

2. columns touch.

3. numerical - continuous data.

Dispersion of scores - a set of score with small range, is going to have a small standard deviation.

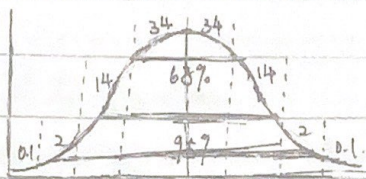
Dispersion or measures of variability how far the scores differ from the mean.

- Low Variability - all scores are close together.

- High Variability - scores are spread out.

- Range - ~~the~~ the highest ~~was~~ subtracting the lowest.

Deviation - Score don't all line up on the mean, but they don't fall randomly. They fall in pattern.



Z-scores - (same thing as standard deviation) assess a score's distance from the mean.

- Useful because it helps researchers compare scores from different studies with different standard deviations.

- Scores below the mean have a negative Z-score.

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Nervous System - Central Nervous System — Peripheral Nervous System

Brain / Spinal Cord.

Somatic Nervous System

Autonomic Nervous System

Sympathetic Nervous System

Parasympathetic

"Fight or Flight"

Nervous System.

"Rest and Digest".

Cilia and Neural Cells.

Cell body: the cell's life support center.

Dendrites: ~~me~~ receive messages from other cells.

Terminal branches of axon: form junctions with other cells.

Axon: passes messages away from the cell body to other neurons, muscles, or glands.

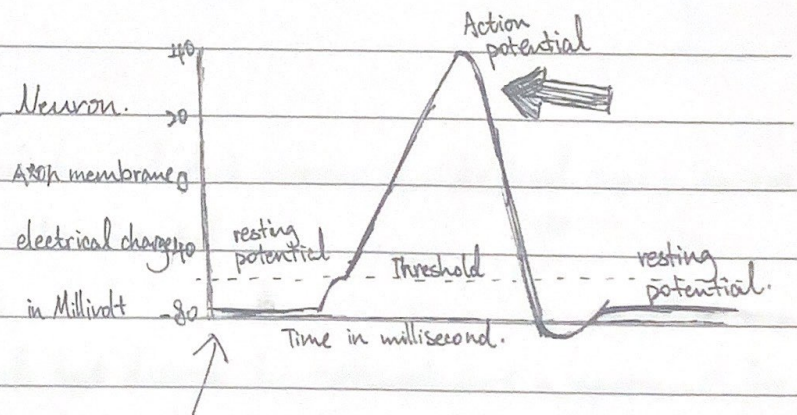
Neural Impulse: action potential; electrical signal traveling down the axon.

Myelin sheath: covers the axon of some neurons and helps ~~spen~~ speed neural impulses.

Neural Transmission

Communicating Communication Within a Neuron.

- Resting Potential (Polarization)
- Action Potential (Depolarization)
- Refractory Period (Repolarization)



Neuron stimulation causes electrical charge to go above the -55 mV ~~thor~~ threshold, triggering an action potential.

when sodium was rushing in, pottasium rushes out, both of them are positive.

This process was called Depolarization.

Post Synaptic Potential (PSP)

Excitatory Post Synaptic Potential (EPSP): A voltage change due to a neurotransmitter that increase the chances that a neuron will fire an action potential.

Inhibitory Post Synaptic Potential (IPSP): A voltage change due to a neurotransmitter that decreases the chances that a neuron will fire an action potential.

List of ~~human~~ hormones: Growth, Melatonin, Insulin, Oxytocin, Testosterone, Estrogen, Adrenaline...

List of neurotransmitters: Glutamate, GABA, ACh, Dopamine, Endorphins, Serotonin, Norepinephrine...

Neurotransmitters and Applications

Excitatory Neurotransmitters: ~~Neurochemical~~ Neurochemicals that increase the likelihood that a neuron will fire an action potential.

- Create EPSPs.

Inhibitory Neurotransmitters: Neurochemicals that decrease the likelihood that a neuron will fire an ~~act~~ action potential

- Create IPSPs.

Glutamate: Learning and memory.

- Primary excitatory neurotransmitters.

- Most abundant neurotransmitter

- Key role in long-term ~~potential~~ potentiation (LTP).

- Oversupply linked to numerous brain diseases and problems following brain injury.

GABA: Anxiety reduction, relaxation

- Primary inhibitory neurotransmitter

- An undersupply is associated with anxiety disorders, seizures, and insomnia

- ~~Ant~~ Antianxiety medications.

Endorphins: Inhibit pain

- Released in response to pain or vigorous exercise and provide pain relief

- ~~Anti~~ Opiates which are drugs (either natural or synthetic) derived from the opium plant that serve as pain relievers are endorphin agonists.

Dopamine: Pleasure, reward, voluntary movement, posture, learning, cognition, and attention

- Schizophrenia

- Parkinson's disease.

Serotonin: Mood, appetite, sleep, and ~~is~~ impulse control.

- Low levels associated with depression, sleep-wake disorders, food ~~crave~~ cravings and aggression

- ~~Antidepressant~~ Antidepressant medication

Norepinephrine: Arousal and attention

- Can be both neurotransmitter and a hormone (noradrenaline)

- Related to sympathetic nervous system arousal by activating the "flight or fight" response as well as other excitatory actions.

Acetylcholine (ACh): Muscle contraction, heart rate, memory and learning.

- Neurotoxins and ACh

- ~~Al~~ Alzheimer's disease