Clinical Disorder

Working Definition of a Clinical Disorder: a constellation of symptoms that significantly impacts an individual’s ability to function, and is characterized by a particular symptom picture with a specifiable onset, course, duration, outcome, and response to treatment, and associated familial, psychosocial, and biological correlates.

Onset: age of initial symptoms + insidious vs rapid
Course: slowing worsening or improving; episodic vs chronic; waxing & waning vs continuous
Duration: how long does a particular episode last?
Outcome: do you fully recover?
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Conditional Probabilities as a means of understanding Clinical Symptoms:

The Role of Sensitivity, Specificity, PPP, and NPP
**Sensitivity** = A/B (true positive) The proportion of children with a particular disorder who exhibit a specific symptom;

**Specificity** = C/D (true negative) The proportion of children without a particular disorder who do not exhibit a specific symptom;

**PPP** = A/E The proportion of children with a particular symptom who meet diagnostic criteria for a particular disorder;

**NPP** = C/F The proportion of children without a particular symptom who do not meet diagnostic criteria for a particular disorder.

<table>
<thead>
<tr>
<th></th>
<th>Meets Dx</th>
<th>Doesn’t Meet Dx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom Present</td>
<td>A</td>
<td>E</td>
</tr>
<tr>
<td>Symptom Absent</td>
<td>B</td>
<td>C</td>
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**Differential Diagnosis & Conditional Probabilities**

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What is epidemiology?

Epidemiology is concerned with the ways in which clinical disorders and diseases occur in human populations, and with factors that influence these patterns of occurrence.

Three interrelated components of epidemiological research involve:

1. Assessing the occurrence of new cases (incidence rate) or existing cases (prevalence rate) of the disorder at a given period of time or within a specific time period; [note: community vs clinic samples]

2. Assessing how the disorder is distributed in the population, which may include information concerning geographic location, gender, socioeconomic level, and race; and

3. Identifying factors associated with the variation and distribution of the disorder to enable etiological hypotheses to be generated.
The Role of Different Variables in Understanding Child Psychopathology
RELATIONSHIP AMONG VARIABLES?

- Correlational Research
  - Temporal Sequence Unknown
  - Identifying Markers
    - Non causally related
    - Temporal Sequence Established-Possibly causal
  - Identifying Risk Factors
    - Non-causally related
    - Temporal Sequence Established
- Identifying Process/Mechanisms By Which Variables Produce Outcomes/Models
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FACTORS INFLUENCING THE RELATIONSHIP BETWEEN VARIABLES?

- Moderators/Protective Factors
  - Non-causal, but Informative
- Identifying Process/Mechanisms By Which Variables Produce Outcomes/Models
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HOW DOES ANTECEDENT EXERT ITS INFLUENCE?

- Mediators
  - Identifying Process/Mechanisms By Which Variables Produce Outcomes/Models
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CAN WE CONTROL OR ALTER THE OUTCOME?

- Prevention/Treatment
  - Decrease probability of occurrence or reduce current symptoms
  - Identifying Process/Mechanisms By Which Variables Produce Outcomes/Models
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WHAT EFFECT DOES IV HAVE ON DV?

- Experimental Research
  - Establishing causal relationships - models
- Identifying Process/Mechanisms By Which Variables Produce Outcomes/Models
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Developmental Psychopathology

• A single cause?
• Direct vs. indirect effects:

Direct effect

Moderator

Mediator
Hinshaw (2007) - moderators of treatment response in ADHD

- Maternal depressive symptoms
- No maternal depression

Diagram shows: Symptom Severity on the y-axis, Pretreatment and Posttreatment on the x-axis, and Maternal depression as a moderator linking Treatment to Symptom reduction.
*J Child Psychology & Psychiatry*
MetaThought
Language Biases in Psychopathology: Descriptions vs Evaluations

✓ pushy
✓ greedy
✓ manipulative
✓ ruthless
✓ stubborn
✓ intrusive
✓ exhibitionist
✓ reckless
✓ troublemaker
✓ cheap
✓ rigid
✓ unfeeling
✓ oversensitive
✓ cowardly
✓ overly emotional
✓ abnormal
✓ weird
✓ dead
✓ sociopath

Underscores the reciprocal influence of attitudes & language
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✓ assertive
✓ ambitious
✓ persuasive
✓ driven
✓ tenacious
✓ concerned
✓ outgoing
✓ brave
✓ feisty
✓ frugal
✓ steadfast
✓ nerves of steel
✓ vulnerable
✓ self-protective
✓ passionate
✓ unique
✓ interesting
✓ ontologically impaired
✓ morally challenged

Underscores the reciprocal influence of attitudes & language
Historical Influences

• Behaviorism and Social Learning Theory
• Behavior is learned-caused by interactions with the environment
  – Classical Conditioning—how we are conditioned to the environment through reflexive learning (high survival value)
    • Pavlov
    • Watson
  – Operant Learning—how we adjust/adapt to the environment via learning (high survival value with changing environment)
    • Skinner
  – Modeling—how we learn from the environment through observation, instruction, and reading
    • Bandura
### Schematic of Operant Conditioning Relationships

<table>
<thead>
<tr>
<th>Positive Stimulus</th>
<th>Increase Behavior</th>
<th>Decrease Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Reinforcement (add stimulus)</td>
<td>Response Cost (remove stimulus)</td>
<td></td>
</tr>
<tr>
<td>Negative Stimulus</td>
<td>Negative Reinforcement (remove stimulus)</td>
<td>Punishment (add stimulus)</td>
</tr>
</tbody>
</table>
Positive Reinforcement – a positively viewed stimulus follows a particular behavior and strengthens or increases the behavior.

Negative Reinforcement – a negatively viewed stimulus is removed or avoided and strengthens or increases the behavior that was performed (e.g., carrying an umbrella; giving in to a bratty child);
2 primary types: avoidance and escape behavior.

Punishment – a negatively viewed stimulus is presented or occurs following a behavior and weakens or reduces future occurrences of the behavior (e.g., spanking).

Response Cost – a positive stimulus is removed and strengthens or increases a particular behavior (relies on the use of a positive stimulus or reinforcer and you lose parts of due to inappropriate behavior on your part).

Extinction – behavior is no longer followed by reinforcement and decreases and eventually ceases in frequency.
Mr. Attention

The Attention Training System

Inventor: M.D. Rapport, Ph.D. Manufactured by Gordon Systems
Inc. P.O. Box 746, DeWitt, NY 13214
• **S-d’s** – discriminative stimuli that indicate the likely occurrence of reinforcement.

• **S-delta’s** – stimuli that indicate the unlikely occurrence of reinforcement.
Basic Classical Conditioning Learning

UCS: Food [unconditioned Stimulus] 
elicits UCR: Salivation 
[no initial response to the neutral stimulus becomes a conditioned response] 

No conditioning required

Paired temporally

Neutral Stimulus: Bell 
[becomes a CS or conditioned stimulus after pairing] 

Conditioning required
Unconditioned Stimulus (e.g., Shock; bombing) → Elicits UCR → Unconditioned Response (pain response/anxiety/escape behavior) → Now elicits a conditioned response (CR)

Neutral Stimulus [memory of event] → Repeated pairings → NS becomes a conditioned stimulus (CS)

Conditioned stimulus is also associated with a memory representation of the US, which then leads to the production of the CR – the CS predicts the onset of the US and thus elicits a CR