

Mental Status Examination

JOEL F. VAUGHAN, MD



Why?

“Systematically evaluat[ing] the patient’s mental condition at the time of the interview ... **[to establish signs of disorder that, with the history, enable you to make, suggest, or exclude a diagnosis.]**”

- From Macleod’s Clinical Examination

How?

MSE involves:

- ① • observation of the patient (*our general inspection*)
- ② • incorporation of relevant elements of the history
- ③ • specific questions exploring various mental phenomena
- ④ • short tests of cognitive function

- From Macleod's Clinical Examination

What?

- Appearance
- Behavior
- Speech
- Mood
- Thought Form
- Thought Content
- Perceptions
- Cognition
- Insight
- Risk assessment

* what they're wearing

* any signs of self-neglect like

∴ not showering and combing their hair

* facial expressions (scars, tattoos)

1 Appearance

e

* any signs of physical disease
that might affect the mental state

* evidence for self injuries →



they can't stop, they just have purposeless motor activity
they are moving all the time for no reason

| Term | Definition |
|--------------------------|---|
| Agitation | A combination of psychic anxiety and excessive, purposeless motor activity |
| Compulsion | An unnecessary, purposeless action that the patient is unable to resist performing repeatedly <i>hand flapping, or something like that they're doing for no purpose</i> |
| Disinhibition | Loss of control over normal social behaviour <i>don't do normal social behaviour</i> |
| Motor retardation | Decreased motor activity, usually a combination of fewer and slower movements <i>they're just behaving very slowly, not moving very much</i> |
| Posturing | The maintenance of bizarre gait or limb positions for no valid reason |

they are no longer constrained by their brain to act in normal way

they're evidencing specific postures or positions of the limbs or walk gait

2 Behavior

like somebody with huntington's dz → they would show
Choreic movements
the limbs purposelessly move periodically

3 Speech

- **Articulation** *Are they able to form words?*
- **Quantity** *talking too much, too little, mute (not talking) or they really talkative*
- **Rate** *are they having trouble getting their words out because they're trying to talk so fast or it's very slow down.*
- **Volume** *→ are they talking really loud, are they talking really quietly*
- **Tone and Quality** *→ do they have an accent, are they really emotional*
- **Fluency** *→ are they able to speak fluently or might be more of a staccato or monotonous where they're giving the whole lecture (hot potato speech!)*
- **Abnormal Language** *in a tone* *↳ as they have hot piece of food in their mouth*

*↳ are they making up words that aren't real words
can they not find word to describe what they are trying to say or are they clanging*



2.36

4 **Mood** → Changes in mood and mood disorders are common

What to ask

- 1 • How has your mood been lately?
- 2 • Have you noticed any change in your emotions recently?
- 3 • Has your family commented recently on your mood?
- 4 • Do you still enjoy things that normally give you pleasure?

these are all screening Q to allow the pt to discuss their mood

Thought Form

how their brain is working

- Rate *may be it is so fast and hard they can't even really express them all*
 - Pressured thought *or very slow with their thoughts*
 - Slowing
- Flow *is it flowing normally, are they having a flight ideas where they're throwing out a hundred*
 - Flight of ideas *ideas all at once, in different ways.*
 - Perseveration *, rapid shift from one idea to another.*
- Sequencing *they just get stuck on one idea and they can't leave it behind*
 - Loosening of associations *this is what happens in psychotic pt or people s schizophrenia*
- Abstract Thinking *often they have a loosening of association → there's no logical*
 - Concrete thought *sequence of ideas coming out of their mouth*

they may have a disorder where they can only think very concretely

kind of step back and look at their own behavior or thoughts, they can't interpret anything

abstractly beyond what they can concretely see and feel and hear



2.39

Thought content

What to ask

- 1 • What have your main worries been recently?
- 2 • What has been on your mind lately?
- 3 • Do you have any particular thoughts you keep coming back to?

→ morbid thinking → just thinking about guilt and they feel burdened all the time, they're unworthy of living, they're blaming themselves for everything

→ phobias

→ may be they're just really hypochondriac → only thinking about this possibility of suffering from dz even though they are basically healthy



2.41

Abnormal beliefs *without evidence → delusions*

What to ask

1. • Have there been times when you've thought something strange is going on?
2. • Do you ever think you're being followed or watched?
3. • Do you ever feel other people can interfere with your thoughts or actions?

| Term | Definition <i>↳ I feel like I'm not in reality</i> |
|----------------------------|---|
| Depersonalisation | A subjective experience of feeling unreal |
| Derealisation | A subjective experience that the <u>surrounding</u> environment is unreal |
| Hallucination | A false perception arising without a valid stimulus from the external world |
| Illusion | A false perception that is an understandable misinterpretation of a real stimulus in the external world |
| Pseudohallucination | A false perception which is perceived as part of one's internal experience |

Cognition

- Level of Consciousness *are they comatose, are they fully awake?*
- Orientation *Do they understand the world around them*
- Memory *→ both long term and short memory is it normal or not?*
- Attention and Concentration *↳ their ability to pay attention to a task and to concentrate*
- Intelligence *you can use formal test to assess or just get an informal sense of it from the history taking*
↳ can be impaired in a variety of situations



2.46

Insight

What to ask

*if they don't think there's anything wrong with them they
have very poor or bad insight into their situations*

- ① • Do you think anything is wrong with you? *people with really good insight will have a good idea of what's wrong with them*
- ② • What do you think is the matter with you?
- ③ • If you are ill, what do you think needs to happen to make you better?



2.47

* important ⚠

Risk assessment

What to ask

Suicide/self-harm

1. • How do you feel about the future?
2. • Have you thought about ending your life?
3. • Have you made plans to end your life? *you might also ask do you have the things*
4. • Have you attempted to end your life? *available to you to carry out that plane?*

Homicide/harm to others

1. • Are there people you know who would be better off dead?
2. • Have you thought about harming anyone else?
3. • Have you been told to harm anyone else? ** Do you have a plan to actually harm some one?*



2.48

Screening questions for mental illnesses

When you suspect an anxiety disorder

- What physical symptoms have you been experiencing?
- How relaxed have you been feeling recently?
- Have there been any particular concerns or worries on your mind recently?

When you suspect a depressive disorder

- How has your mood been recently?
- Are you still enjoying things the way you used to? *screening* ♡
- How do you view the future just now?

When you suspect schizophrenia

- Have you any beliefs that you think other people might find odd?
- Have you had any unusual experiences recently?
- Have you had any difficulty controlling your thinking?
- Have you heard people's voices when there's no one around? (Where do you think the voices come from? What do they say?)

General Screening

both of those are dementia screening tools that can be used both for diagnostic purposes but also for tracking people's disease progression

Screening Tools

- MMSE mini mental status examination

- MINI-COG

- PHQ-9 → the Patient Health Questionnaires 9 → screen for depression

- GAD-7 → anxiety screening tool

MMSE

MINI MENTAL STATE EXAMINATION

The Mini-Mental Status Examination

Name: _____

DOB: _____

Years of School: _____

Date of Exam: _____

Orientation to Time

Correct

Incorrect

What is today's date?

What is the month?

What is the year?

What is the day of the week today?

What season is it?

Total: _____

Orientation to Place

Whose home is this?

What room is this?

What city are we in?

What county are we in?

What state are we in?

Total: _____

Immediate Recall

Ask if you may test his/her memory. Then say "ball", "flag", "tree" clearly and slowly, about 1 second for each. After you have said all 3 words, ask him/her to repeat them – the first repetition determines the score (0-3):

Ball

Flag

Tree

Total: _____

Attention

A) Ask the individual to begin with 100 and count backwards by 7. Stop after 5 subtractions. Score the correct subtractions.

93

86

79

72

65

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.¹⁻³ For repeated administrations, use of an alternative word list is recommended.

Version 1

Banana
Sunrise
Chair

Version 2

Leader
Season
Table

Version 3

Village
Kitchen
Baby

Version 4

River
Nation
Finger

Version 5

Captain
Garden
Picture

Version 6

Daughter
Heaven
Mountain

Mini-Cog[®]

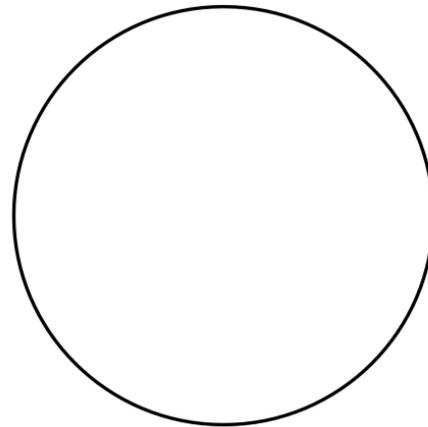
Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test.
Move to Step 3 if the clock is not complete within three minutes.

Clock Drawing

ID: _____ Date: _____



Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

Word List Version: _____ Person's Answers: _____

Scoring

| | |
|-----------------------------------|---|
| Word Recall: _____ (0-3 points) | 1 point for each word spontaneously recalled without cueing. <i>without hint or a clue</i> |
| Clock Draw: _____ (0 or 2 points) | <u>Normal clock = 2 points</u> . A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. <u>Hands are pointing to the 11 and 2 (11:10)</u> . <u>Hand length is not scored</u> . <u>Inability or refusal to draw a clock (abnormal) = 0 points</u> . |
| Total Score: _____ (0-5 points) | <u>Total score = Word Recall score + Clock Draw score.</u> <i>(0/1/2) → screened +ve for dementia</i> A cut point of <u><3 on the Mini-Cog™</u> has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <u><4 is recommended</u> as it may indicate a need for further evaluation of cognitive status. |

PHQ - 9

PHQ-9 → for depression.

When to Use ^

Use as a screening tool:

- To assist the clinician in making the diagnosis of depression.
- To quantify depression symptoms and monitor severity.

* between 15-19 suggests moderately severe depression
pt → typically should have immediate initiation of ~~tt~~ either
drugs like SSRI or
psychotherapy like
cognitive behavioral
therapy ...

When to Use v

Pearls/Pitfalls ^

Why Use v

- The Patient Health Questionnaire (PHQ)-9 is the major depressive disorder (MDD) module of the full PHQ.
- Used to provisionally diagnose depression and grade severity of symptoms in general medical and mental health settings.
- Scores each of the 9 DSM criteria of MDD as "0" (not at all) to "3" (nearly every day), providing a 0-27 severity score.
- The last item ("How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?") is not included in score, but is a good indicator of the patient's global impairment and can be used to track treatment response.
- Higher PHQ-9 scores are associated with decreased functional status and increased symptom-related difficulties, sick days, and healthcare utilization.
- May have high false-positive rates in primary care settings specifically (one meta-analysis found that only 50% of patients screening positive actually had major depression) ([Levis 2019](#)).

(10) ←

When to Use v

Pearls/Pitfalls v

Why Use ^

Objectively determines severity of initial symptoms, and also monitors symptom changes and treatment effects over time.

Advice

Final diagnosis should be made with clinical interview and mental status examination including assessment of patient's level of distress and functional impairment.

Management

PHQ-9 Management Summary

| Score | Depression severity | Comments |
|-------|---------------------|---|
| 0-4 | Minimal or none | Monitor; may not require treatment |
| 5-9 | Mild | Use clinical judgment (symptom duration, functional impairment) to determine necessity of treatment |
| 10-14 | Moderate | |
| 15-19 | Moderately severe | Warrants active treatment with psychotherapy, medications, or combination |
| 20-27 | Severe | |

Critical Actions

- Perform suicide risk assessment in patients who respond positively to item 9 “Thoughts that you would be better off dead or of hurting yourself in some way.”
- Rule out bipolar disorder, normal bereavement, and medical disorders causing depression.

GAD - 7

Measures severity of anxiety.

When to Use ^

Pearls/Pitfalls v

Why Use v

Rapid screening for the presence of a clinically significant anxiety disorder (GAD, PD, SP & PTSD), especially in outpatient settings.

specific phobias

① ② ③ ④

When to Use v

Pearls/Pitfalls ^

Why Use v

- The GAD-7 is useful in primary care and mental health settings as a **screening tool** and **symptom severity measure** for the **four most common anxiety disorders** (Generalized Anxiety Disorder, Panic Disorder, Social Phobia and PostTraumatic Stress Disorder).
- It is **70-90% sensitive** and **80-90% specific across disorders** / cutoffs (see Evidence section for more).
- Higher GAD-7 scores correlate with disability and functional impairment (in measures such as work productivity and health care utilization). ([Spitzer RL 2006](#)) ([Ruiz MA 2011](#))
- The last item "How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" - although not used in the calculation - is a good indicator of the patient's global impairment and can be used to track treatment response.

When to Use v

Pearls/Pitfalls v

Why Use ^

Objectively determine initial symptoms severity and monitor symptom changes/effect of treatment over time.

Management

Scores ≥ 10 : Further assessment (including diagnostic interview and mental status examination) and/or referral to a mental health professional recommended.

| Score | Symptom Severity | Comments |
|--------|------------------|---|
| 5-9 | Mild | Monitor |
| 10*-14 | Moderate | Possible clinically significant condition |
| >15 | Severe | Active treatment probably warranted |

*For Panic Disorder, Social Phobia, & PTSD, cutoff score of 8 may be used for optimal sensitivity/specificity (see Evidence section).

Critical Actions

- This tool should be used for screening and monitoring symptom severity and cannot replace a clinical assessment and diagnosis.
- Do not forget to rule out medical causes of anxiety before diagnosing an anxiety disorder (for example, EKG for arrhythmias, TSH for thyroid disease) (102)*

ID: _____ Date: _____

Step 1: Three Word Registration

Look directly at person and say, “Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now.” If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.¹⁻³ For repeated administrations, use of an alternative word list is recommended.

| Version 1 | Version 2 | Version 3 | Version 4 | Version 5 | Version 6 |
|-----------|-----------|-----------|-----------|-----------|-----------|
| Banana | Leader | Village | River | Captain | Daughter |
| Sunrise | Season | Kitchen | Nation | Garden | Heaven |
| Chair | Table | Baby | Finger | Picture | Mountain |

Step 2: Clock Drawing

Say: “Next, I want you to draw a clock for me. First, put in all of the numbers where they go.” When that is completed, say: “Now, set the hands to 10 past 11.”

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

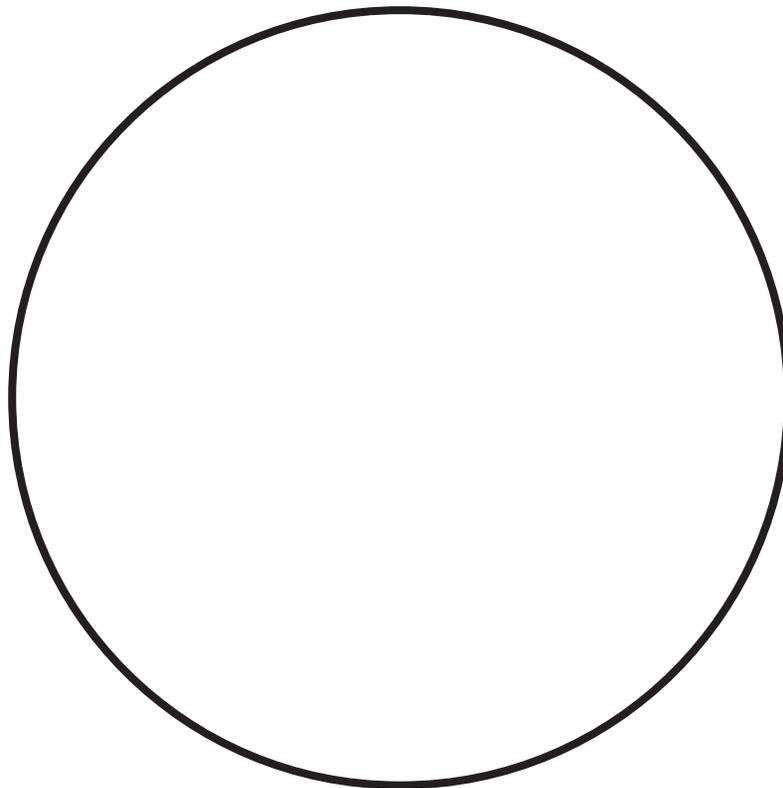
Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: “What were the three words I asked you to remember?” Record the word list version number and the person’s answers below.

Word List Version: _____ Person’s Answers: _____

Scoring

| | |
|-----------------------------------|--|
| Word Recall: _____ (0-3 points) | 1 point for each word spontaneously recalled without cueing. |
| Clock Draw: _____ (0 or 2 points) | Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points. |
| Total Score: _____ (0-5 points) | Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status. |



References

1. Borson S, Scanlan JM, Chen PJ et al. The Mini-Cog as a screen for dementia: Validation in a population-based sample. *J Am Geriatr Soc* 2003;51:1451-1454.
2. Borson S, Scanlan JM, Watanabe J et al. Improving identification of cognitive impairment in primary care. *Int J Geriatr Psychiatry* 2006;21: 349-355.
3. Lessig M, Scanlan J et al. Time that tells: Critical clock-drawing errors for dementia screening. *Int Psychogeriatr*. 2008 June; 20(3): 459-470.
4. Tsoi K, Chan J et al. Cognitive tests to detect dementia: A systematic review and meta-analysis. *JAMA Intern Med*. 2015; E1-E9.
5. McCarten J, Anderson P et al. Screening for cognitive impairment in an elderly veteran population: Acceptability and results using different versions of the Mini-Cog. *J Am Geriatr Soc* 2011; 59: 309-213.
6. McCarten J, Anderson P et al. Finding dementia in primary care: The results of a clinical demonstration project. *J Am Geriatr Soc* 2012; 60: 210-217.
7. Scanlan J & Borson S. The Mini-Cog: Receiver operating characteristics with the expert and naive raters. *Int J Geriatr Psychiatry* 2001; 16: 216-222.