Late life depression and health care utilization

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Late life depression

- One of the most prevalent mental disorders in older adults with different pathways: etiological, neurobiological, behavioral and psychological.

- Complex, frequent relapses and chronic clinical course.

- It can occur in a wide spectrum that ranges from subclinical depression to severe forms of major depression, depending on the severity of the symptoms.

- Characterized by psychological and somatic components.

- Accompanied by multiple affective and somatic symptoms.
Consequences of depression

- Increases the physical symptoms of other conditions.
- Decreases adherence to pharmacological treatment.
- Associated with adverse behaviors (diet, exercise, smoking)
- High direct costs: Treatments, high rates of health service utilization, extended stays, disability, loss of function
- Increases mortality
- Affects 25% of external elderly, but primary care physicians only recognize a third part of them.
- It may be associated with cognitive impairment.

Conceptual framework

**Stress vulnerability**

- **Chronic or acute burden**
  (life events, current or past illnesses, several major depressive episodes)

- **Biological environment**
  (inherited, epigenetic vulnerability, temperament)

- **Psychosocial environment**
  (age, socioeconomic status, childhood events, social support, lifestyle, interpersonal situation, intellect, academic level, addictions)

**Depression**

- **Physiological factors**
  Hypothalamic-pituitary axis dysfunction, neurobiological and immune alterations, inflammation, telomerase activity and telomere length.

- **Psychobehavioral factors**
  - **Appraisal and perception**
    (ruminations, sense of control, connectedness)
  - **Responses**
    (coping behaviors, wisdom, victimization, learned helplessness, locus of control, use of biopsychosocial resources)

**Health outcomes**

- **Recurrent psychiatric symptoms**
  Stress, anxiety, depressive symptoms, dysthymia, major depressive disorder.

- **Morbidity**
  - Chronic diseases
  - Frailty
  - Sarcopenia
  - Thoughts of death

- **Mortality**

Prevalence using dimensional diagnostics (GDS, CES-D, PHQ9)

## Prevalence using dimensional diagnostics (GDS*). Latin American studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDS</td>
<td>17,574 (9.5%)</td>
</tr>
<tr>
<td>Encuesta Nacional de Demografía y Salud</td>
<td></td>
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<tr>
<td>Colombia (2010)</td>
<td></td>
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<tr>
<td>SABE*</td>
<td>5,235 (39.1%)</td>
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<tr>
<td>Salud, bienestar y envejecimiento</td>
<td></td>
</tr>
<tr>
<td>Ecuador (2009)</td>
<td></td>
</tr>
<tr>
<td>SABE*</td>
<td>10,180 (21.7%)</td>
</tr>
<tr>
<td>Salud, bienestar y envejecimiento</td>
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</tr>
<tr>
<td>Latinoamérica y Caribe (2000)</td>
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</tr>
<tr>
<td>PREHCO*</td>
<td>4,662 (26.1%)</td>
</tr>
<tr>
<td>Puerto Rican Elderly: Health Conditions</td>
<td></td>
</tr>
<tr>
<td>CRELES*</td>
<td>2,827 (21.3%)</td>
</tr>
<tr>
<td>Costa Rican Longevity and Healthy Aging</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td></td>
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<tr>
<td>Costa Rica (2005)</td>
<td></td>
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<tr>
<td>ENSANUT</td>
<td>8,874 (36%)</td>
</tr>
<tr>
<td>Encuesta Nacional de Salud y Nutrición</td>
<td></td>
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<tr>
<td>México (2012)</td>
<td></td>
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<tr>
<td>MHAS</td>
<td>(37.9%)</td>
</tr>
<tr>
<td>Mexican Health and Aging Study México</td>
<td></td>
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<tr>
<td>(2001)</td>
<td></td>
</tr>
<tr>
<td>ENS</td>
<td>1,053 (85.6%)</td>
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<tr>
<td>Encuesta Nacional de Salud</td>
<td></td>
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<tr>
<td>Chile (2010)</td>
<td></td>
</tr>
<tr>
<td>Depression in older adults study IMSS*</td>
<td>4859 (20.4%)</td>
</tr>
</tbody>
</table>

Fereccio C. Encuesta Nacional de Salud ENS Chile 2009-2010, V. Resultados.
The nature of depression can differ qualitatively between adolescents and older adults.

**Conditional probabilities of having each of the symptoms for each class**

**Class 1**
- Symptoms suggestive of major depressive episode

**Class 2**
- Probable major depression episode

**Class 3**
- Possible major depression episode

**Class 4**
- Without significant depressive symptoms

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1. Dysphoria
2. Anhedonia
3. Drastic weight change
4. Sleeping problems
5. Thinking and concentration
6. Excessive/inappropiate guilt
7. Fatigue
8. Psychomotor agitation/retardation
9. Suicide ideation

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### Frequency and distribution of depressive symptoms among adolescents and older adults

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Adolescents</th>
<th>Older Adults</th>
<th>OR (95% IC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysphoria</td>
<td>2728 (58.5%)</td>
<td>1454 (59.5%)</td>
<td>1274 (57.3%)</td>
<td>1.0 (1.0-1.2)</td>
</tr>
<tr>
<td>Anhedonia</td>
<td>2080 (44.6%)</td>
<td>959 (39.2%)</td>
<td>1121 (50.4%)</td>
<td>0.6 (0.6-0.7)</td>
</tr>
<tr>
<td>Drastic weight change</td>
<td>819 (17.5%)</td>
<td>428 (17.5%)</td>
<td>391 (17.6%)</td>
<td>1.0 (0.9-1.2)</td>
</tr>
<tr>
<td>Sleeping problems</td>
<td>870 (18.6%)</td>
<td>413 (16.9%)</td>
<td>457 (20.6%)</td>
<td>0.8 (0.7-0.9)</td>
</tr>
<tr>
<td>Thinking and concentration</td>
<td>579 (12.4%)</td>
<td>305 (12.5%)</td>
<td>274 (12.3%)</td>
<td>1.0 (0.9-1.2)</td>
</tr>
<tr>
<td>Excessive/inappropriate guilt</td>
<td>2403 (51.5%)</td>
<td>1340 (54.8%)</td>
<td>1063 (47.8%)</td>
<td>1.3 (1.2-1.5)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>1050 (22.5%)</td>
<td>509 (20.8%)</td>
<td>541 (24.3%)</td>
<td>0.8 (0.7-0.9)</td>
</tr>
<tr>
<td>Psychomotor Agitation/Retardation</td>
<td>559 (12.0%)</td>
<td>157 (6.4%)</td>
<td>402 (18.1%)</td>
<td>0.3 (0.3-0.4)</td>
</tr>
<tr>
<td>Suicide Ideation</td>
<td>307 (6.6%)</td>
<td>214 (8.8%)</td>
<td>93 (4.2%)</td>
<td>2.2 (1.7-2.8)</td>
</tr>
</tbody>
</table>

OR= Odds Ratio; CI= Confidence Interval

The Odds Ratios compares prevalence of adolescents and older adults. (OR>1 means that adolescents endorse the symptom more than older adults)
What do older adults believe?

- Depression is normal: 52.99%
- Depression is not a disease: 34.02%
- Depression is forever: 30.04%
- I don’t discuss my symptoms with a physician: 45.54%
- Depression is normal and a disease: 35.71%

Multivariate: Older individuals and female

- 2,240 individuals were studied
- Mean age 73.16
- 67.19% female
Depressive symptoms (Total sample n = 2,322)

- Yes n = 1,345 (57.92%)

Help-seekers n = 337 (25.06%)

- Got help n = 271 (80.41%)

- Got specialized mental health n = 103 (38%)

Only 25% seeking help

80% got help, but....

But only 38% receive proper health care

- Female
- Number of years in school
- Healthcare in the last 6 months for any reason
- Difficulties in performing at least one ADL
- SAST score
- Indication that depression is not a disease
Health problems classified by type, two weeks before the survey. ENSANUT 2012

- Communicable, maternal and nutrition
- Non-communicable
- Symptoms without diagnosis
- Accident
Association of healthcare use with presence of significant depressive symptoms, with and without recent severe morbidity

<table>
<thead>
<tr>
<th>Utilization rates (%)</th>
<th>Adjusted Odd ratio (aOR)¶</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Without</strong> significant depressive symptoms (n= 5,836 ‡)</td>
<td><strong>With</strong> significant depressive symptoms (n= 1,460 ‡)</td>
</tr>
<tr>
<td><strong>…and no recent severe morbidity (n=3,788)</strong></td>
<td><strong>…and no recent severe morbidity (n=2,048)</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>During the past 6 months sought healthcare for any reason at...</strong></td>
<td></td>
</tr>
<tr>
<td><strong>... any healthcare institution</strong></td>
<td>79.3 (77.7-80.7)</td>
</tr>
<tr>
<td><strong>... any IMSS healthcare facility</strong></td>
<td>66.2 (64.19-68.07)</td>
</tr>
<tr>
<td><strong>... any IMSS family medicine clinicΨ</strong></td>
<td>64.4 (62.5-66.3)</td>
</tr>
<tr>
<td><strong>... any IMSS hospitalΨ</strong></td>
<td>17.5 (16.0-19.2)</td>
</tr>
</tbody>
</table>

‡ 153 original observations were not included in these analyses due to missing data
¶ Reference: Participants without significant depressive symptoms and no recent severe morbidity
Ψ These events are mutually exclusive
Estimates adjusted for age, sex, education, serious illness of someone close, retirement, trouble with neighbors, financial problems, and marital separation/divorce

**Healthcare utilization exceeds in depressed patients between 15 to 35% compared with non-depressed, even under similar morbidity**

Challenges

Help-seeking barriers

❖ **Physician**
  • Limited training for pharmacological and no-pharmacological treatment
  • Stigmas, prejudices

❖ **Patient**
  • Recognition and acceptance of symptoms

❖ **System**
  • Inertia, false beliefs.
  • Improving access and innovate. Other strategies!!
  • Pharmacological treatment available in **primary care**

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Most treatments of depression take place in primary health care (Regier et al., 1993) Patients prefer to be treated by physician at the primary health care (Brody et al., 1997)
Challenges

To evaluate interventions at different levels of approach
  • consider and integrate multimorbidity and other conditions.

To consider addressing schemes that are sustainable and can be transferred into practice, for the patient and the system.

To design and evaluate care flows to detect warning signs of suicide

To develop and evaluate interventions that increase understanding and awareness among primary care physicians and health staff, to increase medical training and bring down the stigmas.

More importantly: Preventing depression!!
It is necessary:

- To analyse existing databases for systematic reviews and meta-analysis.
  - Prevalences
  - Determinants
  - Implications
  - Costs
  - Alternative treatments and prevention:
    - To think about IMPACT? (Improving mood-promoting access to collaborative treatment )*