Personality, Non-Aggressive Antisocial Behaviors, and Mental Health

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Introduction

While there is abundant research on material theft, there is little investigation on compulsory theft. The present study aims to expand the current knowledge on compulsory theft, substance use, and non-aggressive antisocial behaviors in general. The primary goal of this study is to distinguish people who steal for relief from those who engage in a wider variety of antisocial behaviors and those who use substances recreationally from those who may have substance abuse problems. We will distinguish these individuals by personality traits and general mental health. Specifically, factors of interest include mental health, dark triad personality traits, impulsivity, and sensitivity to rewards. Studying the factors that possibly underlie compulsive stealing may help us inform treatment and intervention efforts, thereby decreasing the compulsions and subsequent thefts related to compulsive stealing. Future treatments for individuals who steal for relief may also reduce the likelihood that those individuals may face legal repercussions and the loss of merchandise in stores while improving psychological health and social relationships. Studying the factors associated with substance use may also aid in addiction treatment and help reveal which individuals may be more at-risk for developing substance abuse. This project will broaden our understanding of compulsive behaviors, like stealing for non-material gain and substance-use problems. The research results can expand the existing body of knowledge on such psychological disorders, such as kleptomania, substance abuse, and dependence, and more broadly, conduct problems centered on non-aggressive antisocial acts. Adding to this body of research may contribute to the design of clinical intervention programs aimed at reducing these behaviors, ultimately reducing the likelihood of possible contact with the legal system, and improving social relationships directly affected by these maladaptive behaviors.

More research has focused on aggressive than non-aggressive antisocial behaviors, which encompass deviant behaviors that do not fit within the social convention yet are not directly intended to physically, emotionally, or socially harm others. Specifically, non-aggressive behaviors may include the compulsion to steal items that lack materialistic value and the compulsion to abuse substances such as drugs and alcohol (Burt & Donnellan, 2009). Compulsive thieves score higher on impulse control disorders, having difficulty controlling thoughts, emotions, and behaviors (e.g., conduct disorder (CD) and obsessive-compulsive related disorders (obsessive-compulsive disorder [OCD], trichotillomania) (Hollander & Wong, 1995). These individuals report experiencing uncomfortable tension preceding theft (Weidemann, 1998). The act of stealing appears to reduce the tension experienced and results in greater relaxation and satisfaction (Weidemann, 1998), inadvertently rewarding the behavior and increasing the likelihood of future occurrences. Although the intent of the behaviors is not to cause direct harm to people, both businesses and individuals are harmed through the loss of valuable goods (Grant, 2009).

Similarly, substance abuse has been associated with greater impulsivity (Lee, Hoppenbrouwers, & Franken, 2019; Moreno et al., 2012), with a strong sensitivity to the rewarding effects of the drugs (Ganesh et al., 2018). A strong association has been found between the compulsion to steal and substance abuse (Grant et al., 2010). It has been suggested that people who take things to relieve stress use substances to cope with the general stress, as well as stress related to their compulsive behaviors (Grant et al., 2010). For example, the act of stealing is a crime that may lead to legal, financial, and social consequences (Grant et al., 2009), such as jail time, adverse effects on the mental health of the individual and the family, and financial strain as a result of court fees and restitution. The long-term impact for people who

engage in compulsive theft or substance abuse is poor. Compulsive thieves report greater difficulty controlling their compulsions to steal and experience decreased quality of life due to feeling greater shame, distress, depression, and helplessness, in response to their stealing behaviors (Grant et al., 2003; Odlaug et al., 2012). Substance abuse additionally has a well-documented association with depression and anxiety problems in community samples (Green et al., 2012; Kedzior & Laber, 2014).

Further, substance abuse has been associated with certain personality traits. For example, the dark triad consists of three personalities, narcissism, Machiavellianism, and psychopathy. Narcissism is a grandiose sense of self and superiority; Machiavellianism by charm and a desire to get ahead; and psychopathy by lack of remorse, low impulse control, and antisociality (Furnham, Richards, & Paulhus, 2013). Narcissism and psychopathy have been associated with poor impulse control (Jones & Paulhus, 2011) and substance abuse (Stenason & Vernon, 2016). All three have been associated with elevated rates of engaging in theft (Lyons & Jonason, 2015; O'Reilly & Doerr, 2020; Vaughn et al., 2008).

In the present study, we intend to explore the differences between individuals who have difficulties controlling their impulses to those who tend to just engage in a wider variety of antisocial behaviors. We hypothesize that: 1) individuals who steal for non-material gain will show greater mental health problems than people who steal for material gain. Individuals who steal for material gain will show more dark triad personality traits and higher sensitivity to rewards. The two will not differ on levels of impulsivity; 2) individuals who have substance use problems will show greater mental health problems, impulsivity, and score higher on psychopathy and narcissism, and sensitivity to rewards compared to individuals who use substances recreationally.

Methods

Participants

There were 315 participants in the study recruited from a northeastern university and the general population (71.1% female, 28.9 % male). Ages ranged from 18 to 24 years old (M = 19.07, SD = 1.27). The racial/ethnic composition of the sample was 74.3% White Non-Hispanic, 3.2% White Hispanic, 2.9% Black Non-Hispanic, 1.3% Black Hispanic, 4.4% Hispanic, 1.3% Latinx Non-Hispanic, 2.9% Latinx Hispanic, 3.2% Asian Non-Hispanic, 4.8% multiracial, and 1.9% other.

Measures

A general demographics questionnaire measured age, sex, race/ethnicity, and socioeconomic status. The Brief Symptom Inventory (BSI)(Derogatis & Melisaratos, 1983) is a 53-item measure that assesses mental health symptomology and indicators of psychopathology such as depressive or anxious symptoms in the past 14 days. Scales include somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The BSI also includes global indices such as the global severity index, which assesses overall psychological distress; positive symptom distress, which assesses symptom intensity; and positive symptom total, which assesses the number of self-reported symptoms. Items are scored on a 4-point scale (0 = not at all, 1 = a little, 2 = somewhat, 3 = quite a bit, 4 = extremely). Sample questions include “In the last 14 days, how much were you distressed by faintness or dizziness?” “By hot or cold spells?”. For this study, we used to global severity index, and higher scores indicated greater psychological distress. This study's internal reliability was excellent (Cronbach's alpha = .97).

The Drug Abuse Screening Test (Skinner, 1982) is a 20-item measure that assesses substance use, including the motive and number of substances used in the past 12 months. Sample questions include “Do you abuse more than one drug at a time?” “Have you used drugs other than those required for medical reasons?” Items answered "yes" were scored for 1 point (except for questions 4 and 5, which included “Can you get through the week without using drugs?” and “Are you always able to stop using drugs when you want to?”) and 0 points for “no.” Scores were summed for an overall score of substance use. Scores of 0 indicate substance use with “no problems,” scores of 1-5 indicate substance use with “low severity,” that likely require brief intervention; scores ranging from 6-10 indicate “intermediate severity”, likely meeting clinical diagnosis of substance use problems that require intensive outpatient intervention; scores 11-16 indicate “substantial problems” requiring intensive intervention; and scores ranging from 16-20 indicate "severe problems" requiring intensive intervention. Only one individual scored in the 11-15 range in the current study, and no participants scored in the 16-20 range. For our research, we created three categories. A score of 0 indicates no problems, scores ranging from 1-5 indicate mild problems, and scores 6 or greater indicate at least moderate substance use problems. This study's internal reliability was good (Cronbach's alpha = .81).

The Urgency, Premeditation, Perseverance, and Sensation Seeking - Positive Urgency Impulsive Behavior Scale (Lynam et al., 2006) is a 59-item measure that assesses impulsivity, or the inability to inhibit behavioral urges. Scales include negative urgency, premeditation, perseverance, sensation seeking, and positive urgency. Items were scored on a 4-point scale (0 = agree strongly, 1 = agree somewhat, 2 = disagree somewhat, 3 = disagree strongly). Sample questions include “I have trouble controlling my impulses.” “I generally seek new and exciting experiences and sensations”. Higher scores indicate greater impulsivity. Items were scored on a

4-point scale (0 = agree strongly, 1 = agree somewhat, 2 = disagree somewhat, 3 = disagree strongly). Sample questions include “I have trouble controlling my impulses.” “I generally seek new and exciting experiences and sensations." This study's internal reliability was excellent (Cronbach's alpha = .93).

The Elemental Psychopathy Assessment-Short Form (Lynam et al., 2013) is a 72-item measure that assesses traits of psychopathy. Scales include anger, arrogance, callousness, coldness, irresponsibility, distrust, dominance, lack of persistence, invulnerability, manipulativeness, oppositionality, rashness, self-assuredness, self-centeredness, self-contentment, thrill-seeking, unconcern, and urgency. Items are scored on a 5-point scale (1 = disagree strongly, 2 = disagree a little, 3 = neither agree nor disagree, 4 = agree a little, 5 = agree strongly). Sample questions include “Feeling sorry for others is a sign of weakness.” “It takes a lot to make me nervous or anxious”. Items are summed from the 18 scales to generate an overall total psychopathy score, with higher scores indicating greater psychopathy. This study's internal reliability was excellent (Cronbach's alpha = .91).

The Five-Factor Machiavellianism Inventory (Collision et al., 2018) is a 52-item measure that assesses traits of Machiavellianism. Scales include achievement, activity, selfishness, assertiveness, competence, deliberation, invulnerability, immodesty, order, self-confidence, manipulativeness, callousness, and cynical. Items are scored on a 5-point scale (1 = disagree strongly, 2 = disagree a little, 3 = neither agree nor disagree, 4 = agree a little, 5 = strongly agree). Sample questions include, "Sometimes you have to lie to get things done," and "I view others as tools to be used and manipulated." A total Machiavellianism score can be computed by summing the 13 scales, with higher scores indicating greater Machiavellianism. This study's internal reliability was good (Cronbach's alpha = .80).

The Five-Factor Narcissism Inventory – Short Form (Sherman et al., 2015) is a 60-item measure that assesses traits of narcissism. Scales include acclaim-seeking, arrogance, authoritativeness, distrust, entitlement, exploitativeness, grandiose fantasies, indifference, lack of empathy, manipulativeness, need for admiration, reactive anger, shame, and thrill-seeking. Vulnerable narcissism is a score summed of reactive anger, shame, need for admiration, and distrust. Grandiose narcissism is a score summed of indifference, exhibitionism, authoritativeness, grandiose fantasies, manipulativeness, exploitativeness, entitlement, lack of empathy, arrogance, acclaim seeking, and thrill-seeking. Optionally, three factors can be generated to create antagonism: manipulativeness, exploitativeness, entitlement, lack of empathy, arrogance, reactive anger, distrust, and thrill-seeking; extraversion: acclaim seeking, authoritativeness, grandiose fantasies, exhibitionism; and neuroticism: shame, indifference, need for admiration. Items are scored on a 5-point scale (0 = strongly disagree, 1 = disagree, 2 = neither agree not disagree, 3 = agree, 4 = agree strongly). Sample questions include, "I deserve to receive special treatment," and “I often feel as if I need compliments from others to be sure of myself." A total narcissism score was calculated by summing all the items, with higher scores indicating greater narcissism. This study's internal reliability was excellent (Cronbach's alpha = .90).

The Sensitivity to Punishment and Sensitivity to Reward Questionnaire (Torrubia et al., 2001) is a 48-item measure that assesses how vulnerable one is to stimuli that elicit a favorable and unfavorable response (i.e., reward and punishment). Sensitivity to reward scores are computed by summing all even questions. Sensitivity to punishment scores is computed by summing all odd questions. Sample questions include “Do you often refrain from doing something because you are afraid of it being illegal?” “Does the good prospect of obtaining

money motivate you strongly to do some things?" For this study, we are using the sensitivity to reward score, and higher scores indicate greater sensitivity to rewards. This study's internal reliability was adequate (Cronbach's alpha = .76).

The Stealing Behaviors Questionnaire (Lyons & Jonason, 2015) is a 25-item measure that assesses the frequency, motivation, and targets from which participants steal. Items are scored on a 5-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often). Questions 1-13 were summed and averaged to create an average index of theft frequency in the past year and the targets from whom the participants stole. Targets were separated into categories of family/friends, strangers, work, stores, and government agencies. Questions 14-20 assessed seven different motivations for stealing. Questions 21-22 assessed the level of risk perception of stealing and responses were summed and averaged to create an overall risk perception score. Questions 23-25 assessed the level of planning that goes into stealing. We were most interested in stealing motivations (i.e., material vs. non-material theft). Stealing motivations were split into five groups: No Stealing, Materialistic, Anger/Revenge, Fun, Tension. Sample questions include "How often in the past year have you stolen to reduce tension?" and "In regards to stealing in the past year, how often do you plan ahead?" The internal reliability for stealing in the past year was good for this study (Cronbach's alpha = .84).

Procedures

Data collection began after approval was granted from the university's Institutional Review Board. We used convenience sampling to recruit participants through the university's human subject pool and advertisements to the general population through social media (e.g., Facebook, Instagram, Twitter) to increase the representativeness of the sample. Participants signed up for the study through the human subject pool or a social media advertisement, which

directed them to an online survey hosted by Qualtrics. The first page was the consent form. Participants indicated their voluntary consent to participate by selecting “Yes” or “No” on the consent form (names will not be required to assure anonymity). Those indicating "Yes" were directed to start the survey. Once participants completed the survey, they were debriefed on the study's purpose, nature, and goal. Those who participated through the human subject pool received ten credits towards their courses for compensation. Those who completed the survey from the general population were directed to a separate form (not connected to the survey) where they could enter into a raffle to win one gift card from a pot of twenty $50 Amazon gift cards. The entire process took 45 minutes to 1 hour, depending on the reading pace.

Results

Bivariate Correlations

Table 1 shows the bivariate correlations between all study variables and the means and standard deviations for all study variables. In terms of demographic variables, age was significantly negatively correlated with narcissism, r = -.15, and impulsivity, r = -.14, both ps < .05. Biological sex was significantly positively correlated with drug use, r = .19, psychopathy,

r = .15, and Machiavellianism, r = .26, and negatively correlated with mental health problems,

r = -.11, all ps < .05.

Frequency of stealing within the past year was significantly positively correlated with drug use, r = .29, psychopathy, r = .18, sensitivity to rewards, r = .11, impulsivity, r = .29, and mental health problems, r = .22, all ps < .05. Frequency of stealing within the past year was also significantly positively correlated with stealing for anger or revenge, r = .22, stealing for fun,

r = .71, and stealing to reduce tension, *r* = .46, all *p*s < .05. Stealing for anger or revenge was significantly positively correlated with drug use, *r* = .17, psychopathy, *r* = .20, narcissism,

r = .17, sensitivity to rewards, *r* = .14, impulsivity, *r* = 18, and mental health problems, *r* = .20, all *p*s < .05. Stealing for fun was significantly positively correlated with drug use, *r* = .33, psychopathy, *r* = .21, narcissism, *r* = 18, sensitivity to rewards, *r* = .20, impulsivity, *r* = .32, mental health problems, *r* = 23, and stealing for anger or revenge = .35, all *p*s < .01. Stealing to reduce tension was significantly positively correlated with drug use, *r* = .24, psychopathy,

r = .17, impulsivity, *r* = 22, mental health problems, *r* = .20, stealing for anger or revenge,

r = .60, and stealing for fun = .57, all *p*s < .01.

Drug use was significantly positively correlated with psychopathy, *r* = .28, narcissism,

r = .25, sensitivity to reward, *r* = .26, and impulsivity, *r* = .25, all *p*s < .01.

Psychopathy was significantly positively correlated with Machiavellianism, *r* = .30, narcissism, *r* = .72, sensitivity to reward, *r* = .40, impulsivity, *r* = .57, and mental health problems, *r* = .24, all *p*s < .01. Machiavellianism was significantly positively correlated with narcissism, *r* = .32, sensitivity to reward, *r* = .14, impulsivity, *r* = .26, and negatively correlated with mental health concerns, *r* = -.35, all *p*s < .05. Narcissism was significantly positively correlated with sensitivity to reward, *r* = .62, impulsivity, *r* = .41, and mental health problems,

r = .26, all *p*s <.01. Sensitivity to reward was significantly positively correlated with impulsivity, *r* = .45, and mental health problems, *r* = .26, all *p*s < .05. Impulsivity was significantly positively correlated with mental health problems, *r* = .47, *p* < .01.

Table 1

Bivariate Correlations and Descriptive Statistics of Main Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	-													
2. Sex	-.08	-												
3. Drug use	.08	.19**	(.81)											
4. PSYC	-.10	.15**	.28***	(.91)										
5. MACH	.04	.26***	-.01	.30***	(.80)									
6. NARC	-.15**	.09	.25***	.72***	.32***	(.90)								
7. REW	-.09	.06	.26***	.40***	.14*	.62***	(.76)							
8. IMP	-.14*	.01	.38***	.57***	-.26***	.41***	.45***	(.93)						
9. MH	-.04	-.11*	.25***	.24***	-.35***	.26***	.26***	.47***	(.97)					
10. SPY	.01	-.00	.29***	.18*	-.03	.10	.11*	.29***	.22***	(.84)				
Stealing Motivation														
11. ANG	-.09	.07	.17**	.20***	.06	.17**	.14*	.18**	.20**	.22***	-			
12. Fun	.02	.02	.33***	.21***	-.03	.18**	.20**	.32***	.23***	.71***	.35***	-		
13. Tension	-.03	.02	.24***	.17**	.01	.20	.06	.22***	.20***	.46**	.60***	.57**	-	
14. MAT	-.04	.03	.38***	.25***	-.02	.19**	.14*	.37***	.28***	.78***	.30***	.75***	.54***	-
M	19.07	.29	1.69	175.22	153.65	105.75	11.95	68.84	53.86	1.11	1.04	1.17	1.06	4.58
SD	1.27	.45	2.41	28.73	15.88	24.97	4.35	23.25	38.76	.34	.26	.56	.31	1.54

Note. PSYC = Psychopathy, MACH = Machiavellianism, NARC = narcissism, REW = sensitivity to rewards, IMP = impulsivity, MH = mental health, SPY = stealing in the past year, ANG = anger/revenge, and MAT = materialistic. Sex was coded 0 = females and 1 = males. Numbers in parentheses are Cronbach's alphas for that measure.
*$p < .05$. **$p < .01$. ***$p < .001$.

Stealing Motivations

A one-way multivariate analysis of variance (MANOVA) was used to examine the differences in stealing motivation (materialistic, anger/revenge, fun, and tension reduction) on our dependent variables (narcissism, psychopathy, Machiavellianism, mental health problems, impulsivity, and sensitivity to reward). Significant differences were found among the five groups on the dependent variables, Wilks' $\lambda = .79$, $F(24.00, 1065.23) = 3.09$, $p < .001$. The multivariate η^2 based on Wilks' λ was .06.

Univariate analyses of variance (ANOVAs) on each dependent variable were used as follow-up tests to the MANOVA using a Bonferroni adjusted alpha levels of .0083 per ANOVA (.05/6). As shown in Table 2, the ANOVAs on narcissism, psychopathy, mental health problems, impulsivity, and sensitivity to reward were significant, all *p*s < .0083. The ANOVA on Machiavellianism was not significant, $p = .618$.

Upon initial examination of the means (Figure 1), there appeared to be mean differences between materialistic theft and theft for anger/revenge on narcissism, psychopathy, and mental health problems, all *p*s < .05, and a mean difference between theft for anger/revenge and tension reduction on narcissism, $p < .05$. However, inconsistent with our hypotheses, post hoc analyses of pairwise comparisons using the Bonferroni method (to reduce the possibility of making a Type I Error) with *p* set at the more conservative .0014 level (.0083/6) indicated no significant mean differences.

Table 2

Means, Standard Deviations, and One-Way ANOVAs for Study Variables by Stealing Motivation

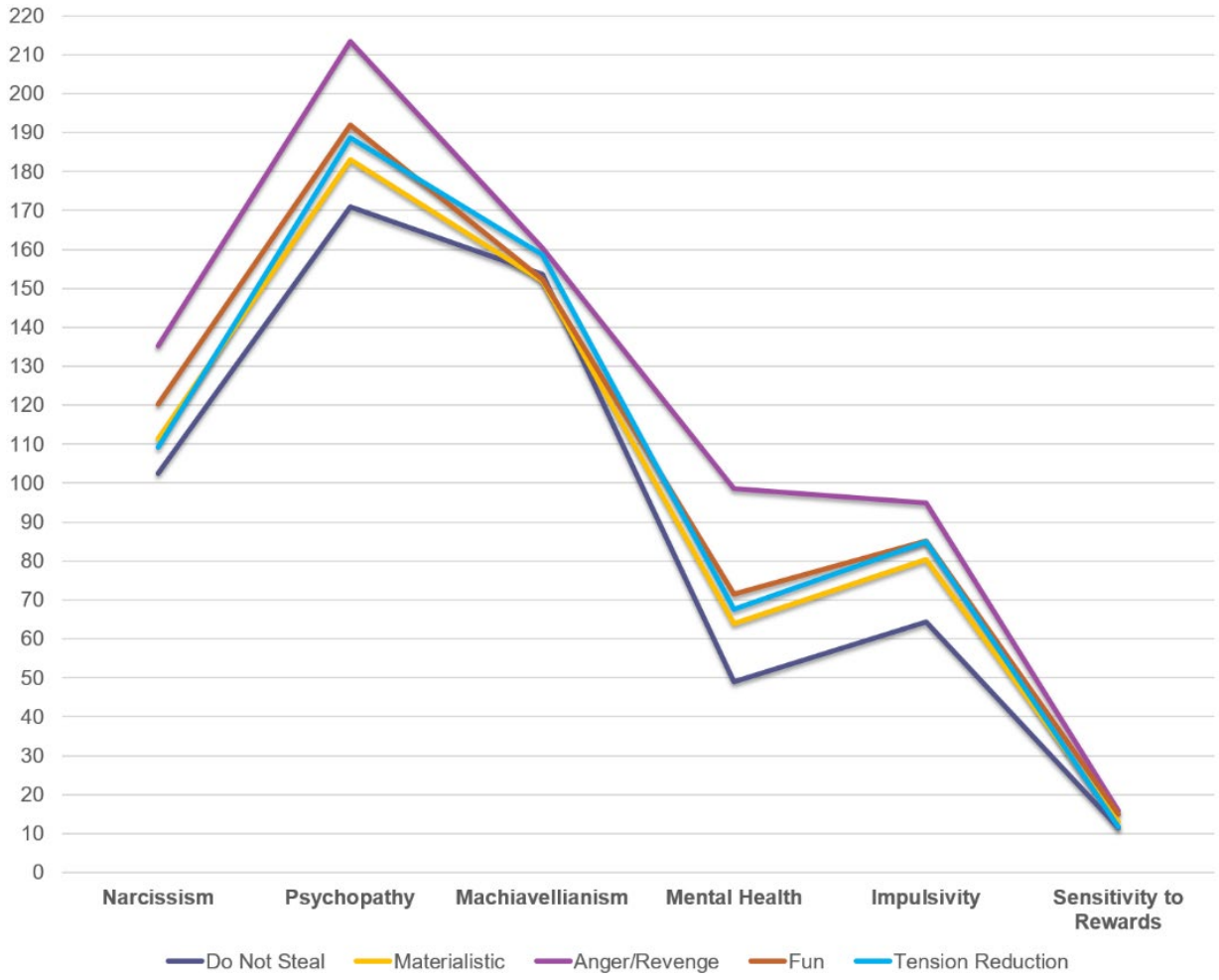
	Narcissism		Psychopathy		Machiavellianism		Mental Health		Impulsivity		Rewards	
Motivation Group	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
No Stealing	102.52	1.54	170.91	1.76	153.67	1.02	48.96	2.41	64.42	1.39	11.39	0.27
Materialistic	111.44	4.26	183.03	4.85	151.78	2.81	63.88	6.65	80.28	3.85	13.00	0.74
Anger/Revenge	135.25	8.52	213.38	9.70	160.25	5.63	98.63	13.29	95.00	7.7	15.75	1.49
Fun	120.25	4.92	192.00	5.60	152.33	3.25	71.46	7.68	85.17	4.45	15.04	0.86
Tension	109.14	9.11	188.71	10.36	158.57	6.01	67.57	14.21	85.00	8.23	11.71	1.59
$F(4, 310)$	6.75*		8.70*		0.66		5.99*		11.95*		6.46*	
η^2	.08		.10		.01		.07		.13		.08	

Note. $N = 315$. ANOVA = analysis of variance.

*$p < .001$.

Figure 1

Mean Scores on Dependent Variables by Stealing Motivations Group



Drug Use

A one-way MANOVA was used to examine the differences in drug use (no problems, mild problems, substance abuse) on our dependent variables. Significant differences were found among the three groups on the dependent measures, Wilks' $\lambda = .86$, $F(12.00, 612.00) = 3.91$, $p < .001$. The multivariate η^2 based on Wilks' λ was .07.

Univariate ANOVAs on each dependent variable were used as follow-up tests to the MANOVA. As shown in Table 3, the ANOVAs on narcissism, psychopathy, mental health problems, impulsivity, and sensitivity to rewards were significant, all *p*s < .001.

Post hoc analyses were conducted using pairwise comparisons and the LSD method with alpha set at .05 to find which level of drug use had the greatest level of narcissism, psychopathy, mental health problems, impulsivity, and sensitivity to rewards scores. Consistent with our second hypothesis, the substance abuse group scored significantly higher than the mild problems and no problems groups, on all scores, all *p*s < .01. The mild problems group scored significantly higher than the no problems group on psychopathy, impulsivity, sensitivity to rewards, all *p*s < .05 (Figure 2).

Figure 2

Mean Scores on Dependent Variables by Drug Use Problems Group

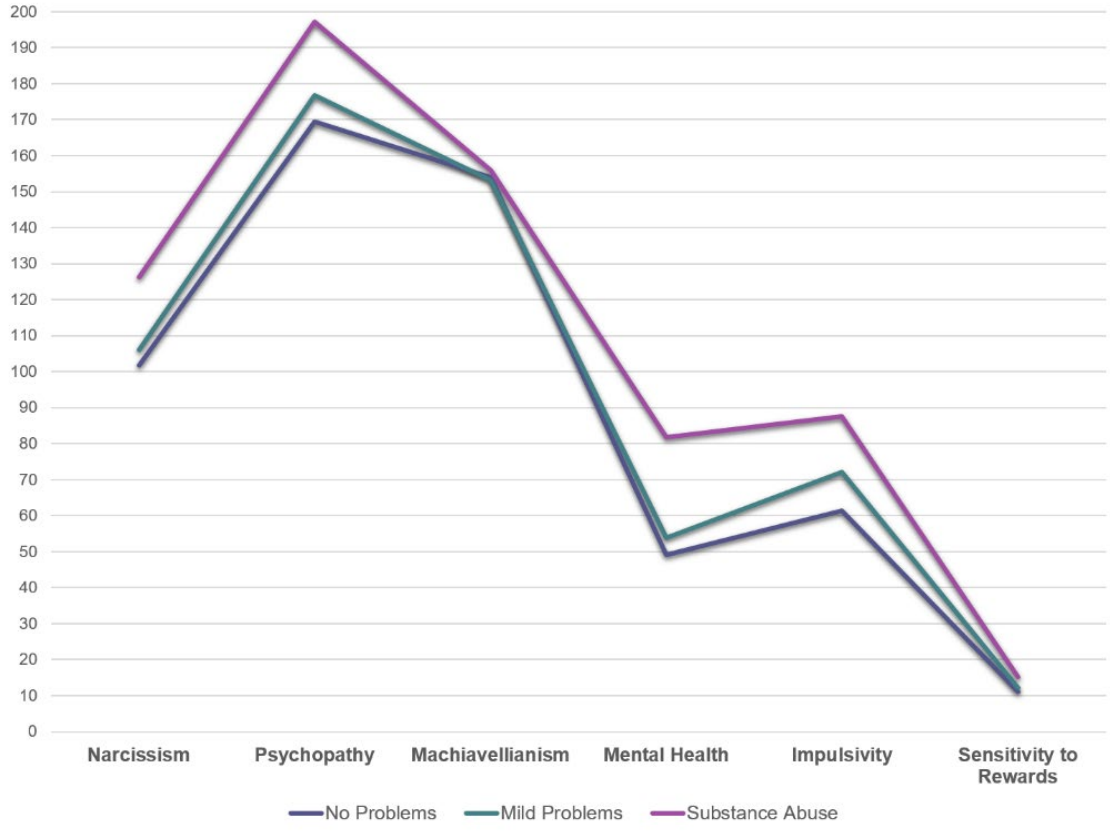


Table 3

Means, Standard Deviations, and One-Way ANOVAs for Study Variables by Drug Use Problems

	Narcissism		Psychopathy		Machiavellianism		Mental Health		Impulsivity		Rewards	
Drug Use Group	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
No Problems	101.73	25.20	169.38	29.31	154.05	13.98	49.10	41.49	61.44	21.78	11.12	4.30
Mild Problems	106.12	24.00	176.82	26.78	153.03	17.11	53.84	35.26	72.08	22.99	12.16	4.24
At Least Moderate Problems	126.36	20.83	197.18	28.53	155.95	17.07	81.68	37.59	87.64	17.15	15.23	3.83
$F(2, 312)$	9.68**		9.86**		0.40		6.88*		16.83**		9.24**	
η^2	.06		.06		.00		.04		.10		.06	

Note. $N = 315$. ANOVA = analysis of variance

*$p < .01$. **$p < .001$.

Discussion

The purpose of the study was to address the dearth of research on non-aggressive antisocial behaviors by differentiating between material stealing and compulsive stealing and recreational substance use and abuse regarding personality and mental health. Notably, we examine general mental health symptoms, psychopathy, narcissism, Machiavellianism, impulsivity, and sensitivity to rewards. Upon examination of the initial bivariate correlations, results indicated that younger individuals are more likely to exhibit egotistical and grandiose tendencies. Males are more likely to abuse substances and show antisocial and exploitative personality traits. At the same time, females report greater problems regarding their mental health. Regarding drug use, results indicate that individuals who excessively use drugs score high on self-centered and antisocial pathological personalities, are more driven by the possible rewards of a situation, are less likely to be able to inhibit behavioral urges, and steal for a multitude of reasons such as out of revenge, compulsion, and for pleasure. These correlations are consistent with past research investigating substance abuse (Lee, Hoppenbrouwers, & Franken, 2019; Moreno et al., 2012; Ganesh et al., 2018, Green et al., 2012; Kedzior & Laber, 2014; Stenason & Vernon, 2016). For stealing, the bivariate correlations support that individuals who participate in stealing for a non-material gain score higher on dark triad personality traits such as psychopathy and narcissism, but not Machiavellianism, meaning they may lack empathy for others and prioritize themselves but not necessarily exploit others to do so. Non-material thieves appear to suffer from problems with mental well-being, perhaps due to the toll that stealing takes on different areas of life (Grant et al., 2009; Grant et al., 2010). Because of the correlations that non-material theft bears with traits such as the antisocial and narcissistic personality traits, and the fact that individuals scoring higher on non-material stealing are more impulsive and

susceptible to rewards in their surroundings, these mental health concerns may also be attributed to lack of control over their behaviors when there is a desirable outcome in their environment. The more frequently a person steals, the higher they score on these deviant and extreme personality traits.

Our first hypothesis was partially supported—that individuals who steal for non-material purposes, compared to those who steal for materialistic gain, would show greater mental health problems; in contrast, those who steal for material gain will show higher levels of dark triad personality traits and sensitivity to rewards, and there would be no differences on levels of impulsivity. We did not find significant differences between the stealing for material gain and non-materialistic gain groups on these variables. The only significant differences that we observed were between people who did not steal compared to those who endorsed engaging in stealing behaviors (exception of Machiavellianism and sensitivity to rewards) (refer to Figure 1). Our results indicate that in terms of different motivations for stealing, people who steal for material gain have the same levels of psychological well-being as those that compulsively steal, use stealing as a tactic to get back at individuals they are angry at, or steal to seek pleasure. The reason participants steal items does not significantly predict how capable someone is at controlling their behavioral urges and inhibiting these urges, how prone they are to respond to rewarding stimuli, the amount of self-centered traits they exhibit, their level of exploiting others, or their antisociality. This is inconsistent with prior research that non-material thieves experience greater psychopathology and impulsivity than material thieves. The significant differences in personality and mental health between those that do not steal and those that do that steal (for any purpose) are consistent with prior research that stealing is associated with adverse consequences in different areas of life (Grant et al., 2009; Grant et al., 2010).

It could be that stealing is associated with greater mental health problems, regardless of motive. All stealing motivations predicted significant differences in psychopathology compared to the no stealing group and had greater means in mental health symptoms. This may be attributed to by the acknowledgment that no matter why an individual is stealing, they may face the same legal repercussions whether that stealing was motivated by material or non-material gain. These legal repercussions could bring about stress that affects one's mental health adversely. Stealing is also associated with shame in society, specifically the act of stealing. Whether an individual is stealing an item for its practicality or due to compulsion, they are still committing the act in the same manner, leading to the same amount of shame, which may bring about depressive and anxious thoughts and feelings. Differences were also significant in predicting psychopathic and narcissistic tendencies, with individuals who did not steal scoring lower on pathological personality.

Although there were no significant differences in the dependent variables amongst the different motivation groups when the conservative significance level of .0083 was applied, pairwise comparisons before we applied this significance level showed there were differences between one of the groups, the anger/revenge group, and the material group on all dependent variables excluding Machiavellianism, impulsivity, and sensitivity to reward. These differences were significant at the .05 level, which indicates we should not be looking at whether non-material and material theft predict differing personality and mental health outcomes, but whether specifically anger or revenge-fueled theft and material theft yield differing personality and mental health outcomes. Stealing for anger or revenge predicted greater narcissism, psychopathy, and mental health problems. This is consistent with studies that have supported associations between poor anger suppression and psychopathic traits (Kosson et al., 2020) and studies that

demonstrate a relationship between anger and narcissism, specifically vulnerable narcissism (Maciantowics & Zajenkowski, 2020). Anger is also associated with poor mental health, such as various psychological disorders (Barrett, Mills, & Teesson, 2013).

However, this insignificance may be due to limitations within our own study. The first limitation we encountered in our research is our limited sample size. There were low rates of participants reporting stealing, as it may genuinely be a rare occurrence in our sample. Additionally, because stealing may be culturally interpreted as a shameful practice, individuals who do steal may be reluctant to admit to participating in theft as they fear retaliation, legal trouble, or social judgment. In participants who reported stealing, very little may have fallen evenly into the categories that existed for the various motivations of stealing. More participants reported stealing for materialistic gain rather than non-materialistic purposes, resulting in a scant number of participants for the categories of stealing for fun, anger, and tension. Lastly, the use of the Bonferroni method in our post-hoc analyses narrowed the significance level to a conservative level of .0083, which decreased the possibility that betas would be significant.

Our second hypothesis was supported—that individual who use drugs to a level warranting substance use have increased concerns with their mental health, are more impulsive, score higher on pathological traits, such as egotistical tendencies, and callous interpersonal behaviors. When individuals consume drugs to the point of excess, they are more likely to score higher on depression, anxiety, and other symptomology scales. This supports the notion that substances and psychopathology may be associated with one another (Mohamed et al., 2020). Individuals who abuse drugs also may be less able to control impulses, show greater antisocial and egotistical personalities, and are more heavily influenced by rewarding and positive stimuli. A limited ability to restrain oneself may contribute to substance abusers' inability to draw a

boundary between recreational and immoderate drug use. Psychopathy and narcissism may contribute to dysfunction in daily life, leading to reliance on the temporarily rewarding effects of substances, exacerbated by higher reactivity to rewards.

Limitations

While the study results did not support significant differences in stealing motivations, this may be due to the limitation of the small sample of individuals reporting stealing. Within those who steal, even fewer reported stealing for each type of motivation. The conservative significance level of the post hoc analyses to reduce the chance of making a Type I error led us to conclude no significant differences but at the same time, increased the chance of a Type II error. In the future, studies examining whether mental health problems, dark triad traits, impulsivity, and sensitivity to rewards differ among stealing motivations should strive for larger sample sizes to increase the power to detect an actual difference if one exists more accurately.

Other limitations include general problems with the questionnaires used in the survey. Due to questionnaires asking about antisocial behaviors, individuals may be biased towards socially desirable responses because of a fear of social judgment or legal consequences. We tried to mitigate this by making participation completely anonymous. Moreover, self-report surveys are typically the best method to assess antisocial behaviors that can be covert (i.e., stealing) and difficult for third parties to observe.

Generalizability is an additional concern. Our study used an undergraduate sample of emerging adults. The results may be difficult to generalize to other age groups in the general population and may be different from what we find in forensic populations.

Future Directions

Based on these limitations, future research on non-aggressive antisocial behaviors may benefit from obtaining a larger sample, using alternative measures for antisocial behaviors like stealing, using socially desirable response measurements to control for biased responses, and asking clear and concise questions that participants will comprehend easily. Studies assessing non-aggressive antisocial behaviors may benefit from surveying other types of samples, such as forensic samples, rather than solely community samples. Questionnaires that target theft should be based on research into different motivations for stealing to ensure that the data is not neglecting a large group of individuals that steal for an alternative motive outside of the ones examined.

Conclusion

Non-aggressive antisocial behaviors such as theft and substance use have been neglected in former studies investigating other antisocial behaviors. Our study strived to remedy this scarcity in non-aggressive research by delineating between theft for material gain and compulsive theft that had no material gain. While our study does not support that people who steal for different reasons have significant differences in their characteristics (mental health, Dark Triad traits, impulsivity, sensitivity to reward), these findings may be due to our study's statistical and structural limitations. However, individuals who engage in recreational drug use do differ from individuals who engage in excessive and immoderate substance abuse in their mental stability, dispositional characteristics, and other traits related to self-control and susceptibility to different kinds of stimuli such as reward.

Implications

Our study may provide a base for future prospective intervention programs that target stealing and drug use. For stealing, because there were no significant differences in our dependent variables as predicted by the motivation groups, programs may not need to screen for different motivations for why participants steal to bolster treatment efficiency.

For drug use, our results support that a multifaceted approach to treatment may yield greater efficiency and be superior to a program that solely focuses on drug use while ignoring other components such as personality, mental health, and additional traits that may be risk factors. Because scoring higher on psychopathic and narcissistic tendencies may be maladaptive in multiple arenas of one's life, individuals may feel compelled to depend on substances to mitigate the effects they feel from their impaired functioning. Therefore, programs may benefit from helping individuals high in these antisocial and egocentric characteristics improve functioning in their daily life so that the need for substances is diminished. Also, exhibiting traits such as being impulsive and over-receptive to rewards may increase the likelihood that an individual succumbs to abusing substances due to a failure to restrain their substance use to an appropriate level and being more heavily influenced by the rewarding components of the drug. Helping individuals improve their ability to control their urges and become less sensitive to these positive elements of substance use may decrease their overreliance on substances.

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