

Personality and cognition of pornographic offenders; A comparison to sexual and general offenders

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Abstract

The purpose of the current study is to determine if there are unique personality or cognitive characteristics to help distinguish pornographic offenders from other sexual and general offenders. The participants consist of 45 male offenders, over the age of 18, who have been convicted of viewing child pornography (9), sexual assault (16) or general assault (20). Each of the offenders was also classified by whether they were first time offenders or had prior offenses. Each offender had previously been administered the following two psychometric tests: The Minnesota Multiphasic Personality Inventory and The Wechsler Abbreviated Scale of Intelligence. The results of this study aim to determine if pornographic offenders have exclusive traits to help create proper treatment and preventative programs.

Personality and cognition of pornographic offenders compared to sexual and general offenders

The proliferation of the Internet has introduced many challenges in preventing child victimization over the Internet for traditional policing. (Elliott & Beech, 2009; Quayle, Vaughan, Taylor, 2006) In 2007, the Internet Watch Foundation shut down 2531 website domains that were reported as hosting child pornography. (Moore and Clayton, 2008) It was estimated that the websites last on average 30 days before being shut down, however within 24 weeks, 41% of the images would reappear on the Internet. (Moore and Clayton, 2008) Pornographic offenders are people who view or distribute these images for their own sexual interest. (Prat and Jonas, 2013) The internet has allowed there to be a new medium of access allowing pornographic offenders to easily access child pornography in the isolated confines of their own home (Webb, Craissati & Keen, 2007). The goal of this current study was to determine if there were unique personality or cognitive traits that differentiate pornographic offenders from sexual offenders and general offenders. By establishing if and how they differentiate from other types of offenders, unique treatment programs can be created with direct target of rehabilitating pornographic offenders.

Previous Literature

Pornographic offenders can be defined as individuals who view pornography containing individuals under the age of 18. (Prat and Jonas, 2013). Frequently, people interested in child pornography have a good socio-economic status and no criminal record. (Prat and Jonas, 2012). Due to the increase in number of criminal cases and the limited knowledge of pornographic offenders, this type of offender has become an enlarged topic of research (Reinjnén, Bulten & Nijman, 2009). The convenience of

Internet has allowed for pornographic offenders to thrive in their search for child pornography as it has made it much easier to distribute and access. (Webb, Craissati & Keen, 2007) It has been suggested that the Internet has created what was referred to as “the Triple A Engine” for pornographic offenders. The three A’s that make up this system were access, affordability and anonymity. (Cooper et al., 2001; Middleton, Elliott, Madeville-Norden & Beech, 2006) This triple A engine describes exactly why pornographic offenders have become an increased concern to society. Child pornography can be easily accessed at anytime of the day, it can be found online at no cost therefore it is affordable and lastly the offenders can remain anonymous as their criminal activities can be done within their own home. (Cooper et al., 2001; Middleton, Elliott, Madeville-Norden & Beech, 2006) With website containing pornographic images and the number of charges increasing at an alarming rate, the amplified need to try and understand the behaviors pornographic offenders is crucial (Elliot & Beech, 2009). A previous mechanism known as the Ward and Siegert’s Pathways Model of child sexual abuse was created to classify child molesters. (Ward & Siegert,, 2002). Six different standardized scales of measurement including the UCLA Emotional Loneliness Scale were used to classify child molesters into one of five pathways. The offenders were classified based on which scale revealed elevated scores. The five pathways consisted of intimacy deficit, distorted sexual scripts, emotional dysregulation, antisocial cognition and multiple dysfunctional mechanisms. (Ward & Siegert,, 2002) Due to child molesters and pornographic offenders having victims within the same age range, Middleton et al. (2006) tried to see if this same mechanism could be applied to pornographic offenders. After trying to classify pornographic offenders using this mechanism, they found that

almost half of the pornographic offenders could not be classified into one of the five pathways. (Middleton, Elliott, Madeville-Norden & Beech, 2006) Of the pornographic offenders that could be classified, the most common classifications were intimacy deficit (35%) and emotional dysregulation (33%). This has been supported by other studies that determined that pornographic offenders have problems with intimacy, social skills and low self-esteem. (Marshall et al., 2012) Therefore while sex offenders, child molesters and pornographic offenders might have some similarities; the above studies demonstrated why pornographic offenders should be classified as their own type of offender (Elliot & Beech, 2009)

Treatment. Similarly to trying to classify pornographic offenders using a child molester mechanism, pornographic offenders are subjected to treatment programs geared for sexual offenders (Elliot & Beech, 2009). There have been some success in treating pornographic offenders with sexual offender programs nevertheless their differences encourage the need for their own treatment programs. (Burke, Sowerbutts, Blundell & Sherry, 2002) Unlike sexual offenders, pornographic offenders may have not have had any direct contact with a child. With this knowledge in mind, treatment programs need to help address and possibly prevent the offender from escalating from just viewing pornography to physical contact with a child (Burke, Sowerbutts, Blundell & Sherry, 2002). This concern may not be something encountered in a typical sex offender programs, as the physical act has already been committed. The collection and categorizing of the images also seems to play a part in a pornographic offenders behavior (Middleton, Elliott, Madeville-Norden & Beech, 2006). They develop an obsession and compulsion for searching out these images on the Internet for viewing pleasures.

(Marshael et al., 2012) Davidson et al (2008) observed that pornographic offenders spend a substantial amount of time on the Internet for non-offending purpose. Their general addiction to Internet seems to tie into their need to view child pornography (Pratarelli & Browne, 2002; Prat and Jonas, 2012). While the viewing of child pornography for sexual gratification would most likely be a topic of discussion in a sex offender treatment program, the program might not consider treating them for addiction or obsessive compulsive traits, which could impact their chance of rehabilitation. The United Kingdom recently developed a treatment program known as the Internet Sex Offender Treatment program (i-SOTP) (Middleton, 2008). This program addresses not only the sexual component to their actions but also their compulsivity, online relationships and collecting behaviors. (Middleton, 2008) While there have been a few treatment programs that have been suggested, there is little to no evaluations on the effectiveness of these programs. (Quayle, Vaughan & Taylor, 2006) The difference of pornographic offenders demonstrates that they need their own specific treatment program and that further understanding of pornographic offender is necessary to develop these treatment and preventative programs. (Burke, Sowerbutts, Blundell & Sherry, 2002)

To create proper treatment programs for different types of offenders, unique behavioral components of these offenders must be established. (Forbey & Ben-Porath, 2002) The Minnesota Multiphasic Personality Inventory (MMPI) was the most commonly used personality test in the correctional setting (Grover, 2011). It was commonly used due to its validity scales to help detect malingering throughout the test. (Forbey & Ben-Porath, 2002) These validity scales helped to determine if the offender was being honest and accurate throughout the self-assessed questionnaire. It has been

suggested that the MMPI was best used alongside with the offender's history as this could impact their test score (Grover, 2011). Assessing offenders with the MMPI has been a useful way in planning appropriate treatment options for offenders. (Forbey & Ben-Porath, 2002) Previous studies suggested that offenders with an elevation on scale 4 (psychopathic deviate) would be least likely to be a good candidate for traditional therapy or therapy at all. However, an offender elevated in scale 2 (depression) would probably be the most willing to participate in therapy. (Forbey & Ben-Porath, 2002) These results show why establishing a basic psychological profile for different types of offender would be beneficial in creating a proper treatment program and would most likely increase the success rate of preventing the offender from reoffending. The MMPI has been a helpful tool in not only planning and creating a treatment program but has also in evaluating the progress of the offender throughout the program. (Miner, Marques, Day & Nelson, 1990) Administering the MMPI multiple times throughout the treatment program allows the evaluator to see if the treatment is being affective in changing the offender's behavioral flaws. (Miner, Marques, Day & Nelson, 1990) While this was observed in an older study, it was stated that a change in the offender's scale 0 (social introversion) scale might be seen over time. (Miner, Marques, Day & Nelson, 1990) The possible explanation for this change was that the offender was learning to cope and accept responsibility for their actions and behaviours. (Miner, Marques, Day & Nelson, 1990) These results advocate why the MMPI should be used in evaluating offenders and helping create treatment programs.

Personality. With pornographic offenders becoming a bigger concern due to the Internet, studies have been looking into how they differ from other types of offenders. (Tomak et

al., 2009) Due to the MMPI being commonly used in criminals, previous studies have been comparing the criminal profiles of different types of offenders by using this test. (Grover, 2011) A study in 2009 compared general sex offenders and Internet offenders using the MMPI as their personality test. (Tomak et al., 2009) Internet offenders are different from pornographic offender as this group encompasses pornographic offenders but also includes offenders who lure minors to meet or chat using the internet as a medium.(Tomak et al., 2009) They found that internet offenders scored significantly lower than general sex offenders on the Lie and Infrequency validity scales as well as the Psychopathic Deviate and Schizophrenia scales.(Tomak et al., 2009) That same year, another study observed the difference on the MMPI of pornographic offenders compared to sexual and non sexual offenders who were receiving treatment in an outpatient forensic psychiatric setting. (Reinjn, Bulten & Nijman, 2009) This study found that pornographic offenders scored significantly lower on the hypomania scale than general offenders. (Reinjn, Bulten & Nijman, 2009) While no significant difference was found on the psychopathic deviate, all the offenders scored elevated on this scale. (Reinjn, Bulten & Nijman, 2009) The criminal history of the offender also seems to impact the offender's score on the MMPI. Davis & Archer, 2010) When comparing 90 incestuous offenders using the MMPI, they found that offenders with more than five offenses scored significantly higher on the Lie, Psychopathic deviate and schizophrenia scale. (Hunter, Childers, Gerald & Esmaili,1990) This study demonstrated that offender's history might play a role in the outcome of the MMPI but limited studies have been done on this topic.

Cognition. After extensive research, there were no studies found discussing IQ and pornographic offenders, however, a study discussing the IQ of sexual offenders and

general offenders had been previously performed. (Cantor, Blanchard, Robichaud & Christensen, 2005) This previous meta-analysis found that sex offenders had a significantly lower IQ than non-sexual offenders. (Cantor, Blanchard, Robichaud & Christensen, 2005) They also obtained enough information from studies to sub classify the sexual offenders based on the age of their victims. (Cantor, Blanchard, Robichaud & Christensen, 2005) This analysis revealed that the sexual offenders IQ was relative to the age of the target victim because only the sexual offenders against children scored significantly lower than nonsexual offenders. (Cantor, Blanchard, Robichaud & Christensen, 2005) This lead to the possible inquiry that whether pornographic offenders, who have children as victims but no contact, would score differently than other types of offenders. While there were no studies found that discussed IQ and pornographic offenders, there were a few discussing their education level (Prat & Jonas, 2012; Burke et al., 2002). Prat & Jonas (2012) found that pornographic offenders had a significantly higher education level than sex offender. Of their sample of pornographic offenders, over 80% of them had a diploma and 50% of them had studied at university.(Prat & Jonas, 2012) With their higher education level taken into consideration and the significant difference in IQ found between sex offenders against children and non-sexual, the IQ of pornographic offenders compared to other types of offenders was an important direction to take. When considering the IQ of an offender, their criminal history may be important to consider. In one of the first study's which observed the criminal history of pornographic offenders, it was noted that with the increased number of prior offenses there was a likelihood of reoffending. (Seto & Eke 2005) While recidivism and history are not the same thing another study found a significant correlation between offenders

with lower intelligence and recidivism. (Gendreau, Little & Goggin & 1996) Using the results of the two studies it is possible to consider that offenders with priors might have lower IQ's than first time offenders.

Current study

This current study was established to examine the personality and cognitive difference of pornographic offenders when compared to sexual and general offenders. The offenders were previously assessed using the Minnesota Multiphasic Personality Inventory, the Wechsler Abbreviated Scale of Intelligence and their prior criminal history was established. The results of this study aim to detect differences between pornographic offenders compared to other offenders to help create treatment and preventative programs with pornographic offenders specific needs in mind.

It was hypothesized that pornographic offenders would score significantly different on personality and cognitive test compared to general and sexual offenders. This expectation was based on previous research finding that pornographic offenders scored significantly lower than general and sexual offenders on the MMPI's hypomania scale. (Reinjnén, Bulten & Nijman, 2009) Another study also found that internet offenders scored significantly lower than general sex offenders on the Lie, infrequency, psychopathic deviate and schizophrenia scale which support the hypothesis that the pornographic offenders will score significantly different. (Tomak et al., 2009) While no studies were found on the IQ of pornographic offenders, using a previous study's findings that sexual offenders with children as victims have significantly lower IQ's than non-sexual offenders in conjunction with pornographic offenders having a significantly higher

education levels, it was expected that pornographic offenders would score significantly different. (Cantor, Blanchard, Robichaud & Christensen, 2005; Prat & Jonas 2012)

It was also hypothesized that first time offenders would score significantly different on personality and cognitive factors than offenders with priors. It was believed that offenders with priors would score differently than first time offenders on the MMPI as a review in 2010 demonstrated that multiple offenses impact the scores obtained on the MMPI. (Davis & Archer, 2010) Studies comparing first time sex offenders with sex offenders with priors established that offenders with greater chronicity tend to score higher on psychopathic deviate. (Davis & Archer, 2010) The review of these studies included multiple different types of sexual offenders therefore it was seen that an elevation in psychopathic deviate was reoccurring pattern in the offender population. (Davis & Archer, 2010) It was also uncovered that a significant correlation between lower intelligence and the chance of reoffending existed. (Gendreau, Little & Goggin & 1996) Using the information from previous findings that priors increase the chance of reoffending and the correlation between recidivism and low IQ, it was possible to hypothesize that offenders with priors would score differently on cognition as well. (Seto & Eke 2005; Gendreau, Little & Goggin & 1996)

Methods

Participants

This experiment was a within subject design with a total of 51 cases divided into three groups based on their convicting offenses. The offenders were divided into one of the following three groups based on if they had been charged with only one of the following crimes: pornographic offending (9), sexual assault (16) or general assault (20).

Any participant who had committed more than one of the three offenses was excluded from the study. Pornographic offenders were defined, as offenders who view or distribute pornography containing individuals under the age 18 however had not been convicted of a crime consisting of sexual contact with a minor. For an offender to be classified as a sexual offender they had to be charged with sexual abuse (sexual contact with someone over the age of 18) or sexual interference (sexual contact with someone under the age of 18). General Assault offenders were used as a control group as they had committed an offense that wasn't sexually motivated and the classifying offenses consisted of assault or domestic assault. For the purpose of this study, the offenders' files were also examined to determine if they had previously been charged with a crime or if it was their first offense. Offenders were classified in the group called "priors" if they had committed previous crimes to their index offense. Offenders were grouped in the first time offender category if they had not been convicted of a previous crime prior to their convicting offense. The sample consisted of only males who were at least 18 years old and were previously referred to Dr. Paul Valliant's practice in Sudbury, ON for evaluation. All the participants had been previously tested on the Minnesota Multiphasic Personality Inventory and the Wechsler Abbreviated Scale of Intelligence. All participants had given signed consent for their information to be released for the purpose of future studies.

Measures

The measures used for this study were standardized test previously administered by psychometrist working at Dr. Valliant's practice.

To measure cognition, the scores of the Wechsler Abbreviated Scale of Intelligence (WASI-II) were analyzed. This test is the abbreviated form of the Wechsler

Adult Intelligence Scale test (WAIS). The WASI tests for crystalized and fluid abilities, as well as overall intelligence. Crystalized intelligence is intelligence acquired by using the skills and knowledge acquired through experience and was tested by the two subtests, similarities and vocabulary, which make up the Verbal Comprehension Index (VCI). Fluid intelligence is intelligence based on your ability to think logically and solve a problem presented and was tested by the two subset, block design and matrix reasoning, which make up the Perceptual Reasoning Index (PRI). Cognition for this study was based on the composite scores of VCI and PRI combined to create what is referred to as the Full Scale 4 IQ. The full scale gave an overall intelligence composite score. In this current study only their overall intelligence on full scale 4 was analyzed. The reasoning behind only looking at overall intelligence was that it was the scale previously used in other studies when analyzing IQ in offenders (Cantor, Blanchard, Robichaud & Christensen, 2005)

Their personality traits were measured with the Minnesota Multiphasic Personality Inventory (MMPI-168). The MMPI-168 is the short form of the MMPI, which is a true or false self-reported personality questionnaire. The MMPI-II is the most common test used test when determining sex offender typology (Grover, 2011; Beech, 1998). The MMPI contains 10 clinical scales and 3 validity scales. The three validity scales consist of Lie (L), Infrequency (F), and correction (K) scale. These scales are what allow the MMPI to be such a useful tool in offender populations where malingering and non-compliance is common (Grover, 2011). The results of the test are divided into the following 10 clinical scales, starting with scale 1 to scale 0; Hypochondriasis (Hs), Depression (D), Hysteria (Hy), Psychopathic deviate (Pd), Masculinity/Femininity (Mf),

Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), Hypomania (Ma) and Social Introversion (Si). (Tomak et al, 2009) The raw scores were then converted into the appropriate T scores for proper evaluation. Scores between 50-59 are considered normal, scores between 60-69 are considered mildly elevated with chance of the trait being present and scores 70+ are considered elevated with a high chance of the trait in question being present. While the MMPI has ten clinical scales and three validity scales, this current study only focused on three clinical scales: hypomania, psychopathic deviate and Psychasthenia. These three scales were chosen based on significant results obtained in previous studies. Tomak et al. (2009) found that Internet offenders (including luring offenders) scored significantly lower than child molesters on psychopathic deviate score, as well as it being a common elevated scale in the offender population. The hypomania scale was chosen as previous studies have found that pornographic offenders scored significantly lower than sexual and general offenders on this scale in an outpatient forensic psychiatric setting. (Reinjnén, Bulten & Nijman, 2009) The last scale that was selected was psychasthenia scale, which was intended to measure the offender's obsessive and compulsive traits. While there have been no studies found stating a significant difference when comparing pornographic offenders to other offenders on the psychasthenia scale, it has been found that pornographic offenders show higher obsessive compulsive traits than child molesters. This was observed in a previous study where pornographic offenders were administered the obsessive-compulsive inventory and scored significantly higher than child molesters. (Marshall et al., 2012) This was congruent with other studies stating their addiction to Internet as well as collecting and organizing their pornography (Pratarelli & Browne, 2002; Middleton, Elliott, Madeville-

Norden & Beech, 2006) Due to the results of these previous investigations, psychopathic deviate, psychasthenia and hypomania were the three scales analyzed.

Procedure

The information on the cases was obtained from patients' stored files at Dr. Paul Valliant's practice. These patients were referred to the practice for psychological evaluation due to having been convicted of a crime according to the Canadian Criminal code. The WASI was the first test administered by the psychometrist to ensure the offender was mentally capable of completing other psychometric test. While some of the files contained more psychometric tests than the two required, only the relevant sheets containing their criminal history, their MMPI score sheet as well as their WASI test and score sheet. The files were then numbered for confidentiality purposes and the cases were referred to their assigned number throughout the study. The scores of the above psychometric test and the information regarding their history were taken and recorded in a separate booklet and their files were then restored in their proper safe place.

Results

Multiple univariate (one way) ANOVA's were run in SPSS to determine if there were difference between offender types or offender history on the MMPI's psychopathic deviate, psychasthenia and hypomania as well of the WASI's full scale IQ 4.

A significant difference was found on the hypomania scale between offender type, $F(2,42)=5.580 p<.05 \eta^2=.210$ (see figure A1). Post hoc test revealed that the significant difference was between sexual offenders ($M= 54.81 SE=2.87$) and general offenders ($M=67.45 SE=2.56$). While pornographic offenders fell between both groups ($M= 59.22 SE =3.82$), they did not differ significantly from either of the groups.

The comparison of offender type with the MMPI's psychopathic deviate scale also showed a significant difference, $F(2,42)=3.35$ $p < .05$ $\eta^2 = .14$ (see figure A2) After running a post hoc test it was discovered that the significant difference was again between sexual offenders ($M=60.75$ $SE=3.15$) and general offenders ($M=71.50$ $SE=2.82$). While again scoring between sexual and general offenders, pornographic offenders ($M=64.44$ $SE=4.20$) did not differ significantly.

The psychopathic deviate scale also demonstrated a significant difference based on the offenders history, $F(1,44)=1.02$ $p < .05$ $\eta^2 = 0.23$ (see figure A3) Offenders with priors ($M=70.11$ $SE=2.49$) scored significantly higher on the psychopathic deviate scale than first time offenders ($M=61.84$ $SE=2.96$)

The MMPI's Psychasthenia scale showed no significant difference between offender types. $F(2,42) = 2.03$ $p > .05$. (see figure A4) General offenders ($M=67.45$ $SE=3.63$) scored the highest followed by pornographic offenders ($M=63.33$ $SE=5.41$) and lastly sexual offender ($M=56.50$ $SE=4.06$) however none of them differed significantly from each other

No significant difference was found on the WASI's full scale IQ based on offender type $F(2,42)=0.26$ $p > .05$ (see figure A5) or offender history $F(1,44)=1.02$ $p > .05$. (see figure A6) Pornographic offenders ($M=99.22$ $SE=5.05$) did however score on average higher than sexual ($M=95$ $SE=3.79$) and general ($M=95.25$ $SE=3.39$) but did not differ significantly (see figure 5). First time offenders ($M=98.42$ $SE=3.39$) also scored higher than offenders with priors ($M=93.96$ $SE=2.84$) however again were not significantly different. (See figure 6)

Discussion

The WASI yielded no significant difference when it came overall intelligence and offender type. While pornographic offenders did have an overall higher average compared to sexual and general offenders, it was not significantly different. When considering education level in other studies, similar results were obtained in a forensic psychiatric setting where there was no significant difference between pornographic, sexual and general offenders. (Reinjnén, Bulten & Nijma, 2009). This was contrary to what was expected based on the meta-analysis comparing sexual offenders and IQ. (Cantor, Blanchard, Robichaud & Christensen, 2005) They had found that sex offenders scored significantly lower than non-sexual offenders and the younger the victims of sexual offenders the lower their IQ was. (Cantor, Blanchard, Robichaud & Christensen, 2005) Taking this study into consideration, it was expected to see at least a difference between sexual and general offenders on IQ, however not even that difference was significant in this study. It was also expected that the difference in IQ from this study would be seen in pornographic offenders as well. While no significant difference was found between offender types, like the meta-analysis, all three types of offenders scored within the average intelligence range of on the WASI; 90-109 (Cantor, Blanchard, Robichaud & Christensen, 2005). While looking at education level, majority of studies found that pornographic offenders had significantly higher education but as previously mentioned, it was found in one study that pornographic offenders did not differ from sexual and general offenders on education level. (Reinjnén, Bulten & Nijma, 2009) Meanwhile another study found that Internet offenders had significantly higher education level than general sex offenders. (Tomak et al., 2009) While the education level of

pornographic offenders has been observed to be significantly different from other offenders in previous studies, the results of this study support the idea that their overall intelligence may not be that different from other offenders.

Offender history also showed no significant difference when being compared on their overall intelligence. Similar results were obtained in a study comparing IQ and recidivism in child molesters. (Beggs & Grace,2008) They found that there was no significant difference when it came to the offenders IQ level and their number of offenses. However, they did find a significant interaction between low IQ, high psychopathy on recidivism but this study was unable to test for this possible interaction in pornographic offenders. (Beggs & Grace,2008) These results were contrary to what was expected as other previous studies had observed that there was a correlation between low intelligence and recidivism in the offender population. (Gendreau, Little & Goggin & 1996) This study however found this correlation using a meta-analysis of overall offender population therefore the type of offenders they used might explain why they found a correlation and this study didn't. (Gendreau, Little & Goggin & 1996) The interaction found by Beggs & Grace (2008) would be an interesting future direction to take and see if this interaction between low IQ and psychopathy on recidivism could be applied to pornographic offenders who continue to commit crimes and aren't first time offenders.

While there was a significant difference observed on the MMPI's hypomania scale, post hoc revealed it was only between sexual and general offenders. Sexual offenders scored significantly lower than general offenders. Pornographic offenders scored between general and sexual offenders on the hypomania scale but showed no significant difference. This was contrary as to what was expected as previous studies

have shown that pornographic offenders scored significantly lower than general offenders on the hypomania scale. (Reinjn, Bulten & Nijman, 2009) Also unlike this current study, they found that sexual offenders did not differ significantly than general offenders on the hypomania scale which was observed in this study. A possible reason for this difference was that their population was from an outpatient psychiatric setting in the Netherlands, therefore this may account for their difference results.

Due to psychopathic deviate scale elevation being common in the forensic setting, it was expected that offenders would score differently on this MMPI scale. (Bickley & Beech, 2001) The results of a one way ANOVA and post hoc divulged that there was again a significant difference between sexual and general offenders on the psychopathic deviate scale. While a significant difference was found, it was not between pornographic offenders and another type of offender, which was expected. Previous studies showed that there was a significant difference between Internet and sexual offenders on the psychopathic deviate scale. They found that Internet offenders scored significantly lower compared to sexual offenders. (Tomak et al., 2009) However this study again used Internet offenders, which includes individuals who not only watch child pornography but also lure children. (Tomak et al., 2009) A newer study in 2010 found no significant difference between pornographic offenders, sexual offenders or general offenders on the psychopathic deviate scale. (Reinjn, Bulten & Nijman, 2009) The three groups were defined using the same definition as this current study and similar to this study, they found no significant difference between pornographic offenders compared to sexual and general offenders. (Reinjn, Bulten & Nijman, 2009) Unlike this study, while they found no significance with pornographic offenders, they also found no significance

between at any of the groups. (Reinjnén, Bulten & Nijman, 2009) While all their groups showed elevated psychopathic deviate scores, there was no significance difference. (Reinjnén, Bulten & Nijman, 2009) This study however found significant difference between sexual and general offenders. The difference in living arrangements (psychiatric, prison, etc.) along with different definitions might be the reason different results have been obtained throughout these studies.

Psychopathic deviate scale also showed significant difference between first time offenders and offenders with priors. As expected, based on previous literature, criminals with priors scored significantly higher on psychopathic deviate scale than first time offenders. This was supported by a review by Davis & Archer (2012), who found that offenders with priors were more likely to have an elevated psychopathic deviate score. These similar findings were also expressed by that found that recidivist child molesters had higher level of psychopathy on the Hare psychopathy checklist (PCL-R). (Beggs & Grace, 2008) These study support and reiterate the results from this study that offenders who have priors will score significantly higher on psychopathy than first time offenders.

The MMPI's Psychasthenia scale did not reveal any significance between pornographic, sexual general offenders. This was not what was expected as previous studies had conveyed that pornographic offenders showed more obsessive-compulsive traits than child molesters (Marshall et al, 2012) Using the Obsessive- Compulsive Inventory, they found that pornographic offenders had significantly more of a problem with obsessions and compulsion than child molesters. (Marshall et al, 2012) The results obtained from this study were not consistent with this previous research that noted that the collection and categorizing of the pornography seems to be gratifying aspect of the

behavior on top of the sexual components for pornographic offenders (Quayle & Taylor, 2002). While none of the previous studies used the MMPI, its Psychastenia scale is used to measure obsessions and compulsions therefore it was expected to be elevated for pornographic offenders.

The results of this study supported the hypothesis that offenders with priors would score differently than first time offenders, but did not support the hypothesis that offenders with priors would score differently on IQ. The results also didn't support the hypothesis pornographic offenders would score differently than sexual and general offenders on personality and cognition. Possible reasons for these unexpected findings were discussed further in limitations.

Limitations and future directions

While significant results were obtained, there are some limitations to consider when interpreting the results. The biggest limitation was that researchers were unable to control for the subjectivity of the offenders criminal history. The offenders were classified based on if they had only committed the one type of offense however they might have in fact committed more but were just not caught. Pornographic offenders were classified based on being charged for only viewing child pornography and no contact however they may in fact have had contact with a minor but were just never caught therefore this may impact the results.

Another important limitation was the small sample size as there were only nine pornographic offender cases and a total of forty-five usable cases. This small sample lead to the inability to run a multivariate ANOVA as there was only one pornographic offender who had priors. This inhibited the chance to observe if there was an interaction

between offender with priors and offense type on the MMPI and WASI scales observed. A small sample size also increased compound error as multiple univariate ANOVA's had to be run compared to only one multivariate ANOVA. This small sample size could also possibly explain why pornographic offenders showed no significant difference compared to the other two types offenders. Pornographic offenders only had 9 offenders in their group while sexual offenders had 16 and general offenders had 20 therefore this might also pay a part in the results obtained. If a larger sample size was obtained it would also be possible to analyze more of the MMPI scales as well as not only their overall IQ but the offenders visual and perceptual IQ of the WASI.

The other limitation was that there was a limited amount of test available per case and the personality test was subjective. The only two tests that were available in each case were the MMPI and the WASI. While the MMPI is commonly used in the forensic population and has validity scales to help detect malingering, it is a self-assessed questionnaire therefore it is subjective to the offender.

Possible future directions would be to obtain a larger sample size to be able to run that multivariate ANOVA. While research has shown that a lot of pornographic offenders are first time offenders, with a large enough sample size it would be possible to obtain enough pornographic offenders with priors. This would allow seeing if the interaction between low IQ, high psychopathy on recidivism in child molesters can be transferred into the pornographic offender population. (Beggs & Grace, 2008)

Another future study would be the division of offenders into even more distinct groups, as sex offenders are a very heterogeneous group. (Bickley & Beech, 2001) In this study, the sexual assault group included offenders with adult and child victims, therefore

dividing that group even further could possibly yield different results. There has also been some new research on luring offenders who use the Internet to entice children or adolescents to meet or communicate online for sexual purpose. (Seto, Wood, Babchishin & Flynn, 2012) As this group uses the same medium as pornographic offenders, it would be beneficial to understand how they differ from one another.

The use of more personality tests would also allow for a better understanding of pornographic offenders even further. While the MMPI is a good personality test for the offender population, using the MMPI in conjunction with other tests may prove beneficial. Possible tests that could be used with the MMPI are the Hare Psychopathy Checklist to further detect their level of psychopathy or the Millon Clinical Multiaxial Inventory to understand the offenders' connection to The Diagnostic and Statistical Manual of Mental Disorders (DSM). Administering more specific personality tests would allow for an even greater understanding of how different pornographic offenders are from other sexually motivated offenders.

Conclusion

While this study found significant results on psychopathic deviate and hypomania scale between sexual and general offenders, there was no significant difference found with pornographic offenders on personality or cognition. While there was no significant difference when it came to pornographic offenders, it allowed us to obtain a better insight on pornographic offenders. It helped establish that when working with pornographic offenders and criminal history, a large sample size is required as pornographic offenders with priors are more limited. This study was also a pilot study of a bigger study looking into a larger and more diverse sample. This study has brought society one step closer into

understanding and determining personality and cognitive characteristics of pornographic offenders. This knowledge will be useful in future studies as to establish which directions these studies need to go to obtain the most accurate results. The more knowledge obtained on pornographic offenders the more specific preventative and treatment programs can be created to help them. In a society where many criminals are recycled in the criminal justice system, the need for specific programs geared towards their specific types of crimes may help inhibit this cycle.

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Appendix A

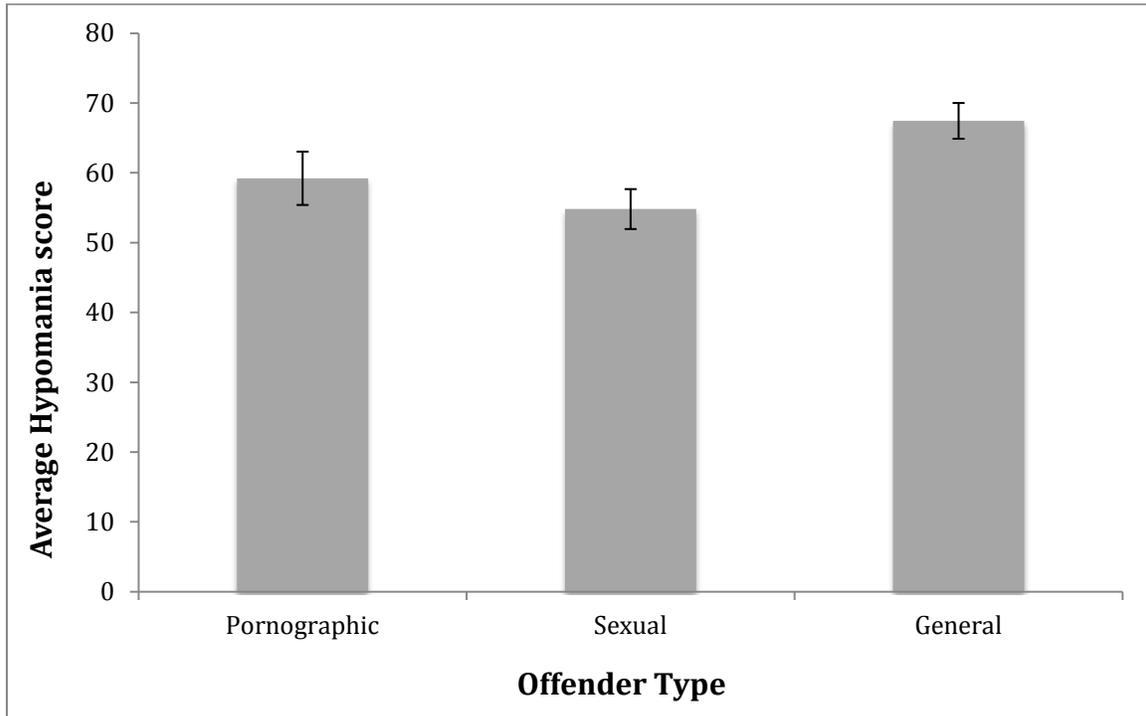


Figure 1. Average Hypomania score on the MMPI based on offender type

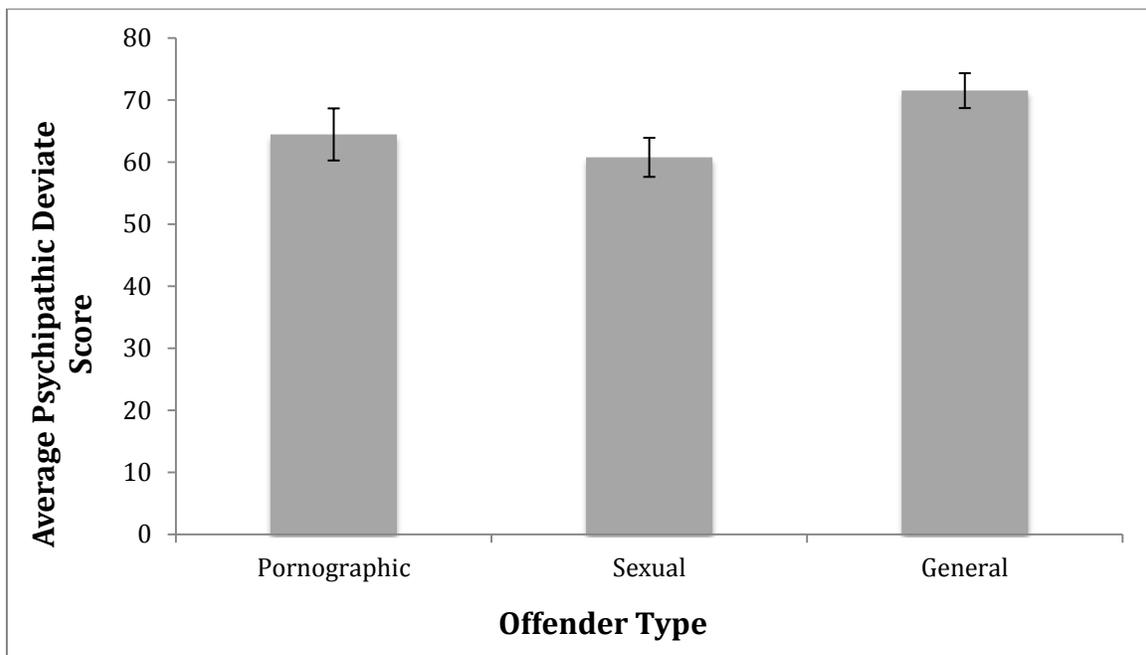


Figure 2. Average Psychopathic Deviate score on the MMPI based on offender type

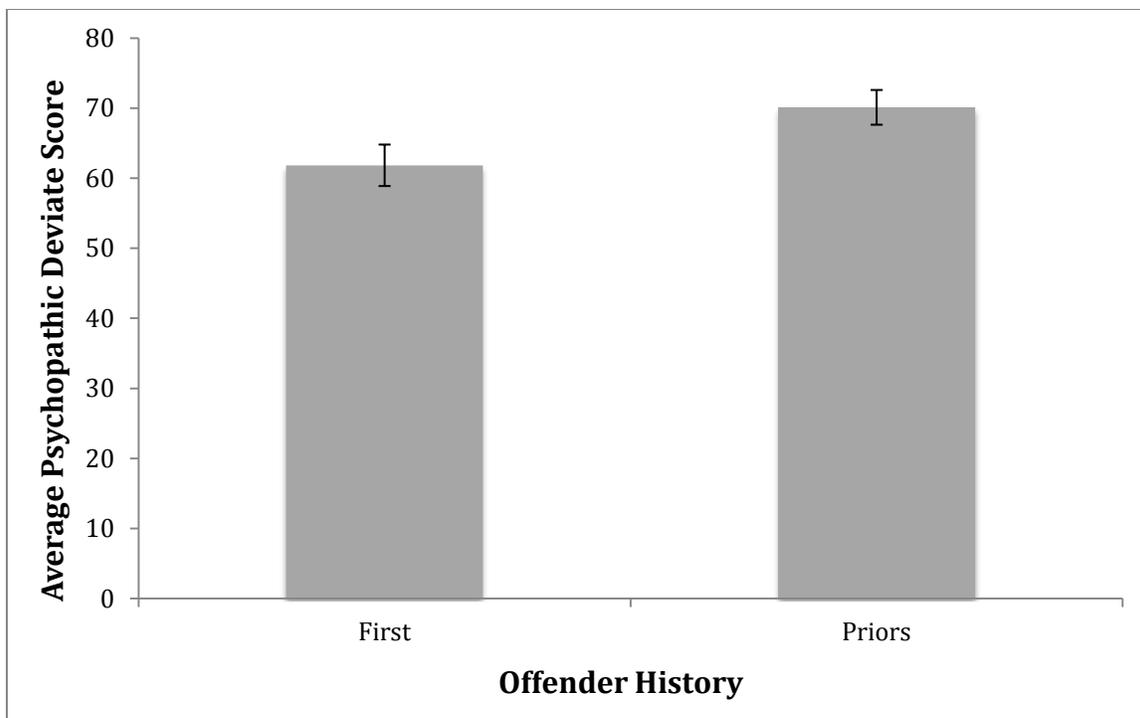


Figure 3. Average Psychopathic Deviate score on the MMPI based on offender history

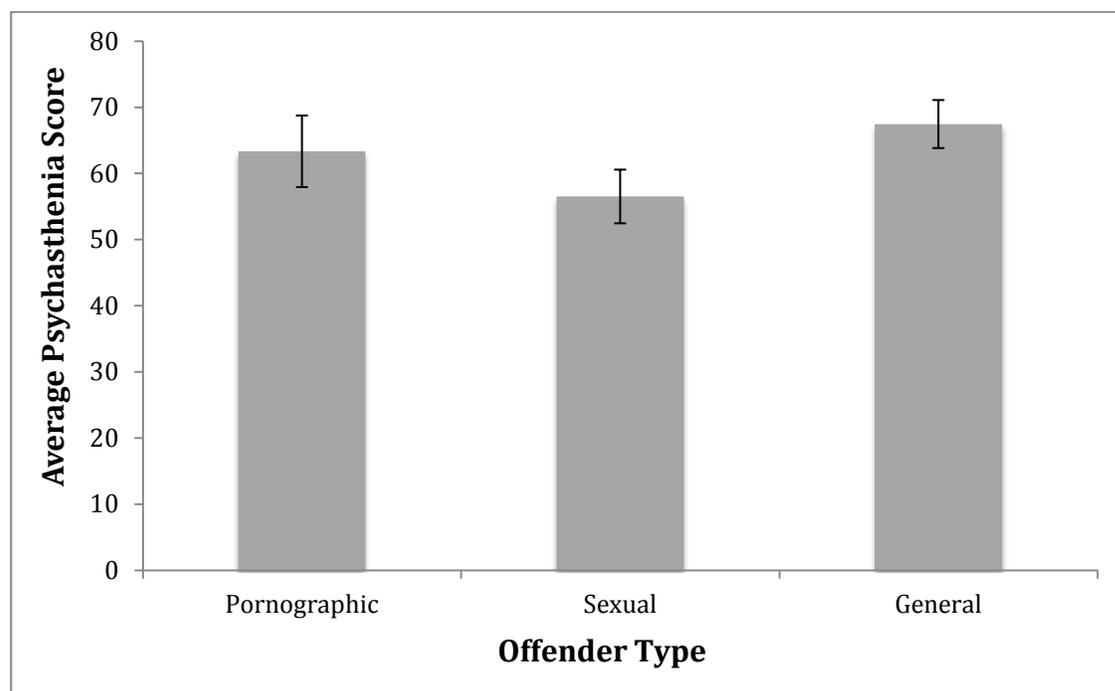


Figure 4. Average Psychasthenia score on the MMPI based on offender type

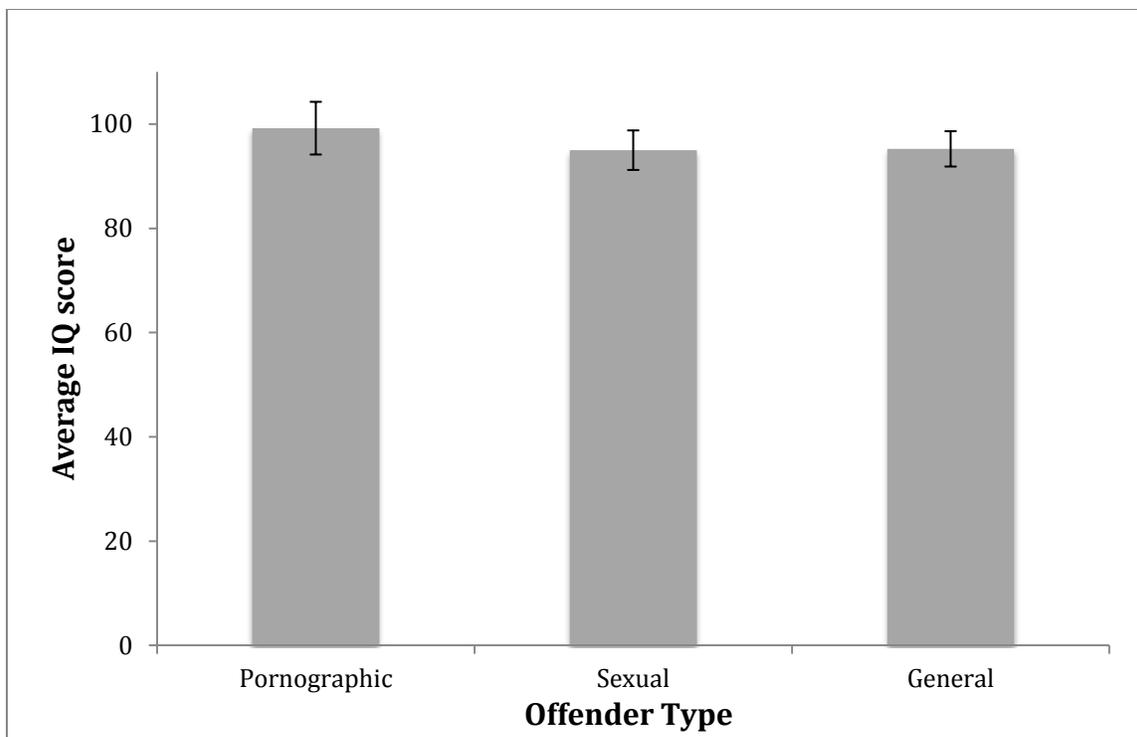


Figure 5. Average IQ on the WASI based on offender types

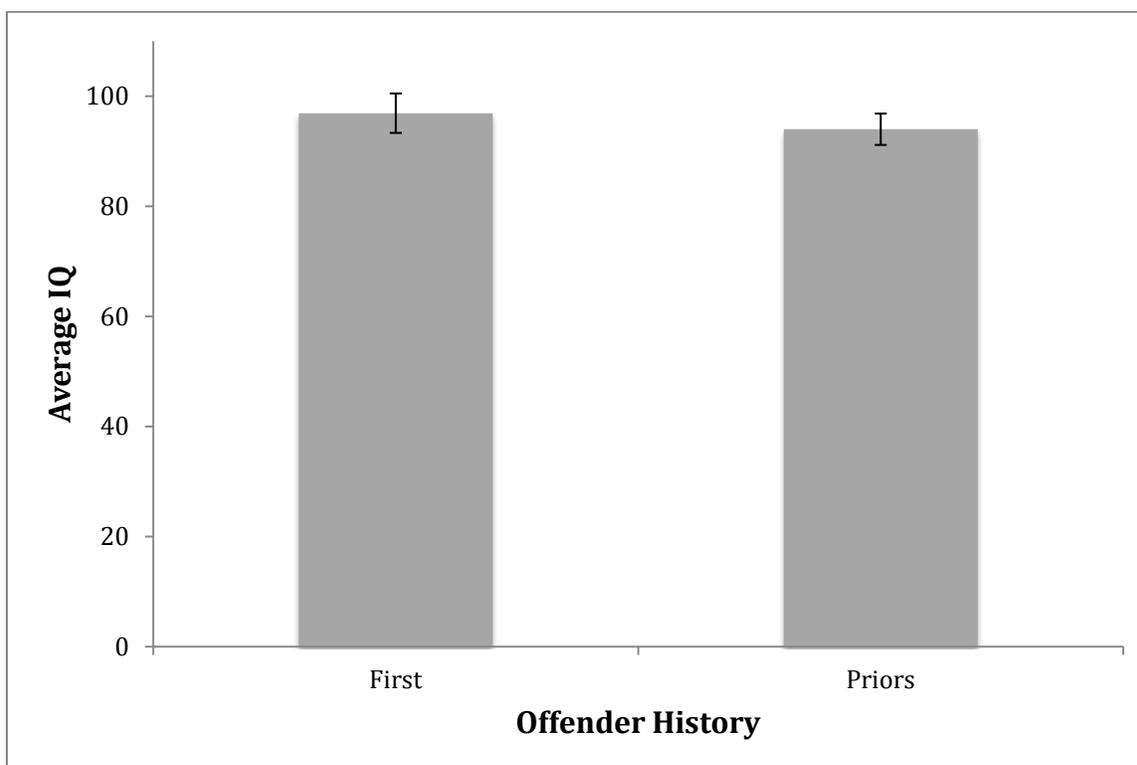


Figure 6. . Average IQ on the WASI based on offender history