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Juvenile Hybrid White-Collar Delinquency: An Empirical Examination of Various Frauds

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ABSTRACT AND ARTICLE INFORMATION

With recent technological advances, juveniles now have more opportunities to engage in certain types of hybrid white-collar crime such as credit card fraud, identity theft, general fraud, intellectual property crimes, and financial/bank fraud, yet they are largely ignored in white-collar crime research due to offender- and opportunity-based definitions of the phenomenon. Using data from the Florida Department of Juvenile Justice, the current paper examines various aspects of this recently acknowledged variety of offending behavior among juveniles. Results indicate that significant differences exist between hybrid white-collar delinquents and conventional crime delinquents in various factors identified in the literature relating to deviant/criminal behavior. Theoretical implications and future research directions are also discussed.

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When Sutherland (1940) coined the term "white-collar crime," he was referring to the criminal behavior of "respectable" upper class citizens (p. 1). Since the original conceptualization, researchers have moved to broader definitions that do not necessarily delineate socioeconomic status; rather, they focus on the opportunity to engage in the act.[1] To complicate the matter further, there are those illegal activities that lie just outside of the margins of traditionally defined white-collar crimes and, as such, are often included under the general label of white-collar crime (e.g., computer crime, identity theft, bank fraud, etc.); these are often referred to as "hybrid" white-collar crimes (see Friedrichs, 2007). Although, some have argued that the techniques utilized for engaging in certain frauds (e.g., common theft, access to technology) should relegate these crimes to a conventional crime classification and that they should no longer fall under the broad white-collar crime umbrella (Copes & Vieraitis, 2009).

The majority of white-collar crime research has focused on adult offenders with few exceptions (Ruggiero, Greenberger, & Steinberg, 1982; Wright & Cullen, 2000). This is not surprising given that opportunities for white-collar crime have largely resided in the adult realm, but as technology has changed, so too have the availabilities of opportunity. Modern computers eliminate the need for large and expensive equipment previously required to take part in acts of hybrid delinquency such as check fraud or counterfeiting (Bowker, 1999). Access to technology and high levels of anonymity contribute to the appeal of acts that involve almost no face-to-face confrontation and are individualistic in nature. A juvenile can commit many forms of hybrid delinquency at any time from the comfort of his or her own bedroom. Even a juvenile without the ability to legally operate a motor vehicle could, for example, steal a large sum of money.

For the purposes of the current study, we use Edelhertz's (1970) offense-based definition of white-collar crime which defines the phenomenon as "an illegal act or series of illegal acts committed by nonphysical means and by concealment or guile to obtain money or property, to avoid the payment or loss of money or property, or to obtain business or personal advantage" (p. 3). This broad definition overlooks the typical requirements of employment, social status, and positions of trust, allowing us to focus on the characteristics of the crimes rather than the characteristics of the offenders.

Just as juveniles engage in conventional offenses similar to adult offenders, they also possess the ability to engage in white-collar offenses similar to adult offenders. Utilizing data comprised of juvenile offenders from the state of Florida, the current study examines juvenile perpetrators of various frauds from an offense-based orientation. Pontell and Rosoff (2009) theorized that white-collar offenses that were historically committed exclusively by adults also have a place in the juvenile community as well. This "migration" has taken place for a number of reasons, with the majority of them closely tied to the nearly limitless access juveniles currently have to technology. Given the growing incidence of frauds and identity thefts (Federal Trade Commission, 2014), it is important to study all groups in efforts to gain a better understanding of the phenomenon. The current study examines hybrid white-collar crimes, but to avoid confusion with terminology, from this point on, this paper will refer to them as "hybrid delinquency/crime." The identification of characteristics related to the different types of offending is yet another step in fully understanding juvenile offending. It is critical that these characteristics or "profiles" be taken into account when examining both the juvenile justice system and hybrid white-collar crime in general.

Literature Review

Research has shown that adult white-collar offenders tend to be male, White, middle-aged or older, middle to high socio-economic status, relatively well educated, and have stable family situations (Benson & Kerley, 2000; Benson & Moore, 1992; Friedrichs, 2007; Weisburd, Wheeler, Waring, & Bode, 1991). These characteristics are in contrast to the demographic characteristics of the typical street offender, and while they may not always be strong, differences do exist. Yet, due to their marginalized status, juveniles are largely ignored in white-collar crime research, and it is unknown to what extent the differences seen in adult populations extend to juvenile populations.

The limited research on juvenile engagement in white-collar crimes has focused mainly on occupational delinquency. Ruggiero and colleagues (1982) conducted the first empirical study of juvenile occupational deviance. High school students holding their first part-time job were asked how often they engaged in various delinquent behaviors while at work. The authors found that within their sample, approximately 60% of first-time employees had committed at least one deviant act within the first nine months of employment, and nearly 24% of the sample could be described as "relatively frequent offenders" (p. 441). Employing the same occupational delinquency scale, Wright and Cullen (2000) found that juveniles who interacted with deviant peer groups, possessed low grade point averages, and held strong materialistic views were

more likely to engage in occupational delinquency than their counterparts.

Although limited, there is some literature regarding juvenile involvement in computer related crimes that reveal motivations, such as boredom with the simplicity of school curriculum, constant dismissal by teachers and parents, frustration with the high price of services due to corporate greed, and the desire to explore and learn (The Mentor, 1986; Yar, 2005). Additionally, it would appear that juveniles who take part in these particular activities attempt to justify their actions by "blaming their victims" (Yar, 2005), which is also seen in the white-collar crime literature (Copes & Vieraitis, 2009; Shover, Coffey, & Hobbs, 2003; Piquero, Tibbetts, & Blankenship, 2005) and is in line with Sykes and Matza's (1957) techniques of neutralization.

Studies of perpetrators of non-corporate types of fraud have largely focused on adult samples. Allison, Schuck, and Lersch (2005) were among the first to examine characteristics of adult fraud offenders (including identity theft and credit card and check fraud) and found that typical offenders were female, Black, and unemployed and committed the offense alone and were unknown to their victims. With the exception of gender, similar results have been found in subsequent studies (see Copes & Vieraitis, 2009, 2012). While this research is limited, there appears to be a sizeable void in the literature in regard to juvenile perpetrators of fraud, yet the same cannot be said for juvenile conventional delinquents.

Many studies examining characteristics associated with conventional delinquency have found that specific traumatic events that occur during childhood are typically linked to conventional delinquency (Baer & Maschi, 2003; Baglivio et al., 2014; Dixon, Howie, & Starling, 2004; Jensen, Potter, & Howard, 2001; Martin, Martin, Dell, Davis, & Guerrieri, 2008; Wolff, Baglivio, & Piquero, 2015). According to Martin and colleagues (2008), "the most serious offenders enter the juvenile justice system with histories that include physical and sexual abuse, witnessing violent acts, parental substances abuse and neglect, and numerous mental health, developmental, and emotional issues" (p. 608). Similar results were also found in an examination of juvenile computer hackers (Verton, 2002). In addition to traumatic events that occur during childhood, conventional juvenile offenders are more likely to be male (Cauffman, 2008; Martin et al., 2008), non-White (Jensen et al., 2001; Mann & Reynolds, 2006; Martin et al., 2008), and to have a propensity toward violent or antisocial behavior (Corbitt, 2000; Martin et al., 2008; Onwuegbuzie, Daley, & Waytowich, 2008). Studies have also focused on the mental health of conventional juvenile offenders (Grisso, 2008), poor academic performance (Jensen et al., 2001; Mann & Reynolds, 2006; Martin et al., 2008), and low socioeconomic status (SES; Martin et al., 2008; Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikstrom, 2002) as factors related to delinquency. Several studies, however, have found that SES is not significantly correlated with juvenile offending (Alltucker, Bullis, Close, & Yovanoff, 2006; Tittle & Meier 1991).

While the literature tends to indicate that males clearly engage in a higher frequency of serious violent acts, as well as delinquency overall (see Cauffman, 2008; Lenssen, Doreleijers, van Dijk, & Hartman, 2000; Martin et al., 2008; Snyder & Sickmund, 2006), female juvenile offending has recently increased at a much more rapid pace than male offending (Calhoun, Glaser, & Bartolomucci, 2001; Cauffman, 2008; Mullis, Cornille, Millis, & Huber, 2004; Smith & Smith 2005). In fact, studies have indicated that the female gender gap is closing in regards to alcohol and drug related criminal acts (e.g., driving under the influence; Putkonen, Weizmann-Henelius, Lindberg, Rovamo, & Hakkanen, 2009; Schwartz & Rookey, 2008) and aggravated and simple assaults (Lauritsen & Heimer, 2008). [2] The female gender gap may even be closing at a much more rapid pace in regards to white-collar crime. Between 1993 and 2002, female involvement in embezzlement increased 85% (Teicher, 2004), and by 2005, females were responsible for 50% of all embezzlement cases (Dodge, 2009). The National Incident Based Reporting System (NIBRS) shows that between 1997 and 1999, adult females were responsible for 41% of counterfeiting and 36% of fraud (as cited in Allison et al., 2005).

Theoretical Guidance

Pontell and Rosoff (2009) identified several theories that may or may not be applicable to the white-collar delinquency they describe. Among the theories they identified, limitations in the current data only allow us to examine elements of Gottfredson and Hirschi's (1990) general theory of crime and peer associations. Although not mentioned by Pontell and Rosoff (2009), we also examine elements of Hirschi's (1969) social control theory. Data limitations do not permit us to examine each theory in full. While not ideal, this is a first attempt at examining the concept of juvenile hybrid white-collar delinquency, a distinct, policy-relevant subgroup of juvenile offenders of which limited knowledge is available.

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The general theory of crime has received extensive support in studies of conventional crimes (see Pratt & Cullen, 2000), yet it has not received much support in the area of white-collar crime (Benson & Moore, 1992; Piquero, Schoepfer, & Langton, 2010; Schoepfer, Piquero, & Langton, 2014; Simpson & Piquero, 2002). The basic tenets of the general theory of crime are that individuals with low self-control are more likely to engage in criminal and analogous behaviors. Individuals with low self-control generally have a here-and-now orientation and do not think about the consequences of their actions. This appears to be in contrast to individuals who engage in traditional white-collar crime as such acts typically involve planning, skill, and patience. Even Pontell and Rosoff (2009) are weary of general theory's ability to explain juvenile white-collar delinquency. Due to the nature of the crimes and the sample examined in the current study, we chose to include measures of low self-control in the analysis. Likewise, the availability of advanced technology has greatly reduced the planning, skill, and patience formerly required to engage in such frauds. As the current study examines hybrid delinquencies and not traditional white-collar crimes, we do expect indicators of low self-control to attain statistical significance (see Hirschi & Gottredson, 1989).

Hirschi's (1969) social control theory suggests that individuals who are strongly bonded to conventional others may be less likely to engage in crime/delinquency because they do not want to let others down or lose what they have worked so hard to obtain. Unlike the general theory of crime, social control theory does focus on the consequences of one's actions, and this theory may be more applicable given the use of our juvenile sample.

Although many of the crimes we examine in this study are individualistic in nature, we still control for delinquent peer associations. Social learning theory (Burgess & Akers, 1966) suggests that individuals learn how to behave/act through associations with others, yet Pontell and Rosoff (2009) are uncertain as to how peer associations would operate in white-collar delinquency as peers in the technological age are not "known" in the conventional sense. We, too, are uncertain of the influence of peers given the individualistic nature of the delinquency we examine, but given the fact that these juveniles have to "learn" the skills required to engage in these crimes, it would stand to reason that peers would have an influence.

Data and Methods

The Florida Department of Juvenile Justice (FDJJ) is one of the largest juvenile justice agencies in the United States. The FDJJ implemented the Positive Achievement Change Tool (PACT) risk/needs assessment in 2006, which was designed to assess juvenile offenders on dynamic risk, needs, and strengths related to the same risk factors as outlined in the extant "what works" literature (Andrews & Bonta, 2003). The PACT is heavily adapted from the validated Washington State Juvenile Court Assessment (WSJCA), which has been in use throughout the country since 1998 (Washington State Institute, 2004).[3]

There are two versions of the PACT: the pre-screen, with 46 items, and the full assessment, consisting of 126 items. Both versions produce identical overall risk to reoffend classifications, but the full assessment provides additional information regarding criminal history, school, leisure/free time, employment, relationships, family/living situation, alcohol/drugs, mental health, attitudes/behaviors, aggression, and social skills. All youth scoring moderate-high or high on the pre-screen or those being considered for placement above traditional probation supervision require a full assessment. Only those youth assessed with the PACT full assessment were included in the current study. Notably, this process oversamples higher risk youth.

The FDJJ maintains a comprehensive database (Juvenile Justice Information System) containing information on all youth entering the system (arrests) and all placement and risk assessment (PACT) information of those youth. The current study uses all PACT assessments from November 1, 2008 to November 30, 2014, including the entire offense history and demographics for every youth who was referred to the Florida juvenile justice system.[4]

The data extract provided records for 211,889 individual youth. The youth were responsible for 1,334,022 delinquency charges across 860,766 referrals, as many youth are referred multiple times, and a referral may have multiple charges. A "hybrid white-collar" crime was charged in 3,865 of the referrals. There were 3,612 individual youth responsible for those hybrid white-collar crime referrals. The 3,612 youth were responsible for 35,685 individual charges total, illustrating that the hybrid crime youth did not necessarily specialize in committing only hybrid offenses. The prevalence rate of ever being arrested for a hybrid offense among juvenile offenders is 1.7% (3,612/211,889=.017), which has heretofore been unestablished.

Additionally, there were 66,575 conventional crime offenders assessed with the PACT full assessment over the study period. Using random selection, 2,064 offenders that did not have a hybrid white-collar charge in any referral were collected.[5] The final data set contained 2,064 individual youth who committed a hybrid white-collar offense, and

2,064 individual youth who had never been referred for a hybrid offense, with each youth contained only one time within the data set (total *n*=4,128).

Dependent Variables

As all youth in the data set have offended, in one set of analysis, offense type is predicted. Offense type was coded dichotomously (hybrid crimes =1; conventional crimes =0).[6] The hybrid crimes include general fraud, identity fraud (e.g., fake/stolen identification, fraudulent documents, etc.), intellectual property theft (e.g., music piracy, software piracy, etc.), financial/bank fraud (e.g., forgery, passing bad checks, credit card fraud, etc.), and computer crimes (e.g., hacking, phishing, etc.). Conventional crimes include everything else.

Independent Variables

The majority of the independent variables were based on self-report from the youth during the PACT interview conducted by a juvenile probation officer or intake screener. Consistency among probation officers/screeners in the scoring of all items on the PACT is enhanced by the existence of help screens within the PACT software, which define, operationalize, and give examples of concepts for each item of the assessment. Variables included in the analysis are identified in Tables 1a and 1b below.

Table 1a: Variables in the Analysis

Concepts	Indicators	Attributes
Substance Abuse	- Drug history - Current drug use - Current alcohol use	0 = no use; 1= use; 2= use causes problems*
Abuse/Neglect	- Ever witness abuse? - Ever been victim of sexual assault? - Ever been victim of physical assault? - Ever been neglected? - Child welfare placement (court ordered or voluntary)**	0=no; 1=yes 0= no placement; 1=1; 2=2; 3= 3+ placements
Mental Health History	- Anger - Depression - Trauma - History of mental health (includes bi-polar, mood, thought, personality, and adjustment disorders)***	Higher values equal more problems (range 0-3) 0=no; 1=yes
Mental Health Scale	-The 4 mental health variables above and the 5 abuse/neglect variables (standardized)	One factor loading; Cronbach alpha = .740
Risk to Reoffend Score	- Prior official criminal record and seriousness of prior referrals - Social History (school, use of free time, employment, relationships, family, living arrangements, alcohol and drugs, attitudes/behaviors, aggression, and skills)	Scores are associated with a matrix used by FDJJ to determine risk to reoffend. Higher scores = higher risk
Demographics	- Sex - Age (avg. 15.3 years old; range 10-18) - Race (46% White) - Income (range 1-4) - Academic Achievement (range 1-5)	0=female; 1 =male Continuous 0=White; 1=non-White Higher scores = lower family income Higher scores = lower GPA

* Problems defined as family conflict, disrupting education, health, interferes with keeping pro-social friends, contributes to criminal behavior, needing increased dosages, and withdrawal problems

**Data corroborated through access to the child welfare records granted FDJJ PACT assessors

***Confirmed by a professional in the social service/healthcare field

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Table 1b: Variables in the Analysis

Variables		Attributes
General Theory of Crime	- Frustration tolerance (temper) - Belief in use of physical aggression - Impulsivity - Goal setting****	Higher values = less self-control
	- Punishment from parents for bad behavior (operationalized as clear communication, timely response, proportionate to the conduct youth displayed)	0=consistently appropriate 1=inconsistent or inappropriate
	- Scale of all 5	Cronbach alpha= .742
Social Control Theory	- Belief in the value of getting an education	Higher values = less belief in value (range 0-2)
	- Involvement in positive school activities	Higher values = less involvement (range 0-3)
	- Respect for authorities	Higher values = less respect (range 0-3)
	- Current pro-social community ties	Higher values = less ties (range 0-2)
	- Belief that laws apply to respondent	Higher values = more defiance to laws (range 0-3)
	- Scale of all 5 (higher values = less social control)	Cronbach alpha = .754
Social Learning Theory	- Current friends	0=pro-social; 1=anti-social and/or gang members

**** Assessed by the juvenile's probation officer

Analytical Plan

Our empirical analysis was conducted in three steps. First, bivariate correlations were examined among the predictor variables to ensure that multicollinearity did not exist.[7] Next, we examined the independent *t*-tests to search for statistically different means among several variables in regards to hybrid and conventional offenders and again between those who were referred and those who were adjudicated for their offenses. Finally, using binomial logistic regressions, we assessed the impact of social control theory, the general theory of crime, delinquent peer associations, and mental health variables on predicting offense type.

Results

The results of the *t*-test examining the differences between those juveniles who were referred to FDJJ for hybrid delinquency and those referred for conventional delinquency can be found in Table 2. Each juvenile is contained within the data only one time. Either the juvenile has been referred for a crime that included a hybrid delinquency offense, or the juvenile has never been referred for a hybrid offense (conventional crime group). Several demographic variables are significantly different. The results suggest that those who are referred (arrested) for hybrid delinquency tend to be significantly older, have higher risk to reoffend scores, are more likely to be non-White, more likely to be female, and have lower educational performance than those juveniles who are referred for conventional delinquencies.

In terms of histories of abuse, neglect, and mental health, the results indicate that juveniles referred for hybrid offenses evidence significantly more risk across all indicators than those juveniles who were referred for conventional delinquency, with the exception of income and sexual abuse history, which are non-significant. What is interesting is that the conventional delinquents in our sample have significantly less negative life experiences (i.e., abuse, neglect, anger, trauma, substance abuse, etc.) than those individuals who engaged in hybrid delinquency.

Table 2: Independent *T*-tests for Referral Sample Only

	Hybrid (*n*=2,064)		Conventional (*n*=2,064)		*T*-test	
Measure	Mean	*SD*	Mean	*SD*	*T*-value	Cohen's *D*
Age	15.69	1.292	14.91	1.8	-16.028***	-0.499
Risk to Re-offend	2.990	1.056	2.252	1.164	-21.334***	-0.664
Race (0=white)	0.673	0.469	0.634	0.482	-2.585*	-0.134
Gender (0=female)	0.751	0.433	0.783	0.412	2.432*	0.076
Income	1.987	0.917	2.007	0.873	.730	
Academic Achievement	2.542	1.399	2.372	1.284	-4.080***	-0.127
Witnessed Violence	0.705	0.456	0.629	0.483	-5.168***	-0.161
Sexual Abuse	0.049	0.216	0.047	0.213	-.218	
Physical Abuse	0.184	0.387	0.151	0.358	-2.795**	-0.087
Child Welfare Placement	0.395	0.819	0.253	0.666	-6.088***	-0.19
Neglect	0.127	0.333	0.089	0.285	-3.917***	-0.122
Anger	1.131	0.886	1.001	0.920	-4.600***	-0.143
Trauma	0.282	0.575	0.220	0.516	-3.646***	-0.114
Depression	0.584	0.733	0.504	0.707	-3.588***	-0.112
Mental Health Problems	0.267	0.442	0.203	0.403	-4.820***	-0.15
Drug History	1.127	0.713	0.900	0.748	-10.010***	-0.312
Current Drug Use	0.485	0.756	0.380	0.694	-4.653***	-0.145
Current Alcohol Use	0.168	0.454	0.128	0.407	-2.958**	-0.092

Note: *=p<.05; **=p<.01; ***=p<.001

In order to control for the fact that not all individuals who are arrested are also convicted, we examined the same variables among a sample of adjudicated juveniles.[8] The results of the *t*-tests from the hybrid offense adjudicated sample were similar to that of the hybrid offense referral sample with the exception that the adjudicated youth had higher risk to reoffend scores and more child welfare placements outside of the home. Among the conventional offenders, the adjudicated youth were older and had higher risk to reoffend scores than those who were referred for a conventional offense. This consistency is indicative of uniformity in the juvenile system when processing cases, regardless of the offense. Those higher-risk juveniles with prior records and more contact with the system are more likely to be deemed in need of intervention. Given the similarities between referred and adjudicated youth, further analysis will be presented on referrals only.

The data was further disaggregated according to gender. When examining the females only (*n*=962), several significant differences arose. The results in Table 3 indicate that among females, hybrid delinquents tend to be older, are more likely to be White, and have higher family income than those females who committed conventional offenses. Additionally, female hybrid delinquents have higher risk to reoffend scores; have witnessed more violence; are more likely to have experienced physical abuse, neglect, trauma, and child welfare placements; and have significantly more mental health problems and substance related problems. In terms of basic demographics (age, race, income), female hybrid offenders mirror the demographics of adult white-collar offenders (Friedrichs, 2007). Yet, the female hybrid offenders have significantly more negative life experiences than those females committing only conventional offenses.

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Table 3: Independent *T*-tests for Females Only

	Hybrid (*n*=514)		Conventional (*n*=448)		*T*-test	
Measure	Mean	*SD*	Mean	*SD*	*T*-value	Cohen's *D*
Age	15.68	1.272	14.90	1.698	-8.029***	-0.519
Risk to Re-offend	2.7977	1.15213	2.0335	1.16098	-10.225***	-0.662
Race (0=white)	.5292	.49963	.6094	.48844	2.509*	0.162
Income	1.9319	.98192	2.0647	.87868	2.214*	0.143
Academic Achievement	2.4202	1.44640	2.3371	1.21521	-0.958	
Witnessed Violence	.7568	.42943	.6719	.47006	-2.910**	-0.188
Sexual Abuse	.1362	.34332	.1228	.32854	-0.617	
Physical Abuse	.3482	.47688	.2344	.42408	-3.920***	-0.254
Child Welfare Placement	.6556	1.04485	.3571	.78984	-5.034***	-0.326
Neglect	.2082	.40640	.1250	.33109	-3.496***	-0.226
Anger	1.3132	.93510	1.3058	.98660	-0.12	
Trauma	.4805	.70130	.3750	.66723	-2.390*	-0.155
Depression	.8852	.81915	.7813	.84154	-1.939	
Mental Health Problems	.4105	.49240	.2522	.43478	-5.294***	-0.343
Drug History	1.0953	.76003	.8170	.75824	-5.673***	-0.367
Current Drug Use	.4572	.75129	.3036	.64630	-3.409**	-0.221
Current Alcohol Use	.2043	.50253	.1317	.41566	-2.451*	-0.159

Note: *=*p*<.05; **=*p*<.01; ***=*p*<.001

Similar results emerge when examining males only (see Table 4). In the male only sample (*n*=3,166), hybrid offense delinquents were older, had a higher risk to reoffend score, were composed of more non-Whites, had lower academic achievement, were more likely to witness abuse, to have child welfare placements, and to be neglected than those who committed only conventional offenses. Additionally, male hybrid offenders evidenced higher levels of anger, trauma, depression, mental health problems, drug history, and current drug use. Essentially, males who commit hybrid offenses evidenced more risk across domains than males who were referred/arrested for a conventional offense.

Table 4: Independent *T*-tests for Males Only

	Hybrid (n=1,550)		Conventional (*n*=1,616)		*T*-test	
Measure	Mean	*SD*	Mean	*SD*	*T*-value	Cohen's *D*
Age	15.69	1.299	14.91	1.825	-13.900***	-0.494
Risk to Re-offend	3.0535	1.01460	2.3125	1.15734	-19.179***	-0.682
Race (0=white)	.7200	.44914	.6411	.47983	-4.779***	-0.17
Income	2.0052	.89398	1.9913	.87053	-0.441	
Academic Achievement	2.5826	1.38070	2.3812	1.30282	-4.217***	-0.15
Witnessed Violence	.6877	.46356	.6176	.48613	-4.157***	-0.148

Sexual Abuse	.0200	.14005	.0266	.16099	1.234	
Physical Abuse	.1290	.33534	.1281	.33430	-0.079	
Child Welfare Placement	.3084	.70897	.2246	.62431	-3.522***	-0.125
Neglect	.1000	.30010	.0792	.27015	-2.046*	-0.073
Anger	1.0703	.86139	.9171	.88289	-4.943***	-0.176
Trauma	.2161	.50981	.1770	.45706	-2.272*	-0.081
Depression	.4845	.67374	.4270	.64380	-2.455*	-0.087
Mental Health Problems	.2194	.41394	.1900	.39240	-2.048*	-0.073
Drug History	1.1381	.69697	.9226	.74374	-8.413***	-0.299
Current Drug Use	.4948	.75777	.4016	.70573	-3.579***	-0.127
Current Alcohol Use	.1555	.43679	.1269	.40507	-1.91	

Note: *=p<.05; **=p<.01; ***=p<.001

Theoretical Indicators

Following Pontell and Rossoff's (2009) theoretical piece, the next step was to analyze theoretical explanations of the different crime types. Due to data constraints, we were limited in our theoretical operationalization. Table 5 presents the binomial logistic regression when examining the referral sample to predict offense type (hybrid offense=1). As shown, non-White youth and older youth were always more likely to be hybrid offenders. Females were more likely to engage in hybrid offenses in Models 1 and 2 (general theory of crime model and social control model, respectively). Among the self-control measures, hybrid offenders were 1.232 times more likely to receive inappropriate/inadequate or inconsistent punishment from their parents for antisocial behavior and were 1.236 times more likely to be impulsive than the conventional offenders. Among social control items (Model 2), hybrid offenders had more involvement in school activities but were more likely to believe laws did not apply to them. After controlling for mental health, the self-control scale did not attain significance in Model 3. Yet, when the mental health scale was removed from the model (results not shown), self-control did attain significance indicating that hybrid offenders evidenced less social control. Model 3 indicates that hybrid crime offenders were 1.057 times more likely to have mental health issues than the conventional crime offenders.

Table 5: Binominal Logistic Regressions for Referral Sample Predicting Offense Type (0=conventional; 1=hybrid)

	Model 1 - General Theory		Model 2 - Social Control		Model 3 - Full Model	
Measure	B / O.R.	C.I.	B / O.R.	C.I.	B / O.R.	C.I.
Punish	0.209** / 1.232	(1.07-1.42)				
Impulse	0.212*** / 1.236	(1.13-1.36)				
Frustration	-0.031 / 0.969	(0.86-1.09)				
Physical Aggression	0.060 / 1.061	(0.98-1.15)				
Goals	-0.070 / 0.933	(0.83-1.05)				
Low Self-Control Scale					0.028 / 1.029	(1.00-1.06)
Education Value			0.133 / 1.142	(0.99-1.31)		
Involved in School Activities			-0.088** / 0.916	(0.86-0.98)		
Respect for Authority			0.098 / 1.103	(0.99-1.23)		
Community Ties			0.019 / 1.019	(0.92-1.13)		
Belief Laws Apply			0.282*** / 1.326	(1.20-1.47)		

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Social Control Scale					0.028* / 1.029	(1.00-1.06)
Delinquent Peers					0.022 / 1.023	(0.89-1.17)
Mental Health Scale					0.055*** / 1.057	(1.04-1.07)
Race (White=0)	0.217** / 1.243	(1.09-1.42)	0.213** / 1.238	(1.01-1.42)	0.298*** / 1.347	(1.17-1.55)
Gender (Female=0)	-0.194* / 0.823	(0.71-0.96)	-0.210** / 0.810	(0.70-0.94)	-0.048 / 0.953	(0.82-1.12)
Age	0.333*** / 1.395	(1.34-1.46)	0.323*** / 1.382	(1.32-1.44)	0.349*** / 1.417	(1.36-1.48)
Constant	-5.379*** / 0.005		-5.093*** / 0.006		-5.518*** / 0.004	
Nagelkerke R^2	0.098		0.104		0.112	

Note: B = Beta, O.R.= odds ratio, C.I.= 95% confidence interval; *=p<.05; **=p<.01; ***=p<.001

Gender Differences

Table 6 examines the theoretical indicators in the prediction of male hybrid offending. Inappropriate/inconsistent punishment by parents of delinquent behavior (O.R. 1.257), impulsivity (O.R. 1.235), belief in the use of physical aggression (O.R. 1.112), and goal setting (O.R. 0.869) significantly predicted male hybrid offending, with those hybrid offenders having more risk in each area. Male hybrid offenders were older and more likely to be non-White, which holds across all models. Among social control measures, only belief that laws apply to them was significant, with hybrid offending males having stronger beliefs that laws do not apply to them (O.R. 1.353). Model 3 highlights both the self-control scale (O.R. 1.042) and the social control scale (O.R. 1.043), with hybrid offense youth scoring higher risk on each scale. Additionally, male hybrid offenders scored significantly higher on the mental health index (O.R. 1.052) than conventional offenders. The delinquent peers variable did not attain significance.

Table 6: Binominal Logistic Regressions for Males Only Predicting Offense Type (0=conventional; 1=hybrid)

	Model 1 - General Theory		Model 2 - Social Control		Model 3 - Full Model	
Measure	B / O.R.	C.I.	B / O.R.	C.I.	B / O.R.	C.I.
Punish	0.299** / 1.257	(1.07-1.48)				
Impulse	0.211*** / 1.235	(1.11-1.37)				
Frustration	0.015 / 1.015	(0.89-1.16)				
Physical Aggression	0.106* / 1.112	(1.01-1.22)				
Goals	-0.140* / 0.869	(0.76-1.00)				
Low Self-Control Scale					0.042* / 1.042	(1.01-1.08)
Education Value			0.134 / 1.144	(0.98-1.34)		
Involved in School Activities			-0.04 / 0.961	(0.89-1.04)		
Respect for Authority			0.093 / 1.098	(0.97-1.24)		
Community Ties			0.057 / 1.058	(0.94-1.20)		
Belief Laws Apply			0.302*** / 1.353	(1.20-1.52)		
Social Control Scale					0.042** / 1.043	(1.01-1.08)
Delinquent Peers					-0.071 / 0.93	(0.80-1.09)
Mental Health Scale					0.051*** / 1.052	(1.03-1.07)
Race (White=0)	0.380*** / 1.462	(1.25-1.71)	0.367*** / 1.443	(1.23-1.69)	0.454*** / 1.575	(1.34-1.85)
Age	0.327*** / 1.386	(1.32-1.46)	0.319*** / 1.376	(1.31-1.45)	0.343*** / 1.410	(1.34-1.48)
Constant	-5.607 / 0.004		-5.455 / 0.004		-5.538*** / 0.004	

Nagelkerke R^2	0.104	0.108	0.115

Note: B = Beta, O.R.= odds ratio, C.I.= 95% confidence interval; *=p<.05; **=p<.01; ***=p<.001

Next, the prediction of hybrid juvenile offending for females was examined (see Table 7). For self-control measures, only impulse control was significant, with hybrid offenders scoring 1.234 times higher on the impulsivity measure than the conventional offenders. Additionally, age was statistically significant indicating that female hybrid offenders were older, but race was not a statistically significant predictor of crime type, findings which hold true across all models. Among social control measures, hybrid delinquency females were *more* involved in school activities. Examining our theoretical indices, neither the self-control scale nor the social control scale predicted female hybrid offending. However, female hybrid delinquents were significantly more likely to have gang-related or antisocial peer associations (O.R. 1.354) and scored higher on the mental health problems index (O.R. 1.069) than conventional female offenders.

Table 7: Binominal Logistic Regressions for Females Only Predicting Offense Type (0=conventional; 1=hybrid)

	Model 1 - General Theory		Model 2 - Social Control		Model 3 - Full Model	
Measure	B / O.R.	C.I.	B / O.R.	C.I.	B / O.R.	C.I.
Punish	0.139 / 1.149	(0.86-1.54)				
Impulse	0.201* / 1.234	(1.02-1.49)				
Frustration	-0.171 / 0.843	(0.67-1.07)				
Physical Aggression	-0.061 / 0.477	(0.79-1.11)				
Goals	0.165 / 1.179	(0.92-1.52)				
Low Self-Control Scale					-0.007 / 0.993	(0.94-1.05)
Education Value			0.057 / 1.058	(0.78-1.43)		
Involved in School Activities			-0.240*** / 0.786	(0.69-0.90)		
Respect for Authority			0.142 / 1.152	(0.94-1.41)		
Community Ties			-0.093 / 0.911	(0.73-1.13)		
Belief Laws Apply			0.201 / 1.222	(0.99-1.50)		
Social Control Scale					-0.019 / 0.981	(0.90-1.04)
Delinquent Peers					0.303* / 1.354	(1.02-1.80)
Mental Health Scale					0.066*** / 1.069	(1.04-1.10)
Race (White=0)	-0.243 / 0.784	(0.60-1.03)	-0.225 / 0.799	(0.61-1.05)	-0.151 / 0.86	(0.66-1.13)
Age	0.348*** / 1.416	(1.29-1.55)	0.325*** / 1.384	(1.26-1.52)	0.354*** / 1.425	(1.30-1.57)
Constant	-5.282*** / 0.005		-4.494*** / 0.011		-5.511*** / 0.004	
Nagelkerke R^2	0.104		0.123		0.133	

Conclusion/Discussion

The results from the *t*-tests indicate that there are significant differences between hybrid white-collar and conventional crime delinquents in our sample. While both types of delinquents did report negative life events (e.g., abuse, neglect, anger, depression, etc.), the hybrid delinquents appeared to have more of these problems than the conventional crime delinquents. This fact alone is interesting in regards to the overall white-collar crime literature. We tend to assume that white-collar offenders do not have the typical negative life events that are relevant for conventional offenders, but research has not yet examined the early lives of adult white-collar offenders, and therefore, these assumptions are anecdotal only and have no basis in the literature (for an exception on early life factors and workplace

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deviance, see Piquero & Moffitt, 2014). Future research should compare white-collar delinquents, conventional delinquents, and non-offenders to see if there is a range of negative life events associated with the different categories of offending and non-offending. Our results are consistent with the literature on juvenile offenders with respect to experiencing traumatic life events (Baer & Maschi 2003; Baglivio et al., 2014; Dixon et al., 2004; Jensen et al., 2001; Martin et al., 2008). However, we did not expect to find that hybrid delinquents had more serious traumas and mental health problems. The argument that the conventional offenders in our sample were committing offenses akin to "kids being kids" is underscored by the use of the full PACT assessment that is generally restricted to the more serious offenders. Our results suggest that the hybrid delinquency youth have more negative/traumatic life experiences than the conventional crime youth. This is intriguing given that the hybrid crimes are largely instrumental crimes, or crimes of deception, whereas the conventional crimes are more so crimes of force and/or expression. Perhaps it is the negative life events that have lead these juveniles to engage in these instrumental crimes as a way to take care of themselves. Future research should examine the motivations behind the different juvenile offenses.

The prevalence rate of ever being arrested for a hybrid offense among juvenile offenders in the state of Florida during the 2008-2014 data collection period is 1.7% (3,612/211,889=.017), which has heretofore been unestablished. In terms of gender difference, of the adjudicated females in the sample (n=301), 60.5% were adjudicated for committing a hybrid delinquency as compared to 55.2% of males (n=1,026 adjudicated males). While males are still committing more crimes overall, females are committing a higher relative proportion of hybrid delinquencies than males, which is consistent with the adult white-collar crime literature that suggests females are increasing their participation in these crime types (Dodge, 2009). This may be due to the individualistic and non-confrontational nature of the white-collar offenses measured in this study. Paternalism of the system when dealing with female criminality may provide an additional explanation as well; females tend to be treated more harshly than males when it comes to status offenses (Barrett, Katsiyannis, & Zhang, 2006; Chesney-Lind, 2004; Rhodes & Fischer, 1993), and this could be occurring for the crimes under current investigation as well.

As measured, the theoretical implications vary by gender. Among males, hybrid delinquents had lower self-control and lower social control scores than conventional offenders. Among females, hybrid delinquents did not differ from conventional offenders on the self-control or social control scales; they were, however, more likely to have gang-related or antisocial peers. This finding is consistent with research that suggests that females tend to carry out crimes with others (Koons-Witt & Schram, 2003; Van Mastrigt & Farrington, 2009). Although these frauds are generally seen as individualistic and non-confrontational in nature, females may still be influenced to engage in these crimes by their peers. Future research should measure concurrent offending among these types of frauds. Additionally, the females in the sample that engaged in hybrid white-collar crimes reported significantly more involvement with prosocial school activities than the conventional offenders.

Our results suggest that while males may be attracted to different types of offending somewhat equally, there appears to be different factors that may attract females to the different crime types. This is very important as the majority of what we know about offending behaviors comes from samples of male offenders. If females are increasing their criminal participation, we need to acknowledge the potential differences as this preliminary investigation indicates that females are indeed different from males when it comes to hybrid white-collar and conventional offending.

Another important issue concerning our juvenile sample is the age at which they are starting and the possible length of their offending careers. Benson and Kerley (2000) found that the average age for white-collar offenders with prior records was 24 compared to 19 for the typical street offender. Weisburd and Waring (2001) found that repeat white-collar offenders in their study had longer offending careers than the typical street offender. Taking this information into account, the white-collar delinquents in our sample are offending earlier and may very well have longer offending careers than their conventional offender counterparts (assuming they continue to offend). It is important to note that life-course research tends to suggest that offenders do not always specialize in one crime type (see Piquero, Farrington, & Blumstein, 2003), and that if specialization occurs, it tends to happen later in adult life (Nieuwbeerta, Blokland, Piquero, & Sweeten, 2011). The 3,612 hybrid-delinquent youth in our sample were responsible for 35,685 individual charges total, indicating that they may not necessarily specialize in only hybrid offenses.

This study was not without limitations. First, our sample consisted of juvenile offenders thus prohibiting us from making comparisons to non-offenders. Yet, due to the breadth of the data utilized, we were able to examine *all* juvenile offenders with a hybrid white-collar crime as the

most serious charge in the state of Florida. Second, the use of secondary data that was not designed to test for criminological theories also limited our research. In addition, theories are typically used to predict offending, whereas we utilized the theories to examine their predictive power among different crime types. If comparing offenders and non-offenders, our theory results would very likely be different. Another limitation lies with our crime types; we did not examine traditional white-collar crimes, but rather the hybrid forms of white-collar crime. Regardless, our results still show significant differences between these hybrid white-collar and conventional offenders. If arguments that these hybrid crimes were really just a form of conventional crime, we would expect to find fewer differences among the offenders, yet the results suggest that differences between the two groups do exist. We cannot expect juveniles to engage in traditional types of white-collar offending due to their marginalized status and inexperience in the workforce, but future research should examine if differences exist among adult conventional, white-collar, and hybrid offenders.

Future research should also take a life-course approach with these juveniles to examine several facets. First, it would be interesting to see if those who were referred but not adjudicated for white-collar delinquency might be encouraged to offend again. Research has suggested that cheating in school can lead to cheating in the corporate world (Sims, 1993). Being referred for a white-collar crime and not being adjudicated may very well translate to later offending if the individual internalizes the idea that they can "get away with it."

Although the current study suffers from some distinct data limitations, it is the first to examine such a large group of juveniles engaged in crimes that have historically been classified as hybrid white-collar crime. Overall, we found significant differences among the hybrid white-collar and conventional crime samples. This further emphasizes the idea that these types of white-collar crimes are indeed different from conventional crimes and different explanations may be needed to fully understand this phenomenon. The premise of white-collar delinquency as set forth by Pontell and Rosoff (2009) is that juveniles now possess the ability to engage in sophisticated and elaborate criminal acts that were formerly only committed by adults. Such offenses become even more complex when committed by a minor. White collar delinquency raises issues that have not been previously examined, which further exemplifies the need for more empirical study.

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Endnotes

[1] The authors acknowledge the controversies surrounding the definition of white-collar crime that have been discussed at length elsewhere (see, for example, Friedrichs, 2007; Geis, 1992; Green, 2004; Shapiro, 1990). Due to space limitations, we do not go into detail in the current paper.

[2] It is important to note that not all researchers agree with the narrowing gender gap argument. Some argue that the increase in female offending (in conventional crime) may be due to changes in definitions of violence, changes in domestic violence policing, or changes in societal tolerance of female offending (Steffensmeier, Schwartz, Zhong, & Ackerman, 2005; see also Chesney-Lind, 2001).

[3] Empirical evaluations assessed the predictive validity of the overall risk to re-offend score of the WSJCA/PACT, finding the risk level predicts subsequent recidivism (Baglivio, 2009; Baird et al., 2013; Barnoski, 2004; van der Put, Stams, Dekovic, & van der Laan, 2012; Winokur-Early, Hand, & Blankenship, 2012). Results hold true for both male and female youth (Baglivio & Jackowski, 2013). PACT validation studies specifically of youth referred to the Florida Department of Juvenile Justice have a cumulative sample size in excess of 130,000. Reliability analyses of the PACT in Florida (Baird et al., 2013) used videotaped interviews and an offense history file to assess reliability across raters, finding an intra-class correlation coefficient (ICC) of .83 for the overall PACT risk level, and only 4% of items (5 items) with less than 75% agreement with an "expert" rater.

[4] A referral is equivalent to an adult arrest and does not imply adjudication, though adjudication information is also contained in the extracted official records. All youth in Florida who are "arrested" under the age of 18 enter the juvenile justice system.

[5] Of note, the random conventional delinquency youth were compared to the excluded conventional youth on all 30 measures employed in the current study. The randomly selected youth were equivalent on 28 measures assessed, though were less impulsive and received more appropriate punishment from parents; however, both *t*-values were under 2.5, and effect sizes were very small (results not shown for brevity). At a p=.05 one would expect two measures to differ significantly.

[6] As this is an exploratory study utilizing a previously unexamined data source, the authors chose to combine all relevant fraud and white-collar-type crime categories into one category, hybrid white-collar crime. We chose to dichotomize this variable with conventional crimes to simplify the initial investigation of whether or not there were significant differences between hybrid and conventional crimes. Future research should categorize the crimes more specifically (e.g., violent, property, fraud, computer crime, identity theft, etc.) in efforts to identify more accurate causes of specific crime categories.

[7] Due to space limitations, the results of the bivariate correlations are available upon request. It is important to note, though, that none of the variables exceeded correlations of over 0.455.

[8] *T*-test tables comparing referrals versus adjudication for hybrid offenders and conventional offenders are available upon request.