# ASSESSING THE INTERPERSONAL EFFECTIVENESS OF THE DEAR-MAN SKILL USING A SOCIAL PSYCHOLOGY PARADIGM

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For more than 50 years, social psychology has investigated persuasion techniques intended to facilitate influencing the behavior of others. This body of research has identified a variety of effective techniques and principles (see Cialdini, 2007). Over roughly the same period, clinical psychologists developed interventions targeting assertiveness, the ability to influence others in socially appropriate ways (see Long, Long, & Whitson, 2009) and the related construct "interpersonal effectiveness," the ability to influence others without harming relationships or self-respect (Linehan, 2015, pp. 231-237). A literature review conducted by the author was unable to identify linkages between these two related areas of inquiry. This suggests that clinical psychology has generally not employed social psychology research paradigms to assess assertiveness or interpersonal effectiveness techniques included in therapy protocols.

The present study is an attempt to adapt a social psychology research paradigm (Lyon & Greenberg, 1991) to assess the effectiveness of Linehan's (2015, pp. 248-254) DEAR-MAN skill. DEAR-MAN is a loose script intended to facilitate making requests of others. Participants were assigned at random to hear a DEAR-MAN request or one of two controls. All requests attempted to persuade the participant to take part in a study one week later. Dependent variables were verbal compliance (agreeing to participate),

behavioral compliance (arriving at an agreed-upon time and place), and judgments of the research assistant making the request, as measured by the Interpersonal Judgment Scale-Revised (adapted from Byrne, 1971). Chi-square analyses showed that participants in the DEAR-MAN condition were significantly more likely to both agree to attend to actually arrive compared to one of the control conditions. DEAR-MAN did not differ significantly from the other control request, but trends suggested superiority of DEAR-MAN in persuading both verbal and behavioral compliance. These findings held true when possible confounds were controlled using a binary logistic regression. Interpersonal judgments of the research assistant did not vary across the three groups. The findings suggest that DEAR-MAN is an efficacious persuasion tool, at least within the limited context of the present study. Implications of the findings are discussed.

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by

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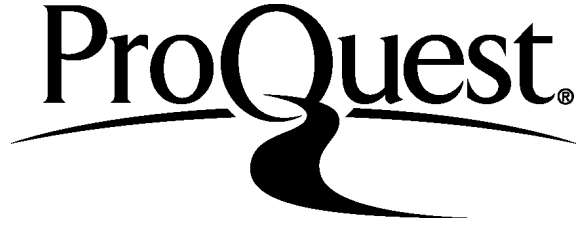C. Richard Spates, Ph.D.
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## INTRODUCTION

### Classical Discourse on Persuasion

The art and science of persuasion have been discussed in Western literature since at least the time of Aristotle, who argued that all Greek citizens should study persuasion. Aristotle implicated three different components in creating persuasive messaging, including the coherence of the message (i.e., "logos"). He also acknowledged the importance of more peripheral elements in persuasion, however, including the perceived character of the speaker (i.e., trustworthiness, authority, and other factors), and the emotional state of the person receiving the persuasive message (Rapp, 2010). These three variables are strikingly similar to those implicated in the modern Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986) discussed later in this paper.

Other classical works that address persuasion include Niccolo Machiavelli's (1532) treatise, *Il Principe* (*The Prince*). Machiavelli debates the relative merits of different methods a leader may use to control his subjects, concluding that benevolent leadership may be most effective in the long-term, but fear is an effective substitute in the short-term (see King, Viney, & Woody, 2009, p. 105 for a discussion of "Machiavellian" persuasion tactics).

### Scientific Approaches to Persuasion

As scientific perspectives on psychology began to emerge in the 19th and 20th centuries (King et al., 2009, p. 232), several distinct theories of persuasion emerged, as well as a set of "weapons of influence" (i.e., specific variables that can be manipulated to

increase the likelihood that a persuasion attempt is successful; see Cialdini, 2007, p. 4). The following is a brief review of theories of persuasion, as well as specific "techniques" described and empirically evaluated during this era.

**Katz' Functional Theory of Persuasion**

Katz' (1960) functional theory was among the earliest theories of persuasion based in scientific psychology. Katz' theory was geared toward understanding attitudes that might influence voting behavior in local, state, and federal elections. Katz posited that attitudes serve at least one of four adaptive "functions." Attitudes, according to Katz, may serve an "adjustment" function, when they lead to more adaptive behaviors, hence leaving the person more "well adjusted" within their environmental context. Attitudes may serve an "ego defensive" function, protecting the person's sense of self from their own negative impulses or thoughts. For example, a person who privately holds racist attitudes may be able to reduce feelings of guilt by publicly expressing anti-racist attitudes and supporting progressive politicians. The third function, according to Katz' model, is "value-expressive," where attitudes motivate behavior that is consistent with one's self-concept and values. A value-expressive attitude also may allow a person to associate with a socially acceptable set of values or beliefs in the eyes of others. Katz' (1960) article also addresses the process of changing attitudes, and advocates for an essentially selectionist (see Palmer & Donahoe, 1992) model of attitudinal change (and consequent behavior change). According to Katz, attitudes are likely to change when a person is presented with an alternative attitude and evidence that the new attitude will better fulfill the function of an existing attitude. Effective methods of persuasion, therefore, should attempt to identify and target the presumed function of a previously

held attitude, and present alternatives that serve the function better, according to Katz'

model.

**Elaboration Likelihood Model (ELM) of Persuasion**

The Elaboration Likelihood Model of persuasion (ELM) was developed by Petty

and Cacioppo during the 1980s (see, e.g., Petty & Cacioppo, 1981, 1986; Petty,

Cacioppo, & Schumann, 1983; Petty & Wegener, 1999). ELM posits two "routes" to

persuasion, corresponding to qualitatively different information processing pathways.

The "central" route to persuasion involves actively evaluating the information presented

in a persuasive argument. If a person responds by evaluating its contents critically, and

forming a reasoned response, then the central route to persuasion is active (the person is

"elaborating" the message). In some circumstances, however, a person may not attend to

the content of the message being presented, but to peripheral cues irrelevant to

informational content. Examples of peripheral cues include the authority or

trustworthiness of the speaker, the speaker's similarity to the listener, and the perceived

attractiveness of the speaker (see Cialdini, 2007, pp. 171-172, 208-236). When a person

responds to these factors, the "peripheral route" to persuasion is active (see Petty &

Cacioppo, 1986).

ELM assumes that most people possess the cognitive resources needed to

carefully consider and evaluate (i.e., "elaborate") persuasive messages. However,

depending on contextual factors, the person may not marshal these resources, and may

rely instead on peripheral cues. Situations in which a person is likely to attend carefully

to the content of persuasive messages are said to have "high elaboration likelihood."

Other situations have "low elaboration likelihood" if factors are present that interfere

with elaboration. For example, a shopper in a grocery store may view a display of name-brand items in impressive packaging next to generic equivalents advertising "same ingredients as the leading brand." If the person were to elaborate the persuasive messages offered by both brands, they might read the ingredients list on both products, weigh the costs and benefits, and be logically persuaded to purchase the less expensive generic. However, given other demands on cognitive resources (e.g., attending to a crying child, planning a meal for the evening, searching for one's misplaced credit card), one might not fully elaborate the information presented (e.g., the lower price, the ingredients list identifying an identical product, and other evidence). In such a scenario, the person might be influenced by the peripheral cues (the recognized brand name and familiar packaging). According to ELM, responses to direct or peripheral messages are determined by multiple factors, including current environmental stressors, level of interest and emotional investment in the content of persuasive messages, and other variables (Petty & Cacioppo, 1986).

**Bandura's Theory of Persuasion**

Another significant contributor to the literature on persuasion was Albert Bandura (1977). His classic paper on persuasion addresses behavior change occurring in the context of therapeutic intervention. However, he frames his approach more broadly as a "unifying theory of behavioral change." Bandura suggests that a person's decision to initiate or sustain a difficult task is influenced by their expectations succeed at that task. Bandura termed this expectation of success "self-efficacy," and identified it as a prerequisite for changing behavior (see Bandura, 1994/1998). According to Bandura, attempts to persuade clients to engage in new behaviors must carefully attend to the

client's self-efficacy if they are to be effective. Bandura described four separate mechanisms for influencing self-efficacy and thus increasing the likelihood of behavior change within the context of therapy. These are "performance accomplishments" (i.e., a previous experience of success in a task), "vicarious experience" (observing someone else with similar skills and abilities succeed at the task), "verbal persuasion" (efforts to persuade the individual that they can succeed at the task). and "physiological states" (states that increase the likelihood of attempting a new task, e.g., intense hunger motivating attempts to obtain food). Bandura (1977) states that verbal persuasion is actually one of the less effective routes to persuasion, as it relies on a potentially unreliable source of information (another person's verbal behavior), rather than an individual's lived experience. According to Bandura, verbal messages are most likely to be effective when they persuade the target that they are capable of achieving the specified actions. For example, a verbal message presented in exposure therapy for spider phobia would have to persuade the patient to believe they are capable of encountering a spider without having a panic attack or dying. Bandura's recommendation is that clinicians use verbal persuasion in conjunction with experiential exercises. For example, a clinician might encourage a spider-phobic client to first complete an exposure that is less anxiety provoking and where success is likely, such as looking at a picture of a spider (an opportunity for performance accomplishment), before modeling a more anxiety provoking exposure, such as approaching a live spider, while the client watches (vicarious experience) and only then attempt to verbally persuade the client to complete a more difficult exposure (touching a live spider).

## Cialdini's Contributions to Persuasion Theory and Research

Perhaps the most important single contributor to the study of persuasion was Robert Cialdini. In addition to describing several of his most famous studies on the psychology of persuasion, Cialdini's (2007) book *Influence: The Psychology of Persuasion* provides a valuable review of persuasion research, describing six separate factors that contribute to the effectiveness persuasion efforts. These factors, or "weapons of influence," are variables that can be manipulated in order to increase the persuasive power of a message. According to Cialdini (2007), these six factors tend to activate fixed response patterns or heuristics that, in turn, lead to rapid behavior change. In this respect, Cialdini's "weapons of influence" typically engage the peripheral route to persuasion, as described in ELM, since they are expected to lead to automatic response patterns rather than activating complex cognitive processing prior to behavior change (Petty & Cacioppo, 1981, 1986).

Cialdini's (2007) six weapons of influence are reciprocity, consistency, liking, authority, scarcity, and social proof. Reciprocity ("the norm of reciprocity"; see Becker, 1986) prescribes performing an act of benevolence toward the target of the request before asking that they respond in kind. Empirical evidence shows that people are more likely to acquiesce to a request after having been given a small gift (e.g., Regan, 1971). Consistency refers to a motive to maintain consistency between expressed attitudes or previous behavior and current behavior, consonant with several classic theories of motivation (e.g., Bem, 1967; Cooper, 2007; Festinger, 1962; Heider, 1958). Here Cialdini argues that persuasive efforts are more likely to be effective when they frame an action as consistent with an attitude previously expressed by the person being persuaded. This

approach is supported by classic social psychology studies such as Moriarty (1975), in which researchers first requested verbal compliance (agreeing to watch the researcher's possessions at a beach), and then assessed behavioral compliance (by staging a sham "theft" of the articles). Moriarty found that people who had previously agreed to the verbal request were more likely to intervene than those who were not initially asked to do so. Liking refers to people's tendency to be more open to persuasion when the request is delivered by someone perceived as likeable or otherwise interpersonally attractive. This theory supported by several lines of research demonstrating that physically attractive defendants are less likely to be convicted in real or contrived court settings and tend to receive lighter sentences than unattractive defendants (see, e.g., Mazella & Feingold, 1994). Cialdini (2007) also supports his liking argument with research showing that people are more likely to be persuaded by someone wearing similar clothing styles to the target (e.g., Emswiller, Deaux, & Willits, 1971). Authority refers to the tendency to acquiesce to requests delivered by those in positions of authority, suggesting that persuasion may be facilitated by wearing clothing typical of authority figures (see Bickman, 1974; Milgram, 2009) or by adopting titles such as "Doctor" (see, e.g., Hofling, Brotzman, Dalrymple, Graves, & Bierce, 1966). Cialdini argues that people are more likely to be persuaded to purchase a product or take similar actions when the product is framed as a scarce commodity (see Knishinsky, 1982; Worschel, Lee, & Adewole, 1975). Lastly, social proof is the tendency to be persuaded by a message when one perceives others as already engaging in the specified behavior (or holding the specified attitude). Cialdini cites "laugh tracks" as anecdotal evidence (i.e., people are more likely to laugh and perceive a comedian as funny when they believe others are doing likewise). He also

cites empirical evidence that when others observe a peer engaging in a behavior, they are more likely to willingly perform that behavior (e.g., children who fear dogs observing another child playing with a dog) (Bandura, Grusec, & Menlove, 1967). Similarly, Cialdini describes the related phenomenon that observing others' inaction may lead to inaction (see Manning, Levine, & Collins, 2007).

## Classic Persuasion Techniques

Much of the classic research conducted on persuasion in the 1970s identified a variety of verbal techniques associated with successful persuasion, many of which are consistent with the broad principles identified by Cialdini (2007, pp. 1-16) and others (e.g., Bandura, 1977; Petty & Cacioppo, 1986). A sampling of these techniques is described below.

### Foot in the Door (FITD)

The foot in the door (FITD) compliance technique involves first making a relatively small request (the "foot in the door"), and, after obtaining compliance, making a much larger request. FITD was studied by Freedman and Fraser (1966), who approached homemakers and requested their permission to enter their homes and inspect all of their household products. Some of the unwitting participants were first asked to complete a brief survey about household products (the FITD group), while the other half were not (the control group). Illustrating the power of tactic, about 50% of the FITD group homemakers agreed to the audit of their cleaning products, while only 25% of the control group did so.

The effectiveness of FITD may be attributed to motivation to maintain consistency across behavior and attitudes, a notion consonant with Bem's (1967) self-

perception theory (see also Dejong, 1979; Freedman & Fraser, 1966; Gass & Seiter, 2007, p. 211) and also discussed in detail by Cialdini (2007, pp. 53-113). In the case of FITD, the initial compliance with the small request (in this case, to take the survey) may be taken as evidence of one's own motivation to help the researchers. In this respect, FITD is consistent with Cialdini's (2007, pp. 57-113) consistency weapon of influence. A relatively recent review (Burger, 1999) found FITD to be generally effective at facilitating persuasion across a variety of populations, settings, and behaviors of interest.

**Door in the Face (DITF)**

Cialdini (2007, pp. 36-51) argues that the norm of reciprocity may function as a mechanism of action for several persuasion techniques, including DITF. In this technique, a speaker makes a request that far exceeds their desired outcome (the door in the face), is rejected, and then "settles" for an outcome that is smaller in magnitude, but which would have been refused without the previous request. In the classic DITF study, Cialdini, Vincent, Lewis, Catalan, Wheeler, and Darby (1975) approached college students and requested that they volunteer to chaperone juvenile delinquents, without compensation, for a trip to the local zoo. Only 19% of the students agreed. However, another group of students was first asked to spend two hours a week counseling students for a minimum of two years. All refused this ("door in the face") request. However, when they were then asked to chaperone the single trip to the zoo, 50% of the students agreed. Cialdini explains this finding using the reciprocity norm, suggesting that people are more likely to agree to a request following an initial refusal because of a sense of obligation to engage in "reciprocal concessions." According to Cialdini, the person making the initial request is forced to make a "concession" when the receiver refuses ("conceding defeat"). At this

point, the receiver may feel obligated by the reciprocity norm to make concession in kind (i.e., agreeing to a request that is undesirable, but more reasonable than the initial request). A recent review (Pascual & Guéguen, 2005) found DITF effective across a variety of populations and settings, with effect sizes similar to FITD.

**Low Ball**

A related compliance technique that may operate on the commitment and consistency motives is the "low-ball" technique (see Cialdini, 2007, p. 98-104). In the low-ball, an appealing offer is presented to a target (often the terms of a purchase or similar exchange). After the target agrees, the offer is then changed in some way by adding additional information, such as hidden costs associated with a transaction, or additional "terms and conditions" that were initially omitted in order to make the offer more appealing (see Burger & Petty, 1981). This technique is commonly associated with automobile sales (see Gass & Seiter, 2007, p. 220), especially the practice of settling on a relatively low price and subsequently adding additional charges (e.g., hidden service charges, costly options). Williams (1995) observed that this practice is common at universities, where student fees, meal plans, and other surcharges may substantially increase the real costs of attendance beyond advertised costs (i.e., tuition only). There is also research on the low-ball technique outside of sales. Cialdini, Cacioppo, Bassett, and Miller (1978) conducted one of the classic studies on the technique by asking students to participate in a "thinking" experiment at 7 a.m. Most of these students (69%) refused immediately. However, when students were first asked to participate in an experiment about thinking (most agreed initially), and only later informed that the experiment would be conducted at 7 a.m., a full 56% of these "low-balled" students agreed to participate.

**Persuasion as It Relates to Clinical Psychology**

Thus far, this paper has mainly addressed persuasion within the context of social psychology and marketing. Despite the wealth of research on persuasion conducted in these domains, it is difficult to identify many direct extensions of this work into clinical psychology (Bandura, 1967, is one counterexample). This is rather striking, considering clinical psychology's interest in the closely related construct of assertiveness (see Long, Long, & Whitson, 2009, for a review). This disconnect may be partly explained by the literature's emphasis on tools and techniques relevant to the sales and marketing fields. For example, Cialdini's (2007) classic book on persuasion, despite having been written by a social psychologist, is part of the "Collins Business Essentials" series. This emphasis on the business world is reflected in his numerous anecdotes about the use of persuasion in the context of sales, even of products and services that are unwanted, unneeded, or which reflect less optimal exchanges for the consumer. Much of this research does not assess the long-term effects of persuasion techniques on interpersonal relationships. Cialdini points out that when targets become consciously aware of the "techniques" being used to persuade, this may "spoil" the attempt at persuasion. For example, if a target is aware that a "gift" used in a reciprocity-based approach (the Hare Krishna follower's flower, for example) is in fact an attempt to persuade, it may change the function of the gift. Cialdini suggests that by labeling the flower as something other than a "gift" (for example, "Hare Krishna trying to manipulate me into giving money"), the target no longer feels an obligation to respond with a reciprocal gift, and may even feel animosity in response to the attempt at "manipulation" (Cialdini, 2007, p. 53). Situations like this could lead to iatrogenic outcomes for therapy clients attempting to be assertive (i.e.,

being labeled as "manipulative") if Cialdini's weapons of influence were employed without significant changes. Some of the specific techniques advocated by Cialdini (e.g., FITD or DITF) would also require additional effort (i.e., contriving alternative requests of much greater or lesser magnitude than the desired outcome). These techniques could also lead to request targets deriving their own rules or heuristics ("Whenever Sarah asks me for something, she really only wants half as much as she asks for") that might undermine future persuasion efforts, and result in stigma (labels like "disingenuous," or "manipulative"). Stigma may be of concern to many clients with psychiatric disorders, especially for certain disorders like borderline personality disorder (BPD) (see Linehan, 1993a, pp. 14-18).

During roughly the same period that social psychology and allied fields were developing the literature base for persuasion theories and tactics, clinical psychology was beginning to explore interventions targeting assertiveness. This literature dates to at least the late 1950s (Wolpe, 1958, pp. 53-62). Most definitions of assertiveness reference influencing the behavior of another person (i.e., persuasion), usually with the added specification that persuasion tactics be deemed socially appropriate (i.e., neither "aggressive," "passive," nor "passive aggressive"; see Long et al., 2009, for a thorough review of assertiveness in clinical psychology, including discussion of the difficulties in defining the construct). Wolpe's approach to assertiveness targeted social anxiety and drew from his (1954) concept of reciprocal inhibition. He assumed that socially anxious people could inhibit anxiety by engaging in "non-anxious" behaviors, in this case approaching others, making appropriate requests and engaging in other responses ostensibly incompatible with fear. Following Wolpe's work, many self-help manuals

were created during the 1970s and later to help people develop and practice assertiveness skills (see, e.g., Alberti & Emmons, 1970; Bower & Bower, 1991; Milne, 2011; Smith, 1975). Very little outcome research exists on these interventions, however. A recent search of the PsycInfo online database was unable to identify any studies assessing efficacy or effectiveness of assertiveness techniques outside the context of treatment packages.

One author with a keen interest in assertiveness training is Marsha Linehan, whose first professional publication was a manual on assertiveness training (Linehan & Egan, 1983). Linehan is better known as the developer of Dialectical Behavior Therapy (DBT, see Linehan, 1993a, 1993b, 2015; Koerner, 2011). DBT is a multi-component treatment for people with BPD and includes elements explicitly targeting the construct of interpersonal effectiveness (see Linehan, 2015, pp. 231-317), defined as achieving effective persuasion while also maintaining (and ideally enhancing) one's relationships and self-respect. A brief review of DBT is provided below.

### Dialectical Behavior Therapy (DBT)

Linehan (1993a) originally developed DBT to treat chronically suicidal people, and eventually shifted to targeting women with BPD and histories of self-harm. DBT includes weekly individual therapy, skills training class held weekly in groups guided by Linehan's (1993b) skills training manual, or its updated (Linehan, 2015) version, phone coaching for clients experiencing crises or needing assistance generalizing skills, and a structured consultation model in which teams of therapists collaborate to provide mutual support and peer supervision (Linehan, 1993a).

**Biosocial Theory of BPD**

Linehan's (1993a, pp. 10, 42) manual describes a biosocial model of BPD, which implicates pervasive emotion dysregulation as the core psychopathology of BPD (see Linehan, Bohus, & Lynch, 2007, and Crowell, Beauchaine, & Linehan, 2009 for a review of the model, and a review of its empirical support, respectively). Emotion dysregulation refers to the inability to effectively modulate overt emotional expression (verbal and non-verbal), as well as covert emotional experiences (i.e., private experiences in response to environmental stimuli, which in people with BPD are apt to be distressing and intrusive). Dysregulation is said to be "pervasive" when it occurs across multiple emotions and situations (Crowell et al., 2009; Linehan et al., 2007). Many of the maladaptive behaviors viewed as characteristic of BPD (including those captured in the diagnostic criteria themselves), such as intense anger, efforts to avoid abandonment, self-injury, and suicide attempts, are conceptualized as attempts to regulate unwanted emotional experiences. For example, an adolescent girl who has intense feelings of self-hatred may experience subjective feelings of relief by burning herself with a cigarette, possibly by distracting herself with the intense sensation, or through verbal mediation (i.e., covert verbal responses related to self-punishment) (see Korner, Gerull, Stevenson, & Meares, 2007). Suicide attempts and other intense emotional responses may serve similar functions, especially if they lead to environmental changes that regulate behavior. For example, a client who is feeling intense hopelessness and attempts suicide may encounter a brief stay in an emergency room staffed by sympathetic nurses, followed by a psychiatric hospitalization that includes emotion regulation via medication, and an escape from a chaotic home environment. Ideographic case conceptualizations are developed as

therapists conduct "chain analyses" (i.e., moment-by-moment functional analyses of past behavior, overt and covert, that lead to problematic or "target" behaviors, such as self-injury or suicide attempts, and their consequences) (see Linehan, 1993a, pp. 165-197 for a thorough description of case-conceptualization in DBT).

According to the biosocial theory, this inability to regulate emotion in stressful situations is attributed to biological vulnerability, in combination with the individual's historical and present environment that are "invalidating" (Crowell et al., 2009; Linehan et al., 2007). Biological factors include genetic tendencies toward emotion dysregulations, prenatal environmental stressors and individual differences in neural "wiring" that favor more intense emotional responses. Factors like a family history of mental illness or suicide attempts, and prenatal exposure to teratogens are examples of biological variables that might contribute to chronic emotion dysregulation (Linehan et al., 2007). Invalidating environments include features that result in maladaptive learning related to emotions and expression. For example, families that punish intense emotional expressions or deny that emotions are real may render children unable to accurately label emotions, or express them in ways that are considered socially acceptable, particularly if only the most intense emotional expressions are treated as "real" or important. Such environments may inadvertently reinforce emotional expressions of the highest intensity (such as self injury or suicide) while simultaneously punishing or ignoring lower-intensity expressions, such as facial expressions, verbal statements in moderate tones, or sobbing. In such scenarios, internal emotional cues may consistently precede invalidating (i.e., punishing) experiences, such that the emotional cues themselves may acquire aversive functions via classical conditioning (see Koerner, 2011, p. 126 for an analysis of

this phenomenon). The person may then be motivated to avoid affective experiences via distraction, thought suppression, substance abuse, overt avoidance of external cues (e.g., not attending family gatherings where an aversive family member may be present), and other unworkable strategies (this construct parallels that of "experiential avoidance" described by Hayes, Strosahl, & Wilson, 1999, pp. 60-69). However, because control and suppression strategies are likely to have paradoxical effects when applied to thoughts (see Abramowitz, Tolin, & Street, 2001) or emotions (see Levitt, Brown, Orsillo, & Barlow, 2004), they are likely to be unworkable long-term solutions, and may lead to increased vulnerability to dysregulation (see Hayes, Wilson, Gifford, Follette, & Strosahl, 1996; Kashdan, Barrios, Forsyth, & Steger, 2006). The individual may, however, be able to exert some control over emotional intensity and duration by using maladaptive ("ineffective," in the language of DBT) strategies (suppression, substance abuse, suicide attempts, and self-injury, among others). More subtle, private responses, like planning a suicide attempt, and imagining the aftermath as an existence without pain, may also have avoidance functions, because of their participation in verbal relations with actual experiences of escaping pain (see Giorgio et al., 2010 for a discussion of such ideation functioning as avoidance). Overreliance on passive, avoidance strategies like these may result in the person with BPD failing to develop an active, approach-oriented problem-solving repertoire (in the language of DBT, the person may rely on "active passivity"). This may be particularly true in interpersonal domains, where invalidating environments are likely to punish assertive behaviors and provide intermittent reinforcement of less skillful behaviors (e.g., threatening suicide, self-harm). For this reason, interpersonal skills in BPD people are often areas in need of development during therapy.

**Intervention Targets**

Linehan's (1993a) biosocial theory leads to a hierarchy of intervention targets, specific intervention techniques, and three overarching goals for the treatment as a whole. The hierarchy of intervention targets is established by the immediate needs of clients with BPD: life-threatening behaviors, therapy-interfering behaviors and quality of life interfering behaviors, unrelenting life crises, and other significant threats to living a "life worth living" (see Linehan, 1993a, pp. 165-198). Therefore, DBT therapists orient immediately to any suicidal, self-injurious or homicidal behaviors, since these represent the most immediate threats to such a life. Next, therapists orient to behaviors that interfere with the therapy itself, such as missing sessions, not completing assigned homework, or refusing to participate in one or more critical facets of therapy. Therapy interfering behaviors may also include behaviors that interfere with skills group dynamics, or which decrease the therapist's motivation to help the client work toward change. Also included under this heading are behaviors that the therapist engages in, such as canceling sessions excessively, failing to prepare for sessions, avoiding uncomfortable conversation topics, or other responses that prevent the client from achieving therapeutic goals or fully engaging in the process. The final targets for intervention are client behaviors that interfere with quality of life. This category includes behaviors that lead to longer-term destructive consequences. Such behaviors might include chronically fighting with coworkers in ways that lead to job loss and subsequent stress, drug or alcohol usage that may cause legal problems, prevent relationships from forming or lead to their premature termination, or which lead to guilt or shame. These behaviors are understood as less urgent targets for intervention, since they may not immediately threaten the life of

the client or the process of life-improvement by therapy, but are not conceptualized as intrinsically less important than the other two categories. Quality of life interfering behaviors are, however, barriers to the client's creating a life that is worth living, meaning that they impede the ultimate goals of therapy. (See Linehan, 1993a, pp. 165-198 for a thorough discussion of the hierarchy of intervention targets.)

**Skills Modules**

Linehan's (1993a, pp. 10-12) biosocial model of BPD identifies four critical areas in which people with BPD tend to lack effective repertoires, and so may rely on ineffective strategies to achieve their goals. Each skills deficit is targeted in a series of four skills training modules delivered during the skills training (group) component of therapy and described in Linehan's (1993b, 2015) skills training manual. These skill modules are described below.

**Core Mindfulness.** New clients all begin skills training in the "core mindfulness" module (see Bishop et al., 2004, and Baer, 2003, for a discussion of mindfulness in psychotherapy; and Linehan, 2015, pp. 161-225 for the core mindfulness module from DBT skills training), which teaches strategies to increase awareness of the present moment, accept experiences as they are without trying to change them. Conceptually, this component of DBT skills training attempts to address confusion about self, and serves as the starting point for interventions to ameliorate the other deficit areas, since clients must be able to accurately label internal experiences (and accept them as real, even if unwanted) before intervening to change them. There are six separate but interrelated skills taught in core mindfulness. These are further divided into two groups: "what skills" (specific operant response sets that comprise the core construct of mindfulness) and "how

skills" (ways to execute the skills effectively). The what skills are *observe* (intentionally attending to experiences, including internal experiences like thoughts and emotions, as well as perceptions of the external environment); *describe* (labeling experiences using clear, non-judgmental language); *participate* (allowing oneself to have experiences, without attempting to change them). The how skills are *non-judgmental stance* (avoiding evaluative language); *one mindfulness* (striving to approach experiences with one's full attention, doing "one thing at a time," rather than "multitasking"); and *effectiveness* (identifying and employing the most effective means to achieve one's goals in a given situation). Core mindfulness skills are taught again following each of the other skills modules, because they are viewed as undergirding development of the other skills (Linehan, 2015, pp. 161-166). The core mindfulness module is thus repeated a total of six times, in contrast to only two exposures for each of the remaining three modules.

**Distress Tolerance.** Distress tolerance skills are intended to replace less adaptive coping options (e.g., self-harm, substance use, or other forms of "numbing") that function to decrease unwanted experiences. Distress tolerance skills are generally framed as short-term solutions to regulate emotions to prevent maladaptive responding, allowing the person to achieve an emotional and physiological state that is conducive to problem solving. For example, a man who becomes dysregulated following a job loss may be temporarily incapable of taking effective steps to solve his larger problems (lack of income, inability to pay his rent, and others). He might use distress tolerance skills to help reduce his arousal and avoid taking ineffective actions (self-harm, aggressive behavior toward his former employer, and other responses that may function to

temporarily regulate arousal, but are likely to lead to more problems in the future) (see Linehan, 2015, pp. 416-491).

"Crisis survival skills" in distress tolerance attempt to temporarily regulate emotions by altering physiology. These skills are identified by the acronym "TIP" and include changing body temperature by applying ice or cold water to one's face, engaging in intense exercise, and using progressive muscle relaxation to return the body to a less aroused state. Skills to distract oneself temporarily from an immediate crisis are identified by the acronym "ACCEPTS." These skills include engaging in unrelated activities, contributing to other's well-being, making comparisons to other's or one's own struggles in order to gain valuable perspective, stimulating incompatible emotions (for example, by watching a comedy film when angry), temporarily pushing away intense emotions, thinking soothing or reassuring thoughts, or exposing oneself to intense sensations that are likely to distract from unwanted emotional experiences (for example, taking a shower with one's clothing on). Clients are also coached to sooth themselves by targeting the five senses (taste, smell, vision, hearing, and touch). Examples of soothing sensations include drinking a favorite tea, smelling a familiar perfume or lotion, looking at soothing images, such as a painting, listening to soothing music, or touching something pleasant, such as a pet or stuffed animal. A related skill set is "IMPROVE the moment," actions to stimulate more positive emotions using cognitive techniques. These include imagining a pleasant scene; finding meaning in an otherwise aversive experience (e.g., attempting to reframe it as a growth experience); finding solace in prayers; using relaxation techniques; reminding oneself to approach problems one at a time, rather than increasing one's stress level through "multitasking"; taking a temporary "vacation" (for

example, by taking a timed break from worry or problem-solving); and providing oneself with words of encouragement.

Lastly, clients are coached to use a worksheet to identify "pros and cons" of each strategy, helping to identify both long- and short-term benefits for using skills to tolerate strong emotions, rather than relying on less skillful behaviors that may provide immediate relief. In this way, clients ideally arrive at a reasoned decision, rather than acting on temporary urges that may lead to long-term negative consequences.

**Emotion Regulation.** The emotion regulation module includes a variety of skills designed to reduce vulnerability to intense emotions, and to reduce dysregulation when it occurs. Strategies to reduce vulnerability are referred to by the acronym ABC-PLEASE. These skills include accumulating positive experiences (i.e., engaging in behavioral activation to increase positive emotions), engaging in activities that bring a sense of mastery and competence, and by coping ahead of time by planning and rehearsing effective response strategies to predictable stressors. Other elements of ABC-PLEASE target physical states to reduce vulnerability, including treating physical illnesses, eating a healthy diet, avoiding non-prescribed mood-altering drugs, balancing sleep, and engaging in regular exercise.

Emotion regulation skills to change negative emotions are a mix of cognitive and behavioral strategies. Clients are coached to "check the facts" by considering all relevant information and determining if an emotional reaction "fits the facts." If an emotion does fit the facts (for example, feeling hurt in response to a critical statement made by a relationship partner), clients are encouraged to attempt to problem solve (in this case by asking for an apology from the partner in order to maintain self-respect, or ending the

relationship if it appears hopeless). If an emotion does not fit the facts (e.g., an irrational fear of bridges), skillfully engaging in "opposite action" is prescribed. Opposite action involves behaving in ways that run counter to action urges (for example, by travelling over bridges until they no longer evoke fear, rather than behaving according to the action urge to avoid) (see Linehan, 2015, pp. 318-409 for a thorough description of the emotion regulation skills).

   **Interpersonal Effectiveness.** Lastly, the interpersonal effectiveness skills, which will be the focus of the remainder of this paper, are designed to help clients achieve specific interpersonal goals (asking for things from other people, refusing requests that are unreasonable or at odds with the client's values) (Linehan, 2015, pp. 231-316). If the person employs the skills effectively, he or she may be able to meet these goals (referred to as "objective effectiveness") while maintaining or even enhancing the quality of her interpersonal relationships ("relationship effectiveness") and self-respect ("self-respect effectiveness"). A critical component of interpersonal effectiveness is identifying which of these goals (objective effectiveness, self-respect, or relationship maintenance and enhancement) is of primary importance.

   Skills trainers remind clients that sometimes the environment presents barriers that are difficult or impossible to surmount, regardless of how skillfully the person approaches the problem. In these situations, clients are coached to use the skills that maximize the likelihood of success, while accepting that they may not be able to meet all of their goals in a given situation.

   Interpersonal effectiveness in DBT comprises three separate skills, each targeting one of the interpersonal effectiveness domains. In many situations, all three skills are

used in conjunction, although one goal area may be of primary importance. In other situations, only one goal may be of interest, necessitating the use of only one skill. To achieve objective effectiveness, clients are coached to use the "DEAR-MAN" skill. This skill is a scripted framework for requests divided into seven steps. Clients first describe the situation prompting the request, then express how this situation makes them feel, then assert specifically what they want the other person to do (or not to do, as DEAR-MAN may also function to refuse another's request), and identify benefits associated with complying with the request ("reinforcing" compliance). Clients are taught to do so mindfully (keeping goals in mind and repeating the request as needed, even if the target engages in behavior that may distract from the client's goal), appearing confident while doing so, and adopting a willing stance toward negotiating a mutually beneficial outcome if needed. Relationship effectiveness is maintained using the "GIVE" skill, which involves treating the other person with gentleness, interest in their perspectives, providing validation, and taking an easy-going manner. Self-respect effectiveness is maintained by adopting a stance that is fair to oneself and the other person involved, avoiding inappropriate apologies, behaving in a way that is consistent with one's values, and being truthful. These skills are referred to by the acronym FAST (see Linehan, 2015, pp. 231-316).

**Efficacy of DBT as a Treatment Package**

As a treatment package, DBT has generally shown strong empirical support. Panos, Jackson, Hasan, and Panos (2014) conducted a recent meta-analysis and systematic review of DBT compared to treatment as usual (TAU) conditions, identifying a total of six studies that met their stringent criteria. They found that DBT offered a net

benefit over TAU for reducing suicide attempts and non-suicidal self-injury behavior. DBT was also found to be marginally superior to TAU in terms of treatment retention (itself a striking finding, considering the large time-investment, homework assignments, and other requirements, including explicit rules about attendance and requirement that clients forego suicide and self-injury as coping mechanisms). Another recent meta-analysis (Kliem, Kroger, & Kosfelder, 2010) identified a total of 16 studies of DBT (8 randomized controlled trials and 8 uncontrolled studies), in which DBT was associated with reductions in suicidal and self-injurious behavior. Ost (2008) included DBT in his meta-analysis of the "Third-Wave" behavior therapies, tentatively concluding that DBT meets the criteria to be considered an empirically-supported treatment for BPD. He also stated that more research is required before DBT may be considered "well-supported," according to the Chambless and colleagues' (1998) criteria. Another review conducted by Lynch, Trost, Salsman, and Linehan (2007) concluded that DBT is a well-established treatment for BPD, based on the same criteria, but using slightly different inclusion criteria. The most recent Cochrane review of DBT (Stoffers, Vollm, Rucker, Timmer, Huband, & Lieb, 2012) arrived at a similar finding, identifying DBT as the only empirically supported treatment for BPD. These studies suggest that the preponderance of evidence supports the use of DBT for BPD clients, and that DBT is likely to reduce rates of self-injury, among other outcomes. Other recent studies have observed reductions in self-injury, maladaptive anger expression, social adjustment and treatment retention, when compared to unstructured treatment by expert clinicians (Linehan et al., 2006). DBT has also shown maintenance of outcomes at one-year follow-up after the end of treatment (Linehan, Heard, & Armstrong, 1993; Linehan et al., 2006). There is some

evidence to suggest that DBT is effective in treating substance abuse (Linehan et al.,

1999, 2002), bulimia nervosa (Safer, Telch, & Agras, 2001), binge eating disorder

(Telch, Agras, & Linehan, 2001), and depression in elderly people (Lynch, Morse,

Medelson, & Robins, 2003; Lynch, Cheavens, Cukrowicz, Thorp, Bronner, & Beyer,

2007).

**Research on the Skills Training Component of DBT**

Despite the findings suggesting the efficacy of DBT as a package treatment, there

has been more recent interest in identifying the mechanisms of action of the treatment,

and the necessary and specific components required for optimal outcomes. A long-term

dismantling study (Linehan et al., in press) has attempted to identify the benefits of the

full DBT package as compared to a more streamlined treatment involving skills training,

but replacing the highly trained individual DBT therapists with case-managers. Results

generally identified equal outcomes across the two conditions, suggesting that skills

acquisition through the group might be the "active" element in effective DBT. Some

differences did favor the full package, however, especially at long-term follow-up,

suggesting that individual therapy may lead to more enduring outcomes, whereas the

benefits of skills training alone appeared to diminish over the year after treatment

concluded. Another recent review (Valentine, Bankoff, Poulin, Reidler, & Pantalone,

2014) identified 17 published studies in which DBT skills training was provided as a

stand-alone intervention (i.e., in the absence of individual therapy), providing preliminary

evidence for the efficacy of skills training in treating a range of psychiatric conditions

(major depressive disorder, attention deficit hyperactivity disorder, and binge eating

disorder).

The critical role of skills training was underscored by Neacsiu, Rizvi, and Linehan (2010), who identified increased skills use as a mediator of reduction in suicidal behavior over the course of DBT, and noted that skills use also partially mediated reductions in self-injury over the same time period. However, that study only considered DBT skills use as a continuous variable as a mediator, and did not assess use of individual skills as predictors of broad outcomes like suicide attempts (i.e., it did not identify the unique contributions of any one skill or skills module to the outcome variables of interest). An earlier study conducted by Miller, Wyman, Huppert, Glassman, and Rathus (2000) provided some evidence to suggest that clients undergoing DBT may perceive certain skills as more useful than others. These authors surveyed adolescents who had completed DBT treatment to assess the perceived utility of each of the skills they learned in therapy. Skills were rated on a 5-point Likert scale from "not at all helpful" to "extremely helpful." Responses on this scale demonstrated relatively little variance (the most useful skill was rated 4.27 out of 5, the least helpful as 3.00), although the three interpersonal effectiveness skills received the lowest ratings of all the skills. Lindenboim, Comtois, and Linehan (2007) conducted an analysis of suicidal women undergoing DBT, assessing the extent to which they used skills from each module. Their participants reported using Distress Tolerance, Emotion Regulation and Core Mindfulness skills more frequently than Interpersonal Effectiveness. When these analyses were broken down into individual skills, rather than modules, it was revealed that the three Interpersonal Effectiveness skills were the least frequently used of all skills. Another study conducted by Stepp, Epler, Jahng, and Trull (2008) arrived at a similar finding, observing that the Interpersonal Effectiveness skills accounted for only 9% of total skill use.

These findings are striking in light of the proposed central role that interpersonal problems play in the lives of people with BPD (Linehan, 1993a, pp. 3-26). Both sets of authors (Lindenboim et al., 2007; Stepp et al., 2008) argue that their findings may be artifactual, since they were gathered by simply collecting diary cards. Their reports may disproportionately reflect skills that were discussed recently in skills training or in the context of phone coaching prior to the participants completing their diary cards. As the Core Mindfulness module is repeated more frequently than the other three, and Emotion Regulation and Distress Tolerance are presumably more likely to be discussed during phone coaching, these skills sets may have been overrepresented.

Although a review of the literature was unable to find any research directly addressing this question, the author has, in his experience as a DBT skills trainer, encountered several complaints from clients regarding the Interpersonal Effectiveness skills that may provide an alternative hypothesis. In particular, clients have complained that the GIVE and FAST skills are overly vague, or they appear intuitive. Clients have also complained that the DEAR-MAN skill is overly complex, and expressed trepidation about using it outside of session, assuming that it will be ineffective, especially in invalidating environments. If the DEAR-MAN skill does not, in fact, lead to increased likelihood of compliance with requests (objective effectiveness) or aid in maintaining relationships (relationship effectiveness), it stands to reason that clients would not use it frequently.

**Origins of the DEAR-MAN Skill**

Neither Linehan's treatment manual (1993a) or her skills training manuals (1993b, 2015) describe the origin of the DEAR-MAN skills. However, it appears that the skills

overlap significantly with and probably were developed from the "DESC" scripts (see Bower & Bower, 1991) that have been included in multiple manuals on assertiveness training. Linehan's prior work in assertiveness skills training (Linehan & Egan, 1983) suggests that she was likely aware of DESC scripts and modeled the DEAR-MAN skill after them (S. R. Axelrod, 2012, personal communication). As described in Bower and Bower's manual, DESC scripts include four steps: Describing the situation, Expressing one's feeling about the situation, Specifying what one wants, and Clarifying consequences. Conceptually, these skills closely mirror the first four steps of DEAR-MAN (Describe, Express, Assert, and Reinforce).

**Understanding DEAR-MAN in Terms of the Elaboration Likelihood Model (ELM)**

It may be feasible to understand the persuasive capacity of DEAR-MAN in terms of ELM (see Petty & Cacioppo, 1986). One interpretation of DEAR-MAN is that it provides a broad enough array of information to target either the peripheral or the direct route to persuasion. By including a description of the events ("describe") and identifying tangible benefits to complying with the request ("reinforce"), DEAR-MAN requests provide information targeting the direct route to persuasion. For example, a DBT client attempting to persuade a roommate to clean her dishes might describe the situation ("I noticed you've had the same dirty dishes in the sink for the past week") and identify a benefit to complying with the request to clean the dishes ("If you clean up your dishes, I would feel a lot better"), thus targeting the direct route to persuasion by identifying clear benefits to complying and costs to not complying. An even more strongly-worded DEAR-MAN might even identify a clear-cut reinforcing consequence for complying (e.g., "If you clean up the sink this week, I will clean the bathroom, which I know you

hate!"). Such a consequence may also serve to ingratiate the speaker to the listener by identifying benefits to the listener. In doing so, the reinforce step may also target the peripheral route to persuasion by increasing the speaker's likeability.

In the scenario described above, a roommate who was able and willing to muster the cognitive resources to attend to the information provided would likely anticipate the benefits of compliance and acquiesce to the request. However, as Petty and Cacioppo (1986) suggest, a roommate who is distracted by social media, attending to homework or a romantic partner, or who is otherwise under a high cognitive load might be less likely to fully attend to the information and disregard the logical argument contained in the DEAR-MAN request. In situations like this, however, the inclusion of affective content (the "express" component, in this case, "It makes me feel really irritated and frustrated and I feel like it's starting to get in the way of our friendship") might activate the peripheral route to persuasion. A roommate who is not invested in weighing the costs and benefits of a mutually beneficial exchange (direct route) might still be able to attend to a friend's genuine display of negative emotion (peripheral route) and be persuaded to comply. By attending to both possible routes, DEAR-MAN requests may maximize the likelihood of success.

Although none of Linehan's materials (1993a, 1993b) explicitly mention the Elaboration Likelihood Model (Petty & Cacioppo, 1986), in many respects the three goals of interpersonal effectiveness correspond to different aspects of the persuasion pathways implicated in ELM. As noted previously, an effective DEAR-MAN includes information relevant to the direct route to persuasion (i.e., describing the situation and identifying clear benefits to acquiescing to the request), as well as information relevant to

the peripheral route (expressing an emotion that may elicit a sympathetic response). The other two skills (GIVE and FAST) target objectives relevant to the peripheral routes to persuasion, consistent with both Cialdini's (2007) weapons of influence and Petty and Ciappioto's (1986) ELM. Because GIVE attempts to increase the quality of an individual's relationships, and, presumably, the individual's likeability (see Cialdini, 2007, pp. 167-207), a person using the GIVE skill in the context of making a request would presumably increase the likelihood of successful persuasion by activating the peripheral route to persuasion. FAST, similarly, is not intended to directly target persuasion, but may improve a client's persuasive ability by acting on the peripheral route. Presumably, a client who avoids apologizing excessively, for example, would avoid potentially undercutting their ability to impress others as confident and authoritative. As Cialdini (2007, pp. 208-236) argues, being perceived as an authority figure may activate heuristics that increase the likelihood of compliance with requests (see also Petty & Cacioppo, 1986, for an analysis of how authority and confidence may act on the peripheral route to persuasion). FAST also reminds clients to be truthful, presumably a factor impacting likeability, another factor in the peripheral route.

**Understanding DEAR-MAN in Terms of Relational Frame Theory (RFT)**

From a behavioral perspective, a DEAR-MAN request may be understood in terms of Relational Frame Theory (RFT). RFT posits that the ability to derive novel (i.e., untrained) relations between stimuli comprises a basic operant common to verbal organisms (see Hayes, Barnes-Holmes, & Roche, 2001; Törneke, 2010). RFT describes three basic processes through organisms derive relations: mutual entailment, combinatorial entailment, and transformation of stimulus function. For example, a child

learning about animals in a science class might learn that bees are insects (A = B, where A is the spoken word "bees" and B is the spoken word "insects"). The same child might later learn in a French class that the French word for insects is "insectes" (B = C, where C is the spoken word, "insectes"). Provided that the child is verbal, she would then be able to derive several novel relations that do not require direct training (in this example, only the relations A = B and B = C were trained, in this case by teachers stating, "Bees are insects" and "The French word for 'insects' is 'insectes'"). The child would likely derive the relation B = A ("insects are bees"). This type of derived relation is "mutual entailment." Another example of mutual entailment is the reflexive property in mathematics (i.e., if X = Y, then Y = X). In multiple studies, non-verbal organisms have failed to demonstrate even this most basic derived relation (see Schusterman & Kastak, 1998), with the possible counterexample of a single California sea lion (Schusterman & Kastak, 1998). In addition to combinatorial entailment, the child would also likely derive the relation A = C ("bees" are "insects"). Again, this relation was not directly trained, but derived by the child. This type of derived relation is "combinatorial entailment." Another example of combinatorial entailment is the transitive property in mathematics (i.e., if X = Y and Y = Z, then X = Z). Through mutual entailment, the child would also likely derive the relation that C = A ("insectes are bees"). In this example, the relations between all three stimuli (the spoken words, "bees," insects" and "insectes") is one of equivalence or sameness. The three words are therefore said to participate in a "frame of coordination" (i.e., a functional response class consisting of equivalent stimuli). RFT describes several other types of response classes ("relational frames"), including relationships of opposition (i.e., non-equivalent stimuli, such as acids and bases, odd and

even numbers, and the like), referred to as "frames of opposition." Other classes of relational frames include frames of comparison (greater than/less than relationships, for example), among others (see Hayes et al., 2001; Törneke, 2010).

The third and final derived relation is "transformation of stimulus function." This entails a change in the function of stimuli based on learning history. In the example above, a child stung by a bee for the first time might come to associate pain and fear with bees, especially if a sympathetic parent made the association salient ("Oh, bee stings hurt!"). However, this stimulus (pain) would also become associated with the various other stimuli that participate in a frame of coordination with the spoken word "bees," because of the equivalence relations both directly trained and derived across the various stimuli. For example, the child might experience fear upon entering a zoo exhibit on "insects" in the United States, or a similar exhibit in the Ecomuseum Zoo in Quebec featuring "des insectes." As noted previously, the only relevant relation that was directly trained between the pain and anxiety of the bee sting was to the word "bee." Transformation of stimulus function refers to the tendency of stimuli to acquire functions based on their participation in relational frames with other stimuli. In this case, the relation between the pain and anxiety of the child's experiencing a bee sting was never directly trained with the French word "insectes." Rather, the French word acquired its aversive, anxiety-provoking function by virtue of its participating in a frame of coordination with the English word "bees," which was directly trained with the pain and anxiety of a first bee sting.

From the perspective of RFT, a DEAR-MAN request might come to acquire its persuasive functions by establishing an array of relations between stimuli that create

associations between compliance with the request and one or more reinforcing outcomes for the target of the request. In the previous DEAR-MAN example (a client asking her roommate to clean her dishes), the request might function to establish novel relations between stimuli in the environment, as well as in the roommate's operant behavior, that could increase motivation for washing her dirty dishes. The three relevant verbal statements are, "It makes me feel really irritated," "I noticed you've had the same dirty dishes in the sink for the past week," and "If you clean up yours this week, I will clean up the sink next weekend so we can both have a clean kitchen". Initially, it is unlikely that the image of dirty dishes would have elicited strong aversive internal responding from the roommate (in lay language, it might be stated that "dirty dishes didn't bother her much," "she didn't care about the dirty dishes," or "she didn't know that leaving her dishes dirty hurt her roommate's feelings"). Presumably, an equivalence relation already exists between the visual image of dirty dishes (A) and the spoken phrase "your dirty dishes" (B). The language of the DEAR-MAN request ("I noticed you've had the same dirty dishes in the sink for the past week and that makes me feel really irritated and frustrated") establishes an equivalence relation between the spoken phrase "dirty dishes in the sink" (B) and the phrase "irritated and frustrated" (C). Through combinatorial entailment (A = B, B = C, A = C), the roommate would likely derive a relation between the image of the dirty dishes in the sink and the phrase "irritated and frustrated." Ideally, this latter phrase would elicit uncomfortable covert responses from the roommate (in lay language, feeling guilty or ashamed). Through transformation of stimulus function, the visual image of the dirty dishes would—again, ideally—come to elicit these same aversive covert responses (feelings of guilt) the next time the roommate views the sink full of dirty

dishes, thus motivating behavior to remove the dirty dishes (negative reinforcement). The client might further increase the effectiveness of the DEAR-MAN by explicitly establishing the relation between a specific response (cleaning the dishes) and relief from aversive stimulation ("If you clean up your dishes, I would feel a lot better") or even positively reinforcing consequences (e.g., "It would make me really happy and feel like our relationship was more equal"). Such an effort might backfire, however, if the consequence of not complying with the request (leaving the client irritated and frustrated) were in fact reinforcing for the roommate (for example, if angering the client was actually reinforcing for the client, leading to "passive aggressive" non-compliance). In DBT, however, clients are explicitly trained to use perspective taking skills to attempt to identify a reinforcing outcome for the target of their DEAR-MANs (Linehan, 2015, p. 252).

# THE PRESENT STUDY

Despite the repeated use of DESC scripts and DEAR-MAN in treatment protocols, the author was unable to identify any empirical studies demonstrating the effectiveness of these skills, either as persuasion tools, or tools to achieve the broader outcome of interpersonal effectiveness (i.e., effective persuasion without damaging relationships or self-respect; Linehan, 2015, pp. 231-236). The purpose of the present study is to apply a research paradigm developed in social psychology to evaluate the DEAR-MAN skill using outcome measures that provide analogues to interpersonal effectiveness. Social psychology offers both a theoretical basis for understanding persuasion, and useful research paradigms for evaluating the effectiveness of specific persuasion tactics. The protocol for the present study was adapted from that used by Lyon and Greenberg (1991), in which a research assistant invited students who had already taken part in a sham study to participate in another study in the same laboratory. Participants in Lyon and Greenberg's study were asked to complete a "sign-up sheet," indicating how much time they would be willing to spend helping with that (non-existent) additional study. Prior to signing up, the participants overheard one of two statements (assigned at random) made by a confederate about the researcher they believed they would be working with. Participants were led to believe the confederate was actually another participant. Both statements reflected the behavior of the researcher (a male student) in a romantic relationship with a student supposedly known to the confederate. They either heard the researcher was "nurturant" (". . . we thought he was the neatest guy.

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He helped her with everything from homework to laundry . . . ") or "exploitive" (". . . we thought he was the biggest jerk. He used her for everything from doing his homework to doing his laundry . . ."). The participants then completed the sign-up sheet, indicating how much time they would be willing to spend on the additional study (the dependent variable). The request used by the research assistant was identical across all conditions; the only experimental manipulation was the overheard reference to the research as nurturant or exploitive. Participants also completed the Interpersonal Judgments Scale-Revised (IJS: Byrne, 1971), a brief measure of the participants' perceptions of the researcher along dimensions such as likeability, perceived adjustment, and other qualities.

Lyon and Greenberg's (1991) study, however, included a significant methodological limitation in that respondents only provided self-reports of their willingness to spend time helping with another study, rather than overt behavioral tasks. It is conceivable that differences in expressed willingness to participate might be influenced by extraneous.

In contrast, a classic study by Langer, Blank, and Chanowitz (1978) used overt behavior as a measure of compliance. Langer and colleagues approached people waiting in line to use a photocopier and requested to move ahead in line. The dependent variable in this study was whether or not the person was observed to cede their place in line. Researchers either simply asserted their wish to move ahead in line, or did so while providing a reason prefaced by the word "because." Langer found that whether the reason given was "valid" (i.e., it added the new information, "because I'm in a hurry") or "placebic" (void of new information, in this case, "because I have to make copies"),

compliance increased when "because" was included in the requests compared to the simple request to move ahead in line. Langer and colleagues also varied the degree of inconvenience to the participants. No measures were taken to assess the impact of the request on the relationship between the researcher and participant, or the participants' perceptions of the researcher.

The present study attempts to combine some of the methods employed by Langer and colleagues (1978) and Lyon and Greenberg (1991) in order to assess the effectiveness of the DEAR-MAN skill using a paradigm intended to capture interpersonal effectiveness using analogue measures. In the present study, participants came to a research lab to initially participate in a different study. At the completion of the other study, participants were approached and asked to participate in an additional research session using one of three requests, assigned at random. One request corresponded to the first four steps of DEAR-MAN (i.e., a DESC script), while the control request included simply describing the study and requesting participation (Describe-Assert). The third request was intended as an active control, and was adapted from Langer and colleagues' (1978) request using "because." This script involved describing the study, and requesting participation while providing a plausible but not exceptionally compelling reason to participate ("We need participants because the grad student in our lab who's running that study doesn't have enough yet"). This request was included to assess the possibility that a greatly simplified request script might achieve similar results as the more complex DEAR-MAN (DESC) script. If this "because" condition resulted in equal effectiveness to DEAR-MAN, it might suggest further inquiry to determine the feasibility of replacing DEAR-MAN with the much simpler guideline, "Describe the situation, ask for what you

want, say 'because' and explain why you want what you want." The present study also included a revised version of the IJS (Byrne, 1971) intended to assess differences between the three request groups across several domains of interpersonal judgment (i.e., judgment of the research assistant as well-adjusted, likeable, intelligent, worthy of respect, someone the participant would be willing to be friends with, or to work with in the future, and others). This was intended to serve as a proxy for assessing the impact of the different request types on relationship effectiveness (if any one of the requests were associated with more negative interpersonal judgments, it would presumably cause damage to interpersonal relationships, a failure in relationship effectiveness).

<center>**METHODS**</center>

<center>**Participants**</center>

Participants were undergraduate students at Western Michigan University

($N = 86$), aged 18 years or older. Participants ranged in age from 18 to 36 ($M = 19.77$,

$SD = 2.48$). The age distribution of the sample was narrow, with 81 participants (94.1%)

aged 18-22, and the remaining 5 participants aged 23, 25, 26, 27, and 36 (one participant

each, 1.2%). The sample consisted of 63 women (73.3%) and 23 men (26.7%). 5

participants identified as Asian (5.8%), 10 identified as African-American (11.6%), 3

identified as Hispanic (3.5%) and 66 identified as Caucasian (76.7%). Thirty-one

participants (36.0%) were randomized to the Describe-Assert condition, 26 (30.2%) to

the Because condition, and 29 (33.7%) to the DEAR-MAN condition. Participants were

drawn from the sample recruited for a study conducted by another graduate student

(Lauren Borges, MA). Ms. Borges' study involved participating in two research sessions;

each session was slightly over one hour in duration, conducted approximately one week

apart. Only participants who completed both sessions of Ms. Borges' study were

approached to participate in the present study.

**Brief Description of Previous Study From Which Participants Were Recruited**

Ms. Borges' study entailed two initial sessions spaced roughly one week apart. In

the first session, participants completed written measures assessing constructs like

personality, affective states and traits, and emotion regulation strategies. Participants

returned for a second session during which they completed additional measures and were

<center>39</center>

randomized to one of two mood induction procedures intended to elicit negative affective states. In one, participants were instructed to write an essay for or against legal abortion (participants were instructed to write the essay reflecting their actual stance on the topic) (Bushman & Baumeister, 1998). Participants were given a short time to complete this essay and told that a "partner" (allegedly another research participant) was simultaneously writing on the same topic. Participants then read the "partner's" essay, rated it along several rubrics, and commented on its quality. The essay they read was in fact a standardized, pre-written essay used in previous studies that reflected the opposite viewpoint on abortion. In quality, it was also superior to what would be typical for an undergraduate working within a short time limit. After providing feedback to the "partner," the participant also read their "partner's" feedback on the participant's essay. The form was again standardized, and included low scores and strongly worded criticism ("This is the worst essay I've ever read!"). The other mood induction was a computerized task (the Paced Serial Addition Task: Computerized: PASAT-C; Lejuez, Kahler, & Brown, 2003) that involved completing addition problems presented at an increasing pace. Incorrect responses resulted in a loud sound mimicking an explosion. The intention of both tasks was to create affective distress. Participants then responded to a series of paper and pencil measures affective states, as well as personality and other variables. Participants were fully informed of the purpose of the two tasks during a short debriefing session conducted after the session. For the essay-writing task, participants were informed about the deception (that the "partner" did not exist and the negative feedback had been prewritten).

During the initial consent process for this study, participants were informed that they would be told about an "optional third session" after the first two sessions were completed and informed that this session would not be compensated with extra credit. Following the debriefing portion of the second session, participants were asked to participate in the third session using one of three separate request forms, which are described below, assigned at random. Assignment to these three request forms constituted the independent variable for the present study.

## Procedures

Immediately after completing Ms. Borges' study, participants were approached by the research assistant who conducted the final session. The research assistant provided the verbal request to participate in an additional study. Participants were then presented with a "sign-up sheet" (see Appendix A) allowing them to indicate their willingness to participate or to decline. Participants were randomized to one of the three request forms using an online, random number generator (www.random.org). A total of 86 participants were recruited for the study using these methods. The three request forms are described below.

### Describe-Assert Condition

This condition was intended to serve as a control and involved no "assertiveness" elements besides a description of the study and a request to participate.

> Since you've finished the first two sessions, I want to tell you about a third session. It's completely up to you if you want to participate in it, though. It takes about 2 hours and would mean filling out a number of questionnaires and surveys like the ones from the first day. We just can't offer extra credit for this third session, unfortunately. Please fill out this form saying whether or not you'd be willing to come back.

**Because Condition**

This script was designed to capture the request form employed by Langer and colleagues (1978) in her classic study on persuasion. This condition was identical to the "Assert-only" condition, except that the research assistant included a putative "reason" for complying using the word "because," as identified in the italics below:

> Since you've finished the first two sessions, I want to tell you about a third session. It's completely up to you if you want to participate in it, though. It takes about 2 hours and would mean filling out a number of questionnaires and surveys like the ones from the first day. *We need participants because the grad student in our lab who's running that study doesn't have enough yet.* We just can't offer extra credit for this third session, unfortunately. Please fill out this form saying whether or not you'd like to come back.

**DEAR-MAN Condition**

This condition was designed to reflect the first four elements of the "DEAR-MAN" script included in Linehan's (1993b, 2015) skills training manual, and is also consistent with the "DESC scripts" suggested by Bower and Bower (1991) and others. Linehan's instructions to "stay mindful," (M) and "negotiate" (N) were not included for ethical reasons, as they include repeating the request and attempting to modify its terms after an initial refusal. It was deemed ethically problematic to create undue pressure on participants who initially refused the request. Research assistants were coached to deliver the requests confidently, using a normal vocal volume and giving appropriate eye contact (i.e., to "appear confident" while giving the request, as specified in DEAR-MAN). This condition is identical to the other two, except the request script is as follows, with the "express" and "reinforce" elements in italics:

> Since you've finished the first two sessions, I want to tell you about a third session. It's completely up to you if you want to participate in it, though. A grad student in our lab is doing a study and needs participants so he can graduate on time. *He's in the last year of his program, so we're all getting really nervous*

*since he doesn't have enough people yet to finish!* The session takes about 2 hours and would mean filling out a number of questionnaires and surveys like the ones from the first day. We just can't offer extra credit for this third session, unfortunately, but *you'd seriously be helping him and our lab out so much!* Please fill out this form saying whether or not you'd like to come back.

**All Conditions**

Participants were then presented with a "signup sheet" (see Appendix A) with an item to indicate willingness to participate in the study described in the request script, or to decline participation. The signup sheet included a free response item for participants who declined to briefly explain why. Participants were also presented at this time with the Interpersonal Judgments Scale-Revised (IJS-R; Byrne, 1971) (Appendix B). This scale consisted of eight items on which participants rated their judgments of the research assistant. Research assistants then collected the signup sheet and IJS-R, and briefly reviewed the signup sheet to determine if the person expressed willingness to return for the additional session or not. Participants were instructed to place the IJS-R in an envelope provided by the research assistant, and told that the research assistant would not have access to responses on this measure so as to avoid biasing responding.

**Participants Who Declined Further Participation**

Participants who checked "no" on the signup sheet were immediately provided a short verbal debriefing and given a written document explaining the true purpose of the study and the deception elements employed in it. This debriefing script also included a check box to indicate whether or not the participant was willing to have their responses analyzed in the study. This was intended to provide participants with the opportunity to withdraw their results from the analyses after having been fully informed about the study.

None refused. They were then thanked for participating, and encouraged to contact the researcher with further questions or concerns.

**Participants Who Agreed to Participate**

If the participant indicated they were willing to return for the additional setting, the research assistant used a Gmail calendar to schedule a meeting, typically with a different research assistant, approximately one week later. In some circumstances, the same research assistant ran both sessions due to limited availability. Some participants requested to schedule times more than one week later. These requests were accommodated as long as research assistants were available to run participants at the desired times.

**Additional Session**

Participants who both agreed to return for the additional research session and subsequently arrived to the session were given a packet of measures to complete. These measures were subsequently analyzed as part of Lauren Borges' thesis study, but not for the present study. The packet of measures included the Acceptance and Action Questionnaire (AAQ-2; Bond et al., 2011), the Affective Control Scale (ACS; Williams, Chambless, & Ahrens, 1996), the Courtauld Emotional Over Control Scale (CECS; Watson & Greer, 1983), the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994), the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), the Schedule for Non-Adaptive and Adaptive Personality-2 (SNAP-2; Clark, 1996), the Ego Resiliency Scale (ER; Block & Kremen, 1996) and the Toronto Mindfulness Scale (TMS; Lau et al., 2006).

**Debriefing**

Following the completion of the additional session, participants were debriefed. Research assistants verbally explained the true purpose of the study and the deceptions employed, and were provided a written debriefing form. They were also given the option of refusing to allow their data to be included in future analyses. As before, no participants refused.

Movement through the study is explained further in Figure 1.



```
              ┌─────────────────────────────────────────────┐
              │   Session 1: Personality Measures (N = 95)   │
              └─────────────────────────────────────────────┘
                                   │
              ┌─────────────────────────────────────────────┐
              │  Randomization to Mood Induction Task and    │
              │          Request Type (N = 86)               │
              └─────────────────────────────────────────────┘
```

Session 1: Personality Measures (*N* = 95)

Randomization to Mood Induction Task and Request Type (*N* = 86)

Session 2: Essay Writing (*N* = 46)    Session 2: PASAT-C (*N* = 40)

DEAR: (*N* = 17)    Because: (*N* = 12)    Describe-Assert: (*N* = 17)    DEAR: (*N* = 12)    Because: (*N* = 14)    Describe-Assert: (*N* = 14)

Session 3: Personality Measures (*N* = 5)    Session 3: Personality Measures (*N* = 0)    Session 3: Personality Measures (*N* = 0)    Session 3: Personality Measures (*N* = 5)    Session 3: Personality Measures (*N* = 3)    Session 3: Personality Measures (*N* = 2)
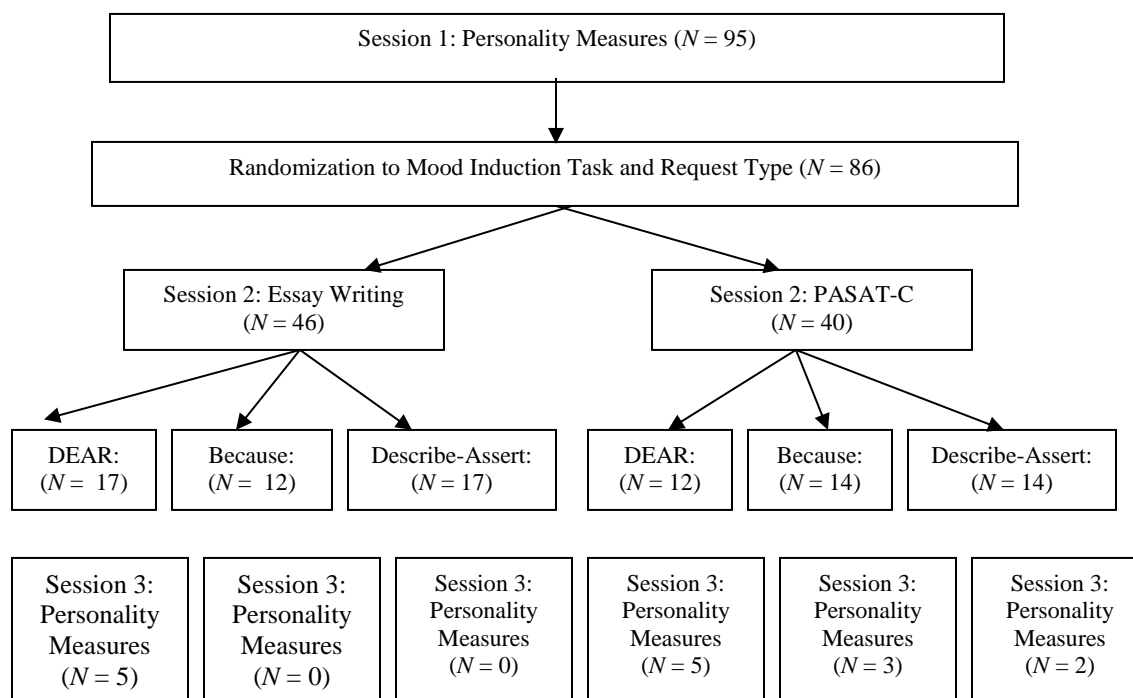
*Figure 1.* Flowchart of Movement Through Ms. Borges' Study and the Present Study

**Measures Delivered Initially**

The following measures were delivered immediately after participants completed Ms. Borges' study, after the participant heard the request to participate.

**Signup Sheet.** This sheet was initially presented with the IJS-R. Participants indicated whether or not they were willing to participate in the additional research session and had the option of completing a free response item explaining why they declined to participate. The signup sheet is included as Appendix A.

**Interpersonal Judgment Scale-Revised (IJS-R: adapted from Byrne, 1971).** This scale is closely based on the original Interpersonal Judgment Scale (Byrne, 1971). The original IJS included ratings of liking a specified person, and level of interest in working with that person on a project in the future. The original IJS also included four items intended as distractors assessing perceptions of the target in terms of intelligence, adjustment, morality, and knowledge of current events. Each items is rated by checking one of seven statements about the target person that range from very positive along the specified dimension (e.g., "I believe that this person is extremely well adjusted") to very negative (e.g., "I believe that this person is extremely maladjusted"). The checked items are then converted to a 7-point scale for scoring purposes. Byrne (1971) reports that this scale has demonstrated good split-half reliability of 0.85 (see also Byrne & Nelson, 1965).

For the current study, two additional items were added to the IJS. Both items follow the same format as the original 6 items, and ask respondents to rate the assistant's social skills (ranging from "I believe this person's social skills are very much above average" to "I believe this person's social skills are very much below average") and respect ("I believe that I would probably respect this person very much" to "I believe that I would probably not respect this person very much"). These items are intended to assess the impact of the different requests on perceptions that might be relevant to Linehan's

(2015, pp. 231-237) construct of relationship effectiveness). As noted previously, if any one of the requests demonstrated significantly lower scores on these measures, this would suggest as detrimental impact on the relationship between the participant and the research assistant. Similarly, between group differences favoring one of the requests would suggest that the given request might have a positive impact on relationships.

**Measures Delivered During Additional Session**

The following measures were administered to participants in counterbalanced order. These measures were only presented to participants who agreed to return for the additional session, and who actually arrived at the lab to participate. Participants typically completed the measures in 45 to 60 minutes.

**Acceptance and Action Questionnaire (AAQ-2: Bond et al., 2011).** The AAQ-2 is a measure of psychological inflexibility (Hayes et al., 1999), a construct hypothesized to underlie many clinical problems and a core treatment target in Acceptance and Commitment Therapy (ACT; Hayes et al., 1999). The scale consists of 10 items, each rated on a Likert-type scale from 1 ("never true") to 7 ("always true"). Higher scores on each item indicate greater levels of inflexibility. The AAQ-2 has demonstrated satisfactory psychometric properties when evaluated using a sample of 2,816 participants across a total of six separate samples. The questionnaire takes under 10 minutes to complete (Bond et al., 2011).

**Affective Control Scale (ACS; Williams, Chambless, & Ahrens, 1996).** The ACS is a 42-item self-report measure designed to assess aversion to strong emotions, with subscales for anger ($\alpha = .72$), positive affect ($\alpha = .84$), depressed mood ($\alpha = .91$), and anxiety ($\alpha = .89$). The anger subscale assesses affective control with statements like,

"I am afraid that letting myself feel really angry about something could lead me into an unending rage." The depressed mood subscale of the ACS consists of items like, "Being depressed is not so bad because I know it will soon pass." Anxiety subscale items assess agreement with statements like, "I am able to prevent myself from becoming overly anxious." All items are rated on 7-point Likert-type scales from 1 ("very strongly disagree") to 7 ("very strongly agree"). Overall, the ACS demonstrates strong internal consistency ($\alpha = .94$) and good 2-week test-retest reliability ($r = .78$) in an undergraduate sample. Higher scores on the ACS indicate greater fear of strong emotion.

**Courtauld Emotional Over Control Scale (CECS; Watson & Greer, 1983).** The CECS is a 21-item self-report inventory assessing attempts to suppress three different affective states: anger (e.g., "I smother my feelings"), depression (e.g., "I hide my unhappiness"), and anxiety (e.g., "I say what I feel," a reverse-scored item), each of which comprises a subscale. Participants rate agreement with each item on a Likert-type scale from 1 ("almost never") to 4 ("almost always"). The CECS demonstrates good internal consistency with subscale alpha coefficients ranging from .83 to .86. Higher scores on the CECS indicate greater emotional suppression.

**Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004).** The DERS is a 41-item, self-report measure assessing difficulties regulating unwanted emotions. The DERS assesses six factors: nonacceptance of emotional responses (e.g., "When I'm upset, I feel ashamed with myself for feeling that way") ($\alpha = .85$); difficulties engaging in goal-directed behavior (e.g., "When I'm upset, I have difficulty thinking about anything else") ($\alpha = .89$); impulse control difficulties (e.g., "When I'm upset, I feel out of control") ($\alpha = .86$); lack of emotional awareness (e.g., "I am attentive to my

feelings") ($\alpha$ = .80); limited access to emotion regulation strategies (e.g., "When I'm upset, I believe that I will remain that way for a long time") ($\alpha$ = .88); and lack of emotional clarity (e.g., "I have difficulty making sense out of my feelings") ($\alpha$ = .84). Participants rate agreement with each statement on the DERS on a 5-point Likert-type scale (1 = "almost never," 2 = "sometimes," 3 = "about half the time," 4 = "most of the time," and 5 = "almost always"). Use of reverse scoring means that higher scores on the DERS reflect less pronounced difficulties with emotion regulation. The DERS has demonstrated good internal consistency with .93 as an alpha coefficient. The DERS has also demonstrated good test-retest reliability over 4- and 8-week spans (Gratz & Roemer, 2004).

**Emotional Expressivity Scale (EES; Kring et al., 1994).** The EES is a 17-item self-report measure assessing overt expression of emotional experiences (e.g., "I don't express my emotions to other people"). Items are rated on a 6-point Likert-type scale from 1 ("never true") to 6 ("always true"). The EES demonstrates excellent convergent validity ($\alpha$ = .90 – .93) in undergraduate samples. Higher scores on the EES indicate greater emotional expressivity.

**Ego-Resiliency Scale (ER; Block & Kremen, 1996; Letzring, Block, & Funder, 2005).** The ER is a 14-item self-report inventory that assesses ego-resiliency, the ability to temporarily modify levels of self-control in response to situational demands (Block, 2002; Block & Block, 1980). Participants are instructed to rate items (e.g., "I like to do new and different things") on a 4-point Likert-type scale from 1 ("does not apply at all") to 4 ("applies very strongly"). Lower levels of ego-resiliency have been shown to predict maladaptive behavioral rigidity, whereas higher levels of ego-resiliency predict

positive affect (Block & Kremen, 1996). Items on the ER were derived from the Minnesota Multiphasic Personality Inventory (MMPI) and the California Psychological Inventory (CPI) (Letzring et al., 2005). The ER has demonstrated acceptable internal consistency across undergraduate samples ($\alpha$ = .76) (Block & Kremen, 1996).

**Emotion Regulation Questionnaire (ERQ; Gross & John, 2003).** The ERQ is a 10-item self-report measure designed to assess the emotion regulation strategies of cognitive reappraisal and expressive suppression. Gross and John's (2003) theory of emotion regulation states that reappraisal functions to decrease intense emotions by modifying antecedents (i.e., cognitions that led to affective responses), whereas suppression attempts to regulate responses to antecedents. Items on the ERQ like, "I control my emotions by changing the way I think about the situation I'm in" are consistent with the use of reappraisal strategies, whereas items like, "I control my emotions by not expressing them" indicate suppression. Items are rated on 7-point Likert-type scales where 1 indicates "strongly disagree" and 7 indicates "strongly agree." The ERQ has demonstrated adequate internal consistency with alpha coefficients of .79 and .73 for cognitive reappraisal and expressive suppression, respectively. Higher scores on the ERQ indicate greater use of both strategies.

**Schedule for Non-Adaptive and Adaptive Personality-2 (SNAP-2; Clark, 1996).** The SNAP-2 is an empirically derived measure that assesses maladaptive personality traits associated with a variety of personality disorder diagnoses. It consists of 390 statements about the respondent, rated true or false. The SNAP-2 yields 12 trait, 3 temperament, 13 personality disorder, and 6 validity scales. The temperament and trait scales have demonstrated excellent psychometric properties. Median Cronbach's alpha

coefficient for the temperament and trait scales across college students, adolescents, inpatients and outpatients ranged from .76 to .84, while median 1-week test–retest reliability was .81 in a patient sample (Clark, 1996). Analyses also identified significant overlap with the Dimensional Assessment of Personality Pathology—Basic Questionnaire (Livesley & Jackson, 2002). Psychometric analyses of the trait scales also show strong patterns of association in the expected directions with Tellegen and Waller's (2008) three-factor model of temperament. The SNAP-2's trait scales have also demonstrated expected correlations with measures of the five-factor model of personality (e.g., Clark, 1996; Reynolds & Clark, 2001; Samuel, Simms, Clark, Livesley, & Widiger, 2010).

**Toronto Mindfulness Scale (TMS; Lau et al., 2006).** The TMS is a 13-item measure of state mindfulness. Participants are instructed to mindfully attend to their breath for 15 minutes to before completing the TMS response items. Participants are instructed to rate their experience on a scale ranging from 0 "not at all" to 4 "very much." The TMS consists of the two scales: curiosity (e.g., "I was curious about each of the thoughts and feelings that I was having") and decentering (e.g., "I experienced myself as separate from my changing thoughts and feelings"). The TMS demonstrates strong internal consistency as an overall construct ($\alpha = .95$) and within both curiosity ($\alpha = .93$) and decentering ($\alpha = .91$) factors (Lau et al., 2006).

## Main Hypotheses

*Hypothesis 1:* A larger proportion of participants in the DEAR-MAN condition will agree to return for the additional session than in either of the two comparison conditions.

*Hypothesis 2:* A larger proportion of the participants in the DEAR-MAN condition will actually arrive at the additional session than in either of the two comparison conditions.

*Hypothesis 3:* Participants in the DEAR-MAN condition will report liking the research assistant more (as indicated by responses on the IJS) than in either of the two comparison conditions.

*Hypothesis 4:* Participants in the DEAR-MAN condition will report respecting the research assistant more (as indicated by responses on the IJS) than in either of the two comparison conditions.

*Hypothesis 5:* Participants in the DEAR-MAN condition will report more positive views of the research assistant's social skills (as indicated by responses on the IJS) than in either of the two comparison conditions.

# RESULTS

The main hypotheses of the current study required testing differences across the three groups (DEAR-MAN, Because, Describe-Assert) on two different categorical outcome variables (i.e., whether or not a person agreed to return for the extra study session and whether they actually arrived at the session). (Table 1 shows the proportion of participants in each group who agreed to return and who actually returned.) Therefore, Pearson's chi-square test (Pearson, 1900) was used to test the equivalence of the three request groups along the main outcome variables. One downside of the use of the chi-square statistic used in the present study is the inability to test group differences with an a priori prediction of the direction of those differences (i.e., a one-tailed statistical test) (Pearson, 1900). In the case of the present study, a one-tailed test was appropriate, given that the authors predicted group differences in a specific pattern of directions based on the prediction that DEAR-MAN would outperform the two comparison conditions. For this reason, Fisher's Exact Test, which provides both one- and two-tailed probability values, was used to specify probabilities for each of the pairwise comparison tests using Pearson's chi-square. Fisher's Exact Test was also appropriate as it was designed for relatively small sample sizes (Fisher, 1922). Tests revealed that participants in the Because condition were no more likely to agree to return for the extra research session than participants in the Describe-Assert condition $\chi^2 (1) = 1.698$, $N = 57$, $P = .193$. The probability obtained using Fisher's Exact Test (one-tailed) was .158. Similarly, participants in the DEAR-MAN condition were no more likely than participants in the

Because condition to agree to return $\chi^2$ (1) = 2.723, $N$ = 56, $P$ = .099, although these differences approached statistical significance, favoring the DEAR-MAN condition. The probability obtained using Fisher's Exact Test (one-tailed) was .083. Participants in the DEAR-MAN condition were significantly more likely to agree to return for the extra research session than participants in the Assert only condition $\chi^2$ (1) = 9.036, $N$ = 61, $P$ = .003. The probability obtained using Fisher's Exact Test (one-tailed) was .003.

Table 1

*Proportion of Participants Who Agreed to Return and Who Actually Returned,*
*By Request and Induct Type*

| Request | Induction | $N$ | Agreed to return | | | Returned | | |
|---|---|---|---|---|---|---|---|---|
| | | | Yes | No | Proportion | Yes | No | Proportion |
| DEAR | | 29 | 16 | 12 | 0.55 | 10 | 19 | 0.34 |
| | Essay | 17 | 8 | 9 | 0.47 | 5 | 12 | 0.29 |
| | PASAT-C | 12 | 8 | 4 | 0.67 | 5 | 7 | 0.42 |
| Because | | 26 | 9 | 17 | 0.35 | 3 | 23 | 0.12 |
| | Essay | 12 | 3 | 9 | 0.25 | 0 | 12 | 0.00 |
| | PASAT-C | 14 | 6 | 8 | 0.42 | 3 | 11 | 0.21 |
| Describe-Assert | | 31 | 6 | 25 | 0.19 | 2 | 29 | 0.07 |
| | Essay | 17 | 2 | 15 | 0.12 | 0 | 17 | 0.00 |
| | PASAT-C | 14 | 4 | 10 | 0.29 | 2 | 12 | 0.14 |

The findings were similar when actually arriving for the extra session was used as an outcome variable. Again, participants in the Assert only condition did not differ from the Because condition in their likelihood of actually returning for the extra session $\chi^2$ (1) = .457, $N$ = 57, $P$ = .499. The probability obtained using Fisher's Exact Test (one-tailed) was .415. Participants in the Because condition also did not differ from those in the DEAR-MAN condition, $\chi^2$ (1) = 2.820, $N$ = 56, $P$ = .093, although again differences

approached significance. The probability obtained using Fisher's Exact Test (one-tailed) was .087. Participants in the DEAR-MAN, condition were significantly more likely to actually arrive for the extra session than participants in the Describe-Assert condition $\chi^2 (1) = 5.720$, $N = 61$, $P = .017$. The probability obtained using Fisher's Exact Test (one-tailed) was .018.

Additional regression analyses attempted to control for possible extraneous variables (specifically the possibility that the different mood inductions or the gender of the research assistants may have influenced the two primary outcome variables of interest). A binary logistic regression (see Peng & So, 2002; Hosmer & Lemeshow, 2000) approach was used to assess whether any of these factors predicted the outcome variables (agreeing to come to the extra research session or actually arriving at that session). Prior research (e.g., Guadagno & Cialdini, 2002) suggests that the gender of an individual making a request may influence compliance, as can a recent history of negatively or positively valenced interaction (e.g., Regan, 1971). It is possible that assignment to an RA of one gender, or to one or the other mood induction might have influenced responding, leading to possible confounds. Another possible confound tested using the regression model was participant age, on the assumption that age might be related to propensity to engage in helping behavior. Logistic regressions have the advantage of incorporating both categorical and continuous predictor variables with dichotomous outcome variables, and do not assume that predictor variables are distributed as a multivariate normal distribution with an equal covariance matrix (see Tabachnick & Fidell, 2013, p. 456 for discussion of guidelines for the use of logistic regression in the case of multiple possible confounders).

Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that participants would agree to return for the third research session. The model contained four independent variables (induction type, request type, participant age, and RA gender). The relatively small number of independent variables in the model was selected because of the small number of cases (86) under analysis. Individual RA names were not entered as independent variables because some RAs ran only a small number of sessions. RA gender was used in the model instead, based on existing research (e.g., Guadagno & Cialdini, 2002) suggesting that gender may be a determinant of compliance in certain persuasion scenarios. The full model containing all predictors was statistically significant, $\chi^2$ (5, $N = 86$) = 11.29, $p = .046$, indicating the model was able to distinguish between respondents who agreed to return and those who did not. The model as a whole explained 12.3% (Cox and Snell $R$ squared) and 16.8% (Nagelkerke $R$ squared) of the variance in agreement to return, and correctly classified 68.6% of cases. As shown in Table 2, only one of the independent variables (request type) made a unique statistically significant contribution to the model. The strongest predictor of agreement to return was assignment to the DEAR-MAN request, with an odds ratio of 5.87. This indicated that respondents who heard a DEAR-MAN request were 5.87 times more likely to agree to return than respondents who heard one of the two other requests, controlling for the other factors in the model. No other independent variables in the model were statistically significant.

Table 2

*Logistic Regression Predicting Likelihood of Agreeing to Return*

| | B | S.E. | Wald | df | p | Odds Ratio | 95% C.I. for Odds Ratio | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Describe-Assert | | | 8.61 | 2 | .01 | | | |
| Because | .83 | .64 | 1.69 | 1 | .19 | 2.29 | .66 | 7.96 |
| DEAR | 1.77 | .61 | 8.44 | 1 | .00 | 5.87 | 1.78 | 19.35 |
| Induction | -.65 | .49 | 1.84 | 1 | .17 | .52 | .20 | 1.34 |
| RA Gender | -.14 | .58 | .05 | 1 | .82 | .87 | .29 | 2.74 |
| Age | .00 | .094 | .00 | 1 | .98 | 1.00 | .829 | 1.20 |
| Constant | -1.04 | 1.89 | .30 | 1 | .58 | .35 | | |

A similar regression was performed using actually returning for the additional session as an outcome variable. Findings were generally similar in this model. Again, the full model containing all predictors was statistically significant, $\chi^2$ (5, $N = 86$) = 12.10, $p = .033$, indicating the model was able to distinguish between respondents who actually returned and those who did not. This model as a whole explained 13.1% (Cox and Snell $R$ squared) and 22.3% (Nagelkerke $R$ squared) of the variance in actually returning, and correctly classified 82.6% of cases. As shown in Table 3, request type and induction type made unique statistically significant contributions to the model. Again, the strongest predictor of actually returning was assignment to DEAR-MAN, recording an odds ratio of 7.73. This indicated that respondents who heard a DEAR-MAN request were 7.73 times more likely to actually return than respondents who heard one of the two other requests, controlling for the other factors in the model. No other independent variables in the model were statistically significant. Interestingly, mood induction assignment was

also found to be a statistically significant predictor of returning, with participants in the essay writing condition less likely to return than those in the PASAT-C. The essay writing condition recorded an odds ratio of .25, indicating that a participant in the essay writing condition was only .25 times as likely to return as one in the PASAT-C condition.

Table 3

*Logistic Regression Predicting Likelihood of Actually Returning*

| | B | S.E. | Wald | *df* | *p* | Odds Ratio | 95% C.I. for Odds Ratio | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | Lower | Upper |
| Describe-Assert | | | 6.62 | 2 | .04 | | | |
| Because | .70 | 0.98 | .50 | 1 | .48 | 2.00 | .29 | 13.82 |
| DEAR | 2.05 | .87 | 5.51 | 1 | .02 | 7.73 | 1.40 | 42.70 |
| Induction | −1.37 | .68 | 4.13 | 1 | .04 | .25 | .07 | .95 |
| RA Gender | .68 | .87 | .60 | 1 | .44 | .51 | .09 | 2.81 |
| Age | −.01 | .11 | .02 | 1 | .90 | .99 | .79 | 1.23 |
| Constant | −1.80 | 2.55 | .50 | 1 | .48 | .17 | | |

The analyses also included $\chi^2$ tests to determine any between-groups differences on the IJS-R ratings. Separate tests were run to determine if the groups differed on scores for the individual items, as well as the total IJS-R score (calculated using reverse scoring for items in which more negative answers were listed first). These tests did not reveal any statistically significant differences on individual items or total scores.

# DISCUSSION

The present study is not a treatment outcome study, nor should it be considered a substitute for such a study. The paradigm employed in the current study assumes that persuading another person to agree to a request, without being perceived as less worthy of respect or liking, serves as a reasonable proxy for interpersonal effectiveness (Linehan, 2015, pp. 231-237). In this respect, the present study may be conceptualized as an attempt to assess the effectiveness of the DEAR-MAN skill at achieving its intended purpose, using an analogue paradigm borrowed from social psychology.

The findings of the present study show that undergraduate students responded differently to requests that included the information specified in the first four elements of the DEAR-MAN script, as opposed to a request using a simpler (Describe-Assert) script. This comparison condition was chosen in part based on the author's clinical experiences in which nearly all DBT clients were able to execute these skills (describing a situation and asking another person to engage in a specific behavior) with relative ease. Conversely, in the author's experiences, the express and reinforce steps of the DEAR-MAN skill tended to be the most difficult for clients to execute without training. That the DEAR-MAN skill (including the express and reinforce steps) was significantly more effective at persuading compliance with the request suggests that there may be utility to training clients in these skills. This argument is made more robust by the fact that participants in the DEAR-MAN condition were not only more likely to agree to the request than those in the Describe-Assert condition, but also resulted in higher rates of

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actually following through on the request (arriving at the agreed-upon day and time). In the author's experiences, many clients also express concern that including these two elements may result in negative perceptions (i.e., being seen as "manipulative" or "talking like a therapist, not a real person"). The present study found that adding these elements did not result in negative interpersonal judgments, as measured by the IJS-R (i.e., research assistants making DEAR-MAN requests were not perceived as less likeable, easy to work with, well-adjusted, intelligent, moral, knowledgeable of current events, socially skillful, worthy of respect, nor were they judged more negatively overall than research assistants making either of the other two requests). These latter finding suggest the DEAR-MAN requests did not damage the relationship between the research assistant and the participant. As noted previously, it is not clear that these results would generalize to interpersonal relationships between DBT clients and their friends, loved ones, or acquaintances. Therefore, the findings should not be interpreted as strong evidence that DEAR-MAN is a useful or effective skill for clients to use. The findings do, however, provide some validation for DEAR-MAN as an interpersonal effectiveness tool within the contrived scenario created for the study. It is worthy of note that the between group differences existed despite the relatively difficult, time-consuming nature of complying with the request (making a significant investment of time to come to the lab and complete measures) and the absence of tangible compensation for doing so.

The findings of the present study are less clear with respect to the Because condition. This condition was included as a possible alternative to DEAR-MAN that might be easier for clients to learn in skills training because of its simplicity. In the present study, the Because condition was conceptualized as an active control, because of

prior research (Langer et al., 1978) suggesting that simply adding the word "because" to a request may lead to higher compliance rates, even when the "reason" given does not add substantive. The Because request used in the present study might be taught in skills training by simply instructing clients to describe the situation prompting a request, say "because," and then explain the reason for the request. The data show this request did not differ significantly from either DEAR-MAN or Describe-Assert in its capacity to persuade compliance. Trends in the data suggested inferiority to DEAR-MAN and superiority to Describe-Assert, although these were not statistically significant. Again, no differences were found in interpersonal judgments (as measured by IJS-R responses) across the three request conditions.

Despite the limitations of the laboratory-based paradigm used in the present study, its findings are of value for several reasons. First, they demonstrate that a relatively convenient, simple compliance paradigm is sensitive enough to show differences in responding across the various requests. This paradigm allows for persuasion research to be conducted under relatively convenient conditions in an academic research laboratory. In the case of the present study, attendance at the third session and completion of measures during that session also generated valuable data for another study. The paradigm also had the advantage of including both self-report data on compliance (agreeing to) as well as overt behavioral observation of "follow through" (whether the participant actually returned).

In contrast to many studies conducted in the social psychology domain, the present study also included subjective data reflecting perceptions of the individual making the request. This element is typically absent in persuasion research, a substantial

lacuna when attempting to translate research on persuasion from social psychology to clinical interventions. Many of the persuasion tools shown to be effective in non-clinical contexts might be expected to produce unwanted interpersonal outcomes when applied by individuals attempting to become more assertive in their personal lives.

One interesting factor that emerged from the logistic regression analysis was the finding that mood induction assignment from the study conducted just before the present study (Lauren Borges' MA thesis) was a statistically significant predictor of overt behavioral compliance with the request to return. These analyses showed that participants in the essay writing condition were just as likely to agree to return, but were significantly less likely to follow through on the agreement. It is possible that this finding is merely attributable to chance. However, it is also conceivable that the nature of the task influenced responding. According to Cialdini (2007), the norm of reciprocity (Becker, 1986) dictates that favors, as well as slights, be repaid in kind. One difference between the essay writing and PASAT-C conditions was the nature of the interaction between research assistant and participant. In the essay writing condition, the research assistant explicitly lied to the participant, stating that another participant would be reading their essay, and then gave them negative feedback on the essay, supposedly provided by this non-existent "partner." Although the PASAT-C task was also aversive, it involved neither a lie nor insulting feedback from another person (only an animated "explosion" sound provided by a computer). If either of these interactions were perceived as slights, they might be expected to result in reciprocal slights from the participant. Agreeing to return for a session and then failing to do so may have been the means to do so.

**Limitations**

The most significant weakness of the present study is the contrived interaction between research assistant and participant, which limit the generalizability of the findings to clinical settings. Clearly, this scenario did not fully capture the types of complex and potentially aversive interaction history between, for example, a person diagnosed with BPD and a romantic partner or parent. Such a relationship was only very loosely approximated in the current study. Participants did experience aversive events involving the research assistant making the request (i.e., undergoing an uncomfortable mood induction procedure). Although these procedures typically generated aversive emotional states (e.g., anger, frustration), they were delivered under controlled laboratory conditions, with the participants' expressed permission (i.e., informed consent). Therefore, it is unclear that participants attributed these aversive interactions to the research assistants' character or other stable personality features, as the assistant was clearly running a protocol over which they had little or no control. The request was also not framed as a "favor" to the research assistant, but was delivered on behalf of an unnamed graduate student in the lab. Therefore, it is unclear that any lingering negative perceptions of the research assistant would have influenced responding to the requests. The experimental paradigm should thus be considered only a very loose proxy for a long-term relationship between a person with BPD and a loved one, friend, or acquaintance with a history of aversive interactions. The results of the present study are thus not directly generalizable to the lives of DBT clients, and are better conceptualized as social psychology findings with tentative applications to clinical intervention technology.

**Future Directions**

Given the limitations of the present study, future lines of research should continue to explore the efficacy and effectiveness of the component skills included in the DBT package. Unfortunately, DBT is a complex, cost- and time-intensive intervention both for clients and clinicians (Brazier et al., 2006). Any efforts to simplify DBT could improve the ease with which the intervention is disseminated and implemented. Some contemporary research has suggested specific alterations to the comprehensive DBT protocol that may reduce cost and complexity, such as implementing the protocol with case management services in place of individual therapy. Current evidence (Linehan et al., in press) suggests equal efficacy between this "stripped down" (hence, cost-effective) version of DBT and the full protocol described by Linehan (1993a), but with more limited benefits at long-term follow-up. A more recent systematic review of treatments that involved providing skills training as "stand alone" interventions suggested that such interventions are associated with improvements above control conditions in treating symptoms of depression, binge-eating and attention deficit hyperactivity disorder (ADHD) (Valentine et al., 2014). These findings are general similar to dismantling studies of at least one other "package" treatment, cognitive therapy for depression (Beck, Rush, Shaw, & Emery, 1979). This line of research has shown equal efficacy across the full cognitive therapy protocol and a substantially simplified behavioral activation treatment (e.g., Jacobson et al., 1996; Dimidjian et al., 2006; Dobson et al., 2008) that initially formed one component of the full protocol. These findings suggest that for at least one treatment, simplification and increased ease of dissemination may not reduce efficacy. Given the complexity and inherent difficulty of training clinicians in DBT and

implementing the treatment in contexts where resources are scarce, simplifying the protocol could be of significant benefit.

Future research should attempt to identify ways in which the DBT protocol may be simplified to facilitate widespread dissemination and implementation. This is of critical important, given that the need for DBT greatly exceeds the availability of trained practitioners (Swenson, 2000). Dismantling studies such as that conducted by Linehan and colleagues (in press) provide valuable evidence to inform this task. Another valuable line of research may help to evaluate the effectiveness of individual component skills so that they may be simplified or omitted from the protocol.

The findings of the current study do not directly answer the question of whether or not DEAR-MAN could be streamlined into a more parsimonious skill. Rather, the findings validate the assumption that, at least within the context of the study, a DEAR-MAN request is more likely to persuade verbal and behavioral compliance than a simpler (Describe-Assert) request. The findings also suggest that DEAR-MAN is more effective at its intended task than a plausible alternative request (Because), although these trends did not achieve statistical significance. These findings may still be of some limited utility to clinicians, especially when clients express trepidation at the complexity of the DEAR-MAN skill, or who express doubt in its utility. A clinician can at least suggest that the effort needed to learn the steps of DEAR-MAN to fluency may be justified by the increased likelihood of compliance, apparently without damage to interpersonal relationships.

The immediate next steps for this line of research are to rectify some of the internal validity problems in the current study. Initially, future studies might explore

request scenarios that more closely resemble real-life interpersonal situations by using first-person, rather than third-person, language. Second, steps should be taken to isolate the elements DEAR-MAN (i.e., which of the seven "steps") are necessary for persuasion. At present, the author has undertaken an extension of the study by creating conditions intended to represent partial composites of the DEAR-MAN elements. These four conditions (describe-assert, describe-express-assert, describe-assert-reinforce, describe-express-assert-reinforce) all feature first-person language (i.e., the research assistant is asking for participants for her own study, as opposed to asking on behalf of an unspecified graduate student). These findings will hopefully contribute to our understanding of how including different DEAR-MAN elements adds to the persuasive power of a request. Eventually, this line of research might attempt to train clients to use simplified versions of DEAR-MAN and empirically assess their effectiveness through self-report paradigms (e.g., asking clients to report when and under what contexts they used the different requests, and whether they were successful).

Even these extensions will not address some of the external validity problems inherent in the present study. In particular, the present study does little to inform how DBT clients achieve effective interpersonal persuasion within the context of complex relationships. They also say little about how different approaches to teaching the skills may impact clients' ability to learn and apply them. Future research should attempt to gather more subjective and objective data about how clients actually use the interpersonal effectiveness skills during and after DBT skills training. If Linehan's (1993a, p. 10) theory of BPD is correct, increasing interpersonal effectiveness should be associated with improved quality of life, as well as reduced self-destructive behaviors that may serve to

regulate intense emotions that often follow ineffective interpersonal interactions. Unfortunately, measuring a construct like interpersonal effectiveness presents significant difficulties in psychotherapy outcome research. Currently, measures exist that attempt to assess DBT skills use, such as the DBT Ways of Coping Checklist (DBT-WCCL; Neacsiu, Rizvi, Vitaliano, Lynch, & Linehan, 2010). Changes on this measure have been shown to mediate DBT outcomes (Neacsiu, Rizvi, Vitaliano, et al., 2010), but only when considering skills use as a continuous variable (meaning that clients who use more skills are likely to achieve optimal outcomes in terms of reducing suicidality and self-harm). These findings have not yet identified the impact of individual skills on any outcome of interest. Interestingly, the only component skill set that has been identified as a statistically significant mediator of outcomes in DBT is mindfulness (Wupperman, Neumann, Whitman, & Axelrod, 2009). It remains to be seen, therefore, if DBT outcomes are in fact improved by the inclusion of other specific skill sets in the skills training protocol.

A useful addition to the DBT-WCCL would be an assessment of the perceived effectiveness of the component skills identified on that measure. The DBT-WCCL in its current form assesses only which skills were used, rather than their effects (i.e., how successfully the client was able to achieve a desired outcome). Developing such a measure could facilitate the evaluation of individual component skills. This question should be addressed in future research using both quantitative and qualitative methods.

Another possible direction for future research and intervention is the development of measures of client strengths and weaknesses at the outset of DBT. Based on the author's clinical observation, many DBT clients begin therapy with relatively strong

repertoires within some domains targeted in DBT skills training, but weaker repertoires in others. This means that for many clients, portions of skills training are redundant. For example, a client with strong interpersonal effectiveness skills may be unable to use them when they are emotionally aroused because they lack mindfulness and emotion regulation repertoires. Such a client might benefit more from more targeted training in mindfulness and emotion regulation, and may find the interpersonal effectiveness module less helpful. If these skill sets are initially assessed before beginning skills training, it may be possible to tailor the experience to the unique needs of the client, decreasing the total time required in treatment to achieve optimal outcomes. An initial comprehensive assessment might include subjective (e.g., self-report) and objective (e.g., behavioral vignette) methods. Such an intervention would require substantial initial costs to develop assessment measures and adaptive training modules, however, and could lose some of the benefits of skills training (e.g., gaining greater enrichment in previously developed skill areas). For this reason, more research is needed before such a treatment could be developed or implemented.

## Conclusions

The present study suggests that interpersonal effectiveness can be evaluated using a relatively simple, convenient paradigm borrowed from social psychology, and that this paradigm is sensitive enough to detect differences in participants' responses to requests. A strength of the current study is its reliance not only on participants' self-reported willingness to comply with a request, but also their overt behavioral compliance (i.e., whether or not the participant actually arrived to take part in the optional third session). Analyses of the data show that participants in the DEAR-MAN condition were more

likely to agree to the request, and more likely to follow through on this agreement, than participants in the Describe-Assert (control) condition. DEAR-MAN was not found to be superior to an active control condition (Because), although trends in the data suggested superiority of DEAR-MAN. No differences were found in measures of interpersonal judgment, suggesting that participants who heard DEAR-MAN requests were no more likely to perceive the research assistant making the request negatively than participants in the other conditions. The findings were conducted in a controlled laboratory setting, however, with non-clinical populations, significantly limiting the generality of the findings. Future research should attempt to assess the utility of DEAR-MAN with clinical populations, possibly identifying ways to streamline the skills training component of DBT to increase cost-effectiveness and ease of dissemination and implementation.

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**Appendix A**

**Signup Sheet**

**Signup Sheet**

**Are you willing to come in for a third session (circle only one): Yes  No**

**If you circled "no," please indicate why you are not willing to return for session three:**

_____
_____
_____
_____

_____

**If you circled "yes," please indicate days and times that would work best for you to participate. Remember that participating in session three requires at least a 2-hour block of availability. We will try our best to accommodate your needs. A research assistant will be contacting you shortly to schedule a day and time for you to participate:**

| Day | Please indicate times that you are available (e.g. "11-1, 3-5") in blocks of at least two hours) |
|---|---|
| **Sunday** | |
| **Monday** | |
| **Tuesday** | |
| **Wednesday** | |
| **Thursday** | |
| **Friday** | |
| **Saturday** | |

**Appendix B**

**Interpersonal Judgments Scale-Revised (IJS-R)**

**IJS-R**

Please answer the following questionnaire about the **research assistant** who is running your session. Remember that the research assistant will not have access to your responses on this form, and neither you nor the research assistant will be penalized in any way because of your responses.

**Research assistant name:**_____

1. Intelligence (check one)
   __I believe that this person is very much above average in intelligence.
   __I believe that this person is above average in intelligence.
   __I believe that this person is slightly above average in intelligence.
   __I believe that this person is average in intelligence.
   __I believe that this person is slightly below average in intelligence.
   __I believe that this person is below average in intelligence.
   __I believe that this person is very much below average in intelligence.

2. Knowledge of Current Events (check one)
   __I believe that this person is very much below average in her (his) knowledge of current events.
   __I believe that this person is below average in her (his) knowledge of current events.
   __I believe that this person is slightly below average in her (his) knowledge of current events.
   __I believe that this person is average in her (his) knowledge of current events.
   __I believe that this person is slightly above average in her (his) knowledge of current events.
   __I believe that this person is above average in her (his) knowledge of current events.
   __I believe that this person is very much above average in her (his) knowledge of current events.

3. Morality (check one)
   __This person impresses me as being extremely moral.
   __This person impresses me as being moral.
   __This person impresses me as being moral to a slight degree.
   __This person impresses me as being neither particularly moral nor particularly immoral.
   __This person impresses me as being immoral to a slight degree.
   __This person impresses me as being immoral.
   __This person impresses me as being extremely immoral.

4. Adjustment (check one)
   __I believe that this person is extremely maladjusted.
   __I believe that this person is maladjusted.
   __I believe that this person is maladjusted to a slight degree.
   __I believe that this person is neither particularly maladjusted nor particularly well adjusted.
   __I believe this person is well adjusted to a slight degree.
   __I believe this person is well adjusted.
   __I believe this person is extremely well adjusted.

5. Personal Feelings (check one)
   __I believe that I would probably like this person very much.
   __I believe that I would probably like this person.
   __I believe that I would probably like this person to a slight degree.
   __I believe that I would probably neither particularly like nor particularly dislike this person.
   __I believe that I would probably dislike this person to a slight degree.
   __I believe that I would probably dislike this person.
   __I believe that I would probably like this person very much.

6. Working Together in an Experiment (check one)
   __I believe that I would very much dislike working with this person in an experiment.
   __I believe that I would dislike working with this person in an experiment.
   __I believe that I would dislike working with this person in an experiment to a slight degree.
   __I believe that I would neither particularly dislike nor particularly enjoy working with this person in an experiment.
   __I believe that I would enjoy working with this person in an experiment to a slight degree.
   __I believe that I would enjoy working with this person in an experiment.
   __I believe that I would very much very much enjoy working with this person in an experiment.

7. Social skills (check one)
   __I believe this person's social skills are very much above average.
   __I believe this person's social skills are above average.
   __I believe this person's social skills are above average, to a slight degree.
   __I believe this person's social skills are below average to a slight degree.
   __I believe this person's social skills are below average.
   __I believe this person's social skills are very much below average.

8. Respect (check one)
   __I believe that I would probably respect this person very much.
   __I believe that I would probably respect this person.
   __I believe that I would probably respect this person to a slight degree.
   __I believe that I would probably neither particularly respect nor particularly disrespect this person.
   __I believe that I would probably not respect this person to a slight degree.
   __I believe that I would probably not respect this person.
   __I believe that I would probably not respect this person very much.

**Appendix C**

**Human Subjects Institutional Review Board (HSIRB) Approval Letter**

# WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date:   January 28, 2013

To:     Amy Naugle, Principal Investigator
        Matthew Jameson, Student Investigator for dissertation
        Lauren Borges, Student Investigator for thesis

From:   Christopher Cheatham, Ph.D., Vice Chair

Re:     HSIRB Project Number 13-01-04

This letter will serve as confirmation that your research project titled "The Effects of Two Different Mood Induction Tasks, With an Associated Evaluation of the Interpersonal Effectiveness of Three Different Request Forms" has been **approved** under the **full** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., *you must request a post approval change to enroll subjects beyond the number stated in your application under "Number of subjects you want to complete the study*)." Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

**Reapproval of the project is required if it extends beyond the termination date stated below.**

The Board wishes you success in the pursuit of your research goals.

**Approval Termination:   January 16, 2014**