Psychosomatics lecture

History of psychosomatics I

From the very beginning of the medicine it was divided by the paradigmatic dualism: ***medicine of organs vs. medicine of functions***

Primitive medicine: shamanic medicine, Central America‘s Ladynos;

- The idea expressed in Old Testament, that body health is inseparable from the healt of soul (*Book of Job*)
- Plato: “...part can not be healthy if the unity is not healthy” (*Charmides*)
- Erasistratus from Alexandria (III B.C.) diagnosed „incurable“ disease of the son of the king of Syria which was due to the love of the fathers new wife Stratonike, and he was cured (!);

History of psychosomatics II

In the medieval Islamic world the Persian psychologist-physicians Ahmed ibn Sahl al-Balkhi (d. 934) and Haly Abbas (d. 994) developed an early model of illness that emphasized the interaction of the mind and the body. They proposed that a patient's physiology and psychology can influence one another.

History of psychosomatics III

- ***René Descartes*** (1596 – 1650, France) – one of main theoreticians of „dualism“, who divided phenomena int two cathegories - “res extensa” and “res cogitans” (however, originally stating it will not apply for medicine)
- ***Baruch Spinoza*** (1632 – 1677, the Netherlands) thought, that every event in the psyche has its parallel event in the body– “ideoplasia”
- ***G.W.Leibnitz*** (1646 – 1716, Germany) thought, that there is no interconnection between body and soul, but predestined coordination of the events in both realms – „a harmony“

History of psychosomatics

- ***J. C. Heinroth*** (1773 – 1843, Germany) – the author of the term „psychosomatics“(1818), used to describe the development of insomnia
- ***H. Maudsley*** (1835 – 1918, UK) – “If emotions are not expressed by the external signs or the work of the organism, they influence our organs and damage its functions; *[e.g.]* sadness is best expressed through tears and lament...” (1876)

History of psychosomatics V

- ***S. Freud's*** psychoanalysis was a theoretical background for the development of psychoso-matics in the 1st half of the XX century. Most prominent authors of this period were:
  - ***F. Dunbar*** (handbook in 1948)
  - ***F. Alexander*** (handbook in 1950)
  - ***F. Deutsch*** (handbook in 1953)
- Essential paradigm of all these theories was a concept of intrapsychic conflict and its influence on the pathology of the organ systems.

History of psychosomatics

After WWII main center of the development of psychosomatics became North America and Europe (esp. Germany). Until now in many German universities clinics of psychosomatic medicine are active (sometimes combined with psychotherapy), and many psychosomatic departments or wards are operating in NHCS (e.g., in Kur‘s). Main theoreticians of the end of XX century:

- Th. von Uexküll, M. von Rad (Germany)
- P. Sifneos, J. C. Nemiah, M. Freedman, R. Rosenman, T. Holmes, R. Rahe (USA)
- Z. Lipowsky (Canada)

Main theoretical paradigms of psychosomatics

1. Personality – specific paradigm of psychosomatics
2. Event – specific paradigm of psychosomatics
3. Unspecific paradigm of psychosomatics

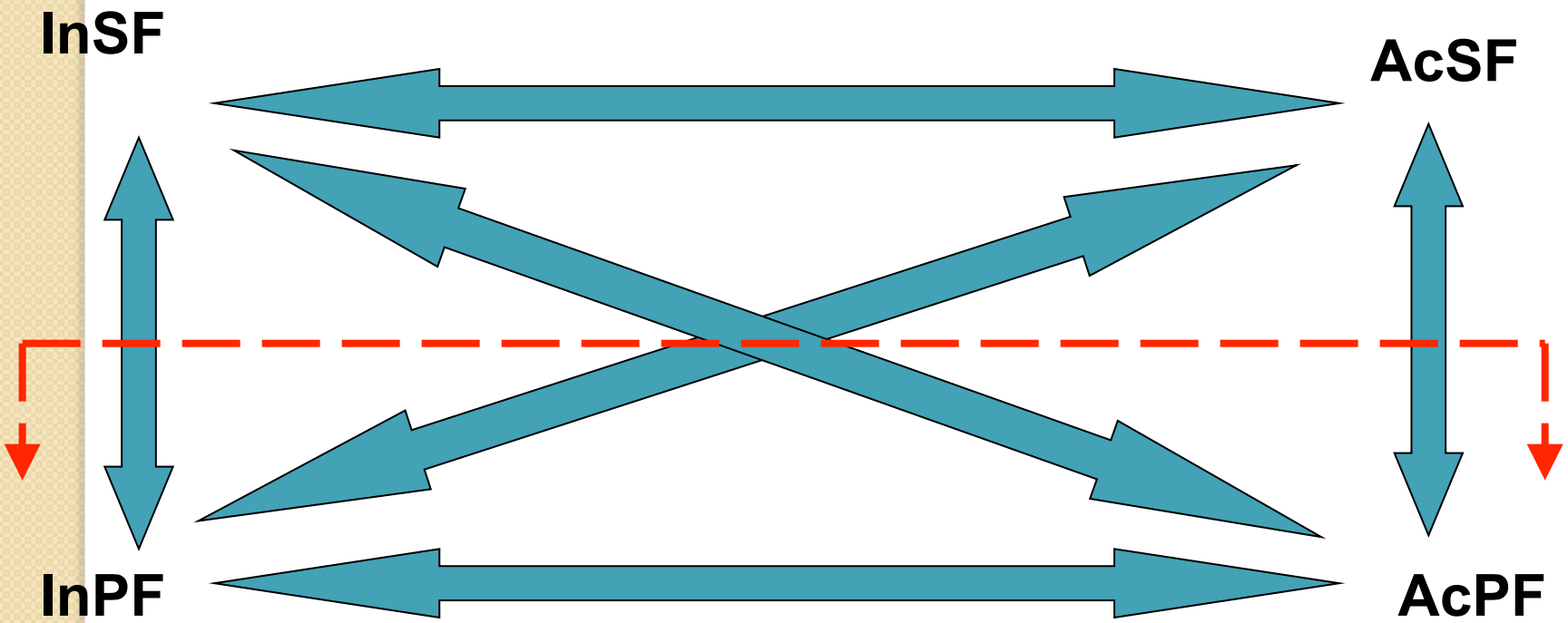
Personality – specific paradigm of psychosomatics

- S. Freud: “Somatic symptoms may be produced by psychological causes”

This general statement was interpreted by several authors in a specific ways:

- F. Dunbar – looking for a relationship between specific personality types and respective diseases;
- F. Alexander – connected specific intrapersonal conflicts (between aggression and the dependency need) in special situations with specific psychosomatic reactions:
  - Dominance of the Sympathetic nervous system in case of the repression of aggression (hypertension)
  - Dominance of the Parasympathetic nervous system in case of the repression of dependency needs (rheumatoid arthritis, ulcer)

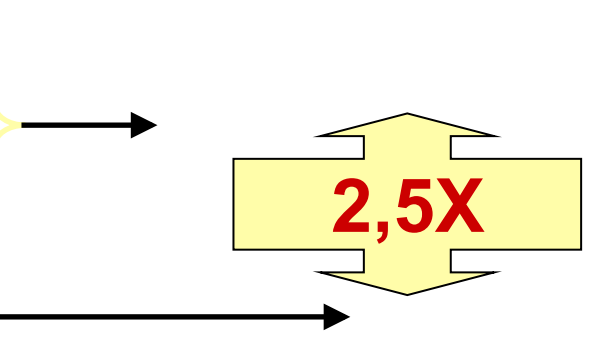
Concept of Psychosomatics



Personality specific psychosomatics

Aleksithymia (a-lexis-thymos) is a concept of a relation between unexpressed emotions in language of the subjects (content analysis) and psychosomatic diseases:

- Healthy subject
- Neurotic patients
- Psychosomatic patients



P. E. Sifneos and J. Nemiah (1972 - 1973),

Type A behaviour (TAB)

TAB found by M. Friedman ir R. H. Rosenman in 1959 m. Research project was carried in the Institute of Heart, Lungs, and Blood of Chicago, included 3460 healthy men 49 – 54 years of age. It was a first prospective study in a field of psychosomatics. Two types of behaviors were found connected with CHD and labeled A/B.

Essential features of TAB:

1. Constant time restrain
    1. "Stepping upon" the end of the sentence
    2. Inability to drive „at the tail"
    3. Rush to make all possible jobs

Type A behaviour (TAB)

2. Aggression towards life:
   - Loud, overpowering, and decisive speech
   - Inability to lose at any situation
   - Inability to value done jobs
   - Attempts to do more and more
3. This produces a constant stress situation:
   1. Periorbital hyperpigmentation

Hypophysis ⟹ ACTH (+TTH) ⟹ pigment

Type A behaviour (TAB)

Impact of TAB on coronary heart disease:

- TAB demonstrating subjects make to 98,5% of those with CHD and MI;
- Innate forms make only about 20% of cases, the rest – conditioned TAB
- TAB can be modified, and after modification the risk of a second MI decreases substantially (in the experimental group MI happened 45% less during 4 years follow-up after first MI, and even among healthy controls the incidence of MI was significantly lower, than in the population)
- TAB modification is possible only by PT means

Type A behaviour (TAB)

Problems in diagnostics of TAB:

- Only a part of symptoms can be diagnosed using tests (only17 of 35 can be diagnosed by psychologic instruments)
- Behavioural symptoms (18) can be diagnosed only after specialized training
- **Absolute majority (85%) of cardiologists demontrate TAB themselves** (Blankenhorn et al., 1981)

The A's, B's, and D's of Coronary Heart Disease

- Type A Behavior Pattern
  - Cluster of behaviors involving hostility, competitiveness, time urgency, and feeling driven
- Type B Behavior Pattern
  - Characterized by a patient, cooperative, noncompetitive, and nonaggressive manner
- Type D Behavior Pattern
  - D is for "distressed"
  - Characterized by insecurity, anxiety, and a negative outlook
  - At risk for repeated heart attacks

Event-connected psychosomatics

- Vietnam war (1959 [1964 - USA] – 1975) veterans from USA (19 – 22 m.) after 12 months in jungle had sclerotic changes in their aortas, resembling the same as 55 – 60 years old in an ordinary life conditions.
- The loss of a spouse – increases a risk to die in consecutive 6 months (mainly for heart attack) 2x, compared to the same age subject who hasn’t lost the spouse.

Event-connected psychosomatics

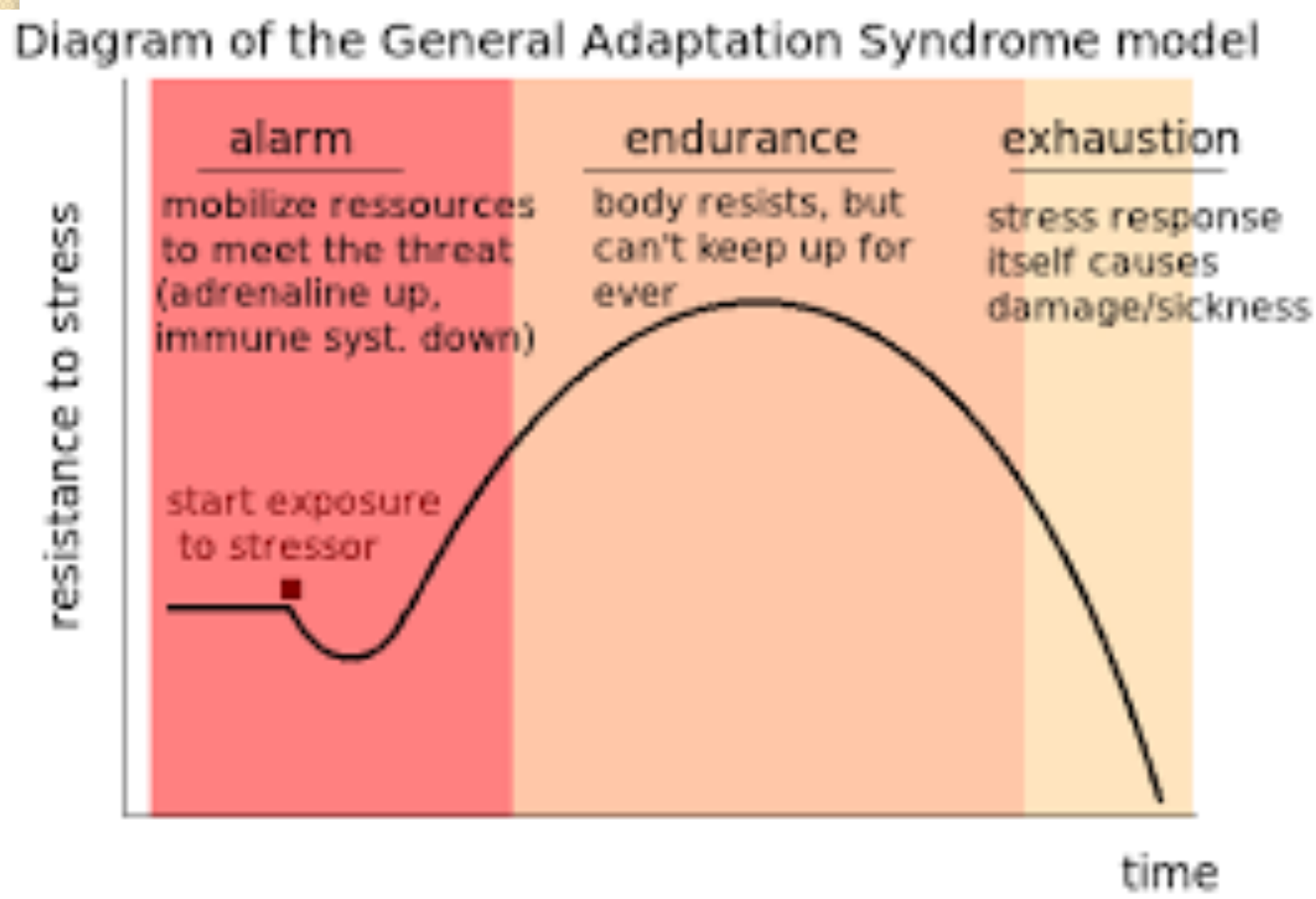
- Process of mourning and its psychosomatic consequences.
- Stages:
  - Denial and aggression
  - Acceptance and depression (frequent pain disorders):
    - Vague (non-specific)
    - Identificatory (in the organ or system, where the disease of the deceased was localized
  - Readaptation

A grief which is not completed increases the risk of psychosomatic disorders significantly!

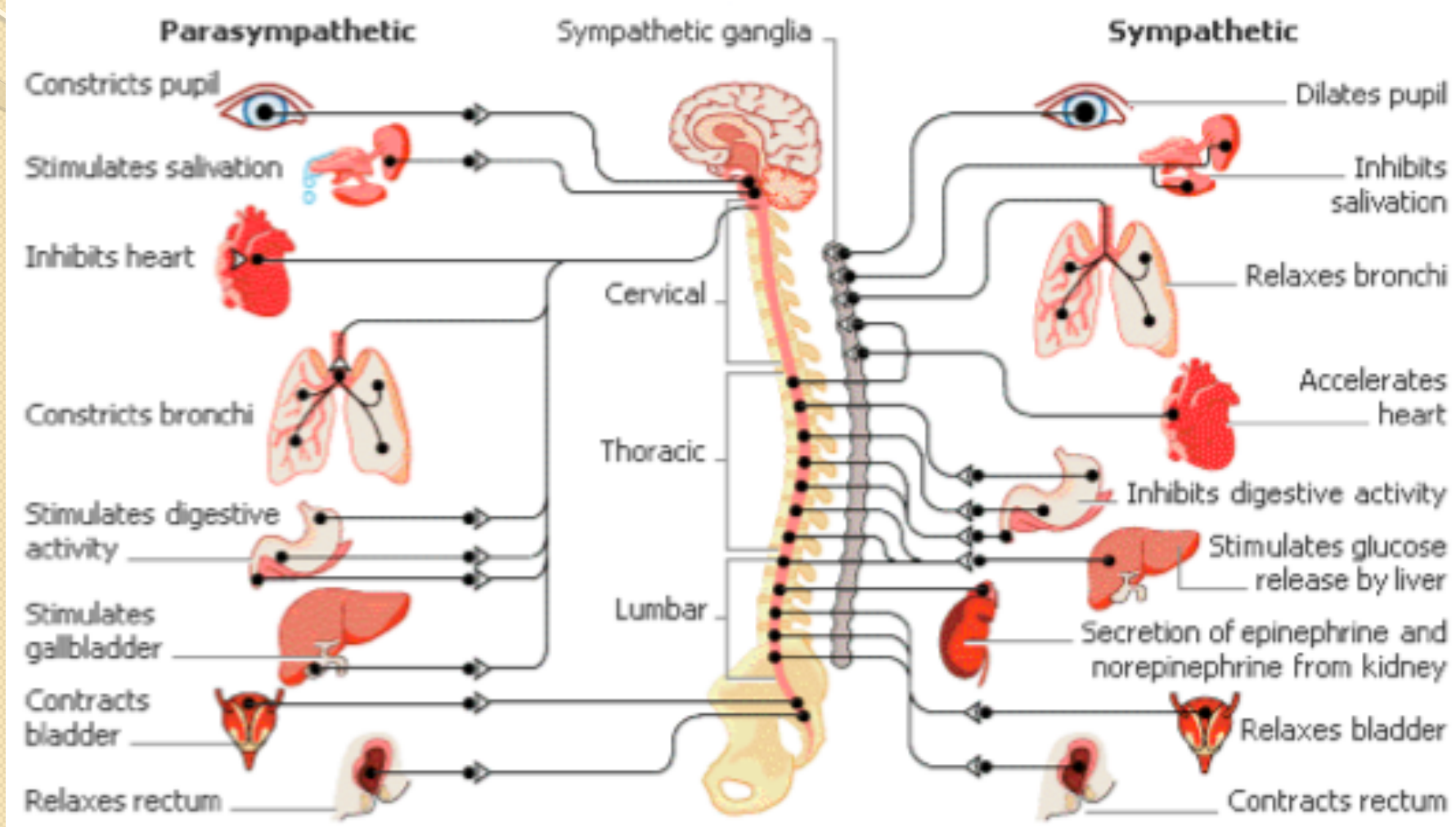
Nonspecific concept of psychosomatics

- Stress (general adaptation syndrom) concept was introduced by Hans Selye in 1936.
- In 1975 he divided it into ***eustress*** (which increases a resistance of the subject) and a ***distress*** (when compensation mechanisms are exhausted, and dis-adaptation starts). Extent of stress depends on:
  - *Experience of change (in external or internal reality)*
  - *Personal expectations*
  - *Coping mechanisms*

Stress curve

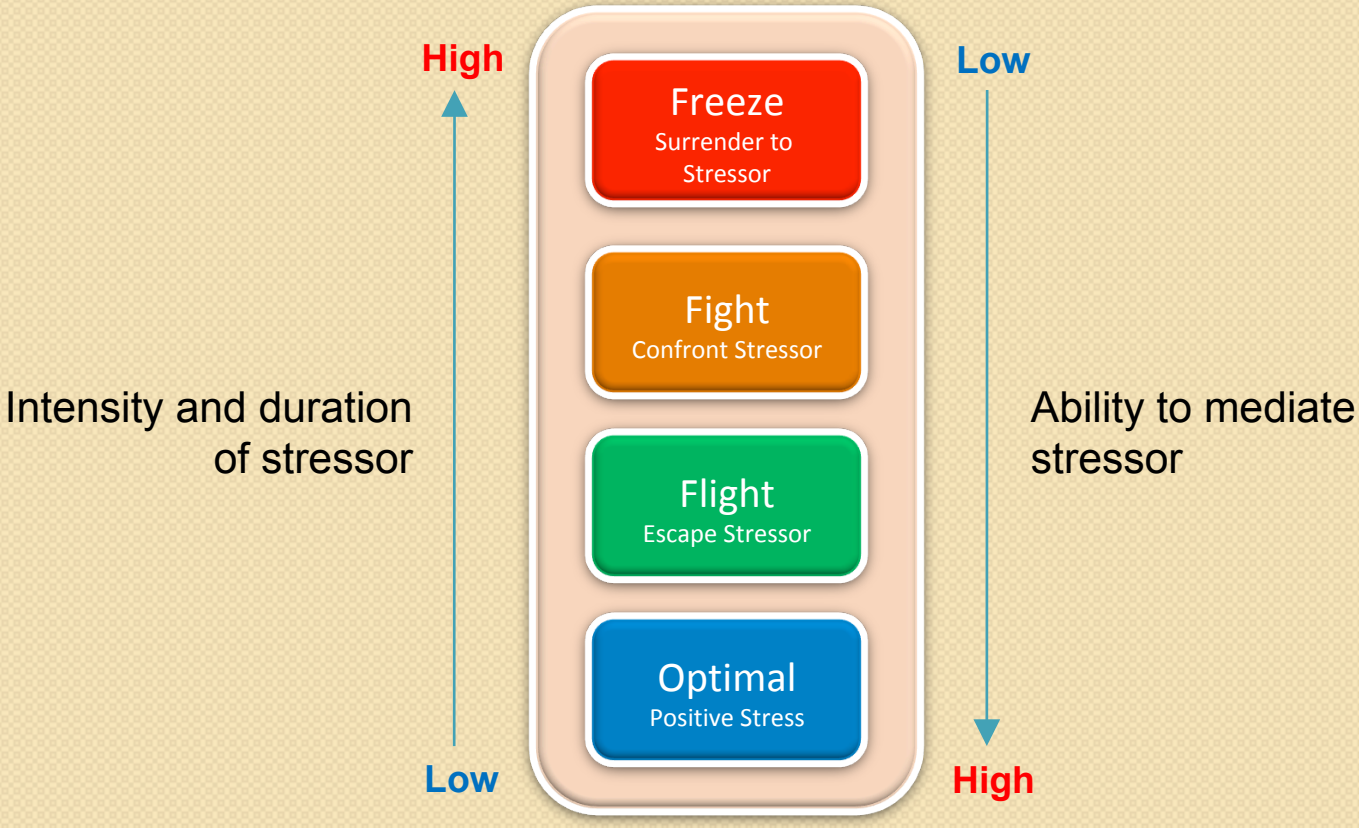


Physiology of the stress



Stress Response

The Stress Response Continuum



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Social readaptation scale

- T.Holmes ir R. Rahe in 1967 proposed the scale for measuring life changes (LCU) after the evaluation of the impact of different life events on the somatic health of >5000 in- and out-patients case histories. It was demonstarted, that for both children and adults, who collected in a previous year LCU‘s:

  >300 – high risk of disease

  299 ÷ 150 – moderate risk of disease

  ≤ 149 – low risk of disease

LCU scale for adults

LIFE CHANGE UNITS

	EVENT	IMPACT
[ ]	DEATH OF SPOUSE	100
[ ]	DIVORCE	73
[ ]	MARITAL SEPARATION	65
[ ]	JAIL TERM	63
[ ]	DEATH OF CLOSE FAMILY MEMBER	63
[ ]	PERSONAL INJURY OR ILLNESS	53
[ ]	MARRIAGE	50
[ ]	LOSS OF JOB	47
[ ]	MARITAL RECONCILIATION	45
[ ]	RETIREMENT	45
[ ]	CHANGE IN HEALTH OF FAMILY MEMBER	44
[ ]	PREGNANCY	40
[ ]	SEX DIFFICULTIES	39
[ ]	GAIN OF NEW FAMILY MEMBER	39
[ ]	BUSINESS READJUSTMENT	39
[ ]	CHANGE IN FINANCIAL STATE	38
[ ]	DEATH OF CLOSE FRIEND	37
[ ]	CHANGE TO DIFFERENT LINE OF WORK	36
[ ]	CHANGE IN NUMBER OF ARGUMENTS WITH SPOUSE	35
[ ]	DEBT OF MORE THAN $10,000	31
[ ]	TROUBLE WITH IN-LAWS	29
[ ]	OUTSTANDING PERSONAL ACHIEVEMENT	28
[ ]	SPOUSE BEGINS OR STOPS WORK	26
[ ]	BEGIN OR END SCHOOL	26
[ ]	REVISION OF PERSONAL HABITS	24
[ ]	TROUBLE WITH BOSS	23
[ ]	CHANGE IN WORK HOURS OR CONDITIONS	20
[ ]	CHANGE IN RESIDENCE	20
[ ]	CHANGE IN SCHOOLS	20
[ ]	CHANGE IN RECREATION	19
[ ]	CHANGE IN CHURCH ACTIVITIES	19
[ ]	CHANGE IN SOCIAL ACTIVITIES	19
[ ]	DEBT OF LESS THAN $10,000	17
[ ]	CHANGE IN SLEEPING HABITS	16
[ ]	CHANGE IN NUMBER OF FAMILY GET-TOGETHERS	15
[ ]	CHANGE IN EATING HABITS	15
[ ]	VACATION	13
[ ]	CHRISTMAS	12
[ ]	MINOR VIOLATIONS OF THE LAW	11

STUDENT STRESS RATING SCALE

The following are events that occur in the life of a college student. Place a check in the left-hand column for each of those events that has happened to you during the last 12 months.

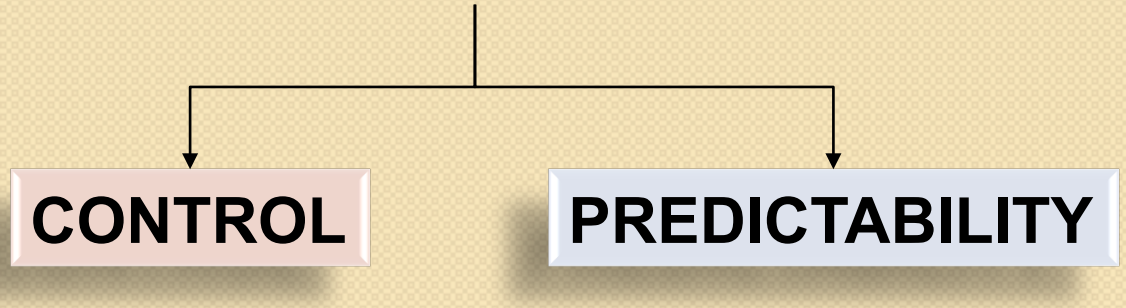
___ Death of a close family member - 100 points
____ Jail term - 80 points
____ Final year or first year in college - 63 points
____ Pregnancy (to you or caused by your) - 60 points
____ Severe personal illness or injury - 53 points
____ Marriage - 50 points
____ Any interpersonal problems - 45 points
____ Financial difficulties - 40 points
____ Death of a close friend - 40 points
____ Arguments with your roommate (more than every other day) - 40 points
____ Major disagreements with your family - 40 points
____ Major change in personal habits - 30 points
____ Change in living environment - 30 points
____ Beginning or ending a job - 30 points
____ Problems with your boss or professor - 25 points
____ Outstanding personal achievement - 25 points
____ Failure in some course - 25 points
____ Final exams - 20 points
____ Increased or decreased dating - 20 points
____ Changes in working conditions - 20 points
____ Change in your major
____ Change in your sleeping habits - 18 points
____ Several-day vacation - 15 points
____ Change in eating habits - 15 points
____ Family reunion - 15 points
____ Change in recreational activities - 15 points
____ Minor illness or injury - 15 points
____ Minor violations of the law - 11 points

Score: _____

Mediating Stress

The amount of stress we experience in a given situation is mediated by our perception of how prepared we are to effectively confront it.

Sapolsky (2004) has argued that the amount of stress experienced is determined by two psychological factors:



Mediating Stress

CONTROL: The feeling that one is in control of the situation buffers the individual against stress.
***EX**: A well-trained and well-armed police officer feels a relatively high degree of control most of the time, and thus they experience less stress than a civilian would in a similar situation.*

PREDICTABILITY: Being familiar with a crisis-producing situation, including the potential outcomes, also provides a buffer against stress.
***EX**: As a result of training and experience, a police officer knows what to expect most of the time when entering a crisis situation. This high level of predictability increases control and reduces stress.*

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Mediating Stress

LOCUS OF CONTROL (Rotter, 1954, 1990)
A person can have either an **INTERNAL** or **EXTERNAL** locus of control. Those with an internal orientation believe they are in control of their own destiny, regardless of the circumstances. Those with an external orientation believe their fate is determined by external forces, and that they have little control over their circumstances.

Self-efficacy is the belief one has in their ability to achieve a successful outcome. High self-efficacy leads to a high level of **confidence**. Thus the following…

Internal locus + Self-efficacy = Control

Experience + Training = Predictability

Control + Predictability = Reduced levels of stress

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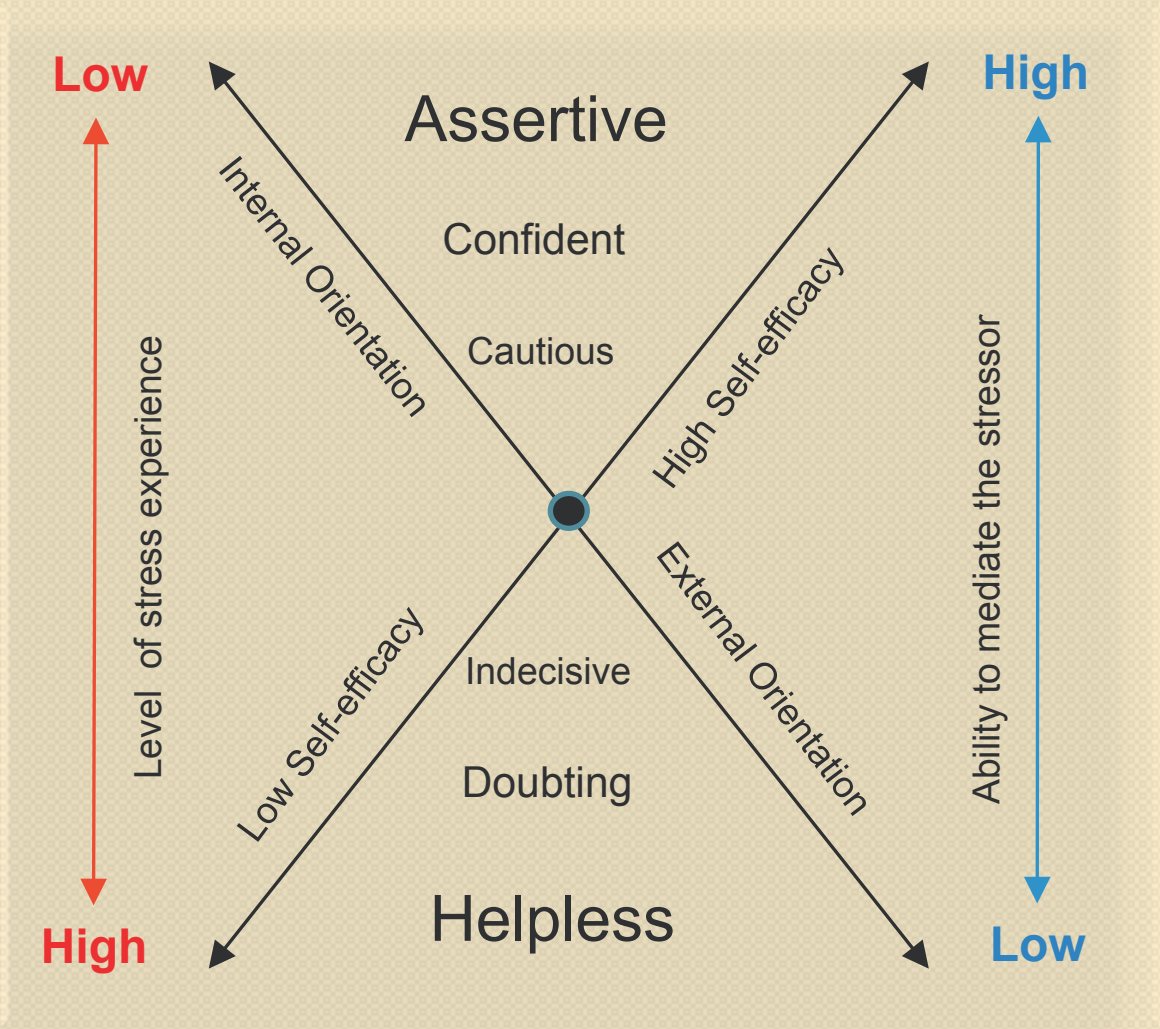
Mediating Stress

LOCUS OF CONTROL (Rotter, 1954, 1990)



Mediating Stress

WHAT DOES IT ALL MEAN?

1. It is important that those agencies tasked with crisis response focus their hiring and recruiting efforts on individuals who demonstrate an **INTERNAL** orientation.

2. Repetitive and realistic training is critical to increasing a sense of **control** and **predictability** in those who respond to crisis.

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