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Methodological Choices in Assessing the Quality and Strength of Evidence on Effectiveness

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NREPP Overview

- A searchable online registry of mental health and substance abuse interventions that have been reviewed and rated by independent reviewers
- New site (www.nrepp.samhsa.gov) launched March 1, 2007
- Assist the public in identifying interventions that
 - have been scientifically tested – have an “evidence-base”
 - can be readily disseminated to the field
 - may fit various needs and resources

NREPP Overview

NREPP publishes and posts an intervention summary for every intervention reviewed. Summaries include:

- Descriptive information
- Quality of Research and Readiness for Dissemination ratings
- A list of studies and materials submitted for review
- Contact information for the intervention developer and dissemination staff

Background – Why?

- Organizations – want to provide what works
- Funders – want to pay for what works
- Consumers and families – want to receive what works
- So.....what works??

Background – How?

Asked public what was wanted from NREPP – relative to a predecessor system – through August 2005 *Federal Register* notice. Responses highlighted need for:

- **More choice** – increase number and type of interventions; assist users to identify “good fits” rather than “forced fits”
- **More transparency** – customizable searches; strengths and weaknesses of interventions listed; details of selection and review processes provided
- **Eliminate mandates for use of system** – encourage adoption by others

Current Status

- As of February 2011, 179 interventions have been reviewed and posted on the Web site
- Approximately 84 additional interventions have been accepted for review
- Between 3 and 5 new postings per month
- Over 650,000 Web site visitors since January 2011
 - Averaging more than 14,000 visitors per month

Delivering on Science to Service

- 64% of posted interventions (114 of 179) were developed and/or evaluated with support from the National Institutes of Health (NIH)
 - Underscores importance of NREPP to SAMHSA's Science to Service agenda (reducing research-to-practice gap)
- Research investments in the development and evaluation of a single intervention by NIH and others often range from \$1 million to \$5 million or more
 - Expending 1-2% of this amount through NREPP appears a worthwhile and justifiable public investment

Reach of Current NREPP Interventions

- Taken together, the 179 interventions highlighted on NREPP have been implemented:
 - In over 246,000 sites
 - In all 50 States and several territories
 - In over 100 countries
 - With over 108,000,000 clients

Minimum Review Requirements

- To be considered for review, four minimum requirements must be met
- Minimum requirements are posted prior to the open submission in a *Federal Register* notice (FRN)

Current Minimum Requirements

1. Study design
2. Behavioral outcomes in substance abuse and/or mental health
 - Documented p values
3. Published results
 - Peer-reviewed journal article
 - Comprehensive evaluation report
4. Dissemination materials are developed and available to the public

QOR Rating Criteria

1. Reliability of measures
2. Validity of measures
3. Intervention fidelity
4. Missing data and attrition
5. Potential confounding variables
6. Appropriateness of analysis

RFD Rating Criteria

1. Availability of implementation materials
2. Availability of training and support resources
3. Availability of quality assurance procedures

Submission Contact Information

Individuals and/or organizations interested in submitting an intervention for potential inclusion in NREPP should contact the NREPP contractor, MANILA Consulting Group:

Phone: 1-866-43NREPP (1-866-436-7377)

Email: nrepp@samhsa.hhs.gov

For questions about NREPP or other SAMHSA activities to promote the use of evidence-based services, contact:

Kevin D. Hennessy, Ph.D.

Science to Service Coordinator, SAMHSA

Phone: 240-276-2234

E-mail: Kevin.Hennessy@samhsa.hhs.gov

Reliability of Measures

- 0 = Absence of evidence of reliability or evidence that some relevant types of reliability (e.g., test-retest, interrater, interitem) did not reach acceptable levels.
- 2 = All relevant types of reliability have been documented to be at acceptable levels in studies by the applicant.
- 4 = All relevant types of reliability have been documented to be at acceptable levels in studies by independent investigators.

Validity of Measures

0 = Absence of evidence of measure validity, or some evidence that the measure is not valid.

2 = Measure has face validity; absence of evidence that measure is not valid.

4 = Measure has one or more acceptable forms of criterion-related validity (correlation with appropriate, validated measures or objective criteria); OR, for objective measures of response, there are procedural checks to confirm data validity; absence of evidence that measure is not valid.

Intervention Fidelity

- 0 = Absence of evidence or only narrative evidence that the applicant or provider believes the intervention was implemented with acceptable fidelity.
- 2 = There is evidence of acceptable fidelity in the form of judgment(s) by experts, systematic collection of data (e.g., dosage, time spent in training, adherence to guidelines or a manual), or a fidelity measure with unspecified or unknown psychometric properties.
- 4 = There is evidence of acceptable fidelity from a tested fidelity instrument shown to have reliability and validity.

Missing Data and Attrition

- 0 = Missing data and attrition were taken into account inadequately, OR there was too much to control for bias.
- 2 = Missing data and attrition were taken into account by simple estimates of data and observations, or by demonstrations of similarity between remaining participants and those lost to attrition.
- 4 = Missing data and attrition were taken into account by more sophisticated methods that model missing data, observations, or participants, OR there were no attrition or missing data needing adjustment.

Potential Confounding Variables

- 0 = Confounding variables or factors were as likely to account for the outcome(s) reported as were the hypothesized causes.
- 2 = One or more potential confounding variables or factors were not completely addressed, but the intervention appears more likely than these confounding factors to account for the outcome(s) reported.
- 4 = All known potential confounding variables appear to have been completely addressed in order to allow causal inference between the intervention and outcome(s) reported.

Appropriateness of Analysis

- 0 = Analyses were not appropriate for inferring relationships between intervention and outcome, OR sample size was inadequate.
- 2 = Some analyses may not have been appropriate for inferring relationships between intervention and outcome, OR sample size may have been inadequate.
- 4 = Analyses were appropriate for inferring relationships between intervention and outcome. Sample size and power were adequate.

Availability of Implementation Materials

- 0 = No materials or resources are available that could assist with program implementation.
- 1 = Limited materials and resources are available that could facilitate but not directly assist with program implementation.
- 2 = Limited materials and resources are available that directly assist with program implementation.
- 3 = Adequate materials and resources are available that directly assist with program implementation.
- 4 = Adequate materials and resources are available that directly assist with program implementation, and they are of high quality and appropriate for the intended audience(s).

Availability of Training and Support Resources

- 0 = No materials, resources, and/or technical assistance are available that support training or coaching.
- 1 = Limited materials, resources, and/or technical assistance are available that could facilitate but not directly support training and coaching.
- 2 = Limited materials, resources, and/or technical assistance are available to directly support training and coaching.
- 3 = Adequate materials, resources, and/or technical assistance are available that directly support training and coaching.
- 4 = Adequate materials, resources, and technical assistance are available that directly support training and coaching, and they are of high quality and appropriate for the intended audience(s).

Availability of Quality Assurance Procedures

- 0 = No materials, resources, and/or procedures are available that could help ensure quality assurance.
- 1 = Limited materials, resources, and/or procedures are available that could facilitate but not directly assist in ensuring quality assurance.
- 2 = Limited materials, resources, and/or procedures are available to directly support quality assurance.
- 3 = Adequate materials, resources, and/or procedures are available that directly support quality assurance.
- 4 = Adequate materials, resources and/or procedures are available that directly support quality assurance, and they are of high quality and appropriate for the intended audience(s).