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An analysis of the efficacy of extinction as an intervention in the modification of switching in patients with dissociation identity diorder

June Canaris

The University of San Francisco

An Analysis of the Efficacy of Extinction as an Intervention in the Modification of Switching in Patients with Dissociation Identity Disorder

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June Canaris — December 6, 2007
Candidate — Date

Dissertation Committee

Steven Zlutnick, Ph.D. — December 6, 2007
Chairperson

Joan Avis, Ph.D. — December 6., 2007

Sister Mary Peter Traviss, O.P. — December 6, 2007

UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

An Analysis of the Efficacy of Extinction as an Intervention in the Modification of Switching in Patients with Dissociative Identity Disorder

The paucity of scientific research on treatment interventions for the dissociative population is well recognized (Pope, Barry, Bodkin & Hudson, 2006; Putnam, 1997; Sar & Ross, 2006). The purpose of this study was to determine if the switching behavior that occurs exclusively in Dissociative Identity Disorder is reduced or eliminated by applying an extinction protocol.

Extinction has been used successfully to treat a wide variety of behavioral problems, including self injurious behavior in developmentally delayed children (Lang, 2003), bizarre vocalizations in paranoid schizophrenics (Liberman, Teigen, Patterson & Baker, 1973; Wilde, Masuda, O'Connor & Baham, 2001), and food refusal in underweight, normal and developmentally delayed toddlers (Lerman & Iwata, 1995, 1996).

The results of the present investigation replicated the successes found within the aforementioned studies by using an extinction protocol in a multiple-baseline design across three participants with Dissociation Identity Disorder. The switching behavior was operationalized by using the criteria outlined by Putnam (1989, 1997). Baseline was established by the researcher and an independent rater counting the number of switches over a 50-minute session. The extinction protocol was implemented when the switching

behavior showed a stable trend. During the intervention phase, the researcher and rater counted the number of switches over a 50-minute session. Substantial reductions in the switching behavior of two dissociative participants were realized and would likely have occurred with Participant 3 had the study not been terminated.

Behavioral markers identified by Greaves (1989), which are "precursor" events to final integration, were seen across the three participants with the implementation of this study's extinction protocol: co-presence, co-consciousness, internal dialogues, and negotiations between the alters. All three participants experienced an additional marker not identified by Greaves: "Catching one's self prior to switching" with the extinction intervention. In addition to the treatment technique's efficacy and scientific integrity, is its conceptual simplicity, uncomplicated implementation, cost-effectiveness, and no requirements for complex apparatus.

In conclusion, the findings of this study underline two significant facts: 1) the severity of the disorder is not incompatible with a parsimonious treatment approach and 2) evidence-based research tested the merits of the procedure, producing an efficacious treatment intervention.

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J. C.

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CHAPTER I

Introduction

The American Psychiatric Association (APA) established that pathological dissociation is manifested as a "disturbance or alteration in the normally integrated functions of identity, memory, or consciousness" (American Psychiatric Association, 2000, p. 477). Research on child maltreatment found that the dissociative etiology is often created with the early onset of severe and extended childhood abuse and neglect with a specific disruption in the parent-child attachment (Briere & Spinazzola, 2005; Kluft, 1985a; Ross, 1989; Simeon, Guralnik, Schmeidler, Sirof & Knetelska, 2001).

According to research in the study of dissociation, the dissociative experience can be described as degrees on a continuum (Butler, 2005; Steinberg & Schnall, 2000). Non-pathological, normative dissociation has been placed on one end of the dissociative continuum (Butler). Butler included daydreaming, fantasy, and absorption in everyday experiences as normative dissociation. Pathological, symptomatic dissociation, which includes the diagnostic category of Dissociative Identity Disorder (DID), has been placed on the opposite end of the dissociative continuum (Briere & Spinazzola, 2005).

Dissociation as a diagnosis remains contested and has generated considerable professional debate as to its authenticity as a bona fide diagnosis (Piper & Merskey, 2004; Spanos, 1994). One of the earlier authors of multiplicity, Ross (1989) pointed out that it was not until 1980 that the American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorder* (*DSM*) formally incorporated dissociation as part of the taxonomy of mental disorders. Unfortunately, prior to as well as after its inclusion, researchers had not conducted too many well designed experimental studies on the

dissociative phenomenon (Ellenberger, 1970; Putnam, 1997; Ross, 1989). In fact, research on dissociative individuals has been primarily anecdotal (Pope, Barry, Bodkin & Hudson, 2006) resulting in the present need for well designed empirical research (Putnam, 1997; Sar & Ross, 2006).

Sar and Ross (2006) have worked to advance the current state of dissociative research, which has lagged behind clinical practice. They maintain that studies conducted on the dissociative population have yet to produce an efficacious treatment protocol in the clinical setting. Others criticize the field of pharmacology for failing to offer medication to ameliorate the symptoms of DID (Barkin, Braun & Kluft, 1986; Hunter, 2004). Thus the need for psychotherapeutic treatment protocol should become a priority for research (Hornstein, 1993; Neborsky, 2003). Putnam (1997) asserts, "We need systematic research to assess treatment outcomes scientifically. This is expensive and requires a supportive clinical-research infrastructure" (p. 280). To this end, the objective of this study is to provide empirical research regarding the effectiveness of a treatment intervention for the dissociative population.

Problem Statement

Childhood maltreatment, which results in Dissociative Identity Disorder (DID), differs from single, short-term, albeit severe trauma, commonly known as Posttraumatic Stress Disorder (PTSD). Childhood abuse is set apart from this single episode event by the nature of the trauma that includes chronicity, the age of onset, and the relational context in which the trauma occurs (Scott, Wolfe & Wekerle, 2003). Research has well documented that the effects of childhood abuse, whether it is physical, sexual, emotional, or in combination, fractures and fragments normal integrated awareness (Braun & Sachs,

1985; Briere & Spinazzola, 2005; Coons, 1994; Kluft, 1985a; Simeon et al., 2001; Waller & Ross, 1997). A child simply does not have the internal resources to compensate for the overwhelming feelings produced by the early onset of chronic and severe trauma.

The etiology of the child-victim reveals indices of fear, rage, guilt, loss, and shame (Chu, 1998; Kluft, 1985a; Myers et al., 2002). These emotional markers are not only present, but also are often suppressed and deeply internalized. Traumatized children suffer from major depression and disabling anxiety, verbalize suicidal thoughts, inflict self-injuries, display sexual aggression, and create a fantasy world that is disconnected from reality (Briere et al., 2001; Sar & Ross, 2006). Coping strategies emerge, which include amnesiac barriers, fugue states, dissociative symptoms, and the formation of two or more distinct personalities (Ross, 1989; Sar & Ross, 2006). Such coping strategies are created as protective defenses against ongoing trauma. Sadly, these very strategies, which were created to cope with child abuse stunt normal psychological growth and development (Kluft, 1985b; Lonigan, Phillips & Richey, 2003; Putnam et al., 1986; Scott et al., 2003; Trickett, Reiffman, Horowitz & Putnam, 1997). Unless efficacious treatment takes place, this divided awareness continues into adulthood. The disruption of the personality remains splintered, profoundly impacting the adult's ability to cope and function well with each successive year (Briere & Spinazzola, 2005; Fine, 1999; Putnam et al., 1986; Ross et al., 1991).

Dissociative adults find daily tasks of living unmanageable due to the rift in personality causing well-defined personality fragmentations. A dissociative adult moves unpredictably from one personality state to the next with its own set of memories, idiosyncratic behaviors, agendas, lifestyle preferences, and mannerisms. Amnesiac

barriers separate one personality from another with little continuity of consciousness making reality vastly different for each personality (Frey-Richardson, 1998; Putnam, 1997). So, it follows that life skills and ego strength will vary across personality fragments or "alters". Competency for certain life responsibilities may fluctuate from one moment to the next depending on the competency of the alter that is present. Trauma cannot be processed or remembered without a more congruent psychologic foundation, which will not shift or falter (Turkus & Kahler, 2006).

The "primary" or "host" personality fragment is the more robust element of the DID internal schema (Braun, 1986). However, this faction of consciousness comes and goes capriciously, making daily life unpredictable and complex. "Switching" is the definition of the psychological mechanism that changes a dissociative individual from one state of consciousness to another. Putnam (1997) addresses this transition state, wherein the primary personality moves from one discrete set of variables to another personality with a different set of variables.

Another challenge is the management of the nature of the DID diagnosis that is a multi-faceted plurality of distinct and separate ego-states or personalities (Fraser, 2003). Each state of consciousness believes in its own separate existence, and relates to the outside world without the need of the co-existing personalities. Effective therapy recognizes and accepts the subjective reality of the dissociative's separate ego states. Kluft (2006), Coons (1986), and Fraser (1991; 2003) wrote that for many DID clients the switching of ego states is chaotic and uncontrolled. These authors further contend that management of the phenomenon of switching becomes the major impediment for most treating clinicians. Moreover, Putnam (1997) acknowledged that although the

mechanism of switching is universally recognized, there are no known studies that address this phenomenon. It is important to research empirically any treatment intervention that not only involves stabilizing the personality structure of the DID but also examines the mechanism and dynamics of switching from one alter to another alter.

Need for the Study

Child maltreatment has reached epidemic proportions with global implications. A notable DID researcher, van der Kolk (2003), wrote that child maltreatment is one of the most important public health issues in the world. Scott et al., (2003) in a conservative estimation projected that 10% to 25% of adults have been victims of multiple forms of childhood maltreatment. In the United States alone, childhood maltreatment has led to 1.62 deaths per 100,000 children. The U.S. Department of Health and Human Services (USDHHS) in partnership with all of the States collected annual statistics on the maltreatment of children from State-level child protective service (CPS) agencies. The outcome of the study resulted in the *Child Maltreatment 2004* report (USDHHS, Child Welfare Information Gateway, 2006). An estimated 872,000 children were determined to be victims of child abuse or neglect in 2004. The report claimed that the rate and number of children who reached the level of a CPS investigation increases each year. In 2001, the rate was 43.2 children per 100,000 resulting in an estimated 3,136,000 children who received CPS attention. In 2004, the rate increased to 47.8, consequentially increasing the CPS referrals to an estimated 3,503,000 children. Child fatalities are the most tragic consequence of maltreatment. In 2004, an estimated 1,490 children died due to abuse or neglect.

Besides the staggering number of children who are abused, Steinberg and Schnall (2000) reported that the actual hidden epidemic that arises from life-threatening childhood maltreatment is that of dissociation, and the subsequent dissociative diagnosis. Steinberg and Schnall gave a conservative estimate that dissociation will afflict 1% of the general population, or more than 2.5 million people. An earlier study by the National Institute of Mental Health (NIMH), in an analysis of 100 cases, found that 97% of dissociative subjects experienced childhood trauma (Putnam et al., 1986).

A study of 10,000 medical patients (Feletti et al., 1998) reported that persons with a history of childhood maltreatment showed a 4 to 12 times greater risk for developing alcoholism, depression, drug abuse, and suicide attempts. The study also revealed a 1.4 to 1.6 times greater risk for obesity, and a 1.6 to 2.9 times greater risk for ischemic heart disease, cancer, chronic lung disease, skeletal fractures, hepatitis, stroke, diabetes, and liver disease. This sample population had a 2 to 4 times greater risk of smoking and having at least 50 sexual partners making them high risk for accompanying sexually transmitted diseases.

Social Impact

Galbraith and Neubauer (2000) indicated that the DID group is more likely to use maximum disability benefits and pose higher underwriting risks than the normal population. In an earlier report prepared by the Critical Issues Committee (1994), Loewenstein spoke to the treatment costs that occurred with undiagnosed dissociation. He identified the considerable expenses, which are incurred from medical treatment of somatoform, psycho-physiological complaints, other emergency room treatments, inpatient hospitalizations due to suicidal and parasuicidal behaviors. In the age of

managed care, long term treatment for DID is not covered and after 20 sessions, treatment is no longer seen as a medical necessity (Haddock, 2001). With the aforementioned in mind, diagnostic accuracy combined with treatment efficacy would result in a reduction of treatment time and treatment expense (Loewenstein, 1994).

Global Phenomenon

As early as 1989, Ross addressed the cross cultural nature of DID, thereby suggesting that DID was not only a North American occurrence but also spanned divergent cultures and European countries: United Kingdom, Belgium, France, Germany, Spain, Norway, and Czechoslovakia. George Rhoades (2003 a, b) noted that at least 11 of the 25 culture-bound syndromes (e.g., amok, ataque, boufee delirante, etc.) listed in the American Psychiatric Association publication, *DSM-IV* (2000) involve dissociative symptoms. Culture-bound syndrome (CBS) is defined as recurrent, locality specific patterns of aberrant behaviors and troubling experiences that may or may not be linked to a particular DSM-IV diagnostic category (*DSM-IV,* 2000, p. 844). Malaysia, Latin America, China, the Arctic, Korea, North Africa, and the Middle East are some of the countries that are listed with culture-bound syndromes (Rhoades, 2005). Kon (1994) found Malaysian CBS in India, New Guinea, North America, and Britain. The presence of DID in Puerto Rico was initially noted in anecdotal case studies, which progressed to a qualitative confirmation of the DID diagnosis as a result of more sophisticated research methodologies (Lewis-Fernandez et al., 2002; Martinez-Taboas, 1991, 1995, 2005). Two studies revealed the presence of the DID in Japan (Berger, Onon, Nakajima & Suematsu, 1994; Hattori, 2005). Dissociation appears in research literature from the Philippines (Gingrich, 2005), New Zealand (Farrelly, Rudegeair & Rickard, 2005), and Australia

(Collins, 2005). Matthess, Hummel, Hofmann, and Dorr (2005) marked the development of research and therapy in the field of dissociation in the Germanic language area. Thus, trauma and dissociation are global occurrences with a far-reaching impact on numerous cultures and people.

Scientific Disinterest and Criticisms

Scientific interest in the study of the dissociative disorders has been found to be distinctly less when compared to other diagnoses in the *DSM-IV*. A systematic review of indexed publications involving dissociative amnesia and dissociative identity disorder listed between the years of 1984 and 2003 was conducted by Pope et al., (2006). The researchers ascertained the annual number of DID publications rose from low levels in the 1980s to a sharp peak in the mid 1990s, followed by an equally sharp decline to a mere one quarter of their peak levels by 2002 and 2003. All 25 comparison diagnoses showed a constant or steadily rising publication rate (e.g., schizophrenia, post traumatic stress).

Steinberg and Schnall (2000) stated that no other field of medicine has been so negatively impacted by misinformation, ignorance, and skepticism as has been the study and research of dissociation. The conceptualizing of multiple personalities within a single individual is troublesome and difficult to absorb. They theorized that the lack of dissociative research was created by its conceptual problems causing a vacuum in empirical studies. Piper and Merskey (2004) were outspoken skeptics of DID treatment, criticizing the cost, the questionable treatment protocol, and the prolonged length of time in therapy. They further claimed that the limited research that does exist on DID does not replicate popular treatment strategies, which are neither reliable nor valid.

Piper and Merskey's criticisms as well as Steinberg and Schnall's observations have relevance and application for the need for the current study. Well designed empirical research in the diagnostic and treatment field of dissociation is clearly needed in order to study a wider spectrum of the disorder. This research will contribute to an empirical approach to the treatment of DID.

Summary

In summary, childhood maltreatment creates the DID's consciousness that splinters in the early developmental years. The effect of splintering creates an adult who does not function within normal societal parameters. Steinberg and Schnall (2000) contended that dissociation is a defense that has gone awry. Daily functioning has crumbled wherein maintaining a relationship, employment, or financial stability becomes difficult. Descriptive research, historical review, meta-analysis, and anecdotal study are the primary sources for DID assessment criteria and treatment intervention techniques. There have been very few well-designed experimental studies of DID where scientific acumen has been implemented. As such, the use of extinction as an intervention with switching will be objectively and scientifically researched by this study. An efficacious treatment intervention would be a timely addition to the scientific body of information on DID.

Purpose of the Study

The research in the field of dissociation is underdeveloped (Finkelhor & Berliner 1995; Reeker et al., 1997; Stevenson, 1999). Notably, few studies examine the efficacy of experimentally controlled treatment interventions specific to the field of dissociation (Coons & Chu, 2000; Frey-Richardson, 1998; Putnam, 1997). After a review of multiple

databases between 1980 and 2003, Alin, Wathen, and MacMillan (2005) concluded that the majority of child DID treatment studies were not only ranked poor in their efficacy but also were few in number.

The purpose of this study is to: (a) investigate the use of extinction as a treatment intervention to modify the number of "switches" that a dissociative client experiences during a clinical hour and (b) contribute to the paucity of controlled research literature on the switching of the dissociative participant by using a multiple baseline experimental design across participants. The intention of this study is to examine the implementation of the extinction intervention applied when the dissociative participant switches from one alter to the next. It is anticipated that should the number of episodes of switching be reduced, it will allow the dissociative individual to maintain a more stable and integrated life.

Extinction is the independent variable in this study and is defined as a process by which the frequency of behavior decreases when a previously reinforced behavior is no longer followed by reinforcing consequences (Miltenberger, 1997). The dependent variable in this study is switching. Putnam (1989, 1997) defined switching as a transition state between alterations of consciousness in the dissociative patient. An abrupt change in consciousness identified by a change of state-defining variables distinguishes one personality from the next.

Overview of the Research

The focus of the study is the examination of extinction as a treatment intervention using a multiple baseline methodology across participants. The research will investigate whether extinction (i.e., the withholding of attention) from eliminates or lessens the

number of dissociative episodes during a clinical hour. The extinction intervention must be consistently applied over time to achieve the hypothesized reduction of switching behaviors that is the claim of the research. The results will be visually graphed thereby measuring the participant's response to the research's treatment intervention.

Dissociative episodes are indicated by the participant's switch from one discrete set of behaviors to the next discrete set of behaviors. Each discrete set represents an independent personality schema with disparate and distinct mannerisms, cognitive processes, agendas, and memories. Although Putnam (1989, 1997) has defined switching that can be applied generally to the research question, it proves to have its limitation for the purpose of this research. The dissociative displays a unique set of behaviors during switching which must be addressed in a more specific way than the general indicators defined by Putnam (1989, 1997). With this in mind, switching will be operationally defined for each research participant, independent of the general definition offered by Putnam.

Extinction was applied as a treatment intervention when the participant switched from the primary alter or the alter that entered the office. The claim or hypothesis behind the use of the extinction protocol is that when it is applied consistently, over time, the switching behavior of each participant should: (a) be ameliorated or reduced, and (b) insure a continuity of care with the returned alter. Competency, empowerment, and assertiveness should become evident as the participant realizes that the modification of the variable behavior that occurs with switching can be contained. The dissociative will no longer be rendered helpless by the non-volitional nature of a spontaneous dissociative episode.

Research Assumptions

The research assumptions are that when extinction is implemented across behaviors which are targeted to be modified (in this study, switching in a dissociative participant), a predictable response is anticipated and will serve as a treatment intervention. With the aforementioned in mind, the major research questions are:

Question 1: Will a treatment intervention using extinction for switching impact the number of switches in a clinical hour?

Question 2: On the subjective level, will the participant experience an increase in empowerment, competency, or control knowing that the intervention returns the participant to the primary alter in a defined way?

Theoretical Rationale

This section will critically explore the writer's justification for the use of extinction as the behavioral intervention in this study and switching the dependent variable that has been found to be problematic for the dissociative population as a whole. Behavioral analysis has shown that extinction is extremely effective ameliorating behavioral disorders across a plethora of psychiatric conditions and with this study generalizes it to the dissociative population. Research-based studies on extinction and switching are cited; however, it is to be noted that studies on the dissociative population with even a similar theoretical orientation as the current study are tangential and conspicuously non existent.

Independent variable

Extinction is a research-based behavioral intervention that may offer a treatment protocol that involves withholding the reinforcer that maintains target behavior, thus

disrupting the contingency between response and reinforcer (Catania, 1992; Iwata, Vollmer & Zarcone, 1990; Lerman & Iwata, 1995, 1996; Mace, Lalli & Lalli, 1991; Martin & Pear, 1992) ultimately reducing and eliminating unwanted behaviors in both adults and children. This point is well supported in the extensive review of the literature on Lesch-Nyhan syndrome (LNS) conducted by Olson and Houlihan (2000). LNS is a profoundly debilitating genetic disorder that can result in round the clock care. The neurological, cognitive processing, and hence behavior problems resulting in self injurious behaviors (SIB) hallmark this syndrome. Extinction when compared to other treatment interventions was found to be highly effective in reducing the frequency of behavioral disorders in both adults and children in the five studies that used extinction as the basis for behavior modification (Lerman & Iwata, 1996).

Extinction was found to be effective even within populations that were profoundly disturbed psychiatrically, behaviorally, and intellectually. Liberman, Teigen, Patterson, and Baker (1973) and an earlier study by Ayllon and Haughton (1964) found that delusional speech was decreased in paranoid schizophrenics by placing hospitalized schizophrenics on an extinction protocol. In a contemporary study, Wilder, Masuda, O'Connor, and Baham (2001) replicated the former studies and found that the bizarre vocalizations of a chronic undifferentiated schizophrenic were reduced when placed on extinction.

When compared to other behavioral interventions, extinction possessed the least restrictive, non-aversive, and moderately intrusive features (Foxx, 1982). However, on the other side of the coin, Durcharme and Van Houten (1994) identified two potential problems with extinction: 1) an extinction burst can occur, and 2) aberrant behavior

diminishes slowly. The literature search by Lerman and Iwata (1995) discovered that the criticisms of extinction were based on anecdotal claims rather than empirically designed studies. In an analysis of 113 sets of extinction data, bursting occurred in 24% of the cases. As such, Cooper, Heron and Heward (1987) believed that the procedure is not definitively associated with a temporary increase in the frequency, intensity, or duration of the target response (extinction burst).

With a conventional population, similar results were shown when extinction was applied to infant and pacifier withdrawal (Schloss & Johann, 1982), with children and bedtime thumb-sucking (Knight & McKenzie, 1974), and adults with deviant behaviors in drug abuse treatment program (Gotestam, Melin & Ost, 1976). Bedtime sleeping problems were significantly reduced by using extinction with a 7-month old female infant (Chadez & Nurius, 1987). At the end of the 47-day study, the infant was sleeping in her own bed 90% of the time. Didden, DeMoor, and Kruit (1999) found that with the implementation of extinction, the excessive nighttime crying of a 2.5 year old male ceased after three nights.

Dependent variable

Switching is the target behavior that will be examined in this study. Switching is the mechanism that is an indicator of the dissociative moving from one state of consciousness to another (Putnam, 1989, 1997) and defined as the transition state of one set of behavioral variables to another set. Putnam (1989) developed behavioral criteria that characterized switching with the following indicators: 1) facial changes, 2) posture and motor changes, 3) voice and speech changes, 4) dress and grooming changes, 5) blinking or fluttering of the eyelids, 6) grounding gestures (e.g., touching of the arms of

the chair or cushions of the sofa), 7) affect changes, 8) thought process changes, 9) communication difficulties, 10) behavioral age changes, and 10) somatic symptoms (e.g., headaches).

After switching has occurred, the dissociative individual experiences logistical as well as psychological problems. Fugue states, amnesia, disorientation, diminished cognitive ability, incompetence, and immaturity can occur singularly or collectively when switching moves the dissociative patient from one alter to the next (APA, 2000). When a switch takes place, daily functioning of the dissociative individual may deteriorate markedly becoming inappropriate or life threatening. As an example, an adult alter, which changes to a younger alter may pose a threat to self or others should a change occur when operating a vehicle or caring for a child.

Further exemplifying the need to research and reduce switching in the DID is the pragmatic and logistical concerns, which arise in a therapeutic setting when a DID dissociates during the clinical hour. Professional tasks are lost behind the amnesiac barriers that separate one alter from the next such as appointment scheduling, payment of fees, homework assignments, or other bookkeeping responsibilities. Ethical issues arise for the therapist should the alter leaving the therapist's office become incapable of driving either from somatic problems (e.g., poor sight) or from age regression (e.g., 5 year-old). Continuity of care and therapeutic efficacy is hypothesized to increase if the alter entering the office is the same alter present during treatment and then later is the same alter that leaves. Understanding switching and to a certain degree, reducing or controlling the phenomenon of switching, becomes pivotal to the clinician treating this disorder.

CHAPTER II

Literature Review

The review of the literature draws upon a variety of areas: definition of terms, historical writings, and psychological research. Dissociative research has created a language that is specific and distinct to its etiology. Definitions of dissociative terms construct a common paradigm for the understanding of classical and contemporary ideas on dissociation. The brief examination of the historical writings on dissociation contextualizes the foundation and chronicling of DID psychopathology. Early studies in the area generally concluded that the research prior to 1982 was anecdotal (Boor & Coons, 1983; Fagan & McMahon, 1984; Kluft, 1984a). The remainder of the chapter that follows critically reviews contemporary literature regarding dissociation. Chu (1998) and Frey-Richardson (1998) pointed out that contemporary studies still have design flaws and are lacking in empiricism. The review concludes with a summary and critique of existing literature, followed by a discussion of the specific research questions, and a hypothesis suggested by the review and examined in this dissertation.

Definition of terms

The following definitions serve as a model from which to form a construct to understand the internal etiology of the dissociative. The definitions are unique to the psychopathology created exclusively by severe childhood trauma (Ross, Ellason & Anderson, 1995).

Abreaction

Abreaction is the emotional release or discharge that occurs after recalling a painful experience that has been repressed because it was intolerable. A therapeutic

effect sometimes is a result of this partial discharge or desensitization of the painful emotions and increased insight (American Psychiatric Association, 1988).

Alter

Alter is an abbreviated term for alternate personality. Alters are dissociated parts of the self that contain memories, emotions, and ways of relating. They are able to function independently from each other and are also referred to as "parts" because they are parts of the individual's overall personality (Haddock, 2001, p. 6). Putnam (1989) presents a more technical definition. The alter is the core feature of the DID. These highly discrete states of consciousness are organized around a prevailing affect and sense-of-self with a limited repertoire of behaviors and a web of state-dependent memories. At any one time, this state of consciousness will come forward controlling the individual's behavior, but is not a separate person.

Amnesia

Amnesia as it relates to dissociation is the pathologic loss of memory, a phenomenon in which an area of experience becomes inaccessible to conscious recall. In the DID, it is primarily emotional and limited to a sharply circumscribed period of time and is not found across all alters (APA, 1988).

Co-consciousness

Co-consciousness is the awareness by one alter of the experience of other alters within the internal system of an individual with DID (Haddock, 2001, p. 6). Braun (1986) in an earlier definition defines co-consciousness as the state of being aware of the thoughts or consciousness of another personality with or without co-presence and with or

without the influence of one upon another.

Co-presence

This is the presence of several or more alters having a consciousness at the same time. This is a clear sign that the initial relative isolation of the alters is changing. This is considered a precursor to integration (Greaves, 1989).

Dissociation Identity Disorder

The following four diagnostic categories must exist for the DID diagnosis:

(a) the presence of two or more distinct identities or personality state (each with its own relative enduring pattern of perceiving, relating to, and thinking about the environment and self),

(b) at least two of those identities takes control of the person's behavior,

(c) inability to recall important personal information that is too extensive to be explained by ordinary forgetfulness, and

(d) the disturbance is not due to the direct physiological effects of a substance (e.g. blackout or chaotic behavior during Alcohol Intoxication) or a general medical condition (e.g. complex partial seizure). **Note:** In children, the symptoms are not attributable to imaginary playmates or other fantasy play *(DSM-IV-TR*, 2000, p. 484)

Extinction

Operant extinction is the process by which, when a previously reinforced behavior is no longer followed by the reinforcing consequences, the frequency of the behavior decreases in the future (Miltenberger, 1998, p. 562).

False Memory

A term coined by the False Memory Syndrome Foundation to describe memories that they believe are not based on actual events. This concept has no clinical research supporting this memory label.

Flashbacks

Intrusive thoughts, feelings, or images associated with past traumas that suddenly enter into consciousness. Flashbacks often cause a person to feel as though he or she is reliving a traumatic event (Haddock, 2001, p. 6).

Fragment

A part of the self that has very special purpose or role and does not operate beyond the scope of the role (Haddock, 2001, p. 6). Braun (1986) believed that a fragment has a consistent and ongoing set of response patterns to a given stimuli and either a significant history or a range of emotions or affect but usually not both to the same degree.

Fusion

Two alters coming together to form a single state. This state is temporary and not to be confused with integration, but allows the alters to work co-operatively (Haddock, 2001, p. 7).

Integration

Integration is bringing together or unifying all of the separate thought processes, consciousnesses, fragments, or alters, and maintaining them as one. It is usually the stated treatment goal for most therapists (Braun, 1986; Haddock, 2001; Ross, 1989).

Internal homicide

Internal homicide is a suicide attempt, in which one alter attempts to kill another alter. The alter attempting to murder another alter always fails to grasp the obvious fact that if the attempt is successful, the first alter too will die, too (Putnam 1989, p. 287).

Original Personality

The part of the personality system that develops first after birth and splits off or remains separate from the flow of the rest of the thought processes. The original personality is often difficult to locate and work with, but it is essential that this work is done to achieve a stable and lasting integration (Braun, 1986).

Presenting Personality

The part of the dissociative that is the initial entity or alter that enters the therapeutic room. The presenting personality maybe the original personality, the host personality, or a fragment (Braun, 1986).

Splitting

Splitting is the creation of a new entity (alter) by the coalescing of energy or consciousness, into a separate personality fragment (Braun, 1986).

System

A term describing all parts of the self in DID. This is a way of framing various parts as a whole as opposed to literal individual personalities (Haddock, 2001, p. 7).

Trigger

Something or someone that reminds a DID of past trauma, whether or not the DID is aware of the connection between the two. Triggers can include such things as people, odors, events, and objects (Haddock, 2001, p. 7).

Historical Review

Ellenberger (1970) and more recently Ross (1989) offer historical references on the commonplace acceptance of multiplicity. According to Ellenberger, one of the earliest indicators of dissociation was the ancient practice of demonic possession and exorcism. The disorganized conduct of the dissociation can be traced to trance states and spirit possession in the rituals of the earlier and more primitive societies. Ross (1989) exampled dissociative constructs with the story of Osiris from Egyptian mythology (86 BC): (a) initial unity, pre-trauma, (b) fragmentation from trauma, (c) healing by loving hands (therapy), and (d) full integration leading to a rebirth or new beginning.

In the early years of dynamic psychiatry (1775-1900), classical case studies that were published were those of "dual personality" (Ellenberger, 1970). Three of the well-known case studies from that period were Miss Beauchamp, who was a patient of Morton Prince, Despine's patient, Estelle (1836), and the famous case of Anna O. (Breuer & Freud, 1895/1999). The literature of Stevenson, Dostoevsky, and Poe offer literary interpretations of man's dual nature (Ellenberger, 1970; Putnam, 1989; Ross, 1989). These notable authors explored the conflict of good and evil within their protagonists. This concept expanded from allegorical curiosity to literal transformation in Stevenson's *The Strange Case of Dr. Jekyll and Mr. Hyde* (Ellenberger, 1970). Dostoevsky addressed a similar phenomenon in *Dvoinik* (*The Double*) wherein a man struggles with two sides of his personality, the psychotic part and the rational part (Ellenberger, 1970). Poe's infamous "William Wilson" was a first-person narrative wherein the central figure's multiplicity was concealed until his last dying moment when the central figure realized that the well planned murder was in truth his own suicide (Ellenberger, 1970).

Independent of each other, both Rosenbaum (1980) and Ellenberger (1970) reached similar conclusions regarding the rise and fall of interest in dissociation. Rosenbaum reviewed the *Index Medicus*, focusing on the proportion of dissociative cases against schizophrenic cases. He concluded that between the years 1914 and 1926, the literature review revealed a proportionally higher number of dissociative cases than schizophrenic cases. Correspondingly after 1927, the number of schizophrenic cases increased whereas the number of dissociative cases decreased. Rosenbaum found that DID vanished from empirical study until 1980. He believed that the decline in DID cases in the literature was due to the increased recognition of schizophrenia. Ellenberger presented a comprehensive picture of dynamic psychiatry which provided an overview of DID throughout history. Ellenberger concurred with Rosenbaum, but cited that the correlation existed between the ebbing of demonic possession references, and the psychiatric community's rising acknowledgement of DID.

The British historian, James Froude (1905) wrote about the importance of studying and understanding the role of history and its importance to the present. He created a metaphoric insight that is applicable to the historical context of dissociation, "First, it [history] is a voice forever sounding across the centuries…" (pp. 27-28). In a similar manner, the voice of dissociation resonates enduringly and persistently from the past into the present

Contemporary Review

This review of the literature will explore and critique the therapeutic work with the dissociative population. It is critical to articulate these approaches in order to form a comprehensive perspective. A prominent researcher and prolific publisher, Kazdin

(1998) indicated that few research studies regarding treatment and treatment outcomes across all psychopathologies have been empirically conducted. More recent, Kazdin (2006) acknowledged that there is a long-standing hiatus between research and clinical practice with reconciling research data and the psychotherapeutic domain. Huppert, Fabbro, and Barlow (2006) recognized that additional evidenced based psychotherapy needs to be developed, which focuses on the clinical utility of treatment interventions for all psychopathological diagnoses due to the paucity of research. More specific to early child sexual abuse, Cloitre, Cohen, Koenen, and Han (2002), Frey-Richardson (1998), and Putnam (1994) noted that the dissociative disorder lacked well researched treatment interventions. Earlier reviewers (Beutler, Williams & Zetzer, 1994; Finkelhor & Berliner, 1995; O'Donahue & Elliot, 1992) noted that the sexual abuse-treatment outcome literature showed methodological weaknesses making assessment of treatment efficacy difficult.

Anecdotal Articles Regarding the Stages of Treatment

Herman (1992), an early pioneer in the treatment of DID, contended that the treatment protocol for the traumatized should contain the following three stages: 1) establishment of safety for the victim, 2) remembrance and mourning, and 3) reconnection with ordinary life. Several years later, Boon (1997) modified Herman's model with the following three stages: 1) stabilization and symptom reduction, 2) treatment of traumatic memories, and 3) integration and rehabilitation. Boon evaluated each DID client to determine whether it was appropriate to make a transition from Phase I (stabilization and symptom reduction) to Phase II (the treatment of traumatic memories). In some cases, she believed that treatment focusing on stabilization is the

only feasible option. Boon wrote that a considerable group of patients were unable to bear an intensive treatment protocol geared towards the treatment of traumatic memories with the ultimate goal being integration. The key supposition of Boon's premise, the intensive treatment of memories, may not be therapeutically necessary for successful integration and thus, her premise would need experimental research with an empirical finding of fact to support it.

Clinicians in the field of trauma research created similar schemas for DID treatment. Kluft (1993) outlined phases, steps, and issues of treatment for dissociative patients in Table 1 that were developed by Braun (1986), Putnam (1989), and Kluft (1991c). Kluft (1993) indicated that all three models overlapped at many stages in their treatment models. Kluft (1993) labeled these models as conceptualizations that share a mutual awareness of the vulnerability and crisis-proneness of the dissociative who are "sensitive to the stress that the treatment will impose upon the patient as a whole, and upon the alter system" (p. 146).

Table 1

Outlines of phases, steps, and issues in the treatment of MPD

Braun, 1986	Putnam, 1989	Kluft, 1991c
1. Developing trust	1. Making the Dx	1. Establishing the Rx
2. Making and sharing Dx	2. Initial interventions	2. Preliminary intervention
3. Communicating with each personality	3. Initial stabilizations	3. Hx gathering and mapping
4. Acceptance of Dx	4. Metabolism of trauma	4. Contracting
5. Gathering Hx	5. Development of communication and cooperation	5. Moving toward integration/resolution
6. Working with each personality communication	6. Metabolism of the trauma	6. Integration/ resolution
7. Special procedures	7. Resolution and integration	7. Learning new coping skills
8. Developing interpersonality communication	8. Development of post-resolution coping skills	8. Solidification of gains and working through

9. Achieving resolution/integration	9. Follow-up
10. Developing new behaviors and coping skills	
11. Networking and using social support systems	
12. Solidifying gains	
13. Follow-up	

Haugaard (2004) wrote about treatment interventions that involve children who experience dissociative symptoms or disorders. Haugaard's intervention strategy was to reduce the child's use of dissociation (e.g., switching). Silberg (2000) concurred that the goal of dissociative treatment is to reduce the patient's use of dissociation. Haugaard listed a four step process to therapeutic intervention: 1) provide a safe environment, 2) explore the use of the child's dissociation, 3) establish a partnership between the therapist and child, and 4) ask the child the reasons for the dissociation and the process under which dissociation occurred. After establishing a partnership with the child, Haugaard suggested that the clinician take an action when the child would begin to dissociate (e.g., touching him or her; calling his or her name; stating, 'I think you are drifting away') (p. 151). Haugaard's treatment intervention parallels this study's objective, which is a reduction or an elimination of the incidences of switching in dissociative individuals. However, Haugaard's treatment strategy along with the other leading protocols (e.g., Braun, 1986; Kluft, 1991c; Putnam, 1989) while complex, lack the experimental support that the present study offers.

Descriptive Research

Previous approaches of the dissociative treatment intervention techniques employed in clinical and hospital settings entailed a preponderance of anecdotal, descriptive, and narrative case studies. In an early study involving treatment

interventions and dissociation, Anderson and Ross (1988) discussed anecdotal treatment strategies in a hospital setting based on a multidisciplinary approach. According to the authors, gaining the patient's trust and ensuring the patient's safety were the critical issues in treatment effectiveness. They also emphasized the need for ongoing assessment throughout the patient's hospitalization. Several years later, Allers and Golson (1994) examined these same concepts from an Adlerian perspective. These researchers found from a subjective analysis that building trust, understanding the clients' lifestyles, and facilitating co-existence of the alter was the corner stone to effective treatment with a dissociative client.

Fraser (1991, 2003) developed a treatment strategy, the "Dissociative Table Technique" for assessing and working with the ego states or alters of the dissociative client. The technique utilized the image of a table in a safe room with chairs for each alter or ego-state. Each alter takes a seat at the table from which a dialogue can begin between therapist and the client's alters. At the table, other techniques can be used: a) the spotlight technique, b) the mediator technique, c) "switching headaches" ameliorated by guided imagery, d) the screen strategy to share specific historical information, e) the Internal Self Healer (ISH) component to healing, f) the changing room technique to developmentally mature an alter, g) fusion and partial temporary fusion techniques. Regrettably, Fraser did not define these techniques or define the procedures needed for their implementation. He further claimed that the "table technique" proved itself useful for accessing and managing the alters of the DID, though empirical data were not included to support his assertion.

A research article on treatment techniques by Allers, White, and Mullis (1997) implemented a five step treatment model to treat a dissociative adolescent with HIV. The following treatment interventions were used: a) identification of the unconsciousness dissociative behaviors, b) identification of the conditions under which the patient was most likely to dissociate, c) introduction of relaxation techniques to facilitate self-control, and d) remembering and releasing of sexual and physical trauma. Since methodology was absent in the research design, the authors' conclusions were not persuasive in regard to the implemented techniques, which purported efficacy in reducing dissociative episodes. The definitions of observable, physical events, or behaviors for the treatment interventions were missing in their article.

Another descriptive commentary about treatment efficacy is contained in Waiess' (2006) article about her psychoanalytic treatment of dissociation. The first aspect of her treatment protocol was a treatment intervention to be implemented by all in-patient staff with the dissociative in-patient population. Staff were instructed not to call the dissociative by different names when the dissociative would switch from one alter to another. The author claimed that her five patients did not display unwanted behaviors observed on other units, interacted with other patients, had short hospital stays, and with one exception did not injure themselves. The intent of Waiess was to present an anecdotal commentary on a technique that hospital staff employed on Waiess' DID patients. Although not acknowledged by Waiess, this technique presumably operated under the conditions of differential reinforcement wherein the dysfunctional behavior is ignored (extinction) and positive behavior is rewarded (reinforcement).

Ogden, Pain, and Fisher (2006) presented a sensorimotor approach to the treatment of dissociation. Unlike traditional talk-therapy that focuses on the verbal description of the trauma events (Brewin & Holmes, 2003), the sensorimotor focus is trained on the repetitive, uninvited, physical sensations of hyperarousal and hypoarousal coupled with movement inhibitions. The article focused on narrative and descriptive delimitations. More critically, the study failed to the meet the criteria for an empirically based treatment intervention.

Loewenstein (2006) and Kluft (2006) presented in their two respective articles narrative descriptions of treatment techniques and treatment rationale based primarily on their theoretical orientation (psychodynamic). In the former article, Loewenstein described how themes presented by the dissociative patient in the initial stages of consultation can later become the framework for the successful stabilization of the DID patient. In the latter article, Kluft (2006) comprehensively justified the need to work with the individual alters of the dissociative patient. With this approach, he believed his patients uniformly stabilized with their condition much improved. Both articles outlined and described the rationale but not the methodology in the treatment of dissociation that has been used as the gold standard for the International Society for the Study of Dissociation (2000).

Turkus and Kahler (2006) presented a theoretical approach for the treatment of DID. From the onset, the authors admitted that their treatment tactics were “Based on years of experience working with this population (dissociative)…” (pp. 245-263). Like the Loewenstein (2006) and Kluft (2006) articles, they believed that the treatment orientation for DID patients required a psychodynamic focus in order to recognize the

devastating effects of past trauma and thus establish a therapeutic rapport. They further wrote that when skill-building is introduced in the beginning of therapy, automatic dissociative responses are disabled. The skills that are taught are: psychoeducation, pacing and containment, grounding skills, talking through an internal conflict, internal meetings, traumatic reenactment, safety planning, creating an internal healing place, journaling, and art therapy. This study shared a common orientation with the aforementioned DID researchers wherein the patient must "remain in the present" for therapy to be fruitful (p. 245). The weakness of this article was its failure to provide methodology, experimental controls, and measureable results.

A second skill building treatment approach for dual diagnosed eating disorder patients with DID in an in-patient hospital setting was described by Levin and Spauster (1994). The goal of the hospital's treatment plan for their dissociative population was to decrease episodes of dissociation. The article presented a multi-disciplinary approach to ameliorate dissociative symptomology. DID patients recorded their thoughts and feelings as they were linked to a stressful life situations. Management of dissociative episodes, hierarchical desensitization for feared food, cognitive restructuring, impulse control techniques, assertiveness training, and anger management procedures were key components used by the in-patient therapists in the hospital setting. The procedures and behavioral definitions for the treatment techniques were not described in sufficient detail to replicate the study or understand the study's findings.

Studies with experimental design problems

Design problems are significant in dissociative research. These problems were identified by Bailey (1991) and include the following points: 1) inadequate description

of the procedures making the replication of the research difficult, 2) lack of operationalizing either the independent or dependent variables, 3) imprecise and inadequate definition of the terms used within the research articles, which impedes the understanding of the procedures, 4) insufficient experimental evidence with a lack of appropriate control measures, 5) human research issues missing or not discussed, which are legal and ethical in nature, and 6) discussion of the research does not integrate or interpret the results and does not relate them to previous research.

In a later study, Lanktree and Briere (1995) examined the use of abuse-focused and symptom change in 105 sexually abused children. The researchers indicated the following results: (a) a decrease occurred in the dissociative subset from the Trauma Symptom Checklist for Children (TSCC) during the first three months (no substantial decrease thereafter), (b) significantly higher dissociative scores occurred in children who had not begun therapy within a short period of time after the abuse was reported, (c) a positive correlation occurred between improvement in dissociative scores and legal charges filed against the perpetrators. However, as in the former study, significant design problems were noted in this study. Problems in the methodology included: 1) a lack of a control group for the treatment phase, 2) a lack of uniformity for its treatment modality, 3) a lack of description of the therapists' theoretical orientation, and 4) the treatment modality that was implemented was never identified in the research report.

In a study with partial scientific analysis, Ellason and Ross (1997) conducted a two-year follow-up study of former patients of an inpatient unit with DID. The follow-up re-assessed 54 of the initial 135 patients (no mention was made of the 81 patients not include in follow-up) with the initial pre-hospitalization instruments, the Dissociative

Experiences Scale (Bernstein & Putnam, 1986) and the Dissociative Disorders Interview Schedule (Ross, Miller, Reagor, et al., 1990). The results showed marked improvement in mood, anxiety, dissociative symptoms, and somatization with a significant reduction in the need for psychotropic medication. Those patients treated to integration were significantly more improved than those who had not yet reached integration. The authors purported that few methodological problems existed; however, the authors failed to provide an adequate explanation of the procedures and measure that they employed. Data from the analysis do not speak to the specific issues of treatment modality, treatment frequency, and treatment continuity as well as a lack of a control group anchoring the results.

Kellett (2005) using a single case experimental design evaluated the efficacy of Cognitive Analytic Therapy (CAT) with one dissociative participant. Kellet used an AB pre-experimental design to measure the frequency scores in the following four areas of the Dissociation Experience Scale (DES): 1) state depersonalization, 2) state identity confusion, 3) identity alteration, and 4) identity awareness. Data were collected for 378 continuous days. Kellet concluded that the experimental research using CAT as an intervention reduced the intensity of state dissociation in his dissociative participant. Unfortunately, the procedures, the measures, and the analysis were not described or operationalized in detail for a replication study.

An outcome study (Gantt & Tinnin, 2007) combined empirical methodology with hypnosis, art therapy, and video therapy. The research protocol employed testing of data gathered on 72 patients (50 diagnosed with dissociative symptomology and 22 diagnosed with PTSD) assessing the efficacy of a 1 or 2 week out-patient intensive program for

PTSD and DID patients. The implication of the findings uncovered a fact that was counter to the prevailing opinion of the International Society of the Study of Dissociation Guidelines (2000): DID patients do not need 3 to7 days between appointments to assimilate material uncovered in therapy. Instead, the research outcome pointed to the feasibility of a more efficacious time-limited approach to trauma work. The recovery criteria required a Dissociative Experience Scale (DES) of less than 20. Forty-five percent of the participants met the criteria for recovery, 44% were improved, 8% were unchanged, and 3% were worse. The authors indicated that there were limitations to the study, which included the lack of randomly assigning patients to comparable treatment protocols, the self-report measures, prior treatment, and larger controlled studies with a longer follow-up. Additionally, the procedures used in this study were not described in sufficient detail to replicate the study or to analyze the results.

Family contributions

Several anecdotal studies reviewed the part in which the dissociative's family were involved in the treatment of the DID patient. Albini and Pease, (1989), Dell and Eisenhower (1990), and Tyson (1992) have all suggested that by creating a cohesive family dynamic that is supported by psychotherapy, directly increased the unity of consciousness in the DID's fragment personality system, but no data were included to maintain their suppositions.

Albini and Pease (1989), in an anecdotal study, wrote that a positive treatment outcome occurred with the early onset of treatment including empathic mothering, separation from the abuser, and identification of dissociative symptoms. Since the

procedures were not sufficiently described, problems occur with understanding and replicating the implementation of their therapeutic model.

In two separate studies (Dell & Eisenhower, 1990; Tyson, 1992), the researchers concurred that a successful treatment outcome depended on either the presence of family therapy, or the presence of a parental counseling component. Dell and Eisenhower elaborated further that treatment failure happened 46% of the time, if ongoing abuse was occurring in the home. Tyson rated treatment failure at 83% when children dropped out of therapy for the following three reasons: 1) the family's lack of co-operation, 2) the family's lack of support, or 3) the family's lack of consistency in attending the therapy sessions.

Family Connections, a West Baltimore outreach program, participated in an empirically designed project funded by the United States Department of Health and Human Services (DePanfilis, 2002). The study, which looked at the inclusion of the family system and its efficacy when included in treatment, involved 154 families. Each family underwent an individualized assessment, community outreach, tailored interventions, helping alliances, empowerment approaches, strengths perspective, cultural competence, developmental appropriateness, and outcome-driven service plans. Individualized interventions were geared to increase protective factors and decrease risk factors. The data were analyzed by using the analysis of variance (ANOVA) and the intent-to-treat (ITT) analysis at baseline, case closing, and 6 months following case closing. The project showed a small but significant improvement in child welfare when the families who were considered high-risk were involved in the treatment. However, the procedures, the measures, and the results were not described in any detail.

Pharmaceutical interventions

The use of pharmaceuticals used as a therapeutic intervention was also evaluated for their efficacy in the treatment of dissociation and PTSD. Outcome studies for both psychotherapy (Rothbaum, Meadows, Resick & Foy, 2000) and pharmacotherapy (Friedman, Davidson, Mellman & Southwick, 2000) concluded that symptom reduction associated with psychotherapeutic interventions were considerably higher than those found with pharmacological interventions. The results from a treatment study by Briere and Scott (2006) indicated that psychoactive medication, although sometimes necessary, is rarely adequate as an intervention that stands alone for the amelioration of the symptoms produced by PTSD or other trauma-related events (p. 195). Hornstein (1993) believed that prior to the administration of any medication for dissociation, therapy should be the first line of attack. In an earlier study, Barkin, Braun, and Kluft (1986) reported that both adults and children with a dissociative disorder did not respond to medications in any consistent or predictable manner.

(Cognitive) Behavioral and Behavioral Approaches to the Treatment of Seriously Disturbed Psychiatric Population

Schizophrenic populations.

Substantial evidence links early traumatic events to severe and debilitating adult psychopathology with psychotic features (Beck & Van Der Kolk, 1987; Bushnell, Wells & Oakley-Brown, 1992; Fergusson, Horwood & Lynskey, 1996; Lange, Kooiman, Huberts & Van Oostendorp, 1987; Whitfield, Dube & Felitti, 2000). Read and Argyle (1999) in an in-patient study found one or more of the characteristic symptoms for schizophrenia in the following percentages: 1) 75% for those who suffered child physical

abuse, 2) 76% for those that suffered child sexual abuse, and 3) 100% for those that were subjected to incest in childhood. Honig, Romme, Ensink, Escher, Pennings, and Devries (1998) found that the onset of auditory hallucinations was preceded by a traumatic event or an event that activated the memory of earlier trauma (p. 646). Hence, the following studies on the schizophrenic population are relevant in the expanded review of the literature since there is a robust correlation between abuse, psychosis, and the efficacy of the extinction protocol.

Ayllon and Michael (1959) conducted a pre-experimental study of the effectiveness of withholding a presumed reinforcer for bizarre speech. In this case study, problem behaviors of a chronic psychotic patient were selected, operationalized, and then measured. Nurses on a psychiatric unit were taught to ignore a client's psychotic talk (i.e., an extinction protocol). Withholding attention was followed by a steady decline in bizarre statements from this patient. This was later expanded into a similar study by Ayllon and Haughton (1964). They found that by using contingent attention, approval, and tangible reinforcers, delusional talk in a paranoid schizophrenic increased and then decreased. Observations made by the 21 nurses affirmed that a parallel existed between rational talk being reinforced and delusional talked being ignored. What is operative in this study is DRO or the differential reinforcement of other behavior (i.e., a combination of extinction for inappropriate behavior, and reinforcement for an incompatible appropriate behavior).

Liberman, Teigen, Patterson, and Baker (1973) replicated the former study by Ayllon and Haughton (1964) with better reliability correlating contingent reinforcement with non-delusional talk. In their study with three paranoid schizophrenics within a

hospital setting, delusional talk was ignored with all conversation being terminated between patient and nurse. With this extinction procedure, rational talk increased 3 times from its former amount. A second study using extinction upon the bizarre speech of 29-year old woman with mild mental retardation and schizophrenia were analyzed (Mace, Webb, Sharkey, Mattson & Rosen, 1988). They found that by ignoring bizarre vocalizations (extinction protocol) coupled with guided compliance and contingent attention that appropriate speech increased. This treatment effect generalized to direct-care staff interactions and to her residential setting.

A more contemporary study by Wilder, Masuda, O'Connor, and Baham (2001) replicated the previous Liberman, et al. study (1973), which expanded the research literature on extinction. Their study examined the effects of extinction and contingent reinforcement on the bizarre vocalizations of a chronic undifferentiated schizophrenic. A functional analysis concluded that hallucinatory speech was maintained by attention. Conversely when hallucinatory speech was ignored, bizarre vocalizations were reduced.

Developmentally delayed population.

The versatility of the implementation of the extinction protocol also extends to those who are profoundly compromised intellectually. Commonly, children with intellectual deficiencies have difficulty sleeping (Bramble, 1997: Richdale, Gavidia-Payne, Francis & Cotton, 2000). Using a multiple baseline design across subjects, Thackeray and Richdale (2002) used extinction to successfully treat sleep problems with three intellectually disabled boys, ranging between 5 and 10 years old. The study was limited to 10 weeks. The design incorporated fixed length phases with three weeks of baseline, two weeks of intervention, two weeks post-intervention, a review session, and

one week follow-up at 3 months. Sleep behavior was measured by using sleep diaries and actigraphy, which was not explained or defined. Parents were taught basic principles of reinforcement, instruction giving, partner support strategies, bedtime routine, and standard extinction procedure. During intervention, they were instructed to ignore attention-based behaviors which occurred after lights were out unless the child was ill. If the child got out of bed they were coached to take him back to bed without making eye-contact or talking while remaining calm and not saying anything to him. An extinction burst did occur to a significant degree in Child 1 and Child 2. Two of the participants from post-intervention through follow-up achieved all treatment goals sleeping throughout the night. The third participant's "awake-time" was decreased to once each night.

Food refusal has been found to be a common denominator with developmentally delayed populations (Luiselli, 1994). Using a multiple baseline across mealtimes (i.e., breakfast and lunch), O'Reilly and Lancioni (2001) conducted a food refusal study with a 4 year old female child with Williams syndrome, (e.g., a genetic condition not limited to any one population, which is manifested by medical and developmental problems). The research protocol employed an escape-extinction with differential reinforcement, which was a home-based study that included the child's mother as a therapist-researcher. During intervention, the mother was trained to ignore all aberrant behavior (i.e., throwing food on the floor, screaming, leaving the table before the end of the meal) at mealtime. If the child attempted to leave the table during the meal, the mother placed her back into her seat.

Specific verbal praise was delivered after each bite of food was consumed. The

dependent variables (bites of food) were measured during baseline until visible stability occurred. Intervention was implemented during breakfast, while baseline continued during lunch. Subsequently, intervention continued and was introduced during lunch. All meals were recorded using a video camera and reviewed by two raters (the author and a second rater). Over a four-week period, aberrant behavior declined, appropriate eating increased immediately, and more gradual improvements observed later.

In an earlier study by Didden, Seys, and Schouwink (1999), a chronic food refusal problem of a 19-month toddler who was developmentally delayed was the subject of a research project. The toddler was at-risk for severe malnutrition and death from starvation. At the pre-test stage, the child was being fed using a gastrostomic tube. The aim of the treatment was to establish oral acceptance of warm pureed food. They used a multi-component treatment package, which included: escape-avoidance extinction, praise, and an extinction technique. Data were collected using an AB-design with baseline probes during treatment and follow-up. The treatment consisted of: (a) extinction of negatively reinforce food refusal, (b) positive reinforcement of food acceptance, and (c) shaping. During treatment phase A through E, the toddler was positioned on the lap of the therapist or one of the parents. During phases F and G, she was seated in the highchair. Certain phases were defined with differing food types (i.e., Phase A: different types of custard; Phase B: different types of ground fruit; Phase D: porridge; Phase F: pureed baby food). In three of the phases (C, E & G), the food choices were generalized to the home setting. By the end of the research, treatment had been generalized to the home setting with the gastrostomic tube being eliminated and the infant orally accepting warm pureed foods.

Dissociative population.

Two early studies by Price and Hess (1979) and Dick-Barnes, Nelson, and Aine (1987) conducted research using behavioral techniques in the treatment of dissociative patients. In the former study, a 33-year-old woman was initially hospitalized for suicidal ideations. The focus of her treatment was two-fold: 1) uncontrollable rage, and 2) contact phobia. During an episode of rage, a second personality emerged. The hospital staff developed a management stratagem using assertion techniques, which assisted the patient in expressing her anger more openly. With the implementation of the assertion protocol the second personality did not emerge during the remainder of her hospital stay. This treatment strategy appeared to suppress the second personality since the personality did not re-emerge after the patient began to openly discuss her anger.

In the latter study by Dick-Barnes, Nelson, and Aine (1987), electrophysiological response (ERP) using the electroencephalograph (EEG) was measured across three personalities of a dissociative patient. The subject of the research was a 28-year old female with a diagnosis of DID who was hospitalized for a suicide attempt. The subject was asked to perform three tasks across her three personalities: 1) a learning and memory task, 2) a perceptual-motor task, and 3) an attention task utilizing ERP's as a measure. The results indicated that in the memory task test, learning occurred across all three personalities. Conversely, across all three personalities, identical associated pairs (memory task test) were forgotten. Results form the perceptual-motor task failed to show any significant variance among the three personalities that were tested. However, in the final attention task, differences were demonstrated among the three personalities. The oldest alter attended more selectively to stimuli, the next oldest showed less attention,

and the youngest alter showed the least. The main finding of the research showed that learning and poor recall for two of the three tasks occurred across all personalities.

Andreason and Seidel (1992) followed three patients with DID over a four year period wherein changes to their treatment plans added behavioral techniques. In Case 1, ward privileges were lost (i.e., activity level reduction and time-out) if an increase in weight was not met on schedule or if there was not a reduction in self-destructive behaviors. As a result of the inclusion of behavioral parameters, her self destructive behaviors decreased and ultimately ceased. Additionally, she gained and maintained a stable weight, and suicidal intent disappeared.

In Case 2, this DID patient inflicted self-injuries with fire. The treatment team targeted impulse control as their primary therapeutic concern. The treatment plan provided no reinforcement for her inappropriate behavior, and when hospitalized changed her unit assignment to a locked ward. Therapy sessions were done only with the dominant personality. At the 1-year follow-up, she had not mutilated herself and there was no contact with crisis services or hospitalizations. Ultimately, she returned to college.

In Case 3, a woman diagnosed with DID continuously was arrested for property crimes for a 2 year period despite hospitalizations and treatment, with which she complied. Subsequently, when the judge threatened extreme consequences for any additional arrests (prison), arrests ceased and were sustained at the one-year follow up. Two conclusions resulted from this research: a) limits were respected across all the subjects' personalities, and b) improvement, which was measured by a reduction in self-destructive behaviors, was maintained at the one-year follow-up. In conclusion, clearly

defined, behavior-orientated limit-setting quickly and effectively reduced socially and physically self-destructive behaviors.

Lamberti and Cummings (1992) used a “hands-on” technique to restrain and thereby reduce the violent behavior of a dissociative patient in an inpatient hospital setting. Hospital staff served as a human barrier whenever the patient threatened to assault the treating therapist. This intervention produced two results: a) safety for both the patient and the therapist was established, and b) at the one-year follow-up, there was a consistent reduction in number of episodes of assaults as well as the duration of the assaults.

Childs and Timberlake (1995) employed a single-subject experimental design to evaluate the efficacy of psychodynamic play therapy on the dissociative processes of an 8-year-old boy. The hypothesis that the researchers were testing explored whether a reduction occurred in dissociative experiences, which they named defensive guarding, utilizing psychodynamic play therapy. They believed that through psychodynamic play therapy, the subject would deal with life stressors without dissociating. At the close of the study (6 months), the researchers found that no significant change occurred in the child’s dissociative experiences. This study’s focus on psychodynamic theory combined with behavioral methodology demonstrated experimentally that this therapeutic construct is not effective and should not be used. With this in mind, the ethical and legal issues arising from ongoing use of psychodynamic play that is ineffective need to be evaluated and discontinued.

Briere (2002) outlined an integrated treatment approach for adults who were severely abused as children. In this study, he utilized empirically based principles from a

variety of psychological disciplines into an amalgamate for DID treatment. While the overall treatment strategies were empirically based, they were not specifically tested for their efficacy in the specific treatment of abuse survivors. He employed cognitive, behavioral, and self-psychology as well as a re-conceptualized psychodynamic framework into his integrated model.

Levin and Spauster (1994) wrote that by using a cognitive-behavioral approach, a reduction occurred in passive and powerless behaviors that cripple the dissociative patient. Unfortunately, the authors did not define operationally either passive or powerless behaviors, which could be measured and then observed for change. Techniques used included goal setting, relaxation exercises, desensitization exercises, cognitive restructuring techniques, and impulse control training. This study did not name or discuss the methodology that the researchers employed.

Post-traumatic stress disorder population.

As a result of the paucity of empirical studies on DID (Finkelhor & Berliner, 1995; Reeker et al., 1997; Stevenson, 1999), the review of the literature has been expanded to include another trauma related diagnosis, posttraumatic stress disorder (PTSD) that involves both sexual and physical child abuse. The correlation between PTSD and DID deepens as one looks at their genesis, which is trauma, past or present (Putnam, 1995; Riggs, Rothbaum & Foa, 1995). Arguably, physical and sexual abuse can be viewed as an experience and by itself is not a diagnosis or a disorder (Finkelhor & Berliner, 1995). Nevertheless, the probability is significant that a developmental disruption, a disorder, or other problems will be sustained by the victim of abuse (Briere, Scott & Weathers, 2005).

Feeny and Danielson (2004) wrote that dissociative symptoms such as the subjective sense of numbing, detachment, reduced awareness of the dissociative's surroundings, depersonalization, derealization, and dissociative amnesia were considered the cardinal features of PTSD. One study clearly pointed to the variables which mediate and link the relationship between dissociation and psychopathology, to include PTSD symptoms (Gershuny, Najvits, Wood, & Hepner, 2004). This study indicated that higher levels of dissociation were found among individuals who had been traumatized, which included war veterans as well as abused children. Van der Hart, Nijenhuis, and Steele (2005) wrote that dissociation has been insufficiently recognized but nonetheless is a major feature of complex PTSD. With the aforementioned in mind, the review of literature will include treatment interventions for PTSD with studies that combine treatment with both the victim and caretaker.

King, Tonge, Mullen, et al., (2000) evaluated the efficacy of the participation of children and caregivers in a cognitive-behavioral treatment (CBT) program for sexually abused children with a diagnosis of PTSD. The researchers randomly assigned 36 sexually abused children between 5 and 17 years old to one of the following three groups: a child alone cognitive-behavioral treatment condition, a family cognitive-behavioral treatment condition, or a waiting list control condition. The protocol remained consistent with the first two group participating in psychoeducation (Session 1), training of coping skills for disturbing memories of abuse and feelings of anxiety and guilt (Sessions 2-4), gradual exposure to the abuse-related experiences (Session 5-18), and relapse prevention (session 19-20). However, the parents received an additional 20 weekly (50-minute

sessions) of training in child behavior management skills and parent-child communication skills.

Assessment measures were taken throughout the study and statistical analysis revealed that compared to the wait-list group, children in the treatment trial exhibited significant improvements in reduction of PTSD symptoms and on the self-reports of anxiety and fear. It was found that parental involvement did not significantly improve the efficacy of cognitive-behavioral therapy. Notwithstanding the above, maintenance of improvement was evident at the 12-week follow-up assessment. Two significant limitations of the research were as follows: 1) the small sample size, and 2) the protocols were multi-varied with CBT techniques obscuring individual treatment intervention efficacy or its lack of efficacy.

Another study (Nolan, Carr, Fitzpatrick, et al., 2002) compared two programs for victims of child sexual abuse. The study aimed to evaluate the comparative effectiveness of individual therapy (IT) and combined individual and group therapy (IGT) in the treatment of child sexual abuse. Assessments were made pre-treatment (once) and post-treatment (twice) with a battery of testing instruments (The Child Behaviour Checklist, The Youth Self Report, the Children's Depression Inventory, and the Trauma Symptom Checklist for Children). Inclusion criteria included the following: (a) disclosure of sexual abuse was corroborated by the multidiscipline assessment team, (b) they were between 8 and 18 years of age, and (c) written consent was given by their non-abusive parent. The IT group included 20 participants and the IGT, 18 participants. Participants in the IT group received 20 hours of therapy each, while those in the IT group received 18 hours of therapy. Results from the research found that after 6 months IT and the

combined IGT were equally effective in the treatment of the psychological indices of internalizing problems, externalizing problems, withdrawn affect, somatic complaints, anxiety/depression, social problems, attention problems, and aggressiveness. Limitations of the study included methodological problems with a lack of a control group, a lack of an operationally defined or explained treatment protocol, a lack of consistency in treatment orientation, and a small sample size.

The following PTSD studies (Cohen, Deblinger, Mannarino & Steer, 2002; Cohen & Mannarino, 1996; Foa, Dancu, Hembree, Jaycox, et al., 1999; Resick, Nishith, Weaver, et al., 2002) outlined the effect of research treatment interventions, alone and in combined design, on the amelioration of symptoms of the PTSD diagnosis. The study by Cohen, Deblinger, Mannarino, and Steer (2002) expanded on their earlier research (Cohen & Mannarino, 1996) by examining the differential efficacy of trauma-focused cognitive-behavioral therapy (TF-CBT) and child-centered therapy (CCT) for treating PTSD and related emotional and behavioral problems in children who suffered sexual abuse. Cohen & Mannarino found that intervention protocols using CBT with 69 sexually abused preschoolers (compared to non-directive treatment protocols), led to a reduction of the PTSD symptoms which included sexual behavior problems and behavioral management problem in the home. These findings were maintained at the 1-year follow-up.

In the more contemporary study, Cohen et al., (2002) enlisted 229 children from 8-to14-years old and their primary caretakers for 12 weeks of individual sessions for caretakers and children. The participants were randomly assigned to one of the aforementioned two treatments. Inclusion criteria included significant symptoms of

PTSD with 89% meeting full *DSM-IV* diagnostic criteria. TF-CBT's specific criteria for the purpose of the study was defined as the skills in expressing feelings; training in coping skills; recognizing the relationships between thoughts, feelings, and behaviors; gradual exposure (also referred to as creating the child's trauma narrative); cognitive processing of the abuse experience(s); joint child-parent sessions; psychoeducation about child sexual abuse and body safety; and parent management skills" (p. 398).

As the sessions continued, the children were encouraged to confront increasingly detailed and distressing abuse-related reminders and memories. Covariance analyses indicated that the children assigned to the TF-CBT demonstrated significantly more improvement with regard to decreasing PTSD symptoms, depression, behavior problems, shame, and abuse-related attributes (19% at posttest with PTSD diagnosis). Using the same covariance analyses, the CCT group at posttest had a PTSD score significantly higher (46%). The major limitation of this study was its lack of identifying which specific TF-CBT components were effective. In an earlier study, Cohen and Mannarino (1996) found analogous results.

A study by Resick, Nishith, Weaver, et al., (2002) differentially compared cognate-processing therapy (CPT) to prolonged exposure (PE) against a minimal attention condition (MA) for the treatment of PTSD and depression. A more adequate description of the treatment modalities (CPT, PE, and MA) would be necessary to understand and hence, to replicate the study. The inclusion criteria for the study include the following indices: a discrete incident of rape in childhood or adulthood that meet the diagnostic criteria for PTSD, the participant was at least 3 months post trauma (no upper limit), and, if on medication, was stable. One hundred and twenty-one women completed

the therapy-research sessions. Assessments were made at pretreatment and at 3-month and 9-month posttreatment. Participants were assigned randomly to the CPT, the PE, or the MA therapy for twice a week sessions for the duration of six weeks. Statistical analysis showed a consistent picture: CPT and PE were highly successful in treating PTSD symptoms from this sample of chronically distressed raped victims (most of whom had histories of other severe trauma). The MA group did not show improvement. In conclusion, the researches noted that CPT was found to be superior to PE in remediating guilt.

Foa, Dancu, Hembree, Jaycox, et al., (1999) examined the effect of 4 therapeutic conditions using Prolonged Exposure (PE), Stress Inoculation Therapy (SIT), a combination of PE and SIT, and a wait list control (WL) on 96 female sexual and nonsexual assault victims with a primary diagnosis of PTSD. The participants were randomly assigned to one of the four groups. The inclusion criteria were more restrictive than the former study with the index trauma occurring after the age of 16. Treatment consisted of 9 twice-weekly, individual sessions. Evaluations using the Structured Clinical Interview for *DSM-III-R* (SCID), PSS-I (17 questions evaluating PTSD symptoms), Social Adjustment Scale (SAS), Becks Depression Inventory (BDI), and State-Trait Anxiety Inventory (STAI) were conducted at pretreatment, post-treatment, and at 3-month, 6-month, and 12-month follow-ups. The results of the study supported the researcher's hypothesis that PE, SIT, and PE-SIT were superior to WL in ameliorating the severity of the symptoms of PTSD. However, the findings of this research did not support that the combination of the two disciplines (PE-SIT) were superior to the individual use of either PE or SIT in ameliorating symptoms of PTSD.

Summary

This chapter reviews the literature on treatment strategies for DID patients, and comparable studies of patients with profoundly debilitating psychiatric disorders and conditions. The chapter included the tracing of the history of the disorder, family contributions to DID treatment, the efficacy of pharmaceuticals for the disorder, DID interventions from the behavioral-cognitive community, and the contributions made from studies related to PTSD. Like the present study, the preponderance of the CBT and behavioral approaches to the treatment of the seriously disturbed psychiatric populations were single subject experimental designs.

Overall then, a review of the literature unveils a variety of untested therapeutic procedures used in the treatment of DID. Conversely, a review of CBT and other behavioral approaches to the treatment of severely disordered behavior reveals a literature based for the most part upon well controlled experimental research.

An early researcher, Eysenck (1957) questioned the effects of psychotherapy since he believed that treatment efforts lack empiricism. A similar theme was echoed by Kazdin (1982, 2003). He contended that treatment modalities and interventions have lacked the foundation that empirical research standards can provide. Thus, the present study is designed to experimentally evaluate the effects of extinction on the switching behavior of individuals diagnosed with DID.

CHAPTER III

Method

Participants

The initial source of the DID target population for this study were referrals from two therapists and colleagues who agreed to refer dissociative clients to the study. A second source of referrals came from two of the study's participants. One was a sibling; the other was a friend. The inclusion age and criteria for participation in the study was a minimum age of 18 with a diagnosis of DID. Neither gender nor ethnicity was used as exclusionary criteria. Initially, seven DID individuals agreed to participate in the study Four Participants completed the study

Of the four DID Participants, three completed both the baseline and the intervention phase of the research: Participant 1 was a 38-year-old, single, Caucasian female; Participant 2 was a 43-year-old, married, Black female; Participant 3 was a 44-year-old, married, Caucasian female. Participant 4, who remained on baseline throughout the study, was a 47-year-old, married, Caucasian female.

Treatment Setting and Treatment Integrity

The research setting was at a private practice counseling center in Northern California Bay Area. The researcher used her private practice office for the initial interview, the establishment of baseline, and the implementation of the treatment intervention. The office was 10 feet by 12 feet, comfortably appointed and designed to put the participants at ease.

In that there was only one researcher who was also the therapist, uniformity of treatment occurred. Treatment protocol was therefore adhered to in both the baseline and

intervention phase. The treatment orientation of the researcher combined brief strategic counseling with behavioral therapy. Each participant was instructed that they could bring any issue into the room to discuss. The researcher helped the participants in the following areas: 1) identified areas of concern, 2) looked for plausible solutions, 3) assessed the participants' deficits and skills in implementing the solution to the problem, and 4) taught the participants the skills needed to accomplish the behavioral change. Additionally, all baseline and treatment intervention sessions were videotaped for inter-rater reliability.

Qualifications of Researcher and Rater

The therapist and researcher is a licensed Marriage and Family Therapist (MFT) who has been licensed in this capacity since 1980. At the time of the research, she was enrolled as a doctoral student at the University of San Francisco, California. Her experience included 15 years working with dissociatives and trauma victims. This research was done in partial fulfillment of the requirement for the completion of a degree for Doctor of Education. The independent rater who established reliability was a colleague of the researcher who had 20 years of experience working with the dissociative population. The rater, also licensed as a MFT, was the former director of the Community Treatment Center (CTC) located in Fairfield, California. The target population, which this agency serviced, was trauma and dissociatives clients. Her job responsibilities included supervising staff as well as providing treatment for the center's client population.

The rater's familiarity with both the diagnosis and the etiology of DID was

imperative since her major task was to identify each discrete episode of dissociation marked by the mechanism of switching. The independent rater counted the number of episodes of switching, first to establish baseline, and then measured the change after the implementation of the treatment intervention. As a result of her experience, the training of the rater only required two one-hour sessions. During the training sessions, areas covered were the discrete behavioral states outlined by Putnam (1989), which became the indicators that the dissociative participant was moving from one alternate personality to another. Each indicator and behavioral example was discussed, as they might appear in a clinical setting. Since there were numerous behaviors to be observed, the rater was trained to record such behavior with the same level of complexity (Kazdin, 1982, p. 72).

Prior to the research, the rater and researcher frequently met in a monthly consultation group revolving around the DID client, which further supported a familiarity with the dissociative diagnosis and enhanced a mutual understanding of the switching phenomenon by the dissociative patient. The consultation sessions occurred for over a year and included another therapist.

Screening

To determine whether the participants had DID, they were initially assessed by this researcher using a structured interview as well as the diagnostic criteria outlined in the following paragraph. The interview included the following information: 1) prior and current therapy, 2) when and with whom, 3) therapeutic experience, 4) psychiatric medication prescribed, past and present, 5) medication effectiveness or not, 6) psychiatric hospitalizations, when and why, 7) family history of psychiatric conditions, 8) amnesia, frequency, and to what degree, 9) depersonalization, frequency, and 10) identity

confusion, 11) rapid mood changes accompanying the identity struggle, 12) different names used or called, 13) internal dialogues or voices coming from inside as well as their frequency, 14) childlike parts or age regression, and 15) feeling of possession. The assessment was conducted not only further confirmed the dissociative diagnosis but also further increased the diagnostic reliability.

The pre-established criteria defined by the categorical classification system of mental disorders *DSM-IV-TR* (2000) for inclusion in the study was a DID diagnosis (Appendix, p. 97). The primary features of the diagnosis were: (a) the presence of two or more distinct identities, each with its own relatively enduring pattern of perceiving, relating to, and thinking about the environment and self, (b) at least two of these identities or personality states recurrently take control of the person's behavior, (c) inability to recall important information that is too extensive to explain by ordinary forgetfulness, and (d) the disturbance is not due to the direct physiological effect of a substance (e.g., blackouts or chaotic behavior during Alcohol Intoxication) or a general medical conditions (e.g., complex partial seizures) (p. 487).

The diagnosis was later confirmed by a licensed clinical psychologist who had diagnostic experience with this population. He was formerly employed in a postdoctoral position at the former Community Treatment Center (CTC) in Fairfield, California. CTC serviced the physically and sexually abused trauma population. This work brought him in contact with clients who were dissociative and who suffered from PTSD. With these qualifications for DID assessment, there was 100 % inter-rater diagnostic agreement.

Procedures

The American Psychological Association (APA) accepted the recommendation of the Presidential Task Force on Evidence Based Practice (2005a) whereby the association endorsed and then adopted not only the definition but also the intent of the following statement: "Evidence-base practice in psychology (EBPP) is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, values, and preferences. The purpose of EBPP is to promote effective psychological practice and enhance public health by applying empirically supported principles of psychological assessment, case formation, therapeutic relationship, and intervention" (p. 1). The procedures employed in the current study were predicated on the principles supported by the APA and could provide the clinician with a treatment intervention that has scientific acumen and could be included in EBPP.

Experimental Design

With the aforementioned in mind, the current research employed a multiple-baseline design across participants, which is especially advantageous since the design allowed for an experimental evaluation of the effects of an intervention in a clinical, educational, or counseling setting (Hersen & Barlow, 1976; Kazdin & Tuma, 1982). Specifically, Kazdin (1982) maintained that the single-subject experimental research design could best evaluate treatment effectiveness in clinical settings.

This experiment involved observations of the switching behavior for the duration of 50 minutes with and without the application of the intervention, which employed the use of extinction as the treatment intervention, and was designed to modify and reduce the amount of switching within a 50 minute time frame (clinical hour).

The “A phase” refers to the baseline or pretreatment period. The “B phase” denotes the introduction of the therapeutic intervention. In single subject designs, the dependent variables are measured repeatedly throughout the pretreatment and treatment phases of the study. Two distinct phases, baseline and treatment are collected and the independent variable is introduced sequentially to each participant in the study. Kazdin (1982) suggested that objective criteria should be used to determine when to shift phases. He noted, “It is difficult to identify rigid rules about the minimum number of data points necessary within a phase because the clarity and utility of a set of observations is a function of the data pattern in adjacent phases” (p. 288). In this study, the objective criterion used to ascertain phase change was the stability of the number of episodes of switches within a 50 minute increment. Using the abovementioned criterion, baseline was established, which resulted in a varied number of days for each participant. The effect of the intervention, extinction, confirmed whether there was a change in each participant’s performance at the point when the intervention was introduced and not before (Kazdin, 1982). The therapeutic intervention must show rate changes in a sequential manner that was observed across all participants only after the treatment intervention had been applied directly to each participant individually (Hersen & Barlow, 1976; Kazdin, 1982).

Dependent measures.

The dependent variable in this study was switching. Switching of the DID participant established the baseline data points. After the stabilization of the switching behavior occurred, a trend was established, and the extinction protocol was applied.

Putnam's (1989) behavioral indicators became the basis for not only the observers' calibrations but also defined the dependent variable. Putnam (1989) defined switching as the transition between two discrete states of consciousness marked by specific identifying behaviors that could differ for each dissociative individual. Switching was operationally defined for each participant separately but based on the following indicators identified by Putnam (1989):

1) Facial Changes: The eyes and mouth show the greatest degree of change when a dissociative switches. Rapid blinking or fluttering of the eyes may occur. Vertical wrinkles may rearrange into horizontal wrinkles, or the jaw may shift from an underbite to an overbite. There may be subtle softening or hardening of expression. Of specific importance are any abrupt changes that erase or significantly rearrange the aforementioned markers.

2) Postural and motor behavioral changes: Body posture, body language, and motor activity can change when switching occurs. Personalities that contain memories of the trauma, psychosomatic complaints and age deficits may curl up in a fetal position, crawl on the floor, huddle in a corner, or rub their hand together in distress. Motor coordination may increase or decrease. Flinching, tremors, physical strength, and motor skills may increase or decrease.

3) Voice and speech changes: Changes are most apparent in pitch, volume, rate, articulation, accent, and language usage. The voice my drop a full octave or may rise by an equal amount. There may be changes in verbal age with baby talk, babble, child-like grammar, and adolescent slang. Stuttering and other speech defects may also appear with switching.

4) Dress and grooming: Changes in hair may occur with a switch: style, color, wigs, hair pieces, or hair adornments. Other changes may include the way an alter plays with the hair, or clothing. Changes may take place in the use or application of makeup where there is heavy use one day and then no make-up the next.

5) Behavior during switching: A blink or upward roll of the eyes may signal the onset of switching (see Facial Changes). There may be a rapid fluttering of the eye lid, transient facial twitching, or grimacing prior to a switch. In addition, there may be bodily twitches, shudder, or abrupt changes in posture (see Postural Changes). The patient may go into an unresponsive, trance-like state with blank, unseeing eyes. The patient may turn his or her head away momentarily shielding the face with either the hands or hair during the moment of switching. "Grounding" is an assorted display of behaviors that may occur after a switch has occurred and may be an indicator for calibration. Common grounding behaviors include touching the face, pressing the temples, touching the chair he or she is sitting in, looking around the room quickly, and shifting posture restlessly. These behaviors are thought to be part of the orientation process from an alter who suddenly find himself or herself in a new situation.

6) Affect: The strongest indicator of a switch may be an otherwise inexplicable shift in the dissociative's affect. Anger, sudden laughter, or tears that seem incongruent to the context are often manifestations of a switch. Inappropriate labile and sudden displays of affect should all be noted.

7) Behavioral age: Another manifestation of switching is an obvious shift in the patient's level of maturity. This may be recognized by nervous fidgeting, movement overflow, rubbing the nose with the back of the hand, or other child-like gestures.

8) Thought process: There is a wide range of cognitive abilities between alters. Word understanding and hence, communication may become problematic as the dissociative switches from one alter to the next. There can be obvious difficulties in the understanding of thoughts and language. There may be problems with the ability to think abstractly, with some alters capable of adult-level reasoning and other alters being profoundly concrete (Putnam et al., 1986). Past information or the ability to learn new information may differ vastly from alter to alter. The DID may be suddenly reinterpreting something that had been work through at an earlier time in therapy.

9) Psycho-physiological sensitivities: The most commonly reported differences between alters that may be a sign of switching is the experience of somatic symptoms varying across alters. The patient may appear incapacitated by a symptom initially (e.g., migraines, allergies, bodily aches) and suddenly these symptoms will vanish (Putnam, 1989, p. 118-123).

Switching Precursors.

The behavioral precursors were operationally and individually defined for each Participant based on the Putnam criteria (1989). Prior to switching, Participant 1 exhibited a change in the following facial features: her eyes become glassy, stares were unblinking, and mouth turned down. The voice and speech change during switching involved increased volume, a higher, more strident pitch, and an increased rate of speech. Affect changed from appropriate to inappropriate, hysterical laughter.

Behavioral precursors of Participant 2 included the following facial feature changes: tightening of facial muscles, clenching of the jaw, narrowing of eyes, and blinking to emphasize certain words. Body posture changes included more rigidity with

the back becoming more upright and straight. Voice changes occurred in the following manner: her speech slowed down, words were more enunciated, and the pacing more deliberate. Affect changes included sudden incongruent anger with threatening verbiage.

Participant 3 showed more regressed behavior indicating a switch. The content of her speech deteriorated to repetitive issues of abandonment, guilt, and over responsibility for the incidents of abuse. The facial features changed with the following indices: eyes shuttered and down cast with no direct eye contact made. The body posture shifted with the shoulders more rounded down and forward.

Internal Validity and Reliability

The inherent features of the experimental design of this study strengthened its internal validity, wherein the change that occurred was a result of the treatment intervention and not due to coincidental extraneous events (Hayes, 1981). Hayes additionally elaborated that the multiple-baseline design corrected the inherent threat to internal validity by the following factors: 1) there were different lengths of baseline, which thereby controlled the amount of baseline assessment or maturation, and 2) phase changes occurred at different times, which reduced the possibility of change occurring because of extraneous events. Kazdin (1982) confirmed internal validity in the use of this study's research design with the following quote "… continuous assessment of behavior prior to treatment [baseline phase] strengthens internal validity of a case study [single-case research design]" (preface).

Throughout baseline and intervention, videotaping was used to record the number of switches that each participant displayed during the 50 minute session, which traditionally establishes internal validity (Mahrer, 1998) and assists in data collection.

More to the point, Mahrer wrote that videotaping and its relationship with evidenced based psychotherapy was integral and had become standard to research. He contended that videotaping was a method to examine data and obtain any relevant information that the clinician could have missed during the therapy hour.

The rater and the researcher separately reviewed the videotapes counting and recording the switches on a data collection form (Appendix E), which was divided into three 15-minute intervals and one 5-minute interval. Inter-observer agreement established reliability, which was the extent to which observers agreed in the scoring of behavior (Kazdin, 1982). The formula for this computation is:

$$\frac{\text{Agreements}}{\text{Agreements + Disagreements}}$$

Kazdin further wrote that inter-rater agreement was needed: 1) to depict the participant's actual performance, 2) to minimize the biases that an individual observer might have, and 3) to help define the target behavior being studied.

Accuracy of observation was additionally enhanced by videotaping the research sessions. The video allowed for both raters to review and re-review the tapes. The switching behavior was clearly observed due to the refined quality of resolution of the videotaping. Permission to videotape forms sanctioned by the University of San Francisco's Institutional Review Board for the Protection of Human Subject (IRBPHS) were provided in accordance with Section 6.13 of American Psychological Association guidelines (1996) and obtained from each participant prior to videotaping (Appendix D).

The participants were reminded at the beginning of each research hour that they were being videotaped by the following prompt, "Remember that we have your permission to videotape each session." This prompt served several purposes: 1) it

predictably eliminated any element of surprise that could occur when the video camera started rolling, 2) it reaffirmed the participant's permission to be videotaped, and 3) it reminded the participant of the intended purpose of clinical hour, which was the research.

Although the participants in the study were referred with a diagnosis of DID, reliability of the diagnosis was affirmed in two ways. The initial screening questions was extrapolate from criteria in the *DSM-IV-TR (2000)* presented for the dissociative diagnosis. These question and the researcher's observations were coupled to validate or invalidate the diagnosis. Another method to corroborate the diagnosis was a second independent assessment from a licensed clinical psychologist using his experience with trauma victims and criteria outlined in the *DSM-IV-TR* (2000).

Independent measures.

The independent variable (i.e., treatment intervention) of this research is extinction. Operant extinction is defined as a process in which a previously reinforced behavior is no longer followed by the reinforcing consequences, resulting in a decrease in the frequency of the behavior in the future (Miltenberger, 1998, p. 562).

When baseline was established the treatment intervention was applied. The extinction protocol was prompted at the beginning of each session during intervention with the statement: "This is the intervention phase of the study. Should you switch, I will drop my head and stop talking. When you return (the original alter) to the room, you need to let me know that you are back". At the point that the participant switched back to the alter entering the office, conversation would continue.

Ducharme and Van Houten (1994) in their former research on extinction noted that the following phenomenon would occur in a predictable manner: 1) the target behavior temporarily increased in frequency, rate, magnitude, or variability (extinction

burst) and 2) the target behavior for modification diminished slowly. The current research also showed a similar pattern of predictability.

Data Collection

The videotape was reviewed by both the researcher and the rater for both the baseline and intervention phases. The number of switches was counted for the duration of 50-minutes, which were divided into four time segments. These numbers were entered on a Coding System form (Appendix E) developed from Putnam's (1989) indices of switching. A simple mark was placed on the chart when the participant switched, formatted with Putnam's behavioral indicator of switching. These numbers became the data points that were both charted and graphed.

Data Analysis

Initially, baseline (Phase A) data for each participant were graphed. By reviewing this information, stability of switching was determined in order to ascertain when the treatment intervention (Phase B) should be introduced. A visual inspection was used to establish baseline stability and whether the treatment intervention was efficacious in eliminating or reducing the targeted behavior switching within the 50-minute time (Kazdin, 1982). Kazdin wrote that the primary basis for using visual inspection was that it served as a filter that allowed only especially potent interventions to be agreed on as significant or meaningful (p. 280). Kazdin (1982) made the following remarks concerning using single case data analysis:

> Several characteristics of the data contribute to judging through visual inspection whether behavior has changed. Changes in the mean (average) across phases, changes in level of performance (shift at the point that the phase is changed), changes in trend (differences in the direction and rate of change across phases), and latency of change (rapidity of change at the point that the intervention is introduced or withdrawn) all contribute to judging

> whether a reliable effect has occurred. Invoking these criteria is greatly facilitated by stable baselines and minimal day-to-day variability, which allow the changes in the data to be detected. (p. 290)

Operational Definitions

Addis (1997) wrote that first and foremost, a treatment intervention must be operationalized in order to be evaluated for efficacy. It would follow that the operationalizing of baseline, the procedure, the dependent, and the independent measures would be applicable. The criteria used for operationalizing the above behaviors have been outlined below.

Baseline.

Baseline was the time period (phase) that the target behavior was observed, counted, and measured pre-treatment. This period of observation comprised the baseline phase and provided information about the level of behavior before an intervention was introduced (Kazdin, 1982). The descriptive function of baseline provides information as to the extent of the problem (Kazdin, 1982, p. 105). In this research, baseline began with the observing as well as counting the number of switches from one alternate personality to the next alternate personality of the DID participants during a standardized 50 minute session. Switching was targeted for experimental research as it had been identified as a specific problem to the DID population (Putnam, 1997).

Each participant brought into their baseline sessions individual issues or problems that they wanted to work on. These sessions were handled therapeutically meaning problems were identified which were interpersonal issues with their employer, children, or significant other. Areas of strengths and weakness were ascertained and the treatment was modified to overcome or minimize the deficits and to reinforce the assets of the

individual (i.e., behavioral rehearsals, communication techniques, modeling, stress reduction, assertion training). Referrals were made as needed to their psychiatrists, therapists, and primary care physicians.

Intervention.

Intervention was the time period (phase) that the target behavior was observed, counted, and measured during implementation of the treatment procedure, extinction. The researcher disengaged all conversation with the participant and tilted her head down and forward. Counting continued to measure any change that transpired as a result of the extinction protocol. This period of observation provided information about the level of behavioral change after the intervention had begun. The descriptive function of baseline combined with the intervention showed the extent to which the problem behavior had changed.

Target behavior.

The target behavior is the behavior identified for change (Kazdin, 1982). In this study the target behavior was switching, which was defined by Putnam (1997) as, "… the transition from one discrete behavioral state to another" (p. 90). According to Putnam, the important clinical feature of the dissociative disorders was the signaling of the emergence of an alternate personality state. Putnam further distinguished these states into types: 1) rapid switches, 2) switches that pass through one or more intermediate states, and 3) switches that require an intervening period of sleep (p. 91). The inclusionary criteria for the current study did not include the type of switches, yet all three types of switches were noted in the study. For this study's inclusion in the baseline data, the switch needed to result in an alternate personality taking executive control,

which is also the inclusionary criteria for DID in the *DSM-IV-TR.* After the behavior of each person reached a stable rate, the intervention was applied to only one participant while baseline conditions were continued for the others. These procedures were continued until three of the participants for whom baseline data were collected, received the intervention (Kazdin, 1982, p. 132).

Protection of Human Subjects

The researcher complied with the University of San Francisco's IRBPHS guidelines for the protection of the human subjects as well as the older ethical standards established by the Nuremberg Code that was later incorporated into the American Psychological Association ethical code of research (APA, 1992). These following points were covered in the initial Informed Consent letter (Appendix B) and reiterated throughout the entire research period, which included the following points:
1) voluntary consent of the human subject was required, 2) the subject must be fully informed of the nature and risk of the experimentation, 3) any such risks should be avoided whenever possible, 4) the subject should be protected against even remote hazards, 5) the experiment should be conducted only by scientifically qualified persons, 6) the subject must be at liberty to terminate the experiment at any time, and 7) the scientist must be prepared to terminate the experiment if at any time, he or she has probable cause to believe that a continuation was likely to result in injury, disability, or death of a subject.

Each participant attended a brief orientation wherein the basic principles of the study were outlined. An Informed Consent letter (Appendix B), an Information data sheet (Appendix D), and Permission to Video Tape form (Appendix E) were given to

each participant to complete. Each form was reviewed carefully and individually with each participant. They were notified that the study was conducted through the University of San Francisco. All participants were furnished with a contact telephone number for Terrance Patterson, IRBPHS chairperson. Particularly, they were assured that the research information would be handled sensitively and would be kept confidential complying with the standards and safeguards outlined by the American Psychological Association (1996) and the criteria established for the proposed study by the IRBPHS. Additionally, all information and research data would be kept in a locked filed cabinet in a locked office.

Four points were included in the informed consent letter: 1) participation in the study was voluntary and that they could withdraw from the study at any time, 2) confidentiality would be kept strictly with the participants identified by first names or nom de plume, only to be revealed to the dissertation committee panel, and 3) participants could request a summary of the results at the end of the research. This document was dated and signed by the participant.

On the information sheet, personal information was abbreviated and limited where practical (e.g., first name but no last name, just the first initial; age but no birth date). No other personal information was required with the exception of ethnicity, marital status, gender, and contact numbers of the participant's primary care physician, psychiatrist, and treating clinician's (if applicable), in order to maintain basic ethical standards.

The last document reviewed and signed by each participant was the Permission to Videotape consent form (Appendix E). It was discussed with each participant that the

sessions would be downloaded and copied to disc. This disc would review first by the two raters for the implicit purpose of counting the number of switches in a 50-minute increment. The video taping would be made available for review by the dissertation committee with a full guarantee that all videotaping would be destroyed after their inspection. They were assured that the tapes would not be used for any other purpose than for educational research.

The participants were given written and verbal assurances that all furnished information and treatment results would remain strictly confidential, shared exclusively with the dissertation committee members. They were informed of their right to terminate involvement in the study at any time with no repercussions, not only at the initial meeting but also at the beginning of each research session (both baseline and intervention phases). Should the research results be published, all identifying information would be reviewed again and eliminated as appropriate. The consent to participate in the research form was completed at the initial meeting.

A brief description of the study, its purpose, and what was expected of the individual if they choose to participate was included in the Informed Consent letter (Appendix B). All sessions for both baseline and intervention were scheduled to fit the participant's schedule and, to a lesser degree, the researcher's schedule. The participants were informed that there would be no fees for the services and the proposed study was entirely voluntary. The researcher was not subsidized for the research from any outside entity, research grant, governmental agency, insurance company, or stipend from any professional association. The participants were reimbursed for any out-of-pocket

transportation expenses; however, the participants were not remunerated in any other manner.

Pilot Study

As part of the researcher's doctoral studies at the University of San Francisco, two courses (Practicum in Psychotherapy and Internship in Psychology) were matriculated consecutively in the fall semester of 1992 and in the spring semester of 1993. Under the supervision of a faculty practicum professor and as part of the courses' requirements, a client was chosen for the purpose of supervision and training. The client selected by the researcher for the practicum and internship was diagnosed as dissociative after a behavioral analysis utilizing the criteria outlined in the *DSM-III-R* (1987).

Treatment of this DID client was troublesome in two areas: the client's lack of medication compliance, and lack of integrated, appropriate behavior. When the client would switch unpredictably from one alter to the next, executive control of the system would move from one alter to the next. Consequently, the prescribed antipsychotic medication was intermittently taken depending on the alter that took executive control. Without medication, the client would experience disturbing visual hallucinations. Furthermore, the client's ability to make managerial decisions needed for everyday functioning was lost when she switched from one alter to the next. Should a younger alter assume control, adult functioning ceased, leading to medication non-compliance, an inability to drive a car, failure to adequately care for her children, and an inability to schedule, or appear for subsequent counseling appointments.

As a result of the foregoing problems inherent in the switching of a DID, a comparable intervention (time-out) to this study's extinction intervention was

implemented to reduce the amount of switching during a clinical hour with the hope of restoring the primary and adult alter back into executive control. The treatment intervention used in the pilot study was the behavioral technique of time-out. This treatment intervention had been empirically validated as an efficacious approach in more empirical studies than any other response reduction technique (Matson & DiLorenzo, 1983).

Time-out was implemented when the DID would switch from the primary alter. The therapist would leave the room, waiting in a seat outside the door of the office until the primary alter returned. At the moment that the primary alter was restored to executive control, the client was instructed to open the door and ask the therapist to return. The outcome results from the time-out procedure showed a measureable reduction in the frequency of switching during the clinical hour. Additionally, 100% of the time, the primary alter resumed executive control. These results remained consistently stable throughout the fall and the spring semesters when the time-out intervention was applied.

Although the time-out intervention had been changed for the current research to an extinction intervention, there were many components of the pilot study that paralleled the current study: (a) target population, (b) setting, (c) single-subject design, (d) the dependent variable, and (e) the effect of the treatment intervention. Based on the pilot study's robust and positive outcome, the protocol for the current research was developed anticipating similar findings.

Summary

Chapter 3 described many of the study's parameters: the research population, the research assessment criteria, the research procedure, the principles and guidelines used for the protection of human subjects, and the data analysis used to ascertain the efficacy of an extinction procedure on the switching of the research participants with a diagnosis of DID. Both the dependent and independent variables were operationalized, which included a definition of terms germane to this study's DID population. Lastly, this chapter described a pilot study with a parallel technique administered on a single subject DID client. Despite its limitations, the technique held supportive evidence for its efficacy.

Chapter IV

Results

The results for Participants 1-4 are shown in Figure 1. Overall, this study showed that extinction, an empirically-based treatment intervention, proved to be extremely successful in the reduction of switching behavior in individuals suffering from Dissociative Identity Disorder. Thus, the objective of the research was clearly realized. Furthermore, the treatment outcome had more far-reaching implications than initially hypothesized, with indications of integration in addition to reduction in disruptive and chaotic behaviors that are produced with the switch of personalities.

Seven (7) DID individuals agreed initially to be included in the study. All selected Participants had a confirmed diagnosis of DID, as outlined by the criteria listed in the Method section. Two of the four participants completed both baseline and intervention while the third was terminated before treatment was completed. The fourth participant stayed on baseline throughout the study.

The remaining three participants were excluded from the study for various reasons. After ten baseline sessions, Participant 5 began to psychiatrically deteriorate and was not emotionally stable to continue in the study. She became verbally threatening to the construction crew who were re-roofing her residence and ultimately threatened to take the life of her landlord. As a result of this behavior, she was arrested and hospitalized in a psychiatric facility. Subsequently, she admitted to the researcher that she had been convicted of murdering her husband (10 years prior), although the case was reduced to self-defense. She admitted that she possessed an alternate personality designated the "Terminator" whose sole purpose was to protect the system by eliminating the perceived

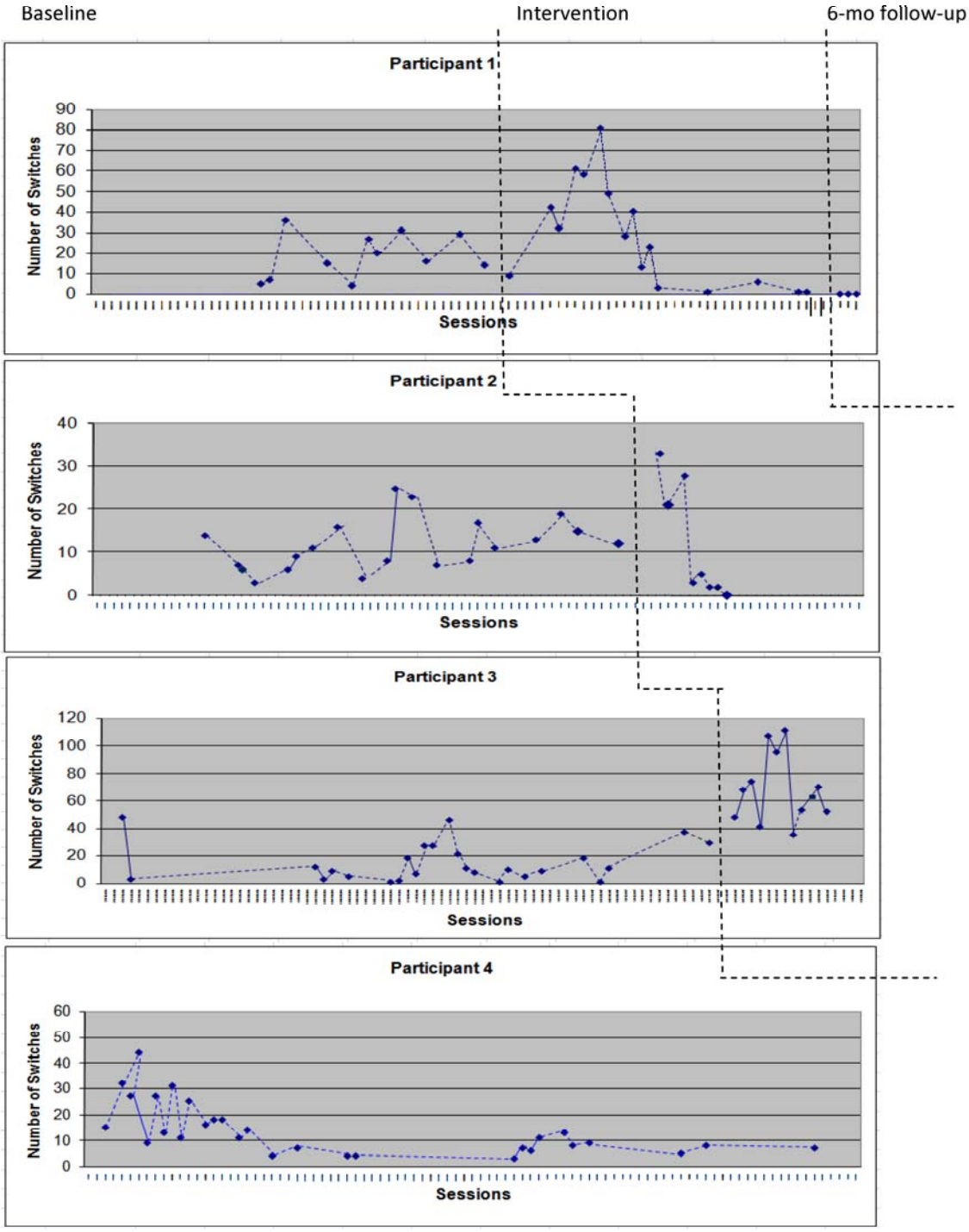

Figure 1. Rate of Switching for Participants 1-4

threat with little censorship and no conscience. A contract, which would assure this researcher of her safety, could not be agreed upon with this alter.

Participant 6 had a dual diagnosis, DID with a Gender Identity Disorder. He was a transsexual, who desired sexual reassignment surgery, initially believing that participation in the study would aid him in this endeavor. The researcher outlined the parameters of the study and recommended that he be treated first for his dissociative symptoms before contemplating sexual reassignment surgery. He possessed a female alter that held firm executive control and believed that the male alter needed to be eliminated ("internal homicide"). This participant was warned that without further investigation of the underlying psychological disturbance, sexual reassignment surgery might create further emotional discord. He was not in agreement with the researcher's recommendation, eventually realizing that the resulting diagnostic label would interfere with his candidacy for surgical treatment, and therefore, declined to continue his participation in the study.

Participant 7 completed the baseline phase of the study. She did not complete intervention since her level of functioning was such that maintaining the research schedule with any predictability was not possible (e.g., she frequently forgot her appointments, which was directly related to the problematic forgetfulness that results from DID switching). The majority of baseline appointments needed to be rescheduled. Additionally, her erratic involvement was caused by a chaotic life-style, which included moving her residences four times and medical hospitalization due to her poor self care.

These difficulties are typical of the problems encountered by those with a DID diagnosis. Recurring problems arose around her main form of communication (cell

phone). Numerous times it was misplaced, turned off, lost, damaged, or the number changed. Although the initial treatment phase appointment was scheduled with her, she failed to appear. With the time line established by the Institutional Review Board, Participant 7 needed to adhere to the research schedule to complete the intervention; however, her psychopathology undermined her ability to do so.

A confounding factor, which seriously affected Participant 3's completion of the intervention, was the University's Institutional Review Board closing date for the research project. The IRB allowed one year for data collection and were unwilling to extend the time limit due to their belief that the potential harm to the participants outweighed the benefits that might be received from the research, as well as the unexpectedly long period of time taken to complete the study. This participant will be seen on follow-up.

Although baseline was initiated on all seven participants, five participants completed baseline as described above. 180 hours of data were collected on the initial seven participants. However, after the three participants departed from the research, only 90 hours (sessions) were examined and graphed on the remaining four participants. Three of these participants, upon reaching a stable rate of switching behavior, were exposed sequentially to the intervention. The time constraints mentioned above prevented Participant 4's exposure to the intervention. Figure 1 presents the rates of switching throughout the study for all four participants.

Reliability Agreement

100% inter-rater agreement was obtained between observers. The reliability numbers are displayed below:

Participant	Number of Observation Periods	Agreements	Disagreements
1	30	30	0
2	28	28	0
3	37	37	0

Though unusually high, the reliability number can be explained for the following reasons: a) the sophistication level of assessment and treatment was high because of the rater and the researcher's extensive experience with this population in their respective clinical settings, b) prior to the rater's training, the rater and researcher collaborated on a monthly basis for over a year on dissociative patients, which potentiated their understanding of the dissociative phenomenon, c) the training with the researcher and rater operationalized more discretely the switching behaviors, which were to be observed and counted, d) the quality of the videotaping increased the accuracy of the visual observations, thereby lessened the distractions, and correspondingly increased focus and concentration, and e) the videotaping allowed the raters to review the tapes numerous times, which reduced the chance that the switching behavior would be overlooked.

In regards to the diagnostic agreement between the researcher and the psychologist, the agreement is more obvious. His training, supervision hours, and current employment involve him with individuals who were victims of child abuse and trauma. He is, therefore, more knowledgeable about the impact of trauma and the resultant psychopathology.

Participant 1

The results for Participant 1 are shown in Figure 1. During baseline, switching occurred a mean of 19 times per 50 minute session, with a range of 5-36.

With the introduction of extinction in the 12th session, Participant 1 showed a typical extinction burst of switching, which first jumped to 46 times per session, and peaked at 81 switches in one session. The rate of switching then began decreasing rapidly (six sessions) to a mean of 2.25 for the last four sessions, with only one switch per session for three of the last four sessions.

At the six-month follow-up, the result were not only maintained, but switching had been essentially eliminated (i.e., a zero rate per session over three consecutive sessions).

Table 2 shows baseline and intervention data (e.g., switches, caught self, co-presence) for Participant 1. In addition to the reduction of switching behavior of Participant 1, several additional, unanticipated, and positive benefits arose from the implementation of the extinction intervention. On the second session of intervention, Participant 1 began to catch herself prior to switching from one alter to the next; that is, the alternate personality did not assume executive control and the switching behavior ceased. Additionally, Participant 1 exhibited signs of co-presence, which is the existence of the primary and a second alter occurring simultaneously for varying lengths of time. Co-presence according to Haugaard (2004) is part of the process which precipitates full integration.

Participant 2

The results for Participant 2 are shown in Figure 1. During baseline switching occurred a mean of 12 times per 50 minute session, with a range of 3-25. With the introduction of extinction in the 19th session, Participant 2 showed a typical extinction burst of switching, which first jumped to 33 times per session. The rate of switching then

began decreasing rapidly (four sessions) to a mean of 2.4 for the last five sessions, with only two switches for the 3rd and 4th session and zero switches for the final session.

Table 2

Participant 1 Baseline and Intervention Phase

Date	Switches	Caught Self	Co-presence
Baseline	Data		
09/28/06	5		
10/01/06	7		
10/04/06	36	0	0
10/19/06	15		
10/23/06	4		
10/26/06	27		
10/29/06	20		
11/06/06	31	0	0
11/13/06	16		
11/27/06	29		
12/04/06	14		
Intervention	Phase		
03/26/07	9	0	0
04/01/07	42	4	0
04/02/07	32	0	0
04/09/07	61	15	5
04/17/07	58	12	0
04/23/07	81	7	12
04/29/07	49	14	28
05/03/07	28	7	12
05/08/07	40	16	23
05/15/07	13	12	13
05/23/07	23	16	17
05/31/07	3	9	10
06/11/07	1	12	2
06/21/07	6	8	5
06/27/07	1	10	0
06/28/07	1	15	17

Six Month	Follow-up		
01/08/08	0	0	0
01/09/08	0	0	5
01/10/08	0	0	7

Co-presence was observed frequently with this participant during the implementation of the treatment intervention. Another observable fact peculiar to this participant was a rapid, quick switch that initially was barely detectable. As the intervention phase continued, the rapid switches lessened. The rapid switches were not calculated in the switch number count. The rationale for not including them in the count was due to their brevity (1-2 seconds) wherein another alter did not assume executive control. Table 3 outlines the switching behavior and other observable behaviors for Participant 2, which occurred during the implementation of the treatment intervention.

Table 3

Participant 2 Baseline and Intervention Data

Date	Switches	Caught Self	Co- presence	Rapid switch
Baseline	Data			
09/13/06	14			
09/17/06	6			
09/19/06	7			
09/27/06	3			
10/04/06	6			
10/05/06	9			
10/17/06	11			
10/20/06	16	0	0	0
10/24/06	4			
10/30/06	8			
10/31/06	25			
11/07/06	23			
11/14/06	7			
11/28/06	8	0	0	0
11/30/06	17			

12/06/06	11			
03/30/07	13			
04/04/07	19			
04/14/07	15			
05/01/06	12			
Intervention	Phase			
05/31/07	33	0	3	0
06/02/07	21	0	6	15
06/06/07	28	6	14	14
06/08/07	3	8	17	12
06/09/07	5	3	1	2
06/11/07	2	0	0	4
06/12/07	2	6	6	6
06/14/07	0	12	6	6

Participant 3

The results for Participant 3 are shown in Figure 1. During baseline, switching occurred a mean of 15 times per 50 minute session, with a range of 1-48.

With the introduction of extinction in the 26th session, Participant 3 showed a typical extinction burst of switching, which first jumped to 48 times per session, and peaked at 111 switches in one session. The rate of switching began decreasing to a mean score of 54.8 over the last five sessions. The IRB was concerned about the logistical problem created by the pathology of the DID diagnosis. In that the participants were not clients of the researcher, the IRB believed it was in the participants' best interests to be returned as soon as possible to their treating therapists. With this in mind, the time needed to finish intervention on Participant 3 exceeded the limit established by the IRB. Data collection continued until then. She remained and continued under the care of her psychiatrist throughout and after the research. Consequently, the hypothesized outcome (reduction in switching) was not realized to the extent seen in Participant 1 & 2, although given the extinction burst, there is not reason to believe that similar results would not

have been obtained with Participant 3.

Co-presence of one or more alters was observed throughout the implementation of the treatment intervention. An added unpredicted and observable behavior was the presentations of a false alter masquerading as the participant's adult alter. The affect of this alter, the observable age (pre-school age), and the alter's area of concern differed from the presenting alter. The false alter was noted in Table 3 in a separate column. Unlike the rapid switch of Participant 2, wherein the alter did not take executive control, the false alter of Participant 3 did take executive control. Thus, the false alter switch was included in the number under the switches column in Table 4.

Table 4

Participant 3 Baseline and Intervention Data

Date	Switches	Caught Self	Co-presence	False alter
Baseline	Data			
07/17/06	48			
07/18/06	3			
10/17/06	12			
10/18/06	3			
10/19/06	9			
10/22/06	5			
10/30/06	1			
10/31/06	2			
11/06/06	18			
11/07/06	7			
11/10/06	27	0	0	0
11/13/06	27			
11/17/06	46			
11/21/06	21			
11/27/06	11			
11/28/06	8			
12/06/06	1			
12/07/06	10			
03/27/07	5	0	0	0

03/29/07	9			
04/09/07	18			
04/18/07	1			
04/23/07	11			
06/04/07	37			
06/11/07	29			
Intervention	Data			
06/18/07	48	0	0	15
06/19/07	68	0	4	26
06/20/07	74	0	25	47
06/21/07	41	1	10	11
06/22/07	107	13	22	61
06/23/07	95	5	54	44
06/24/07	111	0	60	61
06/25/07	35	2	3	4
06/27/07	53	2	2	10
06/28/07	64	0	4	13
06/29/07	70	4	1	11
06/30/07	52	11	4	3

Participant 4

This participant was continued at baseline and reached a stable rate at day 16. After graphing the data points (See Figure 1), it became obvious that the switching behavior was on a steady downward decline during baseline. Time permitting, she would have been considered for the intervention phase. When changes in trend and level are occurring during baseline, it becomes difficult to evaluate the effects of the intervention (Kazdin. 1982, p. 264).

Probes

After completing the review of the baseline and intervention phase, the raters reviewed six probes from the baseline videotapes (i.e., two probes from each of the first three participants) to ascertain whether the additional observable data (e.g., co-presence, catching oneself before switching, false alter) noticed by the raters during the review of

the intervention data were also present in the baseline data. After the reviewing the tapes, the additional observable data seen during intervention were not seen in the baseline probes.

Follow-up

A follow-up at six months for Participant 1 checked for ongoing treatment effects on the switching behavior. Three sequential days were set up consistent with the prior treatment model. The design, setting, prompts, videotaping, researcher, and rater remained identical with the initial intervention phase. Follow-up data indicated that Participant 1 had a reduction in her switching behavior, totally ameliorating all switching in the three follow-up sessions. The raters did not observe Participant 1 catching herself prior to switching, but did observe the occurrence of co-presence in all three follow-up sessions. Time did not permit follow-up on Participants 2 and 3.

Summary

Chapter IV presents the data that were collected and analyzed during baseline and intervention on the three participants involved in the current study. The data clearly show that a reduction occurred in the switching behavior after the implementation of extinction in Participants 1 and 2, and indicate that similar results would have occurred in Participant 3.

Participant 1 was on baseline for 11 sessions before the implementation of the treatment protocol. After 11 sessions, there was a dramatic decline in the switching behavior of Participant 1, which dropped eventually to 1. Participant 2 was on baseline 17 sessions before the implementation of the intervention. At session four, Participant 2, after an extinction burst, experienced a sharp decline in switching behavior, which

continued to decline until the switching behavior was totally eliminated. Participant 3 was on baseline the longest, 21 sessions. Participant 3 would have responded similarly had time allowed. An extinction burst was initially experienced across all 3 participants.

CHAPTER V

Discussion

Extinction has been used successfully to treat a wide variety of behavioral problems, including self-injurious behavior in developmentally delayed children (Lang, 2003), bizarre vocalizations in paranoid schizophrenics (Liberman, Teigen, Patterson & Baker, 1973; Wilder, Masuda, O'Connor & Baham, 2001), sleep problems with intellectually disabled children (Thackeray & Richdale, 2002), and food refusal in under-weight, normal and developmentally delayed toddlers (Lerman & Iwata, 1995, 1996). The results of the present investigation replicated the successes found within the aforementioned studies by using an extinction protocol in a multiple-baseline design across participants with Dissociative Identity Disorder. The use of an extinction protocol produced substantial reductions in the switching behaviors of two of the dissociative participants and would likely have done the same with Participant 3 had the study not been terminated.

The study's findings were consistent across the participants. Relative to the size of the sample, Kazdin (1982) emphasized that multiple-baseline designs must include a minimum of two baselines to strengthen the demonstration of change (although three is the typical number of baselines used). Nonetheless, direct or systematic replication would confirm even more conclusively that the change in behavior was directly attributable to the intervention.

Results relative to other studies' findings

Prior research that involved simple behavioral techniques have historically shown a profound response in ameliorating specific problematic behaviors across a broad

spectrum of diagnostic pathologies (Kazdin & Wilson, 1978), which include agoraphobia and anxiety disorders, diverse phobias, obsessive-compulsive disorders, moderately severe personality disorders, and psychotic disorders. Not surprising, behavioral techniques when used within the dissociative population had similar success as they do in other psychiatric populations. For example, Price and Hess (1979) eliminated the appearance of a hostile alternate personality in a hospitalized dissociative patient by teaching assertive communication techniques to express anger more openly. Anderson and Seidel (1992) found by changing treatment plans to include behavioral-oriented limit-setting over self-destructive behaviors in three dissociative patients that these behaviors quickly and effectively were reduced and eliminated. Lamberti and Cummings (1992) stopped the assaultive behavior of a dissociative patient by forming a human barrier whenever the dissociative patient threatened the treating therapist. Additionally in all of the aforementioned cases, limits that were set with the dominant personality were honored by all of the alter personalities even though each alter personality was not individually made aware of the imposed behavioral limits. This supports the finding that learning generalizes across alter personalities even though they may be "unaware" of each other's existence and activity (Dick-Barnes, Nelson & Aine, 1987). Greaves (1989) defines this phenomenon as co-consciousness, which is one of the precursors to integration.

The present study using the simplest of all behavioral techniques, extinction in the form of the discontinuance of all attending behaviors (e.g., verbal exchange, eye contact, body language), effectively and quickly produced clinically significant results similar to those typified in the aforementioned research studies that used behavioral strategies. This

experimentally controlled research significantly decreased and eliminated the switching behavior in two of the three participants and would most likely have affected the third if the research had continued. With the application of a principle originally derived from experimental psychology, human suffering was alleviated and functioning was enhanced, which is the very definition of behavior therapy (Mahoney, Kazdin & Lesswing, 1976).

Sar and Ross (2006) maintained that the studies conducted on the dissociative population have been lacking in empirical and experimental support. Earlier, Hornstein (1993) and later Neborsky (2003) indicated that experimentally tested therapeutic treatment protocols were missing in DID research studies. Putnam (1997) asserted emphatically that treatment outcome studies evaluating their efficacy have been needed; but were expensive to conduct and required a clinical research infrastructure. Irrespective of what the leading experts in the field contend, this current research was conducted without an expensive and clinical research infrastructure, yet maintained experimental controls, employed strong methodology, and demonstrated remarkable efficacy with the implementation of a simple and straightforward extinction protocol.

The major impediment to the leading DID researchers' (Braun, 1985; Chu, 1998; Kluft, 1985a, 1985b; Putnam, 1997; Ross, 1989) scientific exploration of the clinical treatment of the diagnosis has been the theoretical complexity of the diagnosis. A review of the literature on this topic revealed a plethora of untested theoretical explanations, which lack the empiricism and parsimonious view that this study offers. Unfortunately, untested treatment techniques have become the standard of care for DID clinicians (Bowers, et al., 1971; Kluft 1984; Ross, 1989). Therapy has been based on these untested theories which have "stood the test of time" (Kluft, 1985f, p. 5). In light of our

litigiousness society (Ceci, Ross & Toglia, 1991; Loftus & Ketcham, 1994; Trear vs. Sills, 1999), using techniques without sound empiricism lacks responsible as well as ethical conduct (APA, 1996).

This study employed a behavioral technique with marked success, presenting the clinical community with a technique that raises the standard of care and increases scientific integrity. The treatment protocol drew its strength from a well researched treatment intervention (extinction), coupled with strong methodological integrity (a multiple-baseline across participants). Thus, this simple but profoundly efficacious behavioral technique shifted treatment results from the anecdotal to the empirically tested.

Kazdin (1982) has stated that the multiple baseline design has repeatedly shown its utility in applied settings, including clinics, schools, the home, institutions, and the community for a variety of populations. With the aforementioned in mind, this study illustrated clearly how successfully this design was implemented with a difficult population (DID). The research's methodology specified a range of conditions that needed to be met, which can apply equally well to many conceptual approaches (Kazdin, 1982). Applying the methodology to the already existing DID research would either validate or repudiate the traditional DID treatment techniques forming more evidenced-based criteria.

The majority of DID studies are lacking in experimental rigor, which was employed in the present research. For example, Kluft (1991c), Putnam (1989), and Braun (1996) established phases and steps in the treatment of the dissociative patient. These treatment approaches were built on the "collective experience" of the psychiatric

community that treated the DID population (Ross, 1997, p. 266), but lacked a solid foundation of researched methodology. More recent treatment approaches (e.g., Allers, White, and Mullins, 1997; Briere, 2002; Haugaard, 2004; Silberg, 2000) systematically outlined the course that treatment should take, yet all remained untested theories. Lowenstein (2006), Kluft (2006), and Turkus and Kahler (2006) presented treatment interventions for the dissociative patient that were psychodynamically orientated, but were again without the experimental methodology needed to support their usage.

Similarly, Waiess (2006) found that by using a differential reinforcement procedure with the inpatient DID population that unwanted and unacceptable behavior was reduced, while correspondingly the more appropriate behavior increased. Waiess simply prohibited staff from acknowledging the different alters by name, which created an increase in more appropriate behavior for a patient on a hospital ward. Unfortunately, Waiess' anecdotal report lacked the experimental methodology employed in this current research.

Ross (1997) criticized the psychoanalytic tradition for its missing empiricism since "… [the] models cannot be tested or even modified by data" (p. 83). This is exemplified by Childs and Timberlake's research (1995), which employed a single-subject experimental design to research the effectiveness of psychodynamic play with a young DID client. The researchers discovered that psychodynamic play did not show any change on the behavior targeted for change. It can be argued that the psychodynamic approach should not be used in the treatment of the DID patient until this conceptual framework withstands the range of conditions that applies to strong methodology and

hence, evidenced based psychotherapy (Goodheart, Kazdin & Sternberg, 2006; Kazdin, 1981).

Benefits

The benign nature of this research's procedure, coupled with its strong efficacy made the dire predictions (e.g., suicidal or parasuicidal gestures, abreactions, re-traumatization, and emotional harm) of the sanctioned study group of the International Society for the Study of Dissociation and the members of the University's IRB Committee capricious and unfounded. The findings of the current research support two salient points: 1) evidence-based research ultimately tests the merits of a procedure and not the prejudgments of the academic and therapeutic community and 2) the leading researchers in the dissociative community should be supporting empirically researched treatment interventions conducted in a strong methodological framework (e.g., time out and extinction). Regrettably, the hesitancy of the psychodynamic and academic community to support a research model that diverges from their theoretical orientations echoes the problems with earlier behavioral research with schizophrenics in the 70's and 80's. However, without empirical understanding of the variables controlling behavior, the clinican is faced with selecting treatments based on subjective analysis (Mace et al., 1988).

The additional reported benefits shared by the participants anecdotally are considerable and had not been originally hypothesized. All three participants reported that amnesiac barriers were disintegrating, allowing information to pass across alternate identities. The participants felt that their lives were becoming more conscious and thus more volitional. Decisions were being made between the alters in unanimous fashion

with problem solving multi-lateral rather than unilateral. Future research should investigate this phenomenon in more depth.

An example of this could be seen with Participant 1, whose former unilateral decision making was employed in the criteria for those with whom she would form an intimate relationship. Her child alters chose her most recent paramour with this unilateral criteria (e.g., he was a policeman and he had a dog). The fact that he was a policeman and owned a dog represented to the child alters that this person was safe and good. The system fell into chaos when this person proved to be neither safe nor good. The criteria used by the child alters were influenced by the mental age of the alters, which was vastly different from the adult alters that used more advanced executive functioning when making life decisions. During follow-up with this participant, the extinction protocol was implemented and with just the initial instruction of "I will drop my head and stop talking when you switch from your adult primary alter", the adult alter remained present during the entire session. Participant 1 recognized immediately that her "kids" had been in charge of choosing this latest relationship. In the last two follow-up sessions not only did she not switch from her adult alter but also she reported that she had terminated the relationship with the policeman, acknowledging the need for the adult alter to stay present during adult decision-making periods (e.g., "The 'kids' cannot be in charge of who I become involved with").

Across all three participants, after successful implementation of extinction, the alters were less in conflict with each other and reported a greater understanding of the needs of the entire person as an integrated and unified being. With amnesiac barriers disintegrating and co-presence increasing as a result of the intervention, all the

participants noted that communication increased on an internal level among the personalities. According to Greaves (1989), increased internal communication was one of the 13 markers that signified the DID was moving towards integration or unity of consciousness.

Participant 1 reported less time detached from her body (depersonalization), which according to Greaves was another marker signifying that the system was moving towards integration. During Phase B (Intervention), Participant 1 commented on the phenomenon of leaving her body and would ground herself with several strategies: 1) sitting straighter or 2) placing her feet flat on the ground. This ability to stop the switching also generalized to her work situation where she reported that she was able to "stay in [her] body".

During the Intervention Phase, Participant 2 was brutally beaten by her husband. Although she declined to report the incident to the authorities, she did seek medical treatment. As a result of this incident, Participant 2 became acutely aware of the need to make critical life decisions from her adult alter. Her awareness of the need to maintain executive control generalized outside of the treatment setting. While in the home setting, Participant 2 reported having an internal dialogue with her alternate identities wherein all alters acquiesced that a mature perspective needed to be maintained. Hence, "switching" needed to cease in order to further "their" overall safety. As a result of her awareness and subsequent internal dialogue, she reported that she was able to "hold it together" (did not switch) during periods of domestic stress.

Participant 3 reported more awareness of her switching behavior both in the treatment setting and at home after the implementation of the treatment intervention. She

reported more attempts to stay present in her day to day activities. Although the switching behavior predictably increased during the Intervention Phase of the experiment, she was gradually gaining awareness that she had the power to one day gain control over her switching. The research project ended during the temporary increase of switching behavior (extinction burst). A confounding factor existed that most assuredly impacted the response of Participant 3 during Phase B. Her mother, also one of Participant 3's childhood abusers, died. Predictably, Participant 3's affect vacillated rapidly between relief and grief. Psychosocial stress commonly triggers the transition (switching) between alternate identities (*DSM-IV-TR*, 2000, p. 485). As one examines this participant's data, the switching reached an exceedingly high number (111) when compared to Participant 1 (81) and Participant 2 (33). In addition to the effects of extinction (i.e., extinction burst), the death of her mother could have exacerbated the number of switches. Irrespective of this significant life stressor, Participant 3's data were showing movement in an overall downward trend with the implementation of the extinction protocol. She was referred back to her treating psychiatrist and she will be followed up at a later date.

Additional observable data from the raters revealed other gains that had not been hypothesized but that were noted across participants. The first observation was that all three participants were able to "catch" themselves (i.e., remain in the adult alter) prior to switching from one alter to the next in varying degrees. The participants reported that this increased their sense of control, simultaneously giving them a reduction in the feeling of victimization. The concept of controlling one aspect of the dissociative phenomenon was truly empowering. The return of the locus of control to the participants could allow

a life of volition, choice, and assertion. Although "catching oneself" prior to switching is not a marker of integration as suggested by Greaves (1989), it probably should be, given that it contains elements that bring the individual closer to a united state of consciousness (e.g., heightened awareness of the switching phenomenon and the ability to control it).

The second observation noticed by the raters during the intervention phase across all three participants was an elevated number of incidents of co-presence. Co-presence was the simultaneous occurrence of two or more personalities, which included the awareness of the thoughts and feelings of the other personality. This discrete state was not measured since there was no plan in place to measure co-presence. Instead, the design of the research was to test the hypothesis of whether the extinction protocol would or would not reduce switching. Greaves (1989) spoke to the issue of co-presence stating that this was a marker that indicated the initial relative isolation of the alters was changing, a precursor to integration. Nonetheless, co-presence was a noteworthy observation arising after the implementation of the extinction intervention, and merits a more thorough investigation since it may add a useful parameter to the issue of integration.

The failure of a dissociative client to properly consolidate the personality structure is an etiological fact, which distinguishes this diagnosis from all others. The process of integration remedies this developmental failure and hence ultimately should become the primary focus of treatment. Nevertheless, final integration according to Greaves (1989) is but one step in a long series of "precursor" events. These precursor events are cumulative in effect and necessary to final integration. These behavioral markers (e.g., co-presence, co-consciousness, internal dialogues and negotiations,

catching one's self prior to switching) not only were produced with this research's extinction protocol but also are indices for both the clinician and the client that the integrative process is progressing.

Problems with Data Collection

The psychopathology of the population being researched caused numerous logistical problems, which were unanticipated. Frequent rescheduling occurred due to forgetfulness, mistrust, fear, psychiatric, and medical hospitalizations. Additional scheduling problems occurred that were non-pathological because the research participants were not in a closed setting (e.g., residential, inpatient, or school) limiting the researcher's accessibility to this population. Daily events often interfered with data collection including family obligations, vacations, school, and work schedules. Furthermore, stressful life events such as illnesses, domestic conflict, divorce, supervisor conflicts, changing residences, death of a friend and death of a family member interfered significantly with research appointments. The length of data collection thus increased exponentially and was not sufficiently anticipated to the degree that it occurred. Although the design of the study was simple, it was complicated not only by the participants' life events but also by the participants' psychopathology, which are closely interrelated.

Advantages and Disadvantages

The main advantages of using this treatment intervention were its simplicity of execution coupled with a marked change in behavior. This treatment intervention was cost effective, without any special setting, costly apparatus, or instrumentation required. Binary and practical gains from the research produced: 1) an adult alter exiting the

clinician's office, which safeguarded the client and the community with the life skills to drive a car or operate machinery and 2) an adult alter that would re-enter the world competent to take care of everyday activity (i.e., increased integration). Advantages created by the implementation of this very simple treatment intervention were the appearance of the precursor events or markers as outlined by Greaves, 1989. These markers allow the DID client and therapist to move more rapidly through the therapy process. The four markers that appeared during the extinction protocol (three of which were identified by Greaves, 1989) were: 1) co-presence, 2) intercommunication between alters, 3) lowering of amnesiac barriers, and 4) the ability to stop the switching before it occurred.

The disadvantages of this treatment intervention were limited to the utility of its use under two conditions: 1) the frequency and speed of the switch and 2) the unknown agenda of the alter, which emerged. That is, the intervention would be difficult to implement with a client exhibiting a low frequency of switching. Should an alter personality stay in place for weeks, months, or even years, the practicality of implementing this as a treatment intervention becomes logistically impossible. Neither a researcher nor a therapist can sit with a DID client or participant for a lengthy period of time (e.g., weeks, months, or years) before the switch occurs.

Another counter indication for the use of this intervention was the appearance of a homicidal or suicidal alter, which appeared during the research (baseline) with one of the original participants. This alter identified itself as the "Terminator". This alter had one responsibility, which was to protect the system against what it perceived as a threat. When the Terminator appeared, it was poised for action (e.g., going to kill her landlord).

At that moment, discontinuance of attending behaviors was not judicious. Instead, this researcher's normal protocol for this type of contingency followed forthwith (e.g., call to the local police and to the intended victim).

Limitations and Delimitations of the Study

Generalization of change across situations, settings, and over time cannot be determined with the present investigation since it was not measured. Kazdin (1982) addressed this issue: "The possibility exists that the results will be restricted to special circumstances of the experiments." In an earlier paper, Kazdin (1979) wrote that most treatment studies assessed the efficacy of the intervention under conditions wherein the participants were aware of the research but not in ordinary situations wherein behavior would not be assessed.

Specific to this study, generalization of change was limited in the following ways: 1) a clinical setting is different from a natural setting with few controls (e.g., a husband halting all communication with his dissociative wife, every time a personality change occurs, if it is even noticed at all), 2) in the natural environment, positive and negative reinforcers exist randomly, and 3) in the natural environment stressors can rarely be controlled (e.g., son going into the service, problems with a boss, economic difficulties). Notwithstanding the above, this is an easy procedure for others to implement with guidance from the treating therapist. Further, generalization was noted anecdotally across personalities and settings.

Replication of the research across a larger group of participants is further indicated in order to examine the generality of the findings (Kazdin, 1982). Replication could provide verification for external validity of the treatment effects across, "…a

variety of settings, behaviors, measures, investigators, and other variables that conceivably influence outcome" (Kazdin, 1982, p. 284). Kazdin argued that despite the need for replication studies in single-case research (and all research for that matter), this did not imply that there is an inherent problem with the methodology. He contended that "…stringent criteria for evaluating interventions in single-case research identify interventions with effects that are likely to be more potent and more generalizable than those identified by statistical techniques" (p. 287).

There were two areas of change that this researcher would have handled differently, both of which involved directions from the University of San Francisco's IRB. One IRB issue limited the duration of the research time. The prevailing belief of the IRB and the psychiatric community as a whole is that the complexity of the diagnosis assumes a fragility of personality that does not actually exist. Thus, research with the under- researched and poorly understood DID population is considered more hazardous. This study, should it have been allowed to run its course, increased the opportunity for the time needed for the target behavior of Participant 3 to change, which was not harmful but beneficial to her.

Another IRB issue that arose within this study revolved around the IRB's direction that the participants should not be clients of the researcher. It took considerably longer during baseline to establish trust and thereby to establish trends in the switching behavior with the participants, who did not know the researcher. Notwithstanding the above, the results are all the more powerful and clearly point to the fact that extinction and its effect has little or nothing to do with trust or a long, enduring treatment relationship. In summary, contingent on the request of the participants, the IRB should

have allowed the study to include the researcher's clients and allowed the research to continue to its final conclusion with no imposed deadline since the treatment was producing visible results.

Implications

The clinical significance of the current study was to research and establish a therapeutic intervention, which was shown to be very efficacious with the DID population. The treatment technique is simple to conceptualize, uncomplicated to implement, and straightforward to teach. It can be used as an educational model to train clinicians in graduate classrooms, supervision settings, or in consultation groups. The treating clinican could expect that by the using this technique appropriately, the logistical problems that arise in therapy (e.g., scheduling appointing, treatment continuity, establishing safety for the dissociative client) can be managed more effectively. The course of therapy should run smoother with the dissociative client feeling more in control of themselves and their environment and was present in therapy.

Some of the major shifts in society's mental paradigm, which eventually became established science (e.g., Darwin, Copernicus, Galileo, Newton), were initially challenged by the prevailing theorists. Irrespective of the initial challenges and obstacles in the early stages of this research's development, the study ultimately proved its value by the scientific acumen it employed and the powerful results that ensued. This study is hopefully the first of many controlled experimental studies on the effectiveness of techniques used with the DID population, shifting the prevailing paradigm for DID treatment.

Future Research

Future studies generated by this research might include studying the locus of control that a DID client achieves with the implementation of the extinction protocol with pre- and post-testing. Locus of control research would empirically clarify that the orientation of control of the switching behavior lies within the DID client. Dissociative pathology was created by the client in response to ongoing trauma. When the trauma has dissipated, dissociative pathology is no longer needed. The DID client is then free to modify dissociation.

Following this same reasoning, a research study employing assertiveness training would teach the DID client specific skills that would place the locus of control of their life decisions (healthy assertion) back under their control. Again, pre- and post-testing would measure the impact that assertion training has on the switching behavior.

Another study might include the measuring of the extent of co-presence that occurred as a result of the extinction protocol by creating and administering a self-report measurement scale. Other indices of initial integration found with the implementation of the extinction protocol (e.g., catching oneself prior to switching, removal of amnesiac barriers) could also be evaluated by this same self-report measurement scale.

Future research might also include an expansion of the time-out pilot study mentioned earlier. The same protocol used in the present study would be employed instead with time-out as the treatment intervention. The instruction to the DID participant might be, “When the adult alter switches, I will leave. When the adult returns, come and get me. I will be sitting outside this office door.” This protocol was employed during the pilot study and the adult alter returned consistently within minutes of the

therapist leaving the room. Due to the clinical concerns associated with this diagnostic group, a methodology using multiple baselines across participants seems well suited to this population, since reversals are unnecessary.

A final suggestion to future researchers in regard to complications which arise when investigating a profoundly disturbed psychiatric population would be to keep the scheduling of baseline and intervention individualized and flexible for each patient (e.g., DID diagnosis). The fundamental etiology of these diagnoses makes any predictable reliability for research scheduling difficult to maintain.

Summary

The earlier definition for evidenced-based psychotherapy as described by Sackett, Rosenberg, Muir-Gray, and Richardson (1996) is the, "…conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (p. 71). A more recent definition by the Institute of Medicine (2001) included the integration of clinical expertise and patient values with empirically based research evidence. This research meets the criteria for evidence-based psychotherapy and will add to this body of literature with the current investigation that showed the effectiveness of extinction as a treatment intervention on the switching behavior of the DID patient.

Notwithstanding the above, the findings of this study revealed the importance of utilizing the concept of parsimony, which keeps the clinician searching for the best results with the simplest of solutions. Additionally, the prejudices of the prevailing conceptualization of the DID client have been challenged with the present study in that the severity of the disorder is not incompatible with a simple approach. Of greater note from the study was that despite the complexity of the DID diagnosis, the implementation

of extinction as a treatment intervention was not complex and its efficacy significant, as well as far reaching.

Severe childhood trauma, which is the genesis of the psychopathology of a dissociative client, creates an impediment to a fully actualized life. There are no treatment interventions that can return to these victims the vigorous developmental platform that child abuse damaged. The goal of treatment for this population is to explore the possibility of developing the pretraumatized capacity to cope more effectively with daily struggles. The implementation of a simple extinction protocol as shown with the subjects in this study resulted in a coping strategy that will lead those with the DID diagnosis to an improved and healthier life.

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APPENDIXES

APPENDIX A

Diagnostic Criteria for DSM-IV (2000)
300.14 Dissociation Identity Disorder

A. The presence of two or more distinct identities or personality states (each with its own relatively enduring pattern of perceiving, relating to, and thinking about the environment and self).

B. At least two of these identities or personality states recurrently take control of the person's behavior.

C. Inability to recall important personal information that is too extensive to be explained by ordinary forgetfulness.

D. The disturbance is not due to the direct physiological effects of a substance (e.g. blackouts or chaotic behavior during Alcohol Intoxication) or a general medical condition (e.g., complex partial seizures). **Note:** In children, the symptoms are not attributable to imaginary playmates or other fantasy play.

APPENDIX B

Informed Consent Letter

Dear Potential Study Participant,

I am currently a doctoral student at the University of San Francisco, doing a research on a treatment intervention for Dissociative Identity Disorder. The results of this study may assist others with the Dissociative diagnosis and their treating therapist with a more effective treatment intervention.

I am seeking a number of people, men or women, with the diagnosis of Dissociative Identity Disorder. Participation will include an intake interview to verify the diagnosis, and the completion of a short client information form. The initial session should take less than an hour. Subsequent sessions for the research will be scheduled to accommodate both my schedule and your schedule. The study should take two weeks or ten business days scheduled into two consecutive weeks. The study will be conducted at my Fairfield counseling office, 628 Webster Street, Fairfield, CA 94533. Each session will be scheduled for one hour.

These sessions will be video taped. Two independent raters, myself and Lita Glor-Little will review the tape after the sessions are completed. Both independent raters are licensed Marriage, Family Therapists. They are both familiar with Dissociation having formerly been employed n a program for victims of sexual trauma.

All information obtained in this research which includes any identifying information will be kept strictly confidential. However the information from the research, which includes the video taping, may be furnished to the professors of the University of San Francisco that are supervising the project. Information gained from the study will be used to complete a doctoral dissertation, a requirement for an advanced degree. Information form the study may be used in future educational settings or publications but will not contain any of your identifying information.

These sessions will be set up like a therapy session. You may bring up any subject matter (therapeutic or non therapeutic in nature). I will be there to discuss and explore any area that you wish. I am a licensed therapist with the professional competency to deal with any issue that you choose to discuss.

The greatest benefit form your participation is the knowledge that you will be contributing to a study that may help others with the same diagnosis. There are few

instances wherein trauma victims can become proactive against their former trauma. Another more subordinate benefit is a daily therapy session for two weeks (or more) which will equal to 10 hour (or more) of psychotherapy. The frequency of thee sessions may help you resolve issues that might otherwise take longer to resolve.

Overall there should be little or no discomfort during the study. The initial minutes of video taping may cause come feelings of discomfort but these feelings should quickly subside. A new setting and a new therapist may also cause some discomfort. However, it has been my experience that these feeling will pass quickly.

I will not receive any monetary compensation for these sessions. Reciprocally, you will not receive any monetary compensation for your participation in the study. However, if there should be any out-of-pocket expenses for any means of transport (e.g., gas or public transportation), you will reimbursed, if you so request.

It is important to remember that your participation is completely voluntary. At any time during the research, you may cease your participation. If you should withdraw or refuse to participate in the study, there is not penalty or loss of benefit to you.

You may contact Dr. Terence Patterson, the chairperson of the USF Institutional Review Board for the Protection of Human Subjects, for any further questions you may still have (415-422-6091).

Thank you for considering participating in my research. I look forward to your response.

Sincerely,

June Canaris MA, MFT

I agree to participate in the research project

_____

Signature or Initials *Date*

APPENDIX C

Client Information Sheet

Date: _____

Name: _____

FIRST NAME LAST NAME, INITIAL ONLY

Age: _____ Gender: _____

Occupation: _____

Contact Number(s):_____

Therapist: _____ Telephone number: _____

Are there any medical conditions that I should be aware of? Circle One: YES NO

Please explain if the answer is yes: _____

_____

List all medications that have been prescribed to you, both the dosage amount and frequency (use the back of this paper if needed):

_____

_____

Primary Care physician: _____

Address: _____

Telephone Number: _____

Emergency Person and Contact Number: _____

PROVISIONS: It is my understanding that there will be no charge to me as a result of my participation in the study. No remuneration will be received by me as a result of my participation. I am willing to participate in this research for approximately 60 days, which is the estimated time to complete the research. I understand that I am under no obligation to continue my participation if at any time I decide not to. I understand that these sessions will be videotaped. All information will be handled confidentially and the information will be furnished to the professors involved in the research. The results from this study may help other clients with Dissociation Identity Disorder and their treating therapists. None of the foregoing information will be used outside this study. Information from this study may be used in future educational settings and publications minus any identifying information. Contact number of the researcher is 707-428-0716.

Please sign and date which signifies your agreement to participate in the research study:

Signature: _____Date:_____

APPENDIX D

Permission to Videotape

PERMISSION TO VIDEOTAPE

This is to certify that I consent to the videotaping of the research sessions. I understand these videotapes will only be reviewed by the researcher-therapist, inter-rater, and the faculty that is involved in the research project through the University of San Francisco. I understand that all videotapes will be destroyed at the end of the research project.

_____

Participant's Signature Date

_____

Researcher's Signature Date

APPENDIX E
Coding System (Dependent Variable)

NAME:
DATE:
TIME INTERVAL:

1. Facial changes _____

_____

2. Posture & Motor Behavior Changes _____

_____

3. Voice & Speech Changes _____

_____

4. Dress & Grooming Changes_____

_____

5. Blinking & Fluttering of Eyelids _____

_____

6. Trance-like Blank Stare _____

_____

7. Grounding _____

_____

8. Affect Changes _____

_____

9. Thought Process Changes _____

_____

10. Communication Difficulties _____

_____

11. Behavioral Age Changes _____

_____

12. Somatic Symptoms _____

_____