

# Functional Analytic Psychotherapy is a Framework for Implementing Evidence-Based Practices: The Example of Integrated Smoking Cessation and Depression Treatment

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## Abstract

Depression and cigarette smoking are recurrent, interacting problems that co-occur at high rates and – especially when depression is chronic – are difficult to treat and associated with costly health consequences. In this paper we present an integrative therapeutic framework for concurrent treatment of these problems based on evidence-based practices and Functional Analytic Psychotherapy (FAP). We report the results of a pilot study in which clients ( $n = 5$ ) received the integrated treatment. Case material is presented to illustrate the integration of interventions within a FAP framework.

## Keywords

Functional Analytic Psychotherapy, integration, smoking cessation, behavioral activation, treatment development

Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991; Tsai et al., 2008) provides a framework for the implementation of evidence-based practices (EBPs) by helping therapists conceptualize and manage moment-by-moment therapy process. This process may be managed such that it conforms with the evidence-based practice when such is appropriate. This process also may help fill in the gaps – areas where therapists are asked to use clinical judgment – that are present in EBP protocols. If an EBP provides a map to a given destination (e.g., improved depression outcomes), then FAP acts like a GPS, locating the client and therapist in the here and now and guiding the therapy process, especially in areas where the map is fuzzy.

The FAP therapist manages process on the basis of an ongoing, idiographic functional analysis of therapist-client interactions with the aim of understanding and solving client's problems. This functional analysis serves a variety of functions relevant to implementation of EBP:

(1) It may facilitate conceptualization of behaviorally specific treatment targets. For example, a FAP therapist might, through functional analysis, clarify their understanding of behaviors associated with 'mistrust' while treating a patient diagnosed with PTSD using the Cognitive-Processing Therapy protocol (Resick & Schnicke, 1993).

(2) It may provide an understanding of how the motivational context of the therapy relationship impacts treatment adherence. For example, a FAP therapist may discriminate that a depressed patient does not initiate conversation about the impact of the therapy relationship, but that homework completion and mood reliably improves in weeks following sessions where the therapist initiates such conversations (cp., Kanter, Schildcrout, & Kohlenberg, 2005).

(3) It provides a theoretical basis for addressing 'alliance ruptures' (e.g., Safran & Muran, 1996; Tsai, Kohlenberg, & Kanter, 2010), such as breaches of trust or positive regard or disagree-

ments about treatment goals and methods. Disagreements are interpreted in the context of the client's problems and goals, such that a disagreement that would otherwise be labeled as resistance or non-compliance may be seen as a sign progress for a client whose problems involve excessive acquiescence. Indeed, FAP views conflict as an essential area of relationship functioning, one in which many of our clients have deficits. Conflicts in FAP may be considered opportunities for therapeutic shaping of effective behavior, rather than as non-compliance or resistance to a treatment protocol.

(4) Finally, FAP directs attention to examples of the client's problems occurring here and now in the therapy interaction; these here and now instances are shaped directly as they occur. It is a central hypothesis of FAP that such direct intervention on here and now examples of problems and improvements provides important therapeutic benefits.

In summary, then, FAP provides a means of understanding how specific behaviors occurring in the therapy interaction may contribute to or detract from clinical outcomes during the course of conducting an EBP. In this way, FAP may be compared to other general therapeutic frameworks that aim to guide therapists in the implementation of interventions to best suit a specific client (e.g., Persons, 2008; Nezu, Nezu, & Lombardo, 2004). In common with these other approaches and with behavior therapy in general, FAP advocates an individualized assessment of the impact of an intervention of the individual client, and a systematic variation of intervention in case of non-response. The unique aspects of FAP are its focus on the use of functional analysis and its attention to the therapy relationship.

To illustrate the above ideas, this paper presents the example of an integrated, FAP-based smoking cessation and depression treatment. We present a description of the treatment, some brief case material to illustrate key aspects of the treatment, and them

summarize the results of a small pilot treatment development study.

We selected smoking and depression because they are commonly co-occurring, often inter-related problems (Shiffman & Waters, 2004; Breslau & Johnson, 2000; Covey, Glassman, & Stetner, 1990) with significant public health consequences for which behaviorally based evidence-based treatments exist (Lejuez, Hopko, & Hopko, 2001; Perkins, Conklin, & Levine, 2007; Brown et al., 2001), offering an opportunity for parsimonious integration on the foundation of FAP. Further justifying the interpersonal focus of FAP, interpersonal problems contribute broadly to the onset, relapse, and/or maintenance of both smoking and depression (e.g., Mickens et al., 2011).

We suspect that some clinicians may consider smoking cessation to be a rather simple clinical task, less interesting than meaty clinical issues related to intimacy and problems of self. We hope in this paper to show that this prejudice is misguided and that the task of smoking cessation provides in many ways a crucible in which the problems at the heart of depression may unfold. If additional motivation is needed, consider that smoking tobacco remains the leading cause of preventable death in the United States each year (Centers for Disease Control, 2005).

## ■ METHODS

The treatment, named Integrated Treatment of Smoking and Depression (ITSD), integrated elements of behavioral activation for depression and standard behavior therapy for smoking cessation within the framework of Functional Analytic Psychotherapy. It involved 24 sessions over a 20-week period: twice-weekly sessions for the first four weeks and weekly sessions thereafter. Additionally, therapists and clients communicated via telephone or email, to reinforce homework compliance and especially to provide coaching around the smoking quit date. Finally, clients were encouraged to purchase and use nicotine replacement therapy (e.g. patch or gum) during their quit attempt.

The primary elements of behavioral activation (Lejuez, Hopko, & Hopko, 2001; Martell, Addis, & Jacobson, 2001) as implemented in the treatment included provision of a behavioral conceptualization of depression; functional analysis of avoidance patterns based in part on activity monitoring; and planned behavioral activation activities designed to increase contact with positive reinforcement.

The primary elements of behavior therapy for smoking cessation (Perkins, Conklin, & Levine, 2007) included discussion of past quit attempts to identify individual supports and risk factors; preparation for smoking cessation by means of self monitoring of urges and related triggers; gradual implementation of delayed smoking; setting a quit date; recruitment of social support and other coping skills to support cessation; and finally developing a relapse prevention plan.

Further, our approach to the acceptance of depressogenic thoughts and smoking urges was informed by Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999), which has recently been investigated in the form of a group treatment for smoking cessation, that also integrates FAP, with promising positive outcomes (Gifford, Kohlenberg, Hayes, Pierson, Piascki, Antonuccio, & Palm, 2011).

In the context of the integrated treatment, the client was provided a rationale for treating depression and smoking cessation at the same time. The rationale focused specifically on the inter-dependence of depressed mood and smoking behavior and how interpersonal stressors might impact both mood and urges to smoke. The rationale also included a standard rationale for FAP, emphasizing that behaviors occurring in the interaction between therapist and client might be significant and provide useful therapeutic opportunities, especially for addressing problematic interpersonal patterns that impact mood and smoking urges.

The clinical procedures for each problem listed above were implemented in an integrated way. Early treatment focused on development of rapport and understanding with the purpose of establishing the therapist as a salient reinforcer for behavior change (i.e., increasing client motivation). Behavioral analysis of current client maladaptive patterns focused on the interaction of smoking and depression. Development of client skills to evoke and accept support from the therapist were implemented as a means of increasing general social support outside of session. Specific activation goals were selected to be incompatible with both smoking and depressed mood, e.g., daily exercise or spending time with children (around whom it is a strong value to abstain from smoking). Long-term values and goals served by smoking cessation and overcoming depression were highlighted. Further, engagement in smoking cessation activities were themselves considered to be behavioral activation targets.

Throughout this process of implementation and integration therapists applied FAP principles to manage therapy process. To support this task, the treatment manual highlighted ways in which FAP principles might be applied for each smoking cessation or behavioral activation intervention, and clients completed standard FAP session bridging sheets between sessions (see Tsai et al., 2008), on which clients provided feedback about in-session process and the therapeutic relationship directly to the therapist. Two examples of this application of FAP principles within ITSD are presented below, in connection with interventions targeting acceptance of social support and establishing commitment to a quit date.

### ACCEPTANCE OF SOCIAL SUPPORT

A client expressed that she often feels a compulsion to 'not do the task' when she perceives that someone else wants her to do it. This might be theorized to be counter-control, the result of a long history of aversive control, and/or as avoidance of feelings of relatedness or dependence which in the past have predicted interpersonal pain (e.g., vulnerability followed by betrayal). Such aversion to others' expectations is of obvious significance in a relationship focused on the therapist assisting the client to activate and quit smoking cigarettes. And in general this client did not receive support from others because she believed that no one was trustworthy: 'Everyone will let you down sooner or later.' The therapist conceptualized this resistance as part of a general avoidance of experiences of connection or dependence on others. The therapist and client discussed the notion that the client did indeed want to feel connected to others, but that fear prevented her from building such connection. Subsequently, behaviors that functioned as avoidance of fear or connection

were considered to be targets for reduction (CRB1 in FAP terminology), while behaviors entailing acceptance of support and caring were considered targets for increase (CRB2 in FAP terminology). Therapist and client then engaged in shaping of the client's acceptance of support from the therapist, through such activities as the therapist helping the client in session to package cigarettes into daily rations to support gradual daily smoking reduction, explicit requests by the therapist that the client complete homework assignments *for* the therapist rather than for herself or for other reasons, as well as overt discussions of how the client was blocking acceptance of support or connection. Following weeks of this approach, the client completed many aspects of the smoking cessation protocol and reported towards the end of treatment that, while she did not feel 'attached' to the therapist, she did feel that the therapist was 'on her team' and that this was a new kind of connection with the therapist and a rare event in her relationships with others.

### SETTING A QUIT DATE

Committing to a quit date involved making a commitment to the therapist and was discussed as such. This raised a number of challenges for our patients. Particularly salient was the struggle patients experienced in identifying what support they needed and in asking for adequate support. Several patients had daily life problems related to excessive passivity and avoidance of expressing their needs for fear of causing conflict or disappointing others. Expressions of needs and requests to the therapist were therefore, in this context, considered CRB2. However, reinforcement of these CRB2 had to be balanced against the importance of blocking avoidance of the aversive consequences associated with smoking cessation. For instance, is a request to postpone the quit date by one week in order to get past a stressful work deadline an example of self-awareness and skillful assertion or part of a problematic pattern of procrastination and avoidance? In one instance, the client's postponement of his quit date in this way was treated by his therapist as an example of expressing needs, self-awareness and effective self-management, so the therapist supported the client's request. This was discussed in session as the patient taking the risk of directly expressing his needs and the therapist trusting that the patient knew what he needed to quit smoking. In subsequent weeks, not only did the client quit smoking, he also took needed action in other areas of his life, asserting himself more effectively with his parents and with his son.

In the following section, we describe a small ( $n = 5$ ) pilot treatment development study in which we preliminarily evaluated the ITSD treatment.

## ■ PILOT STUDY METHODS

All study procedures were approved by the University of Washington IRB committee. Participants were recruited from the local community via print and online advertisements. Eligible participants were adults aged 18 years or older, currently smoking at least 10 cigarettes per day, received a current diagnosis of major depression, and agreed to attempt smoking cessation. We excluded potential participants diagnosed with other major mental illness, current suicidality, other primary substance abuse, current panic disorder, or engaged in current ongoing

treatment besides medication. Participants underwent screening that included a structured diagnostic interview and provided baseline data related to mood, overall functioning, demographics, and smoking behavior.

### PARTICIPANTS

Clients were four white females and one white male, ranging in age from 28 to 44 ( $M = 33$ ). They smoked an average of 13.2 cigarettes per day (range: 10 – 20) and all had at least two previous quit attempts. Their mean Beck Depression Inventory-II score at screening was 32.2 (range: 22 – 46), falling in the 'severe' range. All clients met DSM-IV criteria for current Major Depressive Disorder and for nicotine dependence. Two clients met criteria for 'double depression' (dysthymia and a current major depressive episode). All clients had at least one episode of major depression prior to the current episode. This sample therefore represents a group with relatively severe and chronic depression.

### THERAPISTS

Therapists were one professor, two Ph.D. clinical instructors, and two graduate students in the doctoral training program in adult clinical psychology at the University of Washington. All therapists met weekly as a group to discuss development of the treatment, interventions, and ongoing cases. In addition, the graduate student therapists received weekly 1-hour supervision sessions with a senior clinician.

### ASSESSMENT

Clients completed outcome and process measures weekly throughout the study period, as well as larger batteries of measures at pre-, mid-, and post-treatment. Weekly measures included a Beck Depression Inventory-II (BDI-II; Beck, Steer, Ball, & Ranieri, 1996), report of smoking status, and a session bridging form.

The Longitudinal Interval Follow-up Evaluation (LIFE; Keller, Lavori, Friedman, Nielson, Endicott, McDonald-Scott, & Andreason, 1987), a semi-structured interview that assesses the longitudinal course of psychiatric disorders, yielding a retrospective assessment of relapse/recurrence, was administered at mid- and post-treatment as a follow-up to the initial diagnostic assessment.

For smoking, the primary outcome measure was the point-prevalence of smoking for the 7 days and, at follow-up, 30 days prior to assessments (measured by the question, "Have smoked a cigarette, even a puff, in the past 7/30 days?"). Verification of smoking abstinence was obtained by measurement of carbon monoxide (CO) content in the breath, an indicator of recent smoking.

## ■ RESULTS

### RECRUITMENT

Over the three months that we advertised for the study, 26 people contacted us to inquire about participation in the study. Of those, 8 met preliminary screening criteria and agreed to undergo a screening interview at the clinic. Five of those who underwent the screening interview were eligible for and accepted entry into the study.

## TREATMENT RETENTION

Four of the clients who entered the study completed treatment (i.e., completed the agreed upon number of sessions). One client, whose depression remitted and who successfully quit smoking within 12 sessions of treatment, completed a total of 16 sessions, at which point she changed from weekly to monthly sessions for the remainder of the treatment period. At the post-treatment assessment, she had not completed all 24 sessions, yet she remained remitted from depression and abstinent from cigarettes. She is therefore not considered a treatment failure.

## DEPRESSION OUTCOMES

At mid-treatment, the mean BDI-II score was 19.25 (range: 11-29), down from 33.8 (range: 22-46) at pre-treatment. At post-treatment, the mean BDI-II score was 13.5 (range: 4-19.5). According to LIFE interviews conducted at post-treatment, four of five clients experienced remission of their major depressive episode, though two of these four continued to experience clinically significant symptoms of depression. Both of these clients were also experiencing concurrent and long-standing chronic pain related to other medical conditions that impaired their sleep and energy levels. The client whose depression did not remit by post-treatment (one of the two who met criteria for 'double depression') opted to continue in treatment with her study therapist.

A global assessment of outcome, the OQ-45.2 (Lambert et al., 2004), also displayed clinically significant improvements across multiple domains of functioning at mid-treatment and post-treatment. Total score on the OQ-45.2 represents a composite of symptomatic distress (SD), interpersonal relationships (IR), and social role functioning (SR), with higher scores indicating greater dysfunction. The norm-based clinically significant cut-off for the total score is 63. At pre-treatment, the mean for all five clients was 94.8 (range 75-115). Subscales scores were 55.2 (range: 44-72), 24.4 (range: 17-29), and 16.4 (range: 12-22) for SD, IR, and SR respectively. At mid-treatment, the mean was 67.74 (range: 56-76), with subscale mean scores of 35.25 (range: 26-42), 18.75 (range: 12-29), and 11.25 (range: 8-13), for SD, IR, and SR respectively. At post-treatment, the mean total score was 55.8 (range: 34-84), with subscale mean scores of 28.8 (range: 17-38), 16 (range: 9-30), and 11 (range: 6-16) for SD, IR, and SR respectively. Thus, at post-treatment, four of five clients had OQ-45.2 total scores below the clinically significant cut-off. Notably, the two clients who continued to exhibit clinically significant though sub-threshold (for Major Depression) depression symptoms were both below the clinically significant cut-off for the OQ-45.2, and showed improvements in interpersonal relationships and social role functioning comparable to the other clients who remitted. Their symptomatic distress scores, however, remained relatively elevated. The one client whose depressive episode did not remit did show a clinically significant (i.e. >13 points) reduction in her total OQ-45.2 score over the course of treatment (from 98-104 during the initial weeks of treatment to 78-84 during the final weeks of the allotted treatment period), though she remained in the clinically significant range at the end of treatment.

Though these comparisons should be interpreted with caution due to the small sample size in the current study, these out-

comes for depression (i.e., 80% remission) are comparable to those achieved in randomized controlled trials of standardized cognitive-behavioral therapies for major depression .

## SMOKING OUTCOMES

Three out of five clients were completely abstinent by post-treatment. One client (a depression remitter) was abstinent for six weeks, starting at week 14 of treatment, but was smoking an average of <1 cigarette per day during the last four weeks of treatment and at post-treatment, a substantial reduction from his pre-treatment smoking. The client whose depression and dysthymia did not remit continued to smoke at reduced levels (10-15 cigarettes per day) relative to pre-treatment (20 cigarettes per day), but did successfully stop smoking (i.e., smoked no cigarettes) for two weeks between the 14<sup>th</sup> and 16<sup>th</sup> week of treatment. All periods of abstinence were verified with breath CO measurements.

In summary, 60% of clients (3 out of 5) were successful at smoking cessation (i.e. were abstinent from cigarettes) at post-treatment. One client was partially abstinent, and one client had reduced smoking at post-treatment and achieved a two-week abstinence during the middle of treatment. These outcomes are comparable to those typically achieved in smoking cessation trials with non-depressed smokers (40-70% abstinence at post-treatment is the norm), though again this comparison should be interpreted with caution.

## DISCUSSION

This paper seeks to illustrate how FAP may serve as a basis for the implementation of EBPs. Specifically, we described an integrated behavior therapy for smoking cessation and depression, with examples of how FAP principles informed implementation of the treatment protocol, which was in turn based on behavioral activation and standard behavior therapy for smoking cessation. We also presented results of a pilot study in which 5 clients received the integrated treatment with generally positive though preliminary results. It is noteworthy that we achieved generally positive results for both problems targeted by the treatment. We hope that this pilot study underscores the feasibility of treating smoking cessation alongside depression in outpatient psychotherapy. We hope that this presentation also offers some evocative illustration of the notion that FAP provides a general framework for managing implementation of EBP by helping the therapist to understand (via functional analysis) and manage moment-by-moment therapy process.

It is obvious that all therapists who implement EBPs manage therapy process in some way. The potential advantage of FAP and functional analysis for this task is that they offer a consistent, highly specified, yet low-inference language for the production of individualized conceptualizations based on generally applicable principles (such as those contained in EBPs). Further, given the well established effectiveness of immediate reinforcement for behavior change, the FAP focus on reinforcing and shaping behavior as it is occurring in the here and now, has the potential to improve EBP outcomes. As in the case of the client who requested an extra week of preparation before quitting smoking, such individualized conceptualizations offer a systematic basis for increasing therapist flexibility in service

of client's goals, especially when goal-relevant behavior contradicts the more highly-specified requirements of the EBP. Rather than lead clinicians away from EBPs, FAP might help clinicians more effectively adhere to the spirit of EBPs – to effectively help clients in the long run - and overcome the obstacles that arise moment-by-moment in ways that are theoretically coherent with the over-arching EBP yet adapted to the goals and needs of the individual client in this particular moment.

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