Evaluation and Program Planning 70 (2018) 61–66

Contents lists available at ScienceDirect

Evaluation and Program Planning

journal homepage: www.elsevier.com/locate/evalprogplan

Treatment delivery of the community reinforcement approach in outpatient addiction treatment

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ARTICLE INFO

Keywords:
Substance use
Community reinforcement approach
Treatment delivery
Therapist characteristics

ABSTRACT

Objective: Treatment model adherence is an important predictor of treatment outcome. In clinical practice evidence-based treatments are delivered in widely varying degrees. This study examines which Community Reinforcement Approach (CRA) procedures are delivered by addiction care therapists and how this is associated with therapist characteristics.

Method: The study integrated two observational designs. Firstly, using a prospective design, 24 therapists registered every CRA procedure delivered during every patient contact over a six month period. Secondly, using a cross-sectional design, personal characteristics of 69 therapists were assessed including their self-reported delivery of CRA procedures and their perceptions with regard to the meaningfulness and complexity of these procedures.

Results: The number of CRA procedures delivered varied substantially among therapists both at session and patient level. More experienced therapists and those that had received advanced training previously, delivered more CRA procedures. Finally, the delivery of CRA procedures was positively associated with experienced meaningfulness and negatively associated with difficulty.

Conclusions: The results confirm the relation between treatment delivery and experienced meaningfulness and difficulty of CRA procedures and provides support for advanced training to enhance the delivery of a wider range of CRA procedures.

1. Introduction

Generally speaking, the delivery of evidence-based treatments in mental health care varies widely (Boswell et al., 2013). Many therapists do not use empirically supported treatments for psychiatric disorders and even when they do, they are often not delivered according to protocol (Shafran et al., 2009; Waller, 2008). For instance, a study of cognitive behavioral therapy for eating disorders found that the use of core procedures was poor. Half of the therapists involved did not routinely use any of the widely supported techniques for eating disorders (Waller, Stringer, & Meyer, 2012). The limited use of evidence-based treatment core procedures is also found in studies regarding substance use disorder treatment (Foreman, Bovasso, & Woody, 2001; McGovern, Fox, Xie, & Drake, 2004).

This study focuses on the Community Reinforcement Approach (CRA), an evidence-based behavioral treatment that addresses substance use by promoting positive reinforcement for sobriety (Meyers, Roozen, & Smith, 2011). The effectiveness of CRA has been demonstrated in different clinical populations, such as patients with alcohol, cocaine or opioid dependence (Roozen, Kerkhof, & Van den Brink, 2003; Meyers, Villanueva, & Smith, 2005, Schottenfeld, Pantalon, Chawarski, & Pakes, 2000). The goal of CRA is to help people discover and adopt an alternative lifestyle that is more rewarding than the current lifestyle in which substance use is often central. Examples of CRA procedures aimed at increasing the accessibility of alternative reinforcers which compete with the reinforcing effects of substance use are: Problem-solving, Functional analysis and Relapse management (Meyers & Smith, 1995). Therapists decide which procedures are appropriate to use within a session, based on the goals the patient chooses to work on. Patients may receive some procedures multiple times and others never (Campos-Melady, Smith, Meyers, Godley, & Godley, 2017). CRA has no protocol in which procedures are fixed from beginning to end. As a result, CRA places great demands on the flexibility and therapeutic skills of therapists (Roozen, 2006). This may affect the quality and scope of delivery of different CRA procedures.

Although, there have not been any studies on the delivery of CRA procedures, there have been studies on Adolescent CRA (A-CRA), an evidence-based adaptation of CRA (Garner et al., 2009). Garner et al.

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https://doi.org/10.1016/j.evalprogplan.2018.05.004
Received 24 October 2017; Received in revised form 26 April 2018; Accepted 30 May 2018
Available online 04 June 2018
0149-7189/

(2009) designed four randomized, controlled trials of A-CRA procedures with 399 participants and 15 therapists. Significant differences were found with regard to the frequency with which each of the A-CRA procedures was delivered. The delivery of ten or more unique procedures in the course of a treatment episode was associated with maximal clinical outcomes. In accordance, when the relationship between implementation grade and patient outcomes in 65 addiction treatment centers was examined, procedure exposure was predictive of clinical improvement (Garner, Hunter, Funk, Griffin, & Godley, 2016). Here procedure exposure was defined as the delivered number of A-CRA sessions and A-CRA procedures.

Indeed, the authors suggest that procedure exposure can be seen as an evidence-based measure of implementation on an organizational level. Several factors, such as therapist characteristics, may affect the quality and frequency of CRA procedures delivered (Perepletchikova & Kazdin, 2005). For instance, in a study on 'therapist drift', Waller (2008) argued that drift from treatment protocols is related to the tendency of therapists to avoid behavioral tasks of therapy. Waller et al. (2012) found that demographic characteristics of therapists such as a higher age were associated with poorer adherence to evidence-based practice. General anxiety symptoms of the therapist, such as feeling tense and nervous, also appeared to be an impeding factor. With regard to the delivery of A-CRA, perceptions of the intervention in terms of complexity and implementation difficulty were found to be important factors associated with program sustainment (Hunter, Han, Slaughter, Godley, & Garner, 2015). Therapist's perceptions and attitudes towards evidence-based treatments in addiction care were in turn affected by education levels. Therapists with a higher level of education, were found to have more positive attitudes towards the usefulness of evidence-based (Lundgren, Chassler, Amodeo, D'Ippolito, & Sullivan, 2012).

The study presented here focused on treatment delivery defined as therapist's self-reported use of a broad range of specific CRA procedures in substance use disorder treatment. The current study focused on adherence, not competence. In addition, therapist characteristics associated with the delivery of the CRA procedures were examined. Insight into treatment delivery and factors which influence treatment will allow addiction care treatment facilities to develop more specific strategies to stimulate the use of CRA procedures. We hypothesized that CRA therapists who had received advanced CRA training would use more CRA procedures. We also hypothesized that the delivery of CRA procedures would be positively associated with experienced meaningfulness and negatively associated with experienced difficulty of these procedures.

2. Method

2.1. Design

The study was conducted within two addiction treatment centers in the Netherlands and integrated two observational designs. Using a prospective approach, the participating therapists of one of the two facilities gathered data by logging all CRA procedures each session, over a six-month period. A cross-sectional design was used to assess the self-reported delivery of CRA procedures in conjunction with the perceptions of CRA procedures of therapists of both addiction treatment centers. CRA 'treatment delivery' is defined somewhat different in both designs, respectively referring to the therapist-reported number of CRA procedures conducted by a therapist per session (prospective design) and per patient (cross-sectional design).

2.2. Participants and treatment context

In total, 69 therapists from two addiction treatment centers in the Netherlands using CRA as their main methodology were included (IrisZorg (n = 31) and Novadic-Kentron (n = 38). The therapists involved in the study were working in outpatient settings with patients with a reasonable degree of autonomy and limited co-morbidity. These patients often have a supportive social network. The treatments focused on addiction, not on comorbidity. In general, treatment duration averages around half a year. Treatment consists of CRA and is provided by diverse professionals, including social workers, nurses and psychologists.

With regard to the prospective part of the study, only therapists from IrisZorg were included. In total, they registered the CRA procedures delivered during 2461 sessions. From all therapists working with the intended patient group only the data of those who registered more than 20 sessions were included for analysis (n = 23). Limited participation was due to illness (n = 2), limited operating within included treatment department (n = 4) or lack of commitment (n = 2).

2.3. Procedure

All therapists working with the intended patient group participated in the prospective part of the study. Participants were asked to register what CRA procedures or other interventions they used during every patient session over a six-month period. Instructions were given in person and by e-mail. Monthly reminders by e-mail were given to continue administration. After two months of registration, therapists filled in a survey to assess the self-reported delivery of CRA procedures in conjunction with the therapists' perceptions of CRA procedures. Within Novadic-Kentron, the survey was distributed at the same time. Information about how many therapists of Novadic-Kentron were approached is lacking.

2.4. Measures

The CRA Registration List was designed for this study by the authors and is based on the A-CRA Exposure Scale developed by Garner et al. (2009) and measures the delivery of CRA at session level. It intends to measure adherence but does not involve any judgment about the competence with which interventions are delivered. The CRA Registration List includes the 12 CRA procedures and two of the key components – Homework and Role play – outlined in the CRA manual (Roozen, Meyers, & Smith, 2012; see Table A.1 in Supplementary material). The CRA Registration List also includes interventions that are not part of the CRA manual like other behavioral interventions that focus on changing behavior such as sleep training and ADHD coaching and cognitive interventions that focus on changing the content of (irrational) cognitions. Therapists were instructed to report the type of session, (e.g. assessment, evaluation or treatment). Therapists also had to report which CRA procedures they performed during the session.

The CRA Survey of Use is based on the Measurement Instrument of Determinants of Innovations (MIDI) (Fleuren, Paulussen, Van Dommelen, & Van Buuren, 2014). The MIDI is a short instrument used to measure four categories of determinants that may affect implementation: determinants associated with the innovation, and the professional, the organization and socio-political context. The instrument is promising but needs further validation (Fleuren et al., 2014). The MIDI was complemented by the authors with factors described in the literature that affect therapist adherence, such as therapist's anxiety (Waller, 2008) and perceptions of the intervention (Hunter et al., 2015). For this study we used part of the CRA Survey of Use, namely the items that focus on characteristics of the therapists, the self-reported delivery of CRA procedures and three key parts – homework, role play and reinforcers – and the experienced difficulty and meaningfulness of CRA procedures and key parts. Therapists received questions on demographic characteristics such as age, gender and educational level, as well as factors such as CRA training received, years of experience with CRA and CRA supervision attendance. Therapists had to indicate to what proportion of their patients they offered all separate CRA procedures and key parts on a 0–100% scale. The experienced difficulty and