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Jesse M. Crosby
Utah State University

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ACCEPTANCE AND COMMITMENT THERAPY FOR THE TREATMENT OF COMPULSIVE PORNOGRAPHY USE: A RANDOMIZED CLINICAL TRIAL

by

Jesse M. Crosby

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

Michael P. Twohig, Ph.D. Major Professor	Scott C. Bates, Ph.D. Committee Member
Clinton E. Field, Ph.D. Committee Member	Thomas S. Higbee, Ph.D. Committee Member
Melanie Domenech Rodríguez, Ph.D. Committee Member	Byron R. Burnham, Ed.D. Dean of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2011

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ABSTRACT

Acceptance and Commitment Therapy for the Treatment of Compulsive Pornography Use: A Randomized Clinical Trial

by

Jesse M. Crosby, Doctor of Philosophy

Utah State University, 2011

Major Professor: Dr. Michael P. Twohig
Department: Psychology

Compulsive pornography use (CPU) is generally defined by the inability to control the use of pornography and the resulting negative effects on quality of life or general functioning including damaged relationships, loss of productivity, impaired performance at work or school, job loss, financial expenses, guilt/shame, and personal distress. Statistics indicate that CPU may be as common as other psychological disorders and that the effects of the behavior can be just as severe. It is estimated that 1.5% to 3% of the adult population of the United States meets the criteria for compulsive pornography use. A review of the literature found no randomized controlled investigations of psychosocial treatments for this problem.

This study reports the results of a randomized clinical trial of acceptance and commitment therapy (ACT) for the treatment of compulsive pornography use comparing an active treatment condition (n = 14) with a waitlist control (n = 14). The results showed

a significant 93% decrease in self-reported hours viewed per week from pretreatment to posttreatment compared to the control condition, which experienced a 21% decrease. In a 20-week follow-up assessment, the treatment group did not change significantly from posttreatment to follow-up with an 84% decrease, indicating relative maintenance of the treatment gains.

The control condition received the active treatment after the waiting period and was combined with the treatment group to calculate an overall effect size from pretreatment to posttreatment of 1.86. This is supported by clinical effectiveness data that shows 54% of the participants completely stopped viewing at posttreatment and another 39% of participants reduced viewing by at least 70% of pretreatment levels by posttreatment. Additional measures of quality of life, sexual compulsivity, and negative outcomes of sexual behavior were also completed and support the behavioral self-report results. These results are significant because they provide the first randomized group evidence of an effective treatment for compulsive pornography use. Implications and future directions are discussed.

(162 pages)

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Jesse M. Crosby

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CHAPTER I

STATEMENT OF THE PROBLEM

Compulsive pornography use (CPU) is generally defined by the inability to control the use of pornography, the experience of negative cognitions or emotions regarding pornography use, and the resulting negative effects on quality of life or general functioning (Coleman, Miner, Ohlerking, & Raymond, 2001; McBride, Reece, & Sanders, 2007; Reid, 2007). These negative effects could include damaged relationships, loss of productivity, impaired performance at work or school, job loss, financial expenses, guilt/shame, personal distress, and other forms of psychopathology (McBride et al., 2007). CPU has also been associated with increased contacts with mental health providers (Cooper, Griffin-Shelley, Delmonico, & Mathy, 2001). Similar to other behaviors that can become compulsive, the use of pornography is not viewed as inherently compulsive, as it is problematic only to the extent to which it becomes excessive and leads to problematic emotional, cognitive, or behavioral outcomes (Twohig, Crosby, & Cox, 2009).

Statistics indicate that CPU may be as common as other psychological disorders (e.g., specific anxiety disorders; Black, Kehrberg, Flumerfelt, & Schlosser, 1997; Kuzma & Black, 2008) and that the effects of the behavior can be just as severe (Cooper, Delmonico, & Burg, 2000; Schneider, 2000a). It is estimated that 1.5% to 3% of the adult population of the United States meet the criteria for compulsive pornography use (Black et al., 1997; Kuzma & Black, 2008). With the increased use of the internet, that number is likely an underestimate. For example, a study of over 9,000 internet users found that

between 9% and 15% of the participants reported distress related to their use of the internet for sexual purposes and 10% reported their behavior as “addictive” (Cooper, Delmonico, Griffin-Shelley, & Mathy, 2004).

A review of the literature found no randomized controlled investigations of psychosocial treatments for these problems. There is a large portion of the literature dedicated to the treatment of problematic sexual behaviors, but the treatment recommendations are based on clinical experience and professional judgment and not accompanied by experimental evidence. The bulk of the research on CPU is found in the literature on addictive or compulsive sexual behavior, and much of the focus of this research has been on how best to conceptualize and diagnose the behavior (Coleman, 1991; Cooper, Putnam, Planchon, & Boies, 1999; Mick & Hollander, 2006; Orzack & Ross, 2000; Rinehart & McCabe, 1998). The amount of anecdotal literature dedicated to the treatment of CPU and problematic sexual behavior in general is suggestive of the need for experimental research on treatments for this problem.

Current research on the way inner experiences (i.e., thoughts, emotions, physical sensations) are addressed with obsessive-compulsive disorder (OCD) and impulse control disorders may have important implications for the understanding and treatment of CPU (Abramowitz, Tolin, & Street, 2001; Salkovskis & Campbell, 1994). The research suggests attempts to control or avoid the urges to use pornography can lead to an increased intensity and influence of the urges. This is supported by recent research with CPU that demonstrated that the amount one struggles and attempts to control urges to use pornography mediates how problematic the viewing becomes (Twohig et al., 2009). The

paradoxical nature of attempts to control inner experiences appears to be one of the underlying issues of compulsive pornography use. Given this paradox, research has demonstrated the utility of acceptance-based procedures (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Levitt, Brown, Orsillo, & Barlow, 2004) especially when applied to intrusive thoughts/urges (Marcks & Woods, 2007). Acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) is an acceptance-based intervention and may be an effective treatment for CPU. There is a growing body of research in support of ACT for the treatment of a wide variety of disorders (Hayes, Luoma, Bond, Masuda, & Lillis, 2006), and ACT has also been demonstrated to be effective with the disorders to which CPU is most often compared (OCD, impulse control disorders, and substance use disorders; Black, 1998; Grant & Potenza, 2007; Schneider, 1994). The effectiveness of ACT for CPU has also been successfully demonstrated in a case series design and single subjects design in preliminary work by the author (Crosby & Twohig, 2009; Twohig & Crosby, 2010) to test the feasibility of ACT for CPU.

ACT appears to be a logical treatment choice with both theoretical and empirical support. Preliminary theoretical and treatment research has supported this conclusion and prepared the way for a larger randomized controlled trial. The purpose of the present investigation is to examine the effectiveness of ACT for CPU in a randomized group design. The specific research questions for this investigation were as follows.

1. Does the treatment group experience a significant change, compared to the control group, in the primary outcome measure (self-reported behavioral rates of pornography use)?

2. Does the treatment group experience a significant change, compared to the control group, on secondary measures of relevant outcomes (e.g., quality of life, sexual compulsivity, and negative outcomes of sexual behavior)?

3. Are the psychological processes (ACT processes) hypothesized to produce the change in the treatment group supportive of the outcomes?

CHAPTER II

REVIEW OF THE LITERATURE

Compulsive Pornography Use

Consistent with previous research, CPU is generally defined by the inability to control the use of pornography, the experience of negative cognitions or emotions regarding pornography use, and the resulting negative effects on quality of life or general functioning (Coleman et al., 2001; McBride et al., 2007; Reid, 2007). This could include damaged relationships, loss of productivity, impaired performance at work or school, job loss, financial expenses, guilt/shame, personal distress, and other forms of psychopathology (McBride et al., 2007). Similar to other behaviors that can become compulsive, the use of pornography is not viewed as inherently problematic. It is problematic only to the extent to which it becomes excessive and leads to problematic emotional, cognitive, or behavioral outcomes (Twohig et al., 2009). Thus, the amount of time or instances of viewing cannot be used as a sole cutoff for diagnosis. Just like certain compulsions in obsessive compulsive disorder, even a limited number of occurrences can be damaging, but the majority of individuals who meet diagnosis for CPU engage in a high rate of viewing. For example, participants in a recent small treatment study viewed on average 4 days per week at an average of 2 hours per day prior to treatment (Twohig & Crosby, 2010).

Research on CPU is found in the literature on problematic or compulsive sexual behavior, and much of the focus of this research has been on how best to conceptualize

and diagnose the behavior. Conceptualizations of CPU have included sexual addiction (Orzack & Ross, 2000), sexual impulsivity (Mick & Hollander, 2006), compulsive sexual behavior (Coleman, 1991), sexual compulsivity (Cooper et al., 1999), out-of-control sexual behavior (Salisbury, 2008), and hypersexual behavior (Rinehart & McCabe, 1998). Three formal classes of disorders have been used to provide criteria and terminology to conceptualize problematic sexual behavior: (a) substance use disorders (Schneider, 1994), (b) impulse control disorders (Grant & Potenza, 2007), and (c) obsessive-compulsive spectrum disorders (Black, 1998). In this investigation, the term "compulsive pornography use" was chosen as a descriptor of the problem because of the theoretical similarities of the problem to other impulsive or compulsive behaviors and to reserve the term addiction for substance use disorders. I do not intend to suggest that compulsive pornography use is the same as obsessive-compulsive disorder; it appears to have a unique set of defining characteristics.

The similarities of the disorders to which CPU is compared offer insight into the nature of the problem. The inability to control or regulate behavior is a problem among all three classes of disorders that CPU has been suggested to be part of (substance abuse/dependence, impulse control, and OCD spectrum). As with all three of these diagnostic categories, CPU involves a particular behavior or set of behaviors that is excessive and interferes with functioning. These disorders are also characterized by the influence of inner experiences such as thoughts (e.g., obsessions), emotions (e.g., anxiety), or physical sensations (e.g., cravings) on the problematic behavior. Indeed, the problematic behavior often functions to appease or avoid these inner experiences, just as

seen in the diagnostic criteria for most anxiety and impulse control disorders. CPU is also influenced by inner experiences where thoughts (e.g., sexual fantasies), emotions (e.g., stress, fear, sadness, anger, boredom), and physical sensations (e.g., sexual arousal, anxiety) play a role in the maintenance of the behavior (Coleman, 1991; Dodge, Reece, Cole, & Sandfort, 1994).

It has been noted that the literature dedicated to CPU is part of a larger body of literature dedicated to problematic sexual behaviors in general. This could include masturbation, phone or internet sexual interactions, visiting adult businesses, consensual sexual activity, infidelity or adultery, and/or prostitution (McBride et al., 2007). In addition to these behaviors, there is the category of paraphilias, most of which are criminal in nature in addition to other criminal sexual behavior (e.g., sexual assault). While there is no empirical basis for this, the literature and associated population of interest with problematic, addictive, or compulsive sexual behavior appears to be distinct from the literature associated with the paraphilias and criminal sexual behavior. It is clear that problematic sexual behaviors can serve a variety of functions and presentations ranging from mildly problematic to criminal. It is also clear that sociocultural views on the morality of sexual behaviors can vary by behavior as well. To maintain precision, the subject of this paper is limited to noncriminal compulsive pornography use, but it is important to place it in context of a larger class of problematic sexual behaviors.

Masturbation, in particular, deserves specific attention because viewing pornography is often accompanied by masturbation, and recent research has shown that masturbation is quite common among those aged 18-60 where 38% of women and 61%

of men reported any masturbation over the preceding year (Das, 2007). Similar to the viewing behavior, the problematic nature of masturbation is dependent on individual differences in the function of the behavior. Just like the viewing of pornography, masturbation has the potential of becoming problematic if the behavior is inconsistent with personal values. However, it is possible for an individual to have differing views on pornography compared to masturbation (e.g., one is okay and one is not) so to maintain precision the focus of this investigation will be on pornography use.

Negative Impact

Individuals who present with CPU and other variants of problematic sexual behavior have reported that their behavior was "compulsive," "addictive," or "impulsive" (Bancroft & Vukadinovic, 2004) suggesting that it is a behavior that is difficult to control. CPU has been linked to depression, social isolation, damaged relationships, career loss or decreased productivity, and financial consequences (Schneider, 2000a). It has been associated with anxiety, shame, guilt, potential legal problems, loneliness, and self-blame (McBride et al., 2007). It has also been suggested that there can be problems as a result of the religious/moral incongruence of the behaviors (Laaser & Gregoire, 2003). This can be especially apparent in a highly religious culture where a large part of the negative impact is a result of the inconsistency of the behavior with religious or spiritual morals, as is the case with the population from which this study was taken. In a survey of over 9,000 individuals who reported using the internet for sexual purposes, 21% of respondents reported their behavior had jeopardized an area of their life (Cooper

et al., 2000). Finally, CPU has also been associated with increased contacts with mental health providers (Cooper et al., 2001).

Researchers have repeatedly demonstrated a link between pornography use and damaged intimate relationships (Manning, 2006). CPU has been identified as a major contributing factor to marital separation and divorce (Schneider, 2000b), and it has been linked to decreased interest in relational sexual activity between affected partners (Schneider, 2003). Similarly, CPU has been associated with decreased satisfaction with significant others, their affection, physical appearance, and sexual performance (Zillman & Bryant, 1988). A recent survey of attorneys found that 56% of divorce cases involved heightened use of internet pornography by one partner (Dedmon, 2002). This is corroborated by research in which a greater percentage of women versus males consider internet pornography use as infidelity and damaging to the exclusivity of the relationship (Bergner & Bridges, 2002). This same research found that there are many situations where pornography use is welcome by couples, but there is a subset for those who use pornography by one of the partners that indicates that it is damaging to the relationship.

There is a large amount of literature that has identified a relationship between pornography use and negative societal effects. Much of this research represents pornography consumption in general, but it is likely that these outcomes also apply to those who compulsively use pornography. For example, research on the general effects of pornography found that the negative effects occurred after repeated exposure to pornography (Zillman & Bryant, 1988), which would suggest these negative effects are likely associated with compulsive use. The negative impact of pornography use includes

the exposure of children to pornography (Schneider, 2000b), with negative effects on the child such as premature sexual dialogue, anger, embarrassment, fear, and confusion (Black, Dillon, & Carnes, 2003). It is estimated that 12% to 20% of individuals who use internet pornography use their work computer to access materials leading to significant productivity and financial losses for businesses and risks of unemployment for the user (Cooper et al., 2000). Meta-analytic findings have shown that the consumption of pornography leads to a 31% increase in the risk of sexual deviancy, a 22% increase in the risk of perpetrating a sexual crime, and a 31% risk in the acceptance of the rape myth (i.e., that the rape victim is responsible for the crime because of behaviors or dress) (Oddone-Paolucci, Genuis, & Violato, 2000). Exposure to pornography has been linked to increased negative attitudes towards women (Garcia, 1986), and decreased empathy for rape victims (Linz & Penrod, 1988). Pornography consumption, especially violent pornography, is also correlated with subsequent behavioral aggression (Allen, D'Alessio, & Brezgel, 1995). Pornography use has been associated with extramarital affairs and participation in prostitution (Stack, Wasserman, & Kern, 2004). Increased pornography use is correlated with exhibitionism and voyeurism and other paraphilias (Langstrom & Seto, 2006). Pornography use by a sexual batterer increases the odds of sexual abuse actually occurring by a factor of 2 (Shope, 2004), and male domestic violence offenders who use pornography are more likely to engage in sexual abuse, stalking, and marital rape than male offenders who do not use pornography (Simmons, Lehmann, & Collier-Tenison, 2008). A recent study of 341 "child molesters" found that frequency and type of pornography use significantly predicted recidivism 15 years post incarceration (Kingston,

Fedoroff, Firestone, Curry, & Bradford, 2008).

Survey research was conducted to replicate these results with the specific population of interest (Twohig et al., 2009). Results showed that approximately 50% of the 84 males in the sample viewed internet pornography. Depending on the domain of interest, approximately 20% to 60% of those who reported viewing indicated that viewing was problematic. In multiple analyses, compulsive viewing was associated with guilt, shame, spiritual incongruence, interference at work or school, and damage to interpersonal relationships. Additionally, 56% of individuals who viewed pornography could report instances where they experienced negative behavioral outcomes from viewing (loss of employment, divorce, legal matters, low grades).

Like many compulsive behaviors, viewing pornography is not inherently problematic. Many people use pornography in ways that are functional and life enhancing. For example, pornography is often prescribed as a component of treatments for sexual functioning disorders (Both & Laan, 2008; Masters & Johnson, 1970). However, this investigation is concerned with the individuals for whom viewing is problematic in some way.

In summary, there are many immediate negative effects of CPU (e.g., self-esteem, possible job loss), and some are more distant (e.g., acceptance of rape myths). Statistics indicate that CPU may be as common as many other psychological disorders (Black et al., 1997; Kuzma & Black, 2008) and that the effects of the behavior can be severe (Cooper et al., 2000a).

Prevalence

It is estimated that 3% to 6% of the general US adult population meet the criteria for compulsive sexual behavior (Kuzma & Black, 2008). This estimate does not provide specific information on those who struggle with CPU, but an earlier study with individuals reporting compulsive sexual behavior reported over half had an interest in pornography as part of their compulsive behavior (Black et al., 1997), leading to an estimate of about 1.5% to 3% of the US general adult population. With the increased use of the internet, that number is likely an underestimate. For example, a study of over 9,000 internet users found that between 9% and 15% of the participants reported distress related to their use of the internet for sexual purposes and 10% reported their behavior as "addictive" (Cooper et al., 2004).

The advent of the internet has significantly changed the nature of pornography access and use (Cooper, 1998). It is estimated that approximately half of the US population uses the internet, 20-33% of whom access sexual content (Cooper, 2004), and this number has continued to grow and is expected to be significantly higher in the coming years, thereby increasing the prevalence and availability of pornography (Manning, 2006). In a survey of over 9000 individuals who had accessed pornographic or sexual content on the internet, 17% scored in the problematic range for sexual compulsivity (Cooper et al., 2000). In another survey of males involved in online sexual activity, 6.5% reported problematic outcomes as a result of internet sexual behaviors (Cooper et al., 2001). A recent study found that 67% of young men and 49% of young women agreed that viewing pornography is acceptable, and 87% of male respondents and

31% of female respondents reported that they viewed pornography (Carroll et al., 2008). This would suggest that for males there is a portion (20% in this case) who view pornography and find it unacceptable. It is likely that increased use of the internet would lead to increased rates of CPU, and recent economic research designated Utah, as the highest consumer of paid internet pornography (Edelman, 2009).

While this problem does occur among females and adolescents, the problem appears to be much more common among males and the bulk of the research has systematically addressed the problem with adult males (Manning, 2006). In a study of 37 individuals reporting compulsive sexual behavior, 78% of the participants were male (Black et al., 1997). Similarly, in survey research with 290 respondents reporting "sexual addiction," 80% of the participants were male (Carnes & Delmonico, 1996), and in another study of 76 individuals attending a 12-step program for sexual concerns, 84% were male (Schneider & Schneider, 1996). This has important implications for this investigation, as all the participants were male so the generalizability to females is limited, but this does not confound the research as most of the individuals dealing with CPU are likely to be male.

Current Treatments

For compulsive sexual behaviors in general, as well as CPU specifically, a review of the literature found no randomized controlled investigations of psychosocial treatments for these problems. There is a large portion of the literature dedicated to the treatment of problematic sexual behaviors in terms of clinical judgment and experience but the

recommendations are not accompanied by empirical support. The treatments that have been suggested or investigated include motivational interviewing (MI; Del Giudice & Kutinsky, 2007), cognitive behavior therapy (CBT; Young, 2007), 12-step programs (Schneider, 1994), and emotion-focused therapy (Reid & Woolley, 2006). While these recommendations are promising, they are not supported with controlled outcome work and the uncontrolled work that does exist is often with variants of CPU (e.g., compulsive internet use, relationship problems from viewing). The amount of anecdotal literature dedicated to the treatment of CPU and problematic sexual behavior in general is evidence of the need for controlled research on treatments for this problem.

Underlying Psychological Processes

Current research on the way inner experiences (i.e., thoughts, emotions, physical sensations) are addressed in OCD and impulse control disorders may have important implications for the understanding and treatment of CPU. The thought suppression literature (Wegner, 1994; Wegner, Schneider, Carter, & White, 1987) has demonstrated that deliberate thought suppression can result in increases in neutral or nonintrusive thoughts once suppression attempts are terminated. When investigated with unwanted intrusive thoughts, it has been found that deliberate suppression in nondiagnosed individuals resulted in an increase in the occurrence and intrusiveness of the thoughts (Rutledge, 1998; Salkovskis & Campbell, 1994; Trinder & Salkovskis; 1994). Paradoxically, attempting to control thoughts might increase their intensity and influence (Abramowitz et al., 2001). This paradox is also found in work with the disorders to which

CPU is most often compared including OCD (Abramowitz et al., Lackey, & Wheaton, 2009), trichotillomania (Norberg, Wetterneck, Woods, & Conelea, 2007), and substance abuse/ dependence (Forsyth, Parker, & Finlay, 2003).

Research on thought action fusion has demonstrated the tendency of individuals to fuse with thoughts so that thinking the thoughts is comparable to actually performing the behavior or that thinking a thought makes that event more likely to happen (Rachman, Thordarson, Shafran, & Woody, 1995). This would influence the distress caused by the thoughts as well as the need to respond behaviorally to them. This struggle with thoughts is an important part of how sexual compulsivity is defined and measured (Coleman, 1991). Indeed, a commonly used measure of sexual compulsivity addresses the struggle to control sexual thoughts and behaviors (Kalichman & Rompa, 1995). It appears that attempts to control or avoid the urges to use pornography can lead to increased intensity and influence of the urges. This is supported by recent research with CPU that demonstrated that the amount one struggles and attempts to control urges to use pornography mediates how problematic the viewing becomes (Twohig et al., 2009).

Acceptance and Commitment Therapy

The paradoxical nature of attempts to control inner experiences appears to be one of the underlying issues behind compulsive pornography use. Traditional thought suppression or distraction techniques may actually be counterproductive in addressing this problem and it is likely that an increased focus on the problem may lead to an increase in inner experiences and possibly subsequent behaviors. Given this paradox,

research has demonstrated the utility of acceptance-based procedures (e.g., Campbell-Sills et al., 2006; Levitt et al., 2004) especially when applied to intrusive thoughts (Marcks & Woods, 2007). Acceptance-based procedures foster open experience of internal experience (thoughts, emotions, physical sensations) instead of attempts to control internal experience. The focus of the intervention is on the behavioral response to the internal experiences. This is the focus of ACT (Hayes et al., 1999), and suggests ACT may be an effective treatment for CPU. ACT falls under the cognitive behavior therapy tradition because it targets inner experiences (i.e., thoughts, feelings, and sensations), implements behavior change strategies, and maintains a commitment to empirically based practice. ACT targets processes that generally aim to decrease the effects of inner experiences on overt behavior (e.g., urges to use pornography in this case) and increase the effects of other inner experiences (e.g., personal values to engage in meaningful activities) on behavior.

There is a growing body of research in support of ACT for the treatment of a wide variety of disorders (Hayes et al., 2006), and because ACT is a process-based treatment approach, it is informed by research on shared processes that support many forms of pathology. The specific ACT processes are supported on their own in component studies showing that movement of those processes affects outcomes in addition to effective outcomes from the entire treatment package (Hayes et al., 2006). Specifically, inner experiences are targeted through addressing *acceptance* (willingness to experience inner experiences and not work to regulate them when useful; e.g., Campbell-Sills et al., 2006; Levitt et al., 2004), *defusion* (experiencing inner experiences as they are without

additional verbal functions; e.g., Masuda, Hayes, Sackett, & Twohig, 2004), *self as context* (experiencing oneself as the context where inner experiences occur, and not being defined by inner experiences), *being present* (noticing inner and outer experiences as they occur, nonjudegmentally; e.g., Arch & Craske, 2006), *values* (defining areas of life that are important and meaningful; e.g., Paez-Blarrina, Gutierrez-Martinez, Valdivia, Ortega, & Rodriguez-Valverde, 2008), and *committed action* (moving in the valued direction supported by behavior therapy procedures). Ultimately, this work will foster *psychological flexibility,* which is the ability to move in a meaningful direction without particular regard for any inner experience (Hayes et al., 2006).

ACT has been demonstrated to be effective with the disorders to which CPU is most often compared (OCD, impulse control disorders, and substance use disorders). The effectiveness of ACT for OCD has been shown in a controlled trial and a multiple baseline across participants design (Twohig, Hayes, & Masuda, 2006a; Twohig et al., 2010). There is extensive research on ACT and habit reversal in the treatment of trichotillomania (Twohig & Woods, 2004; Woods, Wetterneck, & Flessner, 2006), and ACT alone for chronic skin picking (Twohig, Hayes, & Masuda, 2006b). There have been multiple controlled trials that have shown that ACT is an effective treatment for nicotine smoking cessation (e.g., Brown et al., 2008; Gifford et al., 2004), polysubstance abuse (Hayes, Wilson, et al., 2004), and multiple baseline across participants design for marijuana dependence (Twohig, Schoenberger, & Hayes, 2007).

Current standards of evidence-based practice in psychology (APA Presidential Task Force on Evidence-Based Practice, 2006) indicate that applying ACT for the

treatment of CPU is appropriate given the current evidence base with similar problems. The case for applying ACT to CPU is strengthened further by preliminary work with ACT for CPU by the author. In a case series design, the feasibility of ACT for CPU was tested in three male participants in a case series (Crosby & Twohig, 2009). The participants all endorsed distress due to their inability to control the behavior, interpersonal distress in dating or marital relationships, decreased productivity, and guilt or shame from the religious/moral incongruence of their behavior. The intervention consisted of eight sessions of ACT delivered once a week for 8 weeks with a follow-up assessment after 12 weeks. At each session, the participants reported the number of hours of viewing for that week and answered a series of questions designed to measure the movement of ACT processes (e.g., How much do you fight against your urges to view?). The amount of reported viewing across participants decreased to zero at posttreatment and this was maintained at follow-up. The process measure (a face valid measure of ACT processes with ratings of 0-100 where higher scores indicate higher psychological inflexibility) average at pretreatment was 58.3, improved to 6.6 at posttreatment, and ended with a slight increase at follow-up (14.3). The process measure was consistent with the behavioral outcomes, as it changed with the behaviors indicating that the behavior change could be attributed to the intervention. The participants all reported improved quality of life and decreased distress, and this was confirmed by increases in a measure of quality of life given at pretreatment, posttreatment and follow-up.

The case series was followed by a single subjects design study (Twohig & Crosby, 2010) to establish preliminary evidence of ACT for CPU. This study tested the

effectiveness of ACT for CPU in six adult male participants treated in eight 1.5-hour sessions of ACT for CPU. The participants all reported that their pornography use was affecting their quality of life. The effects of the intervention were assessed in a multiple baseline across participants design with time viewing pornography as the dependent variable. Treatment resulted in an 85% reduction in viewing at posttreatment with results being maintained at 3-month follow-up (83% reduction). Increases were observed on measures of quality of life, and reductions were observed on measures of OCD and scrupulosity (moral-based subtype of OCD). Weekly measures of ACT consistent processes showed reductions that corresponded with reductions in viewing. Reductions were also observed on a measure of psychological flexibility. These findings, coupled with the lack of treatment outcome work in this area, suggest the need for a larger controlled trial of ACT for CPU.

Conclusion

A review of the literature found that problematic sexual behavior has received significant attention, but the majority of the research has focused on conceptualizing the problem and little empirical work has been done to address treatment questions. Compulsive pornography use, specifically, has been associated with negative intrapersonal, interpersonal and societal outcomes suggesting the need to address the problem. The amount of literature dedicated to understanding the problem also points to the treatment demands experienced by clinicians. ACT appears to be a logical treatment choice with both theoretical and empirical support. Preliminary theoretical and treatment

research has supported this conclusion and prepared the way for a larger randomized controlled trial. This study will compare an ACT treatment condition with a waitlist control for the treatment of compulsive pornography use.

CHAPTER III

METHOD

Participants

Twenty-eight participants met eligibility requirements for participation in the study. Participants were eligible to enroll in the study if they met criteria for compulsive pornography use established from the preliminary investigations of ACT for CPU as no formal diagnostic criteria have been established (Crosby & Twohig, 2009; Twohig & Crosby, 2010). The criteria for inclusion were: (a) the individual must have been engaged in compulsive pornography use for greater than 6 months; (b) the individual must be viewing pornography with a frequency of at least two sessions a week, on average, for the month previous to enrolling in the study; (c) the individual must be experiencing significant distress and/or functional impairment in his life; and (d) the individual must have had at least one unsuccessful attempt at stopping the behavior. Participants were excluded if they (a) were currently receiving psychotherapy; (b) started, changed, or were planning to change a psychotropic medication in the last 30 days; (c) not capable of participating in the research due to physical/medical complications; (d) met criteria for substance dependence; or (e) have been diagnosed with mental retardation or a developmental disability. Individuals with comorbid disorders other than those listed in the exclusion criteria were allowed to participate. Eligibility was assessed using a semi-structured interview and an abbreviated version of the Structured Clinical Interview for DSM-IV Axis I Disorders, Clinician Version (SCID-C).

Participants were recruited from an adult community population. It has been noted that the bulk of the research in this area has been done with male samples because more males appear to struggle with problematic sexual behaviors (Manning, 2006). It was anticipated that the majority of interested participants would be male, so any females that responded to recruitment efforts would be treated but not included in the analyses because the number of female participants would be too small to make any meaningful inferences about the population of interest. Two females contacted the investigator by email about participation in the study, but did not respond to the email response that provided further information about the study and an invitation to schedule a pretreatment assessment. Overall participant characteristics are provided in Table 1.

Design

The effects of the treatment were assessed through a randomized controlled trial with a waitlist control group. A waitlist control group was chosen because there are no current empirically supported treatments of this problem with which to compare the active treatment. The waitlist design is advantageous because all participants eventually receive the active treatment and there is no need to use inert treatments such as placebo controls. Additionally, the waitlist design controls for threats to internal validity including history, maturation, selection bias, and repeated testing.

The sample of participants was self-selected. The intended sample size was 30 total participants, 15 per group. This was based on a preliminary power analysis conducted using G*Power software (Faul, Erdfelder, Lang, & Buchner, 2007), with an

Table 1

Participant Characteristics

Variable	*N*	%	*M*	*SD*
Sex				
Male	28	100.0		
Female	0	0.0		
Age			29.3	11.4
Education (years post high school)			3.4	2.0
Marital status				
Single	13	46.4		
Married	14	50.0		
Remarried	1	3.6		
Race				
Caucasian	26	92.9		
Hispanic	2	7.1		
Religion				
Latter-day Saint	27	96.4		
No affiliation	1	3.6		
Years of compulsive pornography use			13.6	11.8
Means of access to pornography				
Internet			28	100.0
Magazines			3	10.7
Cable/satellite			5	17.9
Video rental			1	3.6
Other			1	3.6
Additional problematic sexual behaviors				
Masturbation			27	96.4
Phone/internet sex			3	10.7
Strip club			1	3.6
Infidelity			1	3.6
Prostitution			1	3.6
Previous treatments for compulsive pornography use				
Individual therapy			13	46.4
Group therapy			4	14.3
Support group/12-step			7	25.0
Religious counseling			6	21.4
Self –help			2	7.1

(*table continues*)

Variable	*N*	%	*M*	*SD*
Previous diagnosis (self-report)				
Depression			4	14.3
Bipolar			2	7.1
Generalized anxiety			1	3.6
Obsessive-compulsive disorder			4	14.3
Attention deficit/hyperactivity			3	10.7
Comorbid diagnosis (SCID)				
Major depressive disorder			5	17.9
Bipolar I			1	3.6
Generalized anxiety disorder			2	7.1
Obsessive-compulsive disorder			1	3.6
Current psychotropic medications				
Antidepressants			3	10.7
Mood stabilizers			1	3.6
Antipsychotics			1	3.6

alpha level of .05 and power of .80. The power analysis was informed by a pilot study of ACT for CPU that resulted in a large effect size (Twohig & Crosby, 2010). A power analysis using a large effect size of .4 specified a sample of 22 participants to detect a large effect in a repeated-measures ANOVA. A power analysis using an effect size of .35 specified a sample of 28. An actual sample of 28 participants was enrolled, 14 per group.

Procedures

Participants were recruited by newspaper ads, flyers placed throughout the community, and announcements in university classes (see Appendix A). It was noted in the introduction that there is some argument about how to conceptualize and refer to the problematic use of pornography. Because it is often labeled as an addiction in popular media, this was the terminology used in the recruitment materials. Participants responded

to the recruitment efforts by phone or email and any questions or concerns regarding the study were answered. After agreeing to participate in the study, participants attended a 2-hour pretreatment session during which they were provided with an informed consent (see Appendix B) for their review and signature. The informed consent included a description of the purpose and procedures of the study including an overview of the treatment process. This initial session also included the interviews to assess for eligibility and the administration of the measures (see Appendix C) to gather information on the participant's background, their relevant difficulties, and other information pertaining to the research questions.

After completing the pretreatment assessment, participants were randomly placed in either a treatment or a waitlist group. Random assignment was accomplished using slips of paper listing the group assignment drawn at random, without replacement, for each participant. Randomization took place after the participants had completed the informed consent and pretreatment assessment measures. Randomization was generated by the author who was not blind to group assignment.

To assess the effectiveness of the treatment, the assessments were administered at posttreatment and at a 12-week follow-up session. Self-report behaviors and ACT processes were also given at each session to track client progress. Participants in the treatment group began treatment immediately after randomization. Participants in the waitlist group began treatment after 12 weeks had elapsed and they had completed the postwaitlist assessment. Participants in the waitlist condition completed additional posttreatment and 12-week follow-up assessments after their treatment had been

completed. Table 2 visually illustrates the assessment periods.

Measures

Background Information

Participants completed questions about sex, marital status, age, education, ethnicity/race, current religious affiliation, religious activity, religious importance, years of CPU, how pornography is accessed, other problematic sexual behaviors, previous treatment attempts for CPU, other psychological diagnoses, and current psychotropic medications.

Self-Report

Participants were asked to report actual pornography viewing behaviors to be used as the primary outcome measure in the study. To improve the accuracy of self-report, a modified version of the Daily Drinking Questionnaire (DDQ) was used to measure weekly sessions of pornography viewing and the number of hours spent viewing. The DDQ is an instrument developed to measure the quantity of alcohol use as well as hours spent engaging in alcohol consumption (Collins, Parks, & Marlatt, 1985). The format of the DDQ improves the accuracy of self-report and has been shown to be

Table 2

Assessment Periods

Group	Week 1	Week 12	Week 24	Week 36
Treatment group	Pretreatment	Posttreatment	Follow-up	N/A
Control group	Pretreatment	Postwaitlist	Posttreatment	Follow-up

valid and reliable (Baer, Stacy, & Larimer, 1991; Neighbors, Lee, Lewis, Fossos, & Larimer, 2007). The modified version of the questionnaire asks participants to record the number of urges to view pornography, the number of sessions of viewing pornography, the number of hours spent viewing, and the number of instances of masturbation for each day of the week. The daily results were reported to the therapist at each weekly session. By summing the results, weekly hour totals were obtained.

Quality of Life Scale

The Quality of Life Scale (QOLS; Burckhardt, Woods, Schultz, & Ziebarth, 1989) is a 16-item scale that measures how satisfied people are with the quality of their lives in several areas (e.g., relationships, employment, health, recreation), and has been used in a variety of populations. The items are rated on a 1-7 point scale where 1 = "terrible," and 7 = "delighted." The measure is scored by summing the scores for all 16 items. It has been found to be internally consistent (α = .89 to .92), and has demonstrated temporal reliability stability (r = .78 to .84) over 3 weeks.

Sexual Compulsivity Scale

The sexual compulsivity scale (SCS; Kalichman, Johnson, Adair, & Rompa, 1994) consists of 10 items designed to assess sexual compulsivity. Seven of the item address sexual desires and the how an individual reacts to them, and three of the items focus more on the negative effects of sexual thoughts and behaviors. The SCS has been shown to have adequate validity and reliability (Dodge et al., 2004; Kalichman et al., 1994; Kalichman & Rompa, 1995; Perry, Accordino, & Hewes, 2007). It is internally

consistent (α = .86) and has test-retest reliability of .64. The SCS has also been found to be predictive of internal difficulties (e.g., loneliness, low self-esteem, and beliefs about self-control; Kalichman et al., 1994), and lack of intention to change potentially problematic sexual behaviors (Kalichman & Rompa, 1995). The SCS has been shown to predict problematic sexual behaviors, and it predicts internal events that are conducive to engaging in sexual behaviors that are likely to be problematic.

Cognitive and Behavioral Outcomes of Sexual Behavior Scale

The Cognitive and Behavioral Outcomes of Sexual Behavior Scale (CBOSB; McBride et al., 2007) consists of 20 items measuring cognitive problems due to sexual practices and 16 items measuring experienced negative consequence in the past year due to sexual practices. The CBOSB has demonstrated adequate reliability and validity (McBride et al., 2007). Internal consistency for the CBOSB cognitive scale has been high (α = .89), while slightly lower for the behavioral scale (α = .75). The construct validity of the subscales has been demonstrated using a principal component analysis in which the six factors/subscales explained 74.8% of the total variance. Separate reliability estimates have also been calculated for each of the subscales ranging from .75 to .95.

Acceptance and Action Questionnaire

The Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) is a 9-item questionnaire that measures psychological flexibility, the target process of ACT. Questions are rated on a 7-point Likert scale. Lower scores reflect greater psychological flexibility. The AAQ has adequate internal consistency (α = .70) and test-retest reliability

(r = .64), and has demonstrated relationships with other psychopathology (Hayes et al., 2004).

Session Questionnaire

The Session Questionnaire (SQ) is a face valid measure of ACT processes created for this study following an approach in other treatment outcome research (e.g., Rhéaume & Ladouceur, 2000) and ACT research (e.g., Bach & Hayes, 2002; Twohig et al., 2006a), including the preliminary ACT research for CPU (Twohig & Crosby, 2010). Participants are asked: (a) "How believable are your thoughts and urges to view pornography? (0 = Not At All, 100 = Very Believable)," (b) "How often do you fight against your thoughts? (0 = Not At All, 100 = All the Time)," (c) "How distressing are they? (0 = Not At All, 100 = Very Distressing)," (d) "How similar is having a thought to acting on it? (0 = Not At All, 100 = Very Similar)," and (e) "How much does thinking the thought affect whether you will engage in the behavior? (0 = Not At All, 100 = Very Likely)." Results can be used to track ACT processes from session to session to help guide treatment and analyze processes of change. This measure does not have any established psychometric properties.

Treatment

Preexisting treatment manuals (i.e., ACT for OCD and ACT for Trichotillomania) were adapted for the preliminary studies for ACT for CPU. The success of the preliminary work resulted in a new 12-session treatment manual that specifically addresses ACT for CPU. Treatment consisted of 12 individual weekly 1-hour sessions of

ACT. The goals of this treatment protocol are: (a) to help the client determine effective strategies for responding to urges to engage in the pornography use, (b) to practice using these strategies outside of session, (c) to gradually decrease pornography use, and (d) increase occurrence of high quality of life activities. The full treatment manual is included in Appendix D. Table 3 provides a summary of the treatment components and specific interventions used.

Table 3

ACT for CPU Treatment Components

Session	Treatment components	Exercises/content
1	Informed consent	Warning that therapy may result in emotional discomfort Commitment to complete all eight sessions
	Limits to confidentiality	Suicide, homicide, and abuse of children or disabled adults The viewing of child pornography will be reported
	Values	Increasing quality of life Support client goals of either no viewing or reduced and controlled amounts of viewing
	Acceptance	Identify the distinction between viewing and urges to view
2	Acceptance	Short-term vs. long-term effectiveness of attempts to control urges Identify the negative impact of attempts to control urges Highlight paradoxical nature of attempts to control urges using the *Man in the Hole* metaphor
3	Acceptance	Reinforce the futility of attempts to control urges Identify attempts to control urges as part of the problem using the *Polygraph*, *Chocolate Cake*, and *What are the Numbers?* exercises Discussion of the social contexts that support regulation of private events using the *Rule of Private Events* exercise Introduce acceptance as an alternative to control using the *Two Scales* metaphor
4	Acceptance	Review acceptance by demonstrating that the willingness to experience urges is a chosen behavior and alternative to control using the *Two Scales* metaphor Identify the decrease in effort required to willingly experience urges
	Values	Brief discussion of client values to give purpose and meaning to acceptance Discuss what could be gained by letting go of the control agenda
	Committed action	Behavioral commitments to gradually reduce viewing Behavioral commitments to engage in value-based activities instead of attempting to control urges
5-8	Defusion	Teach the limits of language and its role in suffering using the *Your Mind is Not Your Friend Intervention* Undermine cognitive fusion using the *Passengers on the Bus* metaphor
	Self as context	Identify the self as the context where inner experiences occur using the *Chessboard* metaphor Explain that the client does not choose what inner experiences occur, but that they can choose what to do with them
	Contact with present moment	Help the client be present with their inner experiences using the *Awareness of Inner Experiences* exercise Identify the importance of being present while not being heavily attached to inner experiences
	Acceptance	Identifying opportunities for acceptance from out of session practice Encourage acceptance of any problematic inner experiences
	Committed action	Behavioral commitments to continue to reduce viewing Behavioral commitments to engage in value-based activities instead of attempting to control urges

(*table continues*)

Session	Treatment components	Exercises/content
9-10	Values	Define the concept of values Clarify the client's values and assess the consistency of the his/her behavior with those values using the *Values Assessment Homework*
	Committed action	Behavioral commitments to continue reduced viewing Increased behavioral commitments to engage in valued living based on recent values work Discussion of relapse management using the ACT skills
11	Review	Review any processes that still need attention
12	Termination	Summarize the treatment using the *Joe the Bum* metaphor Apply ACT processes to relapse management Apply ACT processes to termination Suggest *Get Out of Your Mind and Into Your Life* workbook for continued progress

Note. Italicized exercises are from Hayes and colleagues (1999).

CHAPTER IV

RESULTS

Data Analytic Strategy

Reporting of the methods and results followed established reporting guidelines (APA Publications and Communications Board Working Groups on Journal Article Reporting Standards, 2008). This paragraph will provide a summary/overview of the analyses. First, preliminary reports of treatment adherence and participant flow were prepared. Next, the procedures for addressing missing data were discussed followed by an evaluation of the randomization procedure to ensure the randomized groups can be considered equal. Next, the primary outcome variable (behavioral rates of viewing) was statistically evaluated in a group comparison from pretreatment to posttreatment and then for maintenance at follow-up. This is followed by similar analyses with the secondary outcome variables. The two conditions were then combined for additional analysis of effect size, clinical significance, and maintenance at follow-up for the combined group. Then, an evaluation of the processes hypothesized to produce the change in the outcome variables was conducted with the combined groups. Finally, additional auxiliary analyses of interest (the role of religion, marital status, and masturbation) were conducted with the combined groups.

Treatment Adherence

The intervention was provided by the author (23 participants), a licensed

psychologist (2 participants), and an advanced graduate student (3 participants). Both graduate student therapists were supervised by the licensed psychologist. All of the treatment sessions were recorded (video and audio) to monitor treatment integrity. A sample of the sessions (68 of 315, 21.59%) was selected to be viewed and scored for treatment integrity using a standardized treatment integrity scoring system used in previous ACT research (Twohig & Crosby, 2010; Twohig et al., 2006a, 2006b). A new scoring system was also developed as part of this project to provide more detailed information about treatment content and integrity. The sessions to be reviewed were selected systematically and objectively so that of the 12 total sessions, approximately three sessions from each participant and six of each session number, were reviewed. The review of the sessions was conducted by three trained graduate students who were required to participate in 6 hours of training with a psychologist experienced with ACT. After the training, each reviewer viewed two sessions independently of the experienced psychologist and the ratings were compared for reliability. Each reviewer scored at .90 or above reliability when compared to the experienced reviewer.

In a standardized scoring system (see Appendix E), sessions were scored for both the quantity of coverage and the quality of coverage of each ACT process on a 5-point Likert scale. For quantity of coverage, 1 = the process was never explicitly covered, 2 = the process occurred at least once and not in an in-depth manner, 3 = the process occurred several times and was covered at least once in a moderately in-depth manner, 4 = the process occurred with relatively high frequency and was addressed in a moderately in depth manner, and 5 = the process occurred with high frequency and was covered in a

very in-depth manner. The review showed that all of the ACT processes were rated as a 5 in at least one of the reviewed sessions, indicating that all of the ACT processes were covered in depth in at least one session. The mean ratings for each process over all twelve sessions are: acceptance = 3.50 (*SD* = 1.24), defusion = 3.76 (*SD* = 1.40), self as context = 1.68 (*SD* = 1.20), contact with the present moment = 1.62 (*SD* = 1.04), values = 2.37 (*SD* = 1.53), and committed action = 2.40 (*SD* = 1.43). Sessions were also reviewed for intervention techniques that are inconsistent with the ACT model including challenging cognitions, suggesting that thoughts or feelings can cause behavior, and behavioral management strategies to avoid triggers of private events. The ACT inconsistent measures received scores of 1, indicating these techniques were not used in treatment.

The new treatment integrity system developed for this project used a more structured approach to monitor content and integrity (see Appendix E). While scoring the sessions using the standardized approach, the same reviewers were also trained to record observations at each minute of the recording to identify which processes are being targeted in that time period. Using the established definitions of the target treatment processes, the reviewers were instructed to only rate therapist behavior and decide which process(s) was(were) being targeted in that time period. More than one process could be coded during a minute so the total percentages for a session can be more than 100%. Using an electronic spreadsheet, values of 1 were designated for each minute by process (see Appendix E) and then totaled. This total was divided by the total number of minutes in the session to establish a percentage of time spent on each process. The reviewers also looked for general assessment and techniques inconsistent with the treatment model

(cognitive challenging and stimulus management). This system provides a systematic description of the percentage of time dedicated to each process in each session and ensures treatment adherence. Table 4 is a summary of the results for each individual session and in total for the entire twelve session intervention.

Participant Flow

Participant flow and data analysis procedures were based on intention to treat (ITT) guidelines (Hollis & Campbell, 1999). The ideal purpose of ITT is to reduce possible bias introduced when participants who do not complete the intervention are not included in the analyses. For example, noncompliance is a common reason for not

Table 4

Average Percentage of Time Spent on Each Treatment Component

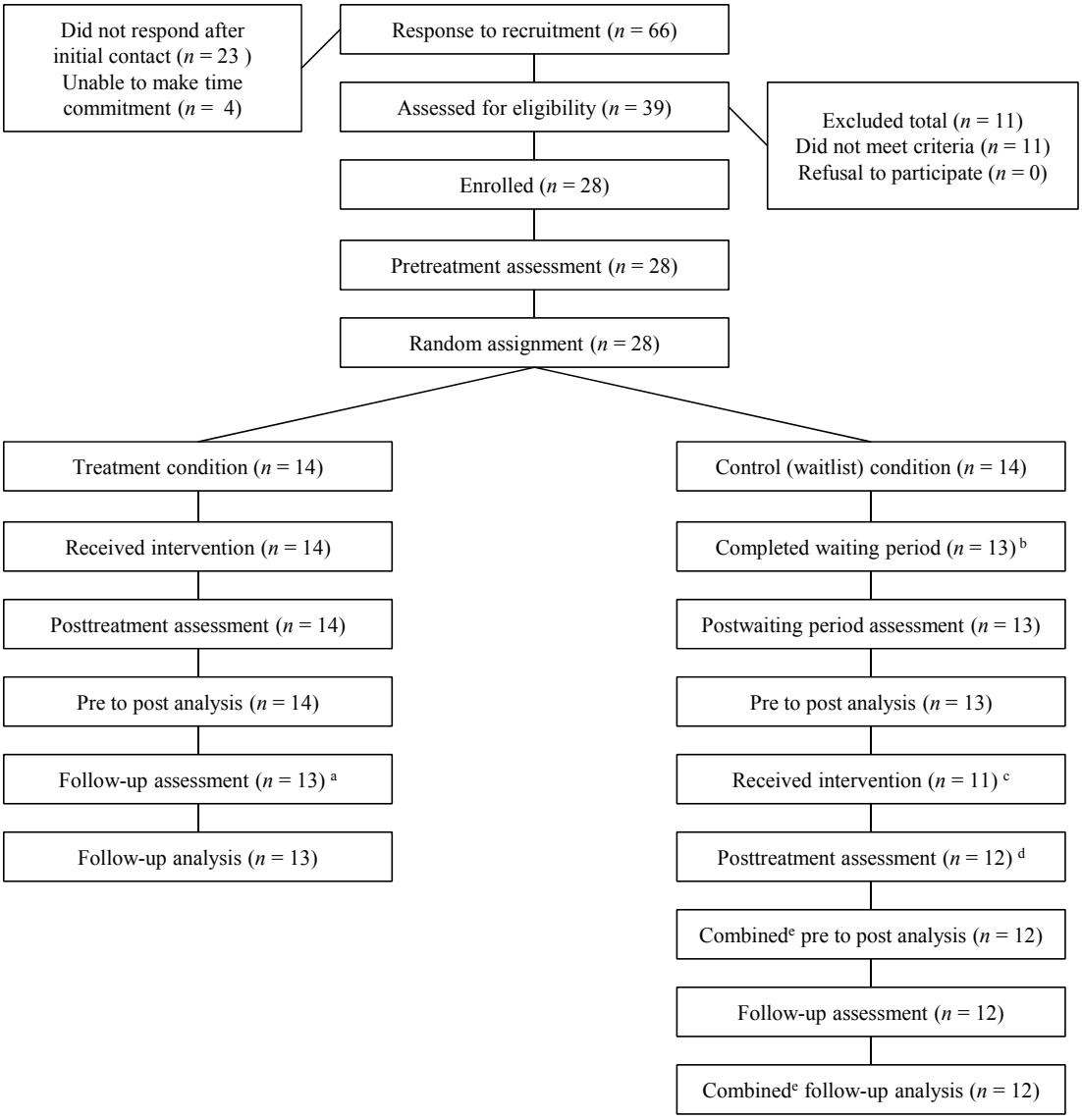
Component	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	Total
Acceptance	14	85	70	31	16	19	21	22	19	8	13	26	30
Defusion	22	8	14	48	64	71	59	57	38	16	15	16	37
Self as context	1	0	2	13	2	3	1	1	11	8	4	4	4
Present moment	0	1	2	3	2	4	4	8	7	7	4	1	4
Values clarification	6	3	2	3	0	8	3	8	36	52	64	5	15
Committed action	2	4	3	5	4	5	3	4	8	26	46	35	10
General assessment	70	12	17	15	21	21	23	20	14	25	18	37	23
Cognitive challenging	0	0	0	0	0	0	0	0	0	0	0	0	0
Stimulus management	0	0	0	0	0	0	0	0	0	0	0	0	0

Note. S = session.

completing an intervention and it is possible that the participants who were noncompliant may have a more severe and refractory condition. Removing these cases from the analysis introduces a bias by removing these more challenging cases. The ITT procedure is to include all randomized participants in the condition to which they were randomly assigned, regardless of successful completion of the intervention or withdrawal from the study (Hollis & Campbell, 1999). Using ITT with treatment research can be difficult because early withdrawal also often means that posttreatment and/or follow-up assessments cannot be collected. In ITT, every effort is made to still collect these assessments, regardless of early withdrawal. For missing assessment points, an analytic approach known as last observation carried forward (LOCF) can be used to impute the missing outcome values. However, this approach has been shown to introduce bias as well (O'Connor, 2010), which is the very problem that ITT was intended to address.

There is significant variability in the application of ITT, and it has been suggested that when ITT is used, a clear description of how it was followed should be provided with the results if there are any deviations from full ITT (i.e., all assessment points are collected; Hollis & Campbell, 1999). In this study, ITT was applied as follows: (a) if a participant withdrew early from the study, every effort was made to collect all of the assessment points regardless of early withdrawal; (b) if efforts to collect the remaining assessments from early withdrawals were successful, those assessments were included in the analysis in conformance with ITT; (c) if efforts to collect these assessment points were unsuccessful, LOCF was considered as an option for data imputation; (d) considerations for LOCF imputation were based on the reasons for early withdrawal; and

(e) if the reasons for early withdrawal did not indicate a significant introduction of bias, the bias introduced by LOCF was not merited and the individuals were not included in analysis. Figure 1 provides a summary of participant flow.



[a] One participant did not respond to attempts to schedule the follow-up assessment. [b] One participant moved out of state during the waiting period, and attempts to collect the remaining assessments were unsuccessful. [c] Two participants received a partial intervention (6 sessions & 9 sessions) because they moved out of state during the intervention. One successfully completed the remaining post and follow-up assessments. The other did not complete the remaining assessments. [d] Increased to 12 because one of the early withdrawals (after 6 sessions) completed the remaining assessments as described in note c. [e] The term "combined" refers to the combination of the data from both groups for additional analysis of pre to post effects with the entire group.

Figure 1. Participant flow.

The guidelines as described in the previous paragraph were followed for early withdrawal. In the treatment condition, the only observed case of early withdrawal occurred at follow-up in which the participant did not respond to efforts to schedule the assessment. For missing follow-up appointments, LOCF is an inappropriate imputation strategy because it would move the posttreatment values to follow-up, ultimately indicating, perhaps falsely, that any treatment gains from the intervention were maintained at follow-up. This has the potential to produce favorable bias in the results, so LOCF was not used. The follow-up data for this participant was included in the follow-up analysis and the missing data were attributed to follow-up attrition. In the control condition, one participant withdrew from the waiting period to move out of state. Following ITT guidelines, every effort was made to collect the remaining assessments, but the individual did not respond. LOCF was considered (impute the post waitlist assessment with the pre-waitlist assessment values), but there is concern that this will also bias the results with a favorable outcome (i.e., postwaitlist levels will be identical to prewaitlist levels), so this participant was removed from the pre to post analysis, and is also missing from the follow-up analysis. In the intervention phase for the control (waitlist) condition, two participants withdrew early from treatment, one after six sessions and one after nine sessions, both to move out of state. Following ITT guidelines, every effort was made to collect the remaining assessment points. The six session participant responded well and completed the posttreatment and follow-up assessments. The nine session participant did not respond and is missing the posttreatment and follow-up assessments. Again, LOCF was considered (impute pretreatment assessment values in

the missing posttreatment assessment point), but this also had the potential to produce a biased outcome, unfavorable in this case as any treatment gains made after nine sessions would not be reflected in the pretreatment assessments. LOCF could have been used with the session nine behavioral self-report data, but not with the secondary measures of quality of life, negative outcomes, and sexual compulsivity as they were only given at pretreatment and posttreatment. This participant was not included in the combined pre to post analysis (the posttreatment data from the control condition is used in subsequent analysis of the effects of the treatment in both treatments combined), or in the follow-up analysis.

The duration of the study was 34.5 months (148 weeks) from the first pretreatment interview with the first participant to the collection of the last follow-up assessment with the last participant. The average time spent in treatment, waiting period, and from treatment completion to follow-up, separated by condition and combined, is presented in Table 5. Note the overall similarity in the figures with the exception of the time in treatment for the treatment group (17.80 weeks) compared to the time in the waiting period for the control group (14.24 weeks). The treatment phase was twelve sessions over twelve weeks, but there were inevitable cancellations and, rescheduled sessions, and missed weeks resulting in a longer time frame than the waiting period that was not subject to cancellations/rescheduling. Additionally, the average time to follow-up was 20 weeks (planned to be 12 weeks) because of response time delays by the participants when attempts were made to schedule follow-up appointments.

Table 5

Average Time in Treatment, Waiting, and Follow-Up Phase

Variable	Days	Weeks
Treatment group		
Average time in treatment (*n* = 14)	124.57	17.80
Average time to follow-up (*n* = 13)	136.15	19.45
Control group		
Average time in waiting period (*n* = 13)	99.69	14.24
Average time in treatment (*n* = 12) [a]	121.92	17.42
Average time to follow-up (*n* = 12) [a]	137.92	19.70
Combined		
Average time in treatment (*n* = 26)	123.35	17.62
Average time to follow-up (*n* = 25)	137.00	19.57

[a] Includes partial treatment completer who completed post and follow-up assessments. Does not include partial treatment completer who did not complete post and follow-up assessments.

Missing Data

The data were collected using printed questionnaire materials, and the administrators of the questionnaires checked for missing data at the time of completion. The data were entered in an SPSS database file by an advanced undergraduate research assistant and then reviewed for errors by the author. Because of the rigorous data collection and data entry procedures, there were no missing items and therefore, no need for data imputation.

After the first two participants had enrolled in the study, two questions about religiosity were added to the background information questionnaire assessing religious participation/activity and how important religion is in the respondent's life. These were added to examine the role of religiosity in the presenting problem and subsequent

intervention process. Because these questions were added later, there is no response to these questions for the first two participants. The first two participants were placed in the treatment and control condition, so the missing items from the religiosity analyses will impact the groups equally. At the time the questions were added, the used of the SCID-C was added to formalize the assessment of current diagnosis. While there is no SCID-C evaluation for the first two participants, the eligibility interview indicated that neither participant presented with a current diagnosis.

Randomization Assurance

Pretreatment descriptive statistics for select variables were calculated, by condition, to evaluate the results of the randomization procedures. To avoid running an unnecessarily high number of analyses, variables that appeared similar were not included in the statistical evaluations of group difference, only those variables in which the apparent difference was potentially statistically different were evaluated. The results are presented in Table 6. As shown in this table, a series of 5 independent samples *t* tests, with a Dunn-Bonferroni correction for multiple comparisons (planned $\alpha = .05$, corrected $\alpha = .01$), were conducted to evaluate randomization. Results showed no statistical difference between the treatment and the control conditions on the selected variables.

Outcome Variable Summary

Table 7 summarizes the means and standard deviations for the primary and secondary outcome variables by condition from the pretreatment assessment to the

Table 6

Summary of Descriptive Statistics by Condition with Randomization Check

	Treatment (n = 14)				Control (n = 14)					
Variable	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*t*	*p*
Male	14	100.0			14	100.0			N/A	
Female	0	0.0			0	0			N/A	
Age			28.8	13.0			29.8	10.0	N/A	
Education (years post high school)			2.9	2.0			3.9	1.9	-1.37	.18
Single	8	57.1			5.0	35.7			N/A	
Married	6	42.9			8.	57.1			N/A	
Remarried	0	0.0			1	7.1			N/A	
Caucasian	12	85.7			14	100.0			N/A	
Hispanic	2	14.3			0	0.0			N/A	
Latter-day Saint	14	100.0			13	92.9			N/A	
No religious affiliation	0	0.0			1	7.1			N/A	
Religious importance[a]			4.4	0.9			4.3	0.9	N/A	
Religious participation[a]			5.2	0.6			4.1	1.3	2.75	.011
Years of compulsive pornography use			12.8	14.0			14.3	9.7	-0.34	.74
Average hours of viewing (week)			6.1	4.5			7.0	5.8	0.45	.66
Quality of life (QOLS)			82.8	11.6			78.2	12.5	1.00	.32
Sexual compulsivity (SCS)			30.4	8.4			31.1	7.1	N/A	
Masturbation (also a problem)	14	100.0			13	92.9			N/A	

[a] n = 13.

posttreatment/waitlist assessment. Distributional characteristics of the data were examined to ensure there were no significant departures from a normal distribution. Additionally, no significant outliers were identified. As described in the section on participant flow, one participant in the control did not complete the post waitlist assessment. At this point, this participant is removed from the analysis because that data will not be included in the forthcoming analyses.

Table 7

Outcome Means and Standard Deviations from Pretreatment to Posttreatment

	Pretreatment				Posttreatment			
	Treatment (n = 14)		Control (n = 13)		Treatment (n = 14)		Control (n = 13)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Primary outcome								
Self-report hours viewing (per week)	6.13	4.51	6.85	5.99	0.43	0.64	5.40	3.49
Secondary outcomes								
Quality of life (QOLS)	82.79	11.58	77.23	12.42	85.36	11.17	73.62	11.89
Sexual compulsivity (SCS)	30.43	8.36	31.15	7.36	20.36	7.27	30.08	6.87
Cognitive outcomes (CBOSB)								
Legal/occupational	4.93	1.94	5.77	1.88	4.50	1.09	6.08	2.14
Psychological/spiritual	13.07	1.90	13.23	2.35	9.57	3.32	13.23	2.57
Social	9.07	2.09	9.15	3.00	7.00	1.92	9.53	2.07
Financial	2.50	0.85	3.77	1.59	2.36	0.84	3.69	1.80

Primary Outcome Variable

The primary outcome variable of interest is the self-reported behavioral rate (hours per week) of viewing pornography. The difference between groups was computed with a univariate analysis 2 (group) x 2 (time) repeated measures ANOVA. Results showed a significant main effect for group, $F(1, 25) = 4.48$, $p = .045$, partial $\eta^2 = .15$, a significant main effect for time, $F(1, 25) = 18.09$, $p = .001$, partial $\eta^2 = .42$, and a significant group by time interaction, $F(1, 25) = 6.42$, $p = .018$, partial $\eta^2 = .15$. As shown in Table 7, the ACT group experienced a significant decrease (93%) in hours viewed from pretreatment to posttreatment when compared to the control condition, which experienced a 21% decrease attributed to nonspecific factors of waitlist participation (i.e.,

participation in treatment research).

Twenty-week follow-up data were collected on 13 of 14 participants in the treatment group. The follow-up mean hours viewed was 1.01 hours (not shown in the table). A paired samples *t* test was conducted between the posttreatment and follow-up values. The change from post to follow-up was not significant, $t(12) = -1.86$, $p = .09$, indicating the results did not significantly change from posttreatment to follow-up. The percentage decrease from pretreatment to follow-up for hours viewing was 84%.

Secondary Outcome Variables

Similar ANOVA procedures using the secondary variables were conducted. The secondary variables include quality of life (QOLS), sexual compulsivity (SCS), and cognitive worry about sexual behavior (CBOSB). Univariate 2 (group) x 2 (time) repeated measures ANOVA analyses were run to detect between group differences (ACT, waiting list) at pretreatment to posttreatment, and then paired samples *t* tests were used to evaluate change from posttreatment to follow-up. Twenty-week follow-up data were collected on 13 of 14 participants in the treatment group (this missing participant is not included in the pretreatment to posttreatment values shown in Table 7, so these numbers are presented in the text below).

For quality of life (QOLS), results showed a nonsignificant main effect for group, $F(1, 25) = 4.10$, $p = .054$, partial $\eta^2 = .14$, a nonsignificant main effect for time, $F(1, 25) = 3.67$, $p = .731$, partial $\eta^2 = .005$, and a significant group by time interaction, $F(1, 25) = 4.23$, $p = .050$, partial $\eta^2 = .15$. As shown in Table 7, there was a small, but significant,

increase (3%) in quality of life for the treatment group from pretreatment to posttreatment compared to the control condition in which the QOLS value decreased slightly. A paired samples *t* test was conducted between the posttreatment (86.6) and follow-up (82.23) QOLS values. The change from post to follow-up was not significant, $t(12) = 1.46$, $p = .17$, indicating the results did not significantly change from posttreatment to follow-up.

For sexual compulsivity (SCS), results showed a nonsignificant main effect for group, $F(1, 25) = 3.85$, $p = .061$, partial $\eta^2 = .13$, a nonsignificant main effect for time, $F(1, 25) = 1.79$, $p = .193$, partial $\eta^2 = .07$, and a significant group by time interaction, $F(1, 25) = 7.78$, $p = .01$, partial $\eta^2 = .24$. As shown in Table 7, there was a 33% decrease in SCS values for the treatment group from pretreatment to posttreatment, compared to the control condition that did not show a significant change. A paired samples *t* test was conducted between the posttreatment (20.3) and follow-up (21.2) SCS values. The change from post to follow-up was not significant, $t(12) = -0.47$, $p = .65$, indicating the results did not significantly change from posttreatment to follow-up.

For cognitive worry about legal or occupational consequences (CBOSB legal/occupational), results showed a significant main effect for group, $F(1, 25) = 4.26$, $p = .050$, partial $\eta^2 = .15$, a nonsignificant main effect for time, $F(1, 25) = 0.03$, $p = .87$, partial $\eta^2 = .001$, and a nonsignificant group by time interaction, $F(1, 25) = 0.99$, $p = .33$, partial $\eta^2 = .04$. As shown in Table 7, there was a slight change in the CBOSB legal/ occupational values from pretreatment to posttreatment, compared to the control condition, but this change was not significant. The nonsignificant change nullifies the need for an evaluation of change at follow-up.

For cognitive worry about psychological or spiritual consequences (CBOSB psychological/spiritual), results showed a significant main effect for group, $F(1, 25) = 4.99$, $p = .035$, partial $\eta^2 = .17$, a significant main effect for time, $F(1, 25) = 11.37$, $p = .002$, partial $\eta^2 = .31$, and a significant group by time interaction, $F(1, 25) = 11.37$, $p = .002$, partial $\eta^2 = .31$. As shown in Table 7, there is a significant decrease (27%) in this value for the treatment condition, when compared to the control condition that did not show any change. A paired samples *t* test was conducted between the posttreatment (9.31) and follow-up (9.69) CBOSB Psychological/Spiritual values. The change from post to follow-up was not significant, $t(12) = -0.39$, $p = .70$, indicating the results did not significantly change from posttreatment to follow-up.

For cognitive worry about social consequences (CBOSB social), results showed a nonsignificant main effect for group, $F(1, 25) = 3.71$, $p = .065$, partial $\eta^2 = .13$, a nonsignificant main effect for time, $F(1, 25) = 2.22$, $p = .149$, partial $\eta^2 = .08$, and a significant group by time interaction, $F(1, 25) = 4.71$, $p = .04$, partial $\eta^2 = .16$. As shown in Table 7, the treatment condition showed a 23% decrease compared to the control condition that did not experience any significant change. A paired samples *t* test was conducted between the posttreatment (6.96) and follow-up (6.54) CBOSB social values. The change from post to follow-up was not significant, $t(12) = 0.59$, $p = .568$, indicating the results did not significantly change from posttreatment to follow-up.

For cognitive worry about financial consequences (CBOSB financial), results showed a significant main effect for group, $F(1, 25) = 7.28$, $p = .012$, partial $\eta^2 = .23$, a nonsignificant main effect for time, $F(1, 25) = 0.437$, $p = .515$, partial $\eta^2 = .017$, and a

nonsignificant group by time interaction, $F(1, 25) = .039$, $p = ..844$, partial $\eta^2 = .002$. As shown in Table 7, there was little change on the CBOSB financial scale for either group. These nonsignificant values nullify the need for posttreatment to follow-up comparison.

Combined Analyses

Because the waiting list group received the experimental treatment after the waiting period, the primary outcomes (behavioral rate of viewing) for this group can also be examined from pretreatment to posttreatment and follow-up in a combined analysis. This combined analysis will be used to evaluate effect size, clinical significance, maintenance at follow-up, process impact on outcome, and some auxiliary analyses. To ensure that the two groups could be combined, the equivalence of the pretreatment assessments had to be established (i.e., the control group has two pretreatment conditions, one before the waitlist and one after the waitlist). Using the first pretreatment assessment would include a significant waiting period before starting treatment for this group which introduces some additional threats to external validity. To make the groups equivalent, the post waitlist assessment from the control condition was used as the pretreatment assessment for these participants in the combined analysis. To ensure that the pretreatment assessment from each group was equivalent, another randomization check was conducted with select variables (variables that could have changed during the waiting period). At this point, any participants with missing data are withdrawn from the analyses as described in the section on participant flow. Table 8 shows the results of this randomization check.

Table 8

Comparison of Pretreatment and Postwaitlist Assessments with Randomization Check

	Treatment (pretreatment; *n* = 14)		Control (postwaitlist; *n* = 13)			
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*
Years of compulsive pornography use	12.8	14.0	15.0	9.7	-0.47	.65
Average hours of viewing (week)	6.1	4.5	5.4	3.5	0.46	.65
Quality of life (QOLS)	82.8	11.6	73.6	11.9	2.03	.05
Sexual compulsivity (SCS)	30.4	8.4	30.1	6.9	0.12	.91

As shown in Table 8, a series of four independent samples *t* tests, with a Dunn-Bonferroni correction for multiple comparisons (planned $\alpha = .05$, corrected $\alpha = .0125$), were conducted to evaluate group equivalence and suitability for data combination. Results showed no difference between the treatment and the control conditions on the selected variables. These results indicate that the pretreatment assessment from the treatment condition and the post wait list assessment from the control condition can be combined into a single pretreatment assessment to be used in the combined analyses.

Table 9 summarizes the means and standard deviations for the primary outcome variable from the pretreatment, posttreatment, and follow-up assessments for the combined analysis. Distributional characteristics of the data were examined to ensure there were no significant departures from a normal distribution. Additionally, no significant outliers were identified. As described in the participant flow section, 26 participants completed the assessments from pre to post and 25 completed the follow-up analysis.

Table 9

Combined Means and Standard Deviations of Hours Viewing Per Week for Pretreatment, Posttreatment, and Follow-Up Assessments

	Pretreatment (n = 26)		Posttreatment (n = 26)		Follow-up (n = 25)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Hours viewing (per week)	5.65	4.01	0.47	0.80	0.77	1.10

A one-way repeated measures ANOVA with pretreatment, posttreatment, and follow-up values for the primary outcome variable was calculated for the combined groups using the 25 participants that completed all three assessments. Because Mauchly's test of sphericity was violated, $\chi^2(2) = 48.46$, $p < .05$, the Greenhouse-Geisser test was reported for the F value. The results showed a significant main effect for time, $F(1.07, 25.55) = 39.47$, $p = .001$, partial $\eta^2 = .62$. Two paired samples t tests, with a Dunn-Bonferroni correction for multiple comparisons (planned $\alpha = .05$, corrected $\alpha = .025$), were conducted to evaluate the differences between pretreatment to posttreatment, $t(25) = 6.89$, $p = .001$, and from posttreatment to follow-up, $t(24) = -1.62$, $p = .119$. As presented in Table 9, there is a significant difference from pretreatment to posttreatment (representing a 92% decrease in hours of viewing), and a nonsignificant difference from posttreatment to follow-up, indicating the treatment gains did not significantly change at a 20 week follow-up. The percentage decrease from pretreatment to follow-up for hours viewing was 86%.

An overall effect size (Cohen's d) was calculated using the combined groups comparing pretreatment to posttreatment hours viewing. Cohen's d is calculated by subtracting the mean of group 2 (posttreatment) from group 1 (pretreatment) and dividing

by the standard deviation. The standard formula assumes the standard deviations are equal, but in this case the standard deviation for pretreatment (*SD* = 4.01) and posttreatment (0.80) are quite different so a pooled standard deviation was calculated using the following formula (Cohen, 2001):

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Using the pooled standard deviation, the Cohen's *d* effect size is 1.86, which is a large effect size (anything over 0.80 is considered a large effect size).

To evaluate clinical significance in traditional treatment research, the percentage of individuals who are considered "recovered" is often calculated by summarizing the percentage of individuals whose scores on the primary outcome variables decreased to below clinical levels. Because the present study is the first to examine a treatment for this problem, there are no established clinical cutoff scores to evaluate clinical change. Additionally, the primary outcome variable in this study is a behavioral self-report and it is likely there is some variance among participants in the reduction of behavior that would be considered "recovered." To present an indication of clinical significance from this investigation, the percentage of participants who obtained benchmark levels of behavioral reduction was calculated. The results are presented in Table 10.

Process Analyses

To evaluate the role of the ACT processes in the treatment outcomes, a mediational analysis using the AAQ was planned using current mediational analysis

Table 10

Number and Percentage of Participants Obtaining Benchmarks of Behavior Reduction

	Pretreatment to posttreatment (n = 26)		Pretreatment to follow-up (n = 25)	
% of behavior reduction	n	%	n	%
100%	14	54%	9	36%
90% - 99%	3	12%	5	20%
80% - 89%	3	12%	3	12%
70% - 79%	4	15%	2	8%
60% - 69%	0	0%	0	0%
50% - 59%	1	4%	2	8%
40% - 49%	0	0%	0	0%
30% - 39%	0	0%	1	4%
20% - 29%	1	4%	0	0%
10% - 19%	0	0%	2	8%
0% - 9%	0	0%	1	4%

techniques (MacKinnon, Fairchild, & Fritz, 2007). However, as shown in Table 11, the AAQ did not change from pretreatment to posttreatment nullifying any further analysis. The AAQ has been shown to identify ACT process change, but has not always been successful experimentally. This has been a common occurrence in ACT treatment research with specific problems as the AAQ language is generalized and not readily applicable to the problem at hand so multiple investigations have created versions of the AAQ that contain more problem specific language (e.g., Luoma, Drake, Kohlenberg, & Hayes, 2011; McCracken, Vowles, & Ecceston, 2004).

Because of the concerns about the AAQ, the ACT process questions were created (SQ) with problem specific language to better track treatment processes from session to session. As shown in Table 11, these processes questions showed a large change from

Table 11

Combined Process Means and Standard Deviations for Pretreatment, Posttreatment, and Follow-Up Assessments

	Pretreatment (n = 26)		Posttreatment (n = 26)		Follow-up (n = 25)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Psychological inflexibility (AAQ)	33.27	3.22	34.1	3.59	34.24	4.28
ACT process (SQ)	71.37	14.06	23.46	22.03	24.16	21.68
Hours viewing (per week)	5.65	4.01	0.47	0.80	0.77	1.10

pretreatment to posttreatment. While these questions are not validated, they provide a face valid measure of ACT processes and provide an opportunity to examine the temporal role of underlying processes in behavior change from session to session. This temporal process analysis involves a series of time lag correlations between the weekly ACT process measure (the SQ) and the behavioral outcomes. Correlations were conducted between the ACT process measures and the behavioral outcomes at lag zero (pretreatment) and the following sessions (sessions 1-12). The relative value of the correlations indicates which variable (the process or the behavior) is predicting change. Higher correlations indicate that variable is predicting change at later time points. The results are presented in Figure 2.

As shown in Figure 2, the hours viewing value was predicting change in ACT process through session 3, at which point the ACT processes were more strongly predicting behavior change than vice versa. This was maintained for the duration of treatment. These results are generally supportive of ACT processes being more influential on behavior change than behavior change driving changes in treatment processes.

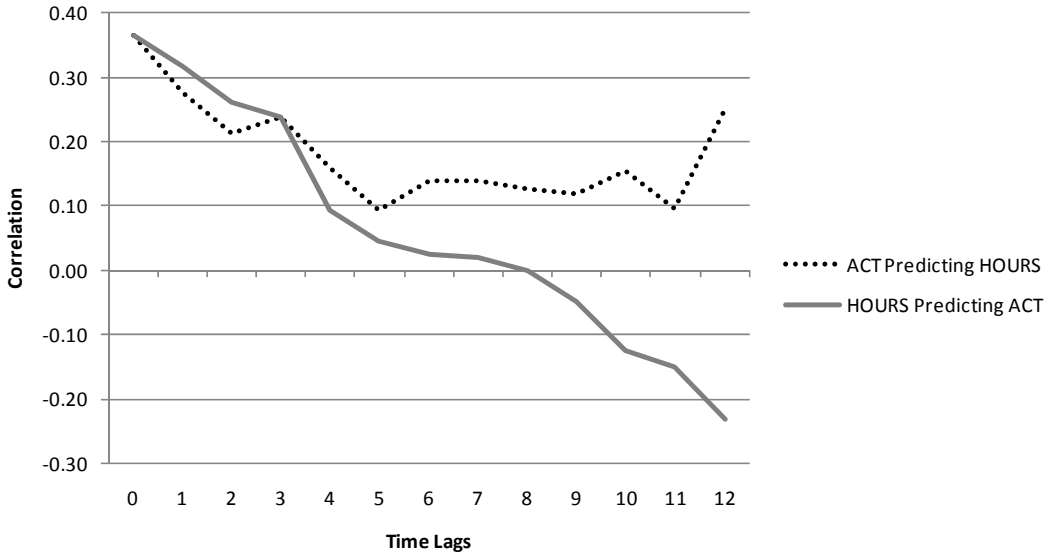


Figure 2. Lag analysis correlations comparing ACT processes and hours viewing.

The ACT process data (SQ) from each session was also plotted with the rate of viewing from each session to visually identify the role of the ACT processes in the outcomes. The results are presented in Figure 3. Reductions in process levels indicate positive change in the ACT processes. Note how the process change tracks the change in behavior session by session.

Auxiliary Analyses

To further explore the nature of this problem based on participant characteristics, some auxiliary analyses were conducted to examine the role of marital status and religiosity in compulsive pornography use. To evaluate the roll of marital status, the combined group was divided into two groups by marital status (married, single). The primary, secondary, and outcome means and standard deviations from pretreatment to posttreatment are shown in Table 12.

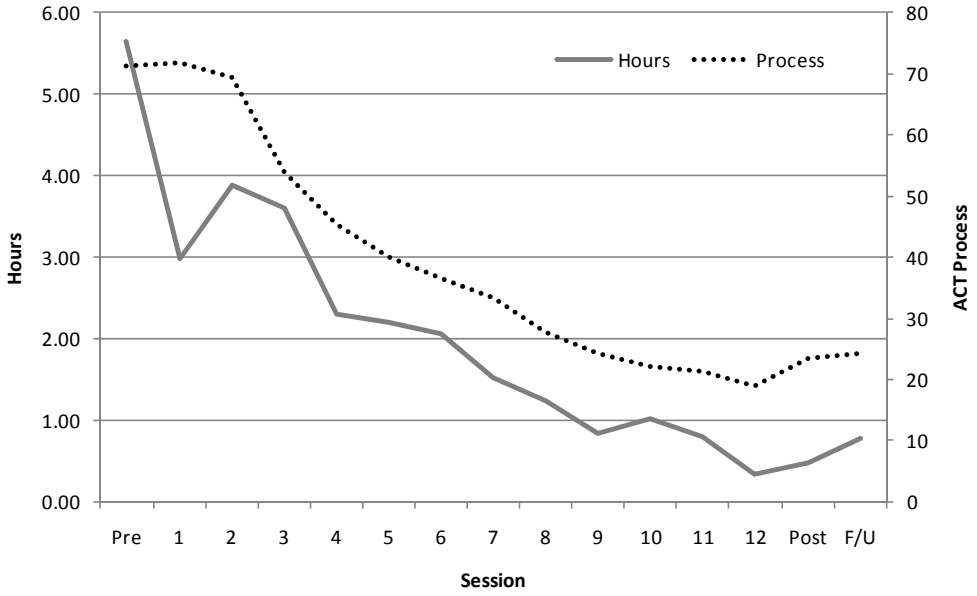


Figure 3. ACT processes plotted with behavioral rate of viewing by session.

Table 12

Primary, Secondary, and Outcome Means and Standard Deviations by Marital Status

	Single				Married			
	Treatment (n = 14)		Control (n = 13)		Treatment (n = 14)		Control (n = 13)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Primary outcome								
Hours viewing (per week)	5.19	4.21	0.57	0.97	6.25	3.88	0.39	0.66
Secondary outcomes								
Quality of life (QOLS)	82.91	9.83	86.92	9.56	74.73	13.36	84.79	10.58
Sexual compulsivity (SCS)	27.42	7.46	17.75	5.21	32.53	7.02	20.36	7.31
Cognitive outcomes (CBOSB)								
Legal/occupational	5.08	2.35	4.25	0.87	5.80	1.86	4.71	1.07
Psychological/spiritual	13.33	1.67	10.33	2.84	13.00	2.62	8.29	3.87
Social	8.50	2.07	6.50	1.09	9.93	1.87	6.64	2.31
Financial	2.50	0.67	2.17	0.39	3.53	1.81	2.57	1.02

As shown in Table 12, the married participants had a lower value in quality of life and higher values in sexual compulsivity and cognitive worry about social consequences in pretreatment. Independent sample *t* tests were conducted for these three variable, but there were no significant differences, although they were close (*p* values ranged from .07 to .09) indicating there was a trend for significant differences.

To evaluate the role of religiosity in the effects of the behavior, the level of religiosity as measured by religious activity (number religious activities per week) was correlated with the pretreatment and posttreatment primary and secondary outcome variables. The purpose of the analysis was to look at any relationships between pretreatment values and religious activity to see if religious activity played a role in the effects of the behavior. The results are shown in Table 13.

Table 13

Correlations Between Religious Participation and Outcome Variables

Variable	Pretreatment	Posttreatment
Primary outcome		
Hours viewing (per week)	-0.20	-0.44*
Secondary outcomes		
Quality of life (QOLS)	0.26	0.09
Sexual compulsivity (SCS)	0.05	-0.21
Cognitive outcomes (CBOSB)		
Legal/occupational	-0.38	-0.01
Psychological/spiritual	-0.01	-0.34
Social	-0.04	-0.15
Financial	-0.35	-0.26

* $p < .05$

As shown in Table 13, the only significant correlation was the negative relationship between religious activity and hours viewed at posttreatment ($r = .44$, $p < .05$, two-tailed). This would be expected given the significant reduction in behavior.

To ensure precise research results, this investigation set out to treat compulsive pornography viewing only, acknowledging that the behavior was often accompanied by additional problematic sexual behaviors (see Table 1). It was discovered in the preliminary studies that the viewing behavior was regularly accompanied by masturbation. This behavior was not specifically targeted in the treatment, but it was clear that many participants were applying the ACT skills to problems beyond pornography viewing. Table 14 shows the change in masturbation behavior that occurred alongside the viewing behavior, including bivariate correlations between viewing levels and masturbation behavior.

Table 14

The Correlation Between Hours Viewing and Masturbation Behavior

	Pretreatment (n = 26)		Posttreatment (n = 26)		Follow-up (n = 25)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Hours viewing (per week)	5.65	4.01	0.47	0.80	0.77	1.10
Masturbation (instances per week)	4.94	3.62	1.04	1.43	1.6	2.92
Pearson r correlation (p value)	0.54	$p < .01$	0.67	$p < .01$	0.67	$p < .01$

CHAPTER V

DISCUSSION

Primary Outcome

The primary variable and analysis of interest was the change in self-reported hours viewed per week from pretreatment to posttreatment in the treatment condition compared to the control condition. The treatment group showed a significant 93% decrease in hours viewed from pretreatment to posttreatment compared to the control condition, which experienced a 21% decrease. This decrease in the waitlist control condition is attributed to nonspecific factors of waitlist participation such as participation in treatment research and completing assessments of behavior. The treatment group is significantly different, and represents a significant decrease in hours viewed.

In a 20-week follow-up assessment, the treatment group did not change significantly from posttreatment to follow-up with an 84% decrease from pretreatment to a 20-week follow-up, indicating relative maintenance of the treatment gains. From the combined analysis, the overall effect size of the treatment from pretreatment to posttreatment was 1.86, which is a large effect size. This is supported by clinical effectiveness data that shows 54% of the participants completely stopped viewing at posttreatment and another 39% of participants reduced viewing by at least 70% of pretreatment levels by posttreatment. Clinical significance at follow-up showed 35% of participants had completely stopped viewing and another 39% had reduced viewing by at least 70%.

These results are significant because they provide the first randomized group evidence of an effective treatment for compulsive pornography use. In addition to the significant difference between the treatment and control conditions, this treatment produced a large effect size in behavior reduction, good clinical effectiveness support, and moderate maintenance at follow-up.

Secondary Outcomes

The significant results in the primary outcome variable are complimented by the secondary outcome variable results, and they provide some additional insight into the problem and the effects of the treatment. It was hypothesized that the treatment would produce an increase in overall quality of life (as measured by the QOLS), primarily due to the behavior reduction and subsequent elimination of functional impairment/distress in other areas of life. The treatment group did experience a significant increase in quality of life when compared to the control condition, but it was as small increase (3%), and these results were maintained at follow-up. This suggests that this problem may not lead to widespread impairment/distress as the individual is able to function in life (i.e., the problem is relatively compartmentalized). Another possibility is that gains that might have been seen in quality of life take much longer than 3 months to show up.

There was a significant decrease (33%) in sexual compulsivity symptoms as measured by the SCS in the treatment group compared to the control group and these values were maintained at follow-up. While this is not a diagnostic measure, it attempts to identify cognitive and behavioral characteristics of this problem. In particular it

measures the extent to which problematic sexual behavior is “compulsive.” To be clear, it is a measure of sexual compulsivity for all sexual behavior, not just the viewing of pornography. The significant change suggests that there is a “compulsive” nature to this behavior (i.e., the behavior can become an automatic response to cognitive content). This is consistent with the theoretical connections between the problem and the ACT approach that targets the behavioral response to cognitive content so the behavior is chosen in the service of values and not an automatic response.

The CBOSB subscales measured cognitive worry about particular consequences as a result of sexual behavior. The four relevant subscales were worry about legal/ occupational (e.g., job loss), psychological/spiritual (e.g., shame, guilt), social (e.g., decreased work/school productivity, impaired relationships), and financial (e.g., monetary cost of behavior) consequences. Just as the quality of life scale provided an indication of life impairment, the CBOSB subscales provide an indication of distress as a result of the problem. This measure is interesting as it provides a measure of worry about consequences, which is something that can change over time whereas actually experienced consequences may not change as a result of an intervention (e.g., worry about losing a job compared to actually losing a job).

Of the four CBOSB subscales in the analysis, there were significant improvements in the treatment groups when compared to the control condition in the psychological/spiritual and social subscales. The lack of change in the legal/occupational and financial subscales suggests that compulsive pornography use may not be as problematic in these areas. The problematic areas that showed up in this study (guilt,

shame, impaired relationships, and decreased productivity) are consistent with preliminary research on the nature of this problem (Twohig et al., 2009). The results suggest that the intervention was able to effect a change in the amount of worry about these consequences, thereby decreasing distress.

Treatment Process

The ACT processes hypothesized to produce a change in the targeted outcome were shown to be empirically predictive of behavior change in a time lag analysis. The purpose of this analysis is to show that changes in treatment processes are temporally preceding behavior change more so than vice versa. It is interesting to note that behavior change preceded changes in ACT processes for the first three sessions, but the treatment processes then moved before behavior change for the rest of the treatment. It was observed that session one behavior rates were relatively low compared to pretreatment behavior rates. Many of the participants were enthusiastic about behavior change from the start, even though the treatment protocol did not set any goals for behavior change until session 2 or 3, which would explain the interesting results in the lag analysis. The results from the lag analysis are supported by a visual representation of movement in both ACT process and behavior change (hours viewing). Overall these results are supportive of psychological flexibility, the main ACT process, as particularly important in reducing compulsive pornography use.

Auxiliary Issues

The role of marital status and religiosity in the effects of this problem was examined because these participant characteristics appeared to be important characteristics of the sample. For marital status, the question at hand was if marital status might lead to differential effects in the negative outcomes as a result of the viewing behavior (e.g., decreased quality of life, cognitive worry about relationships). As shown in the results, there were trends toward differential effects, but no significant differences emerged in this sample. This would suggest that while it is likely that marital status may lead to increased distress in certain aspects of life, it does not account for a significant proportion of the variance in negative outcomes (i.e., the problematic viewing behavior is the problem, not the marital status or the stance of the spouse on the behavior).

A similar question was examined for religiosity as measured by the level of participation in religious activity (how often per week). Here again, no significant relationships emerged between religiosity and experienced negative outcomes. It was hypothesized that a relationship might show up in quality of life or shame/guilt (CBOSB psychological/spiritual), but no significant relationships existed. A similar conclusion can be reached with religiosity as with marital status, that while religiosity may be a relevant arena for negative consequences of the behavior, the problem is in the behavior not in the level of religiosity. On the positive side of religiosity, it was hypothesized that religiosity may lead to improved outcomes at follow-up (e.g., due to more motivation or the seriousness of the problem), but the results did not show a significant relationship between religiosity and behavior change in the primary outcome variable.

The question of masturbation and its relationship to viewing pornography was addressed in this study as an auxiliary issue. While it was clear that viewing pornography was not the sole problematic sexual behavior for many participants, it was the only target of this study to ensure precise results. Masturbation can be viewed similarly to pornography viewing in that it may not be inherently problematic; it is dependent on the individual and the situation. Including masturbation or any other problematic sexual behavior would have clouded the research because the study would have multiple outcome variables that were functionally defined as problematic. This is a problem because it is likely that one participant might regard viewing pornography as problematic, but not consider masturbation to be problematic, and another participant may hold the opposite view while still another might consider both to be problematic. For these reasons, pornography was the target variable. Masturbation was tracked in this study to clarify this issue and to be able to answer any questions about the relationship between the viewing behavior and masturbation. As shown in the results, there were strong positive correlations between the level of viewing behavior and masturbation behavior at pretreatment, posttreatment, and follow-up assessments. This suggests that for many of these participants, there is a relationship between the two behaviors and a reduction in one may lead to a reduction in the other. Certainly, it is clear that a reduction in viewing resulted in a reduction in masturbation behavior based on the results of the study, and this occurred even when the treatment did not target masturbation behavior (the idea that the treatment was not targeting masturbation was also made clear to the participants). Masturbation is an obvious candidate as a primary reinforcer for viewing pornography

because of the pleasurable physical reward. Traditional behavior interventions would suggest changing the reinforcer to change the behavior, and this may be a viable treatment approach to this problem, but this study was solely targeting the viewing behavior for the reasons discussed above and did so successfully by targeting the behavioral response to cognitive/emotional urges to engage in viewing behavior.

Theoretical Functions of Viewing

It is interesting to examine the function that the viewing behavior played for the participants. This was not addressed in the empirical data, but some observations can be made based on the experience of the therapists involved in the research. By subjective observation, the most common function of the viewing behavior was to manage some kind of cognitive or emotional state, many of which had little to do with sexual arousal. Certainly, the behavior often functioned as a response to manage sexual desire or arousal, but a common discussion in the treatment was how interesting it was that this sexual problem did not have much to do with sex. Some examples include (not in any particular order of importance or influence): (a) managing life stress, (b) managing depressive symptoms, (c) managing anxiety symptoms, (d) managing feelings of boredom, (e) distress from relationship problems, often directly connected to spousal disapproval of the behavior, (f) managing guilt or shame about the behavior, and (g) managing frustration from inability to stop behavior. It is interesting to note that many of these cognitive/emotional states were brought about by the behavior itself, and then managed again with the viewing behavior. This destructive cycle is a good example of why this

behavior is often described as an addiction, although the same would hold true using the compulsive or impulsive conceptualization in which compulsive/impulsive behaviors only serve to reinforce the cognitive/emotional content that will then bring about further compulsive/impulsive behaviors.

Generalization

As described in the participant characteristics section, this is a relatively homogeneous group in terms of sex, race, and religious affiliation, but there is good heterogeneity in terms of age, marital status, and education. The results of this investigation can certainly be generalized to similar populations, but further generalization should proceed with caution as it is likely that this sample represents a subset of a larger population that struggles with this problem, especially given the religious characteristics of this group. However, this does not mean that these results cannot be applied to the larger population of individuals struggling with this problem. The religious affiliation of this sample may be an indication of a larger characteristic of the sample; that this treatment approach will work for people who for some reason (moral, religious, spiritual, or values influenced) find the behavior to be unacceptable but cannot achieve complete behavioral control. They may not need to be of the same religion or even religious to qualify as a good candidate for this treatment approach.

All of the participants were male, and this could prove difficult if this problem displayed some distribution among female individuals, but it is clear in the literature that his problem tends to present primarily with males. It is likely that there is some

presentation with females, so generalization with this population should proceed with caution. It is clear that this approach can generalize for use with male individuals. Also, this sample was primarily Caucasian, suggesting that generalization with other racial or ethnic groups should also be done carefully.

Finally, it is hoped that these results can be applied to other problematic sexual behaviors in addition to compulsive pornography use. For reasons described above, this study focused on viewing pornography as the sole target variable. Care should be taken if this approach is applied to other problematic sexual behaviors, but it is possible that it may be useful if the other problematic sexual behaviors serve a similar function as compulsive pornography use. The change in masturbation behavior in this investigation provides some empirical indication for this generalization.

Limitations

Given the cautions about the generalizability of these results, it is clear that care should be taken in the application of this research beyond the population represented in this sample. An additional limitation of this investigation is the self-selection of the sample. This sample may not represent the population at large who struggles with this problem, but it does represent those who self-select for treatment. The outcome variables were self-report, which is subject to inaccuracy, and there were no other methods (e.g., clinician observation) to compliment the self-report data. The primary outcome variable was a behavioral self-report of hours viewed, and was not part of a validated measure. Also, while this study attempted to experimentally control for threats to internal and

external validity, the waitlist design does not control for participation in psychotherapy. Another limitation to this particular design was that the treatment group took more time from pretreatment to posttreatment (approximately 18 weeks on average) compared to the waitlist group (approximately 14 weeks on average). This was due to cancellations and rescheduling with the treatment group, but it does introduce the external factor of more time to change in the treatment group. There were also several additional controls that were not present in this study including a blind assessor, blind randomization, and treatment providers that were blind to condition. Finally, while an attempt was made to include several therapists, most of the treatment was provided by a single therapist.

Strengths

Acknowledging the limitations as described, this investigation includes several strengths. As indicated in the participant flow, the recruitment of participants was very successful (66 individuals requested information about the study). This came with minimal recruitment efforts (flyers, announcements in classes, and an online advertisement on the university website). The unique nature of the problem generated a lot of public interest and the research was featured in several news articles that generated additional interest in the research. The participant flow also shows that treatment acceptability was high as withdrawal was very low (one participant in the treatment condition did not complete follow-up, one participant in the control condition did not complete the waiting period, two participants in the control condition withdrew early from the treatment phase). In all but one of these cases, the reason for early withdrawal

was moving out of the state. The one participant in the treatment condition that did complete treatment but not complete follow-up did not respond to attempts to schedule follow-up contact so the reason for withdrawal is unknown. Related to participant flow was the minimal missing data because of the rigorous collection procedures. This is a testament to the rigor of the study procedures as a whole, despite some of the missing controls often seen in larger funded trials. This is also evidence of the quality of the data set and subsequent analyses.

Additionally, this investigation includes the development of a new method of tracking treatment integrity adherence that is more systematic and may open further analyses into tracking treatment process and outcomes in clinical research. It provides a detailed indication of how treatment progressed and the adherence to the treatment model.

Finally, one of the key components of ACT is the committed action process, which can involve any behavioral techniques deemed appropriate to help an individual respond with behaviors that are consistent with personal values. In clinical work, these behavioral techniques are often already established as effective treatments on their own. To avoid confusion in this research study, these behavioral techniques were specifically omitted so any experimental differences would only be attributable to the unique process associated with ACT. For example, it would have been helpful to do some stimulus management work at the end of treatment, but this was excluded from the protocol. Even with these exclusions, there were significant results. This suggests that in clinical work, the addition of these empirically supported processes and techniques may prove to make

this intervention even more effective. Also, this helps to distinguish this treatment (ACT) in the research from any other currently used treatment that may use these behavioral techniques.

Future Directions

While these results are encouraging, it is clear from reviewing the section on clinical significance that there is more work to be done to make this treatment more effective with more participants. This could take the form of further refinements to the adaptation and delivery of the ACT intervention with this problem. It also may be a question of time as this was a relatively short intervention (12 session) and it is likely that behavior change may be more successful with longer term follow-up and relapse management.

Given the significant results in the comparison with a waitlist control condition, the next step would be a comparison with an active treatment condition that involves treatment as usual. It would be important with this next trial to incorporate the additional controls missing from this study as described in the limitations. And, it would be interesting to include the behavioral procedures in the study in a way that they can be partialed out of the analyses so as to continue to test the unique components of the ACT model while also seeking to maximize the effectiveness of the treatment. This trial could also extend the time period of the treatment to address longer term follow-up and relapse management. Given the role this problem can play in relationships, it may also be worth an investigation geared toward couples where one individual is struggling with

compulsive pornography use.

Finally, given the significant results of this investigation and the lack of empirically supported treatment recommendations for this problem, dissemination of the results will be a major priority. This will include manuscript preparation for peer review and eventual publication, academic conference presentations, a treatment manual for clinicians with accompanying client workbook, a self-help workbook for the general public, and training opportunities for interested mental health professionals.

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APPENDICES

Appendix A

Recruiting Materials

Newspaper Ad

Research Study

The Psychology Department at Utah State University is seeking individuals with pornography addiction to participate in a study assessing the effectiveness of a psychological treatment for this problem. The study will involve 15 hours of your time over 6 to 9 months. There will be no compensation for participation, but you will receive free psychological treatment. If you are interested or have questions please contact Jesse Crosby at (435) 797-8303 or jesse.crosby@aggiemail.usu.edu.

Flyer

Research Study

The Psychology Department at Utah State University
is seeking individuals that struggle with…

Pornography Addiction

Pornography addiction could be described as any problematic viewing of pornography. It may also be associated with problematic masturbation. These behaviors become problematic when they are causing distress and/or impairment in your life and efforts to control the problem have been unsuccessful.

If you struggle with this problem you may be eligible for participation in a study assessing the effectiveness of a psychological treatment. The study will involve 15 hours of your time over six to nine months. There will be no compensation for participation, but you will receive free psychological treatment. If you are interested or have questions please contact Jesse Crosby at (435) 797-8303 or jesse.crosby@aggiemail.usu.edu.

Announcement

My name is _____. I am a graduate student in the Psychology Doctoral Program. I am assessing the effectiveness of a psychological treatment for pornography addiction. Pornography addiction could be described as any problematic viewing of pornography. It may also be associated with problematic masturbation. These behaviors become problematic when they are causing distress and/or impairment in your life and efforts to control the problem have been unsuccessful.

The purpose of this study is to see if this particular treatment is effective at helping people with pornography addiction. The study will involve 15 hours of your time over 6 to 9 months. There will be no compensation for participation, but you will receive free psychological treatment.

If you agree to participate, you will be asked to come to a lab on campus to for an initial introductory session where you will be informed of the study procedures, asked for you consent to participate, and complete a package of questionnaires about the nature of your problem. You will begin the treatment phase within 1 to 12 weeks after this initial session. Treatment will involve 12 therapy sessions over 12 weeks. ou will be asked to return for one follow-up sessions 12 weeks after the completion of treatment to complete the same packet of questionnaires.

The treatment sessions will involve meeting with a trained therapist and discussing your problem. You will discuss how you have attempted to handle it, and other possible ways to decrease the behavior. The therapy will only involve talking and verbal exercises. No medication or other devices are used in this treatment. All sessions will be recorded by video to ensure that the treatment is being provided correctly. The only persons who will view the recordings are the principal investigator and the graduate research assistants monitoring the study. Complete confidentiality will be respected in this study. All data that will be collected from you will be protected and stored in a locked file cabinet at the university. No personal information will appear in any reports or publications that may result from the study.

If you are interested, please contact Jesse Crosby at (435) 797-8303 or jesse.crosby@aggiemail.usu.edu.

Script for Initial Contact

This study is assessing the effectiveness of a psychological treatment for pornography addiction. The purpose of this study is to see if this particular treatment is effective at helping people with pornography addiction. The study will involve 15 hours of your time over 6 to 9 months. There will be no compensation for participation, but you will receive free psychological treatment.

If you agree to participate, you will be asked to come to a lab on campus to for an initial introductory session where you will be informed of the study procedures, asked for you consent to participate, and complete a package of questionnaires about the nature of your problem. You will begin the treatment phase within 1 to 12 weeks after this initial session. Treatment will involve 12 therapy sessions over 12 weeks. You will be asked to return for one follow-up sessions 12 weeks after the completion of treatment to complete the same packet of questionnaires.

The treatment sessions will involve meeting with a trained therapist and discussing your problem. You will discuss how you have attempted to handle it, and other possible ways to decrease the behavior. The therapy will only involve talking and verbal exercises. No medication or other devices are used in this treatment. All session will be recorded by video to ensure that the treatment is being provided correctly. The only persons who will view the recordings are the principal investigator and the graduate research assistants monitoring the study. Complete confidentiality will be respected in this study. All data that will be collected from you will be protected and stored in a locked file cabinet at the university. No personal information will appear in any reports or publications that may result from the study.

Appendix B

Informed Consent

Acceptance and Commitment Therapy as a Treatment for Pornography Addiction: A Randomized Clinical Trial

Introduction/ Purpose: Professor Michael P. Twohig, Ph.D. in the Department of Psychology at Utah State University is running a study to find out more about the treatment pornography addiction. The goal of this study is to look at a specific type of therapy for this problem. The therapy sessions will involve talking about your problem and doing exercises aimed at helping you gain greater control over this problem. There will be no medication or other devices used in this treatment.

You have been asked to take part in this study because you are at least 18 years old and have shown an interest in receiving treatment for pornography addiction. There will be up to 100 participants enrolled in this study.

Procedures: If you agree to participate, the following will happen:

1) You will attend a pretreatment interview and be asked to complete a packet of paper/pencil surveys to help us understand your problem and to track how well the treatment works.

2) You will be randomly placed in a treatment or wait list group. The treatment group will begin treatment immediately. The wait list group will begin treatment after the treatment group has completed treatment (12 weeks).

3) When treatment begins, you will be asked to attend 12 weekly sessions (1 hour each) of therapy that targets these issues. Therapy will be about the way that you handle the urges to engage in your problem behavior and will end with some exercises aimed at helping you stop the behavior. You will be asked to complete a short survey during each therapy session to help pay attention to how well you are doing in treatment.

4) All of the treatment sessions will be recorded by video to allow us to make sure that the treatment is being done well. These videotapes will be stored in locked filing cabinet which only the investigators will have access to. Only the investigators will ever view these tapes.

5) You will be asked to complete the same assessments at your last treatment session that you completed the first time we met.

6) You will be asked to return and complete these assessments again, 12 weeks after you complete the treatment.

New Findings: You will be told of any important new findings (either good or bad), such as changes in the risks or benefits of being part of this study, or if there are different options to participating in this study that might cause you to change your mind about

continuing in the study. If we learn new things about the study that are useful to you, or if the study changes at any time, you will be informed and we will ask you to complete a new consent form that will include the new information.

Risks: Every effort will be made to keep physical, medical, psychological, social, legal, or other risks as low as possible. You could possibly feel mild discomfort from answering some of the questions or discussing your problem. You are welcome to stop being part of the study at any time or to not do any part of the study that you choose not to. There are no penalties for stopping or choosing to not do any part of the study. There is a possibility that data could be lost or revealed to others; however, every effort has been made to protect your privacy and maintain your confidentiality.

Benefits: It is possible that this treatment will help you get control of this problem, and the findings from this study may help us treat other people with similar problems who are not part of this study.

Explanation & offer to answer questions: _____ has explained this research study to you and answered your questions. If you have other questions or research-related problems, you may reach Professor Michael P. Twohig at (435) 797-1402.

Extra Cost(s): There are no extra costs to participating in this study.

Voluntary nature of participation and right to withdraw without consequence: Participation in research is completely up to you. You may stop at any time you want, or you may skip any part of the study that you don't want to do. Stopping early or not completing part of the study will not affect your ability to participate in the study. You may be taken out of the study if you repeatedly miss scheduled appointments/treatment sessions, or don't participate in the treatment.

Confidentiality: All information that we collect on you will be confidential. Only the investigator and the graduate research assistant will have access to the data that will be kept in a locked file cabinet in a locked room. Any information that could be used to identify you will be kept separate from your survey material. To protect your privacy your name will be replaced with a code number and stored in a locked file cabinet in a locked room of Dr. Twohig. To maintain your confidentiality all data will also be kept in a locked room in a locked file cabinet. Any personal identifiable information will be kept for three years after the study is completed and then destroyed.

IRB Approval Statement: The Institutional Review Board for the protection of human participants at USU has approved this research study. If you have any pertinent questions or concerns about your rights or a research-related injury, you may contact the IRB Administrator at (435) 797-0567. If you have a concern or complaint about the research and you would like to contact someone other than the research team, you may contact the

IRB Administrator to obtain information or to offer input.

Copy of consent: You have been given two copies of this Informed Consent. Please sign both copies and keep one copy for your files.

Investigator Statement: "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

_____	_____
Michael P. Twohig, Ph.D. Principal Investigator (435) 797-1402	Jesse M. Crosby Student Researcher (435) 797-1402

Signature of Participant: By signing below, I agree to participate.

_____	_____
Participant's signature	Date

Appendix C

Measures

Background Information

1. What is your sex?

1=female
2=male

2. What is your marital status?

1=single
2=married
3=divorced
4=separated
5=remarried
6=widowed
7=cohabitating

3. What is your age? _____

4. How many years of post high school education have you completed? _____

5. What is your ethnicity/race?

1=African American
2=Asian American
3=Caucasian
4=Hispanic
5=Native American
6=Other _____

6. What is your current religious affiliation?

1=Baptist
2=Catholic
3=Jewish
4=Latter-day Saint
5=Lutheran
6=Methodist
7=Unitarian
8=No Affiliation
9= Other _____

7. How often do you participate in organized religious activities?

1=Never
2=A Few Times a Year
3=Monthly
4=A Few Times a Month
5=Weekly
6=A Few Times a Week
7=Daily.

8. Please rate how important religion is to you?

1=Not at All Important
2=Somewhat Important
3=Neutral
4=Important
5=Very Important

9. How long has pornography addiction been a problem for you?

10. Is masturbation a problem for you as well?

11. How do you access pornography?

1=Internet
2=Magazines
3=Cable / Satellite Television
4=Movie Rental
5=Other

12. Are there any other related problematic sexual behaviors? If yes, what are they?

13. Have you ever sought treatment or tried other procedures? If yes, what did you try?

14. Have you ever been diagnosed with any psychological disorders? If yes, please list.

15. Are you on any psychotropic medications or have you been on any in the last 6 months? If yes please list and tell me when you started your most recent dosage.

Acceptance and Action Questionnaire

Below you will find a list of statements. Please rate the truth of each statement as it applies to you. Use the following scale to make your choice.

1	2	3	4	5	6	7
always true	almost always true	frequently true	sometimes true	seldom true	very seldom true	never true

_____ 1. I am able to take action on a problem even if I am uncertain what is the right thing to do.
_____ 2. When I feel depressed or anxious, I am unable to take care of my responsibilities.
_____ 3. I try to suppress thoughts and feelings that I don't like by just not thinking about them.
_____ 4. It's OK to feel depressed or anxious.
_____ 5. I rarely worry about getting my anxieties, worries, and feelings under control.
_____ 6. In order for me to do something important, I have to have all my doubts worked out.
_____ 7. I'm not afraid of my feelings.
_____ 8. I try hard to avoid feeling depressed or anxious.
_____ 9. Anxiety is bad.
_____ 10. Despite doubts, I feel as though I can set a course in my life and then stick to it.
_____ 11. If I could magically remove all the painful experiences I've had in my life, I would do so.
_____ 12. I am in control of my life.
_____ 13. If I get bored of a task, I can still complete it.
_____ 14. Worries can get in the way of my success.
_____ 15. I should act according to my feelings at the time.
_____ 16. If I promised to do something, I'll do it, even if I later don't feel like it.
_____ 17. I often catch myself daydreaming about things I've done and what I would do differently next time.
_____ 18. When I evaluate something negatively, I usually recognize that this is just a reaction, not an objective fact.
_____ 19. When I compare myself to other people, it seems that most of them are handling their lives better than I do.
_____ 20. It is unnecessary for me to learn to control my feelings in order to handle my life well
_____ 21. A person who is really "together" should not struggle with things the way I do
_____ 22. There are not many activities that I stop doing when I am feeling depressed or anxious

Quality of Life Scale

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

1. Material comforts, home, food, conveniences, financial security

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

2. Health - being physically fit and vigorous

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

3. Relationships with parents, siblings & other relatives - communicating, visiting, helping

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

4. Having and rearing children

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

5. Close relationship with spouse or significant

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

6. Close friends

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

7. Helping and encouraging others, volunteering, giving advice

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

8. Participating in organizations and public affairs

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

9. Learning- attending school, improving understanding, getting additional knowledge

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

10. Understanding yourself – knowing your assets and limitations – knowing what life is about

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

11. Work – job or in home

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

12. Expressing yourself creatively

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

13. Socializing – meeting other people, doing things, parties, etc.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

14. Reading, listening to music or observing entertainment

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

15. Participating in active recreation

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

16. Independence, doing for yourself

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

Session Questionnaire

Please answer each of these questions using **any whole number** from a scale of **0 to 100**:

1. How believable are your thoughts and urges to view pornography?
   (0 = Not At All, 100 = Very Believable)

_____

2. How often do you fight against your thoughts?
   (0 = Not At All, 100 = All the Time)

_____

3. How distressing are they?
   (0 = Not At All, 100 = Very Distressing)

_____

4. How similar is having a thought to acting on it?
   (0 = Not At All, 100 = Very Similar)

_____

5. How much does thinking the thought affect whether you will engage in the behavior?
   (0 = Not At All, 100 = Very Likely)

_____

Please fill out the following table for the past week:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of Urges to View Pornography							
Number of Sessions of Actual Viewing of Pornography							
Number of Hours of Actual Viewing of Pornography							
Number of Instances of Masturbation							

Sexual Compulsivity Scale

Please indicate the extent to which the following statements apply to you:

		Not at all like me	Slightly like me	Mainly like me	Very much like me
1.	My sexual appetite has gotten in the way of my relationships.	1	2	3	4
2.	My sexual thoughts and behaviors are causing problems in my life.	1	2	3	4
3.	My desires to have sex have disrupted my daily life.	1	2	3	4
4.	I sometimes fail to meet my commitments and responsibilities because of my sexual behaviors.	1	2	3	4
5.	I sometimes get so horny I could lose control.	1	2	3	4
6.	I find myself thinking about sex while at work (or in class).	1	2	3	4
7.	I feel that my sexual thoughts and feelings are stronger than I am.	1	2	3	4
8.	I have to struggle to control my sexual thoughts and behavior.	1	2	3	4
9.	I think about sex more than I would like to.	1	2	3	4
10.	It has been difficult for me to find sex partners who desire having sex as much as I want to.	1	2	3	4

Cognitive and Behavioral Outcomes Scale

Below is a list of things that some people worry about as a result of their sexual activities (including things people do alone and those they do with others). Please indicate the extent to which the following apply to you.

1=Never
2=Sometimes
3=Often
4=Always

I am worried that the things I have done sexually:

1. _____ Might have placed me or one of my sex partners at risk for pregnancy.
2. _____ Might have placed me or one of my sex partners at risk for a sexually transmitted infection (like herpes, gonorrhea, or crabs).
3. _____ Might have placed me or one of my sex partners at risk for HIV.
4. _____ Might have resulted in pain, injury or other problems for others.
5. _____ Might have resulted in pain, injury or other problems for myself.
6. _____ Might have presented the potential for serious physical injury or death.
7. _____ Might be leading to problems with my friends.
8. _____ Might be leading to problems with my family members.
9. _____ Might be leading to problems with my boyfriend/girlfriend/spouse.
10. _____ Might have placed me at risk of being arrested.
11. _____ Might have been against the law.
12. _____ Might have led to financial problems.
13. _____ Might have caused me to waste my money.
14. _____ Were interfering with my ability to complete tasks for work or school.
15. _____ Might have had presented the potential for me to lose my job.
16. _____ Could lead to school-related problems, such as probation, expulsion or other sanctions.
17. _____ Were inconsistent with my spiritual beliefs.
18. _____ Were inconsistent with my religious values.
19. _____ Were making me feel guilty.
20. _____ Were making me ashamed of myself.

Below is a list of things that sometimes happen to people as a result of their sexual activities (including those they do alone and those they do with others). Please indicate whether these things have happened to you during the **last year** as a result of your sexual activities (Y=Yes,
N=No).

In the past year, as a result of the things you have done sexually, did the following happen to you:

1. _____ I or my sexual partner(s) became pregnant.
2. _____ I contracted a sexually transmitted infection.
3. _____ I contracted HIV.
4. _____ I gave someone else a sexually transmitted infection.
5. _____ I gave someone else HIV.
6. _____ I caused pain, injury or other physical problems for myself.
7. _____ I caused pain, injury or other physical problems for a sex partner.
8. _____ My relationships with friends and/or family members were damaged.
9. _____ My relationships with a spouse or other relationship partner were damaged.
10. _____ I was arrested.
11. _____ I experienced financial problems.
12. _____ I experienced problems at school.
13. _____ I experienced problems at work.
14. _____ I experienced spiritual distress.
15. _____ I was embarrassed or ashamed of myself.
16. _____ I felt guilty.

Appendix D

Treatment Manual

Acceptance and Commitment Therapy for the Treatment of Compulsive Pornography Use

Treatment Manual

Jesse M. Crosby
Michael P. Twohig

Utah State University
2009

Introduction

The purpose of this treatment manual is to guide the implementation of Acceptance and Commitment Therapy (ACT) for the treatment of compulsive pornography use (CPU). It is assumed that users of this manual have a fundamental understanding of the basic theoretical and philosophical basis of ACT. It is also assumed that they have received some basic training and supervision on the implementation of the treatment.

The primary material of this manual is a session by session description of ACT for CPU. The treatment is designed to be delivered in 12 one hour sessions over the course of 12 weeks. The outline for each session will include a list of session objectives, the suggested content for achieving those objectives, and homework assignments for the participant.

The focus of ACT is on the movement of six core psychological processes. Therefore, any technique or exercise that targets these processes would be considered consistent with the treatment model. These processes can be targeted when the opportunities arise throughout treatment, so the middle sessions of the treatment protocol are designed to allow for flexible work with these processes while the initial and final sessions tend to be more structured.

Note: This manual is an adaptation of ACT for CPU based on the original ACT protocol in Hayes et al., 1999.

Session Outline

Session 1	Introduction & Assessment
Session 2	Setting the Stage for Acceptance with Creative Hopelessness
Session 3	Undermining the Control Agenda and Introducing Acceptance as an Alternative
Session 4	Fostering Cognitive Defusion: What are these urges anyway?
Session 5-8	Viewing the Self as Context and Contact with the Present Moment
Session 9	Values Clarification
Session 10	Committed Action
Session 11	Review
Session 12	Termination

Session 1
Introduction and Assessment

Objectives

The objectives of this session are to make introductions, review the limits to confidentiality, provide the ACT informed consent, obtain a history of the problem, set the treatment goals, introduce the idea of private events, and identify the difference between private events and behaviors.

Content

Introduce yourself to the client and let the client introduce him or herself. Answer any questions that the client has and provide a brief overview of the treatment.

The treatment will last 10 sessions and we will try to meet every week except for the last two sessions that will be spaced two weeks apart. I will be doing a lot of the talking at first, but you will be expected to take more of a role in the treatment as we progress. In fact, the more that you engage this treatment by asking questions and trying to understand the material, the better this will go.

Review the traditional limits to confidentiality (reporting requirements there is a reason to believe the client might harm self or others, you learn of the occurrence of abuse of a protected population, or through court-ordered subpoena). Also warn the client that if they report viewing child pornography, it will be reported.

Informed consent in ACT consists of general descriptions of operating principles and frank discussion of the areas of ambiguity. Before ACT begins, the participant must be prepared for it. It can be an intensive intervention and the participants should not be subjected to such interventions lightly. Because ACT can raise fairly fundamental issues, it is wise to get the participant to commit to a course of treatment, and agree not to measure progress impulsively. Ask the participant to commit to the entire 10 session treatment.
You should expect ups and downs. As treatment is unfolding, it is not unusual for clients to question the progress of treatment. This commitment will help you to engage the entire treatment and evaluate the outcome after you have completed treatment. Are you willing to commit to the entire treatment?
Interview the client about the history the problem and the current manifestation of the problem.

How did their viewing start? How long has it been an issue? Has it been better or worse at certain times? Have they received therapy or medication for their problem? What things have made it worse or better? What negative outcomes have resulted from their CPU?How much do you view on average per day? Per week? Per month? Are there any

other related sexual behaviors? What triggers your behavior? What is your behavior like at its worst? At its best? How do you view (internet, cable, magazines, etc.)? What kind of material are you viewing in general—I don't need specifics, but it is helpful to know the severity of use (soft, hard, deviant, heterosexual, homosexual)? What times of the day or week do you usually view? What are your goals for treatment?

Set the treatment goal (i.e., what is the target level for viewing). If necessary, explain that this is up to the participant to choose between a goal for no viewing behavior or just to better regulate and manage the behavior. Also explain that you will support that participant in achieving whatever goal is chosen.

Introduce the idea of private events as thoughts, feelings, and bodily sensations that areseparate from public experience. Use the term *urge* to describe the private events (thoughts, emotions, sensations) that are typically associated with viewing.

I wonder if I had a magic wand and we were able to get rid of the urges if you would have a problem anymore?

Introduce the difference between private events and behaviors using the *$100,000 Question* exercise.

If I gave you $100,000 for 1 month of no viewing, could you do it? How long could you go? What if I said that I would give you $200,000 for 1 month of no urges to view.

Make sure the participant recognizes that they have control over behavior, but not over the urges to view.

Homework

Ask the participant to pay attention to the urges to view during the week and how he/she responded to them. It may be helpful keep a record of the urges to aid discussion during the next session.

Session 2
Setting the Stage for Acceptance with Creative Hopelessness

Objectives

The objectives of this session are to review the assigned homework, evaluate the workability of efforts to control urges, foster a sense of creative hopelessness, and suggest letting go of the control agenda.

Content

Ask the participant what was learned from the assignment to pay attention to the urges to view and the subsequent response to the urges. Draw his/her attention to any patterns and an overall agenda of control. Do this without communicating any judgment about the control agenda, just highlight the attempts to control urges.

Evaluate the workability of efforts to control urges by making a list of everything the participant has done to control urges. This is most effective when done on a dry erase or chalk board, but you can also use a notepad. If necessary, make it clear that these are things that have been done to control urges. After the list is on the whiteboard ask the participant, *What do you think of this list?* Usually there is some level of surprise at the amount of work that has been devoted to controlling these urges. Let the participant talk about his/her reaction to seeing the long list.

Ask the participant, *Which items on this list work really well in the short term? Which ones work well at controlling the urges for a couple minutes or maybe an hour?* In most cases about half of the items work well at controlling the inner experiences immediately. Then move to, *Which ones work well in the long term? For example, which ones work well for a month, or even a week?* Most likely there are no items on the list that work for a duration of a week or a month. A statement such as, *Hmmm….this is odd, wouldn't you think that you would want a solution that works for an extended period of time. For example, if you had a leaky pipe in your basement you would want the plumber to fix it for 20 or 30 years not for a day or two. Are there any items up there that can fix this for a meaningful period of time?* Most likely nothing up there will work like that, otherwise the participate would not need to participate in the study. Allow the participant some time to discuss these findings.

Foster a sense of creative hopelessness by asking the participant, *Do any of these items have a negative effect on your life?* Usually some of the items on the list negatively affect the participant's quality of life. Some of the items may not be inherently problematic, but the time and effort involved in an unsuccessful struggle is usually quite detrimental to quality of life. Allow a couple minutes for the participant to discuss these issues. This phase usually ends with a review of findings such as, *It looks like these attempts work pretty well in the short term, are generally ineffective in the long term, and at some level*

cause problems in your life. Discuss these findings with the participant in a nonjudgmental way by saying, *It isn't for lack of effort on your part that this hasn't worked, maybe the strategy is the problem*.

Once the participant is in some level of agreement and experiences this sense of hopelessness, Suggest letting go of the control agenda using the *Man in the Hole* metaphor.

Imagine that you're placed in a field, wearing a blindfold, and you're given a little bag of tools. You're told that your job is to run around this field, blindfolded, and live your life. So you start running around and sooner or later you fall into this big hole. Your hole is that you have panic related inner experiences. Other people have other ones. Now one tendency you might have would be to try and figure out how you got in the hole--exactly what path you followed. You might tell yourself, "I went to the left, and over a little hill, and then I feel in," etc. In one sense, that may be true; you are in the hole because you walked exactly that way. However, knowing that is not the solution to knowing how to get out of the hole. Furthermore, even if you had not done exactly that, and you'd gone somewhere else instead, in this metaphor, you might have fallen into another hole anyway, because unbeknownst to you, in this field there are countless widely-spaced, fairly deep holes. Anyway, so now you're in this hole, blindfolded. Probably what you would do in such a predicament is take the bag of tools you were given and try to get out of the hole. Now just suppose that the tool you've been given is a shovel. So you dutifully start digging, but pretty soon you notice that you're not out of the hole. So you try digging faster, or with bigger shovelfuls, or with a different style. More, different, and better. More, different, and better. You are trying all these difference things that we have listed on the board. But all of that makes no difference, because digging is not the way out of the hole; it only makes the hole bigger. Pretty soon this hole is huge. It has multiple rooms, halls, and caverns. It is more and more elaborated. So maybe you stop for a while and try to put up with it. But it doesn't work -- you are still in the hole. This is like what has happened with your urges. It is bigger and bigger. It has become a central focus of your life. You know all this hasn't worked. But what I'm saying is that it can't work. You absolutely can't dig your way out of the hole. It's hopeless. That's not to say that there is no way out of the hole. But within the system in which you have been working--no matter how much motivation you have, or how hard you dig--there is no way out. This is not a trick. No fooling. You know that sense you have that you are stuck? And that you came here to get help to fix it? Well, you are stuck. And in the system in which you are working, there is no way out. The things you've been taught to do aren't working although they may work perfectly well somewhere else. The problem is not in the tools; It's in the situation in which you find yourself using them. So you come in here wanting a gold-plated steam shovel from me. Well, I can't give it to you and even if I could I wouldn't because that's not going to solve your problem. It'd only make it worse.

If client asks for the way out of the hole, say, Y*our job right now is not to figure out how to get out of the hole. That is what you have been doing all along. Your job is to accept*

that you are in one. In the position you are in right now, even if you were given other things to do, it wouldn't work. The problem is not the tool -- it is the agenda. It is digging. If you were given a ladder right now it wouldn't do any good. You'd only try to dig with it. And ladders make terrible shovels. If you need to dig, you've got a perfectly good tool already. You can't do anything else until you let go of the shovel and let go of digging as the agenda. You need to make room for something else in your hands. And that is a very difficult and bold thing to do. The shovel appears to be the only tool you have. Letting go of it looks as though it will doom you to stay in the hole forever. And I can't really reassure you on that. Nothing I can say right now would help ease the difficulty of what you have to do here. Your best ally is your own pain, and the knowledge that nothing has worked. Have you suffered enough? Are you ready to give up and do something else?

The purpose here is to let the participant experience this feeling of creative hopelessness for the week. It is likely that she/he will be anxious for you to suggest an alternative, but gently ask her/him to just take time to examine their own experience and evaluate the workability of the control agenda.

Homework

Ask the participant to pay attention to their efforts to control urges to view during the week. It may be helpful keep a record to aid discussion during the next session.

Session 3
Undermining the Control Agenda and Introducing Acceptance as an Alternative

Objectives

The objectives of this session are to review the assigned homework, to continue undermining the control agenda, to introduce acceptance as an alternative, and to ask the participant to make the first behavioral commitment to change viewing behavior.

Content

Review the assignment to pay attention to the efforts to control urges to view during the week. Draw attention to the unworkability of the control agenda, and pay attention to any experiences that can be used later in the session.

Undermine the control agenda using the metaphors and exercises that target control as a problem. Explain that not only have the attempts to control urges been unsuccessful, perhaps they have made things worse

Remind the participant of the difference between public and private events, and suggest that perhaps the rules are different in these two arenas.

What I want to do today is to try to get a clearer sense of this set of things--I want to have us get clearer about what digging (from the *Man in the Hole* metaphor) *even is anyway. I believe that most of what you having been doing is quite logical, sensible, and reasonable, at least according to your mind and my mind. The outcome isn't what you hoped it would be, but really it seems to me that you've done pretty much the normal thing. You've really tried hard and fought the good fight. All these digging moves you have listed. Aren't they the kinds of things people do?*

Consider this as a possibility. Everyone's story is similar (and similar to yours) because what you are doing is what we are all trained to do. It's just that it doesn't work here. Human language has given us a tremendous advantage as a species because it allows us to break things down into parts, to formulate plans, to construct futures we have never experienced, and to plan action. And it works pretty well. If we look just at the part of our existence that involves what goes on outside the skin, it works great. Look at all the things the rest of creation is dealing with and you'll see we do pretty well. Just look around this room. Almost everything we see in here wouldn't be here without human language and human rationality. The plastic chair. The lights. The heating duct. Our clothes. That computer. And so on. So we are warm, it won't rain on us, we have light--with regard to the stuff non humans are struggling with we pretty much have it made. You give a dog or a cat all this stuff--warmth, shelter, food, social simulation--and they are about as happy as they know to be. But without humans they are outside in the cold. So we've solved the problems nonverbal critters face. We are also the only species that

commits suicide, and we can be miserable when they would be happy. Really, really important things--important to us as a species competing with other life forms on this planet--have been done with human language. There is an operating rule for things outside the skin that works great: if you don't like something, figure out how to get rid of it and get rid of it. And that rule works great in most of our life. But consider the possibility--just consider it--that that rule does not work in the world between your ears. That last little bit of human existence is a pretty important part because it is where life satisfaction lies, but it is only a small proportion of our total lives. But suppose that same rule worked just terribly in that last few percentage points of life. In your experience, not in your logical mind, look and see if it's not like this: In the world inside the skin, the rule actually is, if you aren't willing to have it, you've got it.

Demonstrate the paradox of control using the *Chocolate Cake* exercise.

Suppose I tell you right now, I don't want you to think about something. I'm going to tell you real soon. And when I do don't think it even for a second. Here it comes. Remember, don't think of it. Don't think of...Warm chocolate cake! You know how it smells when it first comes out of the oven...Don't think of it! The taste of the chocolate icing when you bite into the first warm piece ...Don't think of it! As the warm, moist piece crumbles and crumbs fall to the plate...Don't think of it! It's very important, don't think about any of this!

Most participants get the point immediately, and may laugh uncomfortably, nod, or smile. Others may respond by insisting that they did not think about anything. As is illustrated in the following dialogue between a therapist (T) and a participant (P), you can use this exercise to further highlight the futility of mental control or thought suppression strategies.

T: "So could you do it?"
P: "Sure."
T: "And how did you do it?"
P: "I just thought about something else."
T: "OK. And how did you know you did it?"
P: "What do you mean?"
T: "The task was not to think of chocolate cake. So what did you think of?"
P: "Driving a race car."
T: "Great. And how did you know that thinking of a race car was doing what I asked? So that you could report success?
P: "Well I was saying 'Great, I'm thinking of a race car ...[pauses]
T: "Yes. And continue on. I'm thinking of a race car and I'm not thinking of ..."
P: "Chocolate cake."
T: "Right. So even when it works, it doesn't."
P: "It's true. I did think of cake but I pushed it out so fast I almost didn't think of it.
T: "And isn't this similar to what you have done with your urges?"

P: "I try to push them out of my mind."
T: "But see the problem. All you are doing is adding race cars to chocolate cake. You can't 100% subtract chocolate cake deliberately, because to do it deliberately you have to formulate the rule and then there you are because the rule contains it. If you are not willing to have it ..."
P: "You do."

The point can also be made with respect to physical reactions. We might say to the participant something like, *Don't salivate when I ask you to imagine biting into a wedge of lemon. Don't salivate as you imagine the taste of the juice on your lips and tongue and teeth.* These exercises help the participant to make direct contact with the ineffectiveness of conscious purposeful control in these domains.

If necessary, you can further undermine the control agenda using the *Mind Reading* metaphor.

Suppose I had you hooked up to the best mind reading machine that's ever been built. This is a perfect machine, the most sensitive ever made. When you are all wired up to it, there is no way you can think anything without the machine knowing it. So I tell you that you have a very simple task here: all you have to do not think about pornography. If you think about it even a little bit, however, I will know it. How are you doing so far? All you have to do is not think about pornography.

Once you have undermined the control agenda, introduce acceptance as an alternative to control using the *Two Scales* metaphor. The term "acceptance" is usually not used in therapy because of the many connotations that are already associated with it. Instead, use terms such as *willingness or openness*.

Imagine there are two scales, like the volume and balance knobs on a stereo. One is right out here in front of us and it is called "Urges" [It may also help to move ones hand as if it is moving up and down a numerical scale.] *It can go from 0 to 10. In the posture you're in, what brought you in here, was this: The urges are too high. It's way up here and I want it down here and I want you, the therapist, to help me do that, please. In other words you have been trying to pull the pointer down on this scale* [the therapist can use the other hand to pull down unsuccessfully on the anxiety hand]. *But now there's also another scale. It's been hidden. It is hard to see. This other scale can also go from 0 to 10.* [move the other hand up and down behind your head so you can't see it] *What we have been doing is gradually preparing the way so that we can see this other scale. We've been bringing it around to look at it.* [move the other hand around in front] *It is really the more important of the two, because it is this one that makes the difference and it is the only one that you can control. This second scale is called "Willingness." It refers to how open you are to experiencing your own experience when you experience it--without trying to manipulate it, avoid it, escape it, change it, and so on. When urges are*

up here at 10, and you're trying hard to control them, make it go down, make it go away, then you're unwilling to feel the urges. In other words, the Willingness scale is down at 0. But that is a terrible combination. It's like a ratchet or something. You know how a ratchet wrench works? When you have a ratchet set one way no matter how you turn the handle on the wrench it can only tighten the bolt. It's like that. When urges are high and willingness is low, the ratchet is in and the urges can't go down. It's as if when urges are high, and willingness drops down, the urges kind of lock into place. You turn the ratchet and no matter what you do with that tool, it drives it in tighter. So, what we need to do in this therapy is shift our focus from the urges scale to the willingness scale. You've been trying to control the urges for a long time, and it just doesn't work. It's not that you weren't clever enough; it simply doesn't work. Instead of doing that, we will turn our focus to the willingness scale. Unlike the urges scale, which you can't move around at will, the willingness scale is something you can set anywhere. It is not a reaction--not a feeling or a thought--it is a choice. You've had it set low. You came in here with it set low--in fact coming in here at all may initially have been a reflection of its low setting. What we need to do is get it set high. If you do this, if you set willingness high, I can guarantee you what will happen to urges. I'll tell you exactly what will happen and you can hold me to this as a solemn promise. If you stop trying to control urges, your urges will be low ...[pause] or ... high. I promise you! Swear. Hold me to it. And when they low, they will be low, until they are not low and then they will be high. And when they are high they will be high until they aren't high anymore. Then they will be low again. ... I'm not teasing you. There just aren't good words for what it is like to have the willingness scale set high--these strange words are as close as I can get. I can say one thing for sure, though, and your experience says the same thing--if you want to know for sure where the urges scale will be, then there is something you can do. Just set willingness very, very low and sooner or later when anxiety starts up the ratchet will lock in and you will have plenty of urges. It will be very predictable. All in the name of getting it low. If you move the willingness scale up, then the urges are to move. Sometimes it will be low, and sometimes it will be high, and in both cases you will keep out of a useless and traumatic struggle that can only lead in one direction.

The participant will not be clear on what *willingness* is and he/she will likely ask the therapist to explain how to be willing. The therapist will be most successful if she says, *"Willingness is a skill like playing a sport or riding a bike. I can give you general suggestions—like a coach might, but you are really going to have to practice this at home."*

Homework

Ask the participant to practice the acceptance of urges (willingness to experience urges) at home. Ask them to practice willingness to experience urges with the first three urges experienced during the week and make a commitment to control viewing behavior in those three instances. Practice after the first three urges is recommended but not required as this makes the goal achievable and specific.

Session 4
Fostering Cognitive Defusion: What are these urges anyway?

Objectives

The objectives of this session are to review the assigned homework, evaluate the effectiveness of acceptance, to start working on cognitive defusion, and to make another behavioral commitment for behavior change and skills practice.

Content

Review the practice of the acceptance of urges (willingness to experience urges) at home. Discuss the specific details about any situations in which it was successful and point out any evidence of the control agenda.

Evaluate the effectiveness of acceptance by discussing the specific details of any situation in which acceptance may have been difficult. You should expect the participant to have had some difficulties, as acceptance without defusion is difficult, especially in the long-term.

So it was hard, and you did it, but it seems like willingness can be hard sometimes. Perhaps this is just a partial solution to the problem and we need to keep looking at it.

You can introduce the idea of defusion and review the idea of acceptance using the *Monster Tug-of-War* metaphor

The situation you have been in is like being in a tug-of-war with a monster. It is big, ugly, and very strong. In between you and the monster is a pit, and so far as you can tell it is bottomless. If you lose this tug-of-war, you will fall into this pit and will be destroyed. So you pull and pull, but the harder you pull, the harder the monster pulls, and you edge closer and closer to the pit. The hardest thing to see is that our job here is not to win the tug-of-war. ..... Our job is to drop the rope.

This is a review of what has occurred, and can become an important reminder of the need to let go of the struggle as you move through treatment and the participant shows evidence of resorting to the control agenda. The metaphor can be continued to introduce start the defusion work.

Now that you have dropped the rope, maybe you can finally take a look at what you have been fighting for so long. Every time an urge shows up, you do everything you can not to have it, including acting on it, so I wonder if you even know what this monster looks like? I wonder if you are more afraid of what you think about the monster, in your mind, or of the monster itself. Maybe this is a good place to start, to take a good look at what we have been fighting for so long.

Now you start the work on cognitive defusion. It is unlikely that the participant will understand this idea from a brief explanation or one or two experiential exercises. This will require several attempts, with each one creating more and more distance between the literal function of language and the participants actual experience. Be prepared to feel like the participant does not "get it" because it will be a gradual process, and you need to keep "chipping away" at the cognitive fusion.

At this point, a description of the role of language in human suffering and problems can help to start the defusion work. The *Your Mind Is Not Friend* intervention helps highlight the problem of self referential language and thought.

You've may have guessed by now that I'm not a big fan of minds. It's not that I don't think minds are useful, it's just that you can't really live your life effectively between your ears. I'm pretty sure minds evolved to give us a more elaborate way of detecting threats to our survival and they probably helped organize early humans in ways that led to less killing, stealing, incest and so forth. One thing minds didn't evolve for was to help humans feel good about themselves. You know, it's kind of hard to imagine them sitting around a fire, contemplating their belly buttons, hugging and bonding. And, if you look at recent studies of natural thought processes, what you consistently see is that a large percentage of all mental content is negative in some way. We have minds that are built to produce negative content in the name of warning us or keeping us in line with the pack. We will have to address this paradox: Your mind is not your friend, and you can't do without it.

Being verbally knowledgeable and verbally right is powerfully and frequently reinforced within human culture. The arbitrariness of human language means that, once it is learned, it becomes relatively independent of immediate environmental support. The combination of these two factors leads to the indiscriminate use of language, often without the participant even being aware of it. The *Finding A Place To Sit Metaphor* helps make this point experientially.

T: "It is as if you needed a place to sit, and so you began describing a chair. Let's say you gave a really detailed description of a chair. It's a grey chair, and it has a metal frame, and it's covered in fabric, and it's a very sturdy chair. OK now can you sit in that description?"
C: "Well, no."
T: "Hmmm. Maybe the description wasn't detailed enough. What if I was able to describe the chair all the way down to the atomic level. Then could you sit in the description?"
C: "No."
T: "Here's the thing, and check your own experience: Hasn't your mind been telling you things like the world is this way and that way and your problem is this and that, etcetera. Describe, describe. Evaluate, evaluate, evaluate. And

> all the while you're getting tired. You need a place to sit. And your mind keeps handing you ever more elaborate descriptions of chairs. Then it says to you, "have a seat." Descriptions are fine, but what we are looking for here is an experience, not a description of an experience. Minds can't deliver experience, they only blab to us about our experience elsewhere. So we'll let your mind describe away, and in the mean time you and I will look for a place to sit."

Another useful strategy is to appeal to the clients' own experience in areas where words are not only insufficient, but even detrimental.

Some tasks are very well regulated by rules, such as finding one's way to the grocery store--go to the first stop light, turn left, and so forth. However, for some other activities it is not at all helpful. Suppose we had a perfect description of swimming. We could describe its mechanics, even the feel of the water moving over the skin, but we would not then know how to swim. The only way to learn to swim is to get in the water.

This awareness can be built upon experientially by asking the client to explain motor actions during therapy. For example, if the client picks up a pen, the therapist can ask for an explanation of how this is done. When the explanation is given (e.g., "reach for it with your hand") the therapist can see if this works by telling her or her own hand to reach. Of course, the hand will not hear and will not reach. The behavior was nonverbal first and only then became verbally governed.

Language itself claims to know how to do virtually everything, from reaching for a pen to developing a relationship. Verbal knowing rests atop nonverbal knowing so completely that an illusion is created that all knowledge is verbal knowledge. If we suddenly had all nonverbal knowledge removed from our repertoires, we would fall to the floor quite helpless.

If time allows, you can close the session with the *Milk Milk* exercise to help the participant experience defusion from the literal functioning of language. It is a playful way to demonstrate that a literal, sequential, analytical context is required for language stimuli to have any literal (that is, derived) meaning.

> T: "Let's do a little exercise. It's an eyes-open one. I'm going to ask you to say a word. Then you tell me what comes to mind. I want you to say the word, "Milk." Say it nice."
> P: "Milk."
> T. "Good. Now what came to mind when you said that?"
> P: "I have milk at home in the refrigerator."
> T: "OK. What else. What shows up when we say 'milk?'"
> P: "I picture it--white, a glass."
> T: "Good. What else?"

P: "I can taste it, sort of."
T: "Exactly. And can you feel what it might feel like to drink a glass? Cold. Creamy." Coats your mouth. Goes "glug, glug" as you drink it. Right?"
P: "Sure."
T: "OK, so let's see if this fits. What shot through your mind was things about actual milk and your experience with it. All that happened is that we made a strange sound --milk-- and lots of these things showed up. Notice that there isn't any milk in this room. None at all. But milk was in the room psychologically. You and I were seeing it, tasting it, feeling it--yet only the word was actually here. Now, here is the little exercise, if you're willing to try it. The exercise is a little silly, and so you might feel a little embarrassed doing it, but I am going to do the exercise with you so we can be silly together. What I am going to ask you to do is to say the word "milk," out loud, rapidly, over-and-over again and then notice what happens. Are you willing to try it?"
P: "I guess so."
T: "OK. Let's do it. Say "milk" over and over again. [T and P say the word for one-two minutes, with the T periodically encouraging the P to keep it going, keep saying it out loud or to go faster]"
T: "OK, now stop. Where is the milk?"
P: "Gone (laughs)."
T: "Did you notice what happened to the psychological aspects of milk that were here a few minutes ago?"
P: "After about 40 times it disappeared. All I could hear was the sound. It sounded very strange--in fact I had a funny feeling that I didn't even know what word I was saying for a few moments. It sounded more like a bird sound than a word."
T: "Right. The creamy, cold, gluggy stuff just goes away. The first time you said it, it was as if milk was actually here, in the room. But all that really happened was that you said a word. The first time you said it, it was really meaning-full, it was almost solid. But when you said it again and again and again, you began to lose that meaning and the words began to also be just a sound."
P: "That's what happened."
T: "Well, when you say things to yourself, in addition to any meaning sustained by the relation between those words and other things, isn't it also true that these words are just words. The words are just smoke. There isn't anything solid in them."

This exercise demonstrates quite quickly that while literal meaning dominates in language it is not that hard to establish contexts in which literal meaning quickly weakens and almost disappears. To many "milk" is a very odd sound, considered (as it almost never is) simply as a sound. It has a funny quality to it, reminding people of sounds made by birds or other animals. These direct properties are so glossed over by its functional symbolic properties, that it is often a revelation to hear--just to hear--"milk," perhaps for

the first time since early childhood. This does not mean that milk has lost its literal meaning. Participants still have milk and the mammary secretions of cows in an equivalence class, though it may have loosened somewhat. What has happened is that the transfer of stimulus functions through that equivalence class has been greatly weakened.

A participant who is struggling with the urges to view pornography can be asked to do this exercise with the thoughts. It is a bit harder to get the effect with a complete sentence, but it can be done especially if the thought can be put in a few words. For example, shorten an urge to "I want it." This sentence can then be stated as rapidly as possible over and over for a couple of minutes until it's meaning dissolves. Once this is experienced, the thought now has two functions: it is referential and evaluative, and it is also just a string of auditory events. Ask the participant in the natural environment to practice actually experiencing "I want it" as a string of sounds, in addition to whatever literal meaning it has.

Homework

Ask the participant to practice applying the acceptance and defusion skills learned to this point by making another behavior commitment to change behavior. Typically, you should have them commit to reducing behavior on certain days, but still make it achievable and specific.

Session 5-8
Viewing the Self as Context and Contact with the Present Moment

Objectives

The objectives of these sessions are to continue to review the homework from the previous session(s), foster both acceptance and defusion, to introduce the idea of self as context, to help the participant contact the present moment, and to make another behavioral commitment for behavior change and skills practice.

Content

In this portion of treatment it is important to target these processes based on the needs and responses of the participant. The content for these three sessions is presented here as a reference for how to target each process, but it is expected that this will be done flexibly as opportunities arise. As you review the homework at the start of each session, the content of the participant's experience should provide an idea of what to target.

Continue targeting cognitive defusion by using the following exercises and metaphors:

The *Passengers On The Bus Metaphor* is a core ACT intervention aimed at deliteralizing or defusing provocative psychological content through objectification.

It's as if there is a bus and you're the driver. On this bus we've got a bunch of passengers. The passengers are thoughts, feelings, bodily states, memories, and other aspects of experience. Some of them are scary, and they're dressed up in black leather jackets and they've got switchblade knives. What happens is, you're driving along and the passengers start threatening you, telling you what you have to do, where you have to go. "You've got to turn left," "you've got to go right," etc. The threat that they have over you is that, if you don't do what they say, they're going to come up from the back of the bus.

It's as if you've made deals with these passengers, and the deal is, "You sit in the back of the bus and scrunch down so that I can't see you very often, and I'll do what you say, pretty much." Now what if one day you get tired of that and say, "I don't like this! I'm going to throw those people off the bus!"You stop the bus, and you go back to deal with the mean-looking passengers. Except you notice that the very first thing you had to do was stop. Notice now, you're not driving anywhere, you're just dealing with these passengers. And plus, they're real strong. They don't intend to leave and you wrestle with them, but it just doesn't turn out very successfully.

Eventually you go back to placating the passengers, to try and get them to sit way in the back again where you can't see them. The problem with that deal is that, in exchange, you do what they ask in exchange for getting them out of your life. Pretty soon, they don't

even have to tell you, "Turn left"--you know as soon as you get near a left-turn the passengers are going to crawl all over you. Eventually you may get good enough that you can almost pretend that they're not on the bus at all. You just tell yourself that left is the only direction you want to turn. However, when they eventually do show up, it's with the added power of the deals that you've made with them in the past.

Now the trick about the whole thing is this: The power that the passengers have over you is 100% based on this: "If you don't do what we say, we're coming up and we're making you look at us." That's it. It's true that when they come up they look like they could do a whole lot more. They've got knives, chains, etc. It looks like you could be destroyed. The deal you make is to do what they say so they won't come up and stand next to you and make you look at them. The driver (you) has control of the bus, but you trade off the control in these secret deals with the passengers. In other words, by trying to get control, you've actually given up control! Now notice that, even though your passengers claim they can destroy you if you don't turn left, it has never actually happened. These passengers can't make you do something against your will.

You can continue to allude to the bus metaphor throughout defusion work. Questions such as, "Which passenger is threatening you now?" can help re-orient the practicing who is practicing emotional avoidance in session.

The bus metaphor casts the relationship between a person and thoughts or feelings the way one might cast a social relationship between a person and bullies. This reframe is useful as a motivative augmental for seeking freedom from literal language. Some of our past efforts to gain social independence can be used to stimulate a similar independence from the hegemony of our own verbal systems: our own minds. However limited our social independence is, independence from our minds is usually much less. This makes sense in another way since the source of verbal relations, after all, is dominantly social and external in any case. The bus metaphor also nicely structures how the illusion of language works and what the cost is in terms of loss of life direction.

Continue to target defusion using the *Having a Thought vs. Buying a Thought* exercise. The exercise helps distinguish between thoughts observed as thoughts and thoughts bought as beliefs or concepts.

> T: "I'd like us to do an exercise to show how quickly thoughts pull us away from experience when we buy them. All I'm going to ask you to do is to think whatever thoughts you think and to allow them to flow, one thought after another. The purpose of the exercise is to notice when there's a shift from looking at your thoughts, to looking from your thoughts. You will know that has happened when the parade stops or you are down in the parade or the exercise has disappeared. I'm going to ask you to imagine that there are little people, soldiers, marching out of your left ear marching down in front of you in a parade. You are up on the reviewing stand, watching the parade go by.

Each soldier is carrying a sign, and each thought you have is a sentence written on one of these signs. Some people have a hard time putting thoughts into words, and they see thoughts as images. If that applies to you, put each image on a sign being carried by the soldiers. Certain people don't like the image of soldiers, and there is an alternative image I have used in that case: leaves floating by in a stream. You can pick the one that seems best."

P: "The soldiers seem fine."

T: "OK. In a minute I am going to ask you to get centered, and begin to let your thoughts go by written on placards carried by the soldiers. Now here is the task. The task is simply to watch the parade go by without having it stop and without you jumping down into the parade. You are just supposed to let it flow. It is very unlikely, however, that you will be able to do this without interruption. And this is the key part of this exercise. At some point you will have the sense that the parade has stopped, or that you have lost the point of the exercise, or that you are down in the parade instead of being on the reviewing stand. When that happens, I would like you to back up a few seconds and see if you can catch what you were doing right before the parade stopped. Then go ahead and put your thoughts on the placards again, until the parade stops a second time, and so on. The main thing is to notice when it stops for any reason and see if you can catch what happened right before it stopped. OK?"

P: "OK."

T: "One more thing. If the parade never gets going at all and you start thinking "it's not working." or "I'm not doing it right" then let that thought be written on a placard and send it down into the parade. OK. Now let's get comfortable, close your eyes, and get centered. [Help the P relax for 1 or 2 minutes]. Now allow the parade to begin. You stay up on the reviewing stand and let the parade flow. If it stops or you find yourself in it, note that, see if you can notice what you were doing right before that happened, get back up on the reviewing stand, and let the parade begin to flow again. OK, let's begin. ... Whatever you think, just put it on the cards. .... [for about two to three minutes, allow the P to work. Don't under do it time-wise, and use very few words. Try to read the P reaction and other cues and add a very few comments as needed, like "just let it flow and notice when it stops.." Don't dialogue with the P, however. If the P opens his or her eyes calmly ask that they be closed and the exercise be continued. If a P starts to talk, gently suggest that even that thought be put on a placard, saying something like, "we will talk more about this when the exercise is finished, but for now there is no need to talk with me. Whatever you think you want to say, let that thought be written down and let it march by too."]. Ok, now we will let the last few soldiers go by, and we will begin to think about coming back to this room [Help the P reorient for 1 or 2 minutes]. Welcome back."

P: "Interesting."

T: "What did you observe?"

P: "Well, at first it was easy. I was watching them go by. Then I suddenly noticed that I was lost and had been for about 15 seconds."
T: "As if you were off the reviewing stand entirely."
P: "Right. The whole exercise had stopped."
T: "Did you notice what had been happening right before everything stopped."
P: "Well, I was thinking thoughts about how my body was feeling and these were being written on the cards. And then I started thinking about my work situation and the meeting with the boss I have Friday. I was thinking about how I might be anxious telling him some of the negative things that have been going on, and next thing you know it's a while later and I'm still thinking about it."
T: "So, when the thought first showed up "I'm going to be meeting with the boss next Friday" was that thought written on a placard."
P: "At first it was, for a split second. Then it wasn't."
T: "Where was it instead?"
P: "No where in particular. I was just thinking it."
T: "Or it was just thinking you. Can we say it that way? At some point you had a thought that hooked you. You bought it and started looking *at* the world *from* that thought. You let it structure the world. So you started actually working out what might happen, what you will do, and so on, and at that point the parade has absolutely stopped. There is now no perspective on it--you can't even see the thought clearly. Instead you are dealing with the meeting with the boss."
P: "It was like that. It was."
T: "Did you get that thought back on the placard?"
P: "Well, at some point I remembered I was supposed to let the thoughts flow so I wrote the thought out and let a soldier carry it by. Then things went OK for a while until I started thinking that this whole exercise is kind of silly."
T: "And did you just notice that thought, or did it think you."
P: "I bought it I guess."
T: "What happened to the parade?"
P: "It stopped."
T: "Right. And check and see if this isn't so. Every time the parade stopped, it was because you bought a thought."
P: "It fits."
T: "I haven't met anyone who can let the parade go by 100% of the time. That is not realistic. The point is just to get a feel for what it is like to be hooked by your thoughts and what it is like to step back once you're hooked."

It is useful to encourage participants to engage in awareness exercises that can help the client to practice observing the contents of consciousness. Several exercises that emphasize the noticing of conscious content, rather than struggle with the contents, involve writing the contents on cards and having the client do various things with the cards.

One more defusion exercise to demonstrate to role of language in evaluation is the *Bad Cup* metaphor.

There are things in our language that draw us into needless psychological battles and it is good to get a sense of how that happens so that we can learn to avoid them. One of the worst tricks language plays on us is in the area of evaluations. For language to work at all, things have to be what we say they are, when we're engaging in the kind of talk that is naming and describing. Otherwise, we couldn't talk to each other. If we describe something accurately, the labels can't change until the form of that event changes. If I say "here is a cup" I can't then turn around and claim it isn't a cup but instead is a race car, unless I somehow change the cup. For example, I could mash it into raw materials and use it as part of a sports car. But without a change in form, this is a cup (or whatever else we agree to call it)--the label shouldn't change willy nilly.

Now consider what happens with evaluative talk. Suppose I say "This is a good cup" or "this is a beautiful cup." It sounds the same as if we are saying "This is a ceramic cup" or "this is an 8 ounce cup." But are they really the same? Suppose all the living creatures on the planet die tomorrow. This cup is still sitting on the table. If it was "a ceramic cup" before everyone died, it is still a ceramic cup. But is it still a good cup or a beautiful cup? Without anyone to have such opinions, the opinions are gone, because good or beautiful was never in the cup but instead was in the interaction between the person and the cup. But notice how the structure of language hides this difference. It looks the same, as if "good" is the same kind of description as "ceramic." Both seem to add information about the cup. The problem is that if you let good be that kind of descriptor, it means that good has to be what the cup is, in the same way that ceramic is. That kind of description can't change until the form of the cup changes. And what if someone else says "No, that is a terrible cup!" If I say it is good, and you say it is bad, there is a disagreement that seemingly has to be resolved. One piece has to win, and one piece has to lose: both can't be right. On the other hand, if good is just an evaluation or a judgment, something you're doing with the cup rather than something that is in the cup, it makes a big difference. Two opposing evaluations can easily coexist. They do not reflect some impossible state of affairs in the world--the cup is both ceramic and metallic. Rather they reflect the simple fact that events can be evaluated as good or bad depending on the perspective taken. And, of course, it is not unimaginable that one person could take more than one perspective. Neither evaluation needs to win out as the one concrete fact.

Continue fostering acceptance by identifying moments in session where it appears that the participant is avoiding some negative emotion. This can be immediately identified and compared to how they have responded to urges to view.

You can also encourage the practice of acceptance as you have the participant describe their practice during the week. Reviewing the details of viewing experiences and the context in which they occurred can be somewhat awkward and embarrassing. You can

identify this and ask the client to make a place for these private events and continue discussing the content of their practice. You can model acceptance as you acknowledge the awkwardness with a willingness to engage the treatment.

Introduce the idea of the self as context using the *Chessboard Metaphor* to identify the distinction between content and the observing self.

It's as if there is a chess board that goes out infinitely in all directions. It's covered with different colored pieces, black pieces and white pieces. They work together in teams, like in chess--the white pieces fight against the black pieces. You can think of your thoughts and feelings and beliefs as these pieces; they sort of hang out together in teams too. For example, "bad" feelings (like anxiety, depression, resentment) hang out with "bad" thoughts and "bad" memories. Same thing with the "good" ones. So it seems that the way the game is played is that we select which side we want to win. We put the "good" pieces (like thoughts that are self-confident, feelings of being in control, etc.) on one side, and the "bad" pieces on the other. Then we get up on the back of the white queen and ride to battle, fighting to win the war against anxiety, depression, thoughts about using drugs, whatever. It's a war game. But there's a logical problem here, and that is that from this posture, huge portions of yourself are your own enemy. In other words, if you need to be in this war, there is something wrong with you. And since it appears that you're on the same level as these pieces, they can be as big or even bigger than you are-even though these pieces are in you. So somehow, even though it is not logical, the more you fight the bigger they get. If it is true that "if you are not willing to have it, you've got it" then as you fight them they get more central to your life, more habitual, more dominating, and more linked to every area of living. The logical idea is that you will knock enough of them off the board that you eventually dominate them--except you experience tells you that the exact opposite happens. Apparently, the black pieces can't be deliberately knocked off the board. So the battle goes on. You feel hopeless, you have a sense that you can't win, and yet you can't stop fighting. If you're on the back of that white horse, fighting is the only choice you have because the black pieces seem life threatening. Yet living in a war zone is no way to live.

As the particpant connects to this metaphor, it can be turned to the issue of the self.

T: "Now, let me ask you to think about this carefully. In this metaphor, suppose you aren't the chess pieces. Who are you?"
C: "Am I the player?"
T: "That may be what you have been trying to be. Notice, though, that a player has a big investment in how this war turns out. Besides, who are you playing against? Some other player? So suppose you're not that either."
C: "…. Am I the board?"
T: "It's useful to look at it that way. Without a board, these pieces have no place to be. The board holds them. Like what would happen to your thoughts if you weren't there to be aware that you thought them? The pieces need you. They

> cannot exist without you, but you contain them, they don't contain you. Notice that if you're the pieces, the game is very important; you've got to win, your life depends on it. But if you're the board, it doesn't matter if the war stops or not. The game may go on, but it doesn't make any difference to the board. As the board, you can see all the pieces, you can hold them, you are in intimate contact with them and you can watch the war being played out in your consciousness, but it doesn't matter. It takes no effort."

Once the participant has been introduced to the metaphor, it is useful to reinvigorate it periodically by simply asking the participant, "are you at the piece level or at the board level right now"? All the arguments, reasons, and so on that the participant brings in are all examples of pieces and thus this metaphor can help defuse the participant from such reactions. The notion of board level can be used frequently to connote a stance in which the participant is looking *at* psychological content, rather than looking *from* psychological content. The point is that thoughts, feelings, sensations, emotions, memories and so on are pieces: they are not you. This is immediately experientially available, but the fusion with psychological content can overwhelm this awareness. Metaphors such as the chessboard metaphor help make the issue concrete.

Continue to help the participant understand the idea of self as context using the *Observer Exercise*.

We are going to do an exercise now that is a way to begin to try to experience that place where you are not your programming. There is no way anyone can fail at the exercise; we're just going to be looking at whatever you are feeling or thinking so whatever comes up if just right. Close your eyes, get settled into your chair and follow my voice. If you find yourself wandering, just gentling come back to the sound of my voice. For a moment now, turn your attention to yourself in this room. Picture the room. Picture yourself in this room and exactly where you are. Now begin to go inside your skin, and get in touch with your body. Notice how you are sitting in the chair. See if you can notice exactly the shape that is made but the parts of your skin that touch the chair. Notice any bodily sensations that are there. As you see each one, just sort of acknowledge that feeling and allow your conscious to move on. [pause] *Now notice any emotions you are having and if you have any just acknowledge them* [pause]. *Now get in touch with your thoughts and just quietly watch them for a few moments* [pause]. *Now I want you to notice that as you noticed these things a part of you noticed them. You noticed those sensations ... those emotions ... those thoughts. At that part of you we will call the "observer you." There is a person in here, behind those eyes, that is are of what I am saying right now. And it is the same person you've been your whole life. In some deep sense this observer you is the you that you call you.*

I want you to remember something that happened last summer. Raise your finger when you have an image in mind. Good. Now just look around. Remember all the things that were happening then. Remember the sights ... The sounds ... Your feelings ... and as you

do that see if you can notice that you were there then noticing what you were noticing. See if you can catch the person behind your eyes who saw, and heard, and felt. You were there then, and you are here now. I'm not asking you to believe this. I'm not making a logic point. I am just asking you to note the experience of being aware and check and see if it isn't so that in some deep sense the you that is here now was there then. The person aware of what you are aware of is here now and was there then. See if you can notice the essential continuity--in some deep sense, at the level of experience, not of belief, you have been you your whole life.

I want you to remember something that happened when you were a teenager. Raise your finger when you have an image in mind. Good. Now just look around. Remember all the things that were happening then. Remember the sights ... The sounds ... Your feelings ... Take your time. And when you are clear about what was there see if you just for a second catch that there was a person behind your eyes then who saw, and heard, and felt all of this. You were there then too, and see if it isn't true--as an experienced fact, not a belief-that there is an essential continuity between the person aware of what you are aware of now and the person who was aware of what you were aware of as a teenager in that specific situation. You have been you your whole life.

Finally, remember something that happened when you were a fairly young child, say around age six or seven. Raise your finger when you have an image in mind. Good. Now just look around again. See what was happening. See the sights ... hear the sounds ... feel your feelings ... and then catch the fact that you were there seeing, hearing, and feeling. Notice that you were there behind your eyes. You were there then, and you are here now. Check and see if in some deep sense the "you" that is here now was there then. The person aware of what you are aware of is here now and was there then.

You have been you your whole life. Everywhere you've been, you've been there noticing. This is what I mean by the "observer you." And from that perspective or point of view I want you to look at some areas of living. Let's start with your body. Notice how your body is constantly changing. Sometimes it is sick and sometimes it is well. It may be rested or tired. It may be strong or weak. You were once a tiny baby, but your body grew. You may have even have had parts of your body removed, like in an operation. Your cells have died and literally almost every cell in your body was not there as a teenager, or even last summer. Your bodily sensations come and go. Even as we have spoken they have changed. So if all this is changing and yet the you that you call you has been there your whole life that must mean that while you have a body, as a matter of experience and not of belief, you do not experience yourself to be just your body. So just notice your body now for a few moments, and as you do this, every so often notice you are the one noticing. [give the client time to do this]

Now let's go to another area: your roles. Notice how many roles you have or have had. Sometimes I'm in the role of a (fit these to client, e.g., "mother... or a friend... or a daughter... or a wife... sometimes I'm a respected worker... other times I'm a leader... or a

follower.".. etc.). *In the world of form I'm in some role all the time. If I were to try not to, then I'd be playing the role of not playing a role. Even now part of me is playing a role... the client role. Yet all the while notice that you are also present. The part of me you call "you.".. is watching and aware of what you are aware of. And in some deep sense that "you" does not change. So if your roles are constantly changing, and yet the you that you call you has been there your whole life, it must be that while you have roles, you do not experience yourself to be your roles. Do not believe this. This is not a matter of belief. Just look and notice the distinction between what you are looking at, and the you that is looking.*

Now let's go to another area: emotions. Notice how your emotions are constantly changing. Sometimes you feel love and sometimes hatred, calm and then tense, joy-sorrowful, happy-sad. Even now you may be experiencing emotions. . .interest, boredom, relaxation. Think of things you have liked, and don't like any longer; of fears that you once had that now are resolved. The only thing you can count on with emotions is that they will change. Though a wave of emotion comes, it will pass in time. And yet while these emotions come and go, notice that in some deep sense that "you" does not change. That must be that while you have emotions, you do not experience yourself to be just your emotions. Allow yourself to realize this as an experienced event, not as a belief. In some very important and deep way you experience yourself as a constant. You are you through it all. So just notice your emotions for a moment and as you do notice also that you are notice them [Leave a brief period of silence]

Now let's turn to a most difficult area. Your own thoughts. Thoughts are difficult because they tend to hook us and pull us up to piece level. If that happens, just come back to the sound of my voice. Notice how your thoughts are constantly changing. You used to be ignorant--then you went to school and learned new thought. You have gained new ideas, and new knowledge. Sometimes you think about things one way and sometimes another. Sometimes your thoughts may make little sense. Sometimes they seemingly come up automatically, from out of nowhere. They are constantly changing. Look at your thoughts even since you came in today and notice how many different thoughts you have had. And yet in some deep way the you that knows what you think is not changing. So that must mean that while you have thought, you do not experience yourself to be just your thoughts. Do not believe this. Just notice it. And notice even as you realize this, that your stream of thoughts will continue. And you may get caught up with them. And yet in the instant that you realize that, you also realize that a part of you is standing back, watching it all. So now watch your thoughts for a few moments--and as you do notice also that you are notice them [Leave a brief period of silence]

So as a matter of experience and not of belief you are not just your body... your roles ... your emotions ... your thoughts. These things are the content of your life, while you are the arena...the context...the space in which they unfold. As you see that, notice that the things you've been struggling with, and trying to change are not you anyway. No matter how this war goes you will be there, unchanged. See if you can take advantage of this

connection to let go just a little bit, secure in the knowledge that you have been you through it all, and that you need not have such an investment in all this psychological content as a measure of your life. Just notice the experiences in all the domains that show up and as you do notice that you are still here, being aware of what you are aware of [Leave a brief period of silence]

Now again picture yourself in this room. And now picture the room. Picture (describe the room). *And when you are ready to come back into the room, open your eyes.*

Encourage contact with the present moment by identifying the ACT processes in the moment that they are occurring. You can also identity thoughts about the future or the past as they occur in the context of treatment and help the client defuse the literal function of these thoughts. Mindfulness exercises like the *Observing Self* exercise can also help the participant make contact with the present moment.

Homework

At the end of each session, ask the participant to practice applying all of the skills learned to this point by making more behavioral commitments to change behavior. The goals should be achievable and specific, and eventually they should approach their initial treatment goal.

Session 9
Values Clarification

Objectives

The objectives of this session are to review the homework from the previous session, target any of the ACT processes as deemed appropriate, and to present the idea of values.

Content

As you review the homework from the previous session, you will get a good idea of any processes that may need further work. Use any exercises or metaphors that may have not been used or could be reviewed.

Values work is based on the assumption that the significance of values can influence behavior by providing a way to connect immediate acts with long-term consequences. In other words, personal values provide a purpose for the behavior. The identification and clarification of values can provide a stronger purpose for immediate behavior change because it links a difficult behavior with a desired long-term outcome.

Values work can be broken down into a series of steps for easier implementation. When familiarity with these procedures increases, one will find it easy to increase motivation by linking therapy procedures to valued ends without working through all of the following steps. Nonetheless, the following steps are useful for conducting a full session on values clarification. The first four steps will be present in this session, and the three remaining steps will be reviewed in the next session.

1. Creating Distance from Social Rules

Behavior is under many sources of control. The type of employment chosen may be for financial compensation, benefits, prestige, ease of the job, hours worked, enjoyment, or the meaning and importance of the work. In most cases it is the combination of many of these areas that helps us select our occupations. The exact reasons that different areas are important to each of us are hard to determine, but there is a distinction between choices that are made based on rules of how we should behave and choices made freely based on the process of natural learning. Values chosen based on social rules will likely be less effective at maintaining behavior than values that are naturally important to the participant. Naturally important values are more reinforcing.

The first step in values clarification is to help the participant distinguish between choices based on rules of the way things “should be” and choices that are freely made. For example, how many people would attend college or graduate school if nobody ever knew you had done so? A question such as this illuminates the social approval that partially supports the decision to attend college or graduate school. The amount that income

affects college attendance could similarly be illuminated by asking, "Would you attend college if it did not increase your income?" No particular type of motivation is more appropriate than any other, but awareness of the source of the motivation can help foster choices that are more in line with the participant's values rather than social pressures. For example, if the participant finds that she is only attending college to please her parents or that she has chosen a career only to make more money, she may decide not to pursue this value or might benefit from finding the true value behind schooling. Participants should be able to freely choose between options even when there are external factors influencing the decision. Clarification of the sources of influence allows for choices that are more guided by values.

2. Defining Values as a Concept

The term *values* has many different meanings in psychology. In this context it refers to areas of life that are important to the participant. Values can never be achieved; one can always more fully pursue a value, and at any point it has been well pursued, there are additional opportunities to work on that value. For example, the value of being a good parent can never be achieved; one can always be a better parent and there will always be additional opportunities to do so. Values are different than goals; goals are steps that are consistent with values. Even though society may put greater emphasis on some values over others, in therapy, the importance of particular values is chosen by the participant and not judged by the therapist (unless the therapist believes the value was not chosen freely). The participant is welcome to value or not value any area that she chooses. Values can be described to the participant in the following fashion:

Values are areas of life that you really care about. A value can never be achieved like a goal; it can only be worked towards. For example, someone who values being a good parent will never achieve the status of "good parent." Once the parent has done well, such as helping the child do well in school, there will be additional opportunities to be a good parent. Helping the child do well in school is a good example of a goal. Goals are useful as steps in the service of values. Values are often compared to a lighthouse in a storm. The light tells the sailor which way to steer the ship, just as values are useful for telling you which direction to go in life. You get to pick your values. There are no right or wrong choices here—these are not my [the therapist's]*, your parent's, or your friend's values—and you are welcome to change them at any time.*

3. Defining Personal Values

There are an infinite number of areas of life that people can value, and each value means something different to each person. In many cases, people pursue values without thinking about what the value means to them or how they would really like to behave. In some cases the same value may have different functions for different people, (e.g., someone may be a doctor because it pays well and someone else may be a doctor to help the sick,

or someone can value both at the same time). This phase of values training aims to help clarify what the person cares about in a number of areas in life.

Table 1 helps participants identify and clarify their values in nine major areas of life. This list is not exhaustive, but includes areas that many people find important. In this phase of values clarification, participants are asked to think about, discuss, and write about what they care about in the areas listed in the table. Participants are taught to select what they really care about in each area—as though nobody would see what is written. The participant is also welcome to write that she has no value in a particular area. This list is then discussed with the therapist.

Table 1. Values Clarification Exercise

AREA	DESCRIPTION
Intimate Relationships	What kind of person would you like to be in the relationship? What would the relationship be like? What is your role in the relationship?
Family Relationships	Describe the type of brother/sister, son/daughter, father/mother you would like to be. What would the relationship be like? How would you want to treat others?
Social Relationships	What does it mean to be a good friend? What kind of friends do you want? How would you treat your friends? What is an ideal friendship like for you?
Career and Employment	What type of work would you like to do? Why does it appeal to you? What kind or worker would you like to be? What kind of relationships would you like to have with your coworkers or your employer?
Personal Growth and Development	What do you want to be able to do? What do you want to be like? Would you like to pursue a formal education? Specialized training? An informal education? Why does this appeal to you?
Recreation and Leisure	What type of hobbies, sports, or leisure activities would you like to be involved in? Why do these things appeal to you?
Spirituality	What does spirituality mean to you? (It doesn't have to be any kind of organized religion.) Is this an important part of life for you? What would it be like?
Citizenship	What is your role in the community? What groups would you like to be a part of? What volunteer work would you do? What appeals to you in these areas?
Health	What do you value in your physical health? What issues are important to you (e.g., sleep, diet, exercise)?

4. Choosing Values

The issue of choice is purposefully included in the discussion of values. Choice is defined as a selection amongst alternatives that is not necessarily done for reasons. Reasons are avoided because there are always reasons for or against any selection and the participant can get bogged down in whether or not pursuing a value is the "correct" decision. Whereas, a choice can be made while the participant is uncertain if the choice is "correct," or choices can be made that are inconsistent with reasons. The impact of rules, social pressures, and pressures from the therapist (as well as many other pressures) needs to be decreased because they get in the way of value selection and the pursuit of values. For example, a participant might value romantic relationships, but could reason himself out of pursuing one because he could "get hurt." The participant is taught to simply *choose* to pursue that value regardless of the reasons for or against it.
Choosing values is conducted after they are defined so there is clarity to the choice being made. In this phase of values clarification the participant declares that the values listed are indeed his and ranks the level of importance that is associated with each value. As described by Hayes et al. (1999), each one of these areas is ranked on a scale of 1 to 10 (where 1 = not at all important, and 10 = very important). Again, participants are reminded that they are welcome to rate the areas however they choose. Therapists should try to create a therapeutic context where participants feel welcome to be honest about their values.

Homework

Ask the client to complete the personal inventory of values. Print table 1 as a guide for the inventory and suggest that they write down the inventory. Also ask the participant to continue practicing all of the skills learned to this point by making more behavioral commitments to change behavior. The goals should be achievable and specific, and should now be fairly consistent with the initial treatment goal.

Session 10
Committed Action

Objectives

The objectives of this session are to review the homework from the previous session, continue the presentation of the values work, and link the behavior change commitments to values.

Content

Review the assigned homework and behavioral success. The behavioral report will give you a good idea of any process work that may need to occur throughout the session. Review the content of the values inventory and clarify any cases where the participant's values may need to be more focused or if they are too much like goals. Continue the values work using the following steps.

1. Determining Consistency of Values and Current Actions

After participants have defined their values and rated the importance of each area, they assess the consistency between their current actions and their corresponding values. Participants are asked to look at how they defined each of the values and then rate how consistent their current actions are with their values on a scale of 1 to 10 (where 1 = not at all consistent and 10 = completely consistent). The function of this phase of therapy is not to make participants feel like failures, but to motivate and clarify areas that would likely benefit from additional attention. If the participant rates a value as very high, but rates his behavioral consistency with that value as very low, then a treatment target is clarified. Areas where the participant is behaving consistently with her values are less of a treatment target.

2. Choosing Immediate Goals that Are Consistent with Values

Based on the results from the previous step, participants are assisted in defining goals that are consistent with their values. Immediate goals are usually set in areas where participants are behaving inconsistently with values. There are an infinite number of ways that behavior can be altered to be more consistent with the stated value, and the link from each value to the specific goal should be clarified for the participant.

In this phase of values clarification just about any method of behavior therapy or behavior change procedures are acceptable, as long as they are done in the service of the participant's values. A very commonly used procedure is to break down values into manageable steps of increasing difficulty. For example, if a parent values being a good mother—defined as being there for her son and supporting his growth—this might involve the following steps: (1) signing her son up for an activity he has wanted to

participate in, (2) helping him with homework for 20 minutes each night, and (3) taking him out to do something enjoyable. These are all actions that would be considered consistent with the participant's value of being a good parent.

3. Behaving in Accordance with One's Values

The final step involves behaving in accordance with these values. This is done in the form of specific exercises that are agreed upon in session and also as opportunities present themselves outside of session. The participant should state an action that would be consistent with a value and engage in it between sessions. The idea is that a commitment to engage in the behavior is made prior to engaging in it and that the participant is responsible for achieving it between sessions. After the participant begins completing tasks with little difficulty, the need to commit to the tasks can be removed and the value itself can provide the motivation to engage in the tasks.

As you finish the values work, use any remaining time in the session to address any ACT processes that may need further work.

Homework

Ask the participant to continue practicing all of the skills learned to this point by making more behavioral commitments to change behavior. This practice should now be linked to the values work of the previous two sessions. The goals should be achievable and specific, and should now be fairly consistent with the initial treatment goal.

Session 11
Review

Objectives

The objectives of this session are to review the homework from the previous session and review any content from the six ACT processes that still need to be addressed.

Content

Review the assigned homework and behavioral success. The behavioral report will give you a good idea of any process work that may need to occur throughout the session.

Homework

Ask the participant to continue practicing all of the skills learned to this point by making more behavioral commitments to change behavior. This practice should now be linked to the values work of the previous two sessions. The goals should be achievable and specific, and should now be consistent with the initial treatment goal.

Session 12
Termination

Objectives

The objectives of this session are review the homework from the previous session, to review any materials/processes that may need further attention, to summarize the treatment, to discuss relapse management, to discuss the role of termination in the change process, and to recommend resources for continued ACT work.

Content

As you review the homework from the previous session, you will be able to identify any materials/processes that you could target in this last session.

Summarize the treatment using the *Joe The Bum Metaphor.*

Imagine that you got a new house and you invited all the neighbors over to a housewarming party. Everyone is invited in the whole neighborhood--you even put up a sign at the supermarket. So all the neighbors show up, the party's going great, and here comes Joe-the-bum, who lives behind the supermarket in the trash dumpster. He's stinky and smelly and you think, "God, why did he show up?" But you did say on the sign, Everyone's welcome. Can you see that it's possible for you to welcome him, and really, fully, do that without liking that he's there? You can welcome him even though you don't think well of him. You don't have to like him. You don't have to like the way he smells, or his life style, or his clothing. You may be embarrassed about the way he's dipping into the punch or the finger sandwiches. Your opinion of him, your evaluation of him is absolutely distinct from your willingness to have him as a guest in your home.

Now you could also decide that even though you said everyone was welcome, in reality he's not welcome. But as soon as you do that, the party changes. Now you have to be at the front of the house, guarding the door so he can't come back in. Or if you say, OK, you're welcome, but you don't really mean it, you only mean that he's welcome as long as he stays in the kitchen and doesn't mingle with the other guests, then you're going to have to be constantly making him do that, and your whole party will be about that. Meanwhile, life's going on, the party's going on, and you're off guarding the bum. It's just not life-enhancing. It's not much like a party. It's a lot of work. What the metaphor is about, of course, is all the feelings and memories and thoughts that show up that you don't like; they're just more bums at the door. The issue is the posture you take with regards to your own stuff. Are they welcome? Can you choose to welcome them in, even though you don't like the fact they came? If not, what's the party going to be like?

Discuss the use of the ACT processes in relapse management.

Discuss the role of termination in the change process as just another step as the participant continues their journey.

Imagine that we both have been climbing separate mountains and I just came over and climbed with you for a while. We have climbed together and learned a lot, but now it is time for me to go back and climb my mountain. You now have some important skills that will help you as you continue to climb on your own.

Recommend the self-help workbook, *Get Out of Your Mind and Into Your Life* (by Steven C. Hayes & Spencer Smith), as a resource for the participant to review the treatment and continue the work on their own.

Appendix E

Treatment Adherence

Treatment Adherence
Definitions of ACT Processes

Process	Definitions	Therapist Behavior (Examples)
Acceptance	"The active and aware embrace of private events that are occasioned by our history, without unnecessary attempts to change their frequency or form, especially when doing so would cause psychological harm" (Luoma et al., 2007). "Actively embracing private events (thoughts, feelings, bodily sensations), while they are presently occurring, as ongoing private experiences" (Twohig & Hayes, 2008).	• Encourages sticking with difficult thoughts, feelings, memories, and/or bodily sensations.^ • Engages client in exposure exercises* • Talks about doing things just to do them or doing things for the experience* • Encourages behaviors that are new or have not been done for a long time* • Reinforces client for saying "I would usually not talk about this" or the like* • Encourages the client to engage in any of the above outside the session • Uses *two scales* metaphor
Creative Hopelessness (coded as Acceptance)	Undermining ineffective change strategies and emphasizing the negative consequences of the strategies.^	• Asks the client for specific instances of efforts to control or change thoughts or feelings^ • Asks about workability of control attempts^ • Uses "control as the problem" techniques (e.g., *polygraph*^, *man in the hole*^, *chocolate cake*, *wedge of lemon*, *mind reading*). • Reminds the client of historical control attempts^ • Encourages the client to engage in any of the above outside the session

Defusion	"Seeing thoughts and feelings for what they are (i.e., a verbally entangled process of minding) rather than what they advertise themselves to be (e.g., the world understood; structured reality)" (Hayes et al., 1999). "The process of creating nonliteral contexts in which language can be seen as an active, ongoing, relational process that is historical in nature and present in the current moment" (Luoma et al., 2007).	• Talks about mind as a separate thing (e.g., "There goes your mind again"*, "thank your mind for that"^) • Encourages "I am having the thought that…"(or functional equivalent)^ • States that thought/feeling does not lead to action^ • Undermines "right and wrong" languaging* • Comments flexibly on the functions of thoughts* • Replaces "but" with "and"^ • Reinforces client for confusion* • Laughs at things in session* • Encourages the client to engage in any of the above outside the session • *Magic wand* or *$100,000* questions • *Your mind is not your friend* or *finding a place to sit* or *bad cup* metaphors • *Milk, milk, milk* or *having a thought vs buying a thought* exercise
Self-as-Context	"A continuous and secure 'I' from which events are experienced, but that is also distinct from those events" (Luoma et al., 2007). "Seeing that observations are being made from a consistent locus: I/here/now—the "you" aware of the experiences, not the experiences themselves" (Twohig & Hayes, 2008). "The locus from which a person's experience unfolds" (Bach & Moran, 2008).	• Reinforces client's perspective-taking (e.g. expression of empathy for others)* • Discusses private events as ongoing processes that do not define client* • Says "you are the place/container/context"…^ • Uses *chessboard* metaphor^ • Uses *observer* exercise • Encourages the client to engage in any of the above outside the session
Being Present	"Ongoing, nonjudgmental contact with psychological and environmental events as they occur" (Luoma et al., 2007). "Consciously experiencing internal and	• Helps client focus on bodily sensations, thoughts, and/or feelings in present^ • Describes own (therapist's) sensory experience of present • Models flexibility related to what the current environment affords* • Notes small events that transpire, or features of the room, with appreciation.* • Makes process comments about client (e.g., body

	external events as they are occurring, without attachment to evaluation or judgment" (Twohig & Hayes, 2008).	language, affect) • Encourages the client to engage in any of the above outside the session
Values	"Chosen actions that can never be obtained as an object, but can be instantiated moment by moment" (Luoma et al., 2007). "Areas of importance that we recognize and embrace as guides of our patterns of action" (Twohig & Hayes, 2008).	• Engages in activities because of their intrinsic value and the vitality they bring* • Asks for clarity about what client wants* • Links previous pain to present purposes* • Reminds client of stated values^ • Encourages the client to engage in any of the above outside the session
Committed Action	"The development of larger and larger patterns of effective action linked to chosen values" (Luoma et al., 2007). "Behaving in the service of chosen values" (Bach & Moran, 2008).	• Assigns homework linked to short-, medium-, and long-term behavior change goals. • Asks client to generate behavioral goals^ • Encourages client to follow through on behavioral goals^ • Reinforces completion of homework and keeping of commitments* • Reinforces spontaneous engagement in new behaviors * • Encourages behavioral generalization to new domains* • Encourages flexibility, responsibility, and empowerment related to actions* • Encourages the client to engage in any of the above outside the session

Bach, P., & Moran, D. (2008). ACT in practice: Case conceptualization in Acceptance and Commitment Therapy. Oakland, CA: New Harbinger.
Luoma, J. B., Hayes, S. C., & Walser, R. D. (2007). Learning ACT: An Acceptance and Commitment Therapy skills-training manual for therapist. Oakland, CA: New Harbinger.
Twohig, M. P., Hayes, S. C. 2008). ACT verbatim for depression and anxiety. Oakland, CA: New Harbinger.
Twohig, M. P., & Plumb, J. (2008). ACT for OCD adherence manual. Unpublished.

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^adapted from ACT for OCD Adherence Manual (Twohig & Plumb, 2008)
*adapted from ACT Verbatim (Twohig & Hayes, 2008)

Treatment Adherence Rating Form

Client ID: _____ Session: _____ Therapist: _____ Rater: _____ Date: _____

ACT Processes

1) Acceptance	1	2	3	4	5
2) Defusion	1	2	3	4	5
3) Self as Context	1	2	3	4	5
4) Present Moment Awareness	1	2	3	4	5
5) Values	1	2	3	4	5
6) Committed Action	1	2	3	4	5

Alternative Processes

Cognitive Challenging	1	2	3	4	5
Cognitive Model (Thoughts/Feelings Cause Behavior)	1	2	3	4	5
Behavior Management to Regulate Thoughts/Feelings/Sensations	1	2	3	4	5

Other Items

Adherence to ACT Model	1	2	3	4	5
Therapist Competency	1	2	3	4	5

Notes

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1 = the variable was never explicitly covered, 2 = the variable occurred at least once and not in an in-depth manner, 3 = the variable occurred several times and was covered at least once in a moderately in-depth manner, 4 = the variable occurred with relatively high frequency and was addressed in a moderately in depth manner, and 5 = the variable occurred with high frequency and was covered in a very in-depth manner

Minute Rating Spreadsheet

Participant #:		Session #:		Coder:			Date:		

	Acceptance	Defusion	Self as Context	Present Moment	Values Clarification	Committed Action	General Assessment	Cognitive Challenging	Stimulus Management	
1										1
2										2
3										3
4										4
5										5
6										6
7										7
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39										39
40										40
…										41

CURRICULUM VITAE

JESSE M. CROSBY

Education

2012 Ph.D. Anticipated	*Utah State University* – Logan, Utah Combined Clinical/Counseling/School Psychology – APA Accredited *Dissertation*: Acceptance and Commitment Therapy for the Treatment of Compulsive Pornography Use: A randomized Controlled Trial *Chair*: Michael P. Twohig, Ph.D.
2010 M.S.	*Utah State University* – Logan, Utah Psychology *Thesis*: The Relationship Between Perfectionism and Religiosity as Mediated by Psychological Inflexibility *Chair*: Scott C. Bates, Ph.D.
2005 B.M.	*Brigham Young University* – Provo, Utah Bachelor of Music, Business Management Minor

Awards

2011	First Place Presentation ($100), Intermountain Graduate Research Symposium
2010	Elwin Nielsen Scholarship ($1,000), Utah State University
2010	Graduate Student Senate Travel Awards ($1200), Utah State University
2010	Department of Psychology Travel Awards ($1200), Utah State University
2009	Walter R. Borg Scholarship ($2,500), Utah State University
2008	Graduate Student Senate Award ($4,000), Utah State University
2007	Tuition Award ($1,200), Utah State University

2006 Vice President Research Fellowship ($15,000), Utah State University

Clinical Experience

08/2010 – 05/2011 *Graduate Assistant*
Academic Resource Center, Utah State University
Responsibilities included teaching a course on academic skills development, individual consultations/therapy with students to address academic problems, and group therapy/workshops on perfectionism, procrastination, test anxiety, and math anxiety.
Supervisor: Mark A. Nafziger, Ph.D.
Total Hours: 300
Direct Contact Hours: 75

08/2010 – Present *Student Therapist, Practicum in Clinical Psychology*
Treatment of Anxiety and Related Disorders
Psychology Community Clinic, Utah State University
Responsibilities included intake interviewing, individual therapy, and psychodiagnostic assessment with an adolescent and adult community population with anxiety and related disorders supported by weekly supervision and didactic training.
Supervisors: Michael P. Twohig, Ph.D., Melanie Domenech Rodríguez, Ph.D.
Total Hours: 350
Direct Contact Hours: 135

08/2009 – 05/2010 *Graduate Assistant Therapist*
Counseling and Psychological Services, Utah State University
Responsibilities included intake interviewing, crisis consultation, individual therapy, group therapy, psychodiagnostic assessment, outreach, workshops, and systems interventions with a college population with weekly supervision and didactic training.
Supervisors: David W. Bush, Ph.D., Mark A. Nafziger, Ph.D., Larry Kuhn, M.S.
Total Hours: 600
Direct Contact Hours: 300

08/2008 – 05/2009 *Student Therapist, Practicum in Counseling Psychology*
Counseling and Psychological Services, Utah State University
Responsibilities included intake interviewing, crisis consultation, individual and couples therapy with a college population with weekly supervision and didactic training.

Supervisors: Mark A. Nafziger, Ph.D., Larry Kuhn, M.S.
Total Hours: 260
Direct Contact Hours: 105

08/2007 – 08/2008 *Assessment Therapist, Practicum in School Psychology*
Center for Persons with Disabilities, Utah State University
Responsibilities included psychodiagnostic assessment of children, adolescents, and adults, assessment interpretation, integrated report writing, case management, assessment training, and participation in an interdisciplinary supervisory team.
Supervisor: Robert S. Cook, Ph.D.
Total Hours: 345
Direct Contact Hours: 30

05/2007 – 03/2009 *Student Therapist, Extracurricular Practicum Activities*
Psychology Community Clinic, Utah State University
Responsibilities included intakes, diagnosis, report writing, individual supervision, a case study, and individual therapy with a adolescent and adult community population with ongoing clients.
Supervisors: Michael P. Twohig, Ph.D., Melanie Domenech Rodríguez, Ph.D.
Total Hours: 200
Direct Contact Hours: 60

01/2007 – 05/2007 *Student Therapist, Practicum in Counseling and Psychotherapy*
Utah State University Psychology Community Clinic
Responsibilities included intakes, evaluations, assessments, diagnosis, report writing, group supervision, a case study, and individual therapy with an adolescent and adult community population.
Supervisor: Melanie Domenech Rodríguez, Ph.D.
Total Hours: 60
Direct Contact Hours: 20

Clinical Research Experience

01/2008 – 06/2011 *Graduate Research Assistant*
Center for Clinical Research, Utah State University
Administered intake interviews, diagnostic assessment, and psychotherapy as part of treatment outcome program of research using Acceptance and Commitment Therapy (ACT) to treat problematic sexual behavior and trichotillomania in an adult population.

Supervisors: Michael P. Twohig, Ph.D., Melanie Domenech Rodríguez, Ph.D.
Total Clinical Hours: 600
Direct Contact Hours: 400

Research Experience

08/2007 – 06/2011 *Graduate Research Assistant*
Department of Psychology, Utah State University
Responsibilities included designing, administering, analyzing, and disseminating clinical research on the treatment of anxiety and related disorders using Acceptance and Commitment Therapy (ACT) and Cognitive and Behavioral Therapy (CBT). Specialized experience in obsessive-compulsive spectrum disorders including trichotillomania, compulsive sexual behavior, and perfectionism.
Supervisor: Michael P. Twohig, Ph.D.

08/2006 – 05/2007 *Graduate Research Assistant*
Department of Psychology, Utah State University
Responsibilities included the design and implementation of perfectionism research including the creation of questionnaires, participant recruitment, questionnaire administration, and data analysis. Also reviewed lab projects (air quality perception, alcohol use perception, and textbook learning aids), edited documents, attended bimonthly meetings, and assisted with data collection and organization.
Supervisor: Scott C. Bates, Ph.D.

Peer Reviewed Articles

1) **Crosby, J. M.**, Bates, S. C., & Twohig, M. P. (in press). Examination of the relationship between perfectionism and religiosity as mediated by psychological inflexibility. *Current Psychology*.

2) Codd, R. T., Twohig, M. P., **Crosby, J. M.**, & Enno, A. (in press). Treatment of three anxiety disorder cases with Acceptance and Commitment Therapy in a private practice. *Journal of Cognitive Psychotherapy*.

3) **Crosby, J. M.**, Gundy, J., Armstrong, A. B., Nye, E., Bowman, A., Nelson, C. R. & Twohig, M. P. (2010). How well are we doing at reporting participant characteristics in our research? *The Behavior Therapist, 33*, 133-135.

4) Twohig, M. P., & **Crosby, J. M.** (2010). Acceptance and Commitment Therapy as a Treatment for problematic internet pornography viewing. *Behavior Therapy, 41*, 285-295

5) Twohig, M. P., **Crosby, J. M.**, & Cox, J. M. (2009). Viewing internet pornography: For whom is it problematic, how, and why? *Sexual Addiction and Compulsivity, 16*, 253-266.

Invited Chapters

1) **Crosby, J. M.**, & Twohig, M. P. (2011) Habit Reversal. In S. Goldstein and J. Naglieri (Eds.) *Encyclopedia of Child Behavior and Development*. New York: Springer.

2) Twohig, M. P. & **Crosby, J. M.** (2008). Values Clarification. In W. T. O'Donohue and J. E. Fisher (Eds.). *Cognitive Behavior Therapy: Applying empirically supported practice techniques in your practice (2nd edition).* (pp. 583-588). Hoboken NY: John Wiley & Sons. Also appears in W. T. O'Donohue and J. E. Fisher (Eds.) *General principles and empirically supported techniques of cognitive behavior therapy.* (pp. 681-686). Hoboken NY: John Wiley & Sons.

Manuscripts Under Review

1) **Crosby, J. M.**, Twohig, M. P., Dehlin, J. P., & Mitchell, P. R. (2010). How and when to integrate Acceptance and Commitment Therapy and Habit Reversal in the treatment of Trichotillomania. *Cognitive and Behavioral Practice*. Manuscript under review.

Manuscripts in Preparation

1) Gundy, J. M., **Crosby, J. M.**, Twohig, M. P., & Field, C. E. (Manuscript in Preparation). Evaluating the acceptability of exposure treatment for children and adolescents: Client and therapist perspectives.

2) **Crosby, J. M.** Twohig, M. P., Nafziger, M. A., & Armstrong, A. B. (Manuscript in Preparation). Using Acceptance and Commitment Therapy to address perfectionism in a college student population. *Invited Book Chapter*.

3) Twohig, M. P., **Crosby, J. M.**, & Woidneck, M. (Manuscript in Preparation). Newer generations of cognitive and behavioral therapy. *Invited Book Chapter*.

4) **Crosby, J. M.**, & Twohig, M. P. (Manuscript in Preparation). Acceptance and Commitment Therapy for the treatment of the addictive use of pornography. *Invited Book Chapter*.

5) Sherwood, J. A., **Crosby, J. M.**, Dehlin, J. P., & Twohig, M. P. (Mauscript in Preparation). Acceptance vs. Distraction for Unwanted Sexual Thoughts.

6) **Crosby, J. M.**, & Twohig, M. P. (Manuscript in Preparation). Acceptance and Commitment Therapy for the treatment of problematic pornography use: A case series of low behavioral rates with high distress.

7) **Crosby, J. M.**, Twohig, M. P. (Manuscript in Preparation). Acceptance and Commitment Therapy for the treatment of pornography addiction: A randomized clinical trial.

8) **Crosby, J. M.**, Cox, J. M., Myler, C. J., Peterson, K. A., & Twohig, M. P. (Manuscript in Preparation). Values clarification to increase client motivation.

9) Twohig, M. P., **Crosby, J. M.**, Whittal, M., & Robichaud, M. (Manuscript in Preparation). A review of cognitive behavior therapy for obsessive-compulsive disorder.

10) **Crosby, J. M.**, Cox, J. M., Twohig, M. P., & Shahan, T. (Manuscript in Preparation). Delay discounting research with problematic sexual behavior.

Research in Progress

1) Twohig, M. P., Mitchell, P. R., & **Crosby, J. M.** (Data Collection). Acceptance and Commitment Therapy for the treatment of trichotillomania: A randomized clinical trial.

Presentations

1) Sherwood, J. A., **Crosby, J. M.**, Dehlin, J. P., & Twohig, M. P. (November 2011). *Acceptance Versus Distraction for Unwanted Sexual Thoughts*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in Toronto, ON.

2) **Crosby, J. M.**, Twohig, M. P. (2011). *Acceptance and Commitment Therapy for the treatment of compulsive pornography use: A randomized clinical trial*. Paper presentation at the annual Intermountain Graduate Research Symposium in Logan, UT.

3) **Crosby, J. M.**, Twohig, M. P., Dehlin, J. P., & Mitchell, P. R. (November 2010). *When and how to integrate Acceptance and Commitment Therapy and Habit Reversal in the treatment of trichotillomania*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in San Francisco, CA.

4) **Crosby, J. M.**, Nafziger, M. A., & Twohig, M. P. (November 2010). *Acceptance and Commitment Therapy for the treatment of perfectionism in a group workshop*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in San Francisco, CA.

5) **Crosby, J. M.**, Bates, S. C., & Twohig, M. P. (November 2010). *Examination of the relationship between perfectionism and religiosity as mediated by psychological inflexibility*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in San Francisco, CA.

6) Woidneck, M., Twohig, M. P., Gilbertson, D., & **Crosby, J. M.** (June 2010). *Evaluation of an acceptance and mindfulness training for elementary staff, educators, and administrators*. Paper presentation at the annual world conference of the Association for Contextual Behavioral Science in Reno, NV.

7) **Crosby, J. M.** (November 2009). *Acceptance and Commitment Therapy for the treatment of perfectionism associated with generalized anxiety*. Paper presentation at the annual conference of the Utah University & College Counseling Centers in Park City, UT.

8) **Crosby, J. M.**, & Twohig, M. P. (November 2009). *Acceptance and Commitment Therapy for the treatment of problematic pornography use: A case series of low behavioral rates*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in New York, NY.

9) Cox, J. M., **Crosby, J. M.**, & Twohig, M. P. (November 2009). *Scrupulosity and quality of life in a religious sample*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in New York, NY.

10) **Crosby, J. M.**, Gundy, J. M., Nye, E., Bowman, A., Nelson, C. R., & Twohig, M. P. (November 2009). *How well are we doing at reporting participant characteristics in our research*? Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in New York, NY.

11) Cod, R. T., Twohig, M. P., Enno, A., & **Crosby, J. M.** (November 2009). *Acceptance and Commitment Therapy as a treatment for three anxiety disorder cases in a private practice*. Poster presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in New York, NY.

12) **Crosby, J. M.** (September 2009). *Acceptance and Commitment Therapy for the treatment of sexual addiction: Treatment application and empirical evidence*. Poster presentation at the annual conference of the Society for the Advancement of Sexual Health in San Diego, CA.

13) **Crosby, J. M.**, Twohig, M. P., Bates, S. C. (November 2008). *The psychological processes associated with problematic sexual behavior in a highly religious population*. Paper presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in Orlando, FL.

14) Twohig, M. P., & **Crosby, J. M.** (November 2008). *Acceptance and Commitment Therapy as a treatment for problematic internet pornography use*. Paper presentation at the annual convention of the Association for Behavioral and Cognitive Therapies in Orlando, FL.

15) **Crosby, J. M.** (Chair; May 2008). *Acceptance and Commitment Therapy for clinical conditions: randomized controlled trial outcomes*. Symposium presentation at the annual meeting of the Association for Behavior Analysis in Chicago, IL.

16) **Crosby, J. M.**, Twohig, M. P., Shahan, T. A., & Allen, J. W. (May 2008). *Delay discounting research with problematic sexual behavior in human subjects*. Poster presentation at the annual meeting of the Association for Behavior Analysis in Chicago, IL.

17) Peterson, K., Twohig, M. P., & **Crosby, J. M.** (May 2008). *An analysis of the effectiveness and mechanisms of action in ACT for substance abuse and dependence*. Poster presentation at the annual meeting of the Association for Behavior Analysis in Chicago, IL.

Invited Presentations

1) **Crosby, J. M.** (December 2010). *Acceptance and Commitment Therapy for Supervisors*. Seminar presentation for Counseling and Psychological Services at Utah State University, Logan, UT.
2) **Crosby, J. M.**, & Nafziger, M. A. (February 2010). *Acceptance and Commitment Training for Perfectionism and Procrastination*. Workshop presentation for Counseling and Psychological Services at Utah State University, Logan, UT.

3) Twohig, M. P., & **Crosby, J. M.** (March 2009). *Problematic use of internet pornography: Research review and preliminary ideas for helping clients*. Presentation to Evidence Based Practice Learning Community, Online Community.

Submitted Grants

Title: Psychosocial treatment of compulsive pornography use (1R21MH 090391-01)
Date submitted: June 2009 (Not Funded)
Amount: $274,972 direct, $ 378,097 total
Funding source: National Institute of Mental Health
Role: Research Assistant; Co-author of application; Assist with submission. (PI: Twohig)

Peer Review

07/2010 Psychological Review (Guest Review)

Teaching Experience

08/2010 – 05/2011 Psychology 1730 Strategies for Academic Success (60 Students)
Instructor (Face to Face)
Utah State University

05/2010 – 06/2010 Psychology 1010 General Psychology (30 Students)
Instructor (Face to Face / Interactive Broadcast)
Utah State University

05/2009 – 06/2009 Psychology 1010 General Psychology (20 Students)
Instructor (Face to Face / Interactive Broadcast)
Utah State University

10/2009 Psychology 2100 Developmental Psychology in Adolescence
Guest Lecturer: Perfectionism and Adolescence
Utah State University

11/2007 & 04/2008 Psychology 1010 General Psychology
Guest Lecturer: Obsessive Compulsive Disorder
Utah State University

04/2007 Psychology 1010 General Psychology
Guest Lecturer: Bipolar Disorder
Utah State University

Professional Training

03/2011 Acceptance and Commitment in Psychotherapy

	Steven C. Hayes, Ph.D. (University of Nevada, Reno) Salt Lake City, UT
04/2010	An Integrated Approach to Complex Psychological Trauma John Briere, Ph.D. (University of Southern California) Utah State University, Logan, UT
06/2009	Legal and Ethical Aspects of Supervision Stephen Behnke, J.D., Ph.D. (Director of APA Ethics Office) Utah State University, Logan, UT
01/2009	Ethics Workshop Stephen Behnke, J.D., Ph.D. (Director of APA Ethics Office) Utah State University, Logan, UT
05/2008	Introductory ACT Experiential Workshop Sonja V. Batten, Ph.D. Acceptance and Commitment Therapy Summer Institute IV, Chicago, IL
10/2008	Acceptance and Commitment Therapy Multicultural Training (October 2008). Michael P. Twohig, Ph.D., & Melanie Domenech Rodríguez, Ph.D., Utah State University, Logan, UT.

Professional Organizations

Association for Behavioral and Cognitive Therapies

Association for Contextual Behavior Science