Modern Psychological Studies

Volume 19 | Number 2 Article 2

2014

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Abstract

Psychopathy has many implications for society at large. These individuals are likely to commit violent crimes, manifest other antisocial behavior, and make up a large portion of the prison population. This study aims to establish a relationship between sensation seeking, psychopathy, and deception. A sample of 100 undergraduate students enrolled in psychology courses in a southern university completed three questionnaires assessing their level of sensation seeking (SSS-V), deception (MACH-IV), and psychopathy (TriPM). Each of the three distinct phenotypic constructs measured by the TriPM were also correlated with total SSS-V and MACH-IV scores. Pearson and Spearman correlations revealed significant relationships between TriPM and MACH-IV (rho = .28, r = .288, p = .01); TriPM and SSS-V (rho = .583, r = .587, p = .01); MACH-IV and SSS-V (rho = .201, r = .247, p = .05). Pearson correlations revealed TriPM phenotypic construct relationships with SSS-V and MACH-IV as well. Meanness was related to MACH-IV (r =.457, p = .01) and SSS-V (r = .457, p = .01). The relation between Disinhibition and MACH-IV (r = .287, p = .01) and SSS-V (r = .324, p = .01). Boldness was significantly related to SSS-V (r = .428, p = .01), but was not related to the MACH-IV (r = -.102). Implications from this study could serve to further research in understanding the precursors and correlations of psychopathy and may allow the identification of this mental disorder in its early stages so that an effective treatment regime may be established.

Introduction

Psychopathic personality remains a construct of wonder for centuries, which likely has contributed to the several alternative conceptualizations of psychopathy. Hare (1993), known for his development of the gold standard for assessing psychopathy, the Psychopathy Checklist-Revised (PCL-R), described psychopaths as "social predators who charm, manipulate, and ruthlessly plow their way through life … completely lacking in conscience and in feelings for others, they selfishly take what they want … violating social norms and expectations without the slightest sense of guilt" (p. xi). As such, psychopathy is generally thought of as consistent deviation from societal norms accompanied by emotional and interpersonal aloofness. The triarchic conceptualization of psychopathy provides a foundation for uniting alternative views of the construct that is composed of three distinct parts including disinhibition, meanness, and boldness (Patrick, Fowles, & Krueger, 2009).

A disinhibited individual does not plan ahead or have any foresight regarding the consequences of his actions (Patrick, Fowles, & Krueger, 2009). The disinhibited individual also has impaired emotional regulation, behaviors, and urges which leads to a need for immediate gratification. This is an externalized trait that is common among psychopaths and is manifested by irresponsibility, impulsivity, aggressiveness, and impatience. In addition, disinhibition is indicative of drug and alcohol abuse and engagement in other illegal activities.

Meanness is related to emotional dysfunction. The psychopath is thought of as callous, coldhearted, and antagonistic, lacking empathy and close attachments with others. They are likely to be rebellious, exploitative, and excitement-seeking (Patrick, Fowles, & Krueger, 2009). Psychopaths are typically emotionally detached, knowing the "words" of the emotions, but not the "music" (Herpertz & Sass, 2000). Meanness is manifested through arrogance, active exploitation, and confrontation (Patrick, Fowles, & Krueger, 2009). The psychopath is likely to defy

authority, engage in physical cruelty towards humans and animals, and seek excitement through destruction. The trait of meanness is central to the psychopath in the criminal population because it describes guiltlessness, and a lack of remorse, empathy, and concern for others.

Boldness is described as fearless dominance. Psychopaths are likely to remain calm and focused in the most stressful situations and recover quickly from such situations. They tend to have high self-confidence, social efficiency, and tolerance for danger. They may be assertive, persuasive, and brave. Boldness may allow a psychopath to be socially dominant and manipulative due to the low reaction to stress and the need for thrill seeking (Patrick, Fowles, & Krueger, 2009).

There is a clear and long standing historical connection between psychopathy and deception, which is defined as knowingly sending messages with the intent to falsify beliefs or conclusions (Caspi & Gorsky, 2006). Deception is included under all triarchic conceptualization traits of the psychopath, as these individuals are recognized for manipulative behavior and pathological lying (Klaver, Lee, Spidel, & Hart, 2009). According to Hare (1993) psychopaths take pride in their ability to deceive easily, from simple to complex deceptions.

A recent study examined psychopathy and deception using indirect measurements to detect deception (Klaver, Lee, Spidel, & Hart, 2009). Participants watched short videos of offenders telling true and false stories about crimes, rated these stories, and picked which story they believed to be true. Four indirect measures of deception were used assessing critical thinking, nervousness, arousal, and attempting to control one's behavior. The relationship between psychopathy and the attempt to deceive was strong.

Sensation seeking is defined by Zuckerman as the need for intricate, unique, and indefinite experiences as well as the willingness to take risks to seize such experiences to avoid a proneness for boredom (Banerjee, Greene, Krcmar, Bagdasarov, & Ruginyte, 2008). Some research has shown that these personality traits are significantly related to deception (Lu, 2008). One well-established finding regarding sensation seeking is that males are more likely to be high sensation seekers than women (Banerjee, 2008; Öngen, 2007; Zuckerman, 1994). A study regarding online deception found that men deceived more than women, suggesting a relationship between sensation seeking and deception, as more males were likely to deceive than females (Whitty, 2000). Another study found that high sensation seekers were more likely than low sensation seekers to engage in online interpersonal deception (Lu, 2008).

Just as the strength of the relationship between sensation seeking and deception has not been well established, neither has the relationship between sensation seeking and psychopathy although one is thought to exist (Patrick, Fowles, & Kreuger, 2009). Psychopathy shares many common characteristics with sensation seeking. Some behaviors that characterize high sensation seeking are boredom proneness, drug and alcohol use, gambling, impulsivity, thrill-seeking, and risk-taking (Zuckerman, 1994). Similar characteristics of psychopathy include impulsivity, boredom proneness, need for stimulation, promiscuous sexuality, drug and alcohol use, and consistent irresponsibility (Quayle, 2008).

In addition, several measurements of psychopathy include many recurring sensation seeking traits. Factor 2 of the PCL-R measures impulsivity and general sensation seeking of those individuals who are thought to be psychopathic. The three-factor model of psychopathy, proposed by Cooke and Michie (2001), devote their Factor 2 to boredom proneness and impulsivity as well. Another conceptualization of psychopathy developed by Hall et al. (2004) has a Lifestyle factor measuring impulsivity, sensation seeking, disinhibition, and boredom proneness of psychopathic suspects. The Psychopathic Personality Inventory (PPI) also allows for measurements regarding thrill seeking. It appears then, that throughout the history of psychopathy, several researchers have agreed that sensation seeking is a crucial component to put in their measurements of psychopathy.

Related to sensation seeking, it is well established that psychopaths have an emotional deficiency (Herpertz & Sass, 2000). Due to this deficiency, psychopaths are low in arousability, engaging in risky and highly stimulating behaviors to raise their arousal level. One study tested this notion by measuring the risk-taking of three different groups of people. The groups consisted of drug unit residents (DR), who were likened to psychopaths, rock climbers (RC), who were likened to typical thrill-seekers, and heroes (H), who were policemen and firemen recently commended for their bravery in the line of duty and were likened to prosocial risk-takers. Sensation seeking was measured using Zuckerman's Sensation Seeking Scale Form IV (SSS-IV). Psychopathic traits were measured based on Cleckly's conceptualization of psychopathy, known as the SAP scale. Results showed that DR scored higher on the SAP scale, Emotionality, Depression, Psychopathy, and the Disinhibition sub-scale of SSS-IV than both RC and H. DR were significantly lower on the empathy scale than the other two groups as well.

One older study gives some insight to the relationship between psychopathy and sensation seeking (Blackburn, 1969). The study was based upon the proposal that the majority of psychopathic behavior represents the need for stimulation. It was predicted that psychopaths would show higher levels of sensation seeking than non-psychopaths. Sensation seeking was measured using an older form of Zuckerman's Sensation Seeking Scale (SSS). Results showed the highest correlations on scales relating to impulsivity, which is consistent with the hypothesis that sensation seeking is related to psychopathy.

Based upon the review of the literature, it seems that there is a connection between psychopathy, deception, and sensation seeking. However, research that examined psychopathy and sensation seeking together was conducted almost 45 years ago. In addition, the research is scant when examining all three variables together. Because of the impact psychopaths have on society as a whole, it is important to make a connection between these three constructs. To highlight this impact, offenders who are diagnosed as being psychopathic make up an excessive amount of criminal offenses, violent offenses in particular (Patrick, Fowles, & Krueger, 2009).

The purpose of the present study is to describe relationships between psychopathy, sensation seeking, and deception. In order to better understand psychopathy, all contributing factors must be clearly understood. This will be established with three hypotheses: (a) sensation seeking will be positively related to psychopathy, (b)

deception will be positively related to psychopathy, and (c) psychopathy will be positively related to both sensation seeking and deception.

Method

Participants

The sample consisted of 100 undergraduate students enrolled in introductory and statistical-experimental psychology courses at a southern university. All participants had normal or corrected to normal vision. All participants received 1.5 outside participation credits that are required for the aforementioned classes.

Materials

Three separate questionnaires were used to measure the constructs of this study which are Zuckerman's (2007) Sensation Seeking Scale Form V (SSS-V), the Triarchic Psychopathy Measure (TriPM) (Patrick, Fowles, & Krueger, 2009), and the Test of Machiavellianism (MACH-IV) developed by Christie & Geis in 1970.

Sensation Seeking. SSS-V is a 40-item questionnaire that measures one's overall level of sensation seeking along with four subscales consisting of Thrill and Adventure Seeking (TAS), Excitement Seeking (ES), Disinhibition (Dis), and Boredom Susceptibility (BS). Two choices are given (A and B) and participants are instructed to choose the statement that best describes their likes or the way they feel. Previous studies have suggested acceptable validity for this scale (Zuckerman, 2007). The Cronbach's alpha for this scale as computed for this study is .77.

Psychopathy. The TriPM is a 58-item questionnaire which contains statements that people might use to describe themselves. The statements are followed by four choices (True, Mostly True, Mostly False, False). Participants are instructed to completely select the choice that best describes them. This scale measures three subscales that make up the typical psychopathic personality. These subscales are boldness, meanness, and disinhibition. For this study, the Cronbach's alpha for this scale is .85, with previous validity studies suggesting acceptable validity of the measure (Patrick, Fowles, & Krueger, 2009).

Deception. The Test of Machiavellianism (MACH-IV) is a 20-item questionnaire that instructs participants to gauge how accurately they are described by the presented statements. The level of accuracy is based on a 1 (strongly disagree) to 5 (strongly agree) scale. This scale's Cronbach's alpha, as used in this study is .73, with previous validity studies suggesting acceptable levels of validity as well (Kaestner, 1977; Dahling, 2009).

Procedure

The questionnaires were administered online to the undergraduate students. All participants received the questionnaires in the same order (i.e., MACH-IV, TriPM, SSS-V). Each participant was identified by a unique number known only by them and the primary researcher. This number had no connection to their names or other means of identification. Participants were given the option to not respond to any question that was asked. Each participant was told that there were no right or wrong answers, but were instructed to answer as accurately and honestly as possible. It was made clear to each participant that if discomfort was felt at any time, he or she may discontinue at any time without penalty. Participants electronically signed a consent form before

the study began. Upon completion, participants were able to read the debriefing form and had access to the principle investigator's contact information in case questions or concerns should arise. It took participants an average of 16.21 minutes to complete all three questionnaires.

Results

To test the associations among the variables, a Pearson and Spearman correlation analyses were conducted using the total score for each questionnaire. Both types of correlations were used to establish a linear as well as monotonic relationship. Total scores were obtained for SSS-V and TriPM by using syntax developed for IBM SPSS software version 19.0. Total scores for the MACH-IV were obtained by adding a constant of 20 to each raw score for forward coded items and reverse coded items separately. These scores were then averaged to obtain a total score for each participant.

The results of the Spearman correlation analyses revealed strong correlations between the three constructs of the study. The TriPM and MACH-IV were significantly correlated (rho = .28, p = .01). Similarly, the MACH-IV and SSS-V showed a significant correlation (rho = .201, p = .05). The strongest correlation was between SSS-V and TriPM (rho = .583, p = .01). The results for the Spearman correlation supported all three hypotheses, and are summarized in Table 1.

Similarly, results of the Pearson correlation analyses revealed powerful correlations between all three variables. The TriPM was significantly related to MACH-IV (r = .288, p = .01) and SSS-V (r = .587 p = .01). Additionally, MACH-IV and SSS-V were also significantly related (r = .247, p = .05). These results also supported all three hypotheses and are shown in Table 2.

The relationship between each phenotypic constructs of the TriPM and the MACH-IV and SSS-V was also analyzed using a Pearson correlation. Results revealed that Meanness was significantly correlated with the MACH-IV (r =.457, p = .01) and SSS-V (r = .457, p = .01). Disinhibition was significantly correlated with the MACH-IV (r = .287, p = .01) and SSS-V (r = .324, p = .01). Boldness was significantly related to SSS-V (r = .428, p = .01), but was not related to the MACH-IV (r = -.102). These results are summarized in Table 3.

Table 1: *Pearson Correlation of Total Scores*

	TriPM Total	MACH-IV Total	SSS-V Total
TriPM	---	**.288****	**.587****
MACH-IV	**.288****	---	**.247***

Note: * Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Table 2: *Spearman Correlation of Total Scores*

	TriPM	MACH-IV	SSS-V
TriPM	---	**.281****	**.583****
MACH-IV	**.281****	---	**.201***

Note: * Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Table 3: *Pearson Correlation of the Phenotypic Constructs of TriPM to SSS-V and MACH-IV Total Scores*

	MACH-IV	SSS-V
MACH-IV	---	**.247***
SSS-V	**.247****	---
Boldness	**-0.102**	**.428****
Meanness	**.457****	**.457****
Disinhibition	**.278****	**.324****

Note: * Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Discussion

Results supported the hypotheses (a) sensation seeking will be positively related to psychopathy, (b) deception will be positively related to psychopathy, and (c) psychopathy will be positively related to both sensation seeking and deception in the powerful correlations found. By establishing both a monotonic and linear relationship the magnitude of these results is strengthened even more than with the significance of the relationship alone. The results indicated that sensation seeking, psychopathy, and deception are, in fact, related to each other and this relationship is not necessarily dependent on a continuous line. However, fluctuations in these constructs are still powerfully related. The phenotypic constructs of meanness, boldness, and disinhibition as measured by the TriPM are also strongly related to sensation seeking and deception, with the exception of boldness and deception.

Limitations

There are limitations to the current study, the most problematic being the internal validity of the study. Since it is a correlational design, there is no way of linking a causal relationship between the three constructs or specify any direction of causality; it can only be said that the constructs are related. However, this study is the first to look at these three variables simultaneously in any type of design and an extremely powerful relationship was found.

The idea of socially desirable responses also threatens this study's construct validity. All three personality traits measured can shine an individual in an unfavorable light. In addition, there is no way of knowing if all participants answered honestly because all measures were self-report. However, all participants knew their responses were completely anonymous and had the option of not answering any question that they did not want to. Because of this, social desirability was likely not to be a major issue within the study.

A threat to the external validity of the study is within the sample. All participants were undergraduate psychology students. It is possible they recognized some of the scales used and knew what they were measuring. However, this is very unlikely because the vast majority of participants were underclassmen and have not been exposed to the classes in which these scales may be discussed.

Future Directions

This study can be used as a foundation for future research and may be conducted at any university. The study should be replicated in the future to improve validity and further establish this relationship. In future studies, gender differences should be incorporated since females are increasingly being diagnosed with psychopathy (Hare, 1993). Future research should also use children and adolescent participants, since the disease has been implied to start at an early age. It is also important that future research incorporate a sample of known psychopaths so that the study's validity is dramatically improved and results are magnified.

Implications

Previously, the relationship between sensation seeking, psychopathy, and deception was only an implied one. It was only known that certain characteristics of sensation seeking seemed to correspond with deception and psychopathy and vice versa because there has been no study to date that has measured these three constructs simultaneously. The implications of the results of this study serve to make these connections and show that these are, indeed, strong connections and should be added to the body of psychopathy literature. Correlations of this magnitude have major implications into this chronic mental disease.

Currently, clinicians are pessimistic about treatment efficacy for psychopathy for several reasons (Pickersgill, 2011). It is speculated that current treatments may actually serve to enhance psychopathic qualities. For example, in a group treatment setting, psychopaths may feed off each other to gain more insight into various ways to manipulate individuals, including clinicians that they had not thought of before (Hare, 1993). In addition, a basic assumption for a successful therapeutic intervention is that the individual not only needs, but wants help for their distress and actively participate in their treatment. Psychopaths typically do not possess this motivation for treatment.

Perhaps the reason that therapeutic interventions so far have been unsuccessful with psychopaths is because clinicians cannot agree on three critical issues (Lee, n.d.) These issues are the nature of the disorder and the specific people it applies to, the best goals and targets for the intervention, and if the intervention is even going to be successful. The etiology of psychopathy is also a matter of great debate

in the field. This is particularly problematic, since the most logical way to try to alleviate the problem is to identify it as early as possible. Psychopathic traits are exhibited at an early age, but go untreated for a variety of reasons (Hare, 1993).

The only effective treatment for psychopathy is to start at the root of the problem as soon as the problem is noticed. The results of this study make a strong connection between behaviors that can be exhibited at a very early age. They also serve to further understand the precursors and correlations of psychopathy and may allow us to identify this mental disorder in its early stages so that an effective treatment may be established.

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