

Clinical Decision-Making in Therapy and Supervision

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Focus of this presentation

Review many of the issues and problems involved in clinical decision-making

Propose methods to ameliorate this in clinicians and how supervisors can assist in this process.

Content is based on research but with focus more on application and less on research itself

Clinical vs Actuarial Prediction

Historical and current issue

- Relative superiority of actuarial methods (use population base rates and/or regression techniques) over clinical methods in clinical decision making (diagnosis, treatment application, prognostication, behavior prediction) (Meehl, Dawes, Garb)
- hundreds of studies with unequivocal results

Criticisms

Experience level not considered

- (has little effect)

Clinician's confidence not accounted for

- (no effect or reverse effect)

Situation artificial

- Works in real settings

Lack of generalization of regression weights

- Works with unit weighting

However literature on relative superiority of actuarial methods “zilch impact” and little known

Findings re. Actuarial methods true in other prediction areas: medical diagnosis, stock market fluctuations etc.

Diagnosis/Prediction (Samuel, 2015 meta analysis)

Clinicians fair diagnostic agreement with each other

Poor clinician agreement with self-rated questionnaires

Clinician agreement with self-rated questionnaires improves somewhat when using standardized interview

Self-rated questionnaires far superior in predicting future

Clinicians add no prediction to future behavior above and beyond self-rated questionnaires

Why do clinician's not do so well?

Different focus involved in clinical vs actuarial

Actuarial methods – general trends where behavior is viewed probabilistically – spread error over cases

Clinical – deterministic model – individual cases – minimization of high-risk strategy – conservative approach

Clinical Decision Making

Mental health workers' tasks (among many)

- To establish methods to enable reliable and valid classification
- To adopt appropriate treatments and predict how they will unfold
- Correct approaches when warranted

Clinical Decision Making

- 2 steps
 - Information restriction and selection
 - Information aggregation/processing

Information Restriction

3 particular ways we do this:

1. Tendency to look for patterns/order where none exist

(clustering illusion; hot hand, gambler's fallacy)

2. Tendency to seek confirmatory evidence
– prob. Only information supportive of
one's beliefs is attended to, loss of
corrective feedback info, and
erroneously increased confidence.

We prove what we wish to be true



3. Usage of preconceived biases – beliefs regarding specific cues, e.g., overpathologizing tendency

Social class, gender, sexual identity, ethnicity, race.

Heuristics in Clinical Judgment

Kahneman & Tversky

Dual processing model of the brain:

- Slow, deliberate, rational examination
- Fast, efficient heuristics

Three common heuristics in clinical practice

- Representativeness
- Availability
- Anchoring

Representativeness Heuristic

Representativeness – extent to which something matches relevant categories e.g., client and diagnostic categories

Representativeness contd

Insensitivity to prior probabilities (base rates)

- Failure to take into account base rates in assessing representativeness (how many people have DID)

Insensitivity to sample size

- Equating information from large (DSM and assessment scored) and small sample sizes (my clinical case load)
- Overgeneralize from limited experience and observation
- Bias more likely with smaller samples

Insensitivity to predictability

- Ignoring differential probability of future behavior –
- Shorter time spans easier to predict
- (e.g, predicting how the client will function next week vs. how client will function next year)

Bipolar cues in adolescence

- Poor handwriting
- Complains about being bored
- Intuitive/creative
- Difficulty arising in the morning
- Elated/silly moods
- Intolerant of delays
- Curses in anger

Equal number of murders in Iraq and DC

“It seemed to me as those are right numbers. I work in DC on a daily basis and I’m afraid to get out of my car in a lot of places. I hear about police officers being murdered everyday in DC and Baltimore. And I’ve had thousands of friends and colleagues go to Iraq and come back safely.”

Virginia Tech Shooter Profile

- shy,
- alone,
- played video games

Representativeness (cont.)

Misconception of regression

- Error: Failure to take into account regression toward the mean
- Extreme scores are less extreme on subsequent assessment
- Clients first come in in crisis and then naturally will lessen (regression to mean)

Illusion of validity

- Error: Using the degree of representativeness as the determinant of the degree of confidence in the decision—ignoring the reliability or quality of the information used in predicting

Confusion re: reverse conditional probability

Conditional probability

$P(A/B)$ = Probability of event A happening given the presence of event B

Key point

$P(A/B) \neq P(B/A)$

Probability of event A happening given the presence of event B

IS NOT EQUAL TO

Probability of event B happening given the presence of event A

Clinical “fact”

Wrong cue

$P(\text{mood shift/suicide}) \neq P(\text{suicide/mood shift})$

$P(\text{perfectionism/eating disorder}) \neq P(\text{eating disorder/perfectionism})$

$P(\text{depersonalization/PTSD}) \neq P(\text{PTSD/depersonalization})$

$P(\text{interpersonal mistrust/sexual abuse}) \neq P(\text{sexual abuse/interpersonal distrust})$

Availability Heuristic

Availability – memory access issues

Incomplete nature of one's memory search for information – focus only on most salient aspects to increase speed

Affected by mood, imaginability, category vividness, and exposure

- Mood – State-dependent learning and recall
- Imaginability – Retrieve plausible information regardless of probability
- Category vividness – Often retrieve abstract, extreme, vivid
- Exposure – clinical samples are biased (clinicians illusion)

Client hours (Clinician's Illusion)

Monday	Tuesday	Wednesday	Thursday
Path	Non-Path	Path	Non-Path
Non-Path	Non-Path	Non-Path	Non-Path
Non-Path	Non-Path	Non-Path	Path
Non-Path	Path	Non-Path	Non-Path

Assumption 25% new clients pathological

Three-Six months later

Monday	Tuesday	Wednesday	Thursday
Path	Non-Path	Path	Non-Path
Non-Path	Path	Non-Path	Non-Path
Non-Path	Path	Non-Path	Path
Non-Path	Path	Path	Non-Path

8 Non-Path finish and get 6 new non-path and 2 path

Three-Six months later

Monday	Tuesday	Wednesday	Thursday
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Anchoring Heuristic

Anchoring – tendency to let initial information and impressions determine subsequent decision making (3 seconds-first impression)



Heuristics (Representativeness, Availability and Anchoring) useful and important aids to decision making – allow efficient processing of information

However, each has biases – need to be aware of these

Information Aggregation

1. Clinicians ignore different validities of predictors
2. Clinicians not consistent in application of predictions made from data (inconsistent weights)
3. Insensitive to different degrees of redundancy in information
4. Insensitive to regression effects
5. Difficult to combine variables with different metrics

Conclusion

Even with information that we have access to, we are not especially good at putting it together.

We are not unique in this but it has potentially bad effects

What to do?

- **Get quality (normative) outcome information** (necessary but not sufficient)
 - Incorporate both proximal (Routine outcome monitoring) and distal outcomes
 - Rely less on clinical intuition (i.e., heuristics)
- **Key questions**
 - Within clients over time (“Is this client improving relative to last session?”),
 - Across clients (“Is this client doing better than my other clients?”),
 - Across time (“Does this person continue at the level of functioning post treatment and according to my hypotheses?”)
 - Across therapists (“How do the outcomes that I obtain compare to those of other therapists?”)
- **Adopt a scientific attitude**
- **Engage in Reflective/Deliberate Practice**

Deliberate Practice (Ericcson et al, 1993)

Repeated engagement in specific behaviors

- Advocated for interview skills, empathy, confrontation
- variance in expertise explained by deliberate practice (Macnamara et al, 2018)
 - 24% for games
 - 23% for music
 - 20% for sports
 - 5% for education
 - 1% for professions

Problems with deliberate practice

- Some domains are much more multidimensional and less single skill based
- Being skilled therapist is not just executing sound counseling skills (e.g., empathy, reflection, confrontation) although these are necessary.
- Focus in on when and how to elect to use each skill.
- **Reflective Practice** proposed to capture concept
- Reflective Practice ≠ Deliberate practice
- Taking deliberate time to conceptualize client and establish testable interventions.

Reflective Practice: Vague definition (Knapp et al. 2018)

Use professional networks

Personal therapy

Continuing education

Solicit feedback from clients and colleagues

Supervision

Participate in Balint groups (process affect)

Expressive writing

Mindfulness

LOTS suggested; little supportive research

Technological advances

Lyssn (upload actual sessions and get review and feedback on empathy, collaboration, and questions).

Theravue focus on specific skills

Exciting premise but need data. Focuses on skills not on appropriate/timely usage or specifics of client

Reflective Practice Research

Professional self-doubt correlated with greater outcomes and less clinical decision errors

- potentially because of more info seeking

Time on improving targeted skills and clinical decision-making OUTSIDE therapy had better outcomes but time alone is insufficient

-focused practice (use quality information in scientific manner)

-Supervision (but with scientific approach as evidence is lacking regarding impact of supervision on outcomes)

-Environmental support

Adopt and Model Scientific Attitude

- **Be careful of use of heuristics (slow down/doubt)**
- Make specific future hypotheses and test with information
- Look to disconfirm/alternative hypotheses
 - debiasing training works
- Use base rates (how likely is it?)
- Be aware of effects of:
 - regression (less likely states tend to be followed by more likely states)
 - reverse conditional probability

Reflective Practice/Supervision

Set aside time to reflect on each client (obviously difficult)

Reactions to client? Why?

What are client issues? What could I be missing?

What maintains client issue? (what are mechanisms)? What are alternative mechanisms?

What will change mechanisms/behavior? How will it change? How can I see/assess change? What information can I get that will prove me wrong?

Focus on specificity: what client does, what therapist does and how to plan and predict behavior (with specific assessment of how know when wrong).

Apriori hypotheses not post hoc explanations

Ideographic case conceptualization

(Persons & Talbot, 2019)

- Build individual case conceptualizations based on general scientific principles (beyond general diagnosis/conception)
 - specific problems
 - mechanism hypotheses
- Make specific hypotheses regarding what is occurring and specific interventions to help (**apriori**)
- Develop specific indicators of outcome (use disconfirmation as a guide)
- Make interventions
- Gather quality information regarding indicators of change and then modify model appropriately
- reconceptualize

Wrap up

There are many common problems in clinical decision-making of which you and your supervisee should be aware

Use of approaches to limit heuristics and teach these to your supervisees

Engaging in scientific reflective practice with your supervisees (demonstrate and model)

Thank you

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Any feedback on this presentation should be sent to Terence.Tracey@ubc.ca



