A Chaplain's Guide to

HELPING THOSE STRUGGLING WITH A PORNOGRAPHY HABIT:

An introduction to the brain science of addiction, its negative effects, and therapy models for change

This booklet is dedicated to my wife Kaylee and our five children, Bridger, Beckham, Benson, Anderson, and Roslyn.

All photos used with permission from Pixabay.com under their license and terms of service found at: https://pixabay.com/service/license/

© All rights reserved, 2020 Authored by Jeremy Jarvis Contact at jer.jarvis@gmail.com

A Chaplain's Guide to

HELPING THOSE STRUGGLING WITH A PORNOGRAPHY HABIT:

An introduction to the brain science of addiction, its negative effects, and therapy models for change

Guidebook OBJECTIVES:

Give chaplains a basic understanding of the brain science of addiction

Describe the negative impact of pornography use on an individual's personal and family life

Provide hope of recovery by presenting the most effective treatment models proven through clinical research

I NTRODUCTION

Pornography is prolific in today's modern society. It is found on billboards, the internet, in movies, music, magazines, television, and literature. It is often accessed easily with no cost on internet-enabled cellular devices, computers, tablets, and several other ways.

With its easy access and pleasureproducing capabilities, a significant number adults and adolescents struggle to discontinue its use once a habit has been formed.

Once a behavior has become habituated, the pull of pornography can be difficult for some to resist.

Tapping into one of the most powerful and desirable human impulses—the reproductive urge—pornography has the potential to lure individuals into its use (Cline, 2001). In a 2016 nationwide study, an estimated 70 percent of men and 40 percent of women in the United States have admitted to viewing pornography within the past year (Regnerus et al., 2016).

Although viewing pornography does not always form into a habit, the estimated number of users may indicate that pornography is being used as a maladaptive coping strategy, and that is what this booklet aims to look at.

Although pornography is considered potentially addictive (Hilton, Jr., 2013), and brings with it a potential for negative effects (Manning, 2006), there is great hope in knowing that there is effective treatment available that has been shown to help individuals either dramatically reduce or completely eliminate pornography use from their lives (Crosby and Twohig, 2016).

The purpose of this guidebook is to give chaplains a greater understanding of habitual pornography use, and also more importantly, provide guidance on how to assist those struggling with a pornography habit find hope, with a greater perspective and knowledge on

the subject.

While this guidebook by no means aims to be comprehensive, the goal is that it is used as a tool so that, along with spiritual tools, success in recovery can dramatically increase, along with its associated benefits.

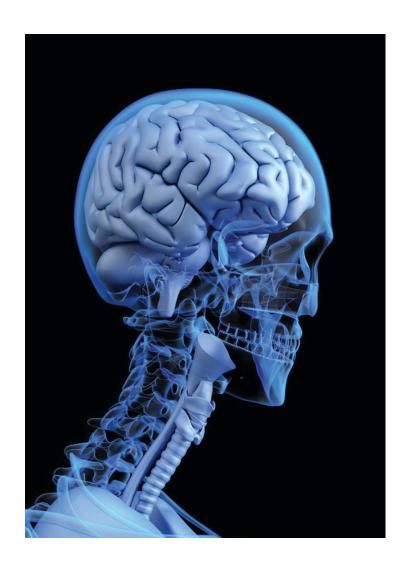
THE BRAIN SCIENCE OF ADDICTION:

For years, many people have simplified addiction as a lack of personal control (Grubbs et al., 2015). In the past 15 years, however, many advances in neuroscience have demonstrated that addiction is not merely a lack of self control, but instead a rather complicated matter involving both brain pathways and emotional regulation (ASAM.org).

Can a behavior become an addiction?

Donald L. Hilton Jr., MD, neurosurgeon and researcher, has stated that "addiction neurobiologists increasingly support the concept of the existence of natural addictions, as ... evidence continues to accumulate." Hilton states that the "natural addiction" model is based on motivating brain chemicals which come from the main pleasure-reward system in the brain known as the mesolimbic reward system (Hilton, 2013; Alavi et al., 2012).

In other words, behaviors can become addictive, as similar brain chemicals released in other addictions are released during pornography use, providing pleasure and pain relief which some use to cope with life's challenges (Hilton, 2013).



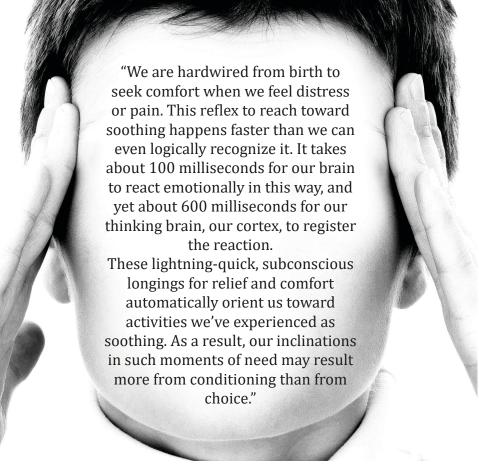


How does addiction work?

Two important aspects of addiction are emotional dysregulation and neural adaptations (re-wiring of brain pathways; see Koob, 2019). This may explain why addiction is so prevalent in our society.

With easy access to so many pleasure producing substances, people today often do not learn how to regulate their emotions in a healthy manner, and instead turn to pleasurable substances or behaviors to temporarily "cope" with their emotions rather than addressing them healthily (Chamberlain and Steurer, 2011).

E MOTIONAL DYSREGULATION



-Mark Chamberlain and Geoff Steurer, Love You, Hate the Porn: Healing a Relationship Damaged by Virtual Infidelity



Why do people put addiction before other things?

As mentioned, there are certain substances or behaviors that can produce stimulation and pleasure beyond what is found in average, everyday life. These substances or behaviors can become very hard to resist once they have been used habitually as a way to cope, as other forms of coping which do not create as powerful of an immediate reward to not seem as desirable (Hilton, Jr., 2013).

In a healthy brain, the prefrontal cortex (the brain's "brakes" that stop the body from making poor choices; Van Der Kolk, 2014) regulates emotions effectively as other areas of the brain receive a steady, balanced dose of dopamine—a chemical in the brain that acts as a messenger (Etkin et al., 2011).

This chemical messenger is also known as a neurotransmitter (Nistico and Scapagnini, 2012).

Coming from the ventral tegmental area, or VTA (the dopamine "storage and distribution area" in the brain; see Solinas et al., 2019, and Pignatelli and Bonci, 2015); dopamine serves as a motivating neurotransmitter within the body's natural reward system (Lewis, 2015).

When functioning optimally, the amount of dopamine distributed throughout the mesolimbic reward system corresponds appropriately to the specific level of arousal a stimulus elicits. In other words, when a person is exposed to a normally rewarding substance such as a delicious meal, a proportionate amount of dopamine is released, telling the body that the experience is rewarding, without "overdoing" it (Solinas et al., 2019). Rewards that produce a sensation of pleasure are often linked to behaviors correlated with survival. such as obtaining food and engaging in sexual reproduction (Koob, 2006; Hall, 2011).

NEURAL ADAPTATIONS

In the event of an extraordinary reward (or stimulus that ends up being much more rewarding than expected), the brain sets the reward system into high gear and quickly adapts to this new and exciting stimulus by sending a large dose of dopamine throughout the main dopamine receiving pathways (Koob and Volkow, 2016).

The dopamine then spreads from those locations and activates other parts of the brain involved in learning and memory such as the amygdala (the emotional center of the brain; Wolf, 2016) and hippocampus (the memory center of the brain; Van Der Kolk, 2014).

This creates new "neural pathways" or networks in the brain, making future brain communication leading to this reward easier and faster. These pathways make it easier for the brain to recreate the circumstances that led to receiving the new, novel and highly stimulating reward (Koob and Volkow, 2016).

It is these neuroadaptations (neural adaptations) in the brain pathways that researchers have theorized to potentially be the cause of the negative emotional states associated with the discontinuation of an ingrained habit, creating a vulnerability to future relapse as one may wish to extinguish unpleasant emotional, physical and psychological symptoms through the behavior (Solinas et al., 2019).

PORNOGRAPHY'S NEGATIVE EFFECTS

Negative Effect #1: It Teaches Objectification

A recent review on objectifying sexual scripts in pornography looked at several different factors within the different types of pornography that exist, and supported the notion that pornography was essentially a "teaching tool" for its consumers to objectify or separate the person from the "body" (Fritz and Paul, 2017).

Negative Effect #2: It Impacts Children

In a 2012 review on the research regarding the impact of internet pornography on adolescents, researchers found several negative effects associated with frequent use, including: "lower degrees of social integration, increases in conduct problems, higher levels of delinquent behavior, higher incidence of depressive symptoms, and decreased emotional bonding with caregivers" (Owens et al., 2012).

Negative Effect #3: It Impacts Marriage and Family

A 2008 Journal of Marital and Family Therapy article mentions that "although many users of cybersex view the issue as recreational and private, a recent study showed that cybersex addictions affect the entire family system," adding that "the use of the internet itself has been linked with reductions in family communication and social interaction and increases in depression and loneliness among family members." While visible among families, "when the component of cybersex is added," the article states, "the systemic effects may be even greater" (Goldberg et al. 2008).

Other negative impacts:

"Changes in sleep patterns, demands for privacy and isolation, disregard for responsibilities, changes in personality, loss of interest in partner sex and decline in relationship investment" (Goldberg et al., 2008).

THERAPY MODELS FOR RECOVERY

Thousands of scientific studies have been dedicated specifically to the topic of addiction. While a majority of them are focused on the issue of substance abuse, many of the same brain mechanisms activated during the consumption of drugs of abuse are activated upon the consumption of pornographic material.

Due to this, many have applied these therapeutic principles to an addiction to pornography, since an addiction to pornography at the neurobiological level may function in similar ways (Zellner et al., 2011).

While much work has been put into the psychoanalysis of drug and sex addicts, a few models have emerged within the last 25 years that have demonstrated to be more effective than traditional therapies of the past (Love et al., 2016).



A couple of the models which have been shown to demonstrate lasting, positive changes in individuals include the therapy models of Emotionally Focused Couples Therapy (EFT), which sees addiction as an attachment disorder and aims to repair the attachment, and Acceptance Commitment Therapy (ACT).

EFT—The "Most Effective" Therapeutic Model?

As "hypersexual behavior can have a devastating impact on attachments" (Reid and Woolley, 2006), one of the most effective methods to combat this has been a therapy model whose overall goal is diametrically opposed to that negative impact—*Emotionally Focused Therapy*.

A recent significant finding regarding social attachment bonds stated that "when social attachment bonds are broken through separation or loss," certain parts of the brain "make the sufferer 'feel bad' in a particular way," yet at the same time "a specific kind of

pleasure arises with social contact and strong attachment bonds, which is . . . thought to be mediated by [endogenous] opioids," and "being close to significant others leads to feelings of comfort, security, and pleasure" (Zellner et al., 2011).

When applied to the concept of addiction, this same study later states that "addiction is a deranged form of attachment," and in regard to sexually compulsive behaviors such as masturbation: "Masturbation is ultimately an empty source of pleasure, in a very literal sense. Masturbation involves satisfaction of the pleasure-lust instinct . . . without attachment, or worse: substitutive pleasure in the absence of a specific longed-for object (i.e., object of affection)" (Zellner et al., 2011).

But no matter the choice (pornography, masturbation, drugs of abuse, or other behaviors/substances), ultimately what an "addict" is seeking in consuming a drug, according to Zellner et al., is not the "euphoria" alone, but rather a restoration of lost attachments, which brings with it feelings of pleasure in conjunction with the feelings of

safety and connection that ultimately satisfies more than the substance or behavior alone (Zellner et al., 2011).

Regarding the impact of pornography use on pair-bond attachments, Zitzman and Butler state:

"Evidence of psychosocial deterioration and attachment relationship disintegration associated with habitual pornography use and concomitant deception suggests the need for therapists to develop a sophisticated understanding of the attachment implications of the (promiscuous) sexuality script implicit in pornography. The psychosocial dynamics and effects of pornography use deception for the individual and the pairbond attachment relationship need to be much more carefully and skeptically scrutinized in this age of ubiquitous Internet access. This study's findings confirm, extend, and elaborate the findings of other studies that pornography use and concomitant deception lead to a significant deterioration of attachment and trust in the pair-bond relationship."

According to Zitzman and Butler, there is some evidence that pornography may impact attachment security with habitual use. Emotionally Focused Therapy (EFT), on the other hand, capitalizes on the concept and power of secure attachment and attachment repair, and is considered by various professional therapists a "roadmap for the path of couples' healing." EFT has even been called by some the "most effective and research-validated way to treat couples in distress" (Chamberlain and Steurer, 2011).

The key points of this therapy can be summarized through three basic concepts: (1) Awareness, (2) Recognition, and, (3) Connection, which all essentially come down to emotional regulation.

The three words just mentioned form an acronym which is very fitting in regard to the expected outcome of the model—**ARC.** The term "arc" is defined by Merriam Webster as "a continuous progression or line of development" (Merriam-Webster.com).

The reason why this word fits so well in the context of addiction is because of how its definition correlates with the overarching purpose of the EFT model—to help couples establish a relationship based on "continuous progression" and "development" in emotionally-connecting interpersonal skills, which ultimately leads to a secure attachment.

HOW TO APPLY THE "ARC" PROCESS:

The first step in the Emotionally Focused ARC process towards healing is learning to become **(A)** more *Aware* of emotions, especially the emotions that are typically pushed down for being petty, such as getting one's feelings hurt from a less-than-thoughtful comment. "As we become more aware of our emotions" says Dr. Mark Chamberlain, "we gain an ability to choose how we want to act in response to them" (Chamberlain and Steurer, 2011). And regaining the ability to choose is a huge step forward in the recovery process.

The **(R)** in ARC says to **Recognize** distressing emotions. Once you become aware of your emotions, recognizing what kind

of emotion it is and labeling it is a very important tool for knowing how to talk about it, to diffuse its distressing energy:

"Since unacknowledged feelings aren't [typically] granted full expression both physically and emotionally, they become stored inside the body. Many individuals report feeling a sense of relief when they begin to give a voice to these stored emotions. The physical relief you may feel as you put your feelings into words is evidence that the emotions are running their course and doing what they were designed to do" (Chamberlain and Steurer, 2011).

The last step in the ARC process, once distressing emotions are recognized and acknowledged, is to **(C)** *Connect* with someone you love and trust—particularly your spouse in the context of healing a marriage (or a trusted friend, mentor, chaplain, or family member, if deployed or not married).

"Husband and wife [or trusted friend] can help each other if he (or she) recognizes and shares the deeper emotions that drive the cravings for relief. This will help her (or him) see that he's (or she is) coming to her (or him) long before the emotions become sexualized in the form of seeking relief through pornography" (Chamberlain and Steurer, 2011).

In sum, when we follow the Emotionally Focused ARC process of reaching out to others for emotional relief, we no longer have the need to reach toward our problematic habits, as the soothing chemical oxytocin "calms the nervous system, soothes us emotionally, and helps [us] bond" (Chamberlain and Steurer, 2011).

WHY USE EFT?

"Instead of reaching out for support when we're emotionally distressed, we keep our feelings inside. We try to stuff our feelings back down when they threaten to bubble up to the surface. We pretend that what hurts us emotionally or unsettles our world a bit really doesn't. We may become so good at pretending we're not upset by upsetting stuff that we convince ourselves to not reach out and open up. However, emotions that have been buried alive don't just die off. All of their potency and energy remains primed and ready to drive us—if not in the direction of expressing ourselves in a way that enables those emotions to discharge as they're shared, then in the direction of our most self-defeating habit. The feelings that prime us to seek emotional connection and relationship support can also prime us to relapse to our addiction."

-Mark Chamberlain and Geoff Steurer

ACT—Acceptance and Commitment Therapy

In an article on the effectiveness of "mind-fulness-based" approaches to therapy (such as Acceptance and Commitment Therapy), Julie Fraumeni-McBride states: "Mindfulness-based therapies for addiction have emerged recently as validated forms of clinical therapy comparable to and in certain situations or cases superior to traditional forms of therapy such as CBT," adding later that "mindfulness, more specifically acceptance and commitment therapy, may be the optimal form of therapy in treating problematic pornography use—use that may qualify as addiction, which falls in the realm of sex addiction" (Fraumeni-McBride, 2019).

A clinical study published in 2016 indicated the potential of ACT in the context of pornography addiction, being "the first [study] to examine a treatment for this problem," where "from pretreatment to posttreatment, 14 of 26 participants (54%) had a 100% reduction in hours viewing, 17 (66%) had at least a 90% reduction, 20 (78%) had at least an 80%

reduction, and 24 (93%) had at least a 70% reduction" (Crosby and Twohig, 2016). These statistics are beyond what is considered successful in a clinical trial, and it is possible that these numbers may have caught the attention of psychotherapists in the last several years.

THE BASIC MODEL OF ACT

In a 2006 review of ACT, researchers list what they call the "Six core processes of ACT" where the overall goal of ACT is increasing "psychological flexibility" (Hayes et al., 2006).

The Six Core Processes:

- (1) **Acceptance** (as an alternative to experiential avoidance, or, in other words, just "feeling" an emotion rather than trying to change or avoid it);
- (2) **Cognitive Defusion** (changing the way one views their thoughts, which includes techniques such as saying the thought "out loud" repeatedly until its impact or meaning is diminished, and/or "labeling" a thought, such as saying "I am thinking that I am worthless");

- (3) **Being Present** (ongoing non-judgmental contact with one's own psychological events, including thoughts, just as they occur);
- (4) **Self as Context** (being aware of one's own "flow of experiences" without emotionally attaching to them);
- (5) **Values** (chosen qualities that can never be obtained but can be expressed moment to moment, such as "being a good dad"); and
- (6) **Committed Action** (the development of larger and larger patterns of effective action linked to chosen values; which, in the context of pornography addiction, would be longer and longer gaps between setbacks)

In the "commitment" portion of the model, ACT protocols "almost always involve therapy work and homework linked to short, medium, and long-term behavior change goals that in turn occasion identifying and working through psychological barriers that show up along the way" throughout the duration of the ACT process (Hayes et al., 2006).

ACT claims to be one of the most effective treatments for addictions when compared to other therapy models, especially among highly religious populations (as mentioned in Crosby and Twohig's study on ACT for treating problematic internet pornography use). This is because "many religious systems define certain sexual practices as permissible and others as problematic," hence the perceived problematic practices can often lead to "guilt and shame" (Grubbs et al., 2015).

Since pornography use is commonly seen as one of the "problematic" sexual practices in the context of religion, "guilt and shame" manifests as "unhappiness and depressive tendencies" (Grubbs et al., 2015). In ACT, however, one of the ways shame is addressed is through the application of the concepts of **Being Present** and **Self As Context**, where things such as automatic thoughts or "urges" that have the potential to come into the mind or body automatically are merely "observed" without judgement rather than attaching a meaning to them or labeling the self as "bad" (Adams and Robinson, 2001).

Shame is labeled by Kenneth Adams and Donald Robinson as one of the "three key barriers" that "prevent addicts from breaking the compulsive cycle," and is defined by them as "self-contempt, feelings of inadequacy, and painful disapproval of the self (seeing one's self as "bad" rather than making poor choices)" (Adams and Robinson, 2001).

Therefore "strategies to reduce shame and alter the subsequent belief system ... are paramount to sexual addiction treatment" (Adams and Robinson, 2001).

One of the key strategies to reducing shame:

Includes the changing of one's negative core beliefs that reinforce shame (Adams and Robinson, 2001). This is addressed specifically within the context of ACT, where the client is,

"not being defined by inner experiences," where core beliefs reside, and is able to develop "psychological flexibility, which is the ability to move in a meaningful direction without particular regard for any inner experience." (Twohig and Crosby, 2010)

Another way ACT is effective in the context of healing from pornography addiction and sexual compulsivity is where "high levels of experiential avoidance" (avoiding or attempting to eliminate "unpleasant" events such as boredom and loneliness with techniques such as distraction) can be "related to increases in sexual urges" (Wetterneck et al., 2012).

ACT "specifically targets experiential avoidance" (Wetterneck et al., 2012), which "significantly reduced" reported avoidance levels in the Twohig and Crosby research results, which in turn dramatically reduced the time the subjects spent consuming online pornography in the following weeks of the study (Twohig and Crosby, 2010).

Lastly, in the context of healthy and balanced sexuality, the ACT model followed by Crosby in his 2011 Ph.D dissertation addresses a common ineffective strategy found among those struggling with compulsive pornography use, which he defines as "traditional thought suppression or distraction techniques," which "may actually be counterproductive in addressing this problem," and

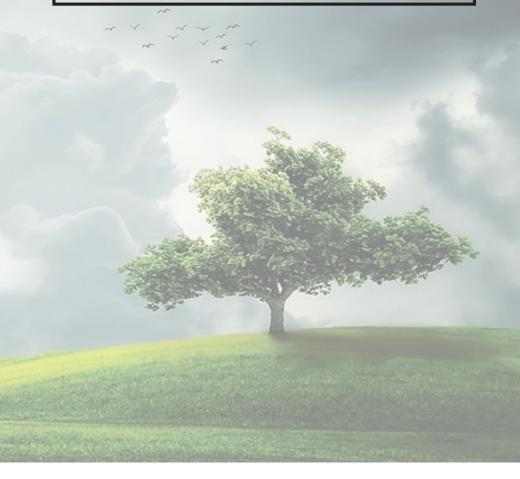
could "lead to an increase" rather than a decrease of these types of "inner experiences" and "subsequent behaviors" (Crosby, 2011). This is important to know as a pastoral counselor, as sometimes the "traditional" methods for overcoming bad habits are actually the last thing you would want to do.

What did Crosby suggest instead?

In the "treatment manual" portion of his dissertation's appendix, the script for the introductory session of ACT therapy for compulsive pornography users has the therapist ask the client: "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?" From the first lesson in this particular model, the client is learning that there is a difference between thoughts and urges, and the manual specifically states to "make sure the participant recognizes that they have control over behavior, but not over the urges to view" (Crosby, 2011).

This perspective allows the client to start

There is a difference between sexual arousal and sexual behavior. Following James Crosby's ACT model for pornography addiction, "make sure the participant recognizes that they have control over behavior, but not over the urges to view."



to distinguish the difference between sexual urges (arousal)—which are "a normal part of being human"—and sexual behaviors, which are consciously chosen and which they have control of (Twohig and Crosby, 2010). This is important as it allows the client to likely reduce, or even eliminate, the shame they experience when they encounter a desire that is inherent in virtually all humans, if that (shame) is what they have been experiencing.

Acceptance is one of the fundamental strategies in ACT, and is the key to its effectiveness. It not only reduces shame but also allows the addict to be more compassionate and accepting of their own self. This, in turn, leads to healing, wholeness, happiness, and balance, as small goals based on personal values turn into medium goals, medium goals evolve into larger ones—and eventually, a person becomes integrated with what they have been trying to become all along.

Two Other Therapy Aids Backed by Science:

#1: Exercise

Regarding the potential of exercise in helping overcome an addiction, in his 2011 study Christopher Olsen states:

"Unlike natural rewards ... most studies have found that exposure to exercise attenuates the effects of drugs of abuse. For example, self-administration of morphine, ethanol, and cocaine are all reduced following exercise." He adds in the conclusion of his study that, in addition to reducing "relapse to drugs of abuse," exercise also "reduces withdrawal symptoms and relapse in abstinent smokers," and even mentions that "one drug recovery program has seen success in participants that train for and compete in a marathon as part of the program."

#2: Environmental Enrichment

Also in his 2011 study on natural rewards and "non-drug addictions," Christopher Olsen mentioned the therapeutic effect of environmental enrichment, where he said:

"Environmental enrichment has been proposed as both a preventative and a treatment measure for drug addiction based on preclinical studies with several drugs of abuse," adding that "studies of human inmates suggest that environmental enrichment through the use of 'therapeutic communities' is in fact an effective treatment option."



How to help those struggling:

As mentioned in the introduction, this guidebook was not meant to be a comprehensive recovery manual for pornography or related addictions.

However, its intention was to be a guide to help chaplains and other spiritual leaders have a better understanding of the nature of this addiction, and know what to do when someone approaches you with the problem.

As mentioned in the book *Love You, Hate the Porn* by Mark Chamberlain and Geoff Steurer, pornography addiction is almost always a result of "attempting to meet healthy needs in unhealthy ways." (Chamberlain and Steurer, 2011) Because of this, there is often a root to the problem that is deeper than expected. The behavior had to start somewhere for some particular reason. And the behavior continues for some (or many) particular reason(s).

The key to recovery, then, is finding how deep the roots go and taking care of the problem from the ground level up.

While some chaplains may be trained professionally in Marriage and Family Therapy, Social Work, or other related counseling fields, I created this booklet with the understanding that many chaplains may not have this type of training...

After many hours of research, however, and discovering how effective the EFT and ACT therapy models are in helping men and women recover from pornography addiction (often in conjunction), I felt that these would likely be two effective models that could help those struggling with a deeply rooted pornography habit.

Because of this, the best way to implement the understanding gained from reading this booklet is not to try and use the therapeutic techniques if you are not professionally or adequately trained in them. The best way to use this book, however, is to study it thoroughly to gain a better understanding of addiction, to be able to better understand those who approach you, and listen to them with love.

If you happen to be trained in either EFT or ACT (or both), great! If not, the most effective thing to do as a spiritual counselor at that point is to refer the person under your care to a professionally trained counselor (in EFT or ACT, or both), and, with your continual spiritual assistance and emotional support, progress will accelerate faster than you could have ever imagined.

"In reality, the pull of pornography results ... from unmanaged emotional and relationship pain. Think of it as attempting to meet healthy needs in unhealthy ways."

-Mark Chamberlain and Geoff Steurer

References

Adams, Kenneth M., and Donald W. Robinson. "Shame Reduction, Affect Regulation, and Sexual Boundary Development: Essential Building Blocks of Sexual Addiction Treatment." Sexual Addiction & Compulsivity 8, no. 1 (2001): 23-44.

Alavi, Seyyed Salman, Masoud Ferdosi, Fereshte Jannatifard, Mehdi Eslami, Hamed Alaghemandan, and Mehrdad Setare. "Behavioral Addiction versus Substance Addiction: Correspondence of Psychiatric and Psychological Views." *International Journal of Preventive Medicine* 3, no. 4 (2012): 290-294.

Berridge, Kent C., and Terry E. Robinson. "Liking, Wanting, and the Incentive- Sensitization Theory of Addiction." *American Psychologist* 71, no. 8 (2016): 1-10.

Chamberlain, Mark D. and Geoff Steurer. *Love You, Hate the Porn: Healing a Relationship Damaged* by Virtual Infidelity. Salt Lake City, UT: Shadow Mountain, 2011.

Cline, Victor B. *Pornography's Effects on Adults & Children.* New York: Morality in Media, 2001.

Crosby, Jesse M. "Acceptance and Commitment Therapy for the Treatment of Compulsive Pornography Use: A Randomized Clinical Trial." PhD diss. Utah State University, 2011. Accessed August 24, 2019. https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1983&context=etd.

Crosby, Jesse M., and Michael P. Twohig. "Acceptance and Commitment Therapy for Problematic Internet Pornography Use: A Randomized Trial." *Behavior Therapy* 47, no. 3 (2016): 355-366.

Doran, Kirk, and Joseph Price. "Pornography and Marriage." *Journal of Family and Economic Issues* 35, no. 4 (2014): 489-498.

Etkin, Amit, Tobias Egner, and Raffael Kalisch. "Emotional Processing in Anterior Cingulate and Medial Prefrontal Cortex." *Trends in Cognitive Sciences* 15, no. 2 (2011): 85-93.

Fraumeni-McBride, Julie. "Addiction and Mindfulness; Pornography Addiction and Mindfulness-Based Therapy ACT." *Sexual Addiction and Compulsivity* 26, no. 1–2 (2019): 42-53.

Fritz, Niki and Bryant Paul. "From Orgasms to Spanking: A Content Analysis of the Agentic and Objectifying Sexual Scripts In Feminist, for Women, and Mainstream Pornography." *Sex Roles* 77 (2017): 639-652.

Goldberg, Peter D., Brennan D. Peterson, Karen H. Rosen, and Mary Linda Sara. "Cybersex: The Impact of a Contemporary Problem on the Practices of Marriage and Family Therapists." *Journal of Marital and Family Therapy* 34, no. 4 (2008): 469-480.

Grubbs, Joshua B., Julie J. Exline, Kenneth I. Pargament, Joshua N. Hook, and Robert D. Carlisle. "Transgression as Addiction: Religiosity and Moral Disapproval as Predictors of Perceived Addiction to Pornography." *Archives of Sexual Behavior* 44, no. 1 (2015): 125-136.

Fraumeni-McBride, Julie. "Addiction and Mindfulness; Pornography Addiction and Mindfulness-Based Therapy ACT." *Sexual Addiction and Compulsivity* 26, no. 1–2 (2019): 42-53.

Fritz, Niki and Bryant Paul. "From Orgasms to Spanking: A Content Analysis of the Agentic and Objectifying Sexual Scripts In Feminist, for Women, and Mainstream Pornography." *Sex Roles* 77 (2017): 639-652.

Goldberg, Peter D., Brennan D. Peterson, Karen H. Rosen, and Mary Linda Sara. "Cybersex: The Impact of a Contemporary Problem on the Practices of Marriage and Family Therapists." *Journal of Marital and Family Therapy* 34, no. 4 (2008): 469-480.

Grubbs, Joshua B., Julie J. Exline, Kenneth I. Pargament, Joshua N. Hook, and Robert D. Carlisle. "Transgression as Addiction: Religiosity and Moral Disapproval as Predictors of Perceived Addiction to Pornography." *Archives of Sexual Behavior* 44, no. 1 (2015): 125-136.

Hall, Paula. "A Biopsychosocial View of Sex Addiction." *Sexual and Relationship Therapy* 26, no. 3 (2011): 217-228.

Hayes, Steven C., Jason B. Luoma, Frank W. Bond, Akihiko Masuda, and Jason Lillis. "Acceptance and Commitment Therapy: Model, Processes and Outcomes." *Behavior Research and Therapy* 44, no. 1 (2006): 1-25.

Hilton Jr., Donald L. "Pornography Addiction—A Supranormal Stimulus Considered in the Context of Neuroplasticity." *Socioaffective Neuroscience & Psychology* 3, no. 1 (2013): 1-6.

Koob, George F. "Neurobiology of Opioid Addiction: Opponent Process, Hyperkatifeia and Negative Reinforcement." *Biological Psychiatry* (2019): 1-10.

Koob, George F., and Nora D. Volkow. "The Neurobiology of Addiction: A Neurocircuitry Analysis." *Lancet Psychiatry* 3 (2016): 760-763.

Kühn, Simone, and Jürgen Gallinat. "Brain Structure and Functional Connectivity Associated with Pornography Consumption: The Brain on Porn." *JAMA Psychiatry* 71, no. 7 (2014): 827-834.

Lewis, Marc. *The Biology of Desire: Why Addiction Is Not a Disease*. New York: PublicAffairs, 2015.

Love, Heather A., Rachel M. Moore, and Natalie A. Stanish. "Emotionally Focused Therapy for Couples Recovering from Sexual Addiction." *Sexual and Relationship Therapy* 31, no. 2 (2016): 176-189.

Manning, Jill C. "The Impact of Internet Pornography on Marriage and the Family: A Review of the Research." *Sexual Addiction & Compulsivity* 13, no. 2-3 (2006): 131-165.

Nistico, Giuseppe and Umberto Scapagnini. *Neurotransmitters and Anterior Pituitary Function*. New York: Academic Press, 2012.

Olsen, Christopher M. "Natural Rewards, Neuroplasticity, and Non-Drug Addictions." *Neuropharmacology* 61, no. 7 (2011): 1109-1122.

Owens, Eric W., Richard J. Behun, Jill C. Manning, and Rory C. Reid. "The Impact of Internet Pornography on Adolescents: A Review of the Research." *Sexual Addiction & Compulsivity* 19, no. 1-2 (2012): 99-122.

Pignatelli, Marco, and Antonello Bonci. "Role of Dopamine Neurons in Reward and Aversion: A Synaptic Plasticity Perspective." *Neuron* 86, no. 5 (2015): 1145-1157.

Regnerus, Mark, Gordon, D., & Price, J. "Documenting Pornography Use in America: A Comparative Analysis of Methodological Approaches." *The Journal of Sex Research* 53, (2016): 873-881.

Reid, Rory C., and Scott R. Woolley. "Using Emotionally Focused Therapy for Couples to Resolve Attachment Ruptures Created by Hypersexual Behavior." *Sexual Addiction & Compulsivity* 13 (2006): 219-239.

Santinover, Jeffrey. Jeffrey Santinover Statement to Congress, Weston, CT, May 9, 2008. http://www.strugglingteens.com/news/RelatedNews/JeffreySatinover.pdf.

Solinas, Marcello, Pauline Belujon, Pierre Olivier Fernagut, Mohamed Jaber, and Nathalie Thiriet. "Dopamine and Addiction: What Have We Learned From 40 Years of Research." *Journal of Neural Transmission* 126, no. 4 (2019): 481-516.

Van Der Kolk, Bessell. The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma. New York: Viking, 2014.

Wetterneck, Chad T., Angela J. Burgess, Mary B. Short, Angela H. Smith, and Maritza E. Cervantes. "The Role of Sexual Compulsivity, Impulsivity, and Experiential Avoidance in Internet Pornography Use." *The Psychological Record* 62, no. 1 (2012): 3-18.

Wolf, Marine E. "Synaptic Mechanisms Underlying Persistent Cocaine Craving." *Nature Reviews Neuroscience* 17, no. 6 (2016): 1-32.

Zellner, Margaret R., Douglas F. Watt, Mark Solms, and Jack Panksepp. "Affective Neuroscientific and Neuropsychoanalytic Approaches to Two Intractable Psychiatric Problems: Why Depression Feels So Bad and What Addicts Really Want." *Neuroscience and Biobehavioral Reviews* 35 (2011): 2000-2008.

Zitzman, Spencer T., and Mark H. Butler. "Wives' Experience of Husbands' Pornography Use and Concomitant Deception as an Attachment Threat in the Adult Pair-Bond Relationship." *Sexual Addiction & Compulsivity* 16, no. 3 (2009): 210-240.