

Doctors 2021 - رّوح - Medicine - MU

## PSYCHOLOGY SHEET

### Disorders of Perception

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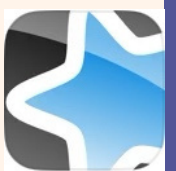
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# PERCEPTION

**Perception** is an active, creative process in which raw sensory data are organized and given meaning (Casey & Brendan, 2007).

- **Disorder** is a disruption of normal physical or mental functions (Gross, 2010)

**Perception** is not sensation because sensation is for things and **Perception** is for psychology.

**Perception** functions as the source of our experience and the state of the surroundings


- Without **perception** we still be able to see, hear, test, smell and or have skin sensations, but we will not understand what we see, hear and so on.

**Perception**-making "sense" of what our senses tell us-is an active process of organizing the stimulus input and giving it meaning.

- **Sensation** : related to physiological condition, to sense organ, not to analyse.

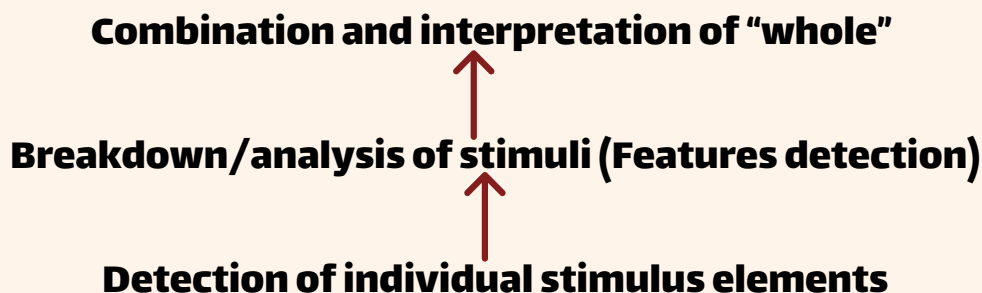
- **Perception** : related to analysis of things, you have normal eye or normal ear but you can't analyze properly, related to pathologicaI psychological conditions.

## CREATION OF PERCEPTION:

In creation of perception the brain carries out two different kinds of processing function, bottom-up and top-down processing 

1. **Bottom Up processing** : a thing you see for the first time (no previous experience) + begins from stimulus.

The system takes in individual elements of the stimulus and then combines them into unified perception, as shown below



- **Visual system** operate in bottom-up fashion in reading

## 2. **Top Down processing** : with previous experience/ background.

Sensory information is interpreted in light of existing knowledge, concepts, ideas, and expectations .

Concept, expectations



Guides analysis (Yes? No?)

"you direct your thinking depending on previous knowledge"



Interpretation of incoming stimuli

•This accounts for many psychological influences on perception, such as the roles played by our motives, expectations, previous experiences, and cultural learning.

e.g. when you see a paint of half a tree you can know that its a tree depending on your previous knowledge about the shape of tree and plants.

## DISORDERS OF PERCEPTION:

Disorders of perception can be divided in two:

- 1.Sensory deceptions : (خداع)
- 2.Sensory distortions : (خلل / تشوهات)

We have 5 types according to sense organ :

- 1) Visual : most common type of illusion.
- 2) Auditory : most common type of hallucination.
- 3) Olfactory
- 4) Gustatory
- 5) Tactile

## 1. SENSORY DECEPTIONS

**Illusions and Hallucinations** : are both false perception

**ILLUSIONS** has a stimulus **BUT HALUCINATIONS** don't

### Illusions

- Illusion – misinterpretations of **stimuli** arising from an external object ( ) ; this **stimuli** is viewed in different way from real
- Illusions are thought to occur when stimuli from a perceived object are combined with mental images to produce a false perception

**e.g : A doctor enters the room of a patient, the patient thought that the pen with doctor is an injection , this is illusion (the pen is a stimulus).**

**(visual illusion)**

**e.g: you pinch the patient's skin of forearm softly, then he shouts at you complaining from massive pinching (this is tactile illusions/stimulus is pinching).**

**illusions may be normal here**

**Illusions are associated with:**

• **Inattention: occurs during day time after waking up**

• **When external stimuli are meager ضئيل، بعيد، غير واضح**

• **When attention is impaired due to delirium maybe due to anesthesia after surgery**

• **Illusions are associated with affect (e.g frightened individual) during loneliness or darkness (fallen branches can be seen as snakes)**

• **Illusions almost always disappear when sensory stimuli increases and inattention improves .**

**Psychosis:**

-**illusion, delusion, hallucination**

-**more schizophrenia = domain disorder, occur mainly because of increasing of dopamine, the problem that cause schizophrenia**

-**pathological condition, treatment by medication mainly and psychotherapy**

• **Phenomena may occur with fatigue and is typically seen with marijuana intoxication also occur in severe depression**

• **In delirium when the perceptual threshold is raised and an anxious and bewildered patient misinterprets stimuli**

• **In delirium patient may perceive innocent gestures and actions from caregivers as threats**

• **Visual illusions more common but can occur in any modality i.e. auditory**

## Three types of illusion (Sims, 2003):

- 1. Complete illusions:** depend on inattention such as misreading words e.g. word '-ook' . as book rather than look **uses up to down processing**
- 2. Affect illusions:** arise in the context of a particular mood state e.g. bereaved person may momentarily believe they see the deceased person
- 3. Pareidolia:** result of excessive fantasy **خيال** thinking and a vivid visual imagery e.g. subject sees vivid pictures in fire or in clouds without any conscious effort

• **Illusions in themselves are not indicative of psychopathology since they can occur in the absence of psychiatric disorder**

## **HALLUCINATIONS (Auditory is most common type).**



- **Hallucination – perceptions **without** an adequate external stimulus**
- **Hallucinations are the most clinically significant false perception**
- **They are not distortions of real perceptions**
- **They are not experienced in inner subjective space but occur in the individual's external environment**
- **They have the sustainability of a normal perception and are not under voluntary control**
- **A percept like experience that has the full force and impact of a real percept that is unwilling, occurs spontaneously and cannot be readily controlled by the percipient**
- **Hallucinations can be the result of intense emotions (depression) or psychiatric disorder, suggestion, disorder of sense organs, sensory deprivation and disorders of the CNS.**

## **5 types as illusion**

## Medical intervention is 3 steps :-

- 1) assessment determine the type of hallucination and what it is (e.g. what he hears)
- 2) voice is real for patient, but not real for me ( to keep the trust between the doctor and the patient)
- 3) distraction, different activities should occupy patient's time instead of hallucinations


- Hallucination vary according to the sensory modalities, perceived location of the hallucination, and the degree to which the persons believes that the hallucination is real

- The intensity of a perception can become heightened or diminished and qualitative changes can occur (this commonly affects the visual modality as when toxicity from certain drugs alters color vision)


### HALLUCINATIONS:

- **Auditory** (MOST COMMON)
- Visual (sight) 
- Tactile (touch)
- Gustatory (taste)
- Olfactory (smell)

Hallucinations may be classified as:

- **Auditory** (MOST COMMON) 
- 2nd person - speaker and the subject (patient hears only one voice talking to him)
- 3rd person - conversation between two or more parties about the person who is hallucinating (patient hears more than one different voice-talking to him)

### 2nd and 3rd NO ORDERS-DIRECTED TO PATIENT

- **Command** hallucination; patient is ordered by the voices to do things usually bad orders such as killing 
- Often frightening as they involve act of violence towards self or others i.e. jump off the roof, go drink, go steal, go visit a friend, pick up the knife and kill your mother

## HALLUCINATIONS ..

- Many patients have mixed sensory hallucinations mostly auditory and visual
- Hallucinations may be experienced by normal people in unusual condition
- Hypnagogic and hypnopompic hallucinations are common visual hallucinations that occur during moment of falling and emerging from sleep



## 2. SENSORY DISTORTIONS

### Changes in intensity, quality, spatial form.

- Results of a change in the intensity and quality of the stimulus or the spatial form of the perception (Casey & Brendan, 2007)

### Changes in Intensity

(HYPER OR HYPO AESTHESIA) **تخدير وعي / exaggeration the intensity of the stimulis**

- Hypoaesthesia is common indicator for drug addiction

**hyperaesthesia --> بسمع الصوت المنخفض على انه عالي جدا، او يرى اللون الباهت فاقع**

**hypoaesthesia --> يسمع الصوت العالي جدا على انه منخفض او يرى اللون الفاقع باهت**

**Increased intensity of sensations or hyperaesthesia may be due to intense emotions or a lowering of the physiological threshold**

- E.g. a person may hear the noise of a door closing like a clap of thunder
- Ordinary green color may assume a glaring green
- Somebody walking may sound as if they are making a loud noise with clattering of shoes
- Anxiety and depressive disorders as well as hangover from alcohol and migraine are all associated with increased sensitivity of noise (hyperacusis)
- True hypoacusis occurs in delirium where the threshold of all sensations is raised.
- People inebriated with alcohol enjoy blaring music because of a degree of hypoacusis

## Changes in Quality

- Changes in quality are often visual distortions due to toxic substances
- Patients may see the following colours over the objects they are looking at due a certain substance

- **Xanthopsia** – yellow colouration



- **Chloropsia** – green colouration



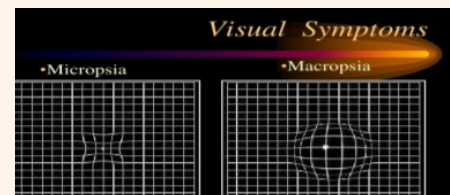
- **Erythropsia** – red colouration.



(Yellow, Green & Red colourations > All surrounding things are seen with slight coloration with these colors).

## Changes in Spatial Form (Dysmegalopsia)

- Change in the perceived shape of an object
- Quantitative changes in which objects are seen as smaller or farther away than reality (micropsia), bigger (macropsia), Such phenomena may be due to acute organic disorders and epilepsy
- Can result from retinal disease, disorders of accommodation or temporal lobe lesions.



**PERCEPTION AND CULTURE** : There is an obvious relationship between perception and culture.

**CULTURE** affects visual illusions vigorously.

- Perceptual development involves both physical and learning
- Some perceptual abilities are innate or developed shortly after birth, where as others require particular experiences early in life in order to develop
- The specific learning experiences, memories, motives, and emotions of the individual also can influence perception.
- Cultural factors can influence certain aspects of perception, including pictures perception and susceptibility to illusions.





# Test Yourself



1) Hallucination is a disorder of:

- A. Perception
- B. Thinking
- C. Intelligence
- D. Memory

**Answer : A**

2) Visual hallucinations are seen in:

- A. Alcoholism
- B. Mania
- C. Depression
- D. Phobia

**Answer: A**

3) 'Mirage' is an example of:

- A. Illusion
- B. Delusion
- C. Hallucination
- D. Extrasensory perception
- E. Fantasy

**Answer: A**

4) Delusions and hallucinations are known as:

- A. Psychotic symptoms
  - B. Neurotic symptoms
  - C. Behavioral symptoms
  - D. Psychosomatic symptoms
  - E. Pressure of characteristic symptoms like delusions and hallucination.
- Term psychosis is defined as Gross impairment of reality testing Loss of weight

**Answer: A**



5) The commonest disorder of perception is:

- A. Delusion
- B. Hallucination
- C. Passivity
- D. Compulsion

**Answer: B**

6) A false sensory perception in the absence of external stimulus is:

- A. Hallucination
- B. Illusion
- C. Delusion
- D. Depersonalization

**Answer: A**

7) The most common type of hallucinations seen in schizophrenia is:

- A. Tactile
- B. Auditory
- C. Visual
- D. Olfactory

**Answer: B**

"لكل إنسان هدفه في هذه الحياة، فلا أنت بمتأخر عن  
أحد، ولا بسابق له!  
سِر في طريقك لأهدافك، ولا تلتفت .. فلا يوجد من  
يمنعك من الوصول للقمة .. سواك!"