

# THE FORGOTTEN RISK FACTOR: MENTAL HEALTH

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## Agenda

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## Mental statement

“**Insanity:** doing the same thing over and over again and expecting different results.”

Albert Einstein (c.1930)

## Introduction

- In clinical practice , most of us touched the relation between the psychological stresses and vascular event in some patients
- But when to start to stratify the risk we believe only in the big five risk factors Why ?
- Simply the answer because the big five are:
  - Tradational
  - Numerical
  - Easily measurable

## Definition of mental health

**Mental health** is defined as a state of **well-being** in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively, and is able to make a contribution to her or his community.

A **mental health disorder** is an illness that affects mood, thoughts, and behavior. It significantly impacts ability to function in life, such as capacity to work effectively or form and maintain healthy relationships with others.

## Risk Factors for Mental Health Disorders

### □ **Social Risk Factors:**

- Disorganized attachment
- Low socioeconomic status
- Exposure to violence
- Role of stigma : negative judgment and shame, from others because they have a mental health disorder.
- Loss of significant relationship

## Risk Factors for Mental Health Disorders

### □ **Psychological Risk Factors:**

- **Negative thoughts** : A person who tends to ruminate, or obsess over negative thoughts, on the past or current negative situations, can experience depression. Excessive worry about the future can lead to anxiety-related mental health disorders.
- **Low self-efficacy**

## Fast facts about mental health disorders

- Around 50% of all chronic mental health disorders begin by the age of 14, while 75% occur before the age of 24
- Around 60% of adults and 50% of youths with a mental illness received no mental health services in the past year
- Serious mental illness costs the US around \$193.2 billion every year.

## Common mental health disorders

- Anxiety neurosis
- Depressive disorder
- Bipolar disorder

## *Mental health as a risk factor for CVD*

Recent studies provide clear and convincing evidence that psychosocial factors contribute significantly to the pathogenesis and expression of coronary artery disease . This evidence is composed largely of data relating CAD risk to 5 specific psychosocial domains:

- (1) Depression
- (2) Anxiety
- (3) Personality factors
- (4) Social isolation
- (5) Chronic life stress

## *Mental health as a risk factor for CVD*

- Depression , anxiety and fatigue accounted for about 15% of cardiovascular and coronary heart disease deaths, and high cholesterol and obesity for 8% to 21%. Diabetes accounting for 5% to 8% of heart-related deaths.
- Only two risk factors accounted for more cardiovascular deaths than depression: smoking (between 17% and 20%) and high blood pressure (between 30% and 34%).

## *Mental health as a risk factor for CVD*

- Both major depressive disorder and bipolar disorder are recognized as moderate risk factors for atherosclerosis and early cardiovascular disease, according to a new American Heart Association scientific statement.
- Clinicians should closely monitor all young patients with mood disorders regardless of medication use.

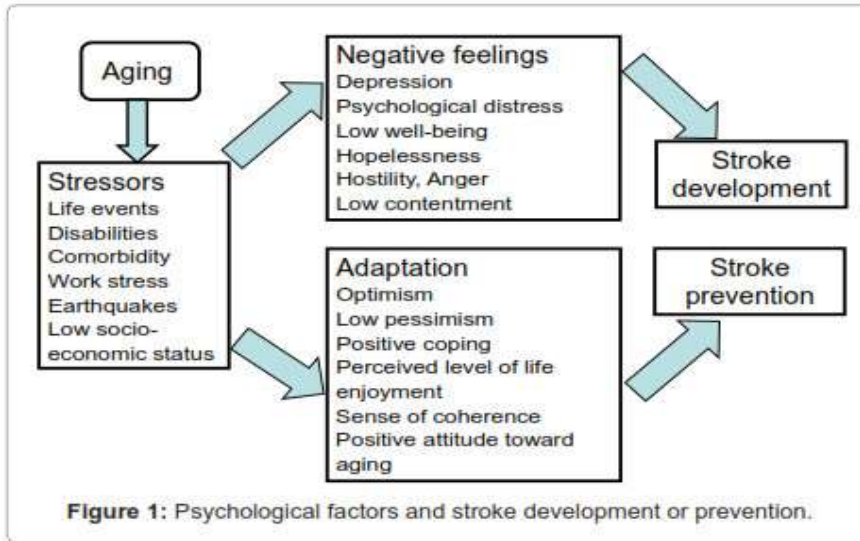
## ***Mental health as a risk factor for stroke***

- Although recent remarkable advances have been made with regard to the treatment of hypertension, hyperlipidemia, and diabetes, the incidence of stroke, and in particular ischemic stroke, in elderly individuals has not been decreased to any great extent.
- It is well known that aging is one of the most important risk factors for stroke; however, the increased risk of stroke with old age cannot be entirely explained by conventional risk factors.

## ***Mental health as a risk factor for stroke***

- In several epidemiological studies, depressive symptoms have been associated with an increased incidence of stroke. Depressive disorder is also a risk factor for stroke independent of traditional cardiovascular risk factors.
- According to a new study recently presented at the Canadian Cardiovascular Congress, *Researchers found that patients who had a mental illness at any point in their life were twice as likely to have had a stroke than the general population*

## Psychological factor and stroke



## Mental disorders and Carotid IMT

- ❑ Negative feelings, hopelessness, hostility, and anger have been associated with subclinical carotid atherosclerosis. In middle-aged women, high scorers of hostility, indicated by the 13-item questionnaire ( $\geq 6$ ), had a greater mean and maximum carotid IMT compared to low scorers.
- ❑ In a population study of 6561 men and women aged 45–84 years, the trait anger score was positively associated with carotid IMT and the presence of carotid plaques.



## Pathogenic Mechanisms of mental disorder as a risk factor

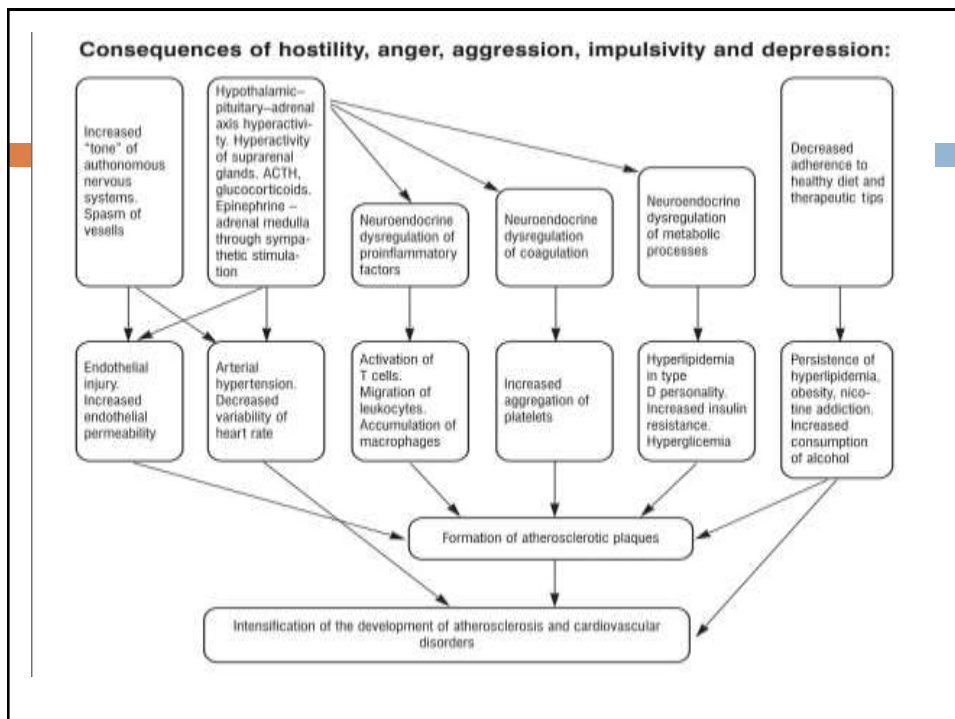
- The mechanism by which psychological factors work as a risk factors remains unknown :
  - ▣ Increased activation of the hypothalamic-pituitary-adrenal axis, high cortisol, and high sympathetic nerve activity.
  - ▣ Depression may induce activation of platelet, In contrast, antidepressant agents such as SSRI inhibit the activation of platelet in patients with depression.

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- ▣ An increased expression of inflammatory markers associated with psychological factors may be involved in the pathogenesis of atherosclerotic disease. It has been demonstrated that the inflammatory markers, C-reactive protein (CRP), IL-6, and IL-1 are associated with depression in people with ischemic heart disease.
- ▣ Platelet NOS activity and NO metabolite levels in the plasma of patients with depression are reported decreased, which may in turn account for endothelial dysfunction

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- **Behavioral factors** : mental disorder patient smoke heavy , eat more unhealthy diet , move little , doesn't care about his health and healthy life style . This will be reflected negatively on the big fives.....



## Implications for cardiologists

- Given that associations between mental health disorders and CVD are known, but the mechanisms behind them are not.
- A good strategy is “adopting this as part of the history ... and then taking that into account as we assess and determine the level and intensity of treating risk factors.”

## Implications for Cardiologists

- Although this isn't codified in current guidelines is that if someone has a prior or current history of depression or anxiety and they are on the border of initiating treatment for hypertension or hyperlipidemia, that might sway us to be more aggressive in managing those risk factors.
- When you are part of a team, you can learn tools and techniques to screen for depression in your cardiac clinics.

## Implications for cardiologists

- The PHQ-9. : General internal medicine practices and most cardiology practices can easily integrate this into their private practice. It is an excellent way to quickly get a sense of whether your cardiac patient is struggling with depression .
- “Some people, particularly cardiologists, took away that if treating depression doesn’t reduce the risk for MI, then we don’t need to treat it,”. The message is that we need to assess and identify individuals at higher risk for depression and anxiety after a cardiac event.

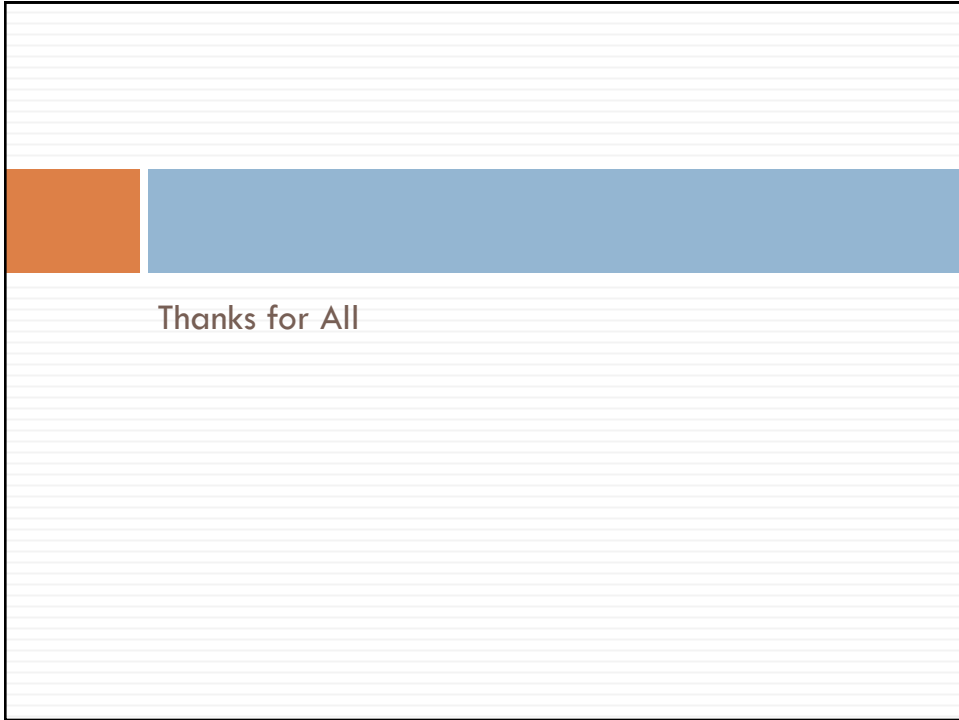
## Implications for cardiologists

- Early intervention in Youth : the cardiologist don’t see many youth in their practice ( only CHD , RHD, and familial hyperlipidemia) so the family doctors and pediatrician should share this part in term of primary prevention.

**Finally : We should be nice with  
our patients and not to be a risk  
factor for his mental illness**

## References

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Thanks for All