Understanding Risk Assessment and Its Applications

Sarah L. Desmarais, Ph.D.
North Carolina State University
Presentation Overview

- Introduction to risk assessment
- Justice context
- Historical context
- Contemporary context
- Risk assessment in practice
Introduction to Risk Assessment
Risk Assessment

- *Process* of evaluating and managing *likelihood* of future offending
  - Incompletely understood
  - Probabilities change across time
  - Interaction between characteristics & situations

- **Can be:**
  - Unstructured
  - Structured
    - Mechanical
    - Allow for professional judgment
Process of Risk Assessment
Process of Risk Assessment

Identify
Process of Risk Assessment

Identify

Analyze
Process of Risk Assessment

Identify

Analyze

Plan

Review
Process of Risk Assessment

Identify → Analyze → Plan → Monitor → Identify
Process of Risk Assessment

Identify → Analyze → Plan → Monitor → Review
Process of Risk Assessment

Identify
Analyze
Plan
Monitor
Review

Communicate

Adapted from Health Level Seven (2010)
Important Distinctions

- **Types of factors:**
  - Static vs. dynamic factors
    - Historical vs. static factors
    - Stable vs. acute dynamic factors
  - Distal vs. proximal factors
  - Risk factor vs. criminogenic need
  - Risk vs. protective factors
Protective Factors

- Any characteristics that reduce the risk of offending
  - More than absence of risk factor
- 4 reasons to integrate into risk assessment:
  1. Balanced view of offender

Rogers (2000); de Ruiter & Nicholls (2011); Desmarais et al. (2012)
Protective Factors

- Any characteristics that reduce the risk of offending
  - More than the absence of a risk factor

4 reasons to integrate into risk assessment:
1. Balanced view of offender
2. Predictive validity
3. Therapeutic alliance
4. Professional mandate

Rogers (2000); de Ruiter & Nicholls (2011); Desmarais et al. (2012)
“Treatment is not just fixing what is broken; it is nurturing what is best.”

Seligman & Csikszentmihalyi (2000, p. 7)
Important Distinctions

- ‘Recidivism’ is not one behavior
  - New offenses vs violation of conditions
  - Violent vs nonviolent
  - Sexual vs nonsexual violence

*Instruments perform best at predicting outcome they were designed to assess.*

*Desmarais & Singh (2013)*
Justice Context
Criminal Justice Policy

- “Get tough policies” ineffective
  - Do not meet criteria for effective punishment:
    - Maximum intensity
    - Intensity
    - Consistent application
    - Blocking of escape and alternatives
- Shift towards rehabilitation

Andrews & Bonta (2010)
Criminal Justice Policy

- Treatment effectiveness with adherence to:
  1. Risk principle
  2. Need principle
  3. Responsivity principle

Requires assessment of individual offender risks, needs and strengths.

Andrews & Dowden (2006); Andrews & Bonta (2010); Lowenkamp et al. (2006)
History of Risk Assessment
## Evolution of Risk Assessment

<table>
<thead>
<tr>
<th>First Generation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstructured professional judgment</td>
<td></td>
</tr>
</tbody>
</table>

1st Generation

❖ Unstructured professional judgment

❖ Advantages
  ❖ Convenient, flexible
  ❖ Inexpensive
  ❖ Widely accepted
  ❖ Able to inform treatment and management
1st Generation

- Unstructured professional judgment

Disadvantages
- Training and expertise
- Lack of transparency
- Highly susceptible to biases
- Lack of consistency
- Accuracy no better than chance

“Flipping Coins in the Courtroom”

Ennis & Litwack (1974)
Evolution of Risk Assessment

First Generation
Unstructured professional judgment

Second Generation
Focus on static factors

2nd Generation

- Empirically-based, comprised of static risk factors

Advantages

- Transparent and objective
- Good reliability and predictive accuracy
- (Relatively) quick and easy
2nd Generation

- Empirically-based, comprised of static risk factors

Disadvantages
- Atheoretical
- Do not allow for change over time
Broken Leg Dilemma

- Life events and circumstances change limiting applicability of risk assessment results
  - Examples
    - Physical incapacity
    - Setting
    - Interpersonal relationships
    - Employment
    - Intervention

* Buchanan, Binder, Norko & Swartz (2012) *
2\textsuperscript{nd} Generation

- Empirically-based, comprised of static risk factors

Disadvantages
- Atheoretical
- Do not allow for change over time
- Limited identification of treatment targets
- Limited integration of intervention
2\textsuperscript{nd} Generation

Identify

Analyze

Adapted from Health Level Seven (2010)
2nd Generation

- Empirically-based, comprised of static risk factors
- Disadvantages
  - Atheoretical
  - Do not allow for change over time
  - Limited identification of treatment targets
  - Limited integration of intervention
  - Decisions based on group norms
The Problem with Group Norms

- Example: A group of 100 offenders and 50 recidivate within 5 years.
  - Does this mean that every member of group had a 50% likelihood of recidivism?
The Problem with Group Norms

- Example: A group of 100 offenders and 50 recidivate within 5 years.
  - Or that half had a 100% and half had a 0% likelihood of recidivism?
The Problem with Group Norms

- Example: A group of 100 offenders and 50 recidivate within 5 years.
  - Or that 20 had a 100%, 20 had a 75%, 20 had a 50% and 20 had a 25%, and 20 had a 0% likelihood of recidivism?
The Problem with Group Norms

- Example: A group of 100 offenders and 50 recidivate within 5 years.
  - We do not know where this offender falls within group of offenders who received given score.
Evolution of Risk Assessment

First Generation
Unstructured professional judgment

Second Generation
Focus on static factors

Third Generation
Consideration of dynamic factors & criminogenic needs

3rd Generation

- Empirically-based and include wider variety of factors
  - Dynamic risk factors, criminogenic needs
- Advantages
  - Transparent
  - Sensitive to change over time
  - Good reliability and predictive accuracy
  - Theoretically sound
  - Identification of treatment targets
3rd Generation

- Empirically-based and include wider variety of factors
  - Dynamic risk factors, criminogenic needs

- Disadvantages
  - Repeated administration required to detect change
  - Potentially shorter shelf life
  - More time consuming
  - Decisions based on group norms
  - Limited integration of intervention
3rd Generation

Identify

Analyze

Plan

Adapted from Health Level Seven (2010)
Evolution of Risk Assessment

First Generation
Unstructured professional judgment

Second Generation
Focus on static factors

Third Generation
Consideration of dynamic factors & criminogenic needs

Fourth Generation
Integration of case planning & intervention

4th Generation

- Integration of risk management, treatment targets and modalities, and assessment of progress

Advantages

- Transparent
- Sensitive to change over time
- Good reliability and predictive accuracy
- Theoretically sound
- Allow for clinical judgment
- Incorporates intervention
4th Generation

Identify → Analyze → Review → Monitor → Analyze

Adapted from Health Level Seven (2010)
4th Generation

Integration of risk management, treatment targets and modalities, and assessment of progress

Disadvantages

- Require repeated administration to detect change
- Potentially shorter shelf life
- More time consuming
- More training and expertise
- Smaller research base
Current Status of Risk Assessment
Risk Assessment in the U.S.

- Rise in risk assessment in correctional settings in U.S.
  - > 60 different risk assessment tools
    - >20 broad and general use
    - >40 for use in specific jurisdictions
  - Varying in:
    - Intended population
    - Intended outcome
    - Content
    - Approach
    - Length
    - Cost

Desmarais & Singh (2013)
Risk Assessment in the U.S.

Currently used and validated:

1. Correctional Offender Management Profile for Alternative Sanctions (COMPAS)
2. Inventory of Offender Risks, Needs, and Strengths (IORNS)
3. Level of Service (LS) instruments
4. Offender Group Reconviction Scale (OGRS)
5. Ohio Risk Assessment System (ORAS)
6. Federal Post Conviction Risk Assessment (PCRA)
7. Risk Management System (RMS)
8. Salient Factor Score instruments (SFS)
9. Self-Appraisal Questionnaire (SAQ)
10. Service Planning Instruments (SPIn)
12. Wisconsin Risk and Needs (WRN) instruments

Desmarais & Singh (2013)
Other Types of Instruments

- Violence risk assessment
  - Developed to assess risk for violence
  - Content overlap

- Personality assessment
  - Personality characteristics associated with risk of recidivism
  - Only one risk factor

- Criminal thinking questionnaires
  - Attitudes and thoughts associated with criminal behavior
  - Only one risk factor
  - Poor association between attitudes and behavior

Desmarais & Singh (2013)
Summary of Research Findings

- Surprisingly few evaluations of predictive validity
  - Usually only 1 or 2 studies
  - Usually conducted by instrument authors
- Even fewer evaluations of inter-rater reliability
  - Only 2 of 53 studies
- Risk classifications outperformed total scores
  - Examined infrequently

Desmarais & Singh (2013)
Does one work better than the other?

- It depends…
  - No one instrument produces *most* accurate assessments
  - Evidence of superiority as a function of:
    - Outcome
    - Population

*Desmarais & Singh (2013)*
Risk Assessment in Practice
Selecting a Risk Assessment Tool

- Answer the following questions:
  1. What is your outcome of interest?
  2. What is your population?
  3. What are the logistics?
1. What is your outcome of interest?

- Some instruments performed better in assessing likelihood of particular outcomes
  - New offenses + violations
    - Salient Factor Score instruments
  - New offenses
    - Ohio Risk Assessment System instruments
    - Federal Post Conviction Risk Assessment
    - Static Risk and Offender Needs Guide
  - Violations
    - Wisconsin Risk and Needs instruments

Desmarais & Singh (2013)
2. What is your population?

- Some instruments developed for specific populations
  - SFS instruments designed for parolees
  - SPIn-W developed for women
- Some instruments perform better for some subgroups
  - LSI assessments of female offenders
- Limited evidence of predictive validity within subgroups
  - Only handful compared validity by sex or race/ethnicity
  - None examined predictive validity across diagnoses

Desmarais & Singh (2013)
3. What are the logistics?

- Information available
  - Official records
  - Self-report
  - Interview
  - Other

- Time required to complete a risk assessment
  - # items varied from 4 (ORAS-CSST) to 130 items (IORNS)

- Staff resources, training and background
  - Certification (Example: PCRA)
  - Specific professional degrees (Example: LSI instruments)

- Cost

Desmarais & Singh (2013)
Additional Considerations

- Generalizability of research studies to use in practice
  - Research assistants ≠ professionals
  - Time
  - Resources
  - Training

- Allegiance effects
  - Better performance in studies conducted by tool author

- Predictive validity ≠ reduced recidivism
  - Instrument must be implemented with fidelity
  - Assessments must inform intervention

Desmarais & Singh (2013)
Successful Implementation

Steps to successful implementation in practice:

1. Prepare
2. Establish stakeholder and staff buy-in
3. Select and prepare the risk assessment tool
4. Prepare policies and essential documents
5. Training
6. Implement pilot test
7. Full implementation
8. Ongoing tasks for sustainability

Vincent, Guy, & Grisso (2012)
Assessment → Management

- Accurate and reliable assessments do not reduce recidivism
- Must be accompanied by comprehensive case plan:
  - Commensurate with offender’s level of risk
  - Addresses identified areas of risk and need
  - Builds on offender’s strengths
  - Delivered in a way that is appropriate (*responsivity*)
  - Evaluated and amended over time
- Must be communicated to others
“Improper risk communication can render a risk assessment that was otherwise well-conducted completely useless or even worse, if it gives consumers the wrong impression.”

Heilbrun, Dvoskin, Hart & McNiel (1999, p. 94)
Thank you!

- Contact information:
  
  **Dr. Sarah L. Desmarais**  
  Assistant Professor  
  Department of Psychology  
  North Carolina State University  
  Phone: (919) 515-1723  
  Email: sdesmarais@ncsu.edu  
  Web: [http://faculty.chass.ncsu.edu/sldesmar](http://faculty.chass.ncsu.edu/sldesmar)