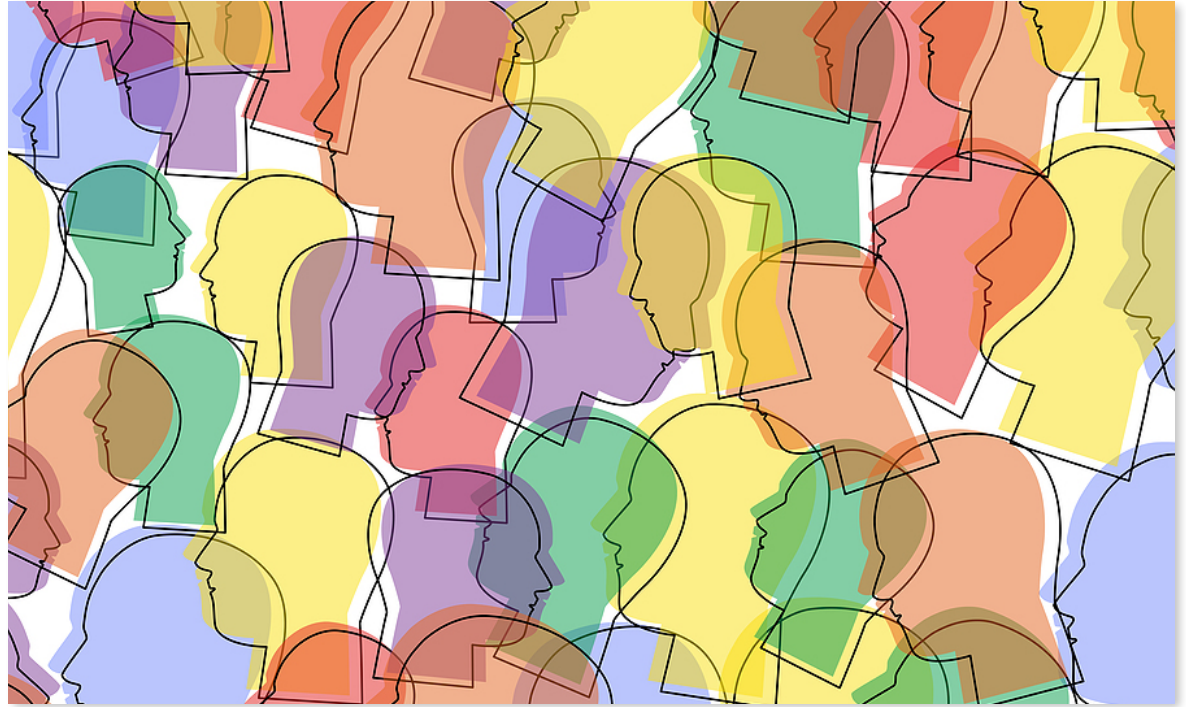


THE OFFICIAL
MAGAZINE OF
THE CENTRE
FOR STUDIES
ON HUMAN
STRESS

The Centre for
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Stress is dedicated
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scientifically
grounded
information about
the effects of stress
on the brain and
body



Can we truly think of stress as an ally? A look into stress mindsets

Editors

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Dear readers,

For this 26th issue of the Mammoth Magazine, we will avoid discussing the negative effects of stress that are constantly talked about in scientific studies and the media. While we recognize that stress can have negative consequences on our physical and mental health, as well as our performance, it is also important to recognize that it can have many positive effects. Recently, researchers have found that the way people interpret stress as being either helpful (positive) or debilitating (negative) influences how they experience the physical and psychological feelings of stress. These stress mindsets are far from trivial. Studies show that they have real implications for our physiology, cognition, and the way we cope with various stressful situations that we

experience. In this issue, you will discover how these stress mindsets can affect many aspects of your daily life and whether it is possible to modify them.

To begin, Philippe Kerr, a doctoral student in biomedical sciences at the University of Montreal, presents the history behind stress mindsets. You will discover that the history behind stress mindsets does not begin in the domain of stress, but in that of intelligence. Are we born with fixed abilities? Is it possible to improve our abilities with effort? Philippe will explain the repercussions that this way of viewing intelligence can have. A second article signed by Audrey-Ann Journault, a doctoral student in psychology at the University of

of Montreal, profiles a pivotal researcher in the domain of stress mindsets: Jeremy Jamieson. You will learn about how he came to study stress mindsets, why our brain uses them, as well as the scientific studies that he has conducted on the subject. Alexandra Brouillard, a doctoral student in psychology at the University of Quebec in Montreal, then writes about a technique frequently used in therapy to change people's inadequate thoughts: cognitive restructuring. Changing the way we interpret things directly affects how we regulate our emotions. Next, Audrey-Ann Journault and Rebecca Cernik, coordinator of the Stress, Trauma, Emotions, Anxiety, and Memory laboratory (STEAM Lab), are the co-authors of the fourth article. They summarize four surprising scientific findings on the effects of mindsets on feelings of satiety, test anxiety, and physical health (through medication and physical activity). You may be surprised to learn how the power of the mind can affect us in so many ways. Catherine Raymond, a postdoctoral researcher at the STEAM Lab and doctoral student in psychology at the University of Quebec in Montreal, then presents us with an infographic illustrating the state of stress

mindsets of a sample of 68 youth and 285 adults in the Greater Montreal area. A sixth article is presented by Sandrine Charbonneau and Annabelle Naud, both psychology students at the University of Montreal in a master's and bachelor's program, respectively. This article shows us concrete ways to adopt positive stress mindsets and the benefits they can have on our stress response. You will notice that it is easier than we think to see our stress as an ally to benefit from its effects! Finally, Victoria Xu, a bachelor's student in psychology at the University of Montreal, concludes this issue with an article on toxic positivity. While it is important not to perceive stress as always being bad, Victoria explains that only perceiving it as being good could also be a trap.

Happy reading! 🐘





A brief history of stress mindsets: Understanding how our thoughts and beliefs about intelligence can influence our chances of success

Philippe Kerr, doctoral student in biomedical sciences, University of Montreal

Without a doubt, life is full of challenges and obstacles, and we all have different ways of responding to them. Few of you will be surprised to learn that the way we welcome in and react to an obstacle in life can have a significant effect on our ability to overcome it. Indeed, the idea that our thoughts can influence our behaviour is at the foundation of many studies in the field of psychology research. According to the mindset theory, sets of beliefs and perceptions about people and the world are organized to help us summarize complex information about mental schemas. Together, these are called mindsets. These mindsets are useful because they allow us to process information more easily. Among other things, they can influence our view of success and failure in the face of adversity. This article will help you understand how research groups have come to study mindsets in relation to achievement, success, and mental health.

The Mindset Theory

We owe the mindset theory to Carol Dweck and Ellen Leggett, two researchers and psychologists from Stanford University and the University of South

Carolina, respectively. Mindset theory emerged in the late 1980s and focuses on the effects of a person's beliefs on how they respond to life's challenges and obstacles. For example, a person can have two views on intelligence: either a *fixed* or a *growth* mindset. People with a fixed mindset see intelligence as a fixed trait that a person either has or doesn't, where this trait is little or not at all malleable. According to Dweck and Leggett, people with a growth mindset perceive intelligence as something that can be developed over time via sustained effort. In general, growth mindsets allow us to better adapt to life's obstacles, as it allows us to overcome some of the negative thoughts that often lead us (wrongly) to believe that we have no control over our situation. Inversely, the beliefs that accompany fixed mindsets may be associated with the development of mental health problems because they make us believe that we have no control over our situation and can lead to passivity. In addition, unlike fixed mindsets, growth mindsets are fundamental to the success of many interventions that have been developed to reduce psychological distress. Indeed, if a person accepts help from a health professional, they recognize they can

learn how to adapt to life's obstacles more adequately. Growth mindsets are known to have many benefits for self-esteem. Here are some practical examples.

Mindsets and beliefs

First, people with a fixed mindset often mistakenly believe that intelligence (or talent) is something completely innate (something that we are born with, without having to work at it). This often leads these people to believe that if they don't succeed at a task, it means they are "not cut out for it". In particular, the fixed mindset can mislead us when we are assessing our ability to overcome an obstacle. This kind of thinking can have negative effects on a person's self-esteem. For example, a person with a fixed mindset might say:

"If others get it right the first time and I don't, it means I'm not smart."

"If I put in a lot of effort to succeed while others put in less, it means that I'm not as good."

For example, Ben Hogan (one of the greatest golfers in history) was described by loved ones as being an awkward and clumsy child. Yet today, he is seen as an icon of grace and as having the ideal swing for the new generation of golfers. His journey shows that even if a person seems to be less talented from the get-go, a growth mindset can lead them to excellence with practice and hard work! Overall, the fundamental difference between a fixed and growth mindset is that the former leads a person to belittle themselves if they put in more effort or if they fail a given task, whereas the growth mindset leads a person to enjoy the learning process and to be stimulated by obstacles.



In general, growth mindsets allow us to better adapt to life's obstacles, as it allows us to overcome some of the negative thoughts that often lead us (wrongly) to believe that we have no control over our situation.

Do I have a fixed mindset or a growth mindset?

The answer to this question is not super obvious, as it needs to be well nuanced and as most people can find themselves on a continuum (between the two types of mindsets). Indeed, it's not all black and white, as a person can have different mindsets depending on the situation. For example, this may depend on the skill in question: a person may think that their athletic ability is fixed, whereas their intelligence may be developed. Moreover, a person might have absolutely no interest in learning to play the violin. However, they may be convinced that if they had an interest in learning the instrument, they would be willing to invest many hours of practice and would make many mistakes, and thus, eventually master the basics.

Having a growth mindset does not mean that we should want to learn about anything and everything. It means that we trust that if we were to put our minds to it, we would be able to accomplish the task with sustained effort, learning, and welcoming not only our successes but our mistakes. Several interventions have been developed to reprogram our fixed mindsets and transition them towards becoming growth mindsets. The transition towards growth mindsets has several benefits for academic and career success, but also for mental health.



Conclusion

In general, fixed mindsets are less desirable than growth mindsets. But keep in mind that we are rarely “all one or all the other”, as our mindsets can vary depending on the situation. The mindset theory remains one of the most influential in the fields of the psychology of learning, sports psychology, and work and organizational psychology. Throughout their careers, Carol Dweck, Ellen Leggett, and the members of their respective research teams have repeatedly demonstrated that mindsets can influence an individual’s motivation, attitude, and behaviour when it comes to learning. Until this day, they continue to dedicate their academic careers to training the next generation of researchers to continue improving our understanding of the effects of beliefs on the success of children, elite athletes, and top-performing leaders in their respective fields. 🐾



Having a growth mindset does not mean that we should want to learn about anything and everything. It means that we trust that if we were to put our minds to it, we would be able to accomplish the task with sustained effort, learning, and welcoming not only our successes but our mistakes. Several interventions have been developed to reprogram our fixed mindsets and transition them towards becoming growth mindsets.



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Researcher profile: Jeremy Jamieson

Audrey-Ann Journault, doctoral student in psychology, University of Montreal

An avid athlete and American football player during his college years, aspiring researcher Jeremy Jamieson quickly noticed that stress did not have the same impact on each of his teammates. While a stress response during a tournament had a propelling effect on some athletes, it could completely paralyze others. These differences extend far beyond sports, as he also observed them in everyday life (e.g., exams in school). In the same situation, what makes a stress response a driving force or break for different people? This question has haunted Jamieson's mind ever since. Beginning his university studies in psychopharmacology, he switched fields entirely to complete a doctorate in social psychology at Northeastern University in the United States. During his doctorate, he became interested in understanding how individuals persevere in stressful situations where they are judged by others. Gradually, his work and encounters with colleagues led him to study the fascinating power of mindsets on our stress response.

The idea that stress is bad is fairly recent

Historically, it is only in the last few decades that researchers have extensively studied the negative impact that stress can have on our health, among others. Stress was first defined in the 1930s by the

Jeremy Jamieson

Associate chair and
associate professor,
Department of
Psychology at the
University of
Rochester



researcher Hans Selye as a response that our bodies and brains produce to react appropriately to the demands of the environment. Indeed, prolonged exposure to significant stressors can negatively impact our health. On the other hand, as a young Jeremy observed on the football field, a stress response can also be a lever for change and a driving force that allows people to excel or accomplish impressive challenges in certain circumstances. In sum, stress is not just good or bad. As the brain is not a fan of complex or nuanced information, it frequently uses strategies to simplify this kind of information and process them in everyday life.

Mindsets are one of the strategies that the brain uses. Just as we may have a fixed or growth mindset about intelligence, we also tend to classify stress as either helpful or harmful to simplify the complexity of its effects.

In the same situation, what makes a stress response a driving force or break for different people?

Jamieson's mission as a researcher

Jeremy Jamieson is now associate chair and associate professor in the Department of Psychology at the University of Rochester in the United States. Beyond understanding general stress mindsets, Jeremy Jamieson's research projects aim to understand how the way we interpret our physiological stress response during performance situations (e.g., exams) impacts the effectiveness of said stress response on performance.

With his research team, Jamieson manipulates how people can interpret stress in the laboratory. He quickly realized how much better the stress response can make a person perform ... if they can interpret it as an ally! A person who perceives stress as useful will react differently when under stress. Rather than expending energy and effort to reduce this response, they may simply see it as a resource and feel that their body is helping them to overcome a challenge. They will then have more energy and resources to devote to performing and in turn, achieve better results. Knowing all this, Jamieson was concerned that the collective discourse promoting the idea that stress is bad and should be avoided at all costs was preventing youth from embarking on new challenges and avoiding stress. So, he wanted to do something about it. With the help of fellow American researchers (such as David Yeager and James Gross), he developed a short intervention to teach high school students two important things. First, their abilities are not fixed (they can be improved) and they can optimize their stress responses as tools to perform and persevere when faced with difficulties. This research team conducted several studies to test the impact of this intervention. The very promising results on students' performance and ability to optimize their stress response were published in the summer of 2022 in one of the most respected scientific journals: Nature



He quickly realized how much better the stress response can make a person perform ... if they can interpret it as an ally!

(see *Read, listen, imagine: Modifying stress mindsets 101* in this issue of the *Mammoth Magazine* for more details).

Jamieson knows that he now has an effective way of instilling the idea that stress is not always bad in the minds of young people. But he doesn't plan on stopping there. His next research projects will explore how this idea can best take root in the minds of youth to produce the best results. Does the intervention also optimize a stress response in non-academic contexts? Is it important that a young person's surrounding environment also promotes a positive view of stress for them to buy into this idea? He also wants to create resources for research teams and adults surrounding youth to

become better communicators about stress using a more nuanced vocabulary. If you ask Jeremy Jamieson about the ultimate message that he would like to convey to the public considering his findings, he will tell you that stress is not always bad. Stress can be good. It doesn't have to be avoided because we need stress to overcome life's challenges. It is what allows us to grow and learn. In brief, this top researcher would tell you: don't be stressed about being stressed! 🐾



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We surveyed you on the topic

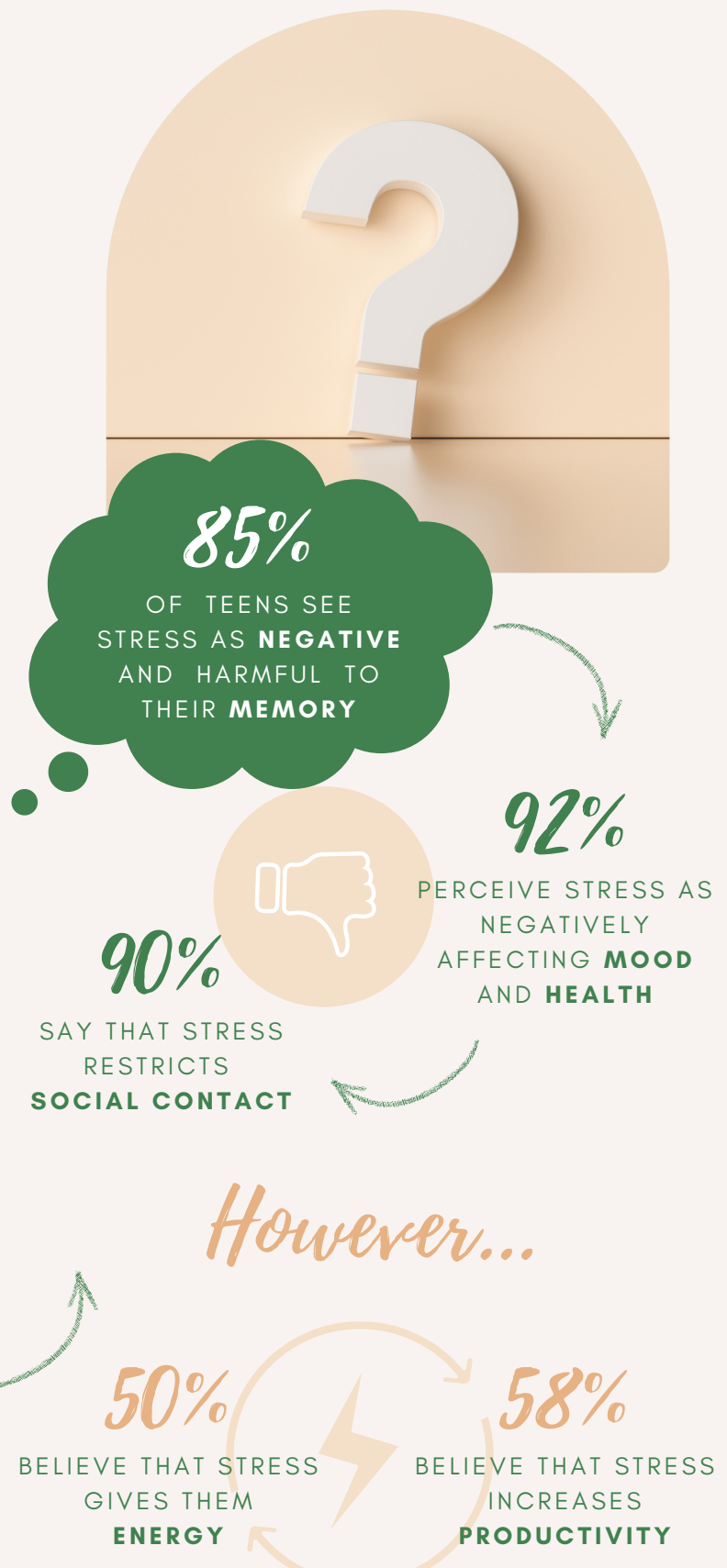
CATHERINE RAYMOND

Do you have positive or negative stress mindsets? We wanted to know your opinion and surveyed teenagers and young adults from the Greater Montreal area. Here is what we found!



Results in teenagers

We surveyed 68 teenagers from a high school in Montreal. Here is how they view the various aspects of stress.





STRESS NEGATIVELY AFFECTS MEMORY, HEALTH, MOOD, AND SOCIAL CONTACTS... BUT CAN BOOST ENERGY AND PRODUCTIVITY

What about adults?

The 285 adults that we surveyed reported having very similar mindsets to those of the teenagers we asked.



Some differences in stress mindsets based on age and sex

Adults

ADULTS ARE 15% MORE LIKELY THAN TEENAGERS TO REPORT THAT STRESS CAN HAVE **BENEFICIAL EFFECTS ON THEIR MEMORY**



Masculine sex

COMPARED TO FEMALE-IDENTIFYING RESPONDENTS, MALE-IDENTIFYING TEENAGERS AND ADULTS MORE OFTEN REPORT THAT STRESS IS **POSITIVE, BENEFICIAL FOR OUR HEALTH, AND GIVES US ENERGY!**



A matter of balance

THE IMPORTANCE OF HAVING BALANCED MINDSETS

Adolescents and adults who participated in the survey perceive stress as negative in general... except when it comes to productivity and energy! They seem to have the mindset that stress is a "necessary evil" in order to perform better. A better understanding of the beneficial effects of stress in other aspects of our lives could help us to have a more balanced view of stress and thus, help our mental health. After all, stress is useful in a multitude of ways!



Cognitive reappraisal: A good way to change the way we see things

Alexandra Brouillard, doctoral student in psychology, University of Quebec in Montreal

Imagine that you are on the verge of falling asleep, all snug in your bed. Suddenly, noises emerge from your living room, bringing you back to consciousness. What would be your first interpretation of the situation? Did someone break into your home? Or is it just the cat having a little too much fun with the decorations? Obviously, if you believe that someone has entered your home, your body will go into “alarm” mode – thank you, stress system! On the contrary, if you think the noises were caused by your cat, you’ll stay warm under the covers and go back to peacefully counting sheep.

This situation perfectly illustrates the importance of our perceptions of our emotional reactions and behaviour. Therefore, the way we interpret the world has a direct influence on our choices, moods, relationships – and even our sleep!

Let’s go back to our example. You think you are being robbed and you go to the living room to investigate. No one is there. You go back to bed.

The way we interpret the world has a direct influence on our choices, moods, relationships – and even our sleep!

The following night, you hear an unexpected noise again. There are many possible explanations for this, but you still believe in the theory of a break-in. You are still feeling the effects of stress and it prevents you from sleeping for a little while.

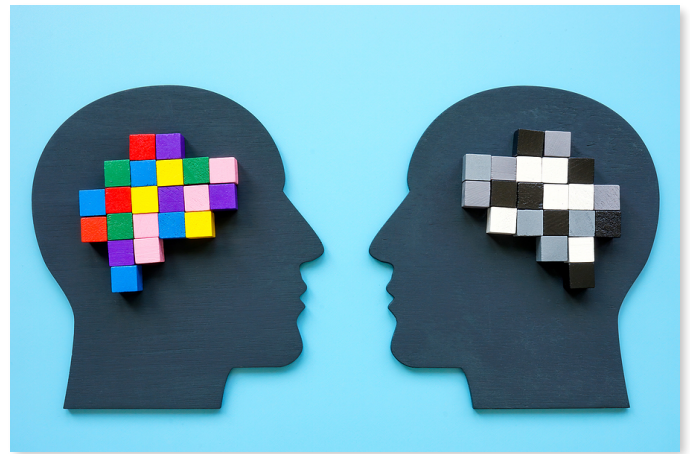
Considering that there is a very small chance that there is actually a home invader, it seems that another interpretation is more appropriate ... but can we really succeed in changing our way of seeing things? And if yes, how so?

Transactional theory of stress and coping: The emergence of the concept of cognitive reappraisal

To better understand how we can change the way we interpret a situation, it is important to review the work of the researcher Arnold Lazarus and his colleague Susan Folkman. Together, they established the transactional theory of stress and coping in 1984. In brief, they defined stress as the result of an active evaluation (appraisal) of the situation – is this situation stressful? Positive? What about my resources to cope with it – am I able to overcome this situation? Thus, in light of this cognitive assessment, an individual will only feel stress if they determine that the magnitude of the event exceeds their resources (the *transaction* between the individual and their environment is the root of the name “transactional theory”). From this moment forward, the individual can activate coping strategies to deal with a situation that is perceived as stressful. Among these coping strategies, cognitive reappraisal has been broadly described as a way of interpreting a stressful situation differently to reduce its threatening potential.

Now, let’s apply the transactional theory of stress and coping to our mysterious noise example. The noise was interpreted as threatening and its potential cause

Reappraisal is the voluntary reinterpretation of an emotional situation to alter its meaning and change its emotional charge.



(the home invader) was perceived as something that exceeded your available resources to deal with it (ability to defend yourself, etc.). An effective way to cope with the stressful situation might have been to re-evaluate the noise as having another plausible source (e.g., your cat having fun with a decorative object), which would have perhaps reduced the threatening aspect of the situation.

In summary, Lazarus and Folkman helped us to understand that stress is preceded by cognitive appraisal and that re-evaluating the situation differently could have a major impact on our thoughts and behaviours.

Cognitive reappraisal to regulate emotions

Following this, many scientific studies have attempted to further our understanding of cognitive reappraisal. The work of researcher James Gross has been particularly influential in redefining the definition of the concept. Indeed, he adapted cognitive reappraisal to the process of emotion regulation: reappraisal is the voluntary reinterpretation of an emotional situation to alter its meaning and change its emotional charge.

There are different ways to do cognitive reappraisal: typically, it can be by trying to change the meaning of the situation or by adapting its purpose. Changing the meaning of an event means questioning its initial meaning and finding an alternative (e.g., “it’s only the cat!”). Another cognitive reappraisal strategy is to keep the same meaning of the event but to adapt its purpose. This means using the source of stress as a source of opportunity and fulfillment – commonly referred to as “when life gives you lemons, make lemonade”! More recently, mindfulness has also been conceptualized as a way of performing cognitive appraisal

Being accepting and non-judgemental of one's emotional reactions requires the ability to take a step back from the situation. An attitude of mindfulness could therefore also correspond to a cognitive reappraisal strategy.

Using cognitive appraisal is an effective strategy to modify physiological, psychological, and behavioural responses to emotions. Although it may seem simple to use this coping strategy, research also shows that it can be difficult to reinterpret stressful events as it requires a certain level of motivation and energy. This explains why we are not constantly reappraising our interpretations to regulate our emotions!

Restructuring our thoughts: A therapeutic target

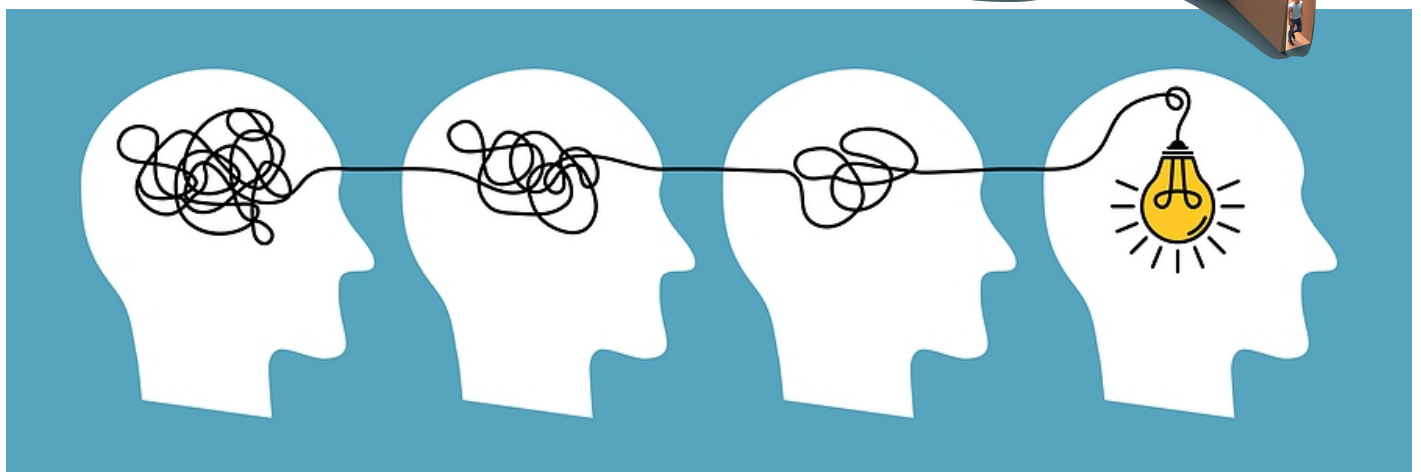
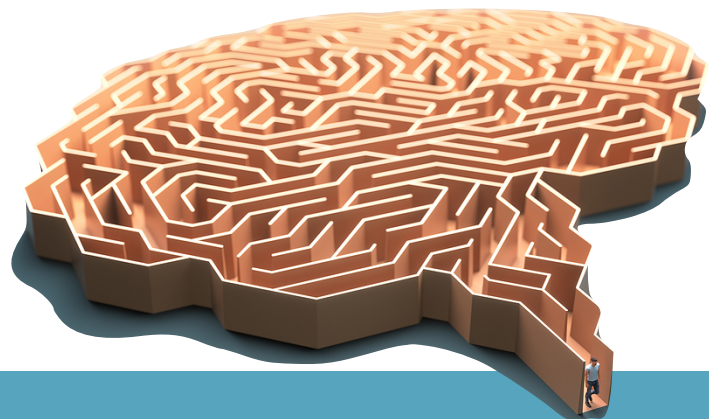
Up until now, we have become familiar with the concept of cognitive reappraisal. However, you are probably asking yourself: “but concretely, how does one do this?”

The American psychiatrist, Aaron Beck, developed cognitive therapy in the 1980s to reduce distress by targeting and modifying certain thoughts. The process by which an individual becomes aware of, evaluates, and changes their distressing thoughts has been called “cognitive restructuring”. Therefore, in a way, cognitive restructuring is a form of cognitive reappraisal.

This type of intervention has been particularly effective for the treatment of depression and anxiety. Of note, it favours the identification of thought biases, which are the lens that taints our perceptions (called

It is important to note that cognitive restructuring is not about convincing oneself or trying to obtain the correct thought. Rather, it is a flexible process which tends to reduce certain biases in our thinking, and which may require professional psychological help.

cognitive distortions). Cognitive restructuring also aims to ease thoughts that have been identified as non-helpful. For example, a depressed person may believe that they “do nothing right”. With cognitive therapy, they will gradually learn to recognize the presence of their own “lenses”, such as the tendency to minimize the positive and to make judgements that are black or white. Then, they could practice reappraising their thinking to see themselves more realistically. For example, they may recognize that they have experienced some failures, many successes, and that they can also learn from their failures to keep improving.



Various techniques can be used to undertake a change in thinking. We will discuss some of them. First, it is important to think of our thoughts as assumptions rather than facts. As we are constantly evaluating and interpreting our surroundings, we may be wrong! Therefore, it is much easier to question our thoughts when we are aware of their subjectivity.

Then, we can use a series of questions to test the validity of our thinking. This is what Beck called “**Socratic questioning**”. According to the philosopher Socrates, a thought can be examined by asking what evidence confirms it, but also what evidence refutes it. These alternative **interpretations** can be generated to see the multiple facets of the same situation. In addition, we can put together a **costs/benefits** list to assess the short-term and long-term consequences associated with this thought (e.g., what are the benefits of holding the belief that “I don’t do anything right”? What are the disadvantages of holding such a belief about oneself?). Calculating the **percentage probability** that the thought will come true can also be a useful strategy to support thought restructuring.

However, it is important to note that cognitive restructuring is not about convincing oneself or trying to obtain the correct thought. Rather, it is a flexible process which tends to reduce certain biases in our thinking, and which may require professional psychological help.



To summarize, cognitive restructuring techniques allow us to initiate change in the way we see a situation, but they also allow us to develop a more critical and nuanced view in general. Therefore, they are a great way to practice our stress management skills.

Now, how will you react when you hear an unexpected noise as you fall asleep? 🦉

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Read, listen, imagine: Modifying stress mindsets 101

Sandrine Charbonneau, master's student in psychology, University of Montreal
Annabelle Naud, bachelor's student in psychology, University of Montreal

How can we adopt positive stress mindsets? Do you have to tell yourself every morning “stress is good, stress is good, stress is good”? Do you have to undergo intense therapy for several weeks? This article helps to answer these questions and summarize different interventions that have been validated by researchers to modify stress mindsets, as well as the effect of these interventions on the stress response.

On your marks, get set, exam!

The researcher Jeremy Jamieson was one of the first to conduct an experiment to change the way students perceive their physical stress signals during exams (rapid breathing, sweating, stomach aches, etc.). Knowing that students in the United States must pass a critical exam to access higher education, Jamieson and his research team created a practice version of this exam that 60 18-year-old students would complete in the laboratory. The conditions of the practice exam were similar to those of the real exam, except for a short text that was added to the instruction manual for approximately



half of the participants. This text explained that it is normal and even favourable to feel nervous before an exam and that this nervousness allows one to mobilize enough energy to enhance performance (see the original text from the study in Figure 1).

FIGURE 1:

“People think that feeling anxious while taking a standardized test will make them do poorly on the test. However, recent research suggests that arousal doesn’t hurt performance on these tests and can even help performance... people who feel anxious during a test might actually do better. This means that you shouldn’t feel concerned if you do feel anxious while taking today’s [...] test. If you find yourself feeling anxious, simply remind yourself that your arousal could be helping you do well.”



The research team wanted to test whether reading this short text before the practice test would cause the students to view their stress responses more positively. The stress hormones of the students were measured before and after the practice test, as well as their performance on the tests (practice and real). The results are quite striking and show that simply reading the text before the exam increased the students’ performance, as they understood the utility behind

their physical signs of stress. Moreover, the effect seemed to be maintained over time, as students who read the text during the practice performed better on the real exam than those who didn’t read the text. In brief, before beginning a stressful week at work or school, you can decorate your agenda with colourful notes that say that it is normal (and even good) to feel nervous in stressful situations. Simply reading these messages daily can help you to perceive the physical signs of stress more positively.



Before beginning a stressful week at work or school, you can decorate your agenda with colourful notes that say that it is normal (and even good) to feel nervous in a stressful situation. Simply reading these messages daily can help you to perceive the physical signs of stress more positively.

Changing stress mindsets in 3 minutes

Another method of modifying stress mindsets is by watching videos. The first research to test this was Alia Crum in 2013. She and her research team attempted to change the way adults view stress in general. In other words, to see stress as either being harmful (what Crum calls a stress-is-debilitating mindset) or as a tool to help you perform better (what she calls a stress-is-enhancing mindset). To do so, the first group of 163 adults was exposed to four short 3-minute videos showing the negative effects of stress on performance, health, learning, and personal development, respectively. After watching these videos, adults reported having negative stress mindsets. In addition, when faced with a stressful situation, their stress hormones reached a high level which in turn, could negatively impact their performance. Next, the second group of adults was exposed to videos showing the positive effects of stress. After watching these videos, the adults reported more positive stress mindsets.



Moreover, when faced with a stressful situation, individuals with positive stress mindsets had optimal stress hormone levels (i.e., not too high, not too low). In other words, they had just enough stress hormones to perform well and to benefit from the advantages of their stress response (e.g., increased alertness, better visual acuity, sharper thinking). The words “just enough” are underlined to emphasize the fact that we should not aim to eliminate stress from our lives. On the contrary, when stress is optimal, it allows us to achieve great things! Having positive stress mindsets helps us to find this



You don't need intensive therapy to see stress positively...it only takes 3 minutes to change how you perceive stress.

balance. Essentially, you don't need intensive therapy to see stress positively ... it only takes 3 minutes to change how you perceive stress. This is great news! However, does this change remain over time or is it short-lived?



Imagine being stressed to stress better thereafter

Mental imagery is the act of mentally picturing and repeating an image or scene to oneself. Previous studies suggest that imagining something stimulates the same connections in the brain as if the action was truly performed. This makes it easier to perform the desired behaviour at a later time. To change our stress mindsets over a prolonged period, an Australian researcher named Jacob Keech developed an intervention based on mental imagery. The researcher presented the positive effects of stress on performance to university students. Afterwards, the students were asked to reflect on how they could benefit from the positive effects of stress in their daily lives. The results show that simply imagining themselves experiencing the positive effects of stress caused them to develop positive stress mindsets. In addition, the change in stress mindsets was still apparent two weeks later. So, much like athletes who visualize their performance before a competition, it could be beneficial to take a moment before a stressful week to reflect on how experiencing stress will help us overcome daily challenges!

Much like athletes who visualize their performance before a competition, it could be beneficial to take a moment before a stressful week to reflect on how experiencing stress will help us overcome daily challenges!

Finding strength in unity

Knowing that young people are particularly affected by stress in school contexts, many researchers have joined forces to create an intervention to change the way young people think about their stress. Recently, researcher David Yeager and his team created an intervention that combined the growth mindset (seeing demanding challenges as learning opportunities) and the stress-is-enhancing mindset (seeing stress as a tool to help you perform). The intervention is an



online 30-minute module that aims to improve the stress responses that the student community may experience at school. The research teams found that youth who completed the intervention had more optimal stress responses when faced with different academic stressors. For example, the young people had more positive thoughts towards a difficult exam (“This exam is a challenge, I can do it”) than those who did not complete the intervention. Furthermore, the researchers showed that the intervention combining the two types of mindsets was more effective than those based solely on growth or stress-is-enhancing mindsets. In light of this, it may be beneficial to intervene with young people in schools using a combination of the two mindsets to optimize their stress responses in different academic contexts.

Stress N’Go

Are you interested in using an intervention like this to help young people in school settings? Drawing on the work of the research teams of Jeremy Jamieson, Alia Crum, and David Yeager, the Centre for Studies on Human Stress created an intervention for teenagers to help them see their stress response in

a positive light. The intervention is called *Stress N'Go* and consists of a series of four 5-minute videos in which the positive effects of stress are presented, as well as ways to cope with stress. This intervention can be given in groups or individually and has been scientifically validated. The results of the scientific study conducted in 2020 will be published shortly and show that after listening to the videos, youth adopted more positive stress mindsets. *Stress N'Go* is free of charge and is available in English and French at the following link: <https://humanstress.ca/programs/stress-n-go/>.



Stress as an ally

Given that stress is unavoidable, it is important to view it in a more positive light. Fortunately, it seems quite easy to change stress mindsets. Several strategies were proposed throughout this article and we invite you to apply them in your daily life. It can be as simple as a note on the fridge reminding you that stress is there to help (when it is at an optimal level). In this way, each time you start a new week, you will more easily perceive stressful situations as challenges (and not threats) that you will be able to overcome thanks to the benefits of your stress response.

Given that stress is unavoidable, it is important to view it in a more positive light. Fortunately, it seems quite easy to change stress mindsets.

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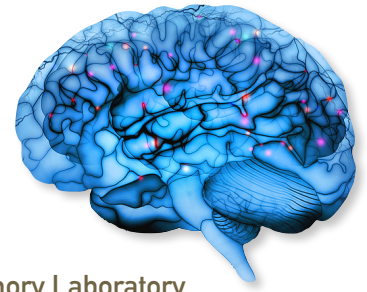
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The fascinating power of the mind: Four scientific findings to know about the effects of mindsets



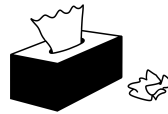
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Food labels influence how full we feel



Adults were given two milkshakes one week apart. First, they were told that one of the shakes was decadent (i.e., high in calories and fat), while the other was healthy (low in calories). What they didn't know was that both milkshakes were identical! The results show that drinking the decadent milkshake caused a greater decrease in the amount of ghrelin (a hormone that indicates satiety) in the blood of adults compared to those who drank the healthy milkshake. Therefore, consuming the decadent milkshake better satisfied their appetite than the healthy milkshake. In other words, simply perceiving the shake as "healthy" or "decadent" affected their feelings of satiety, beyond its actual nutritional value. More research is needed to understand how this happens, but it could have important implications as the way we think about healthy alternatives may influence our feelings of satiety.

Seeing medication side effects differently improves their effectiveness



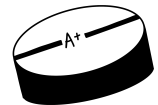
Taking medication can sometimes come with certain side effects. While knowing these potential side effects may make us more likely to experience them, it is important to understand what will happen inside our bodies. To inform but not induce any harm, a recent approach suggests that health specialists should inform people with pain, hypertension, and various allergies that minor side effects of certain drugs are a sign that the treatment is working. Studies show that this approach allows recipients of the drug to adopt a positive mindset regarding medications by being fully informed about what may be happening in their bodies. This makes the treatment less threatening and improves its effectiveness. However, this approach can only be used for minor, non-life-threatening side effects, as some symptoms should never be ignored. Although the usefulness of this approach for other symptoms or health conditions remains to be discovered, we can imagine that it may help us view seasonal cold symptoms in a different light. In other words, minor symptoms are a sign that our bodies are working to heal us!

Perceiving work as a sport makes you healthier



Unknowingly, hotel housekeepers exceed the daily recommendations for physical exercise by doctors. To test whether access to this information affected their health, certain female housekeepers were informed that their work allowed them to maintain an active lifestyle, whereas the others were not. About four weeks later, more women in the "informed" group reported that they exercised regularly compared to women in the other group. In addition, these women had lost more weight, had lower blood pressure, and had a healthier body mass index and waist-to-hip ratio than the uninformed group. Yet, this occurred without any real increase in daily physical activity outside of work or changes to their lifestyles (e.g., diet). Beyond the physical benefits of exercise, the way we perceive it could provide us with more benefits than we could imagine!

Sugar pills for test anxiety



In a university class, certain students were given two sugar pills a day over the course of 2 weeks knowing that they were placebos (i.e., contained no medication). Compared to university students in the same class who took nothing, those who took the sugar pills reported experiencing less test anxiety the day before an exam. However, as the pills were distributed randomly (without the research team or teachers knowing who was given what), they could not have acted differently towards those who were given pills. So, how is this possible? This has yet to be determined, but the human body seems to be conditioned to react automatically to the presence of what looks to be a drug. It is also possible that the university students who received the placebo pills felt more "supported" by the research team, which could have then reduced their levels of test anxiety.

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It's ok not to be ok: Toxic positivity and how to avoid it

Victoria Xu, bachelor's student in psychology, University of Montreal

Have you ever woken up one morning to quickly realize that nothing is going right and that your plans are not going as you had hoped? Not only did you have to rush your cat to the vet because it decided to eat the chocolate bar that you left on the couch last night, but you learn that you're about to lose your job due to pandemic-related budget cuts. On the verge of tears, you call your friend and pour your heart out. This eases your mind briefly until you hear the following phrase sneak into the conversation: "Everything happens for a reason, look at the bright side".

At that moment, you feel invisible and sad. Guilt takes over you. You try to smile, but you can't. Yet, you know the person had good intentions when they gave you those words of encouragement. They wanted to lift your spirits... but why didn't it seem to work?

The answer to this question stems from a concept in the field of positive psychology, a discipline that focuses on the positive aspects of the human experience to enrich and improve it. Here, this refers



to toxic positivity, a new term that is becoming increasingly popular in our society, notably due to the media. It is not uncommon to see manifestations of toxic positivity in our daily lives, such as through cheerful hashtags (#GoodVibesOnly) and cliché quotes plastered on all sorts of commercial products with the intention of making people a little happier.

What is toxic positivity?

Toxic positivity is defined as the rejection or denial of stress, negativity, or any other painful or unpleasant emotion that we may feel at some point in our lives. For instance, toxic positivity can be used (paradoxically) to avoid the problem in question and not as a real solution to the problem. It's like burying your head in the sand when a difficult emotion is looming on the horizon.

Forcing ourselves to stay in a good mood regardless of how difficult a situation may be can have negative consequences on our well-being. In fact, the act of constantly repressing emotions that are socially considered to be bad (e.g., anger or sadness) can eventually become an extremely heavy burden to bear over time. A gap is then created between what we truly feel in the moment and what we wish we would be feeling instead. This comes with added pressure and guilt. In addition, the emotions we were trying to initially ignore are not eliminated by doing this, which can



negatively affect our mental health in the long term (e.g., anxiety disorders or depression). Finally, some negative effects on our physical health can also occur in the long term, such as the development of cardiovascular or respiratory diseases.

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A fascinating study conducted in 2006 by Laura Campbell-Sills and her colleagues illustrated this phenomenon. The research team attempted to study the physiological differences between participants who were instructed to suppress their unpleasant emotions when watching an emotionally charged film and those who were not given instructions. Results of the study showed that individuals who received instructions to avoid unpleasant emotions had a significantly faster heart rate following the film compared to those who did not receive any instructions. Following this study, the research team suggested that the repeated suppression of unpleasant emotions may increase the experience of negative emotions, decrease positive ones, and lead to poorer social adjustment and overall well-being.

The rise in popularity of toxic positivity: Why is it the talk of the town?

Optimism is generally perceived as an attractive and adaptive quality (i.e., having a positive attitude allows for greater resilience and individual well-being). It is a highly desirable personality trait that is often associated with happiness and success. Because of this, it is easy to fall into the following mental trap and let it take over: “the more there is, the better”. Indeed, the problem of toxic positivity comes from when an unrealistic expectation is placed on what we allow ourselves to feel (or not feel), when we force ourselves to feel good and stay optimistic all the time in the hope that it will solve all our problems. Toxic positivity is problematic when we see optimism as the “cure-all” to our problems.



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Discomfort and unpleasant emotions are then seen as plagues to be avoided at all costs, which gives way to rigid and polarized perceptions of positivity in general. These sorts of ideas spread rapidly through our society. As unpleasant emotions drain our energy and distract us from important tasks, we think it is better to not feel them at all. We saw this during the COVID-19 pandemic with the iconic rainbow images with the slogan “it’s going to be ok” (or *ça va bien aller* in French). This was a desperate attempt to mask the overwhelming mixture of fear, anger, and sadness felt by the general population.

The utility of so-called ‘bad’, unpleasant, and difficult emotions

Attempting to live life through rose-coloured glasses may be reassuring and appealing at first glance. Though, choosing to experience things this way prevents us from exploring the different emotions on the spectrum of emotions, in all their complexity and nuance. Unpleasant emotions act as a signal to inform us about our needs from which we can react in consequence. Therefore, constantly rejecting and denying the existence of unpleasant emotions can be potentially destructive.

Whether they are pleasant or not, emotions give us insight into ourselves and important information about the world around us. So, even difficult emotions are working for us (and not against us). For example, although sadness is painful and often associated with weakness, it informs us about our need to take time for ourselves and seek comfort from others. There are no good or bad emotions: there are only useful ones.



To live an enriching, authentic, and well-balanced life, it is essential to welcome the so-called negative emotions as much as the positive ones to fully evolve and transform as individuals. We need to stop running away from them and accept them as they are with kindness and self-compassion. However, any unpleasant emotion can become harmful and maladaptive if it is too intense or experienced over a prolonged period. This could contribute to the development of psychiatric problems in the long term. Therefore, the real secret to well-being lies in moderation and balance: to not drown in unpleasant emotions to the point of mental overload, but not pretending to live in a world where these emotions cannot affect us. The important thing is to try to be optimistic and honest with yourself daily.

The next time you experience a difficult event, try to distance yourself from your emotions and not judge them. Instead of asking yourself “How should I feel right now?”, try asking yourself “How do I actually feel right now? What messages are these emotions sending me? How are they trying to protect me?” 🐾

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Quick tips...

...on how to apply these skills with loved ones (or to yourself, out of self-compassion) when going through difficult times.



A FEW EXAMPLES...

TOXIC POSITIVITY

HEALTHY SUPPORT

"It could be worse."

"It must be really hard to be going through this."

"Don't worry too much, everything is going to be ok."

"I can see that you are really anxious right now, what can I do to help you?"

"Try not to think about it too much..."

"You can share your thoughts and feelings with me if you feel comfortable, I am here to listen if you need me."

"It'll pass eventually..."

"I can see that what you are going through is very difficult, I am here for you."

"Failure is not an option. You must never give up."

"Sometimes it is necessary to take a break to reorient yourself to move forward. There is beauty in failure: it allows us to learn and evolve."

"You are too pessimistic."

"It is normal and valid to feel that way when faced with this type of situation."

NEXT ISSUE OF THE MAMMOTH MAGAZINE



Stress and Resilience Among LGBTQIAS+ Communities

Despite progress and increasing celebration of diversity in Canada, lesbian, gay, bisexual, transgender, queer, intersex, asexual, and two-spirit (LGBTQIAS+) people still experience significant stigma, stress, and strain. In our next issue, we will explore how stigma ‘can get under the skin and skull’ of sexual and gender diverse people and the ways in which they demonstrate community resilience and coping in the face of adversity.

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