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Delivery of an intervention: A framework for the measurement of treatment integrity

Australian Implementation Conference

Pauline Goense, LL.M, MSc

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CREATING TOMORROW

Delivering the intervention as intended

An intervention is designed to reduce specific problems.

- ➢ Based on empirical research on the *risk and protective factors* that play a role in the onset and persistence of this specific problem and *theoretical notions* about behaviour, *the elements* out of which an intervention should exist are determined (Schoenwald et al, 2011).

The theoretical foundation of an intervention shows *which results can be expected*.

- ➢ Therefore, it is logic to *deliver the elements* that are *associated* with the theoretical foundation of the intervention.

In general, research findings indicate that delivering the intervention as intended, is *positively associated* with client outcomes, with higher levels of accurate delivery predicting better outcomes then lower levels (Lipsey, 2009; Schoenwald, Chapman, Sheidow, & Carter, 2009; Tennyson, 2009).

What is delivering as intended?

Carrying out the intervention with the content, duration, frequency and the scope as developed and researched for effectiveness (Carroll et al., 2007).

Delivering the content: Treatment integrity:

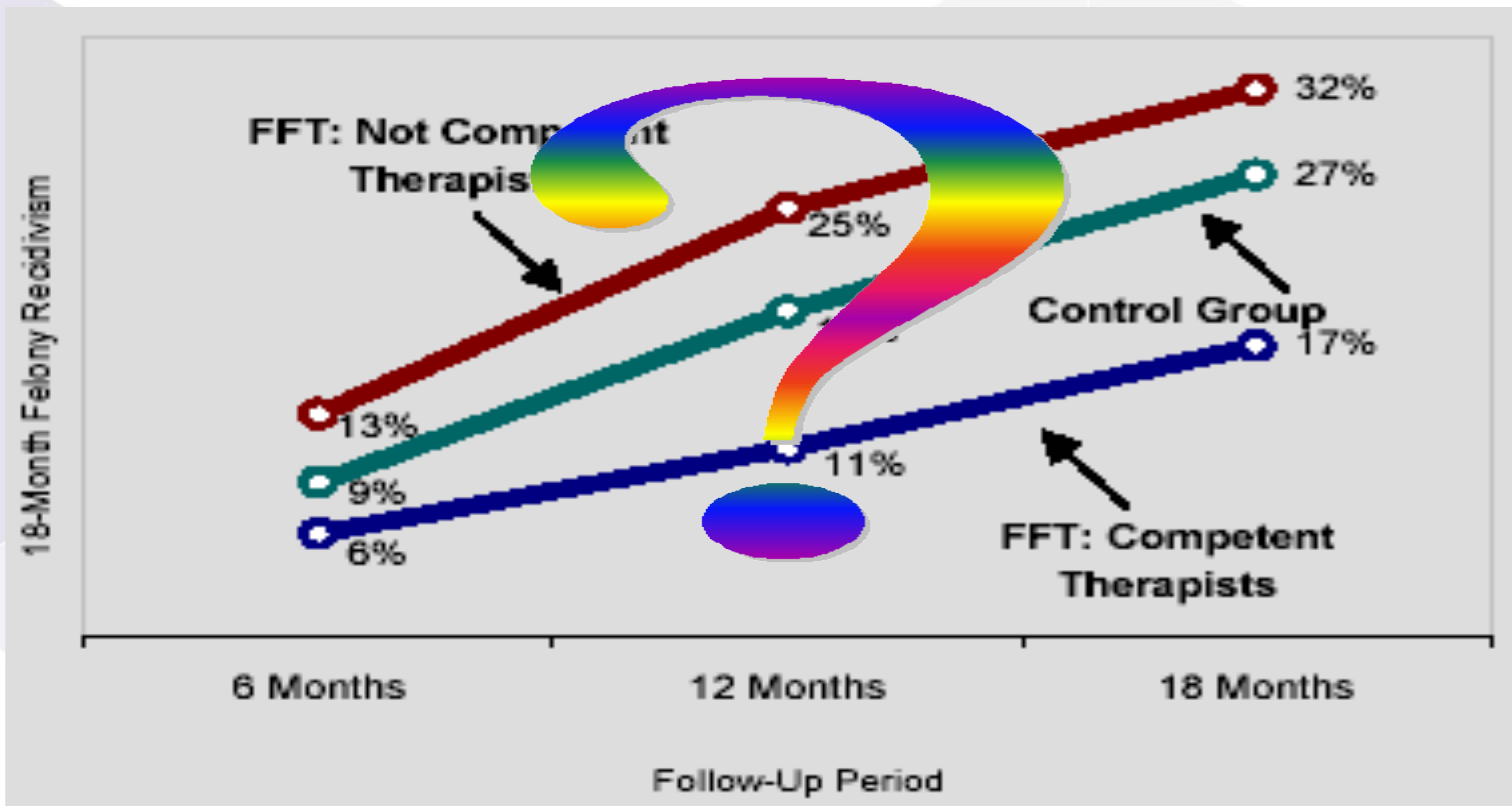
1) therapist adherence: the degree to which the therapist delivers prescribed procedures from a specific intervention (delivery consistent with the intervention manual). (Perepletchikova, Treat & Kazdin, 2007)
2) therapist competence:
   a) Technical competence: The level of therapist (technical) skills and the judgment in delivering the components of the intervention (Barber et al., 2006; Barber, Triffelman & Marmar, 2007)
   b) Common competence: competence in delivering common aspects of treatment (e.g. alliance, formation and creating positive expectancies) (McLeod et al., 2013).
3) treatment differentiation: The degree the intervention differs from other interventions along critical dimensions (Perepletchikova, Treat & Kazdin, 2007; Waltz et al., 1993)

Measuring treatment integrity

Level	Content	Aim/use
Efficacy studies	Information on relationship between intervention (elements) and client outcomes	Information on which elements are responsible for efficacy of intervention
Intervention developer/owner	Information about the quality of the delivery of interventions	➢ (Re) certification purposes ➢ Designing /adjusting training and support therapists.
Therapist / team	Information about their own skills in delivering the intervention	In (daily) support to therapists to learn and develop (further) skills.

Goense & Boendermaker (submitted)

Treatment integrity in outcome studies



Barnoksi, 2004

Reviews on integrity measurements

- Perepletchikova, Treat and Kazdin (2007): adult and child psychotherapy outcome studies, only 3,5% of the 147 articles met criteria for *adequately* implementing treatment integrity procedures

- Goense et al. (2014): outcome studies of youth interventions targeting behavioral problems. 10% of the 30 studies met criteria for *adequately* implementing treatment integrity procedures

Efficacy study? Feedback for therapists? Both?

Phase	Content
Phase 1	*Developing an instrument* 1. Determine the purpose of the measurements 2. Identify key elements of intervention in specific activities (such as behaviors, procedures, techniques, principles) 3. Determine how / when key elements are implemented with high integrity 4. Make sure to measure both adherence and competence

What do you want to ‘see’ a therapist doing?

Do therapists have to deliver all elements during a meeting?

Goense & Boendermaker (submitted); McLeod et al. (2013); Perepletchikova, Treat, & Kazdin (2007); Schoenwald et al. (2011).

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Do you have to score the whole meeting? Will cost a lot of time.

Phase	Content
Phase 2	*Determination which data it will be based on and by who(m) it will be collected* 1. Direct instrument (using audio / video / live observation) 2. Based on ratings of experts (people with knowledge of intervention) 3. Training of raters

Is that always possible? Is there enough time/finance?

Goense & Boendermaker (submitted); McLeod et al. (2013); Perepletchikova, Treat, & Kazdin (2007); Schoenwald et al. (2011).

Phase	Content
Phase 3	*Determine the moments of measurement* 1. Different phases of an intervention 2. Different sessions of the intervention 3. Different clients / cases 4. Various situations in which therapists can find themselves with clients 5. Measurements at random without awareness of therapists that measurements are made 6. Different therapists
Phase 4	*Converting the scores* 1. Determine from what score the intervention is delivered with (high) integrity

Goense & Boendermaker (submitted); McLeod et al. (2013); Perepletchikova, Treat, & Kazdin (2007); Schoenwald et al. (2011).

Example of a measurement instrument

Intervention: Multisystem Therapy (MST)

Instrument
Name: Treatment Adherence Measure – Revised (TAM-R)
Type: Questionnaire
Lenght: 28 questions

http://www.mstinstitute.org/qa_program/pdfs/QAOverview.pdf

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Example of MST

Phase	Content
Phase 1	*Developing an instrument* 1. Determine the purpose of the measurements 2. Identify key elements of intervention in specific activities (such as behaviors, procedures, techniques, principles) 3. Determine how / when key elements are implemented with high integrity 4. Make sure to measure both adherence and competence
Phase 2	*Determination which data it will be based on and by who(m) it will be collected* 1. Direct instrument (using audio / video / live observation) 2. Based on ratings of experts (people with knowledge of intervention) 3. Training of raters

Research and feedback to therapists

9 key principles of MST

Indirect instrument

Only adherence?

Rated by primary caretaker

http://www.mstinstitute.org/qa_program/pdfs/QAOverview.pdf

Example of MST

First administered during the second week of MST treatment. Once every four weeks thereafter

Phase	Content
Phase 3	*Determine the moments of measurement* 1. Different phases of an intervention 2. Different sessions of the intervention 3. Different clients / cases 4. Various situations in which therapists can find themselves with clients 5. Measurements at random without awareness of therapists that measurements are made 6. Different therapists
Phase 4	*Converting the scores* 1. Determine from what score the intervention is delivered with (high) integrity

Treshold level is . 61 Cultural specific?

http://www.mstinstitute.org/qa_program/pdfs/QAOverview.pdf

Translating the framework to practice

- Therapist competence has proven difficult to define and measure
- Many instruments are indirect
- Assessing and scoring (live)observations is time-consuming and expensive
- Treatment integrity scores are used for research and (re)certification of therapists, not always to provide feedback to therapists.

Goense et al. (2014), Goense et al (in preparation), McLeod et al. (2013)

Translating the framework to practice

How does one make measurements practically applicable and relevant to the practice?

Research suggests that *frequent* en *targeted* support of practitioners is an effective way to establish and maintain treatment integrity*

Effective supervision focuses (o.a.) on the levels of treatment integrity of the therapist **

Therapist / team	Information about their own skills in delivering the intervention	In (daily) support to therapists to learn and develop (further) skills.

*Kerby, 2006; Mikolajczak, Stals, Fleuren, Wilde, & Paulussen, 2009; Schoenwald et al., 2009
** Goense et al, accepted

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Amsterdam University of Applied Sciences

Contact details

Pauline Goense, LL.M. MSc.
Amsterdam University of Applied Sciences
School of Social Work and Law
Wibautstraat 5a / 1091 GP Amsterdam
P.O. Box 1025 / 1000 BA Amsterdam / The Netherlands
M. +31 621156195
p.b.goense@hva.nl

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