

Program Evaluation and Advanced Data Analysis

Pernilla Johansson
Planner, Research and Planning

The practice of evaluating one's own efforts is as natural as breathing. Cooks taste their own gravy and sauce, cabinetmakers run their hands over the wood to decide when a piece is smooth enough, and basketball players watch to see whether their shots go in. Indeed, it would be most unwise after turning on the hot water to neglect to check the water temperature before stepping into a shower stall.

— Posavac & Carey (1997)

Did the program work?

- Will this program work?
- Why do we think it will work?
- How will it work?
- For whom will it work?
- What is “work” supposed to mean? What is the goal of the program? What is a good result?
- What is a successful program? How do we know our program was successful?



Evaluating programs

- Process evaluation – looking at the implementation of a program
- Outcome evaluation- looking at the results of a program and evaluate the results against something (e.g. control group's or comparison group's results)
- Methodologies and research approaches for process evaluation and outcome evaluations

Process Evaluation

- Looks at the implementation of a new program
- Focuses on answering questions like:
 - Was the program implemented as intended?
 - Were all planned program activities performed?
 - How is the program/activities being perceived?
What is the perceived outcome?
 - Were changes needed to the program? Did any program activities or component of the program have to be excluded or adjusted? If so, why?



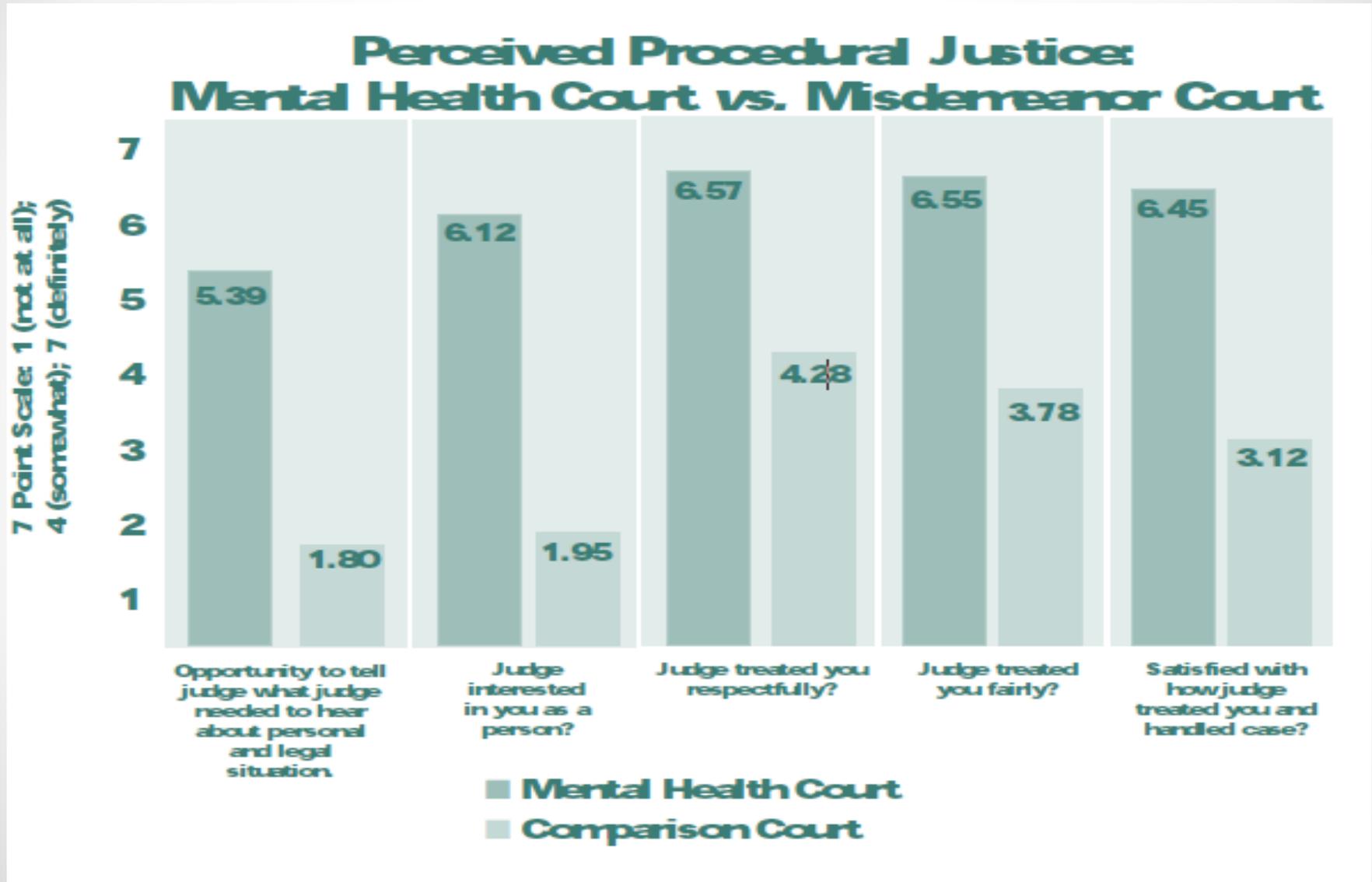
Process evaluation-- how to measure the process

- Measure program **outputs**
- Outputs can most often be counted or expressed as a percentage
 - How many children were served in the program?
 - How many attended each activity/session?
 - How many staff were involved?
 - Were the same staff members involved throughout the program start-up/implementation (staff turnover)?
 - What was the cost of the program? How much money was spent on different components, activities, staff categories etc....?
 - What was the cost per unit?
 - Did changes had to be made to the program during implementation? Why?

Process evaluation-- how to measure the process

- Measure **perceived effects and outcomes**
- Ask the participants what they think the effect and outcomes are for them
- Methodologies:
 - Surveys—satisfaction surveys with Likert-scale responses (strongly agree - strongly disagree)
 - Interviews
 - Focus groups
 - On-going “reflection” meetings

Example: Perceived Procedural Justice

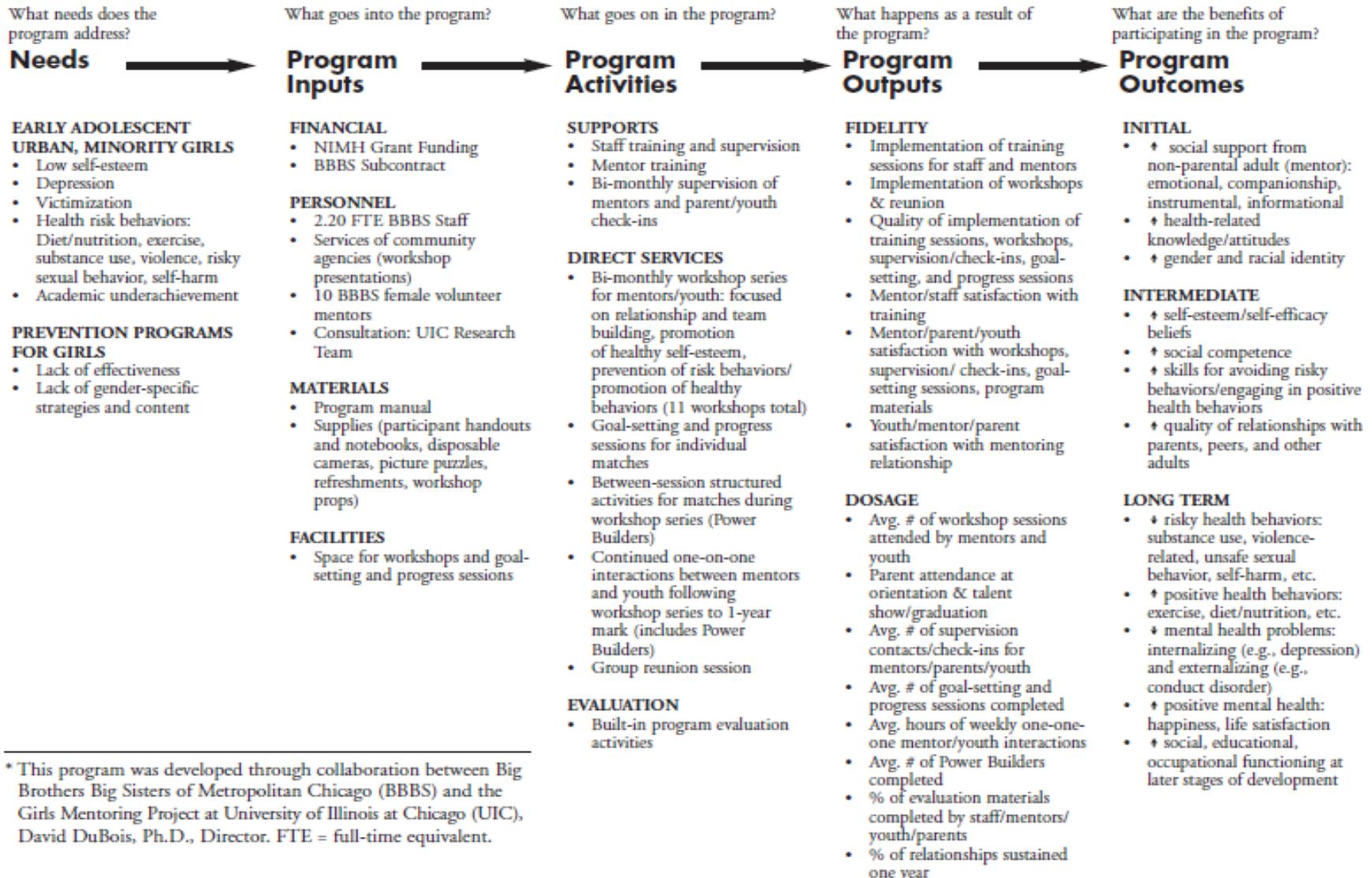


Process Evaluation

- Provide understanding of what was done correctly when the program was first launched
- Evaluate fidelity to the model– implementing a program as the model program.
 - But what if there is no model program? Document changes and adjustments important.
- Provide understanding of what elements were difficult to implement or had to be changed with the program
 - E.g. ESTEEM court parent group and girls group on different day from court day, participants had to come to Letot twice a week. Participation low. Change: parent and girl groups moved to same day as court day.
- Provide understanding of why the program was successful or not as part of the outcome evaluation.

Example: Activities and Outputs

Logic Model for GirlPOWER!*



Outcome Evaluation

- Measures change or makes comparison
- Did the program work? What benefits did the program provide?
- In juvenile justice key measures are:
 - DID THE PARTICIPANTS COMPLETE SUPERVISION/PROBATION SUCCESSFULLY
 - DID THE PARTICIPANTS COMMIT NEW OFFENSES/ RECIDIVATE
- Other outcomes possible and depending on the program:
 - TRUANCY pgm: Did school attendance improve, as a result of the program?
 - SUBSTANCE ABUSE pgm: Did substance use decrease, as a result of the program?
 - EVENING REPORTING CENTER pgm: Did probation supervision compliance increase, as a result of the program?

Outcome evaluation

- **How can we know the change/improvement/reduction was due to the program?**
- Comparing apples to apples
- Calculate a treatment effect
- Calculate predicted probabilities
- Rule out alternative explanations
- Control for other factors
- See statistically significant differences
- Randomize treatment and control group
- ➔ **CREATING COMPARABLE COMPARISON GROUP**

Outcome Evaluation

- To know if the program has an effect we need to compare the results of the program to a comparable group that did not participate in the program.
- We want to compare the result to if we had done nothing.
- Before and After:
 - PRE and POST Test
- Research Design:
 - RANDOM ASSIGNMENT → creating apples and apples
 - TREATMENT GROUP AND CONTROL GROUP
- Statistical Analysis:
 - STATISTICAL MODELING → compensating for lack of random assignment
 - Multivariate analysis with predicted probabilities

Outcome Evaluation: Before and After

- **BEFORE AND AFTER** : PRE and POST Test
- Measures change in the same individuals over time
- Examples:
- Administer a risk and needs assessment after 6 months to look for changes in certain domains compared to the first assessment
- Use a survey measuring self-esteem before and after a Girls Circle program
- Valuable research approach, but can not tell us what the change would have been without the program

Outcome Evaluation: Random Assignment T/C

- RESEARCH DESIGN – RANDOM ASSIGNMENT TO TREATMENT(program) AND CONTROL GROUP
- With **random assignment** (e.g. coin flipping) to two groups (treatment and control), the **differences** between the groups are **removed**. The groups are “apples and apples”.
- The **only difference** between the groups is **participation in the program**.
- The difference in outcome between the two groups is due to the program.
 - E.g. lower recidivism for mental health court participants is due to the programming in the MHC.

Outcome Evaluation: Statistical Modeling

- Used when Random Assignment is not possible
- A method to control for other factors/differences between the treatment and control group.
- Adding the factors/variables known to matter for the outcome into the statistical model to “control” for them/ remove their effect.
 - E.g factors known to matter for recidivism: number of prior offenses, serious felony offense, high risk on RAI, prior probation failures
- The statistical model can provide a predicted probability of recidivism without the program, but when other factors are the same in the two groups.



Outcome Evaluation: With a comparison group

- Example: matching for comparison group for Broward County Mental Health Court

archival data. A misdemeanor court in another Florida county with similar characteristics was chosen as a comparison to the MHC. We enrolled 120 individuals from the MHC and 100 individuals from the comparison court, matching them on a number of key variables to attempt to assure that individuals enrolled in the comparison misdemeanor court would have been eligible for the Broward County mental health court.

Outcome Evaluation: Practice Example

- With the new mental health grant available to the juvenile department, you will develop a program evaluation of a new mental health court for children on deferred prosecution:
- Eligibility: (1) mental health diagnosis, or (2) “warning”-score on Suicide Ideation or Depressed/Anxious MAYSI-2 scale. (3) eligible for DP.
- How would you ideally design this program evaluation?
- How can you create a comparable comparison group?



References:

1. How to build a successful mentoring program sing Elements OF Effective Practice: A step-by-step tool kit for program managers. National Mentoring Partnership.
2. The effectiveness of the Broward Mental Health Court: An evaluation. Policy Brief. November 2002. University of South Florida.