



KITE: How to Cope with Adverse Incidents - Prevention and Intervention

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Agenda



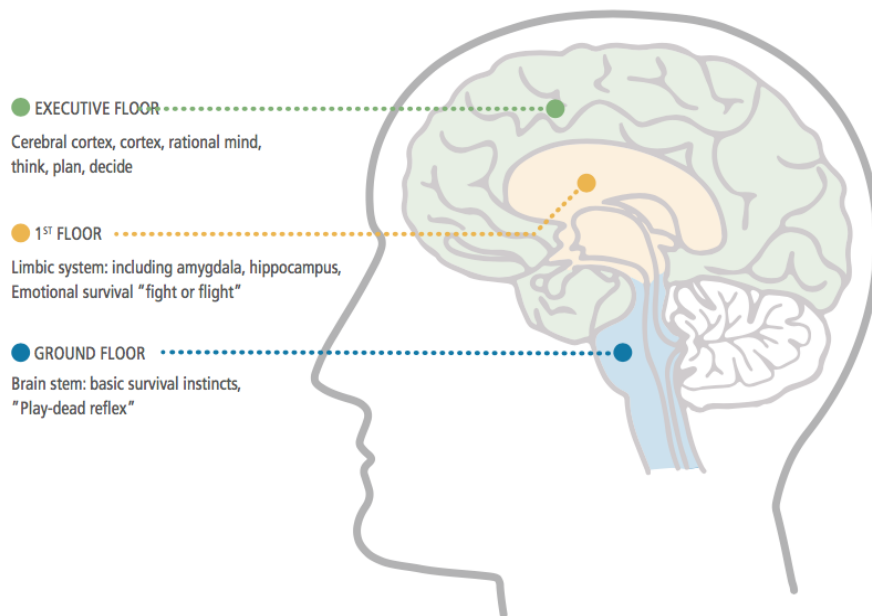
Her indsættes billede målrettet til målgruppen for oplægget



1. Stress

2. KITE. Defusing and debriefing on a regular basis
3. Underlying interventions

The Brain



➤ The "brain building": Evolution has formed different levels of regulation and switching stations in the brain.

The human brain has evolved to its current state for millions of years, and new layers have been added gradually. The oldest part of the brain can be considered the ground floor and is our brain stem, which for instance controls vital functions like breathing, processes stimuli and decodes audio signals. The 1st floor and the next evolutionary layer is the midbrain, which includes our limbic system controlling our emotional reactions. The newest addition is the executive floor of the brain: The forebrain. Stress hormones are regulated through here, and it makes up our rational mind with which we think, make our decisions, and plans ahead.

What is Stress?

- Systems working together
- Encountering/perceiving high demands, changes, threats or danger
- Disrupts normal balance
- Response of physiological changes

What is Stress?

Selye's fundamental levels in the stress response:

- 1. The alarm response**
- 2. The resistance stage**
- 3. The exhaustion stage**





What is Stress?

The brain communicates with the rest of our body through different systems. During stress, these are working together to make us capable of handling all types of different situations. If we encounter or just perceive threatening or dangerous situations, meet high demands from our surroundings or go through changes in our lives, it disrupts our normal balance causing a stress response of physiological changes. Thus, our body rapidly prepares energy, which is an acute stress response, that in the short term is adaptive, as it strives to restore the balance. If this does not happen – if we do not feel able to deal with stressor, or find ourselves in stressful situations for an extended period of time - our systems become swamped and unable to adapt to the constant overload, which in time leads to a state of chronic stress

What is Stress?

Selye was the first stress researcher to describe the biological stress response, and the fundamental aspects are still valid. He uncovered that the stress response happens on three different levels:

1. First of all, an alarm response is triggered, when we feel pressured or threatened. This is the acute stress response, which immediately mobilizes energy to prepare us to handle the current situation.
2. If this does not go as planned, we enter the next stage: The resistance stage. Our body struggles, and actively tries to adapt to and gather enough resources to face the demands of the current situation – our heart rate and blood pressure for instance remains high to provide the necessary energy. On the inside, we remain in a constant state of alert.
3. If we are still unable to provide enough energy, and therefore cannot cope with the situation, we end up in the exhaustion stage. Our system has been overloaded, resources exhausted.



Emotional Memory

- Processed in amygdala (1st floor of the brain)
- Previous experiences affect current reaction
- Triggered by smell, taste, sound, sight
- All aspects of our lives: People, situations, trauma...

One of the things that effect our stress response is our previous memories. Emotional memories are processed in the amygdala; a part of the first floor of our brain in the limbic system. If we find ourselves in a situation that reminds us of a previous stressful or traumatic event, we might react automatically, even if it is not appropriate in the situation. This happens because our amygdala remembers strong feelings, even if we might not consciously remember it. Triggers might be smell, taste, sights or sounds that is stored in amygdala; when encountering new ones, amygdala searches for a match in its memory with something we have previously experienced to compare it to. This applies to people, situations, traumas etc. If we were once bitten by a dog, for instance, we store this memory, and the sight of a dog might later trigger fear.



Emotional Memory

- Emotions affect perception
- Feeling from 1st floor affects perception in the executive floor
- Fear without knowing why

Emotional Memory

- Perception affects emotions
- Perception from the executive floor affects feelings in 1st floor
- If they work well together, we can calm down



Emotional Memory

This is because our brain compares the image of a new dog with our previous experience with dogs, and our emotions thus affect our perception of the new dog, which happens through a fast track. We thus react with fear, perhaps without understanding why.

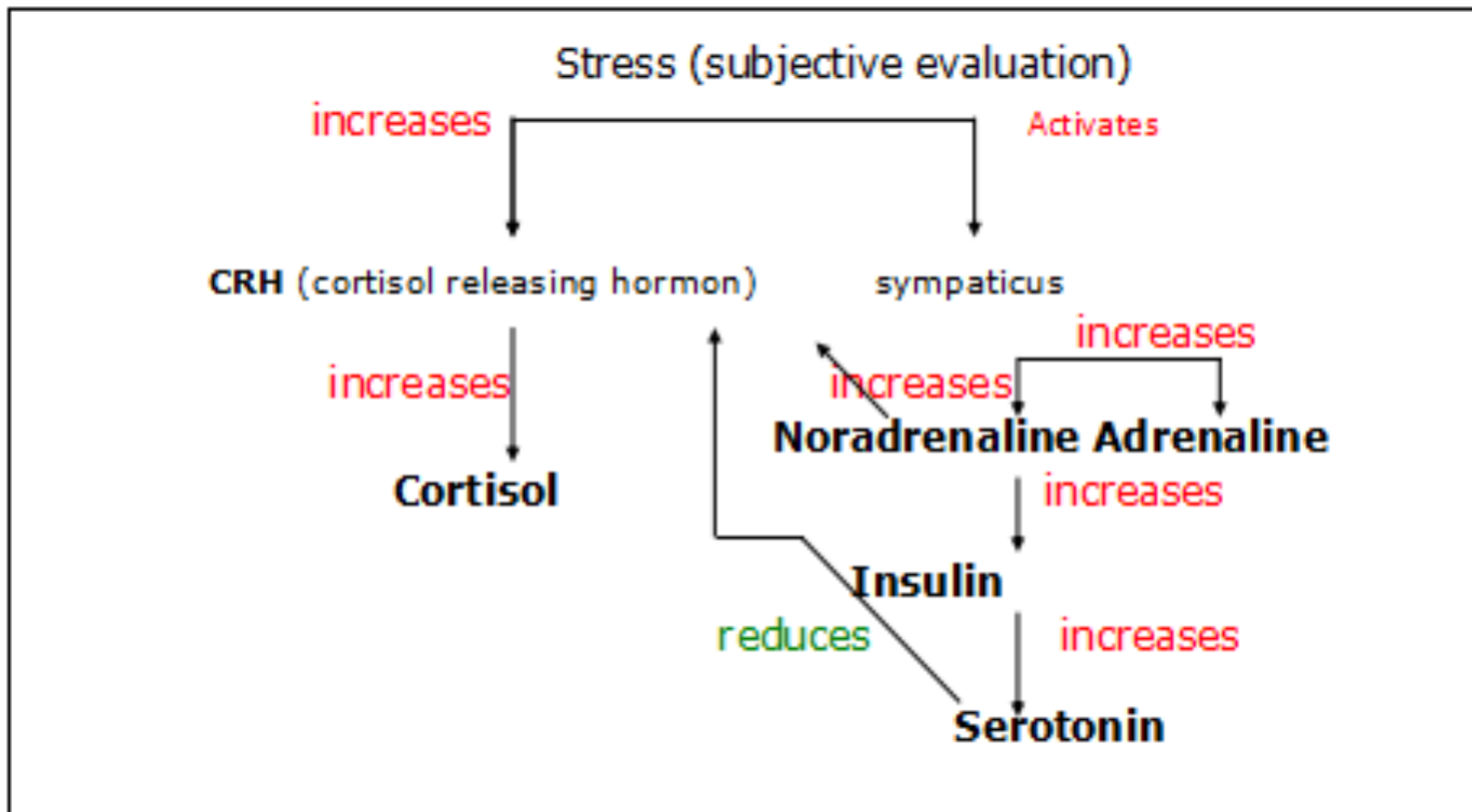
Emotional Memory

The information we perceive about the new dog, on the other hand, goes to our executive floor, the forebrain, through a slow track. If our brain is in balance and communicates well, the executive floor send the message to the first floor that there is nothing to be scared about and we can calm our fear. But due to our initial reaction, signals have already been sent to our nervous system, causing stress hormones to be released.

Thus, our brain works together with other aspects of our body when a stress reaction is produced. Two of these are also very important when gaining an insight into our stress response: A hormonal stress axis and our nervous system, the last here presented by the polyvagal theory.

The Stress Axis

- HPA-axis triggers release of stress hormones
- Rapidly prepares energy and returns us to a normal state





The Stress Axis

When facing a stressful event, the release of energy takes place through a hormonal response system: Through the hypothalamic–pituitary–adrenal (HPA) axis, stressors trigger a release of so-called glucocorticoids, or stress hormones; mainly cortisol.

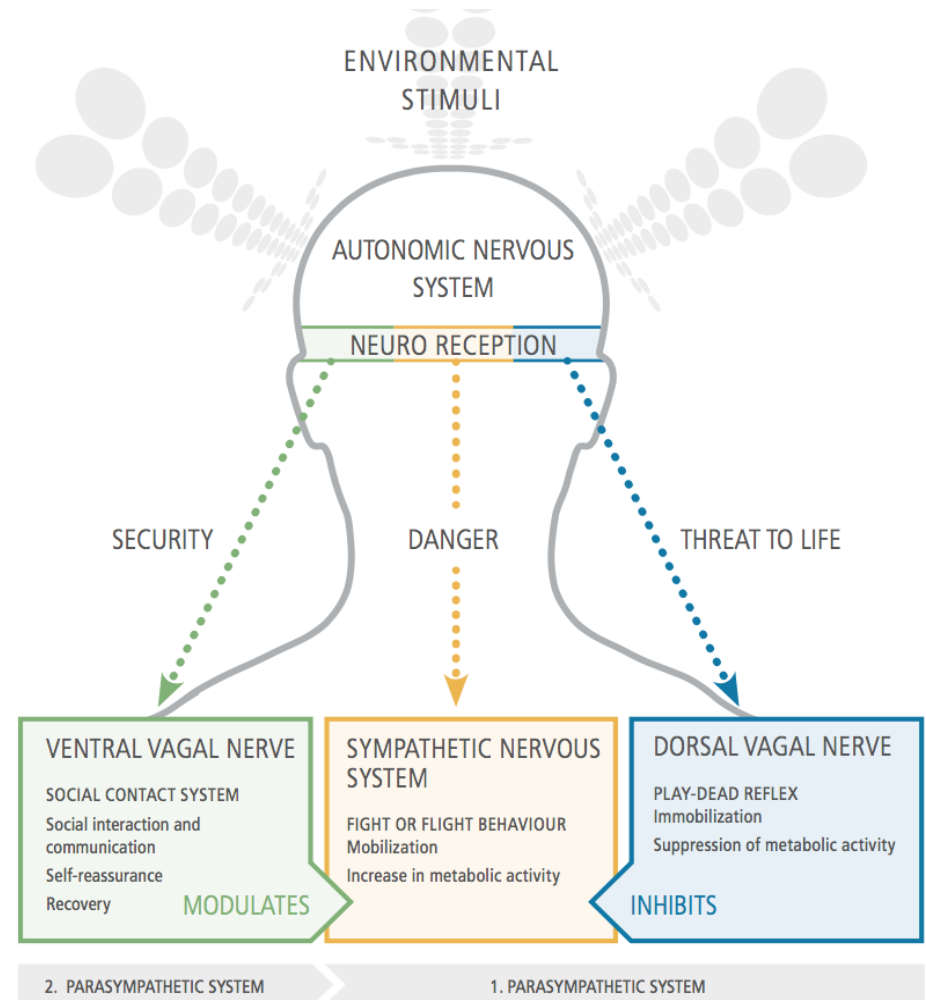
This system makes sure we are prepared quickly, for instance by increasing our blood pressure, but also returns us to our normal state when the job has been done.

The exact function of the axis depends on aspects like our genetic background, early life and current stress, as stress disrupts its functioning. Cortisol influences different important aspects of our general functioning like our immune system, arousal, learning and memory.

The Nervous System and the Polyvagal Theory

- Autonomous nervous system
 - Sympathetic: Fight/flight
 - Parasympathetic
 - Ventral vagus: Social and outwards perception
 - Dorsal vagus: Basic survival system

- Stress
 - Ventral vagus under stimulated
 - Dorsal vagus dominates
 - Sympathetic nervous system sidelined




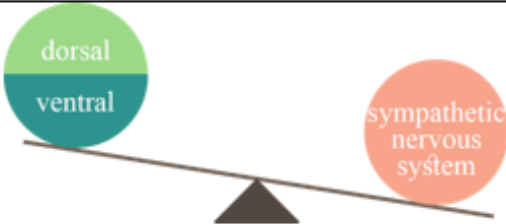
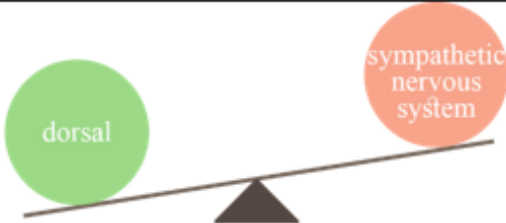


The Nervous System and the Polyvagal Theory

Polyvagal theory embraces the biological understanding of stress, explaining stress as a disturbance of parts of the brain that we cannot consciously access. In short, the focus of the theory is on the autonomous nervous system consisting of the sympathetic and parasympathetic system. The sympathetic nervous system is the one taking part in the mobilization of energy, and activates a fight/flight behavior. As part of the parasympathetic system, we have a vagus nerve, that splits into the ventral and dorsal vagus. Normally, the ventral vagus makes us social and directs our perception towards the outside world. The dorsal nerve, on the other hand, supplies our basic survival system like heartbeat, breathing and body temperature. In a healthy state, these are balanced and activated according to present demand, but stress throws them off balance.

If we are in a state of chronic stress, and eventually reaches Selye's exhaustion stage, we actually experience burnout. In relation to that, the theory highlights how the ventral vagus in the parasympathetic system is under stimulated – that is the part that makes us social beings, and dominates when we are relaxed and feel secure. The dorsal vagus controlling our basic physical survival becomes dominate, and sidelines our sympathetic nervous system, which controls the acute stress response; focusing our energy and enhancing our performance optimally when needed. As the chronic stress progresses, the sympathetic nervous system is eventually incapacitated: No energy is now prepared even when we need it facing stressful situations.

The Nervous System and the Polyvagal Theory

| | |
|--|---|
|  <p>Ventral vagus dominates</p> | <ul style="list-style-type: none"> • Relaxed • Socially oriented • Perception directed towards outside world • Good power of concentration • Sense of well-being |
|  <p>The sympathetic nervous system dominates</p> | <ul style="list-style-type: none"> • State of alert • Focused energy • Ready to perform • Inner drive/pressure • Speed of thoughts increases |
|  <p>Dorsal vagus dominates</p> | <ul style="list-style-type: none"> • Fatigue • Helplessness • Concentration difficulties • Focus on basic survival mechanisms |



Types of Stress

Acute Stress

- First response - prepared to meet present demands
- Energy level increases
- Increased state of alertness
- Psychological hypersensitivity

Chronic Stress

- Unable to adapt
- Symptoms like memory and concentration difficulties, irritability, trouble sleeping, lack of social orientation and fatigue
- Physical weakening

Acute Stress on top of Chronic Stress

- Chronic stress = more susceptible to acute stress
- Small things perceived as immense challenges
- From hyper- to hypo responsiveness



Types of Stress

Recapitulating and knitting the above theories together, we have two types of stress: Acute and chronic stress.

Acute Stress

Acute stress is the first stress response, where hormones are quickly released and our sympathetic nervous system sets us in a fight/flight mode. The two systems cause us to become more active and alert, in order for us to be able to meet the present demands of the situation that we perceive as stressful, harmful or dangerous. In relation to Selye's three levels, this make up the initial alarm response.

Chronic Stress

But if we do not feel able to deal with the acute stress, or find ourselves in stressful situations for an extended period, we risk that our systems become swamped and unable to adapt to the constant overload. Now the stress becomes chronic, and the concomitant stress response becomes harmful; also on a biological level. Our systems backfire, and cause symptoms like concentration difficulties, irritability, memory problems and fatigue.

Acute Stress on top of Chronic Stress

Chronic stress has a series of negative consequences. One of these is that on top of the chronic stress, we also become more susceptible to acute stress. The chronic stress means that we are in a constant state of alertness, and even small challenges are perceived as immense and threatening, causing our reactions to become exaggerated. For a while, our sympathetic nervous system becomes over active, and our system struggles to keep up - in line with Selye's stage 2 (resistance stage)



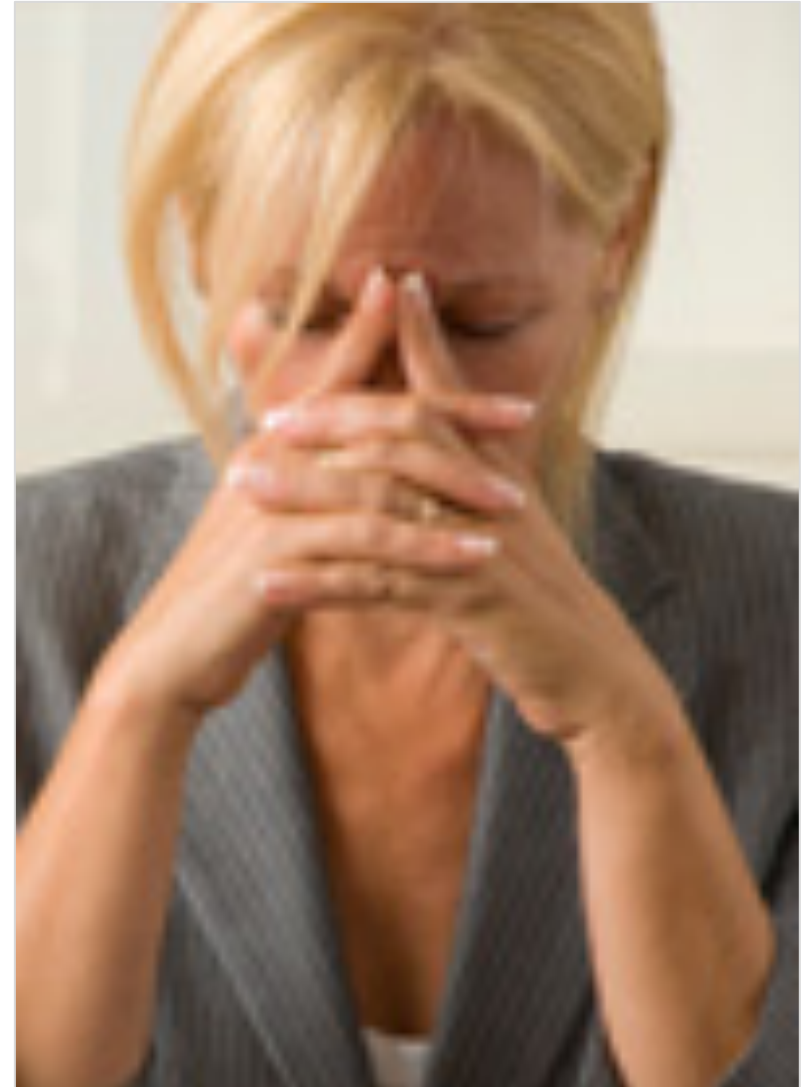
Types of Stress

Hence, living with chronic stress we are more likely to skip stage 1, and go directly to Selye's stage 2 or even 3. In time, the chronic stress causes the incapacitation of the sympathetic nervous system mentioned in the polyvagal theory. If our body is in a constant tense state, it resists and struggles, affecting both our nervous system and stress hormones, which either react with hyper- or hyporesponsiveness. After a while of hyperreactiveness, our body will eventually be worn down, which can manifest itself in various serious consequences like heart disorders, pain, insomnia, concentration difficulties, burnout, anxiety and lack of social orientation. Cortisol, for instance, also has a profound effect on our memory.

With our inner drive pacified, the fatigue and other disturbing symptoms get on top of us. This is a lurking danger that happens gradually, which is why it is common for people to disregard the symptoms before they overwhelm us. We then risk ending up in a state of complete burnout, where our body no longer naturally regenerates, we are permanently fatigued and our mood, mental health and immune system is adversely impacted. We are thus affected long before we eventually risk ending up on long-term sick leave and neglecting our social relations, bodies and minds – we become immobilized, and reaches Selye's exhaustion stage.

Diagnoses

- Post-traumatic stress disorder
 - Flashbacks, avoiding reminders of trauma, state of alertness, trouble sleeping, concentration difficulties and possibly anxiety and anger issues
- Adjustment disorder
 - Depressed mood, anxiety, worry, no surplus to plan ahead and feeling unable to cope with the situation
- DESNOS
 - Disabling recollections of traumatic events, inhibiting social life and general ability to function





Diagnoses

But our response to stress depends on a lot of different variables: For instance, our own reaction, history, vulnerability and coping strategies, the severity and length of the trauma or stress and so on. Sometimes, an incident is so critical that it manifests itself mentally if not properly dealt with:

- **Post-traumatic stress disorder:** This is a delayed or prolonged reaction to a very severe stressful incident of threatening or catastrophic nature which most of us would be distressed by. This might for example be natural disasters, serious accidents, being victim of terrorism or witnessing violent death. Normal symptoms are flashbacks in memories and dreams, avoiding reminders of the trauma and being in a constant state of alertness, making sleeping and concentrating difficult. There might also be anger or anxiety issues.
- **Adjustment disorder:** A state of subjective distress that affects our functional capacity in different arenas, for instance our social lives. It arises due to significant life changes or stressful life events. Here especially, personal vulnerability is influential, but the condition has arisen due to a certain stressor. Symptoms are for example depressed mood, anxiety, worry and having a feeling of not being able to cope with the situation, and thus find a surplus to plan ahead.
- **DESNOS:** This relates to people who for an extended period of time have been systematically exposed to violence, and have a reaction that PTSD is not broad enough to include. Often this implicates multiple trauma being brought upon us for months or years. This might be childhood abuse, torture, prison or war, and symptoms are for instance disabling recollections of the events which inhibit our social life and ability to function.

Comprehensive Soldier Fitness

- Alternative to diagnoses
- Post-traumatic growth
 - Resilience



An alternative to the thoughts of diagnosis may be found in the concept of resilience, the main goal being to alter the negative reactions of for instance PTSD and turn them into psychological post-traumatic growth. Comprehensive Soldier Fitness (CSF) states that the psychological fitness of soldiers should be as important as the physical fitness. Resilience may be taught to both civilians and soldiers, making them less susceptible to stress-related disorders.



Trauma Informed Care

- Long-lasting effects of trauma
- Understanding, recognizing and responding to effects
- The right support is critical

The consequences of trauma are the focus of trauma informed care theory. This theory focuses on the long-lasting effect of trauma, and how important it is to be aware of the impact it has on people. Not dealing with trauma potentially has dreadful consequences like the aforementioned mental health issues, trouble sleeping, substance abuse, and even loss of wages as people become increasingly incapacitated. Understanding, recognizing and responding to the effects are therefore considered of great importance, so that traumatized people can receive the right support and not be re-traumatized with serious consequences for themselves and people around them.

Flexible Memory

- Reconstruction of memories
- Study: Memories of youth blurred with current state
- Creating distance

One of the reasons why the right intervention has such a profound effect is because of the flexibility of our memories. It is for that reason possible to create distance to the stressful, traumatic experience through shaping of the narrative. We can create so-called false memories, and push aside damaging ones. The memories can be reconstructed by applying naturally occurring processes to the predominant memory of a trauma. Our current views of ourselves, for instance, interferes with how we remember ourselves as kids. A study from 1962-1996 portrays this effect: 73 boys of the age of 14 were interviewed in 1962, where they reported themselves as shy. In 1996, they had grown to be more confident and their current state had blurred the memory of their former selves, as it was conflicting with their present self-image. They remember themselves as kids, although they think of themselves as having always been confident individuals. So although adverse incidents cannot be erased, how we remember them might be swayed in a more neutral direction. We thus distance ourselves from the event, and it won't have a profound negative influence on us.

Agenda



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1. Stress



2. KITE. Defusing and debriefing on a regular basis

3. Underlying interventions



Introduction

- [KITE-clip](#)
- http://prezi.com/nsfugz_4unhe/?utm_campaign=share&utm_medium=copy&rc=ex0share
- https://www.dropbox.com/s/po9658rx2kt0dx2/KITE%20english_pdf.pdf?dl=0

Basics

- Includes and is based upon existing trauma psychological interventions
- Cleaning agent
 - 10 minutes or 10 years ago

Initial Focus

- Acute stress of experiencing or witnessing adverse incident
- Trauma informed care: Create distance to incident mentally and emotionally
 - Apply as soon as possible
- Flexible memory: Construction of narrative important



Basics

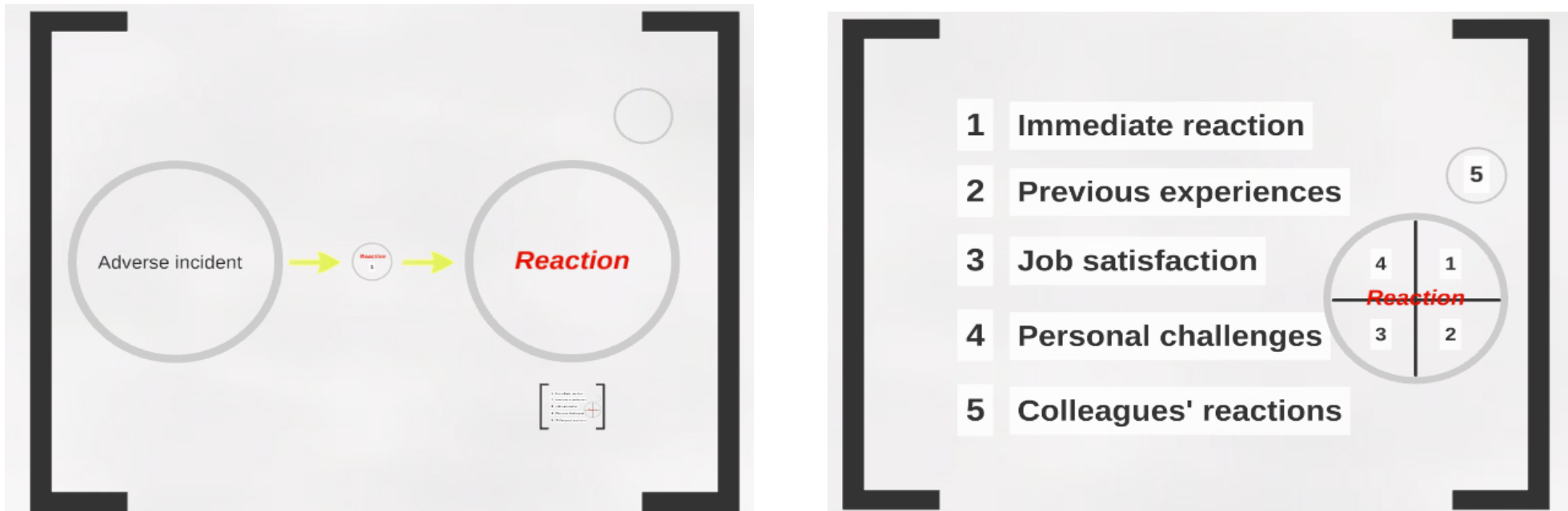
KITE is a new intervention that includes practically all forms of trauma psychological interventions. Based upon the essence of the aforementioned interventions, KITE is a method aimed at helping people past adverse incident. You might think of it as a cleaning agent: After adverse incident, KITE lowers the level of discomfort, regardless whether the incident happened 10 minutes or 10 years ago.

Initial Focus

The initial focus, however, is the acute stress a person suffers from when experiencing or witnessing an adverse incident. Based on acknowledged and well-tested theories from trauma and crisis psychology, the basic assumption of KITE is that, although trauma can take many forms, the reactions triggered by these adverse incidents do not just disappear into thin air (trauma informed care): To move past it, it is necessary to actively distance oneself from it both mentally and emotionally.

KITE is a highly effective and straightforward intervention that helps us accomplish that. Applying KITE as soon as possible after the adverse incident takes place has a profound impact on the way we recall it in the future and thus on its impact on us. We have flexible memories: We can influence and shape our own memories. This means that the way we tell the story - and hence constructs the narrative of the incident – is of grave importance, as we can change the imprint it leaves on us.

Reactions



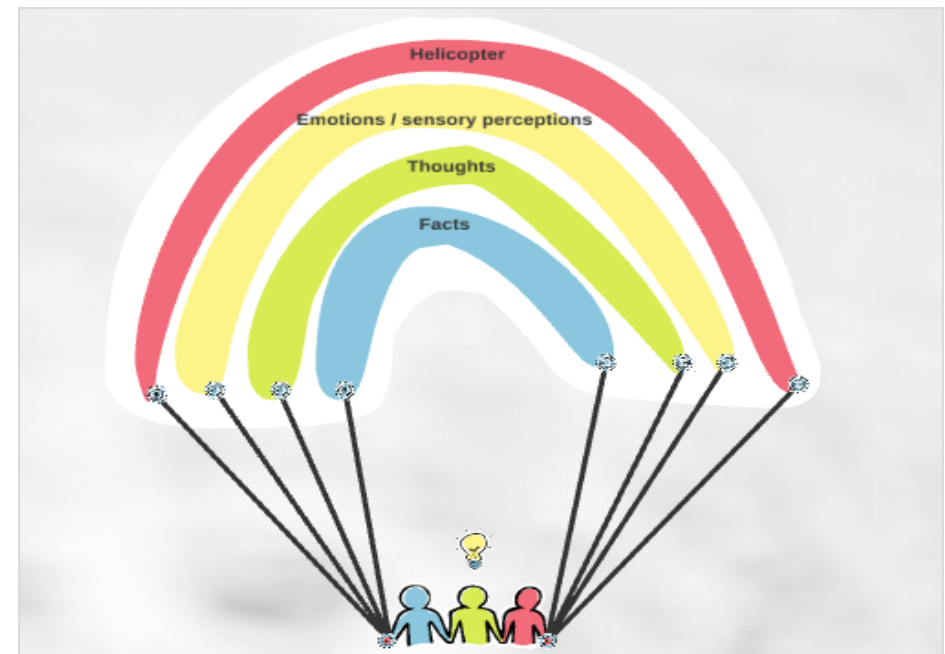
Complying with the structured approach presented in the video is therefore important. As stated in the video, reactions to adverse incidents do, however, differ from person to person. Besides our immediate reaction, four other factors must be considered in the application of KITE. The first is our previous experiences. As earlier mentioned, previous traumas or experience with similar incidents, for example, puts us in a state of alert and affects how we respond and deal with current incidents. So does our job satisfaction – are we for instance under pressure or thriving? We also have to consider personal challenges or problems. All of us goes through things in life that has an impact on our perspective on life and how we cope in different situations. Besides this personal perspective, we are also social beings, which is why we must also consider the reactions of our coworkers, as they also have an influence.

Structure

1. Title
2. Starting point
3. Finishing point

Layers

- 1. Facts**
- 2. Thoughts**
- 3. Emotions / sensory perceptions**
- 4. Helicopter**





Structure

KITE is therefore not a fixated, inflexible approach, but can be adapted to fit the needs of the current situation. Still, some overall elements – a title, starting and finishing point - are recurring and suitable regardless of the individual reaction: Providing the incident with a title forces us to gather our thoughts and focus on the essence of the incident. Next, we focus on the starting and finishing point of when we experience discomfort. This serves a purpose that benefits both parts: When we are thrown back by an adverse incident, our thoughts are scattered, and we tend to circle around certain details. As a psychologist performing a debriefing, knowing the starting and finishing points provides a simple guideline regarding the structure of the story, and thus an insight to when to ask more questions and when to shift focus. The structure is also a helpful instrument for people impacted by adverse incidents. The mind stops racing, and we become able to tell the entire story without getting stuck. Completing the story is vital as it reminds us that we are safe; it is a beacon in the darkness of the emotional impact the details of the story triggers in us.

A horizontal banner image showing a close-up of water ripples, with the word 'Layers' centered in a dark blue font.

Layers

Facts:

1. Thoughts:

2. Emotions / sensory perceptions

3. Helicopter

Distancing oneself from the episode is also the intent of the construction of the intervention. Telling the story with facts only as the initial narrative makes it the dominant story, separating facts from our emotional reactions. Thought and emotions, however, also have to be attended to and straightened out in order to restore order in our system, which is why they make up the next two levels of the intervention. But we do not want the shock of the incident to get the best of us; the emotional impact is what we want to tone down in order for them not to eclipse and overshadow more important aspects of our lives. Instead of distancing oneself, dwelling on the negative emotions potentially has the reverse effect and might compound the problem. That is why we address it, but then moves on to the point where we focus on the helicopter perspective. Seeing the incident through other glasses forces a distance; we notice other things than the ones filling our minds, thus taking a step back from the emotional state. If we want to tell the story to other people afterwards, the best solution is therefore to keep it strictly to facts, and not inciting the initial emotional state. Well-intentioned compassion might just retraumatize us.

Follow-up

Normal reactions

- Emotional fragility
- Tired
- Agitated

Problematic responses

- Dwelling on feelings
- Getting stuck on details

14 days later

- Level of discomfort:
 - Decreased, unchanged or increased?
- If not decreased? Repeat KITE!





Follow-up

After an adverse incident, however, emotional fragility for about a week or two is a normal reaction. And responding to our feelings is healthy. It is okay to cry as we retell the story, as long as we do not dwell on our emotions and get stuck on details, which is practiced when KITE is applied. It is normal to be more tired and agitated, as our systems have been overloaded, which will automatically put our bodies in a state of alertness. The effects of KITE are therefore of vital importance, as KITE causes the reactions to stretch over as little time as possible and be far less severe than if the incident is not dealt with.



14 days later

The degree of discomfort should ideally have decreased after a period of maximum 14 days. Some reactions, however, are long lived. If the degree of discomfort remains the same or even increases, it is the basis of a follow up, where the KITE procedure is repeated to establish or encourage further distancing from the incident.

Dealing with the stress reactions that might keep lingering is very important. If a trauma is not adequately dealt with, the initial acute stress will not just disappear on its own. The degree of discomfort and emotional fragility will be unchanged or at any rate remain too strong a presence in one's life, disrupting our daily whereabouts. Instead of healing, it remains a fresh wound, and the state of acute stress will evolve and turn into chronic stress.

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3. Underlying interventions



Prolonged Exposure

- PTSD - one of the most effective treatments
- Adaptable to various traumas
- Exposure in vivo
 - Engaging in safe activities normally avoided
- Imaginary exposure
 - Repeatedly visits trauma in memory

- Reduces symptoms
- We regain a sense of control
- We learn appropriate coping mechanisms

Interventions



When we are affected by stress, different theoretical and methodical interventions can be made use of depending on the type of stress and our reactions to it. Prolonged exposure is especially targeting PTSD, EMDR treats PTSD as well as other types of psychological stress and neurocoaching based on the polyvagal theory is highly effective treating chronic stress.

Prolonged Exposure

Prolonged Exposure Therapy (PE) is directly aimed at people suffering from PTSD. Both based on extensive theory, like cognitive behavioral theory, and two decades worth of empirical validation, it is generally recognized as one of the most effective treatments, causing significant improvement for 80% of people suffering from chronic PTSD. Moreover, it concurrently reduces symptoms of anger, depression and anxiety.

One of the strengths of EP is its flexibility. It can be modified to comply with the needs of the individual human being and their unique experiences and situations. The intervention can be adapted to help people overcome traumas of various kinds; anything from assault to combat to accidents and disasters.

The exposure might take place in vivo or be imaginary. In vivo means engaging in safe activities that are normally avoided because of the subjective relation it has to the trauma. Over time, this decreases the level of discomfort and excessive fear the situation triggers. We learn to recognize that the situation is actually not dangerous, and thus learn how to cope with it even in stressful situations. If exposure, on the other hand, takes place imaginary, the trauma is repeatedly revisited in memory and described in detail. The narrative can also be recorded and listened to afterwards between sessions. Triggering the intense thoughts and emotions in a safe context promotes processing the trauma and coping mechanisms (<http://deploymentpsych.org/treatments/prolonged-exposure-therapy-ptsd-pe>)

Besides reducing the symptoms, PE helps people regain a sense of control over their lives; provides them with a sense of mastery, thus increasing their confidence and well-being. People also learn more appropriate coping mechanisms so they can face stressful situations with their heads held high, and learn to tell apart safe and dangerous situations.



Eye Movement Desensitization and Reprocessing (EMDR)

- PTSD and other diagnoses and conditions
- Focus on brain:
 - Processing system and memories
- Uses repeated eye movements to process stressful events

- Reduces subjective distress and treats traumatic memories
- Wipes disturbing memories away
- Provides building blocks of information and behavior strategies



Eye Movement Desensitization and Reprocessing (EMDR)

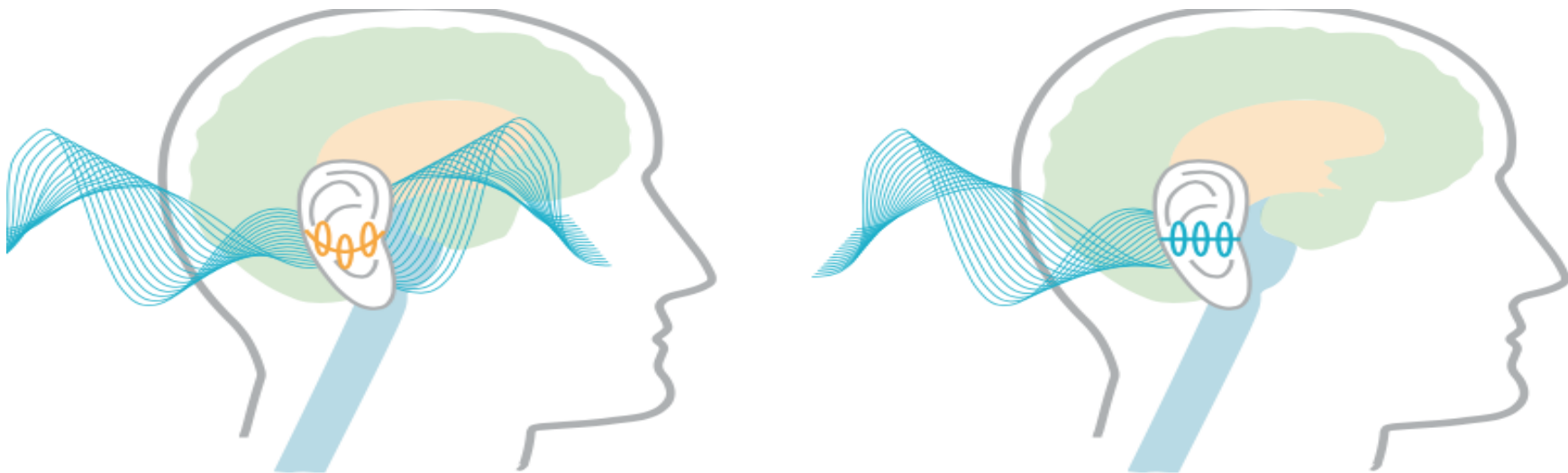
Eye Movement Desensitization and Reprocessing (EMDR) is an internationally recognized intervention that has proved successful in the treatment of both PTSD and other diagnosis and conditions. It aims to reduce subjective distress and treat traumatic memories while concurrently enabling and strengthening a more adaptive approach and way of thinking in relation to the traumatic events that causes the problematic state and symptoms. Like neurocoaching, its focus is on biological processes, here focusing on the brain with a specific emphasis on our information processing system and memories. If we go through traumatic experiences, unprocessed memories of these are considered the root of negative thought, feelings and behaviors.

EMDR enables the processing of stressful and traumatic experiences that keep lingering and disturbing our daily whereabouts, sometimes rendering us incapable of leading a normal life. Using repeated eye movement, where the eyes follow a moving object like a pen or finger, the eyes become an access to our minds: While focusing on the traumatic incident, eye movement helps us wipe the disturbing memories away, causing them to fade, so we can distance ourselves from them. With this approach, no protracted exposure or detailed description of the stressful incident is necessary.

The intervention, furthermore, both concentrates on the stressful incident, the memories of it and current triggers of the symptoms causing us to dysfunction. To help get us past our trauma, EMDR also provides building blocks of the necessary information and behavior strategies to overcome our current problematic state.

AVWF Neurocoaching

- Redresses balance of the nervous system
- Based on the polyvagal theory
- Unique, easily implemented and highly effective
- Middle ear muscles connected to the nervous system filters sounds
 - Stress damages the filter



↑ *In the figure on the left, the organism is put in a state of constant alert due to lack of dampening of low-frequency noise.*

↑ *In the figure on the right, these frequencies are automatically filtered out, allowing for better processing of auditory stimuli.*

AVWF Neurocoaching

To improve complex functions, which have such great influence on our general well-being, the balance of our nervous system must be redressed. An intervention targeting just that is Audiovisual Perception Enhancement (AVWF); a German designed focused intervention based on the polyvagal theory that addresses the problem of chronic stress at the root. Thoroughly and systematically thought through, it has been developed on the basis of two decades worth of research performed by biologists, neuro- and stress scientists as well as psychologists. It is not only easily accessible and implemented; it has scientifically been proven highly effective. The intervention is unique in its way of promoting stress management, and helps put people affected by long-term stress back on an even keel.

When our autonomic nervous system is out of balance due to long term stress, it induces negative effects on our minds as well as our bodies in various ways. One small but very important component affected is our middle ear muscle. It is often underestimated, but plays an important part in our stress regulation due to the fact that the parasympathetic nervous system innervates certain middle ear muscles that is part of a system that subdues low-frequency sounds. The system serves as a tool of sorting, as it filters out unnecessary noise, so we can focus and interpret only relevant stimuli. When imbalanced, the sorting fails and noises flood our system, causing us to be in a constant state of alertness; even at night, which adversely affects our sleep, so we are never properly rested, prompting chronic fatigue.

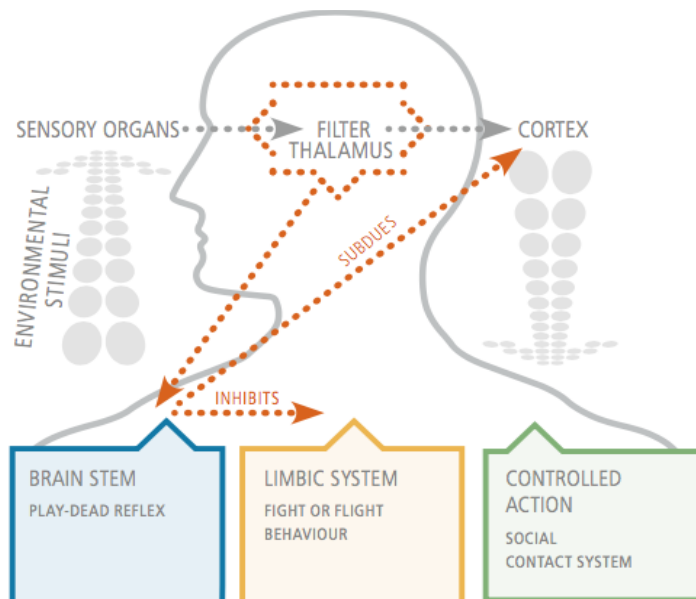
Interventions



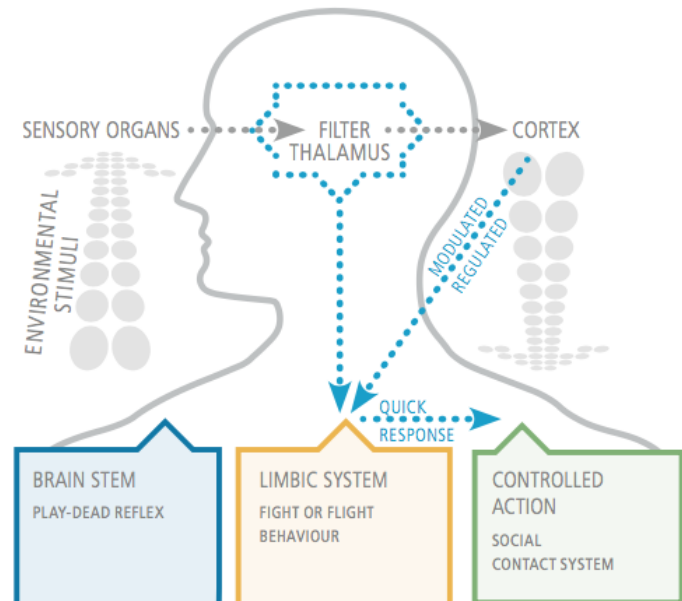
AVWF Neurocoaching

- The nervous system is stimulated by frequency-modulated music
 - Reaches parts of the brain that are normally out of reach
 - Ventral vagus recaptures its function
- Instant effects on mental and bodily performance
 - Proven on top athletes

Impaired System



Optimally Functioning System





AVWF Neurocoaching

Completely differing from traditional music therapy, AVWF uses frequency-modulated music containing certain soundwaves that sophisticatedly utilize the connections to the middle ear, stimulating muscles and nerve fibers connected to the nervous system. The stimulation happens unconsciously, demanding us to make no big effort in the implementation; relaxing or even sleeping while listening to the music is possible. The unique soundwaves help us access the deepest parts of the brain, which are normally out of our reach, thus stimulating the ventral vagus to recapture its function. The effects on mental and bodily performance is almost certainly guaranteed, subsequently enhancing both. We regain our normal ability to function and communicate, and once again feel at ease and ready for action. We feel the burden easing up, and our general well-being improves significantly.

The effects have among others been proven on top athletes, whose performances and regenerating abilities improve.



Further reading

- Stress and neurocoaching:
 - Conrady, Ulrich AVWF®- *neuro-coaching - Scientific principles and background of brain research and neuro research*
- Emotional memories:
 - HeartMath LLC (2002): *The Inside Story - Understanding the Power of Feelings*.
- Stress axis: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3860380/>
- Trauma informed care: <http://www.traumainformedcareproject.org/index.php>
- False memory:
 - [http://www.jaacap.com/article/S0890-8567\(09\)66243-2/abstract](http://www.jaacap.com/article/S0890-8567(09)66243-2/abstract)
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