Improving Clinical Judgment and Decision Making in Psychological Assessment

Presented by

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Improving Decision-Making in Clinical Practice

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http://intensivecarenetwork.com/742-smacc-chris-nickson-all-doctors-are-jackasses/

References

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  - http://works.bepress.com/randy_borum/35/

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Workshop Overview

- All psychology practice involves clinical decision making
- Research identifies a number of challenges with which psychologists are faced when making decisions in clinical contexts
- The goal of this workshop is to identify limitations in human decision making and resulting bias, and propose strategies to employ that can go towards minimizing associated errors and bad decision making in clinical contexts

The Potential Payoff for Psychology

- Psychologists are in a unique position to understand and take steps to minimize these decision making errors, thereby distinguishing their work and resulting opinions from those offered by other professionals/disciplines
- So.....with that being said, let's get started....
Bias Bias

- People see themselves as less susceptible to biasing phenomena than they consider others to be.

### Bias Bias/Overconfidence

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<thead>
<tr>
<th></th>
<th>YOU</th>
<th>PEERS</th>
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<tbody>
<tr>
<td>Illusory Correlation</td>
<td>4.63</td>
<td>5.64</td>
<td>15.08, p &lt; .001</td>
</tr>
<tr>
<td>Hindsight Bias</td>
<td>5.03</td>
<td>6.37</td>
<td>23.02, p &lt; .001</td>
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<tr>
<td>Fundamental Attribution Error</td>
<td>4.58</td>
<td>5.91</td>
<td>20.67, p &lt; .001</td>
</tr>
<tr>
<td>Confirmatory Bias</td>
<td>4.90</td>
<td>6.57</td>
<td>35.07, p &lt; .001</td>
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Overconfidence

- Psychologists infrequently receive feedback on the accuracy or helpfulness of their judgments.

- Psychologists’ judgments may be less accurate than they believe, but the system and judgment biases may operate in such a way so as to preclude valid feedback, resulting in overconfidence in ability and accuracy.
### Overconfidence

- Psychologists should
  - Avoid activities that may facilitate over-confidence, including
    - Using of highly correlated measures
    - Failing to use disconfirming techniques
  - Actively vary their level of confidence according to the validity of data sources
  - Seek out and be informed by follow up information about their accuracy and helpfulness

### Inaccuracy from Over-Reliance on Memory

- Memory capacity is limited
- Clinical practice, particularly psychological evaluation practice, oftentimes requires synthesis of large amounts of data

- Psychologists should
  - Use checklists
  - Employing standardized record keeping, e.g.,
    - " = verbatim by examinee
    - ( ) = query, statement, or hypothesis of psychologist
  - Consider recording some components of service delivery
Fundamental Attribution Error

In explaining behavior, psychologists and others over-emphasize or over-focus on person-centered factors and minimize the relative contributions of contextual factors or environmental factors.

Psychologists are as guilty as anyone of this, e.g., look at how we assess and diagnose.

Fundamental Attribution Error

Psychologists should….

- Always consider behavior in the context of situational and environmental contributions.

- Consistently ask service recipients to identify the environmental/contextual demands and causes of their behaviors.

- Each time they attribute behavior to the person, ask why it is not a situational demand.

Diagnostic Momentum

ASSESSMENT INFO
Diagnostic Momentum

- Once a diagnosis is offered, its power as a descriptor increases as subsequent health care professionals tend to assume its validity based on
  - Its alleged presence over time, and
  - Repeated presentation by multiple professionals—some of whom may have simply assumed it based on prior reports/presentations

- This same phenomenon can take place with specific claims/reports/symptoms of the patient

Psychologists should

- Be careful about assuming diagnoses or symptoms, and not assume the presence of a disorder or symptoms simply based on the report of the examinee or another professional
- Make independent efforts to come to a diagnosis or verify key claims
- Be increasingly skeptical of prior diagnoses the "further" they are from the interaction at hand
- Consider the source of the diagnosis or claim

Premature Closure & Sunk Costs

- The tendency to apply premature closure to the decision making process, adopting a diagnosis, conceptualization or other important aspect of the case before it has been fully verified
- The tendency to become increasingly reluctant to reject or alter an opinion as a result of the time, energy and personal investment one has in the opinion—despite evidence to the contrary
Anchoring, Framing, & Order Effects

Psychologists and others—Tend to form and anchor impressions based on early or preliminary data, evaluate all subsequent data in light of such, and be resistant to revise or reject initial impressions or hypotheses in the light of conflicting information that are subsequently provided.

− Are influenced by the way in which the problem has been framed (e.g., a patient’s or previous treating professional’s presentation)

Anchoring, Framing, & Order Effects

Psychologists should

− Remain aware of the tendency to avoid revising or rejecting initial hypotheses and impressions

− Consider review of data in multiple orders

− Consider how the referral process can result in anchoring and take steps to minimize such effects, e.g.,
  - Play devil’s advocate with oneself and one’s patients
  - Use disconfirming strategies (see below)

Confirmatory Bias
Confirmatory Bias

- Psychologists and others tend to devote more of their energy to confirming their hypotheses/hunches than to disconfirming them.
- Are more likely to seek, identify, and remember confirming, rather than disconfirming, data.
- May adopt "double standards" of evidence.

This results in a tendency to offer opinions that are not wholly supported by data, and resist revising initial impressions by discounting inconsistent data.

Confirmatory Bias

- Psychologists should:
  - Seek and list disconfirming data when investigating hunches they have or hypotheses they have formed.
  - Identify any data that are inconsistent with their hypotheses.
  - Identify all data they would expect to see if their hypotheses were true and identify what data are missing.

Two Fun Examples of Confirmatory Bias

- iPhone 5
- Led Zeppelin

Vertical Line Failure
Psychologists and others who engage in proven, routine, repetitive tasks often begin “thinking in silos”—adopting predictable, orthodox styles that emphasize economy, efficacy, and utility but run the risk of missing unexpected signs or symptoms and mis-assessing the unusual case.

Psychologists should

- Always ask themselves “What else might this be?”
- Consider how their evaluation practices may facilitate missing issues

CCA describes a decision making process whereby data points are interpreted in light of each other, rather than in a linear fashion.

Although psychologists often report that they employ CCA as they consider and make sense of their patients, research indicates that their decisions are more linear and they do not rely on “all the data” (Garb, 1998; Faust, 2012).
Potential Limitations in Complex Configural Analysis (CCA)

- Because they are limited in their ability to remember and manage data psychologists should
  - Consider the issue of incremental validity in data gathering, including when making decisions about test selection (particularly given the problem of overconfidence)
  - More data is not necessarily better
  - Identify and weight the most valid sources of data

Underutilization of Base Rates

- Base rate refers to the prevalence of a given attribute or behavior in a particular population at or over a certain period of time

- Predictive accuracy, and the types of errors examiners make as a whole when assessing for such variables of interest, will be affected - in part - by the base rate of the attribute or behavior of interest

- Ignoring base rates has been described as one of the greatest sources of error in clinical decision making (Faust, 2012)

Underutilization of Base Rates

- Psychologists should
  - Always consider base rate issues in their practice (e.g., assessment/diagnosis/treatment decision making)
  - Access relevant base rates to the degree possible (e.g., by use of appropriate tools or databases) and use them to inform and anchor judgments
  - Stray from known base rates based only on sound evidence and reasoning, and make the underlying rationale clear to the legal decision maker
Misestimation of Covariation

- When examining the relationship between two variables, psychologists and others find most compelling/memorable those cases in which both variables are present.

- When assessing the validity of diagnostic indicators, psychologists tend to focus on the presence of a potential sign in the presence of the “disorder” [A] and pay less attention to the presence of the sign without the “disorder” [B] or the presence of the “disorder” without the sign [C].

<table>
<thead>
<tr>
<th>Disorder or Condition Present (Sexual Abuse)</th>
<th>Disorder or Condition Absent (No Sexual Abuse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign/Symptom Present (Masturbation)</td>
<td>A</td>
</tr>
<tr>
<td>Sign/Symptom Absent (No Masturbation)</td>
<td>C</td>
</tr>
</tbody>
</table>

- These factors, in combination with confirmatory bias and with reliance on clinical observations in the absence of research data, are responsible for development of “illusory correlations” (Chapman & Chapman, 1969).
**Misestimation of Covariation**
- Psychologists should
  - Remain aware of base rates of the sign/symptom
  - Remain aware of the base rate of the disorder or condition
  - Assess all aspects of co-variation and realize that, when data are unavailable for all four squares, one cannot draw conclusions about the relationship between two variables, and associated predictive power
  - Avoid relying on relationships that are not established empirically (i.e., be wary of clinical observations or impressions)

**Hindsight Bias**
- The simple occurrence of an event affects after-the-fact judgments about its likelihood of occurring or its predictability
- After an event has taken place its occurrence appears so apparent and likely that one may come to believe that it could have easily been predicted in advance

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**Hindsight Bias**
LeBourgeois et al., JAAPL, 2007, 1, 67-73
- Using two scenarios (suicide/violence) half of the MDs were provided with information about outcomes and half were not
- All participants made judgments about
  - Patients’ risk (7 point Likert scale)
  - Whether the standard of care was met (yes/no)
Hindsight Bias
LeBourgeois et al., JAAPL, 2007, 1, 67-73

<table>
<thead>
<tr>
<th></th>
<th>Outcome Known</th>
<th>Outcome Unknown</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Suicide: Mean Risk Rating</td>
<td>4.9</td>
<td>4.2</td>
<td>.000</td>
</tr>
<tr>
<td>Suicide: Mean Std of Care (%)</td>
<td>49.1</td>
<td>59.0</td>
<td>.113</td>
</tr>
<tr>
<td>Violence: Mean Risk Rating</td>
<td>4.0</td>
<td>3.6</td>
<td>.008</td>
</tr>
<tr>
<td>Suicide: Met Std of Care (%)</td>
<td>67.0</td>
<td>71.9</td>
<td>.251</td>
</tr>
</tbody>
</table>

Hindsight Bias
- When asked to make judgments about the predictability/foreseeability of an event after it had occurred, psychologists should
  - Identify evidence supportive of alternative conclusions [e.g., non-predictability/non-foreseeability]
  - Consider whether and when the review of materials that may facilitate such biases (e.g., reports summarizing other assessments of the examinee)
  - In advance of judgments, generate possible sources of support for various alternatives

Over-Reliance on Unique Data
- Psychologists and others are drawn to the exotic and unique as compared to the mundane
- Exotic or unique features may be particularly salient and have more of an effect on judgment and decision making than they should
Over-Reliance on Unique Data

- When faced with a case with unique or unusual features forensic examiners should
  - Search for features that are common to other cases
  - Be reluctant about overriding established decision rules, or discarding established decision rules because “this case is different” (i.e., avoid the aggregate bias).

Confusing Fact & Statistical Artifact

- No psychological measures are pure, but rather, even our best measures include error
- Test scores are estimates and are a function of true variance and error variance
- When considering test scores psychologists should
  - Remember all scores are only estimates affected by test reliability and validity
  - Consider regression effects
  - Consider examiner and context effects
  - Consider the representativeness of small samples
  - Remain aware of problems associated with use of highly correlated measures (also relating to overconfidence)