

PORNOGRAPHY AND PURPOSE IN LIFE: A MODERATED MEDIATION ANALYSIS

by

Cynthia Marie Evans

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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APPROVED BY:

Fred Volk, Ph.D., Committee Chair

John C. Thomas, Ph.D., Ph.D., Committee Member

Raquel Guidry, Ed.D., Committee Member

ABSTRACT

Extensive research has examined the relationship between pornography use, religiosity, and perceived addiction to pornography. Other research has explored the connections between religiosity and meaning or purpose in life. No research has examined the potential relationship combining all four constructs in one research study. To rectify this gap, the present study examined the mediating effect of perceived addiction to pornography, as well as the moderating effect of religiosity on the direct relationship between frequency of pornography use and meaning in life. Two hundred and eighty-nine participants, aged 18–30, who admitted using pornography in the past six months completed assessments addressing pornography use, religious instability, perceived addiction to pornography and purpose in life. Quantitative analysis used both zero order correlations and regression analysis. Initial correlational results indicated a negative direction in the relationship between pornography use and purpose in life but no statistical significance. However, upon further exploration, when controlling for age, statistical significance was reported. Perceived addiction mediated the relationship between pornography use and purpose in life only when controlling for age. Religiosity, measured as religious instability, did not moderate the direct relationship. However, when controlling for age, the moderated relationship was statistically significant. Finally, religious instability did moderate the mediated relationship between pornography use, perceived addiction, and purpose in life.

Keywords: addiction, meaning, perceived addiction, pornography, purpose, religiosity

Copyright Page

Dedication

Only my Lord and Savior, Jesus Christ, could have possibly orchestrated the events leading to the completion of this doctoral journey. His leadership, direction, compassionate grace, and mercy kept me diligent in finishing what He began. He declared, “Look, I am about to do something new; even now it is coming. Do you not see it? Indeed, I will make a way in the wilderness, rivers in the desert” (Isaiah 43:19) and indeed He accomplished what He planned.

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“Blessing and glory and wisdom and thanksgiving and honor and power and strength be to our God forever and ever. Amen” (Revelation 7:12).

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List of Abbreviations

Amazon Mechanical Turk (MTurk)

American Psychiatric Association (APA)

Cyber Pornography Use Inventory-9 (CPUI-9)

International Classification of Diseases, Revision 11 (ICD-11)

Purpose in Life test (PIL)

Spiritual Assessment Inventory (SAI)

World Health Organization (WHO)

CHAPTER ONE: INTRODUCTION

Some Christians perceive pornography use as the worst of all sins due to the sin being an immoral choice which is repetitious and premeditated (Perry, 2019). This belief is based largely on the Judeo-Christian commandment, “You shall not commit adultery” (Exodus 20:4, Christian Standard Bible [CSB]), as well as the Christian expansion on this command, “You have heard it said, ‘Do not commit adultery,’ but I tell you, anyone who looks at a woman to lust for her has already committed adultery with her in his heart” (Matthew 5:27-28, Holman Christian Standard Bible). Some Christian believers in the Western world deem pornography use as nearly equivalent to adultery in terms of immorality. In the Catechism of the Catholic Church (CCC; 1997), Roman Catholicism, the largest Christian denomination in the world, denounces pornography as a grave offense against chastity, admonishing both adherents and civil authorities to prevent both the production and distribution of pornographic content. While they are foundationally divergent in supernatural beliefs, all major religious faiths denounce pornography use (Eberstadt & Layden, 2010). In fact, religious organizations have led the crusade against the influx of pornography (Strubb, 2011).

Yet, for many, despite their effort to live in concert with their Christian beliefs, immoral choices with resultant consequences occur. Moral failures, termed *sins*, occur when thoughts and behaviors are not in line with the will of God as outlined in religious texts such as the Bible (Barkan, Ayal, & Ariely, 2015). These immoral choices occur when believers seek temporal, personal gratification rather than eternal fulfillment of their desires (Perry, 2019). This may result in an intrapersonal state of moral disapproval of one’s own actions, leading to moral incongruence and psychological distress (Grubbs, Kraus, & Perry, 2019; Grubbs, Volk, Exline, & Pargament, 2015). In addition, for religious individuals, even slight missteps of immorality

may result in the perception of behaviors being worse than actual usage might suggest and a belief that the personal spiritual connection is broken, despite evidence to the contrary (Perry, 2019). Nonreligious individuals may perceive the reactions of religious individuals to moral failures as unusual or oddly condemning. However, for the religious individual, any deviation from prescribed righteous behaviors may be considered extreme and result in self-perceived moral failure (Perry, 2019).

Prominent Christians who admit to being or are exposed as pornography users are deemed to have fallen into sexual sin and may be removed from their posts, shamed, or shunned by the Christian community (Perry, 2019). This is evidenced by the outcry against Catholic priests' sexual exploits, as well as the attention given to prominent evangelical pastors' admissions of sexual failures (Perry, 2019). In contrast, when other commandment-level sins such as stealing or lying are revealed, offenders are typically forgiven, and their transgressions are forgotten. In fact, these moral failures often become platforms for sharing the forgiving nature and spiritually transformative power of God (Perry, 2019). Not so with sexual moral failures. Religious individuals who have fallen into sexual sin are not rallied around to be helped but rather are shamed, shunned, and hidden from the public eye. Ironically, the Christian community, representative of the extravagant love, grace, and forgiveness of Jesus Christ, which might provide mercy and support, has historically taken the stance of one of the least accepting entities in their effort to help users move toward regulated, sexually moral behaviors (Perry, 2019).

In light of the response of the Christian church, Christians who struggle with pornography usage are understandably fearful of coming forward to expose their struggles. Yet, while seemingly hidden from external judgment, religious users internally shame themselves and

tend to perceive their pornography use as the worst of all sins (Perry, 2019). Christian pornography users distance themselves from religious individuals and activities and do not seek out Christian support (e.g., by attending support groups or counseling), believing the very revealing of their actions could result in judgment and social harm (Grubbs & Perry, 2016). This leads to a continual cycle of shame, guilt, mental distress, and use. This self-perception may also lead to supra-personal tension between knowing the standard of God yet choosing behaviors in opposition to His commandments. In fact, some religious users judge their entire spiritual condition on the basis of use or lack of use of pornography in a given period of time (Perry, 2019).

However, some religious users and pastors have embraced a new belief. Rather than agreeing with the Christian moral standard that pornography use is a personal, sinful choice, some religious users have chosen to embrace the more recent addiction language regarding pornography use (Thomas, 2013). Tsuria (2017) found the perception of addiction to pornography allowed religious users to claim use is not an internal, premeditated, sinful choice but rather an external medical issue over which they have little to no control. Perceived addiction to pornography represents a shift in responsibility from a personal choice of the user to a behavioral addiction from which the user must recover and seek sobriety with the potential for relapses (Duffy, Dawson, & das Nair, 2016).

It is important to note that while religious users have a lower frequency of use than the general public, they report much higher rates of perceived addiction to pornography (Perry, 2019). This is due, in part, to sexual shame and the perceived meaning of pornography as a sin in the Christian belief system (Perry, 2019; Perry & Snawder, 2017). While nonreligious users report greater frequency of use, they report fewer problems associated with use (Perry, 2019).

Without the moral standards acquired from religious affiliation, pornography is perceived as a form of entertainment for nonreligious users. However, for religious users, the meaning of pornography use is a key issue (Perry, 2019). Perceiving pornography use as incongruent with religious values may lead to moral incongruence and psychological distress (Guidry, Floyd, Volk, & Moen, 2019; Grubbs, Volk, et al., 2015; Grubbs, Wilt, Exline, & Pargament, 2018). Therefore, to alleviate the psychological distress resulting from moral incongruence, religious users may attribute their behaviors to an addiction, thereby relieving themselves of personal responsibility (Leonhardt, Willoughby, & Young-Petersen, 2018; Perry, 2019).

Background of the Problem

This section will address the background of the four constructs of this research study: meaning in life, perceived addiction to pornography, pornography, and religiosity, as well as examine how the four constructs interact with one another. Also addressed in this section is the impact of the Internet on pornography use, heightened awareness of problematic pornography use by the mental and medical health communities, Christian values and perception of sin, perceived addiction to pornography, and the cultural shift in the perception of the use of pornography from sinful behavior to the medicalized concept of addiction.

Meaning in Life

“Ever more people today have the means to live, but no meaning to live for” (Frankl, 1979, p. 21). The writings of noted psychotherapist Viktor Frankl, including his seminal book, *Man’s Search for Meaning* (2006), laid the psychological groundwork for the study of finding meaning in life and introduced logotherapy, or meaning-centered therapy. Frankl’s work emerged out of his experiences as a Jewish man in anti-Semitic Vienna, Austria, in the early 1930s, where he was professionally demoted and ultimately transported to several Nazi

concentration camps. Through tragedy and suffering, Frankl solidified his earlier belief that life has meaning under all circumstances (Frankl, 2006). While his writings were initially restricted to his personal recovery from death camp experiences, Frankl's (2006) ideas have global implications regarding overarching human motivations.

Frankl (2000) asserted life is filled with meaning from birth to death that can be discovered in every moment, through any experience: good or bad, tragic or joyful. Seeking out and living in the presence of purpose in life is arguably the key motivation in life (Frankl, 2006). While previous generations lived out meaning through overarching religious values and cultural traditions, the current cultural untethering from these meaningful life anchors has resulted in the search for meaning through self-identity and self-knowledge (Baumeister, 1991). While meaning in life has always rested in the hands of the individual, when individuals have no transcendent beliefs, their self-focused pursuit of meaning may result in an empty, self-absorbed worldview (Frankl, 1966).

Modern society presents numerous potential choices for finding personal meaning through media, institutions, language, culture, and symbols (Baumeister, 1991). However, when individuals do not live in the presence of personal existential meaning in life or lack personal meaning in life, an existential vacuum may develop, resulting in existential angst (Frankl, 2006). As reportedly stated by philosopher Aristotle, "Nature abhors a vacuum" (as cited in Padmanabhan & Padmanabhan, 2019, p. 171). As a remedy for this meaning void, Western culture offers individuals options for finding meaning through career, wealth, material items, relationships, and other activities. Individuals delve into these activities in the hope that something might bring meaning to their lives (Baumeister, 1991). However, without transcendent spiritual values and morals anchoring personal choice, even in the abundance of

choices, there is little relief from existential angst (Frankl, 2006). In fact, without foundational transcendent meaning in life, individuals may turn even positive endeavors into maladaptive behaviors such as addictions, aggression, and depression (Frankl, 2006).

Conversely, seeking religious, transcendent meaning in life through religious activities can bring meaning to a sometimes seemingly meaningless world (Frankl, 1997). Religiosity provides a personal, individual rationale for temporal missional living, as well as ultimate meaning, through the possibility of eternal life after earthly death (Wong, 2012). Meaning or purpose in life (terms used interchangeably throughout the research) refers to the self-perceived significance of one's life (Crumbaugh & Maholick, 1964). However, it is important to note that while religiosity may impact perceived meaning in life, it is not dependent on religious affiliation and may be existential and spiritual in nature rather than behavioral (Steger & Frazier, 2005).

While religiosity brings personal and ultimate meaning in life, it is also replete with foundational values, morals, beliefs, customs, and traditions (Frankl, 1997). Religious cultural standards and group norms pressure adherents to behave in ways that accurately reflect the beliefs of the faith (Perry, 2019). Moral views, as well as an understanding of immorality, form the framework religious individuals use to build their lives as reflected in their personal and public choices (Roccas, 2005) and behaviors and thoughts as played out in intrapersonal, interpersonal, and suprapersonal relationships (Buchko & Witzig, 2003).

Judeo-Christian morals are based on the foundational commandments to “love the Lord, your God, with all your heart, soul, mind and strength” and “love your neighbor as yourself” (Mark 12:29–31, CSB). Through these holistic commandments, followers are taught to place all areas of their life—heart (passion, volition, emotions), soul (physical and emotional humanness, life apart from the physical body), mind (thoughts and intellectual desires), strength (physical

abilities), and relationships (neighbor)—under the control of God (Piper, 2011). In other words, every part of life is designed to be subsumed to Godly control.

Meaning in life is the existential belief that each life has both individual and collective purposes (Frankl, 2006), that the experience of life is not accidental (Shantall, 2020). From an existential perspective, purpose in life involves a coherent, ordered, worldview, in which behaviors and thoughts are consistent with beliefs (Reker, 2000). It is reliant upon an individual's ability to create goals worth striving for and relationships worth developing and maintaining (Hedberg, Brulin, & Alex, 2009; White, 2004). Traditions, anchors that give meaning to life, are transitory and fading in the current relativistic culture. Individuals in the Western world have more expendable income and free time than ever but have less expressed purpose in life (Frankl, 2006). Yet, seeking, finding, and living in the presence of personal purpose in life are necessary components for living meaningfully (Reker, 2000).

Frustration resulting from an unsuccessful search for meaning may weaken the will to deal with challenging life situations and lead to what Frankl (2006) termed existential angst. With less meaningful life experiences, individuals perceive life as empty and boring, leading to satisfaction-seeking behaviors in an attempt to find pleasure and power. These satisfaction seeking behaviors lead to self-absorption, rather than meaningful living, and result in an existential void (Thompson, 2016). These inferior substitutes ultimately neither satisfy nor fill the existential craving and may result in aggression, addictions, or depression, resulting in harm to self, others, and society at large (Frankl, 2006; Ilievski, 2015; Reker, 2000; Schnell, 2009; Wilt et al., 2018).

Frankl (2006) claimed there were three conditions for finding meaning in life, each of which are violated by the use of pornography. The first condition is others-oriented experiential

value. It is through loving and being loved that an individual is able to attain the highest goal to which man can aspire: loving connections with others. If an individual is not able to make meaningful, loving connections, an existential void will develop. Pornography use is representative of an individual's attempt to fill this void. This is evidenced by research supporting a negative relationship between pornography use and interpersonal relationship satisfaction (Guidry et al., 2019; Maas, Vasilenko, & Willoughby, 2018; Perry, 2016; Wright, Tokunaga, Kraus, & Klann, 2017). In addition, loneliness, resulting from a lack of experiential value, has been positively associated with pornography use (Butler, Pereyra, Draper, Leonhardt, & Skinner, 2018; Yoder, Virden, & Amin, 2005).

The second pathway to meaning is creative value: finding something meaningful to do. Without a meaningful deed to do, through vocation, avocation, or recreation, life may be perceived as boring, creating an existential void. Pornography use is indicative of an individual's attempt to relieve boredom, add excitement to an individual's life and has been found to be one of the main predictors of gratification-seeking behaviors such as pornography use (Barbalet, 1999; Eastwood, Frischen, Fenske, & Smilek, 2012; Fahlman, Mercer, Gaskoski, Eastwood, & Eastwood, 2009; Goldberg, Eastwood, LaGuardia, & Danckert, 2011; Healy, 1984; Melton & Schulenberg, 2007; Moynihan, Igou, & Van Tilburg, 2017).

The third pathway to meaning is the attitudinal value of finding meaning in suffering. Frankl (2006) classically stated, "Everything can be taken from a man but one thing; the last of human freedoms—to choose one's attitude in any given set of circumstances, to choose one's own way" (p. 104). This belief was substantiated when, amidst the horrors of concentration camp life, Frankl (2006) claimed to have achieved transcendent self-actualization. Foundational to Frankl's concept of suffering with dignity and courage is the requirement that circumstances

were forced upon the individual; in other words, suffering is not the result of personal choice. Addictions, such as perceived addiction to pornography, may result in self-induced psychological suffering or distress (Bradley, Grubbs, Uzdavines, Exline, & Pargament, 2016; Grubbs, Wilt, et al., 2018; Wilt, Cooper, Grubbs, Exline, & Pargament, 2016). Continuing to choose behaviors which are in opposition to professed beliefs (e.g., pornography) may result in suffering that is bereft of dignity or courage (Frankl, 2006).

While these three components are keys to finding personal meaning in life, ultimately, they are only surface manifestations of a much more fundamental issue, what Frankl (1979), termed *transcendent supra-meaning*. This ultimate meaning in life is found outside the natural world, in the supernatural, through God or an expression of a higher being (Frankl, 1979). Supra-meaning's foundation rests on the belief that there is more to life than what individuals can physically perceive. Frankl's (1979) concept of God is foundationally transcendent yet ultimately personal. He believed God resides in each individual through the noetic, spiritual dimension of life. As one acknowledges God's presence, one has the potential to receive supra-meaning.

Conversely, seeking meaning apart from God may result in an existential vacuum and be the basis for some mental health issues and psychological distress (Giannone, Kaplin, & Francis, 2019). Frankl (1979) stated, "Once the angel in us is repressed; he turns into a demon" (p. 70). He believed the neurotic triad, consisting of addictions, depression, and aggression, results from individuals seeking meaning through daily interaction with worldly offerings such as movies, television, music (and now Internet availability). These lesser proxies for meaning or purpose in life feed a society, impoverished in meaning, the belief that life can be more meaningful if it is filled with self-focused personal desires (Frankl, 2000). The current Western culture's

individualistic, self-centered life focus is in direct opposition to Frankl's three conditions for meaningful living.

Pornography and the Internet

Pornography use is prolific and ubiquitous in current Western society due to the availability, accessibility, and anonymity of the Internet (Cooper, 1998) and will likely continue to increase over time (Lykke & Cohen, 2015; Maddock, Steele, Esplin, Hatch, & Braithwaite, 2019; Price, Patterson, Regnerus, & Walley, 2016; Willoughby, Carroll, Busby, & Brown, 2016). However, pornography has existed since the beginning of time and is mentioned in numerous ancient documents (Kendrick, 1996). Hedonistic, sexual cult practices were common in the ancient world, though often confined to ritualistic cults and celebrations (Kendrick, 1996). However, as early as the fourth century BC, Plato called for a restriction in educational settings of the use of stories of the gods that illustrated their immoral acts (Plato, 1946). In addition, non-Christian art throughout history is replete with pornographic images previously termed obscenities (Kendrick, 1996).

With the advent of television, videos, and print material, pornography moved into the family home. In the 1980s, the Internet was introduced to the general population, creating an entirely new platform for the dissemination of pornographic material (Cohen-Amalgor, 2011). While often praised or maligned, the Internet is a neutral entity that is characteristically and morally neither good nor bad, right nor wrong. Initially devised in the 1950s as an internetwork for scientists wishing to stay connected in the event of an electrical outage, it grew exponentially throughout the 1990s, mostly through government, academic, and communication usage in the United States (Cohen-Amalgor, 2011). Currently, Internet usage has exploded into a quotidian instrument that individuals and institutions rely on for their personal and professional livelihood

(Cohen-Amalgor, 2011). One estimate of the global digital population, a measurement of Internet usage, reported more than 56% (4.33 billion) of the world's 7.6 billion population had Internet availability in 2018, leaving almost half of the world without Internet access (Graham & Dutton, 2019). However, for most Americans, daily life without the use of the Internet is nearly inconceivable.

Extensive research has reviewed the extant literature on individual and problematic pornography use (e.g., Grubbs & Perry, 2017; Perry, 2019). In addition, data from top search engines show sexual content, particularly adult sexual terms, are the most searched for and viewed content on the Internet (Carr, 2004; Didelot, Hollingsworth, & Buckenmeyer, 2012; Ogas & Gaddam, 2011; Short, Kasper, & Wetterneck, 2015), with the United States ranking as a principal consumer (Lo & Wei, 2005; Traeen, Nilsen, & Stigum, 2006; Ybarra & Mitchell, 2005). This is largely due to increased Internet availability, accessibility, and anonymity (Cooper, 1998). Parties who have sought to quantify and understand the popularity of Internet pornography use range from pornography site promoters to international research firms. While the motivations for understanding may be as divergent as the reporters, each provides evidence of considerable increases in Internet pornography usage with differing resultant consequences.

PornHub (2019), one of the most popular websites for accessing Internet pornography, publishes a yearly review of statistical information on site use. While self-report is rife with potential errors (Northrup, 1996), the statistics are staggering. PornHub (2019) reported 33.5 billion visits in 2018, a five-billion-visit increase over 2017, resulting in a daily average of 92 million visits. In 2018, a reported 30.3 billion server searches were completed on PornHub, equating to an average of 962 searches per second. Over one million hours, representing 4.79

million new videos, were uploaded in 2018. The United States is reported to produce the greatest amount of daily traffic, with an average visit duration of 10 minutes, 13 seconds in 2018 (PornHub, 2019). While the statistics provided are impressive, it is imperative to consider the source and recognize statistics reported on PornHub are self-reported and likely self-promoting.

Heightened Awareness of Problematic Pornography and Perceived Addiction

The availability of the Internet to the general public in the mid-1990s quickly led to research that sought to understand the quickly growing popularity of Internet pornography (Cooper, 1998). Research conducted by Cooper and others initially proposed three factors that made Internet pornography different than traditional methods of pornography use (e.g., video rental and magazine purchases). Cooper (1998) concluded the factors of accessibility, availability, and anonymity, termed the Triple-A, uniquely allowed for pornography use to move from a public purchase to a private habit. While the three-factor approach, as uniquely predictive, was never statistically validated, it is still a popularly cited concept (Perry, 2019). Other research that sought to understand and classify pornography use addressed steps leading to online sexual addiction (Young, 2008). Recently, Grubbs, Kraus, and Perry (2019) presented a model addressing pornography use and perceived addiction to pornography that factored in moral incongruence as a mediating factor between religiosity and intrapersonal/psychological, interpersonal/relational, and religious/spiritual distress.

The mental health field acknowledged heightened concern regarding increased problematic pornography use through a proposed diagnosis of hypersexual disorder for the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; Reid, 2016; Reid, Li, Gilliland, Stein, & Fong, 2011). Ultimately, the diagnosis was not included as the mental health community was largely divided on whether pornography use was addictive or impulsive

in nature (Duffy et al., 2016; Grubbs, Exline, Pargament, Hook, & Carlisle, 2015; Grubbs, Kraus, & Perry, 2019). However, the medical field seemed to acknowledge the depth of problematic pornography use when it included compulsive sexual behavior disorder in the recently released International Classification of Diseases, Revision 11 (ICD-11; Kraus et al., 2018).

While the American Psychiatric Association (APA) and the World Health Organization (WHO) may have been slow to reach a conclusion regarding the resultant distress related to Internet pornography use, many individuals self-identify as addicted to pornography (Cavaglion, 2010; Chisholm & Gall, 2015; Gola, Lewczuk, & Skorko, 2016; Gola & Potenza, 2016; Gola et al., 2017) and present to helping professionals with problems associated with problematic or compulsive Internet pornography use (Gola et al., 2016; Kraus, Martino, & Potenza, 2016). However, perceived addiction to pornography, an individual's perception of pornography use as problematic, may not be correlated to actual pornography use or representative of typical addictive or dependence criteria. For example, individuals may not experience pathological behaviors, social impairment, risky use, or tolerance and withdrawal, the four criteria groupings related to substance-related and addictive disorders (APA, 2013). In fact, the individual pornography user may not experience any overt physiological symptoms. Yet, psychological distress may occur with resultant negative consequences independent of the amount of pornography viewed (Perry, 2019; Wilt et al., 2016).

Religiosity

Western Christianity has historically embraced the concept of being in the world, but not of it, based on Jesus' words, "They are not of the world, just as I am not of the world" (John 17:16, Holman Christian Standard Bible). This is historically evidenced by the modifying effect

of Christian morals on Western society. With the advent and spread of the Christian church throughout the world, Christian morals and values impacted much of the world's view on appropriate behaviors, including sexual practices. In fact, most Westernized societies and governments are based on Judeo-Christian principles.

In the Christian belief system, sexual practices are endorsed only within God's design for marriage between one wife and one husband. Jesus stated,

Have you not read that He who created them in the beginning made them male and female, and he also said, "For this reason a man will leave his father and mother and be joined to his wife, and the two will become one flesh?" So, they are no longer two, but one flesh. Therefore, what God has joined together, let no one separate. (Matthew 19:4–6, CSB)

Any deviation from this proscribed plan, such as pornography use or polyamorous behaviors, is perceived as sinful and an affront to the commandments of God. For example, Exodus 20:4 states, "Do not commit adultery," and Hebrews 13:4 states, "Marriage is to be honored by all and the marriage bed kept undefiled, because God will judge the sexually immoral and adulterers." In the book of Romans, shameful lusts are identified:

For this reasons God delivered them over to disgraceful passions. Their women exchanged natural sexual relations for unnatural ones. The men in the same way also left natural relations with women and were inflamed in their lust for one another. Men committed shameless acts with men and received in their own persons the appropriate penalty of their error. And because they did not think it worthwhile to acknowledge God, God delivered them over to a corrupt mind so that they do what is not right. (Romans 1:26–28, CSB)

Homosexuality and bestiality are specifically addressed: “You are not to sleep with a man as with a woman; it is detestable. You are not to have sexual intercourse with any animal...” and “If a man sleeps with a man as with a woman, they have both committed a detestable act. They must be put to death; their death is their own fault” (Leviticus 18:22–23, 20:13, CSB). Yet, in spite of Judeo-Christian prohibitions or perhaps because of them, individuals who are adherents to religious values partake in sinful sexual practices repeatedly and sometimes habitually (Perry, 2019).

Due to the shift of Western culture away from Christian values and toward scientific, relativistic philosophies, Christian morals are no longer indisputable and universally held. In addition, American individualism and desire for personal choice has led to widespread acceptance of birth control and allowed the development of the abortion industry to offset unwanted pregnancies (MacCulloch, 2010). The church became reluctant to interfere with the burgeoning freedom movement of the young adult population, and many church-related activities such as the Sunday drive after dinner and Sunday evening services have been replaced by television viewing (MacCulloch, 2010). While this shift has occurred in many areas (e.g., music, artistic expression, self-image, God centrality), the sexual revolution foundationally changed the moral sexual rules in Western society (MacCulloch, 2010; Walsh, 2008). Sexual behaviors, once reserved exclusively for marriage, have become commonplace and expected outside of marriage (McLeod, 2007). With the increase of entertainment options such as television, movies, print magazines, and more readily available cashflow for middle Americans, sexual expression through pornography became an alternative form of entertainment (MacCulloch, 2010). Yet, while the cultural expectations and the behaviors of both religious and nonreligious individuals

shifted, the Christian church has not changed its stance denouncing pornography or other sexual sins (Perry, 2019).

Perceived Addiction to Pornography: Cultural Shifts

As these American values shifted, some Christians chose to stay true to their traditional values, while others followed the cultural shift. Perry's (2019) meta-analysis of the shift reports on many changing elements. For example, while Western Christian stated sexual values may be reported as more traditional, their actual behaviors mostly match nonreligious Western cultural values and behaviors (Perry, 2019). In addition, rather than following the Biblical edict to "be in the world but not of it," studies continually show the Christian population to be more similar to the general public than different. Perry (2019) reported rates of cohabitation, divorce, and remarriage are statistically similar in both populations. In addition, some sexual behaviors that might have previously been perceived as religious sin are now more generally accepted in the religious population. Exceptions do exist; for example, there are strong negative correlations between identification as a Christian and support of issues such as abortion, death penalty, and some gender issues (Perry, 2019).

The Christian church has moved from denying the existence of pornography use within their ranks to an expectation that believers (males in particular) will struggle with pornography (Perry, 2019). Hundreds of books, articles, workshops, Bible studies, and conferences identify pornography use as one of the greatest challenges in the church. This may be related to the shift in the predominant Christian message regarding pornography use from the perception of use as a sinful choice to the more current, medically oriented, perception of pornography use as an addiction (Perry, 2019; Tsuria, 2017). This may also be representative of the outsourcing of moral authority from the church to society (Thomas, 2016). Research suggests the

medicalization of terminology along with the use of addiction terms such as *triggers*, *recovery*, *relapse*, and *detox* has caused religious individuals to embrace the medicalized belief that they have no choice in the matter (Tsuria, 2017). This has led to the development of an interesting concept whereby religious individuals perceive they are addicted to pornography use in the absence of addictive criteria or resultant consequences.

The General Social Survey (1984–2014) reported 40% of American Christian Protestant males under the age of 40 admit using pornography, a rate that has remained constant over the past 30 years. In contrast, pornography use by the average nonreligious American male under the age of 40 has increased over the past 30 years from 44% to the current 60% (Perry & Schleifer, 2019). However, despite religious individuals' lower incidence of use, religious users are more likely to report a perceived addiction to pornography than nonreligious users (Perry, 2019). In addition, within the male Christian population, fundamental, evangelical Christians are the most likely to express moral incongruence, which leads to perceived addiction (Gallagher, 2007; Perry, 2019). This perception of addiction to pornography is clearly not consistent with the frequency of use. Rather, perceived addiction to pornography results from the frustrating moral incongruence between professed existential religious beliefs and personal, choice-based behaviors (Perry, 2017). When these are not in agreement, individuals may move toward hopelessness, despair, depression, and psychological distress (Perry, 2019), the opposite of hope-filled, purposeful living (Frankl, 2006).

While physical behaviors such as pornography use may be easy to quantify, existential concepts such as purpose in life, religiosity, and perception of addiction prove to be a challenge to measure. Perception of pornography addiction must rest on a foundational belief about rational for use that may be medical, mental, and/or religious in nature. While addictions may be

behavioral in nature, they may also be related to one's mental and medical health. For example, addictions may have a genetic component (APA, 2013). However, addictions are not typically self-determined; in fact, they are classically denied. However, in the case of religious users of pornography, self-reported addiction to pornography is common (Gallagher, 2007; Perry, 2019). Some sources report pornography use is expected in the Christian setting, with some pastors stating it is the greatest crisis in the church today (Perry, 2019). One study reported that religious men are considered less masculine by other religious males if they do not struggle with pornography use (Perry, 2019).

Religiosity has been shown to moderate frequency of use and perceived addiction to pornography, and moral disapproval has been reported to be a pathway to the perception of addiction to pornography (Grubbs, Perry, Wilt, & Reid, 2018). Yet, while these constructs are interrelated in numerous research studies, no research has looked at the relationship between the four constructs addressed in this research study: frequency of pornography use, religiosity, perceived addiction to pornography, and purpose in life.

Purpose of the Study

This study examined the direct relationship between pornography use and meaning/purpose in life. Indirectly, this study examined the potential mediating role of perceived addiction to pornography on the direct relationship between pornography use and purpose in life. Finally, it examined the potential moderating effect of religiosity (including moral disapproval) on both the direct relationship and the mediated relationship between pornography use, perceived addiction to pornography, and meaning in life.

Research Questions and Research Hypotheses

The purpose of this study was to examine the relationships between frequency of pornography usage, purpose in life, religiosity, and perceived addiction to pornography. This model built on previous research, which has shown: a positive relationship between religiosity and perceived addiction to pornography (Abell, Steenbergh, & Boivin, 2006; Guidry et al., 2019; Levert, 2007; Perry & Whitehead 2018; Volk et al., 2019), a negative relationship between religiosity and frequency of pornography use (Bradley et al., 2016; Cavaglioni, 2008; Dunn, Seaburne-May, & Gatter, 2012; Egan & Parmar, 2013; Grubbs, Exline et al., 2015; Grubbs, Sessoms, Wheeler, & Volk, 2010; Grubbs, Volk, et al., 2015; Pyle & Bridges, 2012; Wilt et al., 2016), and a positive relationship between religiosity and purpose in life (Hood, Hill, & Spilka, 2009; McCullough, Enders, Brion, & Jain, 2005; Paloutzian & Park, 2005; Worthington, Kuru, McCullough, & Sandage, 1996; Worthington et al., 2003). No previous research has examined the relationship between pornography use and purpose in life or the relationship between perceived addiction to pornography and purpose in life. This model also examined the potential moderating effect of religiosity on the relationship between pornography use and purpose in life as well as on the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life.

Research Question One

What is the relationship between the frequency of pornography use and purpose in life?

Hypothesis 1: There will be a negative relationship between frequency of pornography use and purpose in life.

Null hypothesis: There will be no relationship between frequency of pornography use and purpose in life.

The first research question investigated the direct relationship between pornography use and purpose in life. This was important to investigate because no research had previously examined this association. Based on previous research showing a positive association between religiosity and purpose in life (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003) as well as a negative relationship between pornography use and religiosity, it was predicted that there would be a negative relationship between pornography use and purpose in life. Figure 1.1 illustrates this research question.



Figure 1.1. Model of research question 1.

Research Question Two

Is the relationship between pornography use and purpose in life mediated by perceived addiction to pornography?

Hypothesis 2: The relationship between pornography use and purpose in life will be mediated by perceived addiction to pornography.

Null hypothesis: Perceived addiction to pornography will not have a mediating effect on the relationship between pornography use and purpose in life.

The second research question examined the potential mediating effect of perceived addiction to pornography on the relationship between pornography use and purpose in life. While the relationship between pornography use and perceived addiction to pornography has been examined, no research has examined these constructs in combination with purpose in life. Previous research has positively related perceived addiction to pornography with religiosity. Other research has positively related religiosity to purpose in life. (Hood et al., 2009; Paloutzian

& Park, 2005; Worthington et al., 1996, 2003). Therefore, it was predicted that if there were a relationship between frequency of pornography use and purpose in life, then that direct path would be indirectly mediated by perceived addiction to pornography. Figure 1.2 illustrates this research question.

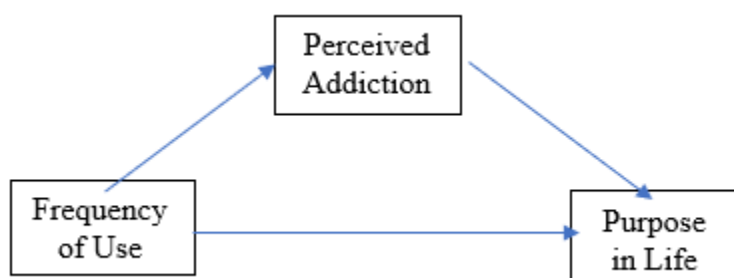


Figure 1.2. Model of research question 2.

Research Question Three

How does religiosity moderate the indirect relationship between pornography use and purpose in life?

Hypothesis 3: The relationship between pornography use and purpose in life will be moderated by religiosity.

Null hypothesis: Religiosity will have no moderating effect on the relationship between pornography use and purpose in life.

The third research question examined the potential moderating role of religiosity. Grubbs's (Grubbs, Exline, Pargament, Volk, & Lindberg, 2017; Grubbs, Perry, et al., 2018) and Perry's (2019) prolific research has shown religiosity to be positively associated with higher moral disapproval and negatively related to the frequency of pornography use (Carroll et al., 2008; Poulsen, Busby, & Galovan, 2013; Wright, 2013; Wright, Bae, & Funk, 2013). Religiosity has been shown to be positively associated with purpose in life (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003). Therefore, it was predicted that the relationship

between pornography use and purpose in life would be moderated by religiosity. Figure 1.3 illustrates this research question.

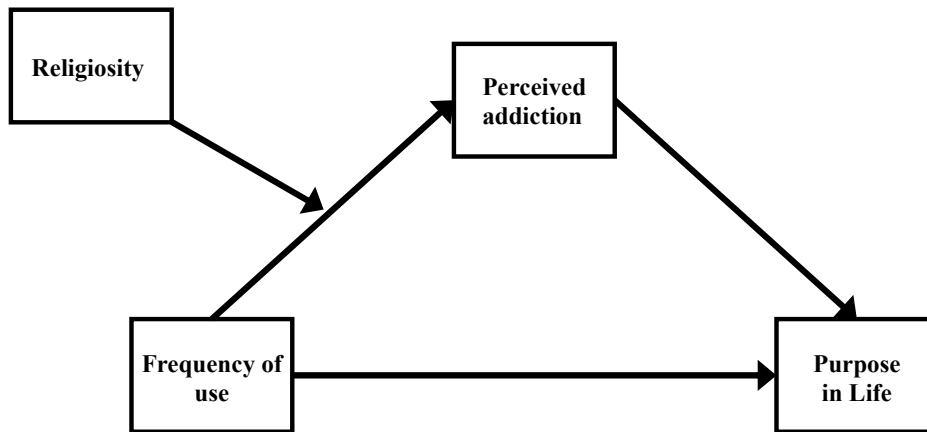


Figure 1.3. Model of research question 3.

Research Question Four

Does the indirect effect of frequency of use on purpose in life through the mediator, perceived addiction, depend on the moderator, religiosity?

Hypothesis 4: Religiosity will moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life.

Null hypothesis: Religiosity will not moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life.

The fourth research question examined the potential moderating role of religiosity on the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life. Previous research has examined the relationships between pornography use, religiosity, and perceived addiction to pornography (e.g., Grubbs, Perry, Wilt, & Reid, 2018; Perry, 2019). Specific research has examined the moderating role of religiosity on the direct

relationship between frequency of pornography use and perceived addiction to pornography (Grubbs & Perry, 2018). No research had previously examined the combined constructs of pornography use, religiosity, perceived addiction to pornography, and purpose in life. However, based on previous research, it was predicted religiosity would moderate the mediated relationship. Figure 1.4 illustrates this research question.

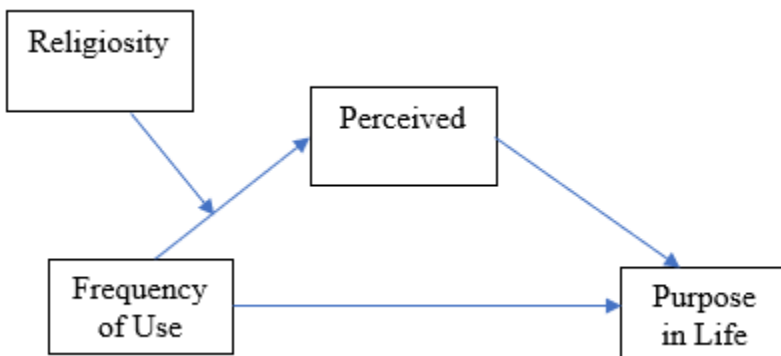


Figure 1.4. Model of research question 4.

Assumptions and Limitations

The first assumption of this study was that individuals recruited through Amazon's Mechanical Turk (MTurk) for participation are representative of the larger population in the United States and that therefore, information gleaned from participants is both representative and generalizable. Research on MTurk samples has previously reported high diversity in ethnicity, socioeconomic status, and age (Casler, Bickel, & Hackett, 2013; Mason & Suri, 2012). Another assumption is that MTurk participants are representative of Internet pornography users. A final assumption is that respondents are truthful in their responses.

The first limitation of this study is the use of Amazon's MTurk. Since MTurk is a pay-for-use service, it is possible respondents were not honest or erred in their responses or were not representative of the general population. In addition, because of the issues with self-report measures and social desirability in reporting pornography use, participants may not have

honestly reported the frequency of pornography use. Second, as this research design utilized correlational design and cross-sectional sampling, it is not possible to infer causal relationships.

Definition of Terms

Pornography

Defining pornography as a construct for the purposes of research is difficult due to the varied perceptions and meanings of pornography based on cultural and societal norms, as well as individualistic beliefs and personal experiences (Ciclitara, 2004). For example, Campbell and Kohut (2017) defined pornography as “written, pictorial, or audio-visual representations depicting nudity or sexual behavior” (p. 6), while Reid et al. (2011) stated “material is considered pornographic if it: (1) creates or elicits sexual feelings or thoughts and (2) contains explicit images or descriptions of sexual acts involving the genitals” (p. 360). Short, Black, Smith, Wetterneck, and Wells (2012) stated pornography is “any sexually explicit material displaying genitalia with the aim of sexual arousal or fantasy” (p. 21). While notoriously difficult to succinctly define, for the purposes of this research, pornography is defined as “sexually explicit media intended for sexual arousal . . . accessed primarily through the internet” (Perry, 2019, p. 219). Pornography use measured through participant responses to frequency of use questions and the Cyber Pornography Use Inventory-9 (CPUI-9; Grubbs, Volk, et al., 2015).

Perceived Addiction to Pornography

Previous research has described addiction to pornography as a self-reported belief that personal pornography use is problematic based on dysregulated behaviors in three areas: emotional distress, perceived compulsivity, and access efforts (Grubbs, Volk, et al., 2015). This perception is not necessarily related to frequency of use (Grubbs, Grant, & Engelman, 2019), although some overlap has been reported (Grubbs, Perry, Wilt, & Reid, 2018). In addition, the

debate continues regarding the addictive quality of pornography (Grubbs et al., 2017). Grubbs, Grant, and Engelman (2019) concluded that “self-reported feelings of addiction to internet pornography refer to the tendency of an individual to self-identify as being dysregulated in his or her internet pornography use, regardless of whether or not that self-perception is consistent with true behavioral problems” (p. 271). For the purposes of this research, perceived addiction to pornography is defined as the inclination of pornography users to self-identify as addicted to pornography resulting in problematic results. This construct is measured using the CPUI-9 (Grubbs, Volk, et al., 2015).

Purpose in Life

Purpose in life is a personal existential belief about one’s life being worthy of living. The search for meaning is the primary motivational force in life, rather than a secondary response to primitive drives (Frankl, 2006; Maddi, 1970). Individuals seek to find meaning and significance throughout the lifespan and are uniquely characterized by an innate drive, identified by Frankl (1963) as a “will to meaning” (p. 99). This concept is defined as a driving need to find meaning in one’s life and is foundationally different than other psychoanalytic motivations such as Freud’s drive for pleasure and Adler’s drive for power (Friedman & Schustack, 2016).

Researchers have struggled to develop a succinct operational definition for this existential concept and often identify factors that expose the lack of meaning in life, resulting in an “existential vacuum” (Frankl, 1997, p. 18). Researchers have examined potential key factors in defining meaning, such as development of an inner coherent life narrative (Kenyon, 2000; Reker, 2000), satisfaction with past achievements, and determination toward a meaningful future (Wong, 2012). Additional research has identified elements such as goal-directedness, purposefulness (Klinger, 1977; Ryff & Singer, 1998), and growth toward self-transcendence

(Seligman, 2002), as well as value, purpose, efficacy, and self-worth (Baumeister, 1991). Frankl (1966) himself maintained that there is no universal meaning in life; rather, individuals have similar life situations, which result in shared understandings of experiential, creative, and attitudinal values.

Crumbaugh and Maholick (1964) described meaning as “the ontological significance of life from the point of view of the experiencing individual” (p. 201). Steger, Frazier, Oishi, and Kaler (2006) defined meaning in life as “the sense made of, and significance felt regarding, the nature of one’s being and existence” (p. 81). Baumeister (1991), in an overview of the construct of meaning in psychology, defined meaning as “a shared mental representation of possible relationships among things, events and relationships . . . meaning connects things” (p. 15). Mascaro and Rosen’s (2005) extensive literature review of meaning-based research from such diverse fields such as psychology, philosophy, Eastern and Western theology, and nursing proposed an overarching definition of meaning: “a possession of a coherent framework for living that provides a sense of purpose or direction, which, if lived within accord, can bring about a sense of fulfillment” (p. 579). For this research, purpose in life is defined as an individual’s perceived overarching sense of meaning in life as expressed in mood, life goals, and meaningfulness of life. This construct is measured with the Purpose in Life (PIL) test (Crumbaugh & Maholick, 1964).

Religiosity

Religiosity is a combination of an individual’s internalized belief system in a higher being and the behavioral activities associated with those beliefs (Worthington et al., 2003). For the purpose of this research, religiosity refers to an individual’s relationally based religious beliefs, including awareness of God and quality of relationship with God (Hall & Edwards,

1996). This construct was measured utilizing the Spiritual Assessment Inventory (SAI) with a focus on the instability of beliefs factor (Hall & Edwards, 1996).

Significance of the Study

This study focused on the potential interrelationship between pornography and purpose in life. While significant recent research has examined pornography, religiosity, and perceived addiction to pornography (e.g., Grubbs, Kraus, & Perry, 2019; Perry, 2019), no research has examined these constructs with the additional variable of purpose in life. Purpose in life and religiosity have received significant attention, and some research has combined these two constructs to examine their association with positive well-being in life and, conversely, dysfunctional behaviors and psychological distress.

This research study has potential significance for numerous audiences such as counselors, researchers, and the general public. For researchers, exploration of a new combination of constructs may open a new lane for future research. For counselors, understanding the role of purpose in life in conjunction with either pornography use, or perceived addictions may inform potential treatment and intervention selection. The general public may benefit from a greater understanding of pornography use, perceived addiction to pornography, purpose in life, and religiosity in general, as well as the potential interplay between constructs.

Theoretical and Conceptual Framework

This research examined the associations between pornography use, religiosity, perceived addition of pornography, and purpose in life. The outcome variable of purpose in life was measured by the PIL test (Crumbaugh & Maholick, 1964). The construct of religiosity was measured through the SAI (Hall & Edwards, 1996). For the purposes of this research, only the instability measure was examined. Data on pornography use were gathered through

demographic and survey questions, and perceived addiction to pornography was measured using the CPUI-9 (Grubbs, Volk, et al., 2015).

Organization of the Remaining Chapters

Chapter Two examines the extensive previous research on the constructs of perceived addiction to pornography, pornography use, purpose in life, and religiosity. Perceived addiction to pornography research addresses the association of religious beliefs with moral disapproval, which can lead to an individual's self-reported perception of their pornography use as an addiction. Pornography use research examines the origins of pornography and the present prolific availability on the Internet and addresses mental and medical health perceptions, positive and negative effects, and predictors of and reasons for use. Purpose in life research addresses contributions of this existential factor as a predictive and protective factor for physical, mental, and spiritual health. The research examines the role of purpose in life with religiosity in addictions and mental health, as well as the mediating roles each plays in concert with other constructs. Finally, religiosity research addresses the overall effects of this construct on physical and mental well-being, as well as how beliefs and values impact individual behaviors through moral disapproval. Chapter Three provides an overview of research methods and design, participants, instrumentation, procedures, and data analysis. Chapter Four addresses the results of the study. This section includes statistical analysis of the resultant data with explanations regarding how each research hypothesis was tested. Chapter Five reports the findings of this study. This section includes summarized results, an interpretation of the results, an explanation of how findings related to previous research, and potential implications of the study findings. Finally, limitations and potential future research ideas are discussed.

One's overarching purpose in life can be a driving force toward or away from certain behaviors. Religiosity, with its concomitant beliefs, morals, and values, proscribes and prohibits certain behaviors. Individuals who knowingly behave in ways counter to their beliefs experience moral incongruence. Similarly, thoughts and behaviors which represent meaninglessness in life result in an existential vacuum that must be filled by meaningful behaviors. When individuals fill this void with religiously immoral choices, such as pornography use, the resultant distress may lead religious users to consider their pornography use as an addiction. Even when pornography use does not meet addiction criteria, the medicalization of language reduces psychological distress by providing religious users an excuse for their choice, as they view it as not being under their own control.

This study examined the association of pornography use, religiosity, perceived addiction to pornography, and purpose in life. The next chapter reviews the literature on these constructs. The following section examines research addressing the individual constructs as well as the relatedness of pornography use, religiosity, perceived addiction to pornography and purpose in life.

Chapter Summary

Pornography use impacts individuals in numerous ways. For religious users, the existential meaning underlying pornography use may be more impactful than the actual frequency of use. Knowingly violating religious beliefs, which may include moral disapproval of pornography, leads to moral incongruence. To reduce the existential angst associated with moral incongruence, religious users may embrace the medicalized language and perception of pornography use as an addiction. This perceived addiction to pornography, as well as actual pornography use, interferes with an individual's ability to live in congruence with their purpose

in life. This study explored the direct relationship between pornography use and purpose/meaning in life. Additionally, the moderating effect of religiosity and the mediating effect of perceived addiction on the relationship between pornography use and purpose in life were examined. The following chapter reviews the literature on pornography use, meaning/purpose in life, perceived addiction to pornography, and religiosity.

CHAPTER TWO: REVIEW OF THE LITERATURE

This section will review the literature on the constructs of pornography use, religiosity, perceived addiction to pornography, and meaning in life. First, the literature on pornography, including the negative and positive effects of pornography, is reviewed. Second, literature on religiosity is reviewed, including research on religiosity with moral disapproval and moral incongruence in conjunction with pornography, as well as the negative effects of pornography use with religious individuals. Next, literature on perceived addiction to pornography is discussed. Research addressing meaning in life is reviewed next, including specific research on meaning in life and addictions, treatment, and religiosity. Next, research on purpose in life and religiosity as mediating factors is presented, followed by a final section reporting on different research combinations utilizing the four constructs of pornography use, religiosity, perceived addiction to pornography, and meaning in life in the research literature.

Pornography

Pornography, sourced through the Internet via sexual search terms and dedicated websites, is the most prolific and quickly growing use of an individual's time on the World Wide Web (Carr, 2004; Cooper, Delmonico, & Burg, 2000; Didelot et al., 2012; Short et al., 2015). An estimated 13–25% of all Internet searches involve adult sex terms (Ogas & Gaddam, 2011; Short et al., 2015). An estimated 20–50% of all Internet viewing is associated with sexual material (Ayres & Haddock, 2009; Beaver & Paul, 2011; McNair, 2002; Poulsen et al., 2013). In part because of its increasing availability, accessibility, and anonymity (Cooper, 1998), use of Internet pornography become common, and the United States is a top consumer (Lo & Wei, 2005; Poulsen et al., 2013; Traeen et al., 2006; Ybarra & Mitchell, 2005).

Pornography has existed since the beginning of history in every known civilization (Kendrick, 1996). Originally termed *obscenities*, pornography, as now understood in print or video, did not come into prominence until the 19th century (Perry, 2019). While previously viewed as dirty, forbidden, and improper (Kendrick, 1996), widespread Internet access has allowed pornography use to move from being perceived as hidden and shameful to openly available, normative, socially acceptable, and expected for males (Perry, 2019; Primack et al., 2017).

Pornography use has continued to increase exponentially since the advent of the Internet (Perry & Snawder, 2019) through greater availability, accessibility, and anonymity (Cooper, 1998). While previous generations were forced to expose their private use through public magazine purchases, movie viewing, or video rentals (Regnerus, Gordon, & Price, 2016), the current availability of the Internet on any smart device allows private or public pornography use to occur anywhere the user has an Internet signal. In addition, cultural shifts allowing for more provocative advertisements, television programs, cable channels, and clothing may have contributed to the acceptance and dissemination of pornography (Doran & Price, 2014; Olmstead, Negash, Pasley, & Fincham, 2013; Perry, 2019). While not the focus of this study, increased availability has also allowed access to pornography to occur at a younger age (Jensen, 2007; Kimmel, 2008). However, increased pornography usage has been related to reductions in religious activities and involvement, as well as lower perceived closeness in relationship with God (Perry, 2017; Short et al., 2015). The universal availability of pornography and concomitant usage affects intrapersonal, interpersonal, and supra-personal relationships as well as resultant individual behaviors.

The mental health community has been slow to recognize the issues associated with problematic pornography use (Duffy et al., 2016; Sniewski, Farvid, & Carter, 2018), also termed *sexual addiction* or *hypersexual disorder* (Karila et al., 2014). Field trials were conducted to establish reliability and validity of criteria as well as examine clinician interrater reliability for a diagnosis of hypersexual disorder (Reid et al., 2012). Citing skepticism, the lack of both consensus and peer-reviewed research (Giles, 2006; Giugliano, 2009; Halpern, 2011; Moser, 2011), and the contention that hypersexual disorder might represent a confusion of moral and social disapproval rather than a mental health-based disorder (Reid & Kafka, 2014), the APA decided to withhold inclusion of the field-trialed hypersexual disorder in the DSM-5. However, the DSM-5's inclusion of gambling disorder, a behavioral addiction, in the section addressing substance use and addictive disorders has opened the door for the possibility of additional behavioral disorders' inclusion in future revisions. Behaviorally based Internet gaming disorder is also included; and caffeine use disorder is under further study (APA, 2013). Current exclusion, combined with a lack of a formal diagnostic definition, has led to attempts to categorize pornography use based on objective (behavioral) or subjective (thought) criteria (Grubbs, Volk, et al., 2015; Short et al., 2012; Young, 2008).

In addition, divergent views exist in the mental health field regarding the addictive nature of pornography. Some researchers have proposed that pornography use promotes addictive behaviors which are compulsive and lead to dysregulation (Hilton, 2013; Struthers, 2009; Wilson, 2014). Others assert there is little evidence to support addictive claims (Ley, 2012; Prause, 2017). Considering pornography usage as addictive is also problematic, as addictions are commonly associated with a specific substance rather than a behavior or feeling associated with a behavior. In addition, the physical signs typically representative of substance addiction are not

always present with problematic pornography use (Alavi et al., 2012). In a meta-analysis of 184 articles addressing problematic online pornography use or hypersexual behavior, few consumers considered use an addiction, with fewer yet believing use resulted in negative effects (Alarcón, de la Inglesia, Casado, & Montejo, 2019).

The medical field's recently released ICD-11 (WHO, 2018) included compulsive sexual behavior disorder. However, the ICD-11 chose to include compulsive sexual behavior disorder as an impulse disorder rather than an addiction or dependence disorder (Kraus et al., 2018; WHO, 2018). While the categories share some phenomenological similarities, Reid, Carpenter, and Hook (2016) contended problematic pornography use did not have conclusive evidence linking compulsive sexual behavior to the criteria necessary to equate it with addiction (e.g., development and maintenance behaviors). Inclusion in the ICD-11 was intended to legitimize treatment for clients who may not otherwise seek treatment because of shame or guilt (Klaus et al., 2018). Interestingly, the ICD-11 diagnosis deems distress related to moral judgments or disapproval as being insufficient for diagnosis (WHO, 2018).

Regardless of the inconsistency of medical or mental diagnostic ability, research is consistent in reporting the problems resulting from pornography use (Duffy et al., 2016; Gola et al., 2017; Harkness, Mullan, & Blaszczynski, 2015; Short et al., 2012; Twohig, Crosby, & Cox, 2009; Walton, Cantor, Bhullar, & Lykins, 2017; Wright, Tokunaga, & Kraus, 2016), with some individuals self-reporting as addicted to pornography (see, for example, the extensive works of Grubbs and Perry). Much research has focused on the potential for pornography use to become excessive or compulsive (Byers, Menzies, & O'Grady, 2004; Cooper et. al., 2000; Young, 2008). Researchers have sought to understand the consequences of problematic pornography use and have especially focused on the potential addictive nature of use (Griffiths, 2012; Kafka, 2001,

2010; Young, 2008), suggesting use may result in psychological disorders (Shapira, Lessig, Goldsmith, Szabo, Lazoritz, & Stein, 2003) or represent a subcategory of hypersexual propensities (Kafka, 2001; Kaplan & Krueger, 2010). Other research suggests pornography use may result in compulsivity or addiction (Cooper, Scherer, Boies, & Gordon, 1999; Green, Carnes, Carnes, & Weinman, 2012; Griffiths, 2012) with significantly negative effects (Gola & Potenza, 2016; Kraus, Meshberg-Cohen, Martino, Quinones, & Potenza, 2015; Twohig et al., 2009).

Positive Effects of Pornography Use

In Western society, pornography use has become normalized, and there is a level of ambivalence toward usage. It is seen as a form of social intercourse and information and a stimulant for arousal (Löfgren-Mårtenson & Månsson, 2010; Price et al., 2016). However, positive effects may be mediated by gender and sexual preference identification (Weinberg, Williams, & Kleiner, 2010). Positive effects associated with marital shared and concordant solitary pornography usage may include increased open sexual communication, closeness, experimentation, sexual comfort, relationship quality (Kohut, Balzarini, Fisher, & Campbell, 2018; Kohut, Fisher, & Campbell, 2017), quality and quantity of sex, intimacy, and sexual communication, as well as decreased sexual boredom (Groß, Gillespie, Royce, & Lever, 2011). Men are more likely to have a positive view of pornography use; they report a positive impact on sexual self-schema and life in general (Miller, Hald, & Kidd, 2018). In a 2004 American study with over 15,000 participants, only 2% of participants reported endorsement of items indicative of problematic or compulsive use (Albright, 2008). However, reports of positive effects may represent inaccurate self-perceptions or denial and be the result of personal rationalization to justify behaviors (Wright et al., 2017).

Negative Effects of Pornography Use

Most research examining pornography use addresses resultant negative effects (Doring, 2009; Short et al., 2012). For example, pornography use may result in unrealistic expectations, decreased sexual partner interest (Kohut et al., 2017; Wright, Sun, Steffen, & Tokunaga, 2019), decreased relationship satisfaction (Guidry et al., 2019; Maas et al., 2018; Perry, 2016), and potential compulsivity or addiction (Cooper et al., 1999; Green et al., 2012; Griffiths, 2012). One meta-analysis of 50 studies including more than 50,000 participants found pornography use to be negatively correlated with interpersonal satisfaction (Wright et al., 2017). Couples who are discordant in pornography use reported inhibited sexual communication and lower closeness (Kohut et al., 2018). Individuals who watched an X-rated movie in the previous year were more likely to be divorced and have an extramarital affair and less likely to report overall or marital happiness; this negative relationship between use and relational results grew in significance over time, as content material became more explicit and available (Doran & Price, 2014; Patterson & Price, 2012). While pornography use is not always problematic, in one study, 20–60% of pornography users reported some level of distress based on their usage (Twohig et al., 2009). Interestingly, in one study, “no negative effects” was the most commonly reported impact on couples’ relationships (Kohut et al., 2017).

Gender may inform reported negative effects. Men report less sexual arousal for partner sex (Groves et al., 2011; Levert, 2007), lower self-esteem, and lower sexual satisfaction with their sexual partner (Wright, Steffen, & Sun, 2019; Wright, Sun, et al., 2019). Women report lower self-esteem and lower attachment to the relationship (Foubert, 2016; Wilson, 2014), greater depression and withdrawal, more suicide attempts (Corley & Hook, 2012), and less frequent sexual interest (Groves et al., 2011; Levert, 2007). Reported effects of pornography use on the

family include overall dysfunction (Manning, 2006), increased negative child-parent relationship (Perry & Snawder, 2017), and decreased likelihood of marriage (Perry & Longest, 2019). In addition, parent use may be predictive of adolescent use (Hardy, Hurst, Price, & Denton, 2019).

Some studies report increased pornography use is positively correlated with sexual violence, incitement to rape, and child abuse (Allen, D'Alessio, & Emmers-Sommers, 1999; Foubert, 2016; Seto & Lalumière, 2010; Wilson, 2014). Research has reported negative cognitive and neurochemical pathological effects (Ley, 2012; Prause & Pfaus, 2015; Staley & Prause, 2013). Other research contends self-selection may account for sexual violence or relational dysfunction and suggested pornography use is not causal but rather simply correlated (Ley 2012; Prause & Pfaus, 2015; Staley & Prause, 2013). One study contended pornography use may act as a form of tension release, thereby preventing sexual violence (Wright et al., 2016). In a meta-analysis of 22 studies representing seven countries, positive associations between pornography use and verbal aggression were found, with an overall pattern suggesting violent content may exacerbate aggression (Wright et al., 2016).

Research addressing the intrapersonal effects of pornography use examines the individual's beliefs regarding their use of pornography. Negative effects include: increased insecurity (Kohut et al., 2017), body dissatisfaction, chronic impotence (Tylka, 2015), guilt, shame, overall mental and psychological distress (Grubbs, Stauner, Exline, Pargament, & Lindberg, 2015; Grubbs et al., 2017; Konkoly-Thege, Stauder, & Koop, 2010; Kwee, Dominguez, & Ferrell, 2007; Perry & Snawder, 2017; Reid, Temko, Moghaddam, & Fong, 2014), and compulsivity (Egan & Parmar, 2013). These negative intrapersonal effects may result in mental health issues such as depression (Cavaglion, 2008; Philaretou, Mahfouz, & Allen,

2005) and anxiety (Grubbs, Volk, et al., 2015; Guidry et al., 2019; Levin, Lillis, & Hayes, 2012; Nelson, Padilla-Walker, & Carroll, 2010; Perry, 2019; Volk et al., 2019).

While historically, American users have been young adults and older single men, research shows currently, Americans watch more pornography overall, more regularly, earlier in life and later into adulthood than in the past (Perry, 2019; Price et al., 2016). One study in the United States reported 93% of adolescent boys and 62% of adolescent girls had been exposed to pornography during their adolescence (Sabina, Wolak, & Finkelhor, 2008). Another study reported approximately 60% of men and 35% of college students had viewed pornography in the past year (Price et al., 2016). One study reported African American men are more likely than all other race and gender combinations to be consumers of pornography (Perry & Schleifer, 2019). Stack, Wasserman, and Kern (2004) found the greatest predictors of pornography use to be weak religious ties, unhappy marriages, and past involvement in sexually deviant behaviors such as paid sex. Other research identified predictors of pornography use to include gender, age, education level, income, urban residence, and knowledge of computers (Buzzell, 2005; Perry, 2019).

Demographics regarding use are more easily determined than frequency of use. This understanding of pornography use may be complicated by individual patterns of use. One study reported two pathways of use that result in negative consequences. The first pathway was binge-watching for hours over short periods of time, followed by no usage. The second pathway was impulsive, continual, or sporadic use (Reid et al., 2011). Differing patterns may influence research results, as users with a binge-type pattern might not be using at the time of data collection.

In a college sample ($N = 813$), 87% of males had used pornography in their lifetime, 47% used weekly, and 21% of females used once a month or less (Carroll et al., 2008). In a meta-analysis of four national surveys, with participants aged 18–39, 46% of males ($n = 2424$) and 16% of women ($n = 2741$) reported using pornography in the previous week (Regnerus et al., 2016). While Regnerus et al. (2016) acknowledged their findings reported significantly more frequent pornography use than other research findings, they asserted results may reflect the challenge of surveying individuals regarding sensitive self-reported behaviors.

Other research has suggested individuals self-perceive their pornography use to be problematic or believe they are addicted to pornography (Cavaglioni, 2008; Cooper et al., 2000; Kraus et al., 2016, Ross, Månsson, & Daneback, 2012; Twohig et al., 2009). One meta-analysis of 184 research articles reported predictors of problematic sexual behaviors and pornography use to include being male, young, or religious; being a frequent Internet user; having negative mood states; and being prone to sexual boredom or novelty seeking (Alarcón et al., 2019). Other research has reported self-perceived addiction is more likely to be present in younger males who report greater than average religiosity, frequency of use, and moral incongruences related to pornography use (Grubbs, Kraus, & Perry, 2019). Due to the lack of consensus regarding what criteria constitute problematic use as well as the numerous assessments used by researchers, there is little clear and reliable data regarding the actual prevalence of problematic pornography use (Alarcón et al., 2019).

Lykke and Cohen (2015) examined gender differences in opposition to pornography across a nearly four-decade period (1975–2012) using the General Social Survey's (Smith, Davern, Freese, & Morgan, 2019) data on support for legal censorship of pornography. While both genders' opposition to pornography declined significantly over time, male opposition

declined faster than females', reflecting males' increased acceptance and consumption. From the same data, Price et al. (2016) stated that both more males (20%) and females (10%) reported viewing an X-rated movie in the previous year.

Reasons for pornography use seem to be as varied as the users. Research reports rationales for use include sexual entertainment, arousal, knowledge, social intercourse (Goodson, McCormick & Evans, 2000), experiential avoidance (Levin et al., 2012), to improve mood (Paul & Shim, 2008), or to lessen depression (Bancroft & Vukadinovic, 2004). One comprehensive study found pornography use provided distraction, information on sex, a mechanism for coping, a platform for sexual fantasies, friendship, relationship development, a source to purchase sexual materials, and overall support related to sexual issues (Cooper, Morahan-Martin, Mathy, & Maheu, 2002). Another study found younger adults reported four motivational factors for use: relationship, mood management and regulation, habit, and fantasy exploration (Paul & Shim, 2008).

Loneliness may be a key factor in attraction to pornography use (Amichai-Hamburger & Ben-Artzi, 2003). Research suggests loneliness and boredom are not an outcome of use, but rather a predictor of pornography use (Hutter 2012; Price et al., 2016; Primack, Shensa, Sidani, Whaite, Lin, Rosen, & Miller, 2017). Noted existential psychologist Viktor Frankl suggested loneliness may predict addictive behaviors (Frankl, 2006). In an Israeli study of 713 adolescents (males = 383, females = 330), loneliness was positively related to online sexual activities and pornography in participants with secure or anxious attachments (Efrati & Amichai-Hamburger 2019). Developmental psychologist Erik Erikson (1968) proposed adolescence is the period in which individuals seek independence from their family of origin with the goal of achieving greater intimacy in non-familial relationships. Failure to find meaningful intimacy may result in

loneliness, which in turn may lead to an attempt to fill the intimacy void with pornography use (Butler et al., 2018; Yoder et al., 2005) and cybersex (Dryer & Lijtmaer, 2007).

Religiosity

Religiosity is a broad construct with both internal and external elements (Pargament, 1999). Research on religiosity examines external involvement with specific behaviors in faith communities (Emmons & Paloutzian, 2003), such as church attendance, prayer (Pargament, 1999), and prosocial behaviors (Diener, Tay, & Myers, 2011), as well as internal factors such as forgiveness leading to overall relationship improvement (McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). Research on religiosity also examines individual existential and transcendent beliefs and reports resultant behaviors may not occur in a religious community (MacDonald, 2000).

Researchers differentiate delineate between intrinsic and extrinsic religiosity (Allport & Ross, 1967). Extrinsic religious motivation refers to the outward signs of a belief system, those religious activities used for personal gain. This is not necessarily negative, as individuals may use religious activities for social support, service, and a means for validation (Abdel-Khalek, Nuño, Gómez-Benito, & Lester, 2019). Intrinsic religiosity refers to an inner connectedness to a higher being as the supreme authority. Ideally, all other motivations are subjugated to these beliefs as the individual seeks to live out his or her felt beliefs through life choices and behaviors (Rodrigues & Harding, 2009). For the purposes of this research, religiosity is defined as the totality of both internal and external elements, including both intrinsic and extrinsic motivations.

Globally, 68% of individuals report that religion is an important factor in their daily life (Diener et al., 2011). A multicultural 20-year literature review (1994–2014) found religiosity to be positively associated with subjective well-being in both Western and non-Western nations at

both the individual and national levels (Tay, Li, Myers, & Diener, 2014). Koenig (2012) reviewed 1,200 research studies and concluded that, for a strong majority, religiosity has a positive association with happiness, peace, and overall well-being. Pargament (2002) found that religiosity offers spiritual support, ultimate explanation, and an overall understanding regarding a benevolent, greater force in the universe, giving individuals a sense of existential fulfillment.

Religiosity has been identified in the research as robustly related to positive mental and physical health, overall-well-being, ability to cope with life challenges, and overall lower levels of psychopathology (Ahrens, Abeling, Ahmad, & Hinman, 2010; George, Ellison, & Larson, 2002; Koenig, King, & Carson, 2012; Pargament, 1997; Pargament, Koenig, Tarakeshwar, & Hahn, 2004; Powell, Shahabi, & Thoresen, 2003; Waite & Lehrer, 2003). Specifically, higher religious intrinsic motivation is positively related to overall well-being (Luehr & Holder, 2016). Religiosity is also positively associated with women's lifespan (McCullough, Friedman, Enders, & Martin, 2009). A meta-analysis of 147 empirical studies found a negative correlation between religiosity and depression not moderated by gender, age, or ethnicity (Smith, McCullough, & Poll, 2003). Religiosity is also negatively associated with suicide, alcohol abuse (Gorsuch, 1995; Myers, 2000), and addictions (Feigelman, Wallisch, & Lesieur, 1998; Gorsuch, 1995). Analysis of 42 longitudinal studies found religious individuals live longer than nonreligious individuals (McCullough et al., 2000).

Religiosity fulfills various universal human needs that promote aspects of subjective well-being such as finding purpose in life (Chamberlain & Zika, 1992), social support (Tay et al., 2014); need to belong (Maslow, 1943 Ryan & Deci, 2000; Tay & Diener, 2011), and fundamental self-needs such as increased self-esteem, meaning, social attachment and belonging (Sedikides & Gebauer, 2013), and respect (Tay & Diener, 2011). Universal virtues such as

compassion, forgiveness, kindness, and gratitude, the practice of which lead to subjective well-being, are positively associated with religiosity (Peterson & Seligman, 2004; Seligman, Steen, Park, & Peterson, 2005). One study that examined 450,000 individuals from the Gallup World Poll found reported behaviors such as volunteerism, donations, and helping a stranger positively were related to religiosity, suggesting an overall positive societal effect (Diener et al., 2011).

Religiosity is positively related to coping strategies such as seeking spiritual support, positive religious reappraisals (Ayele, Mulligan, Gheorghiu, & Reyes-Ortiz, 1999; Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001; Koenig et al., 2012; Pargament, 1997; Pargament et al., 1998), gratitude, prayer, and forgiveness (Allemand, Hill, Ghaemmaghami, & Martin, 2009; Peterson & Seligman, 2004; Sedikides & Gebauer, 2013; Spilka, Hood, Hunsberger, & Gorsuch, 2003). Conversely, negative religious coping strategies such as negative God appraisal and religious discontent have been empirically linked to lower mental and physical health (Exline, Yali, & Lobel, 1999; Koenig, Pargament, & Nielsen, 1998; Pargament et al., 1998, 2003, 2004; Smith, Pargament, Brant, & Oliver, 2000).

Difficult life circumstances predict greater religiosity (Diener et al., 2011). Religious individuals in societies with higher basic life difficulties (hunger, low life expectancy, social problems, instability, insecurity) report higher overall well-being due to dependence on the religious community to provide spiritual as well as basic physical needs (Diener et al., 2011; Tay et al., 2014). In addition, religious individuals in religious yet economically poor countries show higher subjective well-being than religious individuals in less religious yet economically developed countries (Tay et al., 2014). The least religious nations are primarily economically stable, secure, and democratic, leading individuals to perceive little need for religious support (Diener et al., 2011). In fact, religiosity is negatively associated with economic growth (Barro &

Mitchell, 2004). For example, Scandinavian countries report some of the highest levels of well-being in the world, while a majority of residents identify as atheist or nonreligious (Diener, Helliwell, & Kahneman, 2010). However, amidst cultural decline and in societies less supportive of religious beliefs, religiosity may still provide religious individuals with social cohesion, as well as shared bonds of beliefs, values, and morals, leading to greater interpersonal trust and respect within the religious circle (Diener et al., 2011).

Religiosity (with Moral Disapproval/Moral Incongruence) and Pornography

Religious systems promote a set of values, morals, and beliefs (Perry, 2019). While individuals may not consistently live up to their personal belief standards, continually choosing behaviors that violate beliefs leads to moral incongruence (Grubbs & Perry, 2018; Perry, 2017). While similar to cognitive dissonance in terms of intrapsychic distress (Festinger, 1957), moral incongruence refers to the situation that precedes the resulting cognitive dissonance (Perry, 2019). Grubbs's (et al., 2017; Grubbs, Perry, et al., 2018), and Perry's (2016, 2019) prolific research on religiosity and moral incongruence suggests a robust relationship between religious beliefs and moral disapproval of behaviors deemed incongruent. Recent research has examined the effect of moral disapproval and moral incongruence (Grubbs, Kraus, & Perry, 2018; Grubbs, Exline, et al., 2015) and found that they lead to religious/spiritual struggles (Grubbs et al., 2017).

Most Christian belief systems, particularly those of fundamentalist sects (MacInnis & Hodson, 2016; Thomas, 2016; Thomas, Alper, & Gleason, 2017), condemn pornography use, and most require adherents to abstain from some sexual practices (Carroll et al., 2008; Lambe, 2004; Lykke & Cohen, 2015; MacInnis & Hodson, 2016; Patterson & Price, 2012; Sherkat & Ellison, 1997; Thomas, 2013, 2016). In fact, some of the strongest advocates for pornography censorship have been those in religious orders (Lambe, 2004; Thomas, 2013). Yet, despite the

moral disapproval of pornography use, Christian individuals continue to use pornography (Perry, 2019).

In the Christian vernacular, thoughts or behaviors which intentionally or unintentionally fail to follow God's moral laws are termed *sins*. While each sin represents a failure to live up to moral standards, sexual sin is perceived as exceptionally sinful (Perry, 2019). Perry (2019) coined the term *sexual exceptionalism* to refer to the Christian view that sexual sins are the foulest of all possible sins and supremely shameful (p. 13). While some single sexual practices, such as masturbation, are not clearly prohibited, pornography use is widely condemned (Burke, 2016; Diefendorf, 2015; Perry, 2019; Regnerus, 2007).

While pornography use is morally incongruent and consistently viewed as a sin, religious individuals repeatedly, and sometimes habitually, use pornography with overwhelmingly negative effects (Miller et al., 2018; Perry, 2016, 2019; Whitehead & Perry, 2016). While lower in incidence of usage than the general population (Carroll et al., 2008; Poulsen et al., 2013; Wright, 2013; Wright et al., 2013), and despite religious convictions against it, religious individuals do acknowledge pornography use (Grubbs, Volk et al., 2015; Grubbs, Exline, et al., 2015; Nelson et al., 2010). Perry (2017) found individuals reporting higher religiosity believed pornography to be morally wrong, yet 10% of these individuals reported pornography use. However, some research has reported religiosity may be unrelated to frequency of pornography usage (Goodson et al., 2000; Grubbs, Exline et al., 2015; Grubbs, Wilt, et al., 2018; MacInnis & Hodson, 2016). Interestingly, despite moral disapproval, social desirability does not mediate religious users' reports of usage (Rasmussen, Grubbs, Pargament, & Exline, 2018).

Negative Effects of Pornography Use with Religious Individuals

For the religious individual, research has shown greater pornography use to be positively related to unhappiness and depression (Patterson & Price, 2012), shame and guilt (Gilliland, South, Carpenter, & Hardy, 2011), relationship dissatisfaction (Cranney & Štulhofer, 2017), emotional instability, and psychological distress (Bradley et al., 2016). While nonreligious users also experience negative effects, the negative association between frequency of use and life satisfaction is more pronounced with religious individuals (Perry & Whitehead, 2019). Religious hypersexual individuals report increased alcohol and drug abuse, as well as increased anxiety and depression (Reid et al., 2016). In religious practice, pornography use may lead to declines in some aspects of religiosity, but at extreme levels may motivate intensified religious practices (Perry, 2017). Increased pornography use is negatively associated with religious activities such as service attendance, leadership and discipleship roles, volunteerism, and prayer, as well as beliefs about the importance of religious faith, perceived closeness to God, relationship with God, spirituality (Short et al., 2015) and overall spiritual practices (Perry, 2017). Conversely, use is positively associated with religious doubt and a lack of perceived ability to lead or disciple others (Perry, 2017). While greater religiosity typically increases marital satisfaction, research reports when one spouse is religious and the other uses pornography, marital satisfaction decreases (Perry, 2016). Increased pornography use lessens the time spent with family, leading to adverse interpersonal outcomes, including relational distress and lack of conveyance of religious legacy from the parent (particularly the father) to a child (Perry, 2016).

Perceived Addiction to Pornography

Recently, research has shifted from a more general investigation into pornography use to a specific examination of the individual perception that one's use of pornography is excessive

and problematic (Maddock et al., 2019). A growing body of research suggests that increasing numbers of religious individuals self-identify as addicted to pornography whether or not their use is compulsive or frequent (Bradley et al., 2016; Cavaglione, 2008; Dunn et al., 2012; Egan & Parmar, 2013; Grubbs et al., 2010; Grubbs, Exline et al., 2015; Grubbs, Volk, et al., 2015; Pyle & Bridges, 2012; Wilt et al., 2016). This connection between religiosity and self-reported perceived addiction to pornography has been well documented in recent research (Abell et al., 2006; Guidry et al., 2019; Levert, 2007; Perry, 2019; Volk et al., 2019). Research increasingly reports religious users' behaviors are not in concert with their professed beliefs, resulting in the perception of addiction. This perception suggests objection to use may be in principle rather than in practice (Perry, 2016, 2019).

The overall label for this phenomenon is disputed and unresolved (Duffy et al., 2016; Wery & Billieux, 2017). Researchers have suggested terms such as: *pornography problems due to moral incongruence*, *perceived addiction to pornography* (Grubbs, Perry, et al., 2018; Grubbs, Volk, et al., 2015), *self-perceived problematic pornography use* (Sniewski & Farvid, 2019), *sex addiction* (Griffiths, 2012), *problematic online pornography use* (Alarcón et al., 2019), *self-perceived pornography addiction* (Duffy et al., 2016), *problematic pornography use*, and *problematic pornography viewing* (Borgogna, McDermott, Browning, Beach, & Aita, 2018; Kor, Fogel, Reid, & Potenza, 2013). For the purposes of this study, the term *perceived addiction to pornography* will be used.

Self-perceived addiction to pornography is the belief an individual holds regarding their pornography use being addictive, which, when combined with moral disapproval of one's own behaviors, results in distress for religious users (Grubbs, Exline, et al., 2015; Grubbs et al., 2017; Grubbs, Grant, & Engelman, 2019; Grubbs, Perry, et al., 2018; Perry, 2016, 2019). In general,

nonreligious individuals are less likely to report perceived addiction even when factoring in the frequency of use (Grubbs, Exline, et al., 2015). Research reports perceived addiction to pornography involves three domains: compulsivity (belief one's use is out of control), access efforts (belief that time spent obtaining pornography interferes with life tasks), and emotional distress (feelings of guilt, shame and/or regret based on use; Grubbs, Volk, et al., 2015).

Perceived addiction to pornography is most strongly predicted in nonclinical populations with young, white, adult males who report greater religiosity and greater moral incongruence (Grubbs, Kraus, & Perry, 2019), and refers to subjective beliefs about individual use rather than objective behaviors or behavioral dysregulation (Grubbs, Exline, et al., 2015; Grubbs, Wilt, et al., 2018; Leonhardt et al., 2018).

Perceived addiction to pornography is positively associated with intra-personal factors such as anxiety (Grubbs, Volk, et al., 2015), despair (Cavaglioni, 2008; Philaretou et al., 2005), compulsivity (Egan & Parmar, 2013), low self-esteem (Wilt et al., 2016), shame (Volk et al., 2019), internal evaluation, depression, and aggression (Maddock et al., 2019; Perry, 2019 Volk, Floyd, Bohannon et al., 2019; Vega & Malamuth, 2007), as well as overall psychological distress (Bradley et al., 2016; Wilt et al., 2016). Interpersonal factors affected include anger (Wilt et al., 2016), blame (Volk et al., 2019), relationship anxiety (Leonhardt et al., 2018), and sexual dissatisfaction (Blais-Lecours, Vaillancourt-Morel, Sabourin, & Godbout, 2016). Supra-personal factors affected include religious struggles and supra-personal anger (Wilt et al., 2016). In addition, moral disapproval of pornography usage leads individuals with stronger religious beliefs to have higher levels of perceived addiction (Bradley et al., 2016; Wilt et al., 2016). These beliefs, with concurrent incongruent behavior, may lead to higher levels of depressive symptoms and psychological distress (Perry, 2017).

Guidry et al. (2019) examined pornography use and relational satisfaction and the mediating effects of depression and anxiety with the potential moderator of moral disapproval. Researchers utilized a convenience sample ($N = 287$) of individuals who met criteria (in a committed relationship, sexually active with their current romantic partner, and pornography use in the past 6=six months) for the study. The analysis was completed to determine if the mediators of depression or anxiety, as well as the moderator of moral disapproval, affected the relationship between pornography use (in the past month) and relationship satisfaction. Researchers concluded that while the moderator of moral disapproval might be closely related to religiosity, it could also result from nonreligious influences such as personal spiritual experiences and beliefs or family of origin culture. The strongest support was found for the moderating effect of moral disapproval on both anxiety and depression, suggesting individuals in committed relationships who report both high levels of use and moral disapproval also report higher levels of anxiety and depression.

In a meta-analysis of 12 empirical studies, Grubbs, Perry, Wilt, et al., (2019) found conclusive evidence of a robust relationship between religiosity and perceived addiction to pornography. From this research, a comprehensive model was designed to integrate the results of the empirical data that proposed two pathways linking problematic pornography use to distress (Grubbs, Perry, Wilt, et al., 2019). While previous research typically addressed objective behavior, this new model sought to examine the phenomenological experience of pornography problems resulting from moral incongruence (Grubbs, Perry, Wilt et al, 2019). While some researchers have taken issue with elements of the model (Brand, Antons, Wegmann, & Potenza, 2019; Vaillancourt-Morel & Bergeron, 2019), most concur that the development of a model is a step in the right direction.

The link between pornography problems and distress is dysregulation. This pathway is built on the idea that self-reported dysregulation in individual use leads to distress (Gola & Potenza, 2016; Kraus et al., 2016). The second proposed pathway, more closely related to the present research study, is based on the existence of pornography problems due to moral incongruence. This pathway proposed that moral disapproval based on religious beliefs leads to moral incongruence and an existential conflict between individual beliefs and contradictory behavior (Perry, 2017). Moral incongruence was speculated to lead to perceived addiction to pornography, resulting in intrapersonal/psychological, interpersonal/relational, and religious/spiritual distress (Grubbs & Perry, 2018). Moral incongruence has been reported as one of the best predictors of self-reported feelings of addiction (Grubbs, Wilt, et al., 2018; Volk et al., 2019).

While most research has reported a clear positive relationship between religiosity and perceived addiction to pornography, one six-month longitudinal research study found a lack of relationship between religiosity and perception of pornography addiction (Maddock et al., 2019). However, results did suggest religious individuals report a positive relationship between pornography use at three months and depression at six months. In addition, depression at baseline was associated with problematic use at two months, while women reporting higher problematic use at three months reported lower use yet higher depression at six months. The authors explained their finding was limited by the ordinal scale used for religiosity and suggested that the results might have been different if religiosity measurement had followed a normal distribution. In addition, religious measures were measured behaviorally rather than existentially or denominationally. Researchers suggest additional questions utilizing a valid and reliable measure of religious beliefs might render the relatedness of constructs as reported by other

researchers (e.g., Grubbs, Perry, Wilt et al., 2019; Perry, 2019). In addition, Grubbs, Grant, and Engelman's (2019) multi-study research using dimensional rather than binary ratings found, in contrast to their hypothesis, that male gender and average daily use were the strongest predictors of perceived addiction to pornography, while moral incongruence was reported to be a strong contributing factor in each of the four studies.

Meaning/Purpose in Life

Finding purpose in life is arguably one of the most important tasks in life, as it is essential to psychosomatic well-being (Baumeister, 1991; Frankl, 2006; Klinger, 1977; Maslow, 1968; Yalom, 1980). *Existential meaning* refers to an individual's subjective perception of inner coherence, order, and purpose in life, as well as individual striving for worthy goals with internal satisfaction in personal achievements (Reker, 2000). Higher meaning in life includes clear life purpose and satisfaction with past achievements with a determination toward a meaningful future (Reker, 2000; Wong, 2012). The existential belief that one's life matters during and outside of life is important and may be a precursor to finding meaning in life (Costin & Vignoles, 2020).

Research has repeatedly found seeking and maintaining a purpose in life to be positively associated with the development of maturity and negatively related to psychosocial adaptation (Krause, 2007; Mascaro & Rosen, 2005; Steger, Kashdan, & Oishi, 2008; Steger, Oishi, & Kashdan, 2009). Most research on purpose in life examines the individual's cognitive awareness of the presence (or lack of) purpose in life (Brown & Wong, 2015; Heintzelman & King, 2014; Steger et al., 2006). Research has shown higher purpose in life to be a significant predictor of overall well-being (Martin, MacKinnon, Johnson, & Rohsenow, 2011; Stoddard, Pierce, Hurd, Bauermeister, & Zimmerman, 2019), and psychological health (Rogers, 1951; Steger, Kashdan, Sullivan, & Lorentz, 2008).

Understanding of the meaning in one's existence is reported as stable yet continually transforming across the lifespan (Chamberlain & Zika, 1992). One comprehensive research study ($N = 8,756$) found purpose in life to be important throughout the lifespan, reporting older individuals claim greater *presence* of meaning in life, while younger participants reported greater *search* for meaning in life (Steger et al., 2009). Higher purpose in life predicted overall health, well-being, and life longevity, especially when participants had the opportunity to find meaning in challenging life situations (Schaefer et al., 2013). An Australian study examining meaning in life across the lifespan found older adults ($n = 57$) reported lower *search* yet higher *presence* of meaning in life than younger adults ($n = 208$). Interestingly, both age groups reported overall higher levels of meaning in life and greater overall mental health and well-being than participants in the control group. These results suggest the search for and presence of meaning in life as important focuses in therapy for depressed or anxious adults (Battersby & Phillips, 2016).

While Frankl (1966, 1979, 2006) repeatedly professed that to find meaning in life is *the* fundamental task in life, the struggle to find meaning addresses core existential issues of life and may lead to distress in both the mental and physical realms (Exline et al., 2014; Harper et al., 2007; Keesee, Currier, & Neimeyer, 2008; Park, Edmondson, Fenster, & Blank, 2008). In fact, Frankl (2006) posited a lack of meaning in life could result in an existential vacuum that one may seek to avoid or escape and may result in the tragic triad of addictions, aggression, and depression/anxiety.

Lower purpose in life was reported by Frankl (2006) to be associated with boredom, emptiness, and apathy. Recent research (Csabonyi & Phillips, 2017; Fromm, 2000; Hart & Carey, 2014; Hutter, 2012; Melton & Schulenberg, 2007; van Tilburg, Igou, Maher, Moynihan, & Martin, 2019) has confirmed these findings and additionally associated lack of purpose in life

with higher levels of death anxiety (Evans, 2014), addictions (Frankl, 2006), depression, anxiety (Schnell, 2009; Wilt et al., 2018), disinterest, disengagement, emptiness (Hart & Carey, 2014), and lack of resilience (Min et al., 2013). Failure to address meaning in life can lead to numerous mental health issues, addictions, and physical illnesses (Glaw, Kable, Hazelton, & Inder, 2017). Seeking relief from the meaning vacuum may include a search for meaningful activities (van Tilburg & Igou, 2011; van Tilburg et al., 2016) or distraction behaviors such as pornography and addictions (Csabonyi & Phillips, 2017).

Higher levels of purpose in life are related to a belief that life is worth devoting energy to, while lower levels are associated with lack of motivation and overall life dissatisfaction (Hart & Carey, 2014), leading to Frankl's (2006) concept of an existential void. Higher purpose in life is negatively related to depression, hopelessness, addictions, suicide risk, non-suicidal self-injurious behaviors (Garcia-Alandete, Marco-Salvador, & Perez-Rodriguez, 2014; Kleftaras & Katsogianni, 2012; Marco et al., 2015), workaholism (Peplinska, Wojdylo, Kosakowska-Berezecka, & Polomski, 2015), personality disorders (Blažek, 2015), depression in elderly individuals (Lebădă & David, 2018), attachment anxiety, attachment avoidance (Luna, Horton, & Malloy, 2016; Luna, Horton, Newman, & Malloy, 2016), and need for psychotherapy (Battista & Almond, 1973).

Purpose in life is positively related to reduced stress and increased coping capital, overall well-being (Ishida & Okada, 2006; Miao, Zheng, & Gan, 2016; Stevens, Pfof, & Wessell, 1987; Zilioli, Slacher, Ong, & Gruenewald, 2015), self-acceptance, environmental mastery, positive relations (Marco et al., 2015) optimism, and self-esteem (Compton, Smith, Cornish, & Qualls, 1996). Additionally, purpose in life is related to lower perceived stress with the correlated physiological results of stress (Ishida & Okada, 2006) and improved satisfaction with life, mood

(Schnell, 2009), quality of life, coping, and acceptance of depression (Blażek, Kaźmierczak, & Besta, 2015). Further, research has found higher purpose in life to be protective factor against bullying (Zawadzka, Korzycka, Oblacinska, 2018), relapse in cocaine abusers (Martin, MacKinnon, Johnson, & Rohsenow, 2011), health-risk related behaviors (McKnight & Kashdan, 2009), depression, hopelessness, and suicide risk in borderline personality disorder patients (García-Alandete, Marco, & Pérez, 2014). In addition, purpose in life has been found to be a predictor of lower incidences of health problems in older adults (Kim, Sun, Park, Kubzansky, & Peterson, 2013), higher rates of happiness/satisfaction in life among cancer patients in Poland (Wnuk, Marcinkowski, & Fobair, 2012), reduced risk of myocardial infarction (Kim, Sun, Park, Kumzansky, & Peterson, 2013), and increased quality of life in patients with rheumatoid arthritis (Verduin et al., 2008). Higher purpose in life is a greater predictor of increased positive mood in amyotrophic lateral sclerosis patients than the severity of symptoms or beliefs about prognosis (Martin et al., 2012). Further, purpose in life has been found to be a partial mediator between social support and workaholism (Peplinska et al., 2015), as well as emotional regulation and happiness, supporting the overall impact of purpose in life on mental wellness as a resource for confronting life challenges (García-Alandete, Gallego Hernandez de Tejada, Pérez-Rodriguez, & Marco-Salvador, 2019).

Clearly, purpose in life is an important factor in overall psychological well-being (Stoddard et al., 2019) offering a framework for understanding life challenges, completing monotonous daily tasks of living, and developing direction for future goals (McKnight & Kashdan, 2009), as well providing the motivation to persevere through seemingly impossible or tragic situations (Frankl, 2006). Without the presence of purpose in life, tedious daily activities

may be perceived as insignificant and purposeless (Stoddard et al., 2019), while suffering and tragedy may be perceived as meaningless and incomprehensible (Frankl, 2006).

Ultimate meaning in life refers to an intrapersonal belief in a deeper profound purpose for one's existence (Emmons, 1999, 2005; Exline et al., 2014). Struggles in this realm are negatively associated with *presence* of meaning but positively associated with the *search* for meaning (Wilt et al., 2018). Individuals lacking purpose in life may question existential issues such as life purpose, spirituality, existence, death, tragedy, and suffering, with the concomitant resulting mental and physical issues (Exline et al., 2014; Frankl, 1979, 1997, 2006; Pargament, Mahoney, Exline, Jones, & Shafranske, 2013). Ultimate meaning involves a focus on external matters outside one's self (rather than on self-focused accomplishments) in domains which transcend individual achievement (Baumeister, 1991; Reker & Wong, 1988; Seligman, 2002). Devotion to worthy endeavors such as a vocation, avocation, relationship, political cause, spirituality, or science allows individuals to participate in eternal pursuits, which serves as a protective factor against meaninglessness and insignificance (Emmons, 2005).

Purpose in Life and Addictions

While debate continues regarding classification of problematic pornography use as an addiction, it is important to explore the empirical research addressing relationships between purpose in life and addictions. Research has reported higher purpose in life to be negatively related to alcohol use (Martin et al., 2011), drinking levels in adolescents (Palfai, Ralston, & Wright, 2011), smoking intensity in Hungarian women (Konkoly-Thege et al., 2010), addictions (García-Alandete, Marco, & Perez, 2014; Kleftaras & Katsogianni, 2012; Marco et al., 2015), substance abuse (Minehan, Newcomb, & Galaif, 2000; Newcomb & Harlow, 1986),

consequences of drug use (Stoddard et al., 2019), and alcohol-related problems among university students (Palfai & Weafer, 2006).

Purpose in life is positively associated with achievement of sobriety in African Americans (Krentzman, Farkas, & Townsend, 2010), remission from alcohol dependence (Krentzman, Cranford, & Robinson, 2015), motivation for change in problem alcohol and heroin use (Klingemann, 1991), and positive coping strategies for adolescent with drug use (Minehan et al., 2000). Purpose in life and forgiveness mediate substance abuse and recovery (Lyons, Deane, & Kelly, 2010). Addictive behaviors may momentarily relieve temporal distress but, paradoxically, increase spiritual/existential suffering (Wiklund, 2008). Through an extensive four-part literature review of research addressing addictions and meaning life, researchers concluded that increased meaning in life may impact adolescent and young adult commencement of substance use, frequency and intensity of use, and decision to decrease or end use, as well as determination to seek help, and length in time of recovery (Hart & Carey, 2014). The United States Substance Abuse and Mental Health Association (2016) reported restoration of a personal sense of meaning and purpose in life was one of four key determinants in substance abuse recovery and stated finding purpose in life is one of the holistic factors of overall mental health wellness.

Purpose in Life and Treatment

Utilizing meaning in life in treatment, no matter the modality, may allow clients to obtain a wider breadth of benefits, break the downward spiral of use, and improve overall personal perception of life meaning (Hart & Carey, 2014). However, addressing purpose in life in psychological treatment *specifically* utilizing meaning-centered therapy, such as logotherapy (Frankl, 2006), has been shown to enhance outcomes and effectiveness in treatment of dysthymia

(Luna, Horton, & Malloy, 2016), and addictions (Didelot et al., 2012; Musalek, 2011; Thompson, 2012, 2016), as well as increase hope in both recovery (García-Alandete, Marco-Salvador, & Perez-Rodriguez, 2014; Klingemann, 1991; Moxley, 2001) and remission (Krentzman et al., 2015). Meaning-centered therapy helps lessen the attractiveness of drug use (Musalek, 2011) by helping the client pursue a meaningful life in spite of addiction struggles (Thompson, 2017).

Purpose in Life and Religiosity

Religious beliefs provide individuals with a personal and ultimate sense of meaning, existential truths (Frankl, 2006; Hood et al., 2009), and an understanding of the challenges of life (Batson & Stocks, 2004). Studies exploring Allport's (1950) religious approach found a correlation between intrinsic religious beliefs and purpose in life (Crandall & Rasmussen, 1975). By providing a sense of meaning in life (Steger & Frazier, 2005; Steger et al., 2006), religion helps answer the existential question, "Why am I here?" by adding purpose, value, and significance to life (Steger & Frazier, 2005), reducing thanatophobia (Soenke, Landau, & Greenberg, 2013), and mortality salience (Jonas & Fischer, 2006), while increasing life satisfaction (Diener, Fujita, Tay, & Biswas-Diener, 2012). Religiosity is positively related to the ability to cope in difficult situations due to the buffering effect of increased religious capital (Tay et al., 2014). In other words, those with higher religiosity are less likely to be overwhelmed by life challenges due to their understanding of a greater purpose for life.

Religious activities and practices can lead to higher perceived meaning in life through social identity (Ysseldyk, Matheson, & Anisman, 2010) and belongingness (King, 2012). These activities may also motivate a sense of purpose in life as a member of a greater system that creates meaning (Krause & Hayward, 2012). Religion offers adherents meaning in life through

the possibility of immortality (life after death; Solomon, Greenberg, & Pyszczynski, 2004), belief in a God-given mission (Ferris, 2002), and practices, values, and beliefs that drive personal choices and behaviors with self, others, and the world (Castano, Yzerbyt, & Paladino, 2004; van Tilburg & Igou, 2011). Meaning in life can provide individuals with a transcendent experience that facilitates an existential understanding of life (James, 1902; Park, Edmondson, & Hale-Smith, 2013; Park, Park, & Peterson, 2010). While consistently confirming the positive association between the two, researchers have called for greater research to study the effect of religiosity on the development of meaning in life (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003).

Mediations

In combination, purpose in life mediates the relationships between religiosity and happiness (French & Joseph, 1999), anxiety, depression (Giannone et al., 2019; Min et al., 2013), life satisfaction, and overall well-being (Steger & Frazier, 2005). Religiosity mediates the relationship between purpose in life and life satisfaction in poorer nations (Oishi & Diener, 2014), as well as an individual's income and life satisfaction (Joshani, 2018), confirming Frankl's (2006) belief that meaning can be found even in abject living conditions. Meaning in life and perceived relationship with God or a higher power mediate the relationship between attachment dimensions, depression, and dysthymia (Luna, Horton, Newman, & Malloy, 2016). The relationship between religiosity and purpose in life is mediated by forgiveness (Lyons, Deane, Caputi, & Kelly, 2011). Meaning in life and hope are important elements of religious well-being and are associated with positive psychological outcomes such as: life satisfaction, positive affect, and reduced negative affect (Wnuk & Marcinkowski, 2014). Purpose in life, when combined with religiosity, is positively related to social support resulting, in lower

psychological distress in Chinese University students (Wang, Koenig, Ma, & Shohabib, 2016) higher social connectivity (Chan, Michalak, & Ybarra, 2019).

Religiosity, Purpose in Life, and Addictions/Mental Health

Higher levels of both religiosity and purpose in life are associated with overall personal well-being (Katsogianni & Kleftaras, 2015), civic engagement in post-addiction treatment (Robinson, Hart, Singh, & Pocrnic, 2009), greater recovery capital for sustained recovery (Laudet & White, 2008), and rehabilitation in patients with substance use (Sørensen, Lien, Landheim, & Danbolt, 2015). Both constructs are also positively associated with lower levels of drug addictions and alcoholism (Katsogianni & Kleftaras, 2015; Kleftarus & Katsogianni, 2012) and greater use of prayer and meditation in Alcoholics Anonymous attendees (Carroll, 1993) and are considered foundational resources in women's alcohol use disorder recovery (Jacobs, 2018). Higher levels of both religiosity and purpose in life are also related to increased interpersonal wellbeing (Robinson et al., 2009), lower incidents of depressive symptoms (Katsogianni & Kleftaras, 2015; Kleftaras & Katsogianni, 2012), higher dispositional gratitude and growth in veterans recovering from post-traumatic stress disorder (Sharma et al., 2017), and higher quality of life in elderly individuals (Lebădă & David, 2018).

Chapter Summary

As evidenced by the extant research, there are clear and robust associations between religiosity and pornography use, perceived addiction to pornography, and purpose in life. There is a strong positive relationship between pornography use, religiosity, and perceived addiction to pornography. Other research has repeatedly shown a strong positive relationship between religiosity and meaning in life. However, no research has examined pornography use or perceived addiction to pornography with the outcome variable, purpose in life. The following

section describes the methods used in this research study which addressed potential relationships. First, the direct relationship between pornography use and purpose in life is examined. Second, the indirect mediating role of perceived addiction on the direct relationship pornography on the direct relationship is addressed. Third, and the moderating role of religiosity on the indirect relationship between pornography use and meaning in life is examined. Finally, the moderating role of religiosity on the mediated relationship between pornography use, perceived addiction to pornography, and meaning in life is examined.

CHAPTER THREE: METHODS

This chapter presents the methods which will be used to examine four research questions. First, the direct relationship between pornography use and meaning in life will be addressed. Next, the moderating role of religiosity on the direct relationship will be addressed. Third, the mediating role of perceived addiction on the relationship between pornography use and purpose in life will be examined. Last, the moderating role of religiosity on the mediated relationship of pornography use, perceived addiction to pornography and meaning in life will be examined. Also addressed are the research design, selection of participants, and assessment instruments used in this study. Finally, the research procedures are explained as well as the plan for data processing and analysis.

Research Questions and Hypotheses

Research Question One

What is the relationship between the frequency of pornography use and purpose in life?

Hypothesis 1: There will be a negative relationship between pornography use and purpose in life.

Null hypothesis: There will be no relationship between pornography use and purpose in life.

Research Question Two

Is the relationship between pornography use and purpose in life mediated by perceived addiction to pornography?

Hypothesis 2: Perceived addiction to pornography will mediate the relationship between pornography use and purpose in life.

Null hypothesis: Perceived addiction to pornography will not have a mediating effect on the relationship between pornography use and purpose in life.

Research Question Three

How does religiosity moderate the indirect relationship between pornography use and purpose in life?

Hypothesis 3: The relationship between pornography use and purpose in life will be negatively moderated by religiosity.

Null hypothesis: Religiosity will have no moderating effect on the relationship between pornography use and purpose in life.

Research Question Four

Does the indirect effect of frequency of use on purpose in life through the mediator, perceived addiction, depend on the moderator, religiosity?

Hypothesis 4: Religiosity will moderate the indirect effect of frequency of pornography use → perceived addiction to pornography → purpose in life causal sequence.

Null hypothesis: Religiosity will not moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life.

Research Purpose

The purpose of this research was to examine the relationships between four constructs: pornography use, purpose in life, religiosity, and perceived addiction to pornography. Results provided insight into the association between purpose in life and pornography use. In addition, findings may inform the selection of treatment modalities for mental health professionals working with clients who present with problematic pornography use.

Research Design

This study utilized a cross-sectional correlational design to examine the variables of pornography use, religiosity, perceived addiction to pornography and purpose in life. Amazon's MTurk was used to recruit participants. While challenges exist due to the use of a pay for use service, research using MTurk has previously reported greater diversity in ethnicity, socio-economic factors (Casler, Bickell, & Hackett, 2013) and age (Mason & Suri, 2012) when compared to other collection samples.

The benefits of using MTurk included greater geographic distribution of participants (Buhrmester, Kwang, & Gosling, 2011), allowing for greater generalizability as well as faster access to a larger sample size. Payment encouraged participants to fully participate and complete all measures and was economical compared to other data collection service costs (Johnson & Borden, 2012). Research reported MTurk to have similar psychometric properties to other data collection sampling methods (Buhrmester, Kwang, & Gosling, 2011).

After recruiting a sample of online participants through MTurk, participants were provided with an informed consent document to read and sign acknowledging consent to participate in the research study. After giving consent, participants gained access to the assessment measures. These measures included demographic information, items measuring the frequency of pornography use, the SAI (Hall & Edwards, 1996), the CPUI-9 (Grubbs, Volk, et al., 2015), and the Purpose in Life test (PIL; Crumbaugh & Maholick, 1969). After data were collected, results were downloaded into the IBM SPSS Version 26 program for data analysis.

Selection of Participants

Participants were recruited through Amazon's MTurk, an online human intelligence data collection platform. Adults between the ages of 18 and 30 were recruited. Exclusions from

participation included no use of pornography, refusal to sign informed consent, and age outside of the required criteria. To encourage participation, respondents received a \$1.00 payment upon submission of a completed, valid survey. A minimum of 500 participants were recruited in order to ensure sufficient variability of sample participants' responses and to account for incomplete or invalid submissions.

Instrumentation

Demographic Information

Participants were asked a number of demographic questions designed to assess for inclusion criteria, specifically use of pornography and age (18–30). Information requested included age, gender, ethnicity, sexual orientation, relationship/marital status, marital history, highest level of education achieved, current employment status, annual income, relationship status, recent sexual activity (past six months), pornography use, and religious affiliation, religious attendance, and belief in God. Participants who reported no use of pornography and/or age under eighteen or over age thirty were excluded from the final sample.

Perceived Addiction to Pornography

Participants' perceived addiction to pornography was measured through the use of the CPUI-9 (Grubbs, Volk, et al., 2015). The CPUI-9 uses three three-item subscales which measure: perceived compulsivity (e.g., "I feel unable to control my use of Internet pornography"), access efforts (e.g., "At times, I try to arrange my schedule so that I am alone to view pornography"), and emotional distress (e.g., "I feel sick after viewing pornography online"). Participants utilize a seven-point Likert scale ranging from 1 (not at all) to 7 (extremely) to rate each statement on the nine-item inventory. Previous research has repeatedly confirmed both internal consistency and construct validity in the CPUI-9 (Grubbs, Volk, et al.,

2015). For example, in a Portuguese sample, Cardoso et al. (2018) reported good psychometric properties in reliability (for total scale Cronbach's alpha of .787), composite reliability, as well as convergent and discriminant validity of individual items.

Pornography Use

Participants were asked several questions regarding their pornography use. Questions requested individuals report on their frequency of use, recency of use (past week, month, six months) and amount of time spent using pornography in the last week.

Purpose in Life

The PIL (Crumbaugh & Maholick, 1964) was used to assess the outcome variable, purpose in life. Based on Frankl's (1966, 1979, 1997, 2006) extensive and foundational work on meaning in life, the PIL is a 20-item self-report scale which measures the extent to which an individual self-perceives an overarching sense of meaning or purpose in life, or conversely, reports lack of meaning or purpose in life, identified by Frankl (2006) as an existential vacuum. The PIL questions, based on a seven-point Likert-type scale, addresses participant mood (e.g., I am usually completely bored, neutral, exuberant, enthusiastic), life goals (e.g., In life I have no goals, or aims at all, neutral, very clear goals and aims), and meaning in life (e.g., My personal existence is utterly meaningless without purpose, neutral, very purposeful and meaningful). Final scores were calculated based on the assigned value of the response with the most positive anchor receiving the highest score of seven-points and the most negative anchor receiving one-point. Potential scores ranged from 20–140 points. Higher scores reflected an individual's higher perception of personal purpose in life; a score of 60 reflects the median score potentially reflective of an existential vacuum (Crumbaugh & Maholick, 1968).

The PIL has been widely used with both clinical and non-clinical populations, with research addressing constructs as diverse as apathy, volunteerism, leadership effectiveness, sexual drive, sexual frustration, and boredom (Batthyany & Guttman, 2005). Research has consistently found support for the validity of the PIL instrument as measuring Frankl's construct of purpose in life in relation to other measures of this variable. The 20-item test reports test-retest coefficients of .83 (Meier & Edwards, 1974) and split-half reliability of .90 (Crumbaugh & Maholick, 1964). Another validation study found the split-half reliability of the PIL yielded a coefficient of 0.85, corrected by the Spearman-Brown formula to 0.92, indicative of reliability (Crumbaugh & Maholick, 1964, 1969; Molasso, 2006).

Religiosity

The SAI (Hall, Reise, & Haviland, 2007) was used to measure participant religiosity. This 49-item self-report, relationally-based, assessment measures two primary dimensions of spirituality: awareness of God and quality of relationship with God utilizing five subscales: Awareness (of God), Disappointment (with God), Grandiosity (excessive importance), Realistic Acceptance (of God), and instability (in one's relationship to God; Hall & Edwards, 1996). All items are rated on a five-point Likert-like scale anchored by opposing statements, "Not true at all" to "Very true." The first subscale addresses an individual's perception of the experience of God's presence and communication. The other four subscales examine an individual's developmental maturity in one's patterns of relationship, essentially their internal working model of God (Hall et al., 2007). Each subscale addresses specific aspects of spiritual attitudes. Disappointment addresses anger, frustration with God (e.g., "There are times when I feel frustrated with God"); Grandiosity addresses how an individual might perceive their relationship with God to be uniquely special (e.g., "God recognizes that I am more spiritual than most

people”). Realistic Acceptance reports on an individual’s ability to reconcile their relationship with God even after disappointments (e.g., “When this happens, I still have the sense God will always be with me”). Finally, Instability addresses the individual’s concerns regarding the stability of their relationship with God (e.g., “I feel I have to please God, or He might reject me”) (Hall & Edwards, 1996). Alpha coefficients reflecting good internal consistency for each subscale and are reported as: Self-awareness (.95), Defensiveness/Disappointment with God (.90), Realistic Acceptance (.83), Grandiosity (.73) and Instability (.73; Hall & Edwards, 2002). Item response theory testing confirmed all five scales peaked correctly representing valid and precise measurement. For the purposes of this research, only the instability measure of the SAI was utilized for review. For example, statements such as, “I am very afraid God will give up on me” addressed the self-perception of having an unstable quality of relationship with God. A higher score represents a self-reported belief that this trait is present.

Research Procedures

The initial research study proposal was submitted to the Institutional Review Board. After receiving approval, data was collected utilizing Amazon’s MTurk. A request was made through MTurk to recruit participants. Individual’s responding to the survey request were asked to read and consent to participation in the research study. Information was given regarding the nature of the study, addressing pornography use, perception of pornography use, purpose in life, and religiosity. Participants were informed data collected on the survey would be stored securely, anonymously, kept private, and available only to for the purposes of research. Participants were informed that the only direct benefit of participation was the payment of \$1.00 upon successful submission of the assessment. Risks to participation included the emotional or psychological impact (e.g., shame) of reporting use of pornography and the social impact of

results if released to the public. These risks were nullified as no identifying information was collected. Participants were informed that participation was voluntary with the ability to leave the survey at any time. Finally, respondents were asked to confirm understanding of all materials by selecting yes or no. An affirmative answer (yes) allowed access to the survey. Following completion of the survey, participants were paid \$1.00 through the MTurk platform. The informed consent is listed in Appendix A.

Data Processing and Analysis

Data was loaded into the most current version of IBM's SPSS Statistics Version 26 (2019) with Hayes's (2013) PROCESS macro. Data were reviewed and screened for outliers, incomplete answers, and unreliable responses. Participant responses which did not meet inclusion criteria were removed. Complete data analysis was performed based on current statistical analysis. Pearson's correlation coefficients and regression analysis were used to test the hypotheses of the research questions.

Chapter Summary

This chapter examined the research methodology of this research study. The research questions and hypotheses were presented along with the research purpose and methodology. The process of participant selection was reviewed, followed by a description of the measures utilized. Finally, research procedures were explained, including data processing and analysis. The next chapter addresses the results and implications of the findings based on the data collected.

CHAPTER FOUR: RESULTS

This study examined the relationship between pornography use and purpose in life with religiosity (measured as instability in one's relationship with God) as a moderator and perceived addiction to pornography as a mediator. Data were screened for inattentive or nonsensical responses prior to statistical analysis.

Summary of Demographic Findings

Mahalanobis distance was used to identify multivariate outliers which, with a degree of freedom of four, resulted in a cutoff score of 18.4. This resulted in the removal of three participants. Inclusion requirements included both age (between 18 and 30) and pornography use in the past six months. Final screening yielded 289 adults who met the research study criteria.

Data were loaded into IBM's SPSS Statistics Version 26 (2019) with Hayes's Process Macro (2018). The Purpose in Life (PIL) assessment had numerous questions which were reverse coded; therefore, these responses were reversed prior to analysis. Data were reviewed and screened for multivariate outliers, incomplete answers, and unreliable responses.

Participants who did not endorse pornography use in one of the given categories (past week, month, or six months) were excluded from the analysis. Participants under the age of 18 or over the age of 30 were removed from the analysis. The mean age was 26.6 years. As research has repeatedly reported that young adults are the most frequent users of pornography (Grubbs, Kraus, & Perry, 2019; Perry, 2019), and purpose in life increases across the lifespan (Chamberlain & Zika, 1992), age was controlled for in each analysis. Finally, participants with inattentive or nonsensical responses were removed. Participant demographics are reported in Table 4.1. Demographic questions are listed in Appendix B.

Table 4.1

Participant Demographics

	<i>n</i>	%
Gender		
Male	164	56.7
Female	124	42.9
Other	1	0.3
Racial identity		
Caucasian/White	226	78.2
African American	24	8.3
Asian	8	2.8
Hispanic, Latino, or of Spanish origin	24	5.4
American Indian or Alaska Native	3	8.3
Other	1	0.3
Educational background		
High School diploma or equivalent (e.g., GED)	31	10.7
College freshman	9	3.1
College sophomore	6	2.1
College junior	8	2.8
College senior	13	4.5
Trade, technical, or vocational training	5	1.7
Bachelor's degree	172	59.5
Master's degree	35	12.1
Professional degree	6	2.1
Doctorate	4	1.4
Employment status		
Employed for wages	212	73.6
Self-employed	50	17.3
Not employed	9	3.1
Homemaker	3	1.0
Student	11	3.8
Military	2	0.7
Unable to work	1	0.3
Household annual income		
Under \$10,000	23	8.0
\$10,000–\$19,999	26	9.0
\$20,000–\$29,999	41	14.2
\$30,000–\$39,999	43	14.9
\$40,000–\$49,999	38	13.1
\$50,000–\$59,999	38	13.1
\$60,000–\$69,999	23	8.0
\$70,000–\$99,999	39	13.5

Over \$100,000	18	6.2
Current Relationship Status		
Single (never in a serious relationship)	54	18.7
Single (not currently in a serious relationship)	33	11.4
Non-committed dating relationship	14	4.8
Monogamous dating relationship	46	15.9
Married/life partner	137	47.4
Married, legally separated	3	1.0
Religious affiliation		
Protestant (e.g., Methodist, Baptist, or some other Non-Catholic Christian denomination)	19	6.6
Catholic	145	50.2
Christian (nondenominational)	48	16.6
Mormon	2	0.7
Muslim	5	1.7
Hindu	6	2.1
Jewish	2	0.7
Buddhist	3	1.0
New Age or Wiccan	3	1.0
None	48	16.6
Other	8	2.8

Participants reported frequency of attendance at religious services each year with a range of 0–365 times. The highest percentage was 0 times (20.8%), followed by two times (13.4%), five times (8.8%), three times (6.3%), 10 times (5.6%), one time (5.3%), 12 times (4.9%), four times (4.2%), 20 times (4.2%), six times (3.5%), 50 times (2.8%), 30 times (1.8%), eight times (1.4%), 35 times (1.4%), 52 times (1.4%), 48 times (1.1%), 15 times (1.1%), and 24 times (1.1%). These numbers ($n = 254$) account for 89.1% of responses. The remaining participant responses ($n = 25$) were less than 1.0%. Five participants did not answer this frequency question, while five participants' responses were nonsensical (e.g., participants reported having attended 2002, 2016, 2017, and 2018 times in the past year, which may more accurately reflect the last year of attendance) and, therefore, not included in the reporting of this frequency.

Participants were asked to choose an answer to a question which inquired about their belief in God. The most common response was “I believe there is a God” (49.1%), followed by,

“I sometimes believe there is a God” (33.2%), “I used to believe there was a God but do not anymore” (9.3%), and “I do not believe there is a God and I cannot say that I have ever believed in a God” (8.3%). When asked to respond to what degree religion or faith affected their everyday lives and decision-making, respondents reported a great deal (14.5%), a lot (12.1%), a moderate amount (22.5%), a little (32.2%), and none at all (18%). Two participants did not respond, accounting for 0.7% of responses. When responding to the question regarding sexual activity in the last six months with your current romantic partner, participants responded yes (76.1%), no (15.2%), and “I do not have a current romantic partner” (8.7%).

Participant endorsement of the use of pornography in the past six months was required for inclusion in this study. Participants reported pornography use in the past week: zero times (21.5%), one to three times (43.9%), four to six times (17%), seven to nine times (12.5%), and 10 or more times (4.5%). In the past month, participants reported pornography use: zero times (6.6%), one to three times (27.7%), four to six times (30.8%), seven to nine times (20.1%), and 10 or more times (14.9%). Participants reported use in the last six months as: one to three times (18.7%), four to six times (23.2%), seven to nine times (27.3%), and 10 or more times (30.1%). Because use in the past six months was required for inclusion, zero times in the past six months was not an option. Two participants did not answer the question regarding pornography use in the last six months, accounting for 0.7% of the total reported. However, as these participants did endorse use in the past month, they were included in the analysis. Items measuring pornography use are listed in Appendix C.

The analysis was undertaken in four phases: first, data screening described above, second, zero order correlations, third, simple mediation, and fourth, moderated mediation. Finally, exploratory analysis was conducted. Pearson’s correlation coefficients were used to test

for bivariate correlations. Hayes's (2018) Process Models 4, 8, and, 59 were used to analyze research questions addressing mediation, moderation, and moderated mediation. Descriptive statistics regarding minimum, maximum, mean, and standard deviation of each variable were calculated, are within normal limits, and are reported in Table 4.2. The following section reports on the statistical analysis of the data.

Table 4.2

Descriptive Statistics of All Measures Used in This Study

Measure	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
What is your age?	289	18.00	30.00	26.6228	2.45
Purpose in Life	289	2.70	7.00	4.7600	0.83
CPUI-Total	289	1.11	10.00	5.4821	2.33
SAI-Instability	289	1.00	5.00	2.9123	1.20

Note: CPUI-Total = Cyber-Pornography Use Inventory-9; SAI-Instability = Spiritual Assessment Inventory/Instability Measure.

Summary of Research Questions

Research Question One: Correlations

RQ1: What is the relationship between the frequency of pornography use and purpose in life?

Hypothesis 1: There will be a negative relationship between the frequency of pornography use and purpose in life.

The direct relationship between pornography use and purpose in life was first examined. It was hypothesized that there would be a negative relationship between these constructs such that as pornography use increased, purpose in life would decrease. Pearson's correlations were completed to examine each element for significant correlational relationships. The constructs examined were: pornography use, CPUI-Compulsivity, CPUI-Efforts, CPUI-Negative Affect,

CPUI-Total, instability of religiosity, age, and purpose in life. The results of these correlations, as well as the means and standard deviations, are reported in Table 4.3.

After an examination of the direct effect through both zero-order correlations and regression analysis, results reported correlations which are significant at the 0.01 level between purpose in life and CPUI-Compulsivity, CPUI-Efforts, CPUI-Negative Affect, CPUI-Total, religiosity, and age. Correlations which were reported as significant at the $p < .05$ level included pornography use and CPUI-Negativity, and religiosity. Correlations reported as significant at the $p < .01$ level included pornography use and CPUI-Compulsivity, CPUI-Efforts, and CPUI-Total; CPUI-Compulsivity and CPUI-Efforts, CPUI-Negative Affect, CPUI-Total, religiosity, age and purpose in life; CPUI-Efforts and CPUI-Negative Affect, CPUI-Total, religiosity, age, and purpose in life; CPUI Negative Affect and CPUI-Total, religiosity, age, and purpose in life; CPUI-Total and religiosity, age, and purpose in life; Religiosity and age, and purpose in life; and finally age and purpose in life.

Frankl (2006) asserted lower purpose in life may lead to addictions or maladaptive behaviors. Previous research has reported loneliness and boredom are related to lower levels of purpose in life (Fromm, 2000; Hart & Cary, 2014; Hutter, 2012; Melton & Schulenberg, 2007; van Tilburg et al., 2019) and pornography use (Barbalet, 1999; Eastwood et al., 2012; Fahlman et al., 2009; Goldberg et al., 2011; Healy, 1984; Melton & Schulenberg, 2007; Moynihan et al., 2017). Other research has shown a positive relationship between pornography use, perceived addiction, and religiosity (Grubbs, et al., 2018; Perry, 2019). Therefore, it was hypothesized there would be a negative correlation between higher pornography use and lower levels of purpose in life. However, while statistical analysis reported the relationship in the hypothesized negative direction, it was not statistically significant., $r = -.085$. Yet, upon further examination,

using Model 4 for mediation analysis, when controlling for age, Hypothesis 1 was supported.

This finding will be discussed in the next section.

Table 4.3

Pearson's r, Means, and Standard Deviations

	1	2	3	4	5	6	7	8
(1) Pornography Use	1							
(2) CPUI-Compulsivity	.188**	1						
(3) CPUI-Efforts	.197**	.694**	1					
(4) CPUI-Negative Affect	.150*	.701**	.769**	1				
(5) CPUI-Total	.196**	.861**	.922**	.921**	1			
(6) Religious Instability	.120*	.668**	.794**	.745**	.820**	1		
(7) Age	.046	.233**	.243**	.227**	.259**	.228**	1	
(8) Purpose in Life	-.085	-.651**	-.702**	-.630**	-.732**	-.651**	-.275**	1
Mean	3.090	5.554	5.348	5.544	5.482	2.912	26.623	4.760
SD	1.154	2.092	2.866	2.770	2.332	1.204	2.449	.826

*Correlation is significant at the .05 level (2-tailed).

**Correlation is significant at the .01 level (2-tailed).

The next section reports on the mediation, moderation, and moderated mediation models.

Current statistical analysis no longer requires demonstration of an association between X and Y as a prerequisite for other analyses (Hayes, 2018, p. 80). All measures were mean centered prior to analysis to allow for more meaningful regression coefficients (Hayes, 2018) and greater ease of interpretation (Dalal & Zickar, 2012). The level of confidence was set at .95, and bootstrap confidence interval samples was set at 5000.

Research Question Two: Mediation

RQ2: Is the relationship between pornography use and purpose in life mediated by perceived addiction to pornography?

Hypothesis 2: The relationship between pornography use and purpose in life will be mediated by perceived addiction to pornography.

The second model examined the potential mediation of perceived addiction on the direct relationship between pornography use and purpose in life. This analysis utilized Hayes's (2018) conditional process analysis for mediation (Model 4 - Simple Mediation). Model 4 used pornography use as the predictor variable and purpose in life as the outcome variable, with perceived addiction to pornography as the mediator. Figure 4.1 provides a pictorial representation of this model with statistical results.

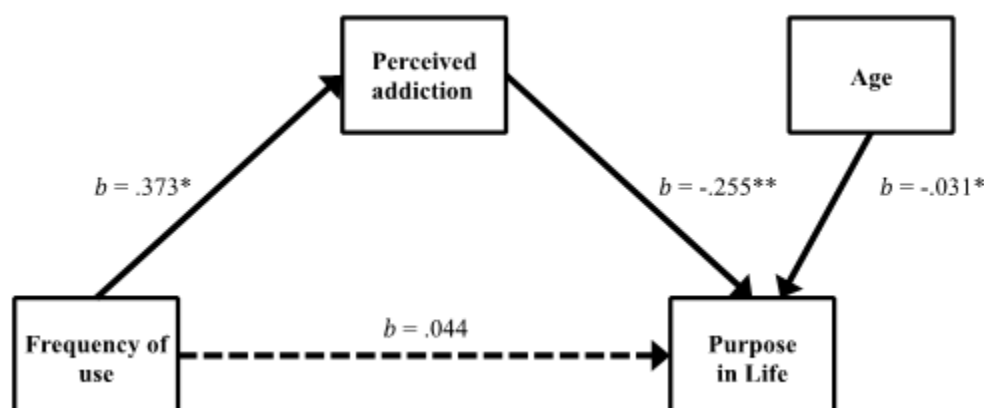


Figure 4.1. Mediation model. Solid lines indicate significance. Dotted lines indicate insignificance.

* $p < .05$

** $p < .001$

Hypothesis 2 proposed perceived addiction to pornography would mediate the relationship between pornography use and purpose in life. Previous research has shown a relationship between pornography use and perceived addiction (Perry, 2016, 2019; Perry & Snawder, 2017). Other research has shown a relationship between addictions and purpose in life (Csabonyi & Phillips, 2017; Frankl, 1979; Glaw et al., 2017). No research addressing the combined constructs of pornography use, perceived addiction to pornography, and purpose in life

was found. However, based on these previous empirical findings, it was hypothesized a relationship might exist between these variables.

This model first addressed Pathway A, examining if pornography use (X) predicted perceived addiction (M). The results showed statistical significance $R = .318$, $R^2 = .101$, $MSE = 4.92$, $F(2, 286) = 16.118$, $p < .001$. Pornography use accounted for 10% of the variance in the outcome variable, perceived addiction to pornography. Pornography use was a statistically significant predictor of perceived addiction. Results controlling for age showed age did significantly affect this relationship.

Second, this model addressed whether pornography use (X) predicted purpose in life (Y) with the mediator, perceived addiction to pornography (M). Results reported statistical significance : $R = .739$, $R^2 = .547$, $MSE = .313$, $F(3, 285) = 114.588$, $p < .001$. Analysis showed that X accounted for 54.7% of the variance in the outcome variable purpose in life when controlling for age (Y). Pathway B, which examined if perceived addiction (M) predicted purpose in life (Y) revealed statistical significance.

When considering the model as a whole, the predictors of perceived addition and age, as covariates, do account for some purpose in life, and the indirect relationship was reported as significant. Pathway C' examined if pornography use (X) no longer predicted (or lessened the prediction of) purpose in life (Y) when the mediator of perceived addiction (M) was involved. Finally, the total effect model, Pathway C, examined if pornography use (X) predicted purpose in life (Y) without mediation. Overall results reported $b = -0.0517$, $t(286) = -1.27$, $p < .204$, with bootstrap confidence intervals including zero, 95% CI [-.1316, .0283] indicating no statistical significance. However, when accounting for age, $b = -0.092$, $t(286) = -4.78$, $p < .001$, bootstrap confidence intervals did not cross zero, 95% CI [-.130, -.054], indicating statistical significance.

Table 4.4

Conditional Process Analysis Results for Mediation Model

Source	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI	
					<i>LL</i>	<i>UL</i>
Perceived Addiction						
Pornography use	0.373	.113	3.293	.001	.150	.597
Age	0.239	.053	4.467	<.001	.134	.344
Purpose in Life						
Pornography use	0.044	.029	1.496	.136	-.014	.101
Perceived addiction	-0.255	.015	-17.116	<.001	-.284	-.226
Age	-0.031	.014	-2.205	.028	-.058	-.003

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

Analysis reported statistically significant predictions between pornography use and perceived addiction to pornography ($X \rightarrow M$), $R = .831$, $R_2 = .690$, $MSE = 1.708$, $F(4, 284) = 158.188$, $p < .001$, as well as perceived addiction and purpose in life ($M \rightarrow Y$), $R = .744$, $R_2 = .554$, $MSE = .310$, $F(5, 283) = 70.267$, $p < .001$. Examining the total indirect effect ($-.0517[C]$, $-.0435[C'] = -.0952$) confirmed the effect size with the mediator decreased rather than increased, suggesting a difference between C and C' . As bootstrap confidence intervals did not cross zero, the null hypothesis was rejected. Therefore, while the direct pathway between pornography use and purpose in life was not statistically significant unless controlling for age, the indirect effect was statistically significant. Statistical results for the mediation analysis are listed in Table 4.4.

Table 4.5

Conditional Process Analysis Results for Moderated Mediation Model

Source	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI	
					<i>LL</i>	<i>UL</i>
Perceived Addiction						
Pornography use	0.206	.067	3.063	.002	.074	.339
Religious instability	1.515	.067	22.583	<.001	1.383	1.647
Pornography use x Religious instability	0.086	.054	1.580	.115	-.021	.193
Age	0.073	.032	2.244	.026	.009	.136
Purpose in Life						
Pornography use	0.038	.029	1.306	.193	.096	-.019
Perceived addiction	-0.212	.025	-8.376	<.001	-.162	-.261
Religious instability	-0.100	.048	-2.082	.038	-.005	-.194
Pornography use x Religious instability	-0.009	.023	-0.382	.703	.037	-.055
Age	-0.030	.014	-2.172	.031	-.003	-.058

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

Research Question Three: Moderation

RQ3: How does religiosity moderate the indirect relationship between frequency of pornography use and purpose in life?

Hypothesis 3: The relationship between frequency of pornography use and purpose in life will be moderated by religiosity.

The third research question examined the potential moderating effect of religiosity (W) (measured by the instability measure of the SAI) on the indirect relationship between pornography use (X) and purpose in life (Y). Hayes's (2018) Process Model 8 (moderated mediation) was used to assess this relationship utilizing pornography use as the predictor variable, purpose in life the outcome variable, and religiosity as the moderator. Figure 4.2 illustrates this model with statistical results.

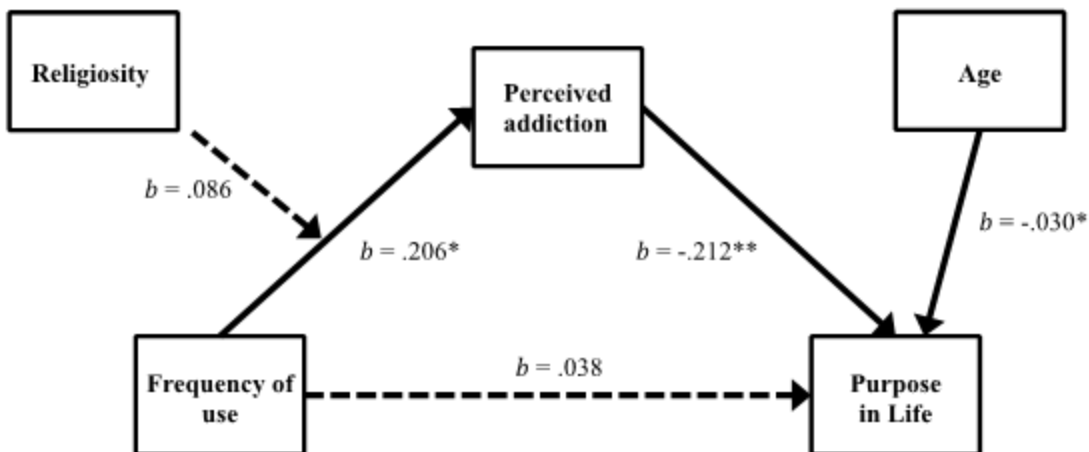


Figure 4.2. Moderated Pathway A mediation model. Solid lines indicate significance. Dotted lines indicate insignificance.

* $p < .05$

** $p < .001$

This model first examined if pornography use (X) predicted perceived addiction to pornography (M). The results showed statistical significance, $F(4,284) = 158.188$, $R^2 = .6902$, $p = < .001$, with pornography use accounting for 69.02% of the variance in the outcome variable perceived addiction. Pornography use was reported as a statistically significant predictor. Next, this model examined if religious instability (W) predicted perceived addiction to pornography (M). Analysis reported statistical significance. These results suggested as religious instability increased by one unit, perceived addiction increased by 1.5 units.

Finally, analysis addressed the interaction between pornography use (X) and religiosity (W) on perceived addiction to pornography (M). Bootstrap confidence interval measures crossed zero, 95% CI $[-.0211, -.1926]$, exposing a lack of statistical significance. This showed the effect of pornography use (X) on perceived addiction (M) is not dependent on religiosity (W). However, statistical moderation of the $X \rightarrow M$ path is not a requirement of moderation of the indirect path ($X \rightarrow Y$; Hayes, 2018, p. 448).

The next pathway (C') examined if pornography use (X) predicted purpose in life (Y) with and without the moderator of religiosity (W). The analysis reported statistical significance with $F(5,283) = 70.267, p = <.001, R^2 = .5539$. These results showed pornography use accounts for 55.39% of the variance in the outcome variable purpose in life. First examined was whether or not pornography use (X) predicted purpose in life (Y) while controlling for religiosity (W). Pornography use (X) was not reported as a significant predictor. Next, while perceived addiction to pornography (M) was reported as a significant predictor (of Y), religiosity (W) was not reported as a predictor (of Y). Finally, a calculation of the interaction between variables (X * W) showed no statistical significance. However, when controlling for age, there was statistical significance. Table 4.4 illustrates these results.

Overall analysis of the conditional direct effect of pornography use on purpose in life reported lack of significance at all pick-a-point values of religiosity: low (16%, .0550, $p = .281$), average (50%, .0344, $p = .2773$), and high (84%, -.0275, $p = .514$). Analysis of the conditional indirect effect of pornography use (X) on purpose in life (Y) mediated by perceived addiction to pornography (M) reported negative effects at low (-.0090), average (-.0513), and high (-.0654) values for religious instability (W), with bootstrap confidence intervals crossing zero at the low but not average and high levels of effect. However, for the index of moderated mediation, bootstrap confidence level did fall across zero, 95% CI [-.0410, .0050], reporting a lack of statistical significance and implying there is no moderated mediation except when controlling for age.

Research Question Four: Moderated Mediation

RQ4: Does religiosity moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life?

Hypothesis 4: Religiosity will moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life.

The fourth research question used Hayes's (2018) Process Model 59 to statistically examine if religiosity moderated the mediated path of pornography use \rightarrow perceived addiction to pornography \rightarrow purpose in life. This model utilized pornography use as the predictor variable and purpose in life as the outcome variable, religiosity as the mediator, and perceived addiction as the moderator. Figure 4.3 illustrates the statistical results of this model.

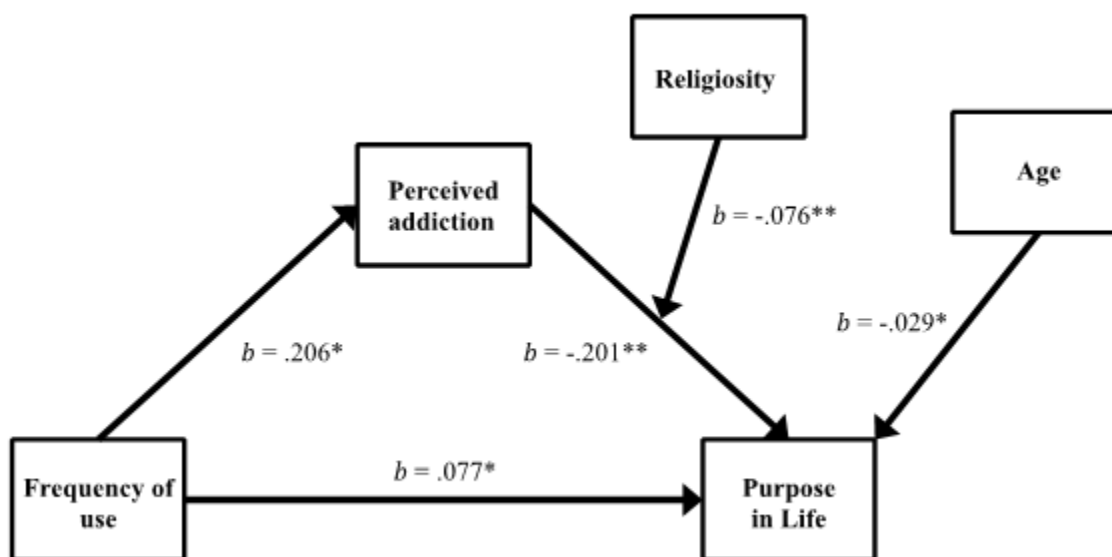


Figure 4.3. Moderated mediation model. Solid lines indicate significance. Dotted lines indicate insignificance.

* $p < .05$

** $p < .001$

The model first examined if pornography use (X) predicted the moderator, perceived addiction to pornography (M). This same initial pathway was examined and previously discussed in research question three with statistical results of $R = .831$, $R^2 = .690$, $MSE = 1.708$, $F(4, 284) = 158.188$, $p < .001$. Second, the model examined if pornography use (X) predicted purpose in life (Y) when factoring for perceived addiction (M) and religiosity (W). The results

of analysis show statistical significance, $R = .770$, $R^2 = .594$, $MSE = .284$, $F(6, 282) = 68.638$, $p < .001$. First, pornography use (X) was examined and reported statistical significance. Next, perceived addiction (M) showed statistical significance, as did religiosity (W).

Finally, interactions were examined for significance. The interaction between pornography use and religiosity (X * M) on purpose in life (Y) showed no statistical significance. Bootstrap confidence intervals crossed zero, 95% CI [-.0354, .0530], confirming lack of significance. The interaction between perceived addiction and religiosity (M * W) on purpose in life (Y) was examined last. The interaction was found to be statistically significant. Figure 4.4 is a pictorial representation of these interactions with statistical results.

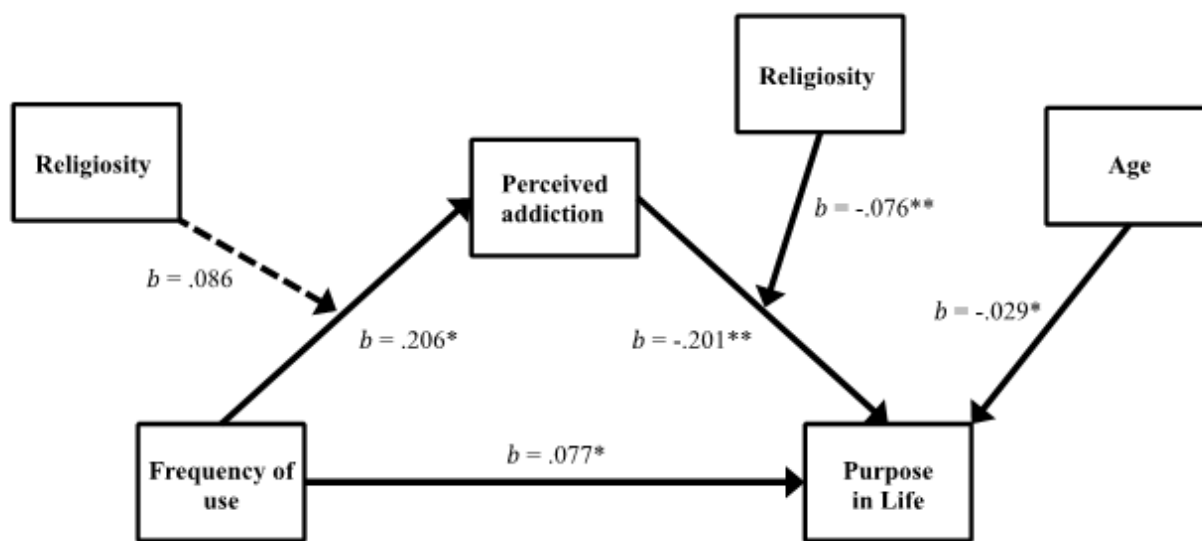


Figure 4.4. Integrated moderated mediation model. Solid lines indicate significance. Dotted lines indicate insignificance.

* $p < .05$

** $p < .001$

The conditional effect of the focal predictor, perceived addiction (M), at different levels of religious instability (W) was negative at low levels (-.0569) and not statistically significant, p

= .1367, with bootstrap confidence intervals falling across zero, 95% CI [-.1320, .0181]. At average and high levels, the effect was also negative but statistically significant, $p = <.001$.

The conditional direct effect examined if pornography use (X) predicted purpose in life (Y) controlling for perceived addiction (M) at differing effect values of religious instability (W). Analysis reported positive effect at all levels: low (.0606, $p = .2150$), medium (.810, $p = .0105$), and high (.0878, $p = .0366$) with statistical significance reported at average and high effect levels.

The conditional indirect effect examined how religiosity (W) moderated the mediated relationship between pornography use (X), perceived addiction (M), and purpose in life (Y). Negative effect was reported at all three levels, low (-.0024), average (-.0565), and high (-.0902). At the lower effect level, bootstrap confidence intervals crossed zero, implying lack of statistical significance. However, at both average and high effect levels, bootstrap confidence interval levels did not cross zero, implying statistical significance. Figure 4.5 illustrates the interaction of perceived addiction (M) and religiosity (W) on purpose in life (Y). Hypothesis 4 was supported.

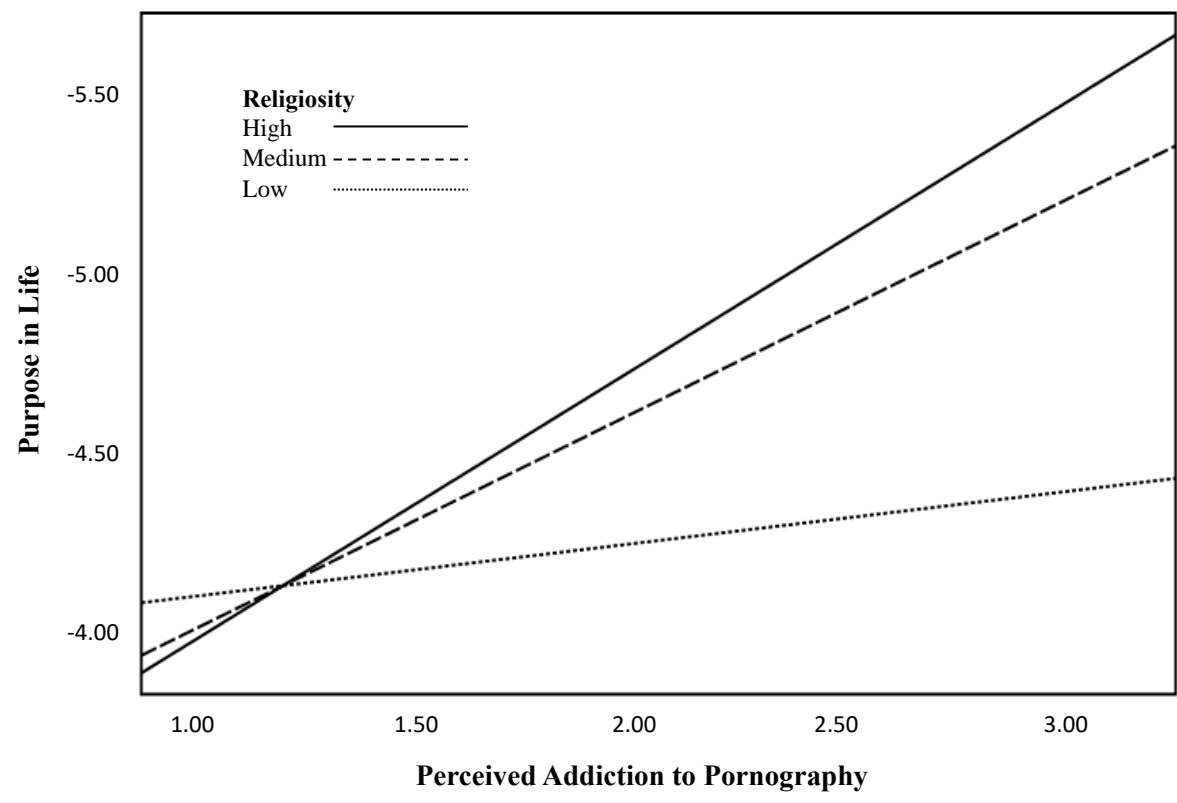


Figure 4.5. Interaction effect of perceived addiction and religiosity on purpose in life.

Pairwise contrasts between conditional indirect effects are statistically significant with no bootstrap confidence intervals crossing zero. This implies religiosity (W) moderates the indirect effect of pornography use (X) on purpose in life (Y). Statistical results for this model are presented in Table 4.5.

Table 4.5

Conditional Process Analysis Results for Moderated Mediation Model

Source	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI	
					<i>LL</i>	<i>UL</i>
Perceived Addiction						
Pornography Use	0.206	.067	3.063	.002	.074	.339
Religious Instability	1.515	.067	22.583	<.001	1.383	1.647
Pornography Use x Religious Instability	0.086	.054	1.580	.115	-.021	.193
Age	0.073	.032	2.244	.026	.009	.136
Purpose in Life						
Pornography Use	0.077	.029	2.677	.008	.134	.021
Perceived Addiction	-0.201	.024	-8.303	<.001	-.154	-.249
Religious Instability	-0.176	.048	-3.672	<.001	-.082	-.271
Pornography Use x Religious Instability	0.009	.023	0.390	.697	.053	-.035
Perceived Addiction x Religious Instability	-0.076	.014	-5.248	<.001	-.047	-.104
Age	-0.029	.013	-2.159	.032	-.003	-.055

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

Chapter Summary

This chapter provided an overview of the statistical results of this research study. Amazon's MTurk was used to recruit participants between 18 and 30 years old who also endorsed pornography use. Data were entered into IBM's SPSS Statistics Version 26 (2019) with Hayes's (2018) process macro for SPSS. Data were screened for outliers, resulting in 289 participants. Hayes's (2018) Process Models 4, 8 and 59 were used to analyze research questions addressing correlations, moderation, mediation, and moderated mediation. Age was controlled for in each analysis.

Research question one examined the potential relationship between pornography use (X) and purpose in life (Y) and was analyzed using bivariate correlational analysis. Hypothesis 1 proposed there would be a negative relationship between pornography use and purpose in life.

While a negative relationship between variables was reported, it was not initially reported as statistically significant; however, when controlling for age, Hypothesis 1 was supported.

Research question two examined if the relationship between pornography use (X) and purpose in life (Y) was mediated by perceived addiction to pornography (M). While some intermediary relationships reported significance, Hypothesis 2, which proposed the relationship between pornography use and purpose in life would be mediated by perceived addiction to pornography, was not initially supported. However, when controlling for age, statistical significance was reported.

Research question three examined how religiosity (W) might moderate the indirect relationship between pornography use (X) and purpose in life (Y). While some variables reported significance, Hypothesis 3, which proposed the relationship between pornography use and purpose in life would be moderated by religiosity, was not supported with statistical significance. However, statistical significance was reported when controlling for age.

Finally, research question four examined if religiosity (W) moderated the mediated relationship between pornography use (X), perceived addiction to pornography (M), and purpose in life (Y). Hypothesis 4, which proposed religiosity would moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life, was supported.

The summary of findings and implications of the statistical analysis, as well as the limitations of the study, suggestions for future research, and clinical implications, will be discussed in the next chapter.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The current study was based on previous research that addressed the relationships between pornography use, religiosity, and perceived addiction to pornography. To this extant research, this study added the variable of purpose in life. This chapter provides an overview and discussion of the findings resulting from statistical analysis based on four research questions: What is the relationship between the frequency of pornography use and purpose in life? Is the relationship between pornography use and purpose in life mediated by perceived addiction to pornography? How does religiosity moderate the relationship between frequency of pornography use and purpose in life? Does religiosity moderate the mediated relationship between pornography use, perceived addiction to pornography, and purpose in life? The implications of statistical results are discussed, followed by limitations, suggestions for future research, and an overall summary of the research study.

Amazon's MTurk was used to recruit 578 participants. Data were screened to include participants who were between the ages of 18 and 30 who also endorsed use of pornography in the past six months. This resulted in a total sample of 289 participants. Overall, participants were most frequently reported as: male (56.7%), White (78.2%), college educated (75.1%), employed (73.6%), being married or having a life partner (47.4%), and Catholic (50.2%). The most common responses to questions regarding religious activity reported the highest percentage of individuals do not attend religious services (20.4%), do believe there is a God (49.1%), and report religion or faith affect every day and decision making "a little" (33.2%). With regard to pornography use, the greatest percentage of participants reported they had used pornography in the past: week, one to three times (44.3%); month, four to six times (30.8%); and six months, 10

or more times (30.1%). When participants were asked if they had been sexually active in the last six months with their current romantic partner, 76.1% answered affirmatively.

Discussion

The current study was based on previous research that examined the constructs of pornography use, purpose in life, religious instability, and perceived addiction in various combinations. Grubbs, Perry, et al.'s (2018) and Perry's (2019) extensive research repeatedly reported relationships between pornography use, perceived addiction to pornography, and religious moral disapproval (resulting from incongruence between religious moral values and use of pornography). Other research reported a positive relationship between religiosity and perceived addiction to pornography (Abell et al., 2006; Guidry et al., 2019; Levert, 2007; Perry, 2016; Volk et al., 2019) and a negative relationship between pornography use and religiosity (Bradley et al., 2016; Cavaglion, 2008; Dunn et al., 2012; Egan & Parmar, 2013; Grubbs et al., 2010; Grubbs, Exline et al., 2015; Grubbs, Volk, et al., 2015; Pyle & Bridges, 2012; Wilt et al., 2016). Additionally, research consistently reported positive relationships between purpose in life and religiosity (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003). No research had examined the relationship between pornography use, religiosity, perceived addiction to pornography, and purpose in life. This study was designed and conducted to examine the interactions between these four constructs.

The first research question examined the direct relationship between pornography use and purpose in life. It was hypothesized there would be a negative correlation between these constructs. The second research question addressed if perceived addiction to pornography mediated the relationship between pornography use and purpose in life. The third research question addressed how religiosity might moderate the indirect relationship between

pornography use and purpose in life. The fourth research question addressed the combined constructs with a moderated mediation model. In research questions two through four, it was hypothesized there would be a mediated, moderated, and moderated mediated relationship.

Summary of Findings and Implications

Research Question One: Correlations

The first research question examined the potential correlational relationship between pornography use and purpose in life. Previous research had reported relationships between pornography use and moral disapproval of behaviors in samples of religious individuals, leading to perceived addiction to pornography (e.g., Grubbs, Perry, et al., 2018; Perry, 2019). Other research positively connected purpose in life with religiosity (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003). No research had examined the combination of these specific constructs. It was hypothesized that there would be a negative relationship between pornography use and purpose in life. Hypothesis one was not initially supported; however, when controlling for age, significance was reported.

The initial lack of a significant correlational finding between pornography use and purpose in life was unexpected, as previous research had suggested a relationship might exist based on correlations between religiosity, boredom, and loneliness with both pornography use and purpose in life. While initial statistical significance was not found, a negative direction was reported in the correlational analysis (-.085). Further examination of research variables showed statistically significant relationships between pornography use (X) and perceived addiction (M) (.196), perceived addiction (M) and purpose in life (Y; -.732), pornography use (X) and religious instability (W; .120), and perceived addiction (M) and religious instability (W; -.085). In

addition, age showed correlational significance with all constructs except pornography use and purpose in life. Each of these correlational relationships is further examined in the next section.

Correlation between pornography use and purpose in life. As the relationship between these variables had not been examined, a causal, time-order relationship was the best guess based on contradictory research findings. For example, previous research reported relationships between higher levels of boredom and loneliness to be related to pornography use (Barbalet, 1999; Eastwood et al., 2012; Fahlman et al., 2009; Goldberg et al., 2011; Healy, 1984; Melton & Schulenberg, 2007; Moynihan et al., 2017) and even predictive of pornography use (Butler et al., 2018; Hutter, 2012; Price et al., 2016; Primack et al., 2017). Other research showed boredom and emptiness to be related to lower levels of purpose in life (Fromm, 2000; Hart & Cary, 2014; Hutter, 2012; Melton & Schulenberg, 2007; van Tilburg et al., 2019). Based on this previous research connecting research variables, it was hypothesized that there would be a negative relationship between pornography use and purpose in life. However, Hypotheses 1 was not supported through the correlational analysis. Yet, when controlling for age, in Model 4, the relationship between pornography use and purpose in life was significant.

It is possible the time-order prediction might more accurately be reversed with purpose in life as the predictor, rather than outcome, variable. A reversal in the causal sequence might result in findings such as lower purpose in life affecting the choice (or frequency) of use or higher purpose in life as a protective factor against pornography use. This reversed pathway might better support Frankl's (2006) assertion that lower purpose in life leads to addictions. Alternatively, there may be a cyclical relationship between the two variables. While correlation does not prove causation, further research could examine an inversed time-order relationship.

Other correlations with pornography use. While pornography use was not significantly correlated with purpose in life unless controlling for age, other statistically significant correlations were reported. Pornography use was significantly correlated with perceived addiction to pornography and religious instability. This adds to the extant research literature, which has previously reported these relationships (e.g., Grubbs & Perry, 2018; Perry, 2019). The correlations between pornography use and the CPUI-9 factors of compulsivity, efforts, and negative affect, as well as overall CPUI-total score, reaffirmed the predictive reliability of the CPUI-9 instrument.

Other correlations with purpose in life. Significant negative correlations were reported between purpose in life and all CPUI-9 factors (compulsivity, efforts, and negative affect) as well as overall CPUI-total score. While these results were not predicted by research hypotheses, they are in line with current research. Purpose in life has been shown to be negatively related to addictions (García-Alandete et al., 2014; Glaw et al., 2017; Kleftaras & Katsogianni, 2012; Marco et al., 2015), lack of motivation, and overall life dissatisfaction (Frankl, 2006; Hart & Cary, 2014). Purpose in life was also significantly negatively correlated with religious instability. This is not surprising, as previous research has reported positive correlations between healthy religiosity (rather than instability in religiosity as measured in this research study) and higher purpose in life (Allport, 1950; Crandall & Rasmussen, 1975; Steger & Frazier, 2005; Steger et al., 2006; Wong, 2012).

While the correlations between the variables of interest for this study were not statistically significant unless controlling for age, lack of correlation does not imply a lack of relationship. Hayes (2018) acknowledged correlation is no longer a necessary prerequisite for investigating potential mediations, moderations, or moderated mediations. Therefore, the

following section will address the previously proposed mediation, moderation, and moderated mediation models.

Mediation, Moderation, and Moderated Mediation

Research questions two, three, and four addressed mediation, moderation, and moderated mediation. While the mediation and moderation models were found to be significant only when controlling for age, the moderated mediation model reported statistical significance. Most previous research findings that reported relationships between pornography use, religiosity, perceived addiction, and purpose in life were supported. However, some hypotheses, inferred from indirect relationships between research variables in previous research, did not reveal statistically significant findings. Two overall factors may have impacted the results: age and causal sequence.

The effect of age on research study results. Previous research has shown as age increases, wisdom and purpose in life also increase (Reker & Wong, 1988). These combined factors of aging and purpose in life may affect the behavioral choice to use or not to use pornography. As young adults are the most frequent users of pornography (Grubbs, Perry, et al., 2018; Perry, 2019), it is not surprising that age affects the relationships between these variables. In fact, when controlling for age, each model increased in statistical significance. For example, hypotheses one, two, and three were not initially supported. However, when controlling for age, each was statistically significant. Even though hypothesis four was supported without controlling for age, significance was also found when controlling for age.

The effect of the proposed time-order sequence. As this research study added the purpose in life variable to previously studied relationships between pornography use, religiosity, and perceived addiction to pornography, the time-order sequence from pornography use to

purpose in life ($X \rightarrow Y$) was a best-guess causal sequence. Previous research had reported time-order sequencing between pornography use and perceived addiction ($X \rightarrow M$), religious instability and perceived addiction ($W \rightarrow M$), and pornography use and religious instability ($X \rightarrow W$). Lack of statistical significance may indicate an error in the time order relationship between pornography use and purpose in life. Therefore, when considering the statistical results and implications of this research, it is important to keep in mind the antecedent variables and outcome variable may be incorrect in their time-order sequence. In other words, purpose in life may be predictive of pornography use ($Y \rightarrow X$) while this research study used causal sequencing to examine the predictive potential of pornography use on purpose in life ($X \rightarrow Y$).

Research Question Two: Mediation

The second research question asked if perceived addiction to pornography mediated the relationship between pornography use and purpose in life. Mediation was predicted since previous research reported relationships between religiosity and perceived addiction ($W + M$; (Grubbs, Perry, et al., 2018; Perry, 2019), as well as between religiosity and purpose in life ($W + Y$; Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003). Other research had reported relationships between pornography use and perceived addiction ($X + M$; Grubbs, Wilt, et al., 2018; Perry, 2016, 2019, Perry & Snawder, 2017), as well as between addictions and purpose in life (Csabonyi & Phillips, 2017; Frankl, 1979, Glaw et al., 2017). However, as there was no previous research linking perceived addiction to purpose in life, initial lack of mediation was not surprising.

Statistical results did show significant relationships between some variables ($X \rightarrow M$, $M \rightarrow Y$), but the mediated pathway ($X \rightarrow M \rightarrow Y$) was not reported as statistically significant. Interestingly, the direct pathway between pornography use and purpose in life ($X \rightarrow Y$) was

statistically significant. This was further explicated as the indirect effect, the difference between the total effect of $X \rightarrow Y$ and $X \rightarrow M \rightarrow Y$, implied there is a difference when controlling for age. These results are in line with previous research that reported increased age leads to increased purpose in life and showed the significant impact of age on the mediated relationship.

Research Question Three: Moderation

The third research question examined the moderating effect of religiosity (W, as measured by the instability measure of the SAI) on the indirect relationship between pornography use (X) and purpose in life (Y). While the previous model showed a lack of statistical significance, mediation is not required for moderation (Hayes, 2018). The statistical analysis resulted in significant relationships between pornography use and religious instability ($X \rightarrow M$), religious instability and perceived addiction ($W \rightarrow M$), and perceived addiction and purpose in life ($M \rightarrow Y$) but no statistically significant moderation ($X \rightarrow M \rightarrow Y$). However, when controlling for age, significance was reported.

Another item of interest was the interaction between perceived addiction (M) and religious instability (W). Statistical analysis revealed that as religious instability (W) increased by one unit, perceived addiction (M) increased by 1.5 units. This finding supports previous research showing statistically significant relationships between perceived addiction and religious instability (Grubbs, Perry, et al., 2018; Perry, 2019). While religiosity (W) had previously been reported as related to each variable: pornography use (X), purpose in life (Y), and perceived addiction (M), it did not moderate the relationship between pornography use (X) and purpose in life (Y).

Lack of moderation by religious instability on the indirect relationship between pornography use and purpose in life was an unexpected result. Extensive research has shown

greater levels of reported religiosity to be positively associated with higher moral disapproval and negatively related to the frequency of pornography use (Carroll et al., 2008; Grubbs, Wilt, et al., 2018; Grubbs, Kraus, Perry, 2019; Poulsen et al., 2013; Wright, 2013; Wright et al., 2013). Religiosity has been shown to be positively associated with purpose in life (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003). Therefore, if an individual reported instability in their religiosity (relationship with God), it seemed likely purpose in life would also decrease. However, statistical analysis did not report moderation except when controlling for age.

First, moderation was expected as instability in God attachment (as measured by the SAI-Instability scale) was expected to be related to lower purpose in life. As previously reported in the literature, religious instability was significantly related to perceived addiction (Grubbs, Perry, et al., 2018; Perry, 2019). However, it was not significantly related to pornography use or purpose in life. This may indicate moderation by religiosity is related to avoidant, rather than the predicted insecure, God attachment. In fact, previous research has shown purpose in life to be negatively related to attachment anxiety and attachment avoidance (Luna et al., 2016). If this is the case, an assessment such as the Attachment to God Inventory (Beck & McDonald, 2004) addressing avoidant, rather than insecure, God attachment could help examine potential moderation of these variables.

Moderation by religious instability was also expected as previous research has shown religiosity provides a pathway to focus on eternal pursuits rather than temporal pleasures (Chamberlain & Zika, 1992; Reker & Wong, 1998; Wong, 2012). Previous research reported when individuals lack meaning in life, they may turn to self-focused, self-absorbed, maladaptive,

and destructive behaviors (Baumeister, 1991; Frankl, 2006). Therefore, religious instability was expected to reveal temporal gratification represented by pornography use.

This temporal focus might be influenced by the reported age of the sample ($M = 26.6$). This age is representative of the Millennial generation, those born from 1980–1999, who have been reported to focus on the immediate gratification of needs rather and lack the restraint required for the lifelong pursuit of purpose (Twenge & Campbell, 2012). This is supported in this research study through participant responses which most frequently reported: not having a religion (16.6%), not attending religious services (20.4%), believing that there is a God (49.1%), and believing that religion or faith affect everyday life and decision-making only “a little” (33.2%). As wisdom typically increases with age, lack of moderation when not controlling for age may reflect young adults’ lack of a depth of understanding of both religiosity and purpose in life (Lakies, 2013). In fact, only when controlling for age was significance reported.

Age might also affect an individual’s concept of religion and relationships. With the accessibility, anonymity, and accessibility of the Internet (Cooper, 1998) and social media, young adults’ experience of relationship is largely developed through interactions with “friends” on media platforms (Turkle, 2011, 2015). This perception of relationship may also impact the supra-personal relationship, which is foundational to the concept of ultimate meaning in life (Frankl, 1997). This lack of depth in relationships may affect participation in physical church activities (which may be replaced though listening to podcasts; Waters & Bortree, 2012) and result in a lack of mentoring by older, wiser believers who might assist younger believers in their search for meaning in life as well as hold them accountable for behaviors (Perry, 2019).

Lack of moderation may reflect the current relativistic nature of Western culture regarding the importance of religiosity. While historically religious beliefs, morals, and values

have impacted and restricted some maladaptive behaviors, current cultural norms allow for lack of belief in a higher power as well as acceptance of a higher being that does not represent Christian morals or values (Perry, 2019). Within the Christian church, some believers also lack belief in God's word as foundational and inerrant while embracing increased tolerance for previously prohibited behaviors (e.g., pornography use and sexual promiscuity; Perry, 2019). Overall, Western culture increasingly views Biblical mandates as intolerant of the relativistic viewpoint and pressures the church and believers to conform to cultural norms. This shift has resulted in religious individuals moving from being effective change agents to statistically similar to nonreligious individuals in behaviors and lifestyle choices. Additionally, in an effort to be relevant and open to religious seekers, the Christian church has largely reduced its focus on sinful behaviors while increasing its focus on God's grace (rather than a balance between His love and laws; Perry, 2019), resulting in Christian believers who are both in the world and of it.

Finally, previously reported connections between religiosity and purpose in life may reflect existential or cognitive beliefs about God and life that may not impact behavioral choices such as religious activities or pornography use. This supports previous research that reported the *meaning* of pornography use may result in moral incongruence, resulting in moral disapproval but not necessarily affecting the frequency of use (Grubbs, Perry, et al., 2018; Perry, 2019). Additionally, the disparity between beliefs and behaviors may reflect individuals' perception that pornography use is simply an entertainment choice (MacCulloch, 2010) and not related to religious beliefs or existential issues related to purpose in life. This might be the result of increased desensitization of young adults to violence, aggression, sexuality, and spiritual darkness throughout all forms of media (Fanti & Avraamides, 2011), including the enormous increases and predicted growth in the development and use of pornography on the Internet

(Lykke & Cohen, 2015; Maddock et al., 2019; Price et al., 2016; Willoughby et al., 2016).

Overall, Western culture's current relativistic, individualistic, and self-gratification focus is in direct opposition to Frankl's (2006) three existential conditions for meaningful living. This disparity may help explain the lack of statistical moderation, as the behavioral choice to use pornography may not be perceived as related to existential religious beliefs or purpose in life.

Research Question Four: Moderated Mediation

The fourth research question examined the potential moderating effect of religiosity (W) on the mediated pathway of pornography use, perceived addiction to pornography, and purpose in life ($X \rightarrow M \rightarrow Y$). Statistical significance was reported in most variable relationships ($X \rightarrow M$, $W \rightarrow M$, $X \rightarrow M$ [controlling for age], $M \rightarrow Y$, $W \rightarrow Y$, $M*W \rightarrow Y$, $X \rightarrow Y$, $X \rightarrow Y$ [controlling for age]). Only relationships between $X*W \rightarrow M$ and $X*W \rightarrow Y$ were not reported as statistically significant.

Pathway A ($X \rightarrow M$) was reported as statistically significant but not moderated by W. In other words, pornography use was reported as significantly and positively related to perceived addiction, but that relationship was not moderated by religious instability. This supports previous research, which has reported a robust relationship between religious instability and perceived addiction (Grubbs et al., 2017; Perry, 2019) as well as inconsistent relationships between actual frequency of pornography use and perceived addiction (Perry, 2019). Therefore, it follows that the relationship would not be moderated by religious instability. This lack of moderation might be the result of an individual's relationship with God, as reflected in their God attachment style. This research study examined instability, which is related to an insecure God attachment. It may be the case that while stability in one's relationship to God does not equate to a good relationship with God, instability may reflect a poor relationship with God. Therefore,

rather than having an unstable relationship with God, as examined in this study, participants may have an avoidant relationship with God. If this is the case, individuals with an avoidant God attachment may not connect pornography use with their relationship with God and, therefore, not report moral incongruence or psychological distress associated with pornography use. In fact, they may not report problematic pornography use at all, as it is not cognitively or existentially connected to their beliefs. Pathway B ($M \rightarrow Y$) reported the negative relationship between perceived addiction and purpose in life was significant and moderated by religious instability. This shows perceived addiction (as measured by the CPUI-9) interacts with religiosity (as measured by SAI-instability) to create purpose in life.

Overall Total, Conditional Direct and Indirect Effects

Model 4 analyzed the total, direct, and indirect effects of pornography use (X) on purpose in life (Y). While neither C nor C' reported significance, the indirect effect size was -.092 with bootstrap confidence intervals that did not cross zero, implying there is a difference in C and C'. This might be explained as changing when controlling for age. Both Models 8 and 59 addressed conditional direct and indirect effects at low, average, and high levels of religious instability.

The conditional direct effect of pornography use on purpose in life when taking into account low, average, and high effect levels for religious instability (W) reported effects in a positive direction. However, only average and high effect levels of religious instability (W) showed significance. This implies average and higher levels of religious instability impact the $X \rightarrow Y$ relationship. This supports the research which suggests religiosity and purpose in life are negatively related (Hood et al., 2009; Paloutzian & Park, 2005; Worthington et al., 1996, 2003) as well as research reporting a negative relationship between purpose in life and addictive behaviors (Csabonyi & Phillips, 2017; Frankl, 1979; Glaw et al., 2017). The conditional indirect

effect of pornography use on purpose in life as mediated by perceived addiction ($X \rightarrow M \rightarrow Y$) at each effect level of religious instability reported effects in the negative direction. At average and high levels, the effect was significant.

Additional Findings

While not predicted or discussed in the proposal for this research study, an interesting finding regarding perception should be discussed. The strong and statistically significant negative relationship between purpose in life and perceived addiction, while supporting previous research connecting addictions and purpose in life, adds a new element connecting *perceived* addiction to *perceived* purpose in life. This relationship may be attributed to both variables being cognitive and existential in nature. Frankl's (2006) third condition for finding meaning in life, the attitudinal value, was achieved through suffering with dignity and courage. Foundational to this value was the belief that the suffering must be forced upon the individual. As pornography use is a personal behavioral choice, individuals with higher meaning in life may existentially rationalize their use as entertainment rather than acknowledge the spiritual incongruence and psychological suffering caused by their use. In other words, pornography users may extricate their behaviors from their existential and religious beliefs to prevent existential angst. This separation of behaviors and beliefs supports previous research, which showed a lack of connection between the behavioral use of pornography and the existential concept of moral incongruence resulting from a disparity between behaviors and religious, moral beliefs (Grubbs, Wilt, et al., 2018; Perry, 2019).

Limitations of the Study

The first limitation of the study may be the use of Amazon's MTurk participants. While research on this service has been shown to be reliable (Casler et al., 2013; Mason & Suri, 2012),

it is possible participants were not honest in their responses or may not be representative of the general population or, specifically, pornography users. An example of this limitation might be the unusual demographic result that 50.2% of respondents reported as Catholic. The second limitation is the challenges associated with self-reporting. Self-reporting measures have previously been shown to be problematic (Northrup, 1996) as individuals may err in responding (e.g., fill in the wrong bubble, click the wrong box) or not be honest in their responses due to social desirability issues (Osborne, 2012). Shame or embarrassment regarding reporting of pornography use may have also influenced participant' responses. While reported as both reliable and valid, there may have been errors in the measurement tools. In addition, as this measurement is only reflective of the moment in which individuals took the assessment, an individual's responses might change if assessed at another moment in time. Finally, due to the use of cross-sectional sampling and correlational design, causal relationships cannot be inferred. In fact, as discussed previously, the time-order sequence may be altogether incorrect.

Suggestions for Future Research

Future research should continue to explore the relationship between pornography use and purpose in life. In addition to these constructs, other variables already identified as associated with purpose in life and pornography use could be examined. Some of these might include boredom, loneliness (Butler et al., 2018; Hutter, 2012; Price et al., 2016; Primack et al., 2017), aggression, addictions, or depression (Frankl, 2006; Ilievski, 2015; Reker, 2000; Schnell, 2009; Wilt et al., 2018) and shame (Kyle, 2013). Alternately, variables from this research study could be removed, or different measures from the current assessments could be studied. Current or new variables could operate as mediators or moderators in different combinations and with different Hayes (2018) PROCESS models.

Changing the sample population to utilize a clinical population of identified pornography users, as well as nonusers and previous users, might broaden the understanding of the relationships between variables. Additionally, using a sample of individuals with self-identified high levels of pornography use or high levels of purpose in life might strengthen findings. Researchers might examine different demographics such as sexual identities, age groupings, developmental level, the region of the country, or political affiliation. Other data gathering or crowdsourcing tools such as Microworker (Crone & Williams, 2017) or participant pools might be employed to more strategically target research participants.

As purpose in life has been shown to develop across the lifespan and pornography is most frequently used by young adults, this study specifically looked at young adults and pornography use. Future research might examine different age groups' relationship with pornography use. For example, research might look at the relationship between pornography use and middle or older adults who report established purpose in life. Examining different age groups and use might help establish the time-order sequence between study variables.

While the assessment instruments used were valid with results reporting reliably, researchers might utilize assessments that address other interrelated variables. Some assessments to consider might address meaning in life (Seeking of Noetic Goals Test; Crumbaugh, 1977), depression (Depression Anxiety and Stress Scale; Lovibond & Lovibond, 1995), hypersexuality (Hypersexual Behavior Inventory; Reid, Garos, & Carpenter 2011), guilt and shame (Test of Self-Conscious Affect; Tangney, Dearing, Wagner, & Gramzow, 2000; Kyle Inventory of Sexual Shame; Kyle, 2013) or social desirability (Social Desirability Scale-17; Stöber, 2001). Additionally, using all scales from the SAI as well as the Attachment to God Inventory (Beck & McDonald, 2004) may help identify and differentiate between types of God attachment.

Finally, reversing the pathway to examine the effect of purpose in life on pornography use might allow for the causal pathway to be better determined. As this was the first research project to examine the relationship between pornography use and purpose in life, the causal direction was hypothesized as pornography use → purpose in life. However, while the correlational relationship was reported as negative, it was not statistically significant. Therefore, future research might examine a reversal of the pathway examined in this study.

Clinical Implications

Results from this research study have potential significance for counselors, researchers, and the general public. Researchers could expand on the constructs examined in this research study to better determine relationships, including establishing a causal sequence. This initial exploration might open a new line of research examining purpose in life and other maladaptive behavioral issues. For counselors, understanding the relationships between problematic pornography use, religiosity, and purpose in life might inform the selection of clinical focus and treatment modalities. The continued rise of Internet pornography used that has been predicted by research (Lykke & Cohen, 2015; Price et al., 2016; Willoughby et al., 2016) will likely result in the continued growth in the number of clients who present with psychological distress associated with problematic pornography use. In addition, exploring a meaning-centered therapeutic approach such as logotherapy may allow for a more direct focus on existential issues, which might underlie maladaptive behaviors. Finally, the general public could benefit from a better general understanding of the possible connections between variables.

Chapter Summary

This chapter presented an in-depth discussion of the results and implications of the statistical findings from this research study. Limitations of the study, suggestions for research,

and clinical implications were addressed. While a statistically significant correlation was not found between pornography use and purpose in life, the relationship was reported in a negative direction. Numerous other correlation findings between pornography use, religious instability, perceived addiction, purpose in life, and age suggested statistically significant relationships between most study variables. In fact, all variables reported correlational statistical significance except pornography use and purpose in life, and pornography use and age. The relationship between pornography use and purpose in life was not mediated by perceived addiction or modified by religious instability, except when controlling for age.

While it was predicted religious instability would moderate the relationship due to previous research, which reported statistically significant relationships between purpose in life and religiosity, this was not the finding of this research study. Lack of moderation might have been related to the assessment used to test for religiosity. The instability measure of the SAI, which addressed *insecure* God attachment, may not have been the correct moderating factor. Addressing *avoidant* God attachment, previously linked in the research to purpose in life, might have produced significant results. Moderation by religious instability might also have been affected by the characteristics of age group (e.g., temporal versus eternal, self-centered focus), the self-reported lack of impact of faith on daily living, and the relativistic nature and current intolerance of Christian beliefs and morals in Western culture. Finally, the lack of moderation might be representative of an individual's separation of beliefs and behaviors. Moderated mediation was statistically supported as a result of the combined strength of the relationship between religious instability and perceived addiction and the relationship between pornography use and purpose in life.

The study was limited by the use of an online data gathering source, which may not be representative of the general population or population of pornography users, the challenges of self-reporting measures, and the sensitive nature of pornography use, which may have led participants to not respond honestly. Future research was suggested that might address different variables related to this research study's constructs by changing the population, selected assessments, age groups, and demographics of interest. As this research study was the first to examine the relationship of pornography use on purpose in life, reversing the time-order sequencing might lead to additional findings. Results may lead to additional lines of research, inform the clinical selection of treatment modalities and focus for clients presenting with problematic pornography use, and be a source of information about study variables for the general public.

Summary of the Study

Extensive research had previously examined relationships between pornography use, religiosity, perceived addiction to pornography, and purpose in life. No research had looked at combining all variables in one research study. Participants were recruited through Amazon's MTurk resulting in 289 individuals who met inclusion and exclusion requirements. This research study examined the direct relationship between frequency of pornography use and purpose in life, as well as the mediating effect of perceived addiction to pornography and the moderating effect of religious instability. The direct relationship, while reported in the predicted negative direction, was not statistically significant. Statistical significance was not found in either the mediated or moderated models, except when controlling for age. Finally, the moderated mediation analysis reported statistically significant results due to the combined strength of the relationship between religious instability and perceived addiction. As

pornography use is likely to increase, leading to increased problematic use and psychological distress, further research is needed to understand the relationships between these and other behavioral and existential variables.

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APPENDIX A: Informed Consent

Informed Consent Form

You are invited to be in a research survey, which is a study about the Impact of Family-of-Origin Experiences, Spirituality, Sexual Behavior, Sexual Attitudes, Relationships, and attitudes about pornography. As a compensation, one dollar will be made available to participants who complete it. We ask that you read this form and ask any questions you may have before agreeing to participate in the survey. You have received the opportunity to participate in this survey through your arrangement with Amazon Mechanical Turk.

Confidentiality

The records of this study will be kept private and anonymous. We are asking for your honest response to all the questions. Research records will be stored securely, and only researchers will have access to the records. Publications from this research study will only report on statistical information, as no personal information will be requested from you.

Contacts and questions

The researcher conducting this study is Fred Volk. Please feel free to send the questions you may have at any time during the course of this study by email: [REDACTED]. If you have questions later, you are encouraged to contact him via email. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), then you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Green Hall Suite 1887, Lynchburg, VA 24515 or email at irb@liberty.edu. In case you may need to talk to a counselor after taking the survey, though this is not an endorsement of the following free online counseling service, you may contact <http://www.onlinecounseling4u.com/>. Again, this is only a suggested resource to assist you just in case you need counseling assistance after completing survey.

Risks and Benefits

There is no direct benefit to you from your participation in this survey. Risk is mostly limited to social impact should an individual's responses be released; therefore, the responses will be collected anonymously with no identifying information. You will receive \$1.25 (U.S) for completing this survey. The findings from this study have important implications for counselors and counseling services.

Procedures

If you agree to be in this study, we would ask you to complete the questionnaire. As part of this survey, you will be asked several questions about yourself, as well as questions about your family-of-origin, your beliefs, your attitudes, and your behavior. This survey will take between 20 and 45 minutes to complete.

Compensation

As compensation, one U.S. Dollar (\$1.25) will be made available to participants who complete it.

Voluntary Nature of The Study

Thank you for your interest in participating in this survey. Your participation is voluntary, and you can quit at any time. Your decision whether or not to participate will not affect your current or future relations with Liberty University. Researchers reserve the right to refuse compensation if you do not indicate that you have willingly agreed to participate in this survey.

Statement of Consent

Please click “yes” if you agree with the following statement: “I have read the above information and I consent to participate in the study *and for my data to be analyzed for the purposes of the study.*” All information you provide in this survey is completely anonymous. By answering yes to the question below, you are agreeing to participate in this study.

Yes

No

APPENDIX B: Demographics

Do you identify as:

Male Female Other

What is your age?

Do you identify as:

Caucasian/White

African American

Indian or Alaska Native

Asian

Native Hawaiian or other Pacific Islander

Hispanic, Latino, or of Spanish Origin

Other

What sexes are you attracted to?

Men only Women only Men and Women Neither Men nor Women

What is your highest completed education level?

No schooling completed Less than high school

High school diploma or equivalent (e.g. GED) College Freshman

College Sophomore College Junior College Senior

Trade/Technical/Vocational training Bachelor's degree

Master's degree Professional degree Doctorate degree

Employment Status: Are you currently...?

Employed for wages Self-employed Not employed

A homemaker

A student

Military

Retired

Unable to work

What is your household's annual income?

Under \$10,000

\$10,000-\$19,999

\$20,000-\$29,999

\$30,000-\$39,999

\$40,000-\$49,999

\$50,000-\$59,999

\$60,000-\$69,000

\$70,000-\$99,999

Over \$100,000

What is your current relationship status: Please choose only one:

Single (I am not currently in a serious relationship but have been in the past)

Non-committed Dating Relationship

Monogamous Dating Relationship

Married/Life Partner

Married but Legally Separated

Divorced

Widowed

In terms of religion, how would you describe yourself? Choose one of the following answers:

Protestant (e.g. Methodist, Baptist, or some other non-Catholic Christian denomination)

Catholic

Christian (Non-Denominational)

Mormon

Jehovah's Witness

Muslim

Hindu

Jewish

Buddist

New Age/Wiccan

Taoist

None

Other

About how often do you attend religious services each YEAR?

Please choose the answer that best describes your belief in God:

I believe there is a God.

APPENDIX C: Items Measuring Pornography Use

How old were you when you were first exposed to pornography?

Have you ever intentionally used pornography for the purpose of sexual gratification?

Yes No

How many times have you used pornography in the last WEEK?

0 times 1-3 times 4-6 times 7-9 times 10 or more times

How many times have you used pornography in the last MONTH?

0 times 1-3 times 4-6 times 7-9 times 10 or more times

How many times have you used pornography in the last 6 MONTHS?

0 times 1-3 times 4-6 times 7-9 times 10 or more times

On average, how many hours a week do you use pornography?

About how many times do you masturbate per week?