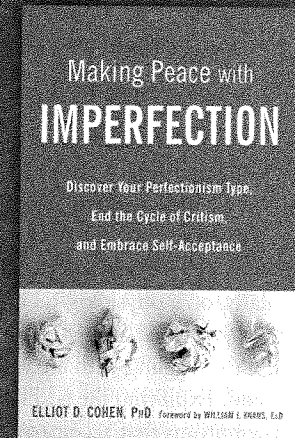
When exploring the physical experiences of stress, I have found that it can be helpful to take a "top-down" approach. That is, starting with the head and working your way down the body. Examples of questions and prompts that can help guide the exploration of physical experiences of stress:

❖ *How does your head feel when you are experiencing stress?* During this question, it is helpful to pay particular attention to phrases or descriptors involving feelings of tension, tightness or dizziness. These can all be indicators of stress and provide openings for further exploration.

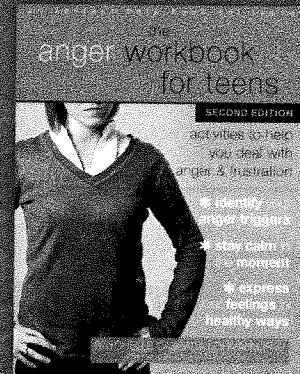
❖ *What do your shoulders feel like when you're stressed out?* Clients often report experiences of tightness in their shoulders, including muscle tension and feelings of soreness.

❖ *Talk about what your chest feels like when you're under stress.* Similarly, individuals often endorse feelings of tightness and "uneasiness" in the chest area when stressed out.

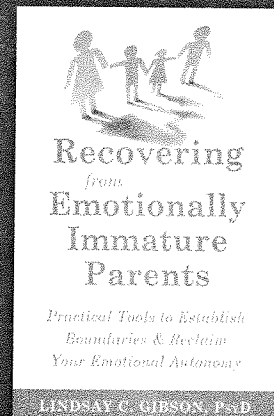
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While continuing to move down the body, counselors can adjust the phrasing of their questions to assess different parts. Counselors can also walk clients through guided imagery, asking clients to imagine their body during a time of stress. This is especially helpful if clients are having a challenging time connecting to those physical experiences in the moment. By asking questions about physical experiences that occur during stressful times, counselors can create a dialogue and space for clients to begin making more connections between the brain, mind and body.

As previously mentioned, additional mental health symptoms often surface with stress. For example, anxiety and depression are common counterparts to stress. Similarly, on a physiological basis, cortisol is also produced at higher rates for individuals struggling with anxiety and depression. Exploring the additional emotional symptoms that accompany stress provides a greater understanding of clients' experiences and further influences the course of treatment. For instance, if depression begins to surface in addition to stress, additional techniques and assessment may be required.

The next step serves to continue creating connections between the general information regarding cortisol and stress and clients' personal experiences of cortisol and stress. This step can begin with dialogue regarding common adages or sayings about stress, such as "my stress is making me sick" or "my immune system is run down." These expressions can serve as poignant and nonthreatening talking points to help individuals make further connections between their physical and emotional health.

These types of exchanges also open the door to process the *meaning* behind clients' experiences. For example, if a client resonates with the phrase "my stress is making me sick," it provides an opportunity to explore exactly what that means to the client. It also offers the chance to connect with those previous explorations of top-down data associated with physical experiences and stress.

Another common experience of stress (and anxiety) centers on ruminating thoughts — those pesky thoughts that we continue to hyperfocus on repeatedly. When we engage in the cognitive process of rumination, we are generating more

chances for cortisol to rev up during a time in which we are not actually in danger (i.e., ruminating negative thoughts make our brain and body believe that we are in an *actual* crisis when we are in a *perceived* crisis instead). Exploring the experiences and implications of rumination can be a validating experience and help our clients better understand how even thoughts can influence the creation of cortisol and stress.

Phase 3: Empowering clients to engage in processes to "conquer" cortisol

After clients have gained a better sense of what cortisol is, how it affects the body and, most importantly, how it influences their emotional and physical health, it is time to introduce and practice specific techniques that have demonstrated effectiveness in reducing cortisol levels and, ultimately, feelings of stress. Although these activities do not actually conquer cortisol (remember, we need a certain level of cortisol to function effectively), they do serve to reduce or keep cortisol levels in check. Because of the brain's ability to change (i.e., neuroplasticity), the more our clients engage in a healthy behavior,



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the more likely it will be for a subsequent positive “shift” in the brain to take place. Ultimately, a change in our brain requires modification (and repetition) of behaviors.

Physical exercise can be a top-of-the-line defense against unhealthy levels of cortisol. A standard recommended amount of exercise is 30 to 60 minutes per day. This could include both cardiovascular-based activities and strength training. Physiologically, exercise actually increases cortisol levels slightly. However, levels begin to decrease to a healthier range once exercise is complete. It is important to assist clients in creating a helpful exercise protocol that fits their needs and physical abilities. As with most things, moderation is key with exercise, at least when it comes to regulating cortisol levels. Engaging in exercise that is too intense can actually increase cortisol levels even more.

Mindfulness practices have gained tremendous recognition and evidence-based support in the world of counseling. Engaging in mindfulness-based practices decreases activity in the stress response system and encourages experiences such as relaxation and ease. An

abundance of resources regarding mindfulness-based practices are available. One user-friendly resource I have found helpful is *A Mindfulness-Based Stress Reduction Workbook* by Bob Stahl and Elisha Goldstein.

Similarly, a strong regimen of effective breathing exercises can be excellent in combating cortisol. Earlier, I briefly explained the PNS, which is responsible for slowing down those physiological processes that are often experienced with stress and increased cortisol levels. Diaphragmatic breathing engages the PNS to work toward decreasing physiological responses such as increased heart rate. For more information about diaphragmatic breathing, I recommend *Rewire Your Anxious Brain: How to Use the Neuroscience of Fear to End Anxiety, Panic and Worry* by Catherine M. Pittman and Elizabeth M. Karle.

Final thoughts

As I think about human experiences, I often search for quotes that I believe resonate with the topic at hand. One quote that I stumbled upon was by Hans Selye,

the “pioneer of stress research,” who said: “It’s not the stress that kills us, it is our reaction to it.”

Ultimately, in our roles as helpers, it can become a supplementary goal in the therapeutic process to help our clients understand that cortisol and stress are part of the human experience. Cortisol is there for a reason, and it keeps us healthy and well in many ways. At the same time, it can often wreak havoc on our bodies. However, if we learn about its role, impact and purpose, we can work toward helping our clients pursue healthy behaviors that promote physical and mental wellness. ♦

Caitlyn M. Bennett is an assistant professor of counseling at the University of North Texas. She is a licensed professional counselor (Texas), a licensed mental health counselor (Florida) and a national certified counselor. Contact her at Caitlyn.Bennett@unt.edu.

Letters to the editor:
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