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Review

A comprehensive review of research on Functional Analytic Psychotherapy☆

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HIGHLIGHTS

- FAP's proposed mechanism is therapeutic social reinforcement.
- We conclude that FAP is not yet empirically supported for specific psychiatric disorders.
- Evidence supports FAP's mechanism as an agent of idiographic behavior change.

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ABSTRACT

Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991) is a transdiagnostic approach to outpatient psychotherapy that presented guidelines to instantiate the behavioral principle of natural, social reinforcement applied to idiographic behavioral targets within a genuine and authentic psychotherapy relationship. We present the first comprehensive review of research on FAP, including qualitative studies, uncontrolled and controlled single-case designs, group designs, and studies on training therapists in FAP. We conclude that current research support for FAP is promising but not sufficient to justify claims that FAP is research-supported for specific psychiatric disorders. There is stronger support for FAP's mechanism of therapist-as-social reinforcer: FAP techniques, when appropriately applied to idiographically defined behavioral problems—primarily in the realm of social functioning—produce positive change in those behaviors.

1. Introduction

Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991) was described in 1991 to resolve an apparent paradox: How can psychotherapy consistent with fundamental behavioral principles be practiced in standard, adult, outpatient contexts without sacrificing a strong psychotherapeutic relationship? It was particularly important to early FAP theorists (e.g., Follette, Naugle, & Callaghan, 1996) to articulate a behaviorally grounded explanation for the well-established importance of the therapy relationship (e.g., Gaston, 1990; Horvath & Symonds, 1991). FAP proposed that a primary mechanism of effective psychotherapy was the in-session, natural, social reinforcement of improved client behavior by the therapist. According to FAP, a therapist reinforcing clients in accordance with this mechanism will naturally foster the genuine, close, caring psychotherapy relationship fundamental to the therapy alliance (Horvath, 2005; Kohlenberg & Tsai, 1994a; Kohlenberg, Yeater, & Kohlenberg, 1998; Tsai, Kohlenberg, & Kanter, 2010).

The notion of the therapist as a source of positive social reinforcement was not new to FAP (Krasner, 1962; Truax, 1966); it was derived from a radical behavioral analysis of the psychotherapy relationship (e.g., Skinner, 1974), now situated within the broader framework of contextual behavioral science (Hayes, Barnes-Holmes, & Wilson, 2012; Zettle, Hayes, Barnes-Holmes, & Biglan, 2016). Consistent with the behavior analytic emphasis on describing behavior in terms of functions rather than topography (Hayes & Follette, 1992), Kohlenberg and Tsai (1991) did not specify concrete treatment techniques or an easily replicable FAP protocol; rather, they explicated five functional rules to guide the therapist. Central to these rules is the term *Clinically Relevant Behavior* (CRB) – the in-session manifestations of the client's daily-life problems (CRB1s) and improvements in those problems (CRB2s). FAP's five rules are structured around CRB: Rule 1 is to observe CRBs, Rule 2

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is to evoke CRBs, Rule 3 is to reinforce CRB2s, Rule 4 is to observe the potentially reinforcing effects of therapist behavior in relation to CRBs, and Rule 5 is to give functional interpretations of CRBs and clarify parallels between CRB and daily life problems in the service of generalization. FAP's first three rules specified FAP's central mechanism of action: in-session observation, evocation, and contingent responding by the therapist to client CRB2s with natural reinforcement to increase the frequency of these CRB2s.

Although central to FAP's behavior-analytic foundations is the idea that the clinical problems and targets defined as CRB in FAP should be idiographic to the client's presentation, given the importance of the therapeutic relationship in FAP, most descriptions of FAP's targets converge around the broad theme of social/interpersonal functioning (Maitland & Gaynor, 2012). The two primary texts on FAP (Kohlenberg & Tsai, 1991; Tsai, Callaghan, Kohlenberg, Follette, & Darrow, 2009) emphasize a treatment approach that prototypically (but not exclusively) targets a client's social and interpersonal problems, idiographically defined but often related to intimacy. Improvements in this domain are hypothesized to produce downstream transdiagnostic mental health benefits (Wetterneck & Hart, 2012) and this social functioning target is prevalent in many published FAP research projects and FAP case descriptions (Maitland, Kanter, Manbeck, & Kuczynski, 2017).

Descriptions of the clinical application of FAP emphasize that attempts to evoke (Rule 2) and reinforce (Rule 3) client CRB2s related to intimacy and social functioning should be natural (Ferster, 1967), in that the therapist should aim to respond to client CRB2s in ways that are functionally similar to ideal intimate relationships in the client's life. Thus, FAP therapists are encouraged to strategically and explicitly create a safe, authentic, and caring relationship within which the mechanism of FAP unfolds. Recent FAP writings (e.g., Tsai et al., 2009) have employed the terms *awareness, courage,* and *love* (ACL) to describe the ideal qualities of this relationship. For example, in the service of increasing accurate observation of clients' CRBs (Rule 1), FAP therapists are encouraged to be empathically attuned to and aware of the subtleties of the client's behavior and core attributes in session (i.e., awareness). To evoke CRB2s (Rule 2), FAP therapists are encouraged to take strategic, therapeutic risks which may involve authentic expression of feelings and reactions to the client (i.e., courage), and when these clients' CRB2s are observed by the therapist in the moment, the therapist attempts to respond with natural reinforcement to strengthen these repertoires (Rule 3). This natural reinforcement may involve authentic expressions of empathy and positive regard for the client (i.e., love).

Despite FAP's behavioral science foundations, transdiagnostic focus on the core human concern of intimacy, and long-standing presence in the behavioral, cognitive-behavioral, and contextual behavioral therapy communities, there is little research on the efficacy of FAP. In 2001, Corrigan identified only 17 FAP publications, most of which were theoretical and none of which provided strong empirical support for FAP. Corrigan expressed concern that FAP may have gotten ahead of its data, with its treatment developers pursuing wide dissemination without empirical justification. Hayes, Masuda, Bissett, Luoma, and Guerrero (2004), in response to Corrigan, noted that FAP "has a limited research base, but its central claim is well substantiated" (p. 35). By this, the authors meant that the proposed mechanism of FAP – the shaping of in-session behavior (CRB2s) by the therapist with contingent reinforcement (Rule 3) – "is among the oldest and best-established behavioral approaches…whether or not FAP ever emerges as an empirically supported treatment in its own right" (p. 48). However, a solid foundation in behavioral principles and broad-spectrum research findings does not obviate the need to demonstrate empirical support in well-designed studies to justify claims of efficacy. Ferro García (2008) reviewed 29 empirical and case studies of FAP and agreed that studies on FAP efficacy and effectiveness are still lacking.

Several FAP researchers have noted that FAP is difficult to research (Follette & Bonow, 2009; Maitland & Gaynor, 2012; Weeks, Kanter, Bonow, Landes, & Busch, 2012), with challenges operationalizing both its independent and dependent variables. Regarding the independent variable, Kohlenberg and Tsai's (1991) presentation of FAP's techniques as five abstract, functional rules was consistent with its behavior analytic foundations but made it difficult to manualize the treatment, measure adherence and competence, and replicate training and therapy procedures for clinical trial research. The recent use of ACL language may have amplified, rather than ameliorated, these problems, and generated concerns about the use of poorly defined, unscientific terms to describe the treatment approach (e.g., McEnteggart, Barnes-Holmes, Hussey, & Barnes-Holmes, 2015).

Regarding the dependent variable, Kohlenberg and Tsai's (1991) description of an idiographic, content-free concept of CRBs allowed subsequent FAP authors to propose a wide scope of applications, as the concept of CRBs could be brought to bear on various presenting problems and in various clinical contexts (Kanter, Tsai, & Kohlenberg, 2010). This may have made it difficult to operationalize and achieve consensus on primary research targets, link these targets to reliable and valid measures, and establish an underlying theory of disorder to guide a broader research agenda.

FAP researchers have begun to overcome and address these obstacles. Since Corrigan's (2001) review, researchers have developed replicable systems for assessing interpersonal targets in FAP (Callaghan, 2006a; Darrow, Callaghan, Bonow, & Follette, 2014; Leonard et al., 2014), manualized and evaluated FAP protocols in group designs targeting aspects of social functioning and intimacy (Holman, Kohlenberg, & Tsai, 2012a; Maitland et al., 2016b) and capitalized on existing manualized approaches by integrating FAP concepts into them, with the logic that FAP's in-session interpersonal focus will enhance the existing approaches (Gaynor & Lawrence, 2002; Gifford et al., 2011; Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002). Several researchers have explored FAP in single-subject designs that may be more suited to its functional approach to intervention and its idiographic approach to clinical targets (Cattivelli, Tirelli, Berardo, & Perini, 2012; Kanter et al., 2006; Landes, Kanter, Weeks, & Busch, 2013; Lizarazo, Muñoz-Martínez, Santos, & Kanter, 2015; Villas-Bôas, Meyer, & Kanter, 2016). Several others have exploited FAP's definition of its mechanism of action in terms of a behavioral process - the in-session client-therapist interaction – and produced detailed in-session micro-process studies that shed light on the validity of its proposed mechanism (Busch et al., 2009; Busch, Callaghan, Kanter, Baruch, & Weeks, 2010; Callaghan, Summers, & Weidman, 2003; Oshiro, Kanter, & Meyer, 2012).

The current review represents the most exhaustive and detailed summary of FAP research to date, adding to and expanding on a previous review by Ferro García (2008). Mangabeira, Kanter, and del Prette (2012) and Ribeiro, Oliveira, and Borges (2013) previously identified and reviewed 80 and 46 FAP publications, respectively, but focused their reviews on descriptive characteristics of the publications (e.g., year of publication, country of origin, methodology) and did not evaluate the evidence. Muñoz-Martínez, Novoa-Gómez, and Gutiérrez (2012) published a review of FAP theoretical, clinical, and research articles in Ibero-America but likewise did not draw empirical conclusions.

Because of substantial heterogeneity in the research designs and analytic strategies employed in the manuscripts reviewed herein, we organized our review first by research design. This allowed us to quantify effect sizes according to design and provide empirical summarizations of the extant data to the extent possible. Within each research design type, we organized studies by presenting problems, which in some manuscripts were idiographically defined but in other cases converged on several common themes: smoking cessation, depression, and social functioning. We also included in our review three studies on outcomes of FAP training protocols on therapists and separately discuss studies that measured in-session FAP processes. Because of the small number of studies, we were able to describe the methodologies,