Social-psychological factors of personality traumatisation

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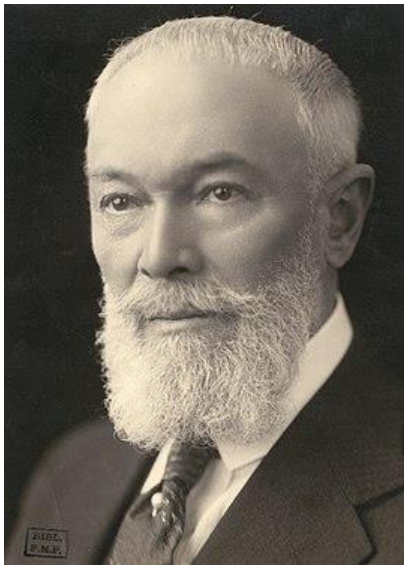
Introduction

- This course is a part of Psychotraumatology
- *Psychotraumatology is the study of* ***natural*** *and* ***man-made trauma*** *(from* ***the natural trauma of the accidental and the geophysical*** *to* ***the horrors of human inadvertent or volitional cruelty****), the* ***social and psychobiological effects*** *thereof, and the* ***predictive-preventive-interventionist parameters*** *which evolve from that study (*Donovan*)*

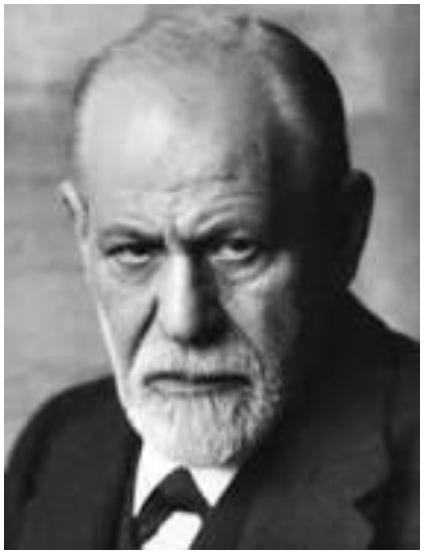
Historical aspects of psychotraumatology

Historical aspects of psychotraumatology

- First publications on the topic of traumatisation from Pierre-Marie-Félix Janet («Dissociation»), Pierre Janet and Sigmund Freud investigated the aetiology of hysteria



Pierre Janet



Sigmund Freud

Historical aspects of psychotraumatology

- Emil Kraepelin – classification of mental disorders,
- Hermann Oppenheim («Traumatic neurosis»)

Emil Kraepelin

Hermann Oppenheim

Railway Liverpool

Открытие Стоктон-Дарлингтонской железной дороги

Historical aspects of psychotraumatology

- In the 19th century – industrialization and urbanization in Europe (Great Britain in the 1769 was invented a cotton-machine), and than began a railway construction (since 1829 in Great Britain and USA, since 1840- in Germany)
- In the mid-19th century, surgeon John Eric Erichsen coined the term ***«railway spine»*** to describe the symptoms he observed among people who survived or witnessed train accidents
- in 1866 **John Eric Erichsen** developed the influential hypotheses that psychological symptoms **after railway accidents** were caused by a concussion of the spine followed by „molecular changes" in the spinal cord***(„railway spine syndrome")***.

A Really «railway-spine» story

- **«disability pension neurosis»** : submitting a request at a pension **after railway accidents**
- Claims for compensation for damage and receipt of a pension for **railway workers** were discussed

The shell shock & soldier's heart & …..

- American Civil War surgeon Jacob Mendez Da Costa described similar symptoms among soldiers he treated on the battlefield—a condition he called **soldier's heart**.
- British military psychiatrist Charles Samuel Myers referred to **the shell shock** experienced by **World War I** soldiers after they returned from combat.

World War I and II

- In World War I and II, up to **10 %** of the soldiers were exempted from further service because they suffered from nervous breakdowns caused by the experience of war ***(„shell shock")***.

Victims of World War II,

Historical aspects of psychotraumatology

- **Diagnostic terms applied to symptoms have included *Soldier's Heart, Battle Fatigue, War Neurosis, Da Costa's Syndrome, Tunnel Disease, Railway Spine Disorder, Shell Shock, Gross Stress Reaction, Adjustment Reaction of Adult Life, Transient Situational Disturbance,Traumatic Neurosis, Post-Vietnam Syndrome, Rape Trauma Syndrome, Child Abuse Syndrome, and Battered Wife Syndrome* (Everly, 1995; Meichenbaum, 1994).**
- **The Diagnostic and Statistical Manual of Mental Disorders-Third Edition (DSM-III) first recognized Posttraumatic Stress Disorder (PTSD) as a distinct diagnostic entity in 1980 (APA, 1980).**
- **It was categorized as an anxiety disorder because of the presence of persistent anxiety, hypervigilance, exaggerated startle response, and phobic-like avoidance behaviors (Meichenbaum, 1994).**

Historical aspects of psychotraumatology

- Insights into the psychological long-term effects of Nazi Germany's concentration camps, the political activities of the Vietnam Veterans, and evidence from clinical studies resulted in the introduction of the newly defined diagnosis „Post-traumatic Stress Disorder” into DSM-III in 1980.
- In the past few years, several aspects of this diagnostic concept were legitimately criticized. Nevertheless, the official introduction of the diagnosis led to the acknowledgement of personal suffering and to the development of specific and efficacious therapies

Traumatic life events

- Traumatic events are typically unexpected and uncontrollable.
- They may overwhelm an individual's sense of safety and security and **leave** a person **feeling vulnerable and insecure in their environment**.
- Natural disorder, fire or explosion, transportation accident, physical assault, sexual assault, other unwanted or uncomfortable sexual experience

Type I (short)	Type II (longtime)
motor vehicle accidents (MVA), boat, train, airplane accidents, fires, and explosions	natural and technological disasters
involve bombings, rape, hostage situations, assault and battery, robbery, and industrial accidents	intentional human design include combat, child sexual abuse, battered syndrome (i.e., spousal abuse), being taken as political prisoner or prisoner of war (POW), and Holocaust victimization

Type I Life Events

- Events that are abrupt, often lasting a few minutes and as long as a few hours can be referred to as short-term or Type I traumatic events (Terr, 1991).
- Included within this category are natural and accidental disasters as well as deliberately caused human-made disasters.
- Natural disasters include events such as hurricanes, floods, tornadoes, earthquakes, volcanic eruptions, and avalanches. Accidental disasters may include motor vehicle accidents (MVA), boat, train, airplane accidents, fires, and explosions. Deliberately caused human-made disasters (i.e., intentional human design or IHD) involve bombings, rape, hostage situations, assault and battery, robbery, and industrial accidents.

Type II Life Events

- Sustained and repeated traumatic events (or Type II traumatic events) typically involve chronic, repeated, and ongoing exposure. Examples include natural and technological disasters such as chronic illness, nuclear accidents, and toxic spills.
- Events resulting from intentional human design include combat, child sexual abuse, battered syndrome (i.e., spousal abuse), being taken as political prisoner or prisoner of war (POW), and Holocaust victimization.
- It is important to consider that research indicates that, despite the heterogeneity of traumatic events, individuals who directly or vicariously experience such events show similar profiles of psychopathology including chronic PTSD and commonly observed comorbid disorders such as depression, generalized anxiety disorder, and substance abuse (Solomon, Gerrity, & Muff, 1992).

comorbid disorders

- **depression, generalized anxiety disorder, and substance abuse, personality disorders**

- **(41% criminal victims) sexual dysfunction**
- **(27% criminal victims) obsessive-compulsive symptoms**
- **(82% criminal victims) depression**
- **(18% criminal victims) phobias**

Life Prevalence

- 7.8% (Breslau, Kessler & Chilcoat, et al. 1998), 5% men и 10% women
- Women – 2.9%, men– 0.9% (Alonso, Angermeyer, Bernert, Bruffaerts et al. (2004)
- Medical workers (paramedics) 20-30%
- Soldiers (30-50%)
- Rape, physical, sexual assault

PTSD

Differential diagnosis

Current Diagnostic Criteria and Other Considerations

Post**t**raumatic **S**tress **D**isorder

- PTSD may develop **following** exposure to an **extremely threatening or horrific event** or series of events (ICD-11)
- Arises as a delayed or protracted response to a **stressful event or situation (of either brief or long duration)** of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone (ICD-10)

Criterion A ICD-11

Traumatic life events

Type I (short)	Type II (longtime)
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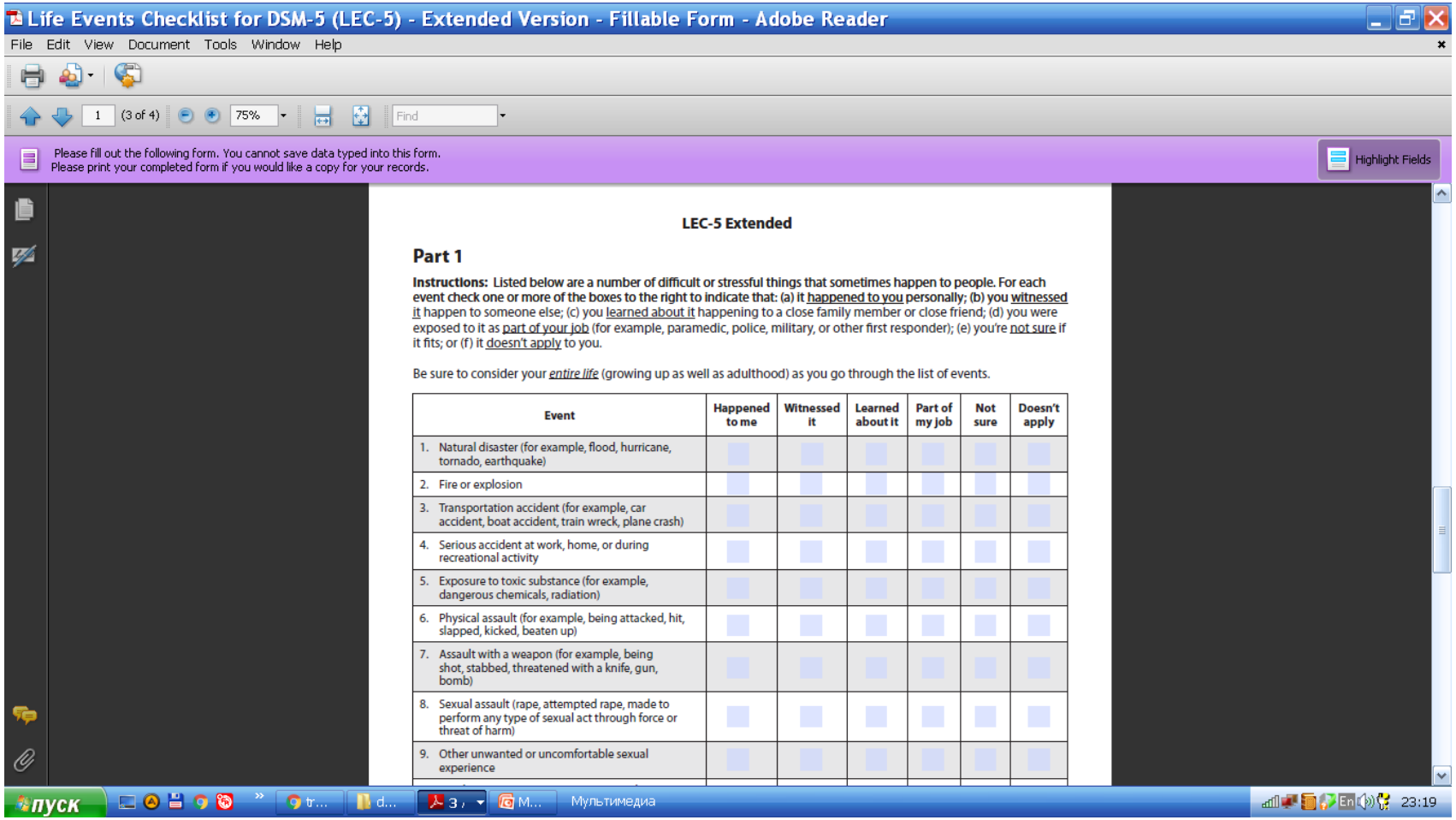
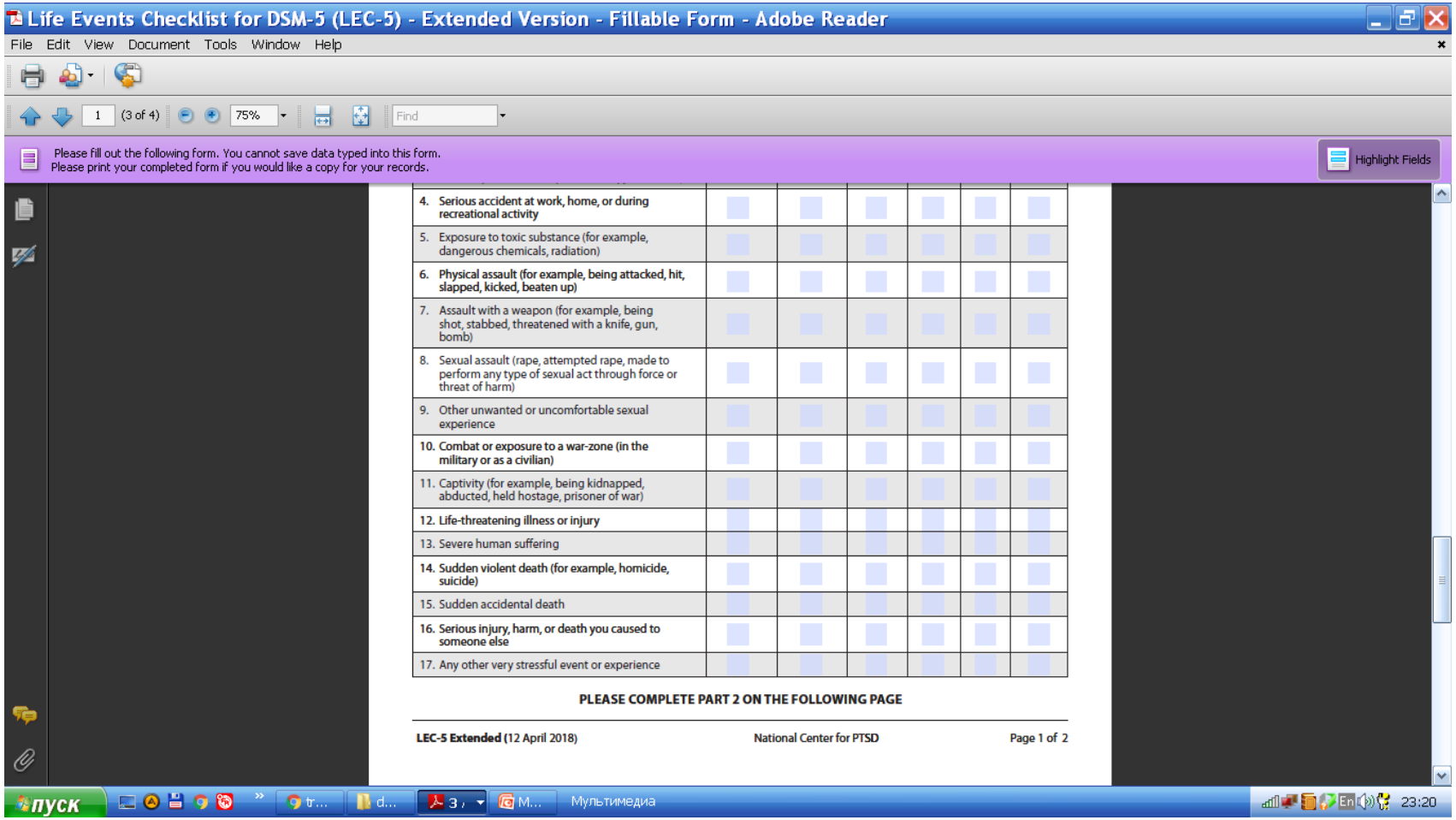
Which of events

LEC-5



LEC-5


Life Events Checklist for DSM-5 (LEC-5) - Extended Version - Fillable Form - Adobe Reader
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Please fill out the following form. You cannot save data typed into this form.
Please print your completed form if you would like a copy for your records.
Highlight Fields
4. Serious accident at work, home, or during recreational activity
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)
9. Other unwanted or uncomfortable sexual experience
10. Combat or exposure to a war-zone (in the military or as a civilian)
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)
12. Life-threatening illness or injury
13. Severe human suffering
14. Sudden violent death (for example, homicide, suicide)
15. Sudden accidental death
16. Serious injury, harm, or death you caused to someone else
17. Any other very stressful event or experience
PLEASE COMPLETE PART 2 ON THE FOLLOWING PAGE
LEC-5 Extended (12 April 2018)
National Center for PTSD
Page 1 of 2
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PTSD Symptoms ICD-11

b) **re-experiencing** the traumatic event or events **in the present** in **the form of vivid intrusive memories, flashbacks, or nightmares**. Re-experiencing may occur via one or multiple sensory modalities and is typically accompanied by strong or overwhelming emotions, particularly fear or horror, and strong physical sensations;

c) **avoidance of thoughts and memories of the event** or events, or **avoidance of activities, situations, or people** reminiscent of the event(s);

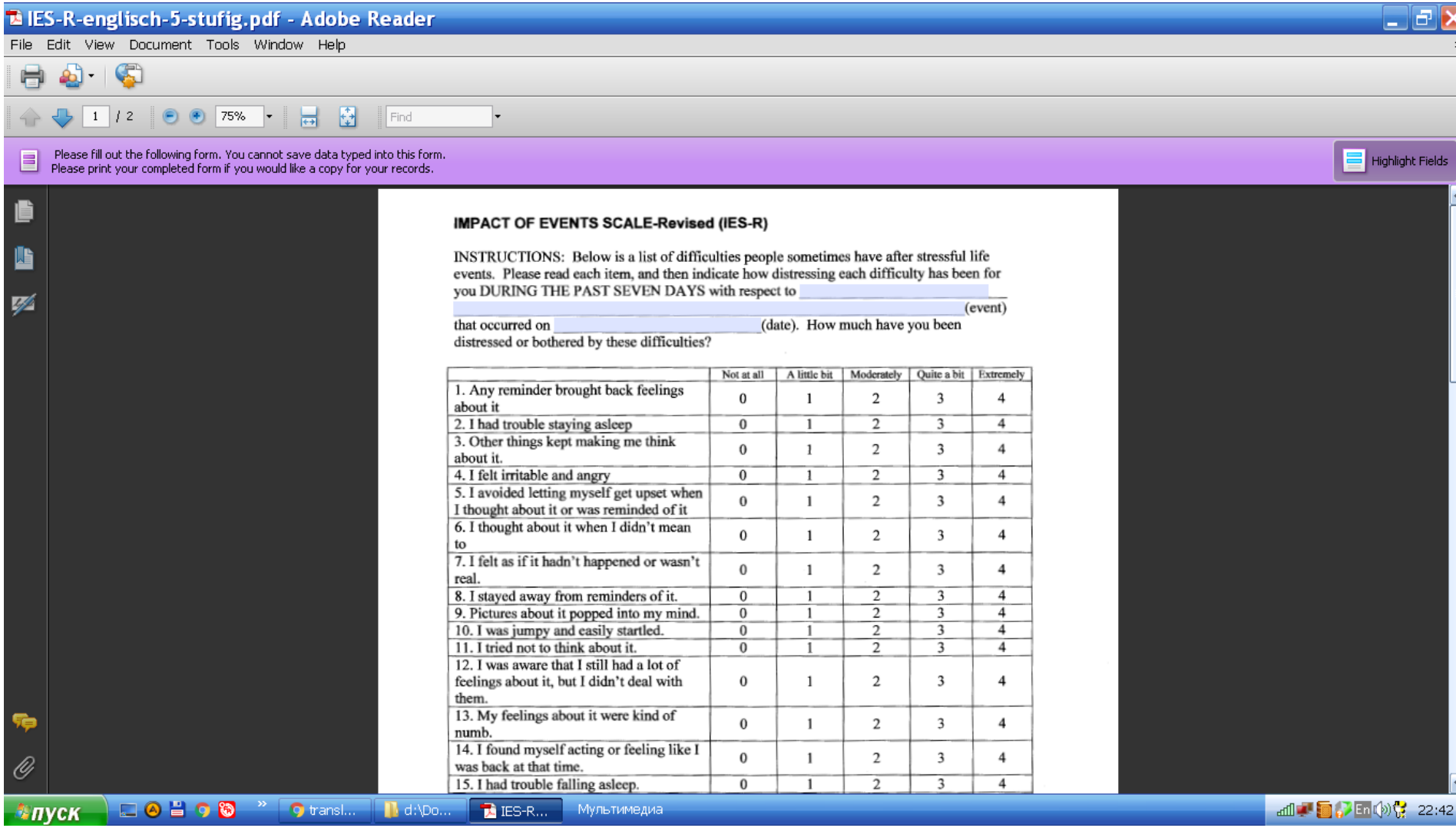
d) **persistent perceptions of heightened current threat**, for example as indicated by **hypervigilance** or an **enhanced startle reaction to stimuli** such as unexpected noises.

The symptoms persist for at least several weeks and cause significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

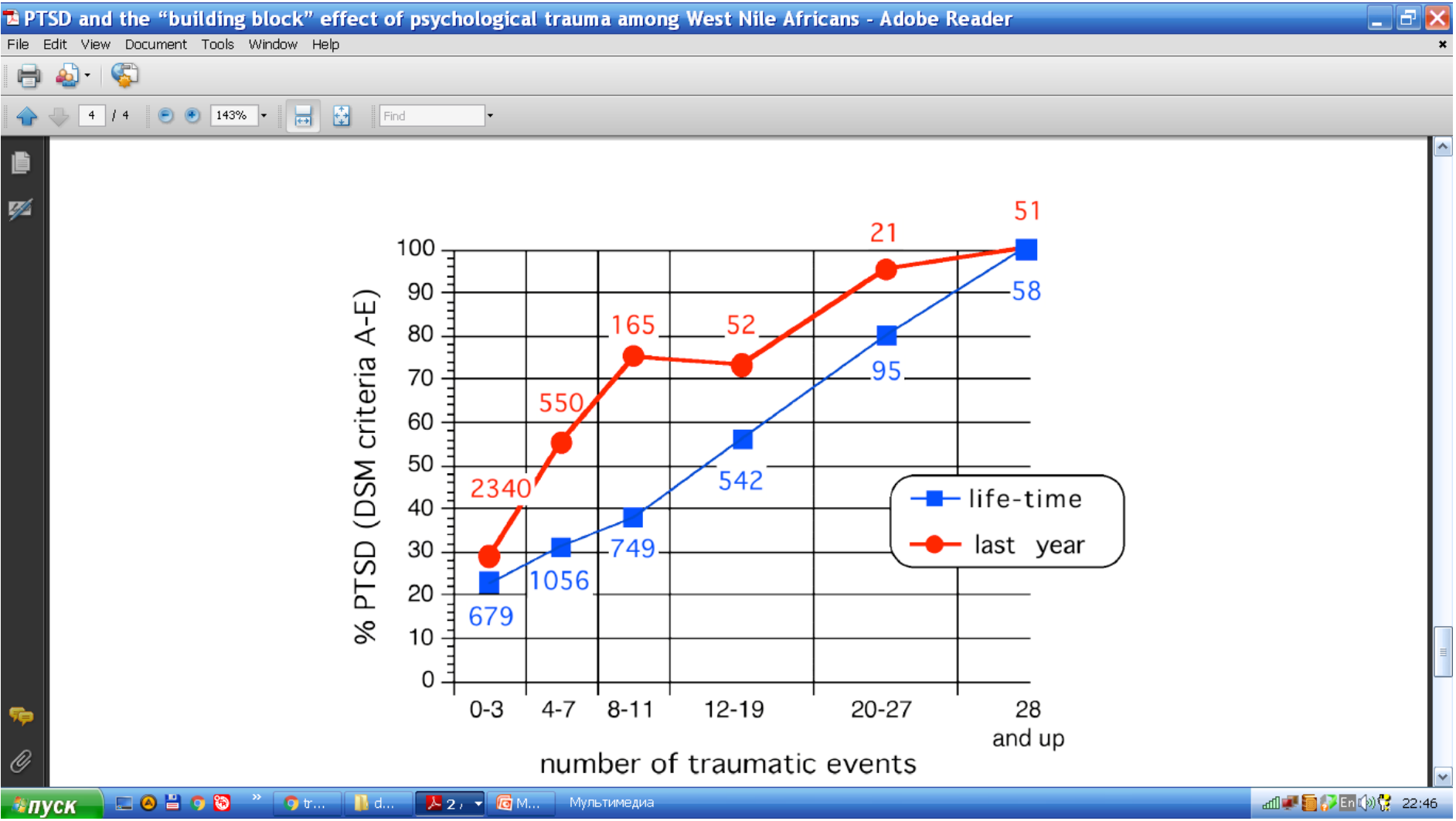
PTSD Symptoms ICD-10

- Typical features include episodes of repeated reliving of the trauma in **intrusive memories ("flashbacks"),** dreams or nightmares, occurring against the persisting background of a sense of "numbness" and emotional blunting, detachment from other people, unresponsiveness to surroundings, anhedonia, and avoidance of activities and situations reminiscent of the trauma. There is usually a state of autonomic hyperarousal with hypervigilance, an enhanced startle reaction, and insomnia. Anxiety and depression are commonly associated with the above symptoms and signs, and suicidal ideation is not infrequent.

Self-learning (homework)
IES-R



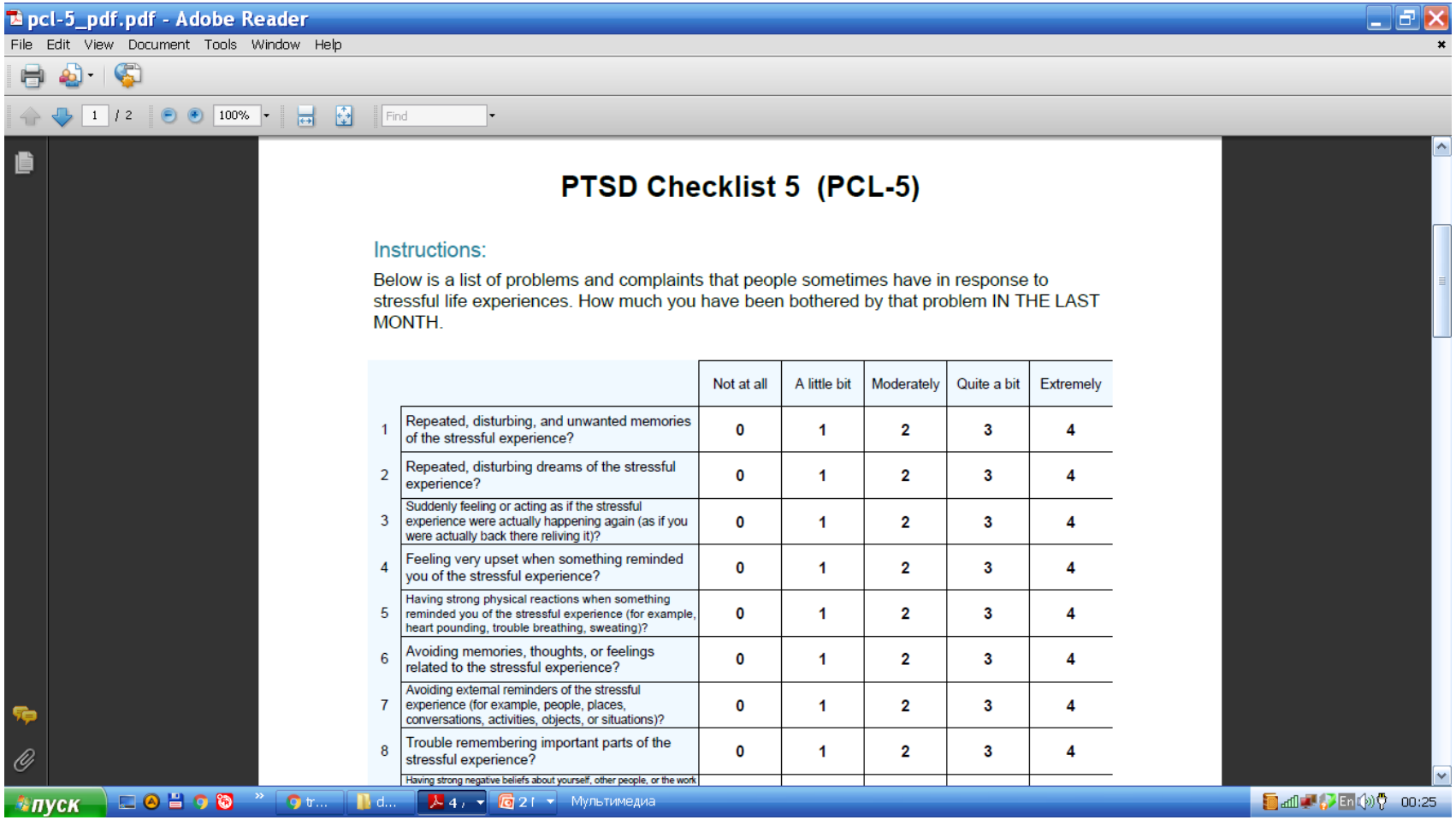
Self-learning (homework)



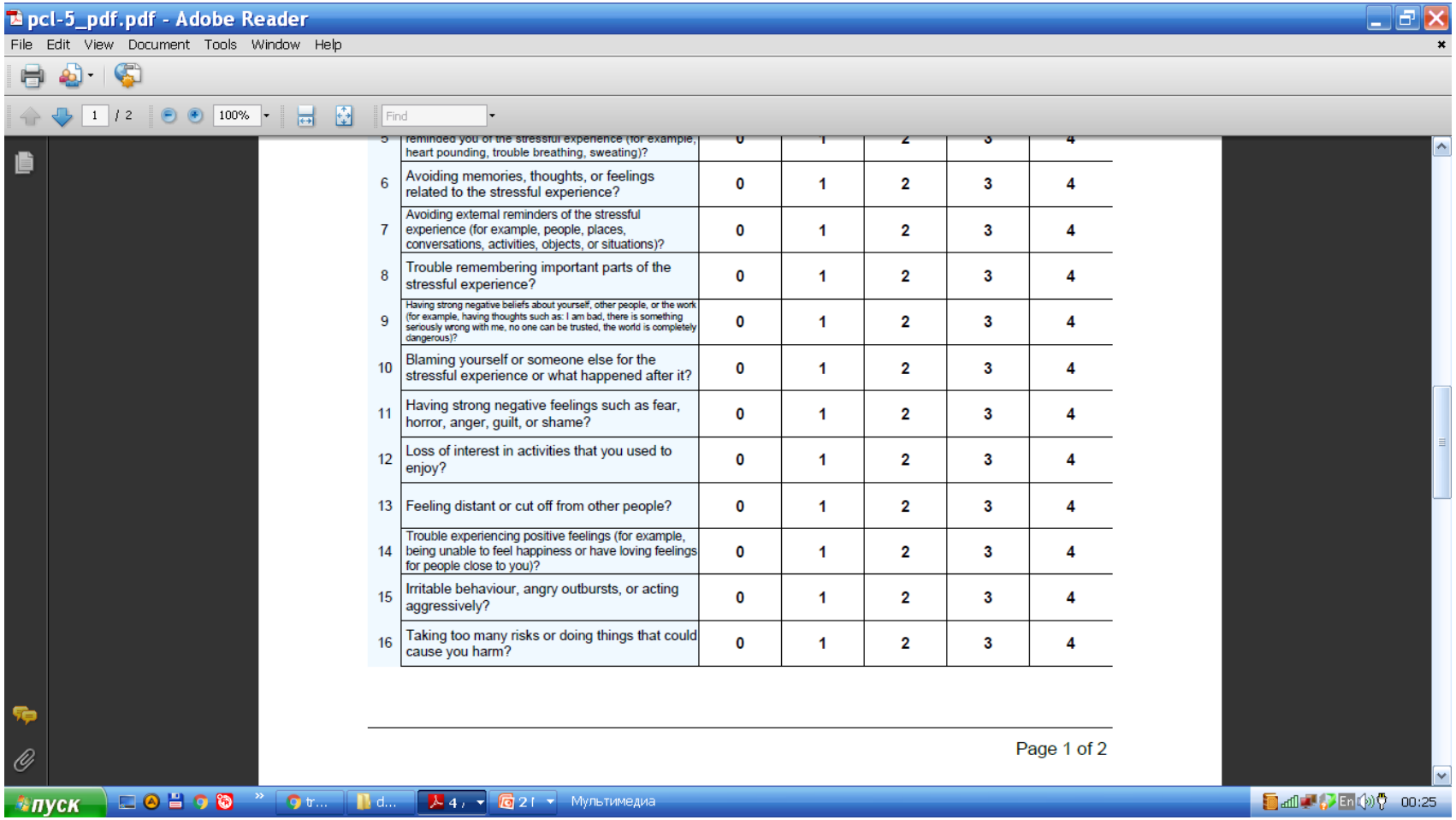
Kessler, 1995 (USA)
(15 - 65 years old , PTSD life prevalence)

- Sexual assault (5.5) 55,5%
- sexual harassment (7.5) 19,3%
- Soldiers, combat or exposure to a war-zone (3.2) 38,8%
- Assault with a weapon (12.9) 17,2%
- Physical assault (9.0) 11,5%
- Accidents (car, boat, train wreck) (19.4) 7%
- To be a witness of accidents or assault (25.0) 7%
- Sexual or physical assault in childhood (4.0) 35,4%
- Fire, explosion and natural disaster (17.1) 4,5%
- Parental neglect (2.7) 21,8%

PTSD Checklist 5 (PCL-5)

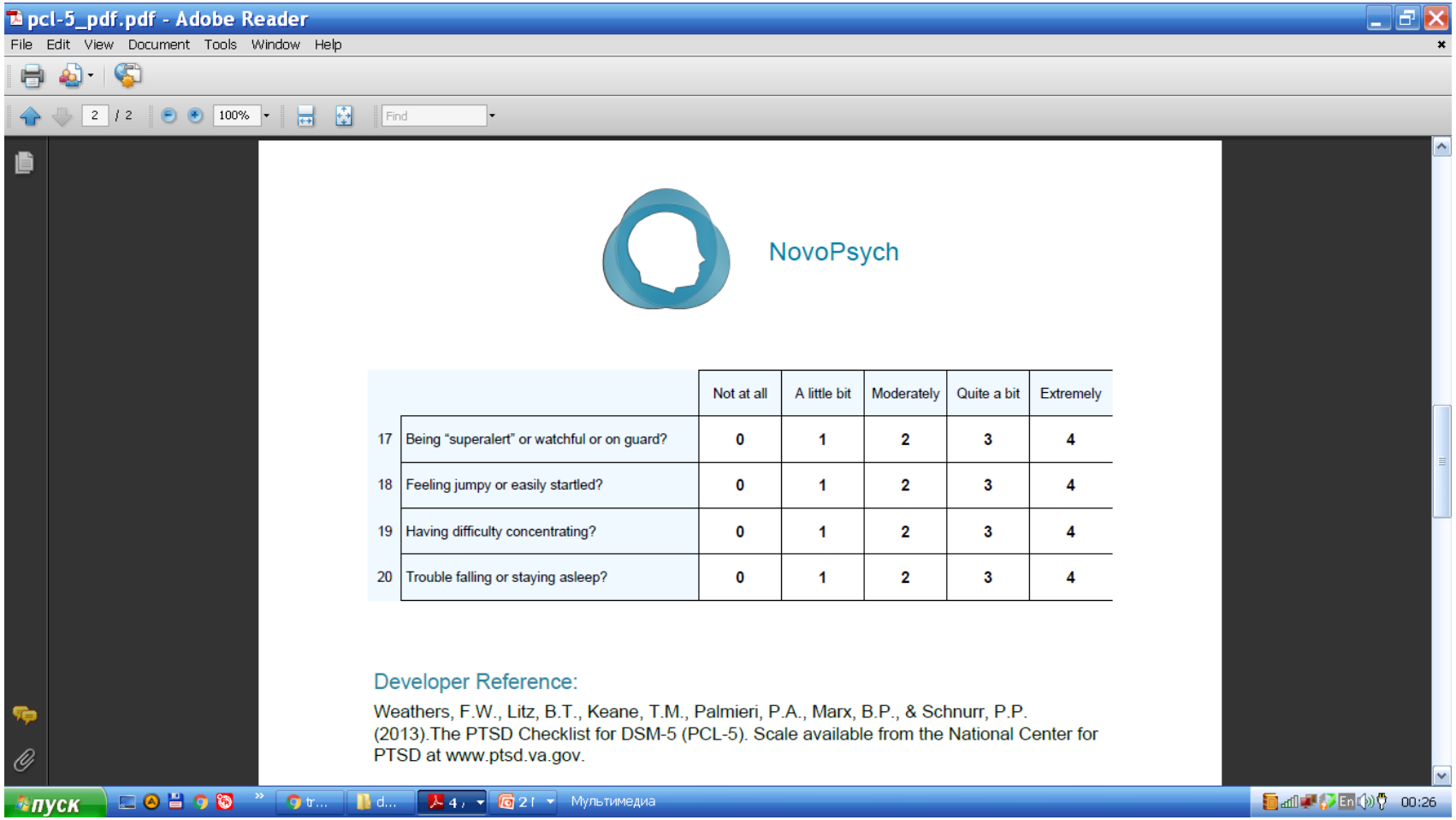


PTSD Checklist 5 (PCL-5)



5	reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6	Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7	Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8	Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9	Having strong negative beliefs about yourself, other people, or the work (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10	Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11	Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12	Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13	Feeling distant or cut off from other people?	0	1	2	3	4
14	Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15	Irritable behaviour, angry outbursts, or acting aggressively?	0	1	2	3	4
16	Taking too many risks or doing things that could cause you harm?	0	1	2	3	4

PTSD Checklist 5 (PCL-5)



		Not at all	A little bit	Moderately	Quite a bit	Extremely
17	Being "superalert" or watchful or on guard?	0	1	2	3	4
18	Feeling jumpy or easily startled?	0	1	2	3	4
19	Having difficulty concentrating?	0	1	2	3	4
20	Trouble falling or staying asleep?	0	1	2	3	4

Developer Reference:

Weathers, F.W., Litz, B.T., Keane, T.M., Palmieri, P.A., Marx, B.P., & Schnurr, P.P. (2013).The PTSD Checklist for DSM-5 (PCL-5). Scale available from the National Center for PTSD at www.ptsd.va.gov.

Acute stress reaction

- **Acute stress reaction** refers to the development of transient emotional, somatic, cognitive, or behavioral symptoms **as a result of exposure to an event or situation** (either short- or long-lasting) of an extremely threatening or horrific nature (e.g., natural or human-made disasters, combat, serious accidents, sexual violence, assault).
- **Symptoms** may include autonomic signs of anxiety (e.g., tachycardia, sweating, flushing), being in a **daze, confusion, sadness, anxiety, anger, despair, overactivity, inactivity, social withdrawal, or stupor.**

- usually begins to subside **within a few days after the event** or following removal from the threatening situation.

QE84 Acute stress reaction ICD-11 vs. ICD-10

- **24 Factors influencing health status or contact with health services**
- Factors influencing health status
- Problems associated with harmful or traumatic events
- **QE84** Acute stress reaction

- ICD-10
- **V Mental and behavioral disorders**
- **F43** Reaction to severe stress, and adjustment disorders
- **F43.0** Acute stress reaction

6B41 Complex post traumatic stress disorder

- ICD-11

- **Complex post traumatic stress disorder** is a disorder that may develop following exposure **to an event or series of events of an extremely threatening** or horrific nature, most commonly prolonged or repetitive events **from which escape is difficult or impossible** (e.g. torture, slavery, genocide campaigns, prolonged domestic violence, repeated childhood sexual or physical abuse).

- Complex PTSD is characterised by severe and persistent **1) problems in affect regulation**; **2) beliefs about oneself as diminished**, defeated or worthless, accompanied by feelings of shame, guilt or failure related to the traumatic event; and **3) difficulties in sustaining relationships and in feeling close to others**.

- ICD-10

- **Disorders of adult personality and behaviour (F60-F69)**

6B42 Prolonged grief disorder

- **ICD-11**
- **Prolonged grief disorder** is a disturbance in which, **following the death of a partner, parent, child, or other person** close to the bereaved, there is persistent and pervasive grief response **characterised by** longing for the deceased or persistent preoccupation with the deceased accompanied by intense emotional pain (e.g. sadness, guilt, anger, denial, blame, difficulty accepting the death, feeling one has lost a part of one's self, an inability to experience positive mood, emotional numbness, difficulty in engaging with social or other activities). **The grief response has persisted for an atypically long period of time following the loss** (**more than 6 months** at a minimum) and clearly exceeds expected social, cultural or religious norms for the individual's culture and context.

- **ICD-10**

6B43 Adjustment disorder

- **ICD-11**

- **Adjustment disorder** is a **maladaptive reaction** to an identifiable **psychosocial stressor or multiple stressors (**e.g. divorce, illness or disability, socio-economic problems, conflicts at home or work) that **usually emerges within a month of the stressor.** The disorder is characterised by preoccupation with the stressor or its consequences, **including excessive worry, recurrent and distressing thoughts about the stressor, or constant rumination about its implications**, as well as by failure to adapt to the stressor that causes significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

- **ICD-10**
- **Adjustment disorder (F43.2) is a part of neurotic, stress-related and somatoform disorders (F40-F48)**

Dissociative disorders 6B60

- **ICD-11**
- **Dissociative disorders**
- **Dissociative disorders** are characterised by involuntary **disruption or discontinuity in** the normal integration of one or more of the following: **identity, sensations, perceptions, affects, thoughts, memories, control over bodily movements, or behaviour.** Disruption or discontinuity may be complete, but is more commonly partial, **and can vary from day to day or even from hour to hour**.

- **Dissociative symptoms** in dissociative disorders **are sufficiently severe to result** in significant impairment in **personal, family, social, educational, occupational or other important areas of functioning.**

- **Dissociative [conversion] disorders (F 44) – are a part of Neurotic, stress-related and somatoform disorders (F40-F48)**

- Post-traumatic stress disorder **is a complex**, specific set **of disturbances of several mental processes**: affective presentations, conditioning, memory, dissociation, cognitive processes, social-interpersonal processes

Phenomenon's after trauma

affects

- Affect, strong emotions (overwhelm an individual's sense of safety and security and **feeling vulnerable and to be insecure in their environment, anxiety**)
- **shame, anger, disgust, revenge, feelings of injustice**
- feelings of complete defeat, self-denial are high risk factors in the development of PTSD
- These emotional states manifest themselves not only during the trauma and almost always in the period in social and interpersonal relationships

Phenomenon's after trauma

Unwanted trauma memories

- repeated reliving of the trauma in **intrusive memories ("flashbacks"), dreams or nightmares**
- flashbacks are a typical PTSD phenomenon (sensory details of trauma in the form of pictures or sounds) are experienced fragmentarily. What is especially frustrating is that they are not the result of volitional action. Not in the context of autobiographical memories
- the victims have very emotional memories of the trauma, but they are disorganized and with gaps
- **amnesia** as regards **the details** of the traumatic event

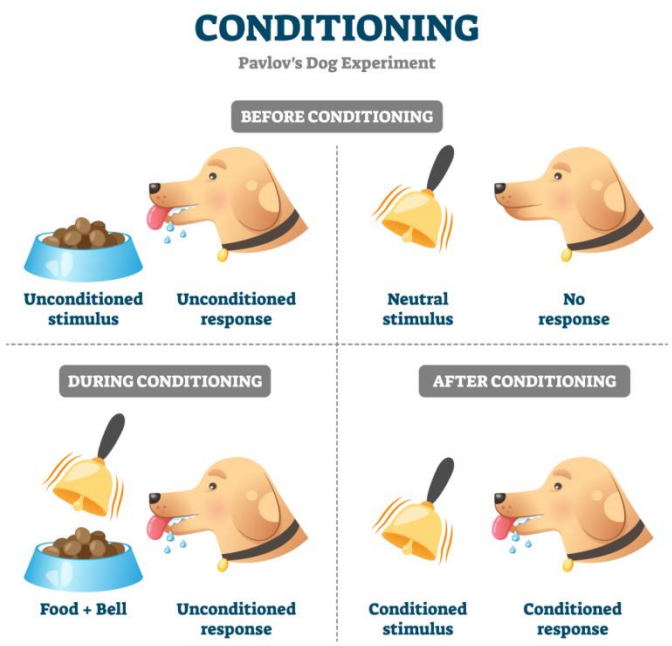
conditioning (two factors theory)

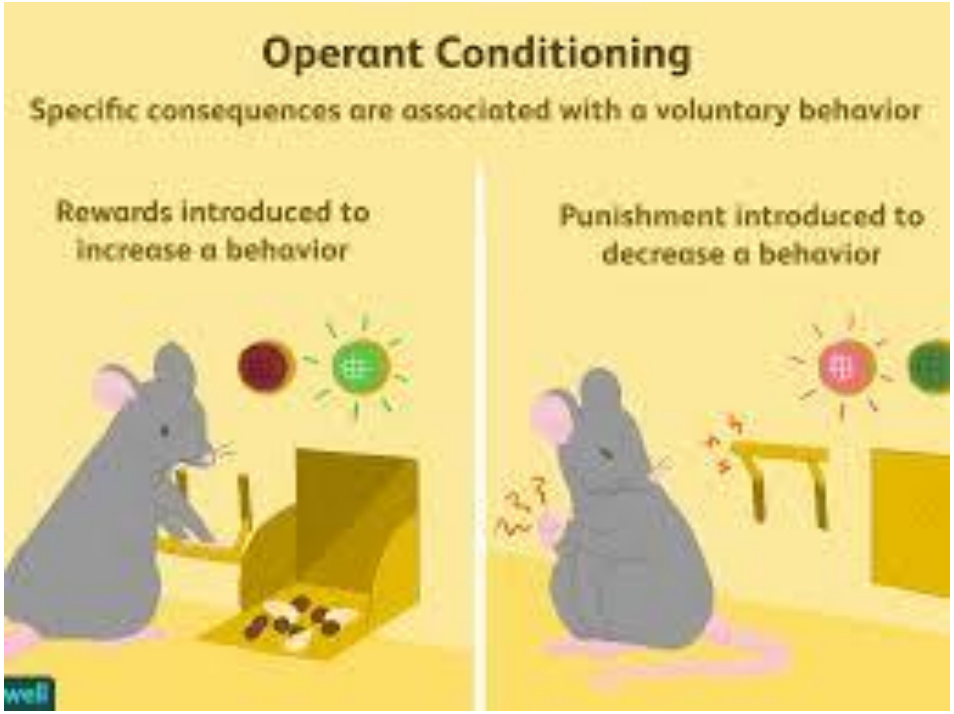
1. neutral stimulus within the traumatic situation is associated with a traumatic situation
2. Maintenance of the disorder is associated with operant conditioning (avoidance of stimuli is reinforced)

two factors - theory

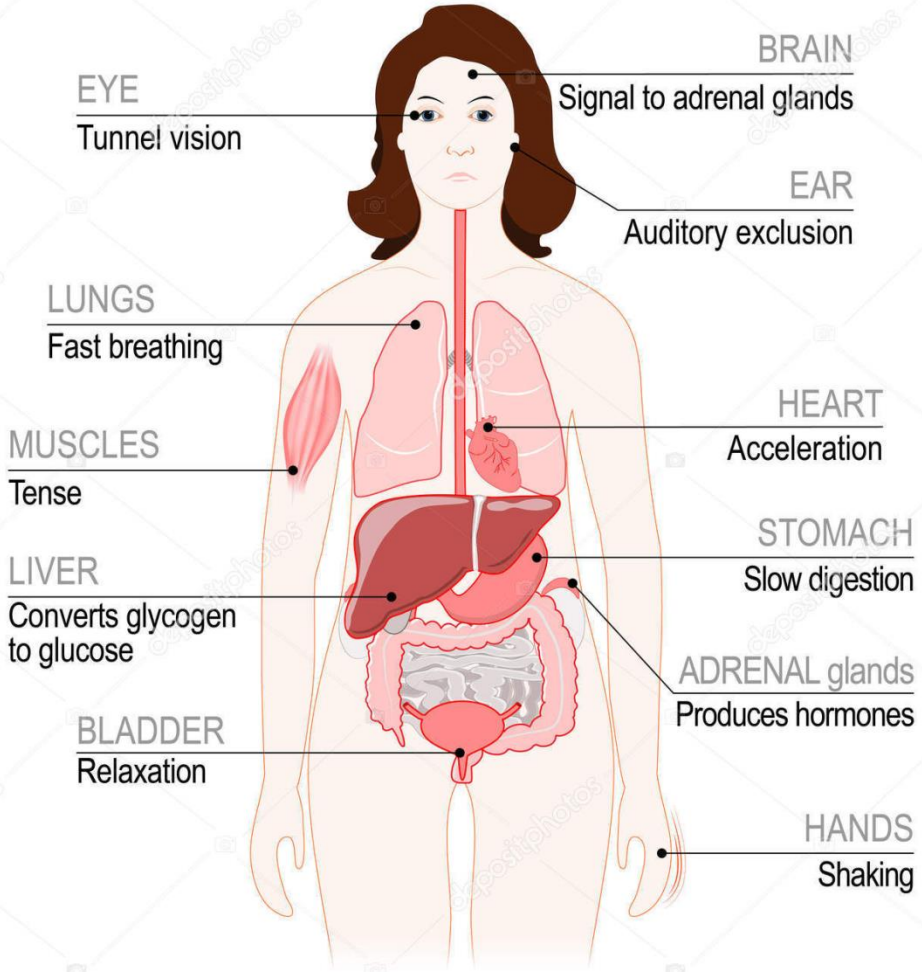
- During the trauma (psychological model "two factors - theory", Mowrer 1960 classical and operant conditioning) **a neutral stimulus is associated with a traumatic situation** (fear reaction and autonomic manifestations), later there is **a generalization** of the reaction to various stimuli (stimuli).
- Maintenance of the disorder is associated with operant conditioning (avoidance of stimuli is reinforced)

classical and operant conditioning

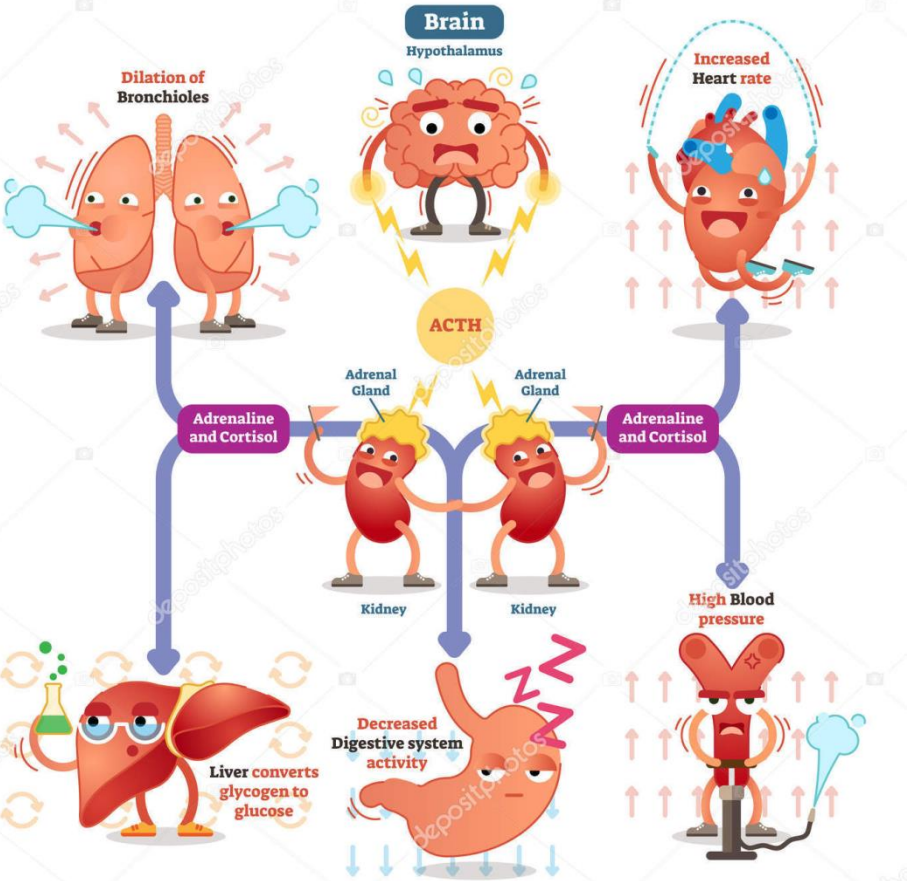




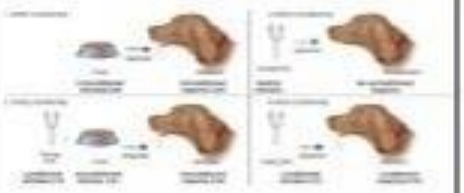
Fight-or-flight response



STRESS RESPONSE SYSTEM



Differences Between Classical and Operant Conditioning

Classical Conditioning	Operant Conditioning
In classical conditioning, the organism learns an *association between two stimuli*—the UCS and NS (eg. food and tone)—that occurs before the natural response (eg. salivation).	In operant conditioning, the organism learns an association between *behavior and its consequences*. Behavior changes because of the consequence that occur *after* it.
 UCS → UCR NS CS → CR	
Classical conditioning usually deals with reflexive or involuntary responses such as physiological or emotional responses.	Operant conditioning usually deals with voluntary behaviors such as active behaviors that operate on the environment.

CLASSICAL CONDITIONING
VERSUS
OPERANT CONDITIONING

Classical conditioning was introduced by Ivan Pavlov in early 1900s	Operant Conditioning was found by B.F. Skinner in 1938
Based on involuntary reflexive behavior	Involves voluntary behavioral outcomes
Studies individual's behavior in relation to various internal or external stimuli	Studies behavioral patterns that take place in response to numerous rewards & outcomes
Pavlov's world famous dog experiment helped to establish the theory	Skinner's rat box experiment helped to prove this theory

Cognitive processes

- **Appraisal** (Lasarus &Folkman, 1984)
- Assessment of threats and own resources to cope with the threat
- **Cognitive model:** negative assessment of a traumatic event and its consequences leads to the development and chronic manifestation of PTSD.
- The world is not perceived as fair and controlled, with meaning, and a person is perceived in the world as vulnerable.

social-interpersonal processes

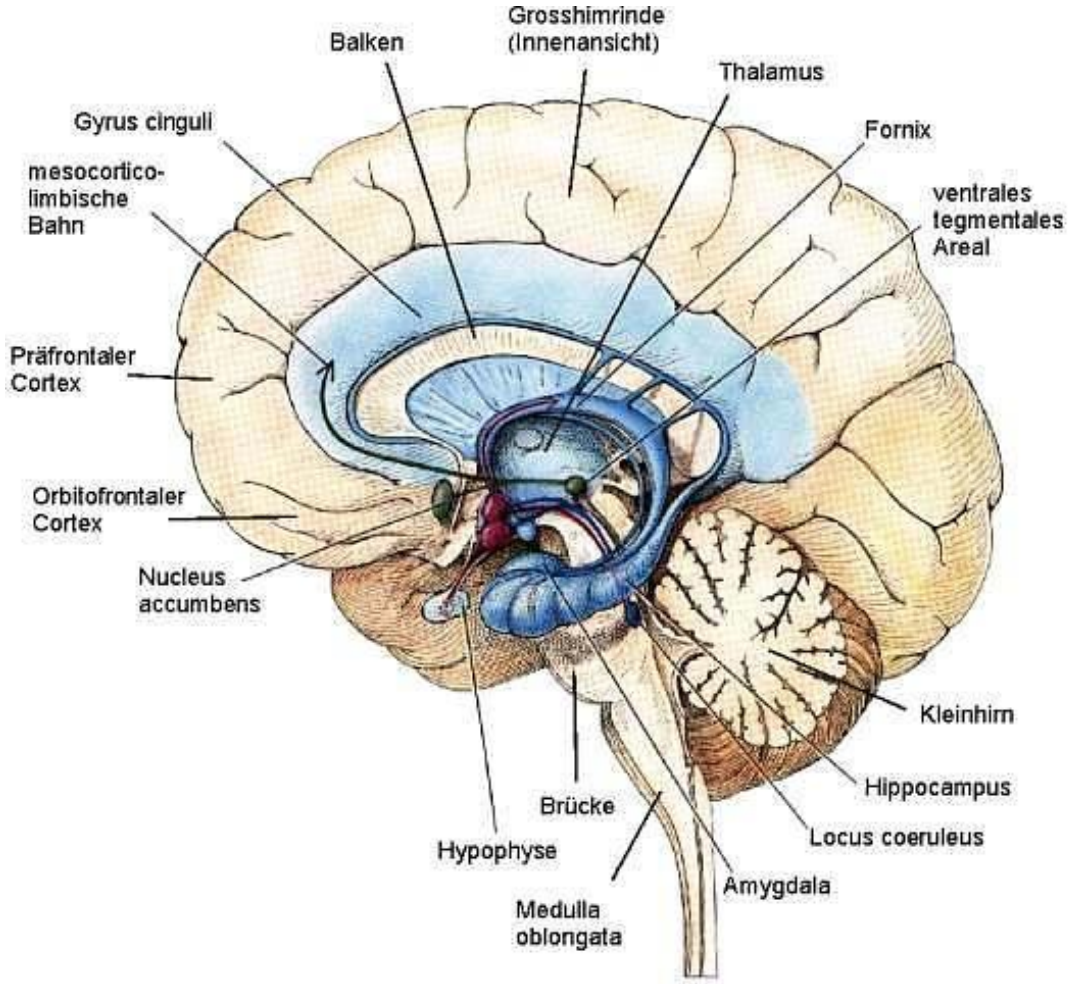
- The most severe traumas occur in an interpersonal context
- After trauma, many patients perceive their social environment as unfriendly and positive. They don't trust other people
- Social support as a protective factor (stronger than the severity of a traumatic life event and the patient's personality)

Dissociation

- ***«Freezing»*** **in animals** (evolution conditioned process)
- As a phenomenon of PTSD consists of **emotional dullness, derealization, depersonalization, *«out of body»* states**
- It arises during very complex events with a massive threat, when it is impossible to influence the situation by fighting. Necessary for the survival of the organism in cases whene the fight is impossible

function of the amygdala, medial prefrontal cortex, and hippocampus in posttraumatic stress disorder

Three brain regions that may be involved in the pathophysiology of PTSD: **the amygdala, medial prefrontal cortex, and hippocampus**



- **The amygdala** is involved in the assessment of threat-related stimuli and is necessary for the process of fear conditioning
- **Medial prefrontal cortex** is involved in the process of extinction of fear conditioning and the retention of extinction. Extinction does not occur normally when medial prefrontal cortex is damaged.
- A third region of interest is **the hippocampus**, which is involved in explicit memory processes and in the encoding of context during fear conditioning. Importantly, the hippocampus appears to interact with the amygdala during the encoding of emotional memories.

PTSD & amygdala

- functional neuroimaging studies of PTSD have provided evidence in support **of heightened amygdala responsivity** to both traumatic reminders and more general affective stimuli. **Amygdala hyperresponsivity** in PTSD has been reported during the presentation of personalized traumatic narratives and cues, combat sounds, combat photographs, and trauma-related words

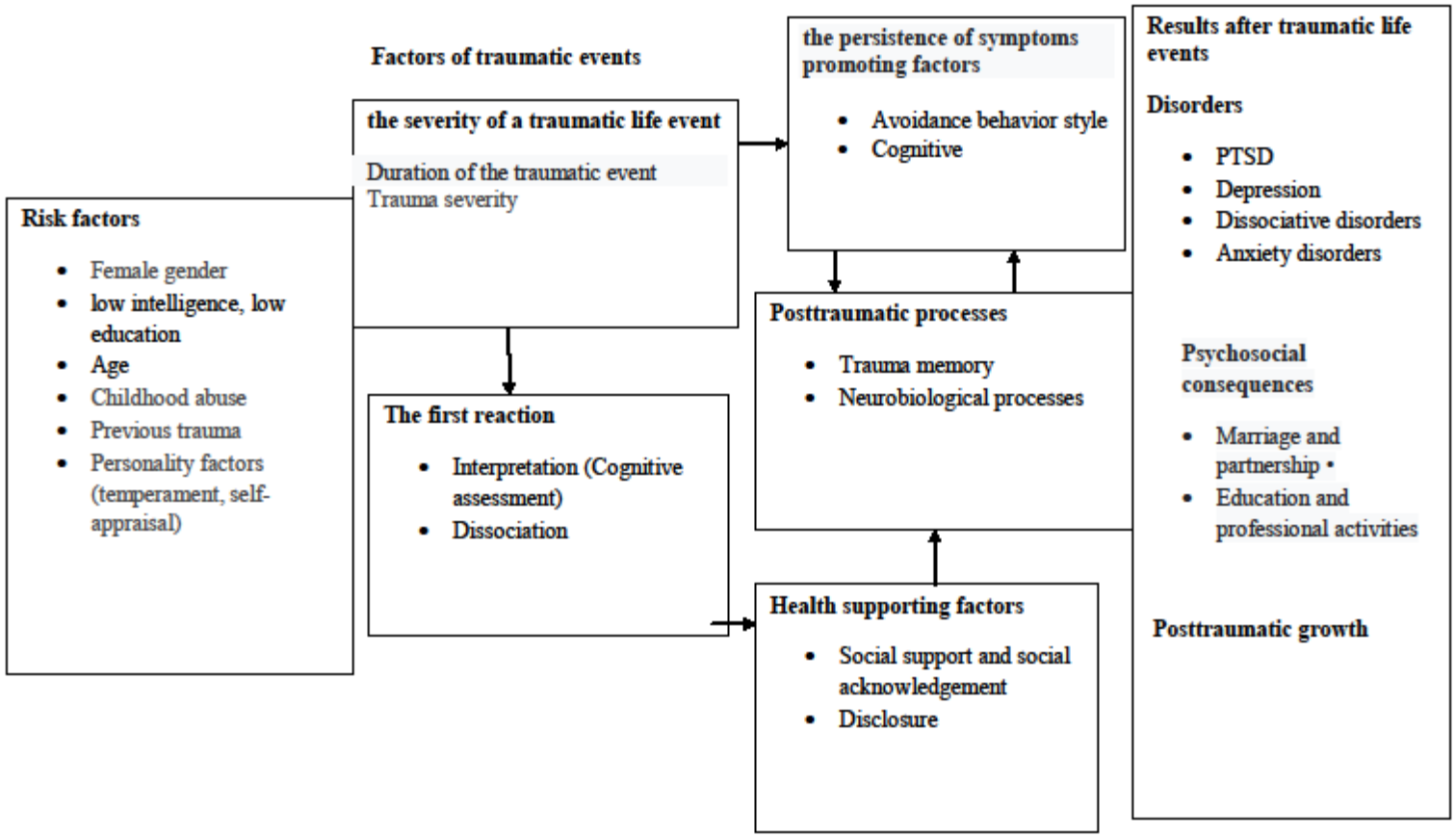
PTSD & medial prefrontal cortex

- Several morphometric MRI studies have reported **decreased volumes** of prefrontal cortex in PTSD
- Neurochemistry studies have provided data consistent with medial **prefrontal cortex abnormalities**
- Functional neuroimaging studies have also yielded findings consistent with decreased activation and/or a failure to activate medial prefrontal cortex in **PTSD** (a relatively **diminished responsivity in medial prefrontal cortex**)

PTSD & medial prefrontal cortex

- the majority of studies has found **decreased hippocampal volume** or decreased hippocampal NAA levels in **PTSD**
- hippocampal volumes have been inversely associated with verbal memory deficits, combat exposure severity, dissociative symptom severity, depression severity,and PTSD symptom severity.

Social-psychological factors of personality traumatisation


Factors of traumatic events
the severity of a traumatic life event
Duration of the traumatic event
Trauma severity
Risk factors
Female gender
low intelligence, low education
Age
Childhood abuse
Previous trauma
Personality factors (temperament, self-appraisal)
The first reaction
Interpretation (Cognitive assessment)
Dissociation
the persistence of symptoms promoting factors
Avoidance behavior style
Cognitive
Posttraumatic processes
Trauma memory
Neurobiological processes
Health supporting factors
Social support and social acknowledgement
Disclosure
Results after traumatic life events
Disorders
PTSD
Depression
Dissociative disorders
Anxiety disorders
Psychosocial consequences
Marriage and partnership •
Education and professional activities
Posttraumatic growth

Health supporting factors (Maercker, 2009)

Social support and social acknowledgement (quality of perceived social support from family and friends)

Disclosure (opening of the traumatic life event)

Social acknowledgement as victim or survivor

- General disapproval
- Family / friends disapproval
- Recognition

- Meta-analysis Brewin, Andrews & Valentine (2000) r= -0.40
- Meta-analysis Ozer, Best, Lipsey и Weiss (2003) r=-0.28.

Disclosure of trauma

The written or verbal disclosure of a traumatic event and associated thoughts and feelings (Pennebaker, 1993). Writing or verbal disclosure of stressful events should help the person analyze and understand what happened and identify the feelings associated with the event.

Disclosure of trauma questionnaire

- Reluctance to talk
- Urge to talk
- Emotional reactions

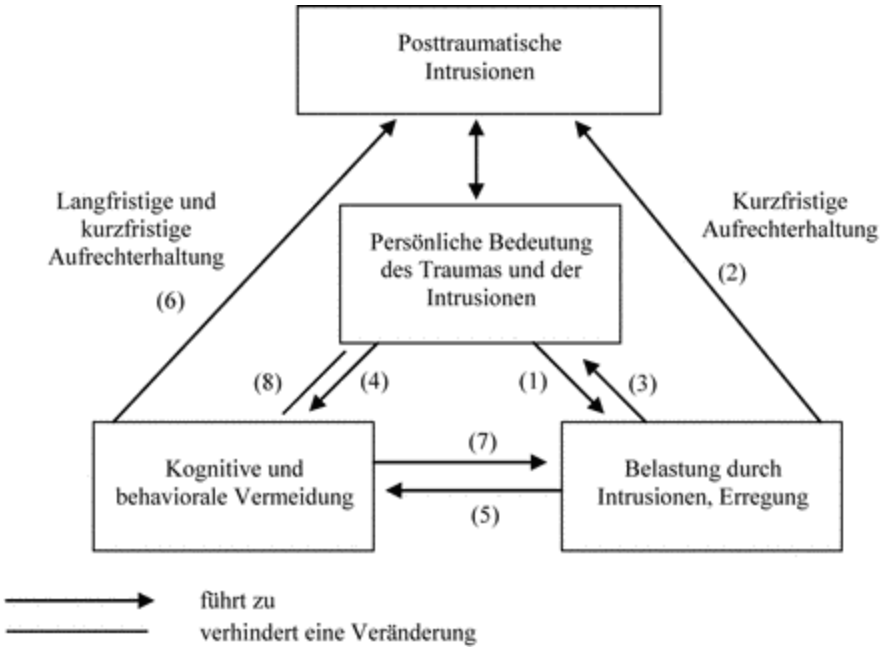
Early intervention

Cognitive therapy

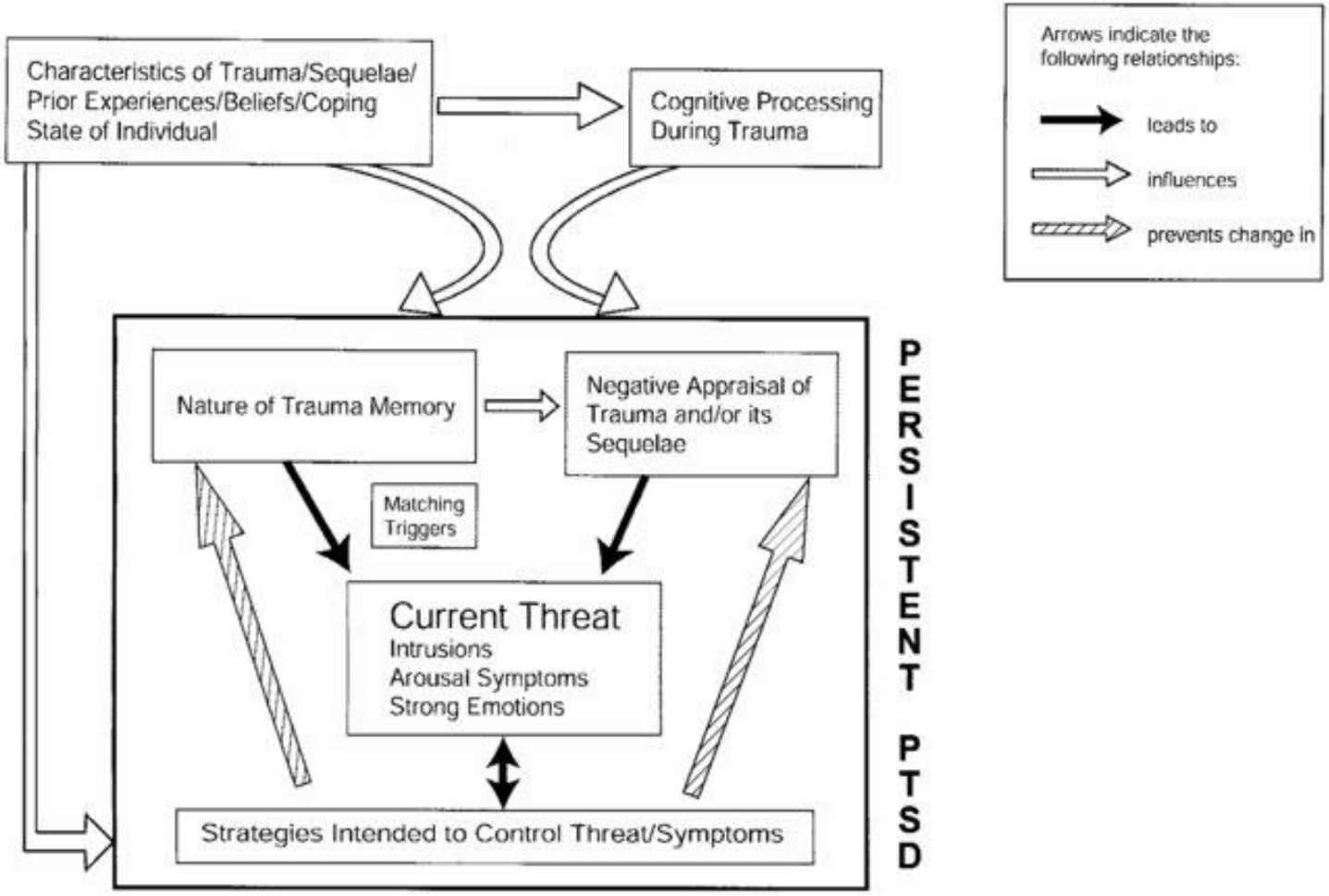
- This type of talk therapy helps recognize the ways of thinking (cognitive patterns) that are keeping you stuck — for example, negative beliefs about yourself and the risk of traumatic things happening again. For PTSD, cognitive therapy often is used along with exposure therapy.

In a Cyclical Process: Negative Interpretation of Trauma and Its Consequences
Ehlers, 2000

Feelings of perceived constant threat and processes of avoidance and suppression of thoughts lead to increased intrusions and increased symptoms



Ehlers & Clark 2000



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Cognitive therapy

Intrusions and related thoughts

Avoidance-behavior

- **<u>Normalization of symptoms:</u>** reduce the feeling of catastrophization, the symptoms he (patient) is experiencing are normal reactions for such a situation

Normalization of symptoms

- T: “Have you already noticed that in certain situations you more often remember what happened? What situations lead to this? " "If these memories, thoughts, feelings appeared, what did you usually do?"
- T: "Are you doing something to stop these memories?" “Are you trying to distract yourself? Are you doing something to get the thoughts out of your head? "
- T:”Do you think about something specific over and over again? And what exactly? "

Diary (homework)

Time	Intrusions	What did you think while doing this?	0-100 How did you feel?	what did you usually while doing? What was the trigger?	What have you done to stop the memories? What helped you?

Identification of «hot spots»

- **Identification of «hot spots»** and their cognitive treatment

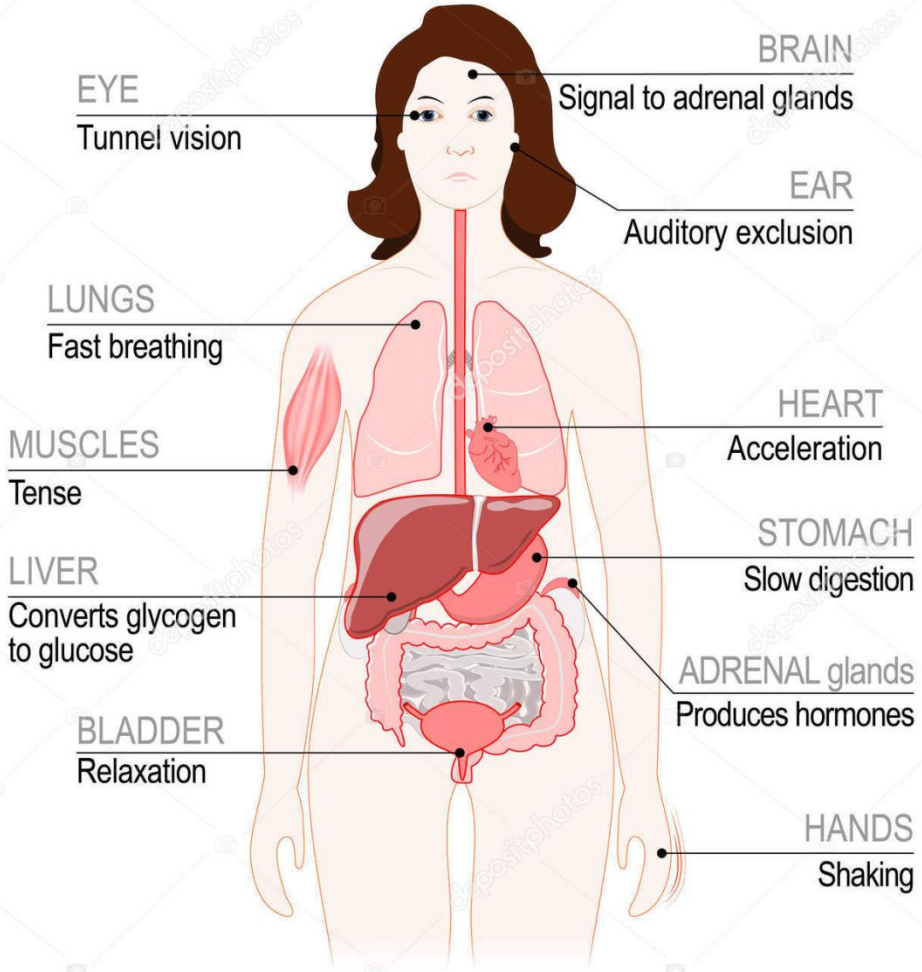
- T. “You are sure that only you are to blame for what happened. What evidence is there for this? Is there anything else that could lead to the event? Could XXX be responsible for this? Could just chance play a role? From external objects / phenomena could at least something matter? “
- T. “If this happened to your friend, would you have the same thoughts?”

explanatory models

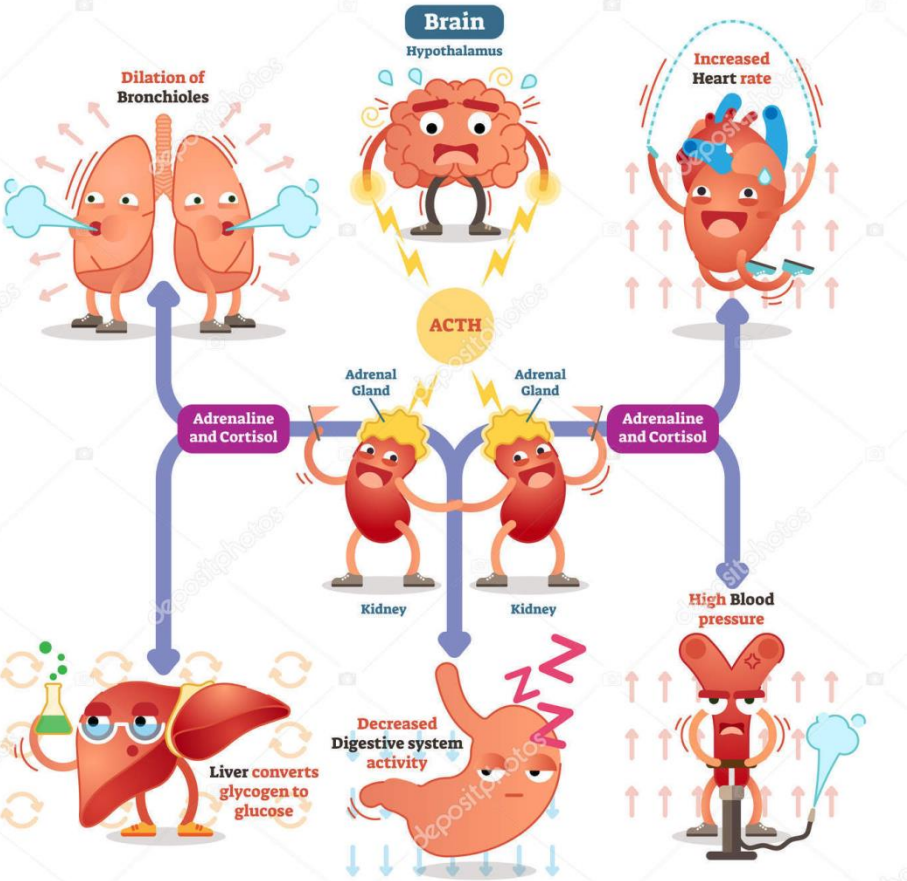
Foa & Kozak, 1986

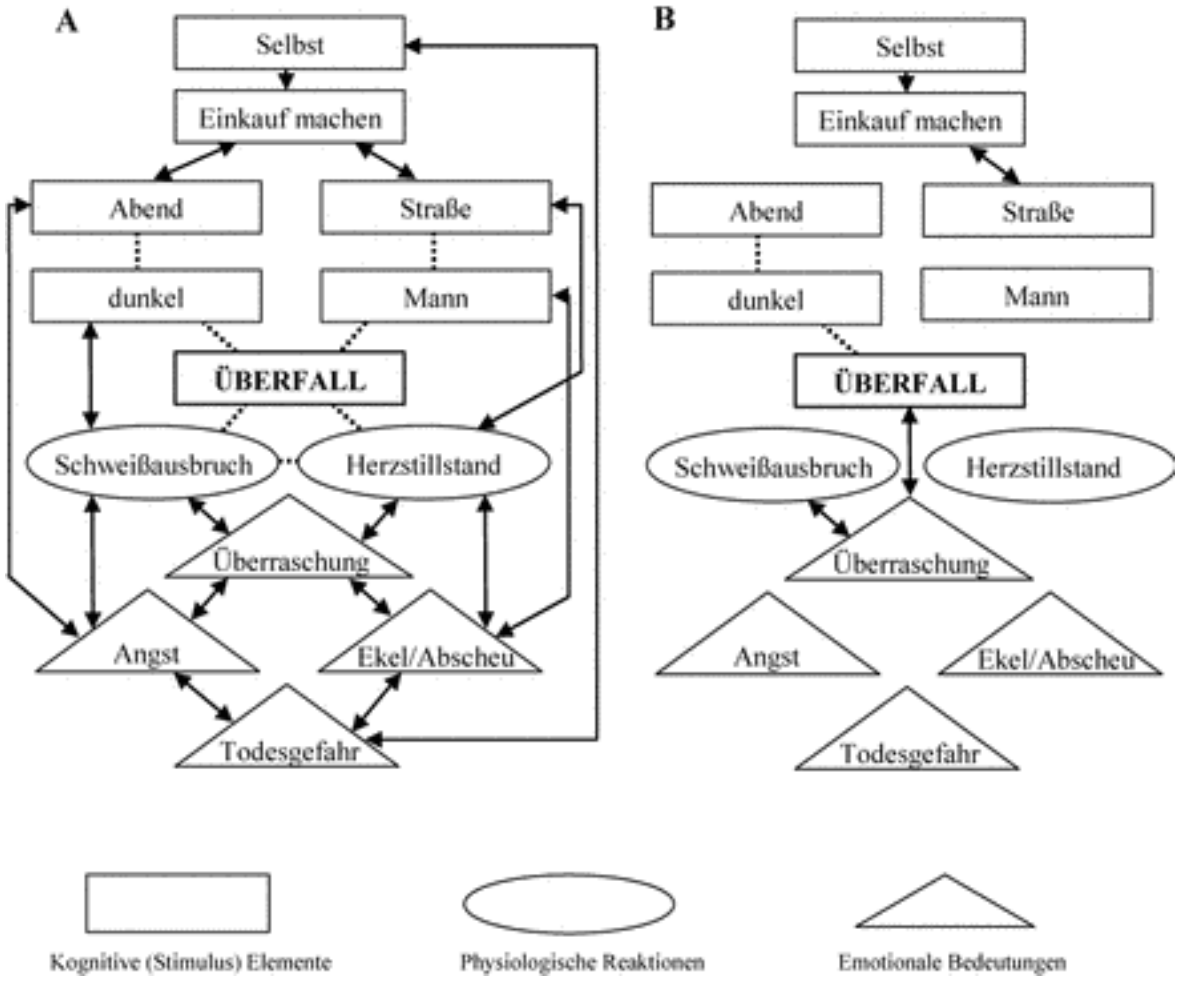
- This model is based on classical conditioning: in addition to conditioned emotional and physiological responses to an event, new content (components) of trauma also arise in semantic memory.
- The larger the network of memories (components), the more key stimuli (sensory and semantic) can be activated. This network is formed when an extremely emotionally significant stimulus (fear of death) is associated with a variety of cognitive elements and physiological responses.
- Fear memories contain information about stimuli, responses, meaning

Fight-or-flight response



STRESS RESPONSE SYSTEM

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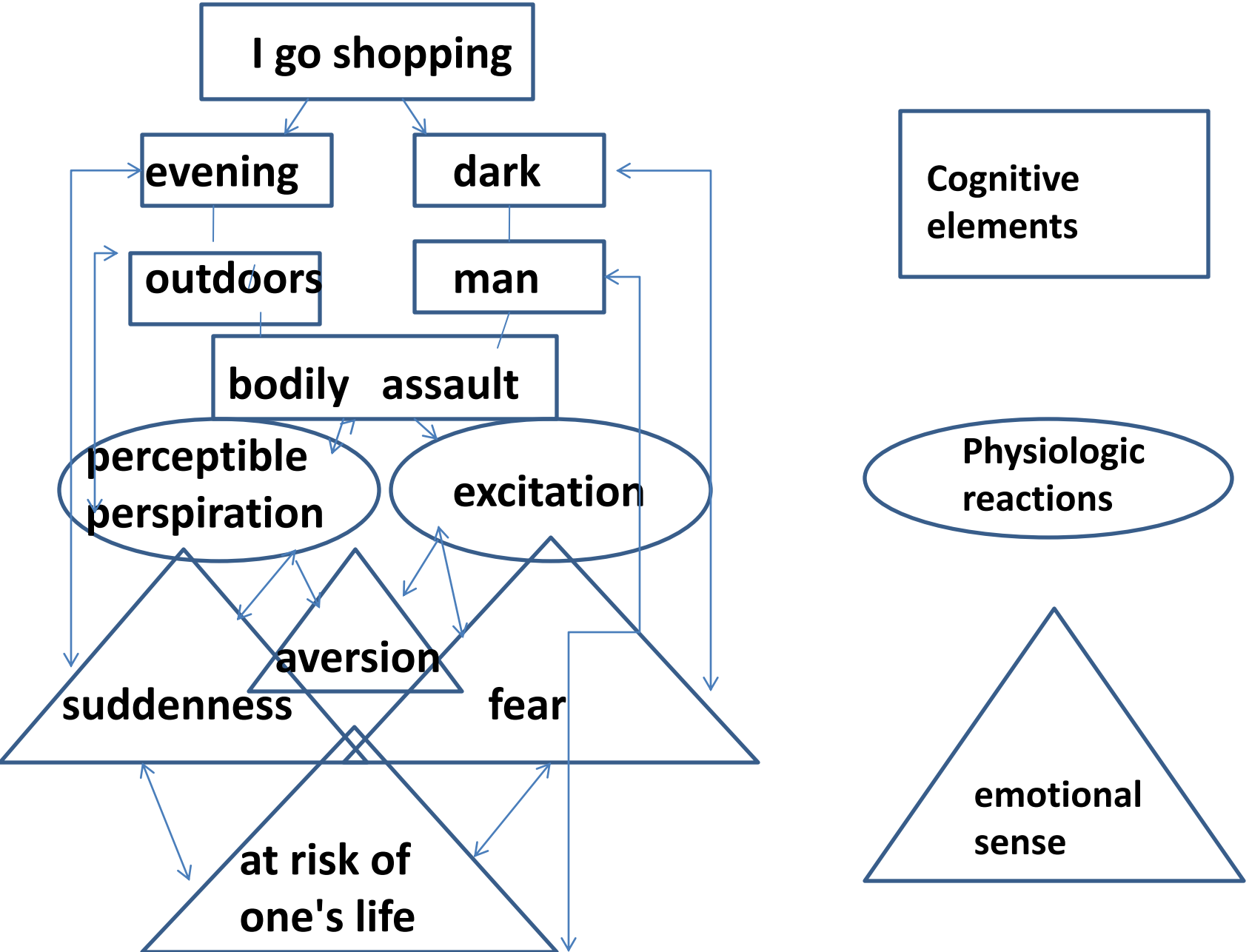
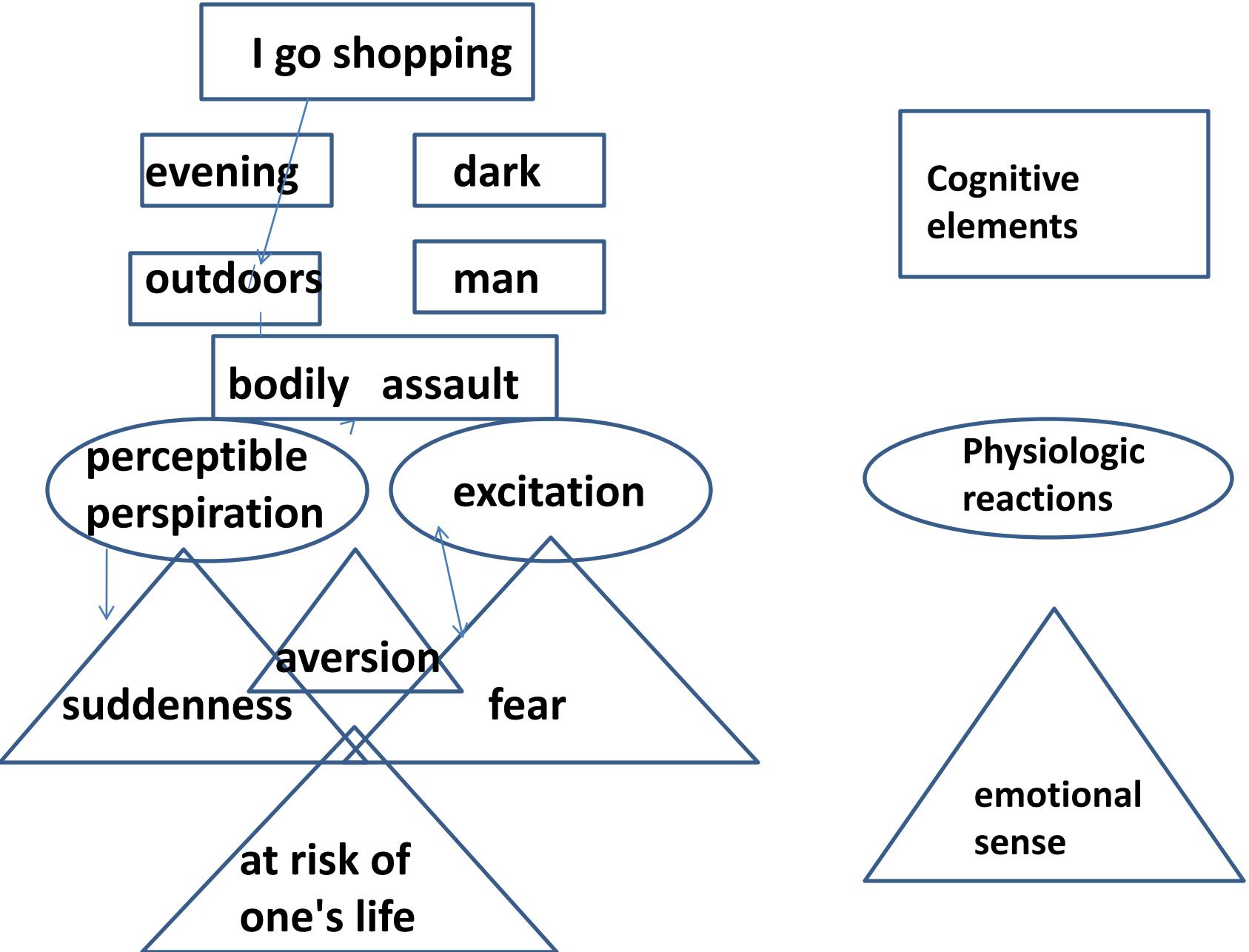
Kognitive (Stimulus) Elemente
Physiologische Reaktionen
Emotionale Bedeutungen

Before treatment



After Treatment



Dual Representation Theory (Brewin, et al 1996)

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- ***Situational accessible memory*** (SAM)

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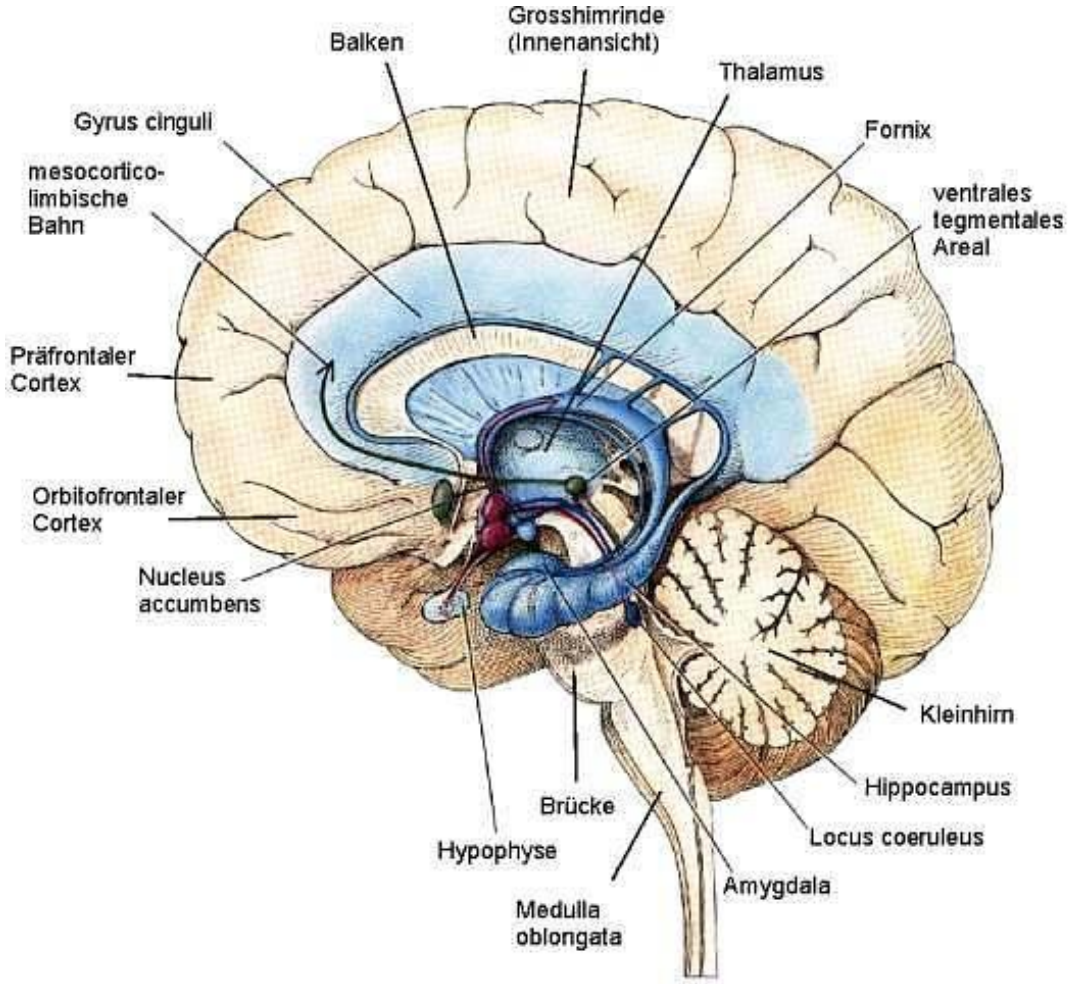

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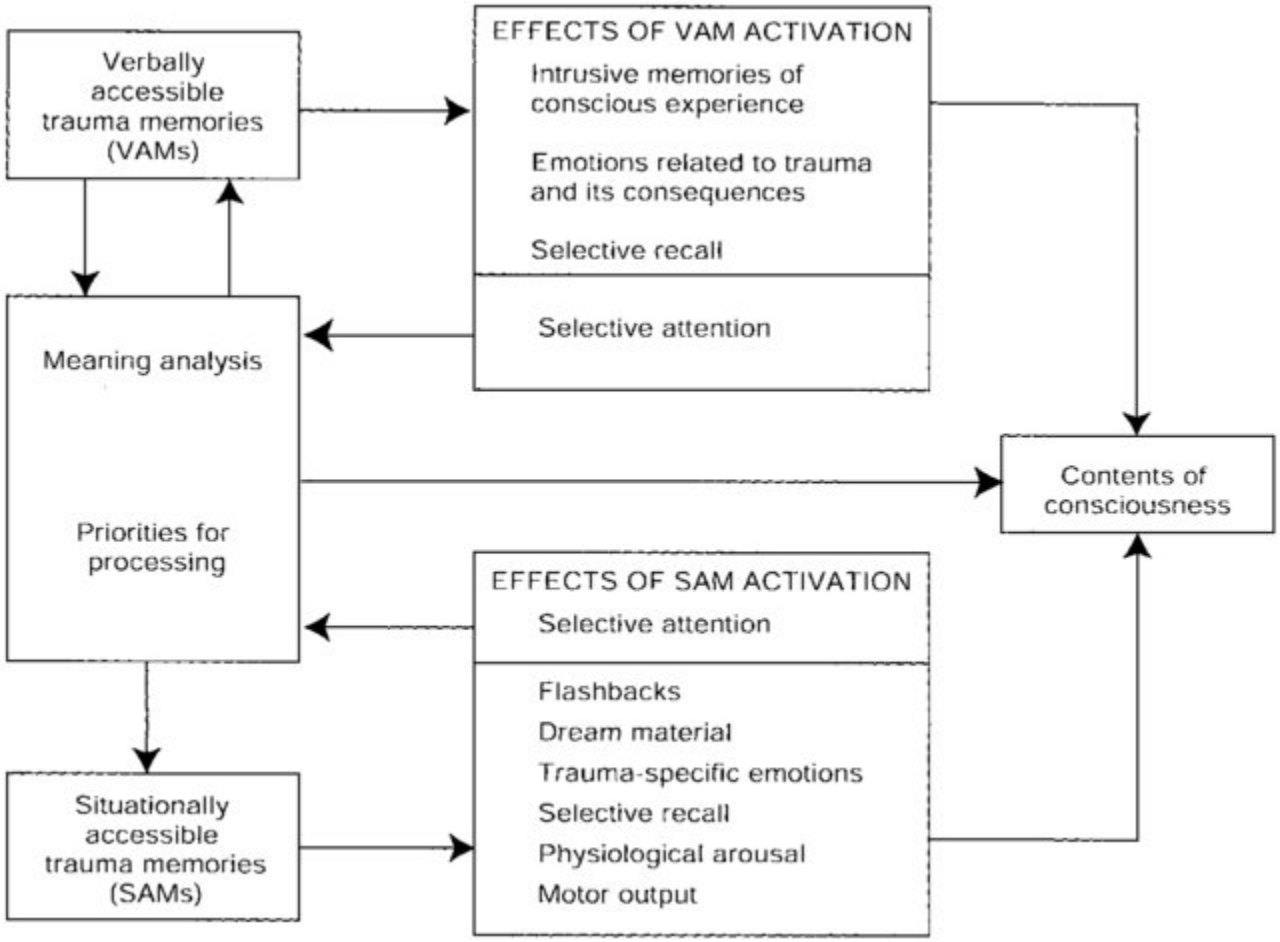

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Dual Representation Theory

- Theory is that in PTSD people have failed to create a detailed VAM representation, therefore considerable amounts of information reside in SAM, producing the characteristic intrusions.
- Treatment involves transferring information from SAM to VAM, thus constructing a VAM memory that exerts control over SAM.

Ehlers & Clark 2000

- the model, explored the paradox that while the trauma is long overdue, fear spreads to the future.
- They explain this by the peculiarities of information processing, which gives an assessment of what happened and indicates the threat to the individual and his future.
- Negative assessment of what happened “I was and will become a victim”, negative assessment of myself “I deserve only bad things” and my post-traumatic symptoms (“My symptoms will never go away”) are of great clinical significance. Further, the model points out that the fear of “not thinking it through” due to avoidance leads to fragmented recollection of what happened and an increase in PTSD symptoms.

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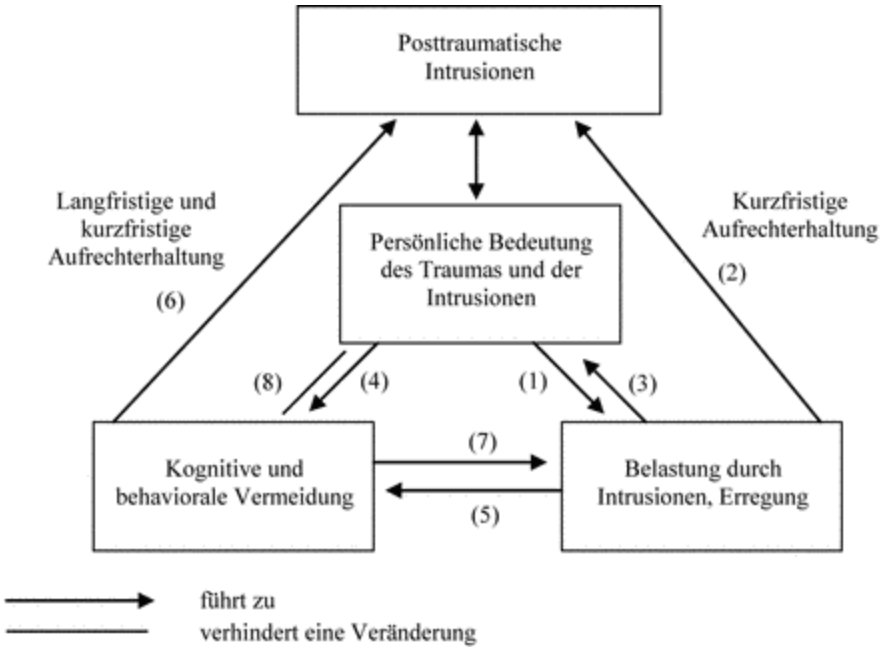
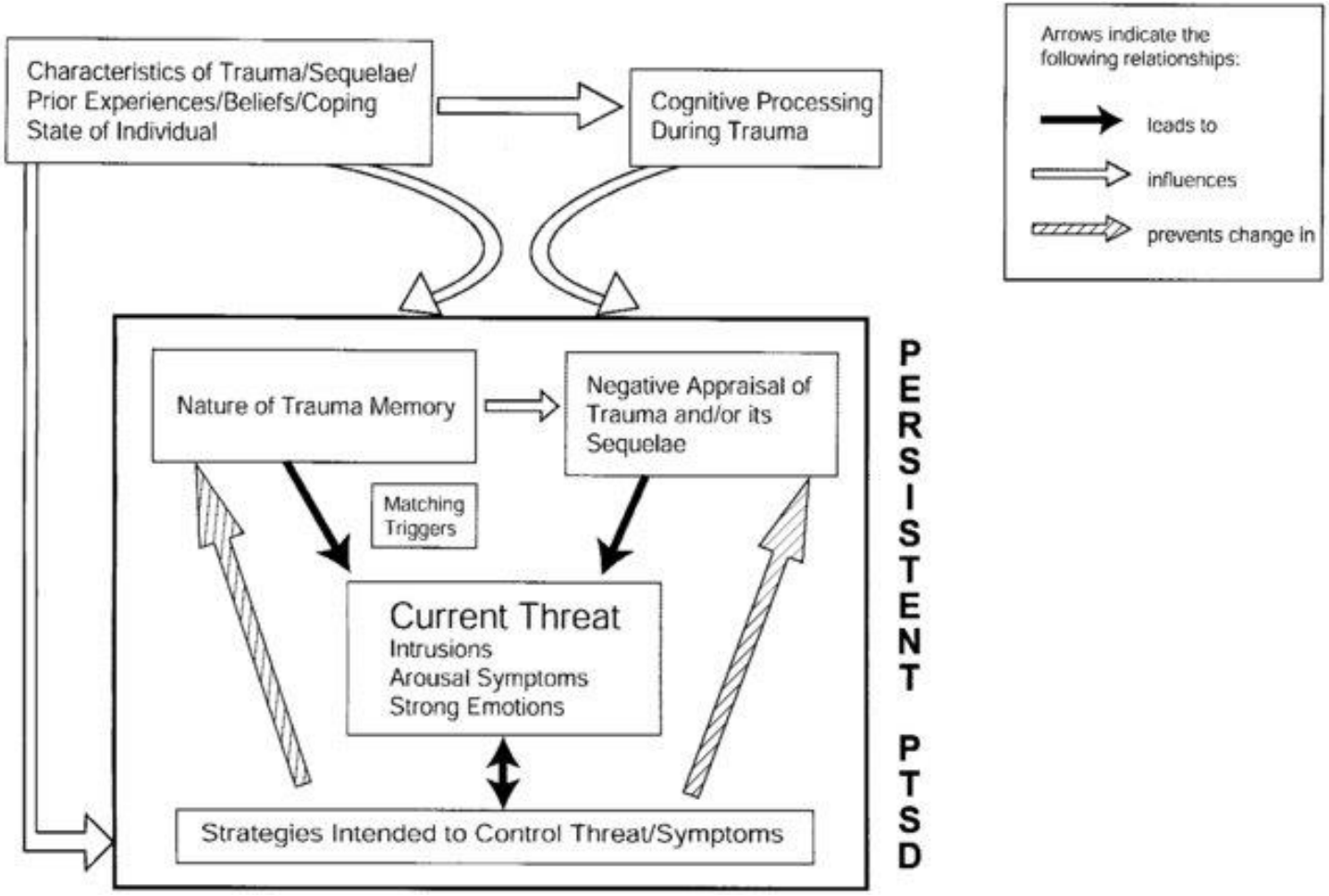
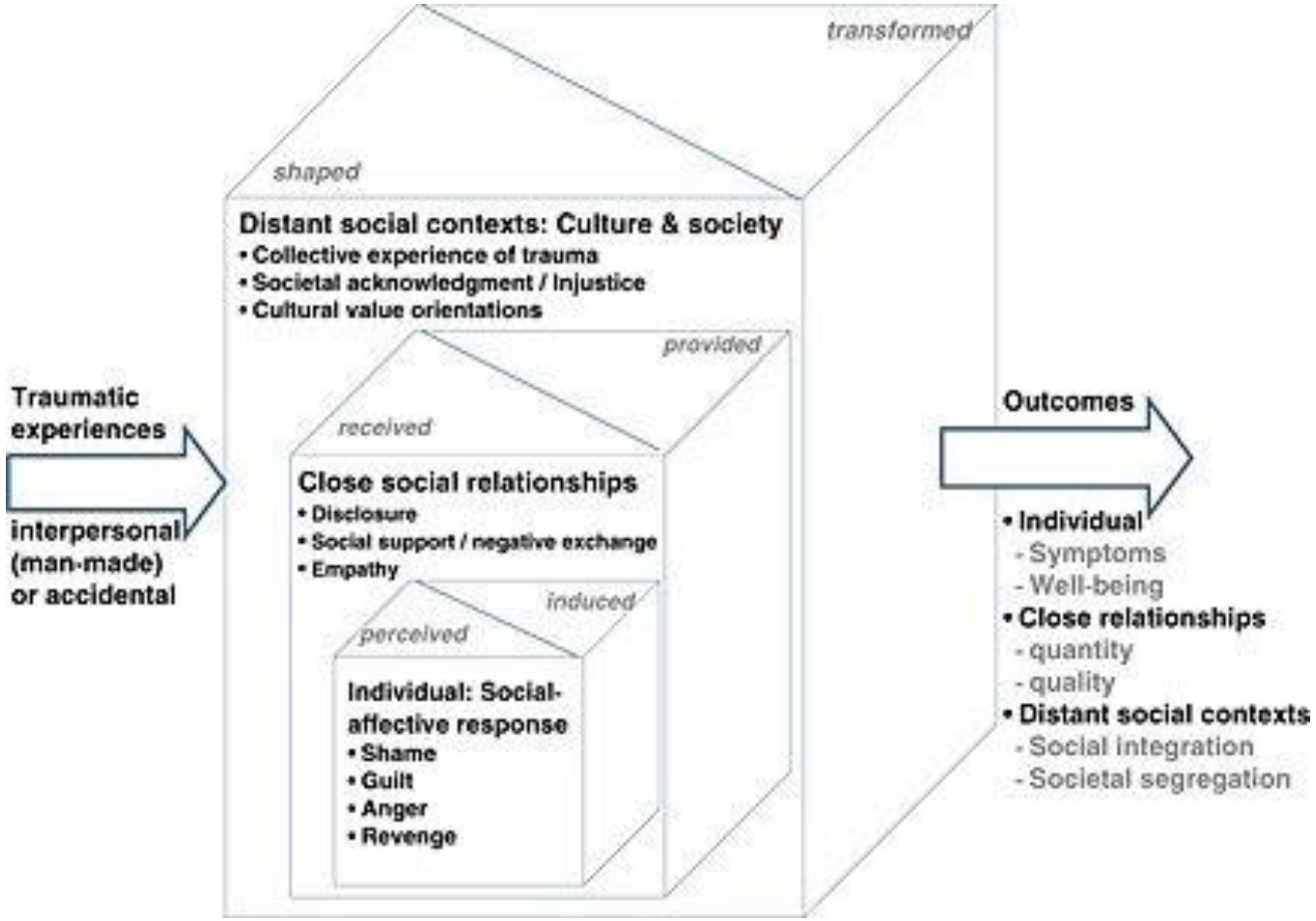


Ehlers & Clark 2000



The social-interpersonal model
Maercker & Horn, 2013



The social-interpersonal model Maercker & Horn, 2013

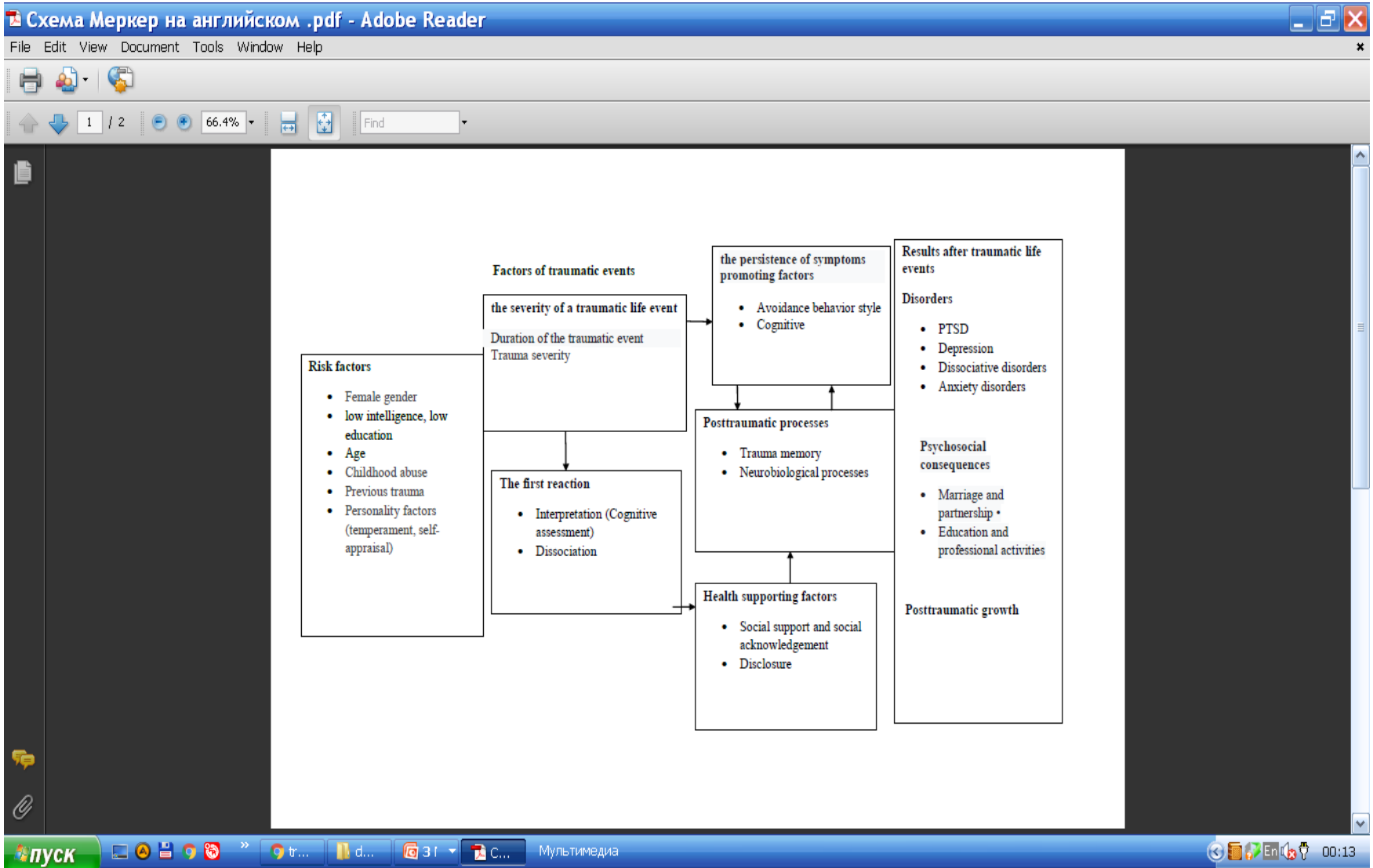
- **The first level** includes **intrapsychic** processes after trauma, which are reflected in social emotions and cognitions. **At the second level**, the **interaction** of the individual with close people comes to the fore. In doing so, the disclosure of the traumatic image and perceived social support from family and friends are most important for trauma handling.

The social-interpersonal model Maercker & Horn, 2013

- At **the third level** are the processes that affect the post-traumatic integration of the individual and organize his **cultural and environment**. These include, among others, political, religious, legal and social relations, as well as social and health systems that interact with the survivors of the traumatic event.
- The authors of this model emphasize that **the most important factors for the development and prolongation of post-traumatic stress disorder** are, first of all, **factors of the second and third levels** (Maercker & Horn, 2013).

- It is important to remember that factors from the above three levels interact with each other, influence each other and form new connections.

The multifactorial framework, Maercker 2009

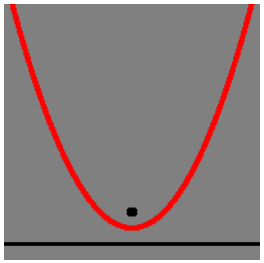


The multifactorial framework model, Maercker 2009

- The multifactorial framework model of the etiology of the consequences of traumatic events includes components of biological, cognitive models, the theory of social learning, in the generally accepted biopsychosocial perspective.
- The model takes into account both aspects of the traumatic event and individual risk factors, protect- factors, as well as factors that influence the processing of trauma and the maintenance of the mental health factor.

Risk factors

- **Female gender** (risk of being robbed, raped is higher)
- **low intelligence**, low education (low ability to adapt)
- **Age** (U-form)
- **Childhood abuse** (parental neglect)
- **Previous trauma** (sexual or physical assault, assault with a weapon)
- **Personality factors** (weak nervous system, low self-appraisal)



Factors of traumatic events

- **the severity of a traumatic life event**

Duration of the traumatic event (longtime natural and technological disasters, political prisoner or prisoner of war) and **trauma severity** (sexual or physical assault in childhood)

- **The first reaction**

Interpretation (*Cognitive assessment*) feelings of complete defeat, self-denial

Dissociation (emotional dullness, derealization, depersonalization, «*out of body*» states)

the persistence of symptoms promoting factors

- **Avoidance behavior style** (operant conditioning - maintenance of PTSD symptoms are associated with operant conditioning)
- **Cognitive changes** (negative assessment of a traumatic event and its consequences)

Posttraumatic processes

- **Trauma memory**

memories of the trauma are disorganized and with gaps

- **Neurobiological processes**

the amygdala (hyperresponsivity), medial prefrontal cortex (decreased volumes), and hippocampus (decreased hippocampal volume)

Health supporting factors

Social support and social acknowledgement (quality of perceived social support from family and friends)

Disclosure (opening of the traumatic life event)

Results after traumatic life events

- **Disorders or Comorbid disorders**

PTSD
Depression
Dissociative disorders
Anxiety disorders
Alcohol abuse

- **Psychosocial consequences**

Marriage and partnership
Education and professional activities

- **Posttraumatic growth** (wisdom after traumatic life events but not healing)

comorbid disorders

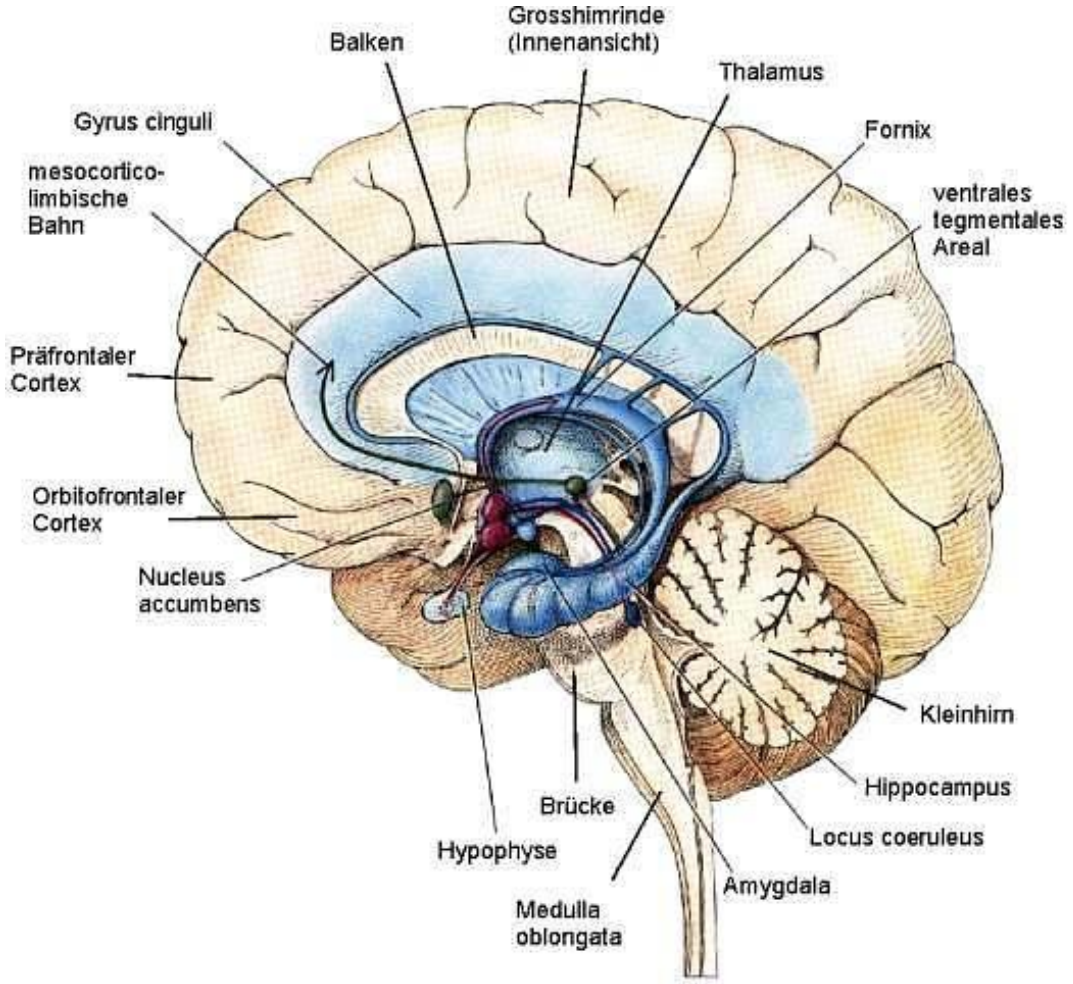
- **depression, generalized anxiety disorder, and substance abuse, personality disorders**

- **(41% criminal victims) sexual dysfunction**
- **(27% criminal victims) obsessive-compulsive symptoms**
- **(82% criminal victims) depression**
- **(18% criminal victims) phobias**

Stabilization and regulation of affect

function of the amygdala, medial prefrontal cortex, and hippocampus in posttraumatic stress disorder

Three brain regions that may be involved in the pathophysiology of PTSD: **the amygdala, medial prefrontal cortex, and hippocampus**



- **The amygdala** is involved in the assessment of threat-related stimuli and is necessary for the process of fear conditioning
- **Medial prefrontal cortex** is involved in the process of extinction of fear conditioning and the retention of extinction. Extinction does not occur normally when medial prefrontal cortex is damaged.
- A third region of interest is **the hippocampus**, which is involved in explicit memory processes and in the encoding of context during fear conditioning. Importantly, the hippocampus appears to interact with the amygdala during the encoding of emotional memories.

PTSD & amygdala

- functional neuroimaging studies of PTSD have provided evidence in support **of heightened amygdala responsivity** to both traumatic reminders and more general affective stimuli. **Amygdala hyperresponsivity** in PTSD has been reported during the presentation of personalized traumatic narratives and cues, combat sounds, combat photographs, and trauma-related words

PTSD & medial prefrontal cortex

- Several morphometric MRI studies have reported **decreased volumes** of prefrontal cortex in PTSD
- Neurochemistry studies have provided data consistent with medial **prefrontal cortex abnormalities**
- Functional neuroimaging studies have also yielded findings consistent with decreased activation and/or a failure to activate medial prefrontal cortex in **PTSD** (a relatively **diminished responsivity in medial prefrontal cortex**)

PTSD & medial prefrontal cortex

- the majority of studies has found **decreased hippocampal volume** or decreased hippocampal NAA levels in **PTSD**
- hippocampal volumes have been inversely associated with verbal memory deficits, combat exposure severity, dissociative symptom severity, depression severity,and PTSD symptom severity.

therapeutic intervention

Education

- This includes educating the survivor (and their families) about trauma and its effects on daily functioning.
- The clinician and patient may share books and articles relevant to the treatment of the traumatic symptoms. This process helps give meaning to the symptoms that he or she experiences and may ultimately facilitate a sense of control over them.
- Cognitive, behavioral, and physical aspects of the stress response are explored with the individual.

Social support and social integration

- Included within this category are **family therapy** and **group psychotherapy**. The former typically helps to improve communication and cohesion between family members.
- Group treatment allows individuals to reduce feelings of isolation, share difficult feelings and perceptions regarding the trauma, and learn more adaptive coping strategies.
- *Spend time with supportive and caring people (family, friends, faith leaders or others). You don't have to talk about what happened if you don't want to. Just sharing time with loved ones can offer healing and comfort.*

Therapy

- The goal of most forms of therapy is to help the individual work through their grief, extinguish fear responses, and improve the quality of the individual's life.
- For example, cognitive-behavior therapy typically relies on exposure strategies to reduce intrusive memories, flashbacks, and nightmares related to the traumatic experience.
- Exposure to fear-producing stimuli and cognitions in a safe and supportive environment, over time, often reduces the impact of these stimuli on the individual's reactivity (Foa & Kozak, 1986).
- Cognitive restructuring strategies are also utilized to address the meaning and, oftentimes, distortions in thought processes that accompany traumatic exposure (e.g., "Life is awful", "All people are cruel").

Effectiveness of treatment

Types of treatment	Studies	Effectiveness
Prolonged Exposure therapy	24/9	1,54
Cognitive therapy	4/2	1, 56-1,7
Combination of cognitive and behavioral therapy	34/14	1,58
Group treatment	1/2	0,40
EMDR	7/30	1,78
Relaxing technique	4/-	1,06

Stages of therapeutic intervention

- Stabilization and emotional regulation
- Trauma-synthesis / trauma-exposure
- Integration and new orientation

Stabilization

- Stabilization refers to the recovery or development (maintenance) of mental safety, the risk of suicidal behavior, self-harming behavior and dissociation.
- Developing control over the expressed emotions that cover patients;
- Decreased impulsivity and increased self-regulation (imagination, relaxation techniques)-

“Protected space”, “sphere”;

- Building social relationships and reducing other trauma-related problems.

Cognitive therapy

- This type of talk therapy helps recognize the ways of thinking (cognitive patterns) that are keeping you stuck — for example, negative beliefs about yourself and the risk of traumatic things happening again. For PTSD, cognitive therapy often is used along with exposure therapy.

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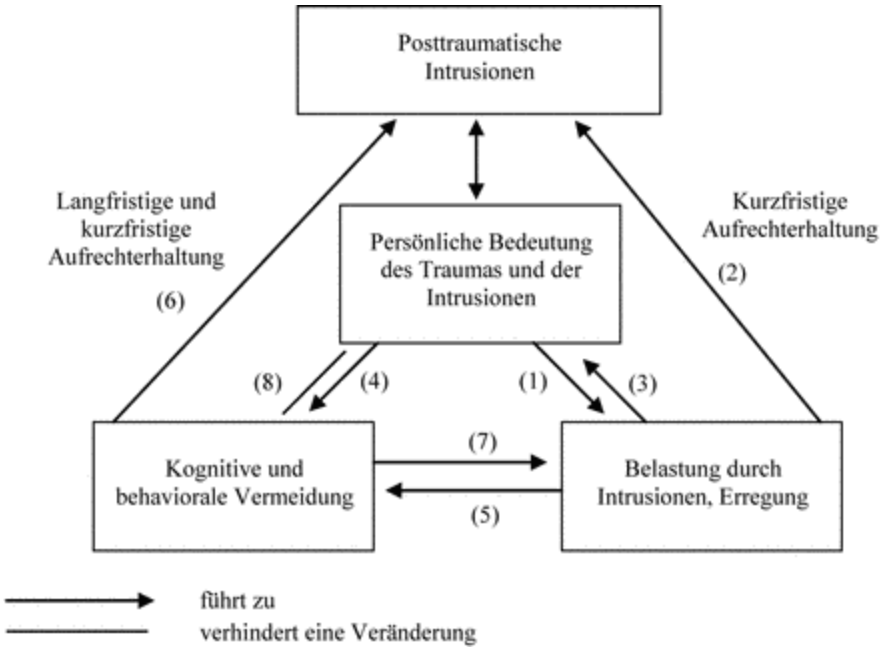

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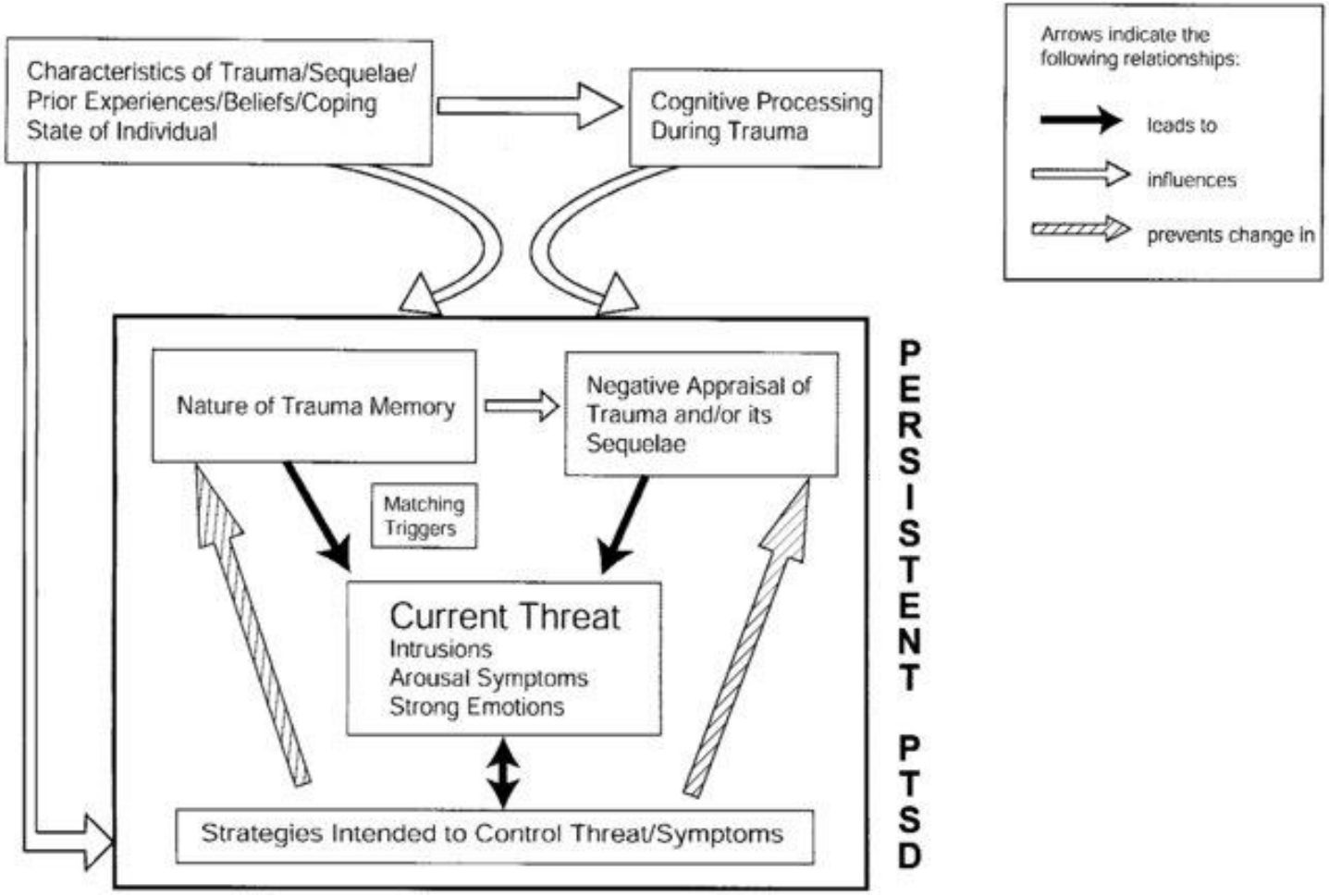

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Exposure therapy

- This behavioral therapy helps you safely face both situations and memories that you find frightening so that you can learn to cope with them effectively. Exposure therapy can be particularly helpful for flashbacks and nightmares. One approach uses virtual reality programs that allow you to re-enter the setting in which you experienced trauma.

Exposure therapy

- 9-12 sessions (1-2 contact and planning);
- The rest 7-10 confrontation
- First confrontation at least 60 minutes Support the patient and make him clear that with anything can be dealt
- From 0 to 100 ask to determine the level of fear
- Efficiency due to: the extinction of fear **(habitualization)** of all elements and due to the fact that in the process of multiple exposure there is an improved organization of the memory **(elaboration)** of what happened, there is a decrease in disorganization and unfinished thoughts.

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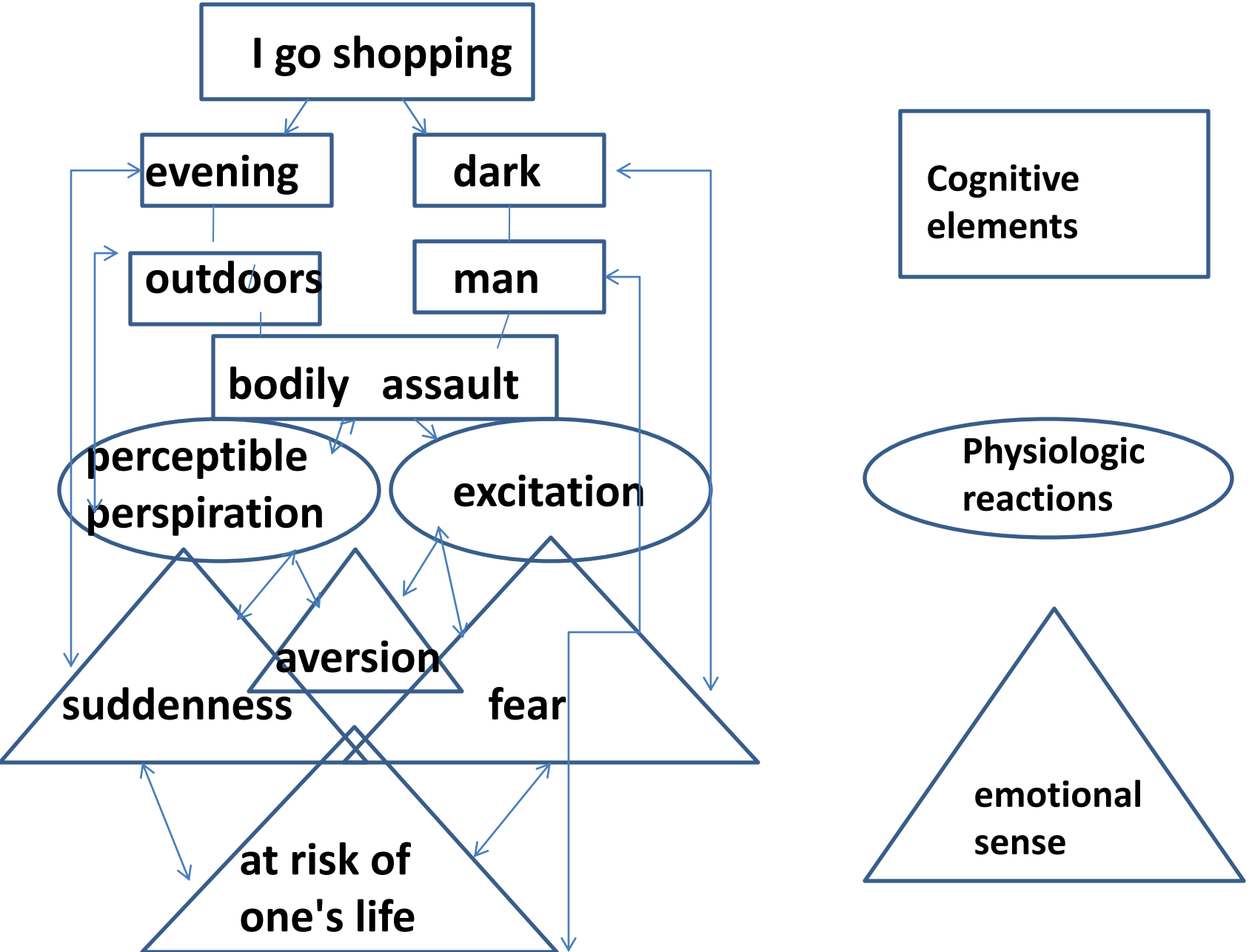
Before treatment



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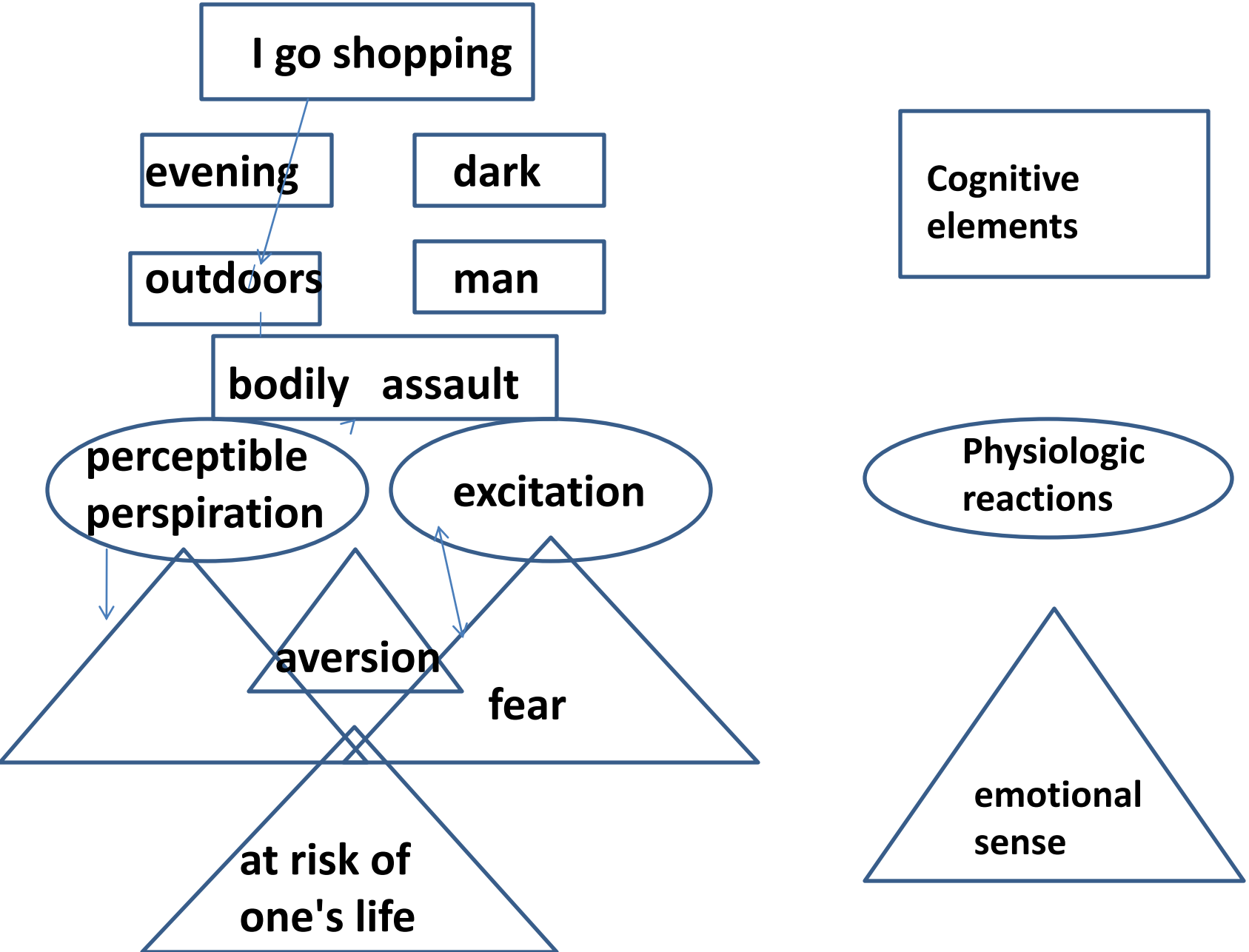

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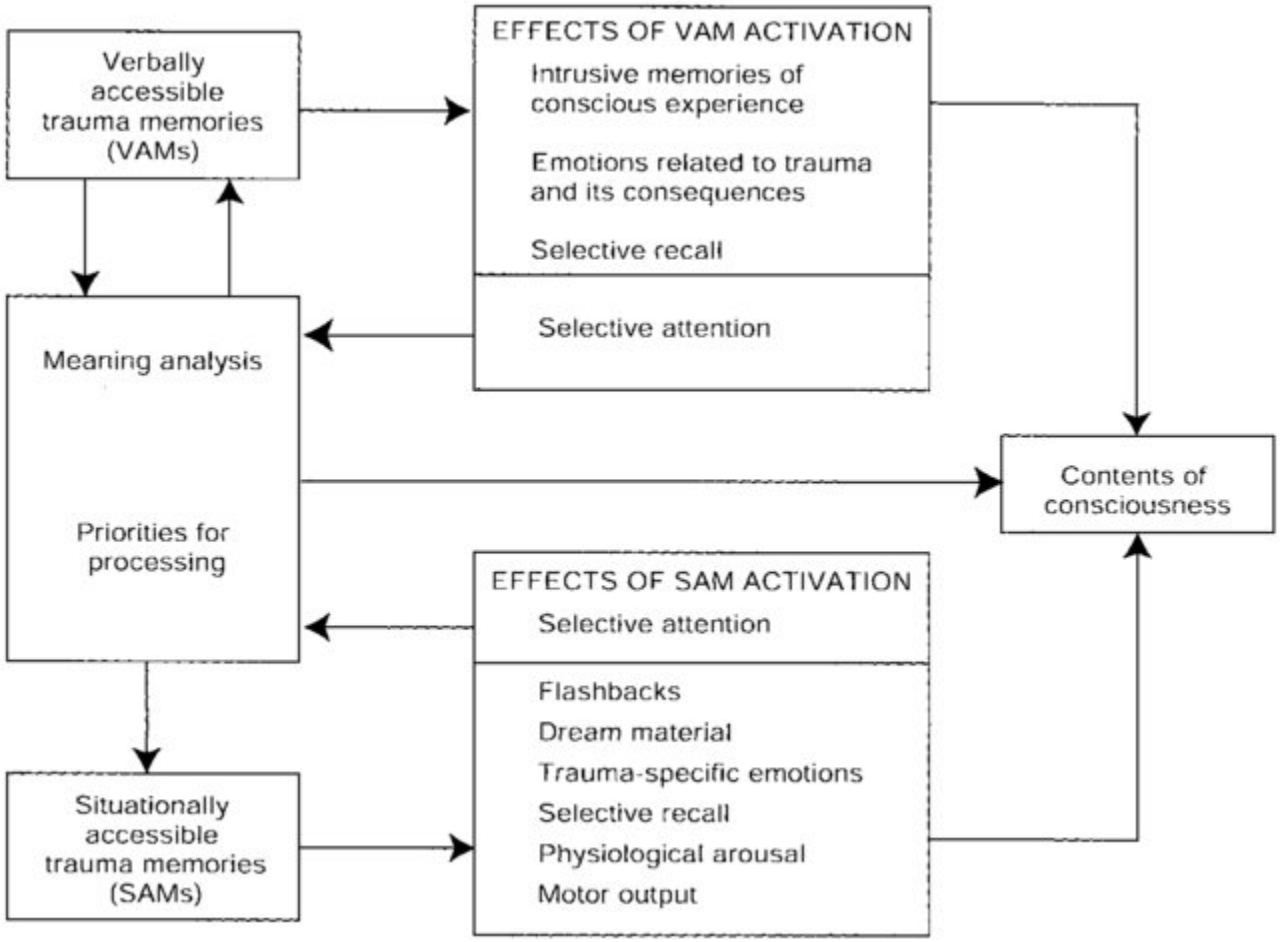

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Dual Representation Theory

- Treatment involves transferring information from SAM to VAM, thus constructing a VAM memory that exerts control over SAM.

Eye movement desensitization and reprocessing (EMDR)

- EMDR combines exposure therapy with a series of guided eye movements that help you process traumatic memories and change how you react to them.

Eye movement desensitization and reprocessing (EMDR)

- EMDR therapy is a phased, focused approach to treating traumatic and other **symptoms** by reconnecting the client in a safe and measured way to the images, self-thoughts, emotions, and body sensations associated with the **trauma**, and allowing the natural healing powers of the brain to move toward adaptive resolution.
- During **EMDR therapy** sessions, **you** relive traumatic or triggering experiences in brief doses while the **therapist** directs your eye movements. **EMDR** is thought to be effective because recalling distressing events is often less emotionally upsetting when your attention is diverted.

Eye movement desensitization and reprocessing (EMDR)

- **EMDR** Therapy changes maladaptive neural networks by connecting the traumatic memory with new information.
- The distressing thoughts and emotions are blended with new positive thoughts and emotions; embodied awareness allows frozen sensations in the body to resolve through healing movements.

Pharmacological treatment

- of traumatic stress and PTSD indicates that different medications may affect the multi-faceted symptoms of PTSD.
- For example, Clonidine has been shown to **reduce hyperarousal symptoms**.
- Propranolol, Clonazepam, and Alprazolam **appear to regulate anxiety and panic symptoms**.
- Fluoxetine may **reduce avoidance and explosiveness** whereas re-experiencing of traumatic symptoms and depression may be treated with tricyclic antidepressants and selective serotonin reuptake inhibitors.

Posttraumatic Growth

Introduction

- Many people have the potential for development (growth)
- Despite growth, there is nothing "good" about traumatic situations
- Traumatic events are not a prerequisite for growth
- Growth and resilience (resilience) are not universal and not taken for granted

Resilience

- Keeping functioning in high-risk environments
- Ability to “walk away” and return to normal functioning after a traumatic event (s)
- This is not a stable personality characteristic, but a dynamic, contextually related, intra- and interindividual characteristic of the adaptation process.

What helps maintain resistance?

- Social network
- Avoid judging events as "impossible to survive“
- Changes in life are happening, you need to accept it
- Find your own goals;
- be proactive in making decisions
- Open up opportunities to "find yourself“
- Develop and maintain a positive self-image
- Take care of yourself and be considerate of yourself
- Keep the installation hopeful

What is a posttraumatic growth?

- increasing the value of life,
- increasing the importance of personal relationships,
- opening up new opportunities,
- awareness of one's own strength,
- intensification of spiritual consciousness

Psychodiagnostic

- PGS Posttraumatic Growth Scale (Tedeschi & Calhoun, 1996)

Posttraumatic Growth study
Dekel, S., Ein-Dor, T., & Solomon, Z. (2012)

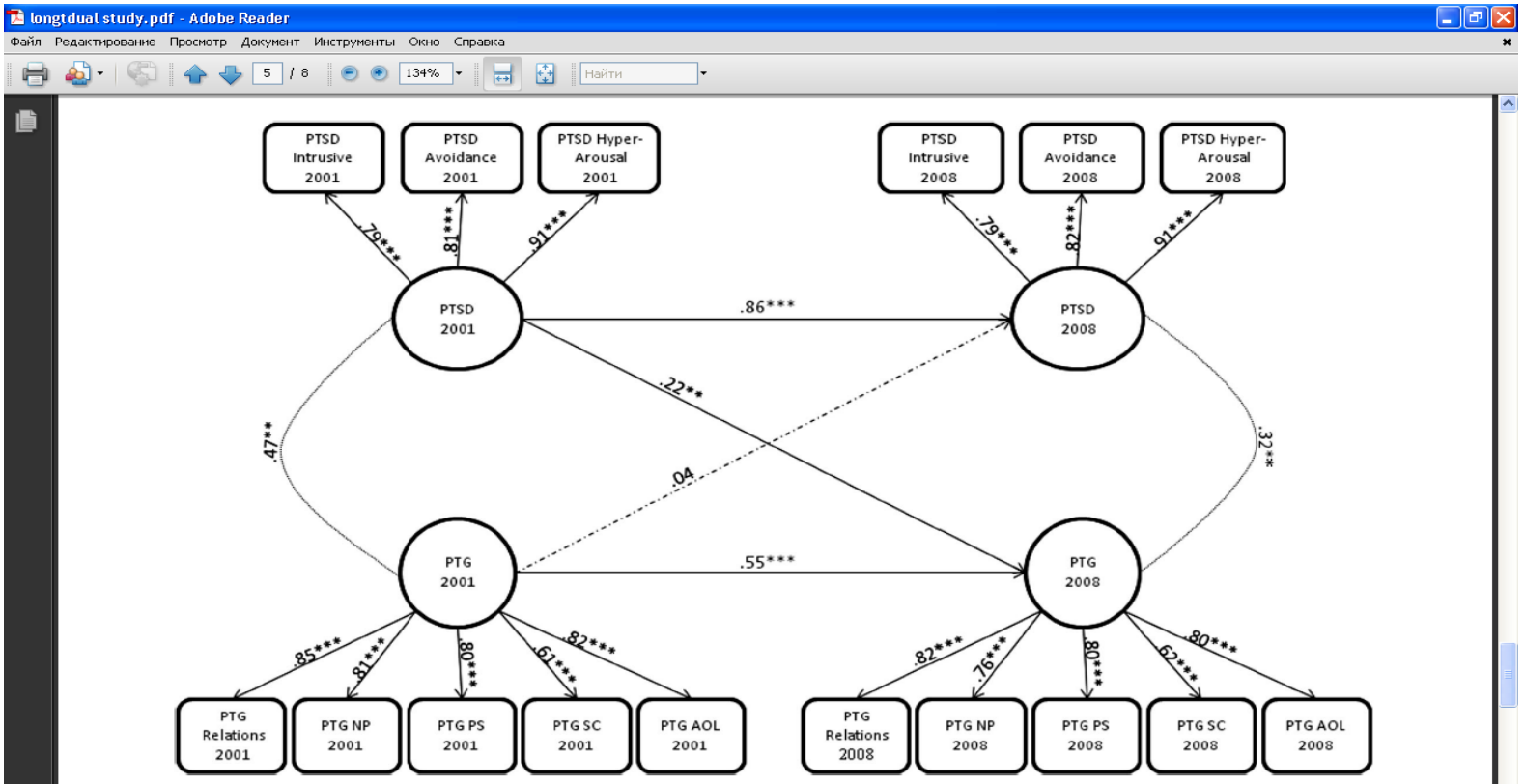

Figure 1. ARCL model for assessing the bidirectional association between PTSD and PTG across two time-points, 2003 and 2008.

The illusory nature of post-traumatic growth
Zoellner, T. & Maercker, A. (2006)

post-traumatic growth is not a salutogenic factor,
not associated with a decrease in psychopathological symptoms,
not associated with a decrease in PTSD symptomatology,
cannot be "caused" in the survivor of a traumatic event artificially or at the request of a psychotherapist, psychologist,
persistence in identifying it in the victim can lead to aggressive behavior and the development of depressive disorders.

How can we help?

- The mood, sensitivity of the psychologist (psychotherapist) to the growth processes (support, but not forcing)
- Help Imaginative techniques, cognitive-behavioral elements, wisdom therapy
- With children, it is important to develop autonomy, initiative, the ability to act, the ability **to develop resilience, stable and reliable social relationships**;

- With adolescents, develop hope for a successful future, for the development of "resilience", firmness, psychosocial health, integration into significant systems of relationships, fairness in relationships, controllability, identification
- Adults: problem solving, self-regulatory competence, ability to maintain consistency (density), balance between autonomy and being part of a collective process, wisdom therapy

Thank You very much!