Applying Differential Coercion and Social Support Theory to Intimate Partner Violence

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Abstract

A review of the current body of literature on intimate partner violence (IPV) shows that the most common theories used to explain this public health issue are social learning theory, a general theory of crime, general strain theory, or a combination of these perspectives. Other criminological theories have received less empirical attention. Therefore, the purpose of this study is to apply *Differential Coercion and Social Support* (DCSS) theory to test its capability to explain IPV. Data collected from two public universities (N = 492) shows that three out of four measures of coercion (i.e., physical abuse, emotional abuse, and anticipated strain) predicted IPV perpetration, whereas social support was not found to be significant. Only two social-psychological deficits (anger and self-control) were found to be positive and significant in predicting IPV. Results, as well as the study's limitations and suggestions for future research, are discussed.

Keywords

coercion, social support, social-psychological deficits, intimate partner violence

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A review of the current body of literature on intimate partner violence (IPV) shows that the most common criminological theories used to explain this public health issue are social learning theory (Cochran, Jones, Jones, & Sellers, 2016; Cochran, Maskaly, Jones, & Sellers, 2016; Cochran, Sellers, Wiesbrock, & Palacios, 2011; Gover, Park, Tomsich, & Jennings, 2011; Sellers, Cochran, & Branch, 2005), general theory of crime (Kerley, Xu, & Sirisunyaluck, 2008; Sellers, 1999), general strain theory (Cheung, Choi, & Cheung, 2014; Gibson, Swatt, & Jolicoeur, 2001), or a combination of these perspectives (Gover, Jennings, Tomsich, Park, & Rennison, 2011; Jennings, Park, Tomsich, Gover, & Akers, 2011; Zavala, 2016). However, other criminological theories have been less tested. One such theory is differential coercion and social support (DCSS) as articulated by Colvin, Cullen, and Vander Ven (2002).

DCSS integrates aspects of strain and self-control theories, and attempts to connect several themes in criminological research by explaining the relationship between social support, coercion, and criminogenic behaviors. On one hand, DCSS argues that *coercion*—force that induces or intimidates an individual to act because of the fear or anxiety it generates—is a driving force for criminal behavior. Coercion produces what Colvin (2000) called "social-psychological deficits" that includes anger, lower self-control, weaker social bonds, and coercive ideation. Higher levels of anger, along with weak social bonds and lower self-control, increase the likelihood of criminal behavior. On the other hand, *social support* prevents crime and is defined as "the delivery (or perceived delivery) of assistance from communities, social networks, and confiding partners in meeting the instrumental and expressive needs of individuals" (Colvin et al., 2002, p. 20). Expressive support may come in the form of emotional care and reaffirming someone's importance and dignity, whereas instrumental support means providing material and financial assistance. Expressive and instrumental support may come from family, friends, a person's social network, and social institutions, such as schools, a person's workplace, and governmental agencies. Support prevents crime by providing individuals with an outlet to cope with hardship through noncriminal means (Colvin et al., 2002).

Studies on IPV have shown that many perpetrators and victims are subjected to the many forms of coercive forces outlined by the theory, such as threats, and physical and emotional abuse (Outlaw, 2009), whereas other studies have documented that victims do seek support and help from others (Kaukinen, 2004). Other coercive forces found in the literature like vicarious (i.e., physical victimization of others) and anticipated (i.e., strain that will continue into the future) strains may also be correlated with IPV, but have yet to be examined under DCSS. Taken together, the theory's core propositions

suggest a positive relationship between coercive forces and IPV perpetration, whereas social support should decrease the likelihood of IPV, thus positioning DCSS as a possible explanation for IPV perpetration. This study empirically tests these notions on a sample of 492 college students.

This article will advance the literature in at least three significant ways. First, it tests a criminological theory rarely utilized to explain IPV. Relying exclusively on social learning, general theory of crime, and general strain theory without testing others may prevent scholars and practitioners from discovering new insights that may help further understand IPV. Second, test of the generality of DCSS and its ability to explain specific crimes like IPV is limited. One important requirement for evaluating theory is the exploration of core propositions with various populations and different types of behaviors. Studies on DCSS have focused on street crimes like burglary, drug dealing, delinquency, vandalism, engaging in violence, robbery, and fighting. Other forms of crimes that are more prevalent, frequent, and often experienced in a repetitive manner like IPV have been rarely examined under the lens of DCSS. Third, the role of vicarious and anticipated strain on IPV will also be examined, given that these types of strain may induce respondents to engage in this behavior because of the fear and anxiety it may create. Such concepts are theoretically aligned with DCSS, but have yet to be empirically tested.

These goals are accomplished through the following steps. First, the major components of DCSS will be reviewed. This will entail highlighting the importance of coercion and social support as it relates to crime. Second, studies that have tested this theory will be examined. From this literature review, hypothesis will be formed to guide the empirical analysis that follows. Third, the data and measures used in this study are described in detail. Finally, the results are presented and the article concludes with a general discussion of the results, limitations of the study, and ideas for future research.

DCSS

Colvin's et al. (2002) DCSS is the integration of two concepts found to either increase (coercion) or decrease (social support) the odds of engaging in criminal behavior. As mentioned earlier, coercion occurs when a person is forced to alter their behavior because they encounter some negative force. Colvin (2000) pointed to behaviors such as the use of threats, intimidation, and direct violence as forms of coercion. Coercion is said to come from a number of sources, including peers, family members, the criminal justice system, and the broader economy. Two dimensions make up the concept of coercion. The first is the strength of the coercive force that can range from no coercion to extreme coercion. Small amounts of coercion can be things such as name

calling and extreme coercion can involve confinement in a super-maximum security prison. The second is the consistency in which a person experiences coercion. Some may experience coercion for short periods of time, whereas others may experience it for extended periods. The most common form of coercion tested in studies of DCSS is physical victimization (Baron, 2009a, 2014; Day, Brauer, & Butler, 2015; Kurtz, Linnemann, & Green, 2014; Listwan, Colvin, Hanley, & Flannery, 2010; Unnever, Colvin, & Cullen, 2004; Zavala & Kurtz, 2016). To remain consistent with this literature, we will include physical and emotional victimization as our measures of coercive forces in this analysis.

The second component to the theory is social support. Again, recall that social support is any help or assistance from community members, social networks, friends, and others, and can be either expressive or instrumental. Colvin et al. (2002) pointed out that more consistent social support is likely to reduce the risk of a person engaging in prolonged criminal behavior. This is because coercion and social support may interact with each other. Constant and consistent social support fosters a sense of trust and, therefore, forms a strong moral commitment to friends, family, and social institutions. Individuals with strong social support may find it easier to ask for help dealing with their coercion and, therefore, the influence of coercion is reduced. Furthermore, consistent social support has the ability of increasing a person's self-control and alleviates high levels of anger, which reduces the chances of committing criminal behavior (Colvin et al., 2002). In contrast, when an individual receives inconsistent social support, they may feel unwanted and come to believe that they cannot rely on anyone. Such situations may increase anger that pressures some to engage in criminal behavior. Research has generally found this to be true. For example, Wright, Cullen, and Miller (2001) found that strong social support stemming from family members reduces a youth's association with delinquent peers, which translated to fewer opportunities to engage in delinquency. Supportive parenting fosters other parenting dynamics that creates positive social control leading to greater prosocial behavior (Wright & Cullen, 2001). We include a variable of social support in this study that measures support stemming from family and friends.

Coercion and erratic social support then influences a person's social-psychological characteristics, or social-psychological deficits. With higher levels of coercion, particularly erratic coercion, and lower social support, individuals are more likely to develop high levels of anger, lower self-control, weaker social bonds, depression, and acquire "coercive ideation." The latter concept refers to the notion that the world is full of coercion, and that the only way to overcome it is through aggression and coercive reactions to others. The most common tested social-psychological deficits in previous

studies testing DCSS are self-control, anger, and depression and are, thus, included in the current analysis (Antonaccio, Tittle, Brauer, & Islam, 2015; Baron, 2009a, 2014; Unnever et al., 2004).

As envisioned, DCSS can account for a number of criminal and noncriminal outcomes, depending on the sum of supportive and coercive forces in an individual's life (for a detailed diagram of DCSS outcomes, see Colvin et al., 2002). For example, erratic social supports will generally result in low self-control, moderate anger, and intermediate social bonds. These individuals may engage in criminal behavior and, depending on the access to illegitimate social supports offered by criminals, they may continue with disorganized criminal action or skilled and organized crime. Individuals who receive consistent support will have low levels of anger, highly internalized self-control, and strong social bonds. These individuals are likely to display few criminal behaviors and possess high levels of prosocial behaviors (Colvin et al., 2002). Individuals who receive consistent coercion will develop strong self-directed anger, high externalized self-control, and weak social bonds. These individuals will have minimal legal difficulties, but are likely to have persistent mental health problems (possibly substance abuse). Individuals disciplined in an erratic manner will tend to develop strong anger directed toward others, low self-control, and weak alienated bonds, and are likely to become chronic offenders (Colvin et al., 2002). Thus, the theory attempts to explain a range of criminal and mental health outcomes beyond just chronic or violent offending.

Prior Studies

Only a small number of studies have tested DCSS or its core theoretical propositions and the majority of them use a juvenile sample. For example, Baron (2009a) tested the theory with a sample of street youths residing in Toronto, Canada. He reported that coercion was positively correlated with violent offending. More specifically, he found that physical abuse, street victimization, being incarcerated, and being unemployed (all types of coercion) were related to violent offending. Unnever et al. (2004) tested the theory with a sample of middle school youth from the state of Virginia. They found support for the theory, concluding that coercive environments (being the subject of tough child-rearing techniques, being bullied at school, whether a juvenile lived in an unsafe neighborhood or attended an unsafe school, etc.) are conducive to serious delinquency. The social-psychological deficits parental and school bonds, as well as coercive ideation, were also significant in predicting delinquency. Using again homeless youth from Toronto, Baron (2014) provided evidence that social support decreases criminal behavior by reducing anger and increasing self-control. This study also showed that coercion

increases anger, lowered self-control, and serves as a catalyst to seek illegitimate social support. Finally, Kurtz et al. (2014) analyzed data from the *National Survey of Adolescents* and found that interpersonal coercion (physical child maltreatment) predicted delinquency and violent offending, whereas social support reduced the odds of offending.

Studies using adult samples have tested the theory on prisoners, citizens from outside the United States, and police officers. Day et al. (2015) and Listwan et al. (2010) tested the theory on a group of prison inmates. Both studies found that prisoners exposed to coercion in the form of inmate violence and victimization was positively correlated with posttraumatic cognitions and trauma symptoms, as well as prisoner misconduct and resistance. Social support in both studies did not consistently reduce coercion. Antonaccio et al. (2015) analyzed data gathered from individuals living in Bangladesh and Ukraine. Their study provided mixed results for the theory. In their study, coercion (measured mainly by victimization and punishment) did predict crime-generative effects. Social support was not consistent in predicting a decrease in the odds of committing criminal behavior in their study.

There is currently one study that has applied DCSS to IPV. Zavala and Kurtz (2016) analyzed data from a sample of police officers and found that coercive forces in the form of physical victimization perpetrated by the officer's intimate partner was positive and significant in predicting IPV perpetration. They also reported that one social-psychological deficit (anger) predicted IPV. Their measures of social support were not found to be significant in their data. However, this study did not have other social-psychological variables outlined in the theory, such as low self-control and depression, in addition to anger. Their use of police officers also limits their results to similar samples and, therefore, cannot be generalized to the general population. It also lacked measures of emotional abuse, which is one of the types of coercion experienced by victims of IPV (Outlaw, 2009).

It is important to note at this point that the theory is not without its criticisms and two major criticisms have been levied against it. First, Alexander and Bernard (2002) pointed out that the authors do not properly define the ways to empirically test the theory. Although the theory is meant to explain offending, exactly what acts will induce or intimidate an individual to act criminally because of the fear or anxiety it induces is left entirely to the researcher. Such practice "properly lies with the theorist rather than with the researcher" and without proper guidance from the theorists it "limits the ability of researchers to test the theory, and it also limits our ability to evaluate the theory" (Alexander & Bernard, 2002, p. 393). Second, Alexander and Bernard (2002) argued that the theory is really not an integrated theory, but rather a specific type of strain theory. The theory is more specific than Agnew's (2006) general strain theory

because it contains a specific dependent variable (chronic offending) with a specific independent variable (coercion). Therefore, the authors stated that "it appears to make a more specific argument within the context of Agnew's (1992) general strain theory" (Alexander & Bernard, 2002, p. 392).

In addition to examining the personal experiences of coercion by the respondents, this study also looks at the impact of coercion experienced by others around the individual, mainly vicarious and anticipated strain (Agnew, 2002). According to Agnew (2002), vicarious strain is the real-life strain experienced by others around the individual. Vicarious strain is said to affect the respondent's emotions when that person is close to them, like family members and friends. Vicarious strain can be acquired through directly witnessing the strain experienced by that individual or hearing about it (Agnew, 2002). In the context of the current study, this may occur when the respondent becomes aware that a close friend or family member has also been physically victimized. Anticipated strain occurs when an individual believes that his or her strain will not stop and, therefore, continue into the future (Agnew, 2002). Given that studies have found acts of IPV are usually repetitive in violent relationships (Cochran et al., 2011), it stands to reason that some victims would anticipate further violence to occur when similar situations happen. Although several studies have found vicarious and anticipated strain to be positively correlated with crime, delinquency, and victimization (Agnew, 2002; Baron, 2009b; Zavala & Spohn, 2013), it remains unknown how, if any, it predicts a specific act like IPV. Both vicarious and anticipated strain aligns with the propositions of DCSS and is, therefore, included in the analyses that follows.

The Current Study and Hypotheses

Rarely has a theory outside of social learning, general strain theory, and a general theory of crime been applied to predict acts of IPV. Although the reliance of these theories has increased our understanding of the correlates of IPV, other theories may offer new insights and uncover previously unknown factors that can better help understand this public health issue. DCSS suggests that coercion in the form of physical victimization and emotional abuse, as well as vicarious and anticipated strain, may force respondents to react in a negative way because of the fear and anxiety it creates, whereas social support decreases the likelihood of IPV to occur. Based on previous studies on DCSS, we test the following two hypotheses in the current study.

Hypothesis 1: Coercive forces (i.e., physical/emotional victimization and vicarious/anticipated strain) are positively related to IPV perpetration.
Hypothesis 2: Social support is negatively related to IPV perpetration.

Method

Data and Sample

A quantitative survey was developed and circulated to gather cross-sectional data from a sample of college students attending two state universities.[1] A random sample of 3,000 students (1,500 from each university) enrolled in the spring 2015 semester were selected to participate in the study. Students from both universities were sent an email requesting their participation in the survey. The email contained the hyperlink to the survey and all students were assured that their participation was voluntary and anonymous. Follow-up emails were sent 2 and 4 weeks after the original email. The decision to use a college sample rather than the general population was based on three factors. First, college samples are frequently used to test criminological theories (Payne & Chappell, 2008). This may be explained by the fact that almost all criminological theories are general theories and, thus, any population (including college students) can be used to test theory. Second, studies have shown that the rate of IPV is high among college students (Straus, 2004) and, therefore, concentrating on this group will help identify factors associated with IPV, which will inform ongoing education and help design prevention and treatment programs. Indeed, college students are a natural high-risk population for this type of offending and victimization. Third, it has been shown that results obtained from a college sample can be generalizable to the general population (Wiecko, 2010). For all these reasons, college students are an appropriate target sample.

   In total, this technique yielded 665 respondents, resulting in a response rate of 22%.[2] After eliminating cases with missing data on key variables and responses of individuals who had not been in an intimate relationship in the past 12 months, the final sample in the following analyses is based on the answers of 492 respondents. Furthermore, the sociodemographic characteristics of the sample are very similar to that of the total enrollment at both universities. The majority of respondents are currently in an intimate relationship ($n = 420$). Some respondents indicated that they are living with their partners ($n = 14$), and only 58 respondents indicated that they were married at the time of the survey. It is important to note that the cross-sectional nature of the data does not allow us to talk about causes, but rather limits our discussion to correlates.[3]

Dependent Variable

Following previous studies, IPV perpetration were measured using items from the Revised Conflict Tactics Scale (CTS-R; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), which has been used in more than 500 studies

and is the most commonly used instrument to capture interpersonal conflicts (Costa & Barros, 2016).[4] Prior to starting the survey, respondents were instructed to focus on a single person. Then, the survey asked participants if they had engaged in the following acts with their current intimate partner or their last partner in the last 12 months: (a) throw something that could hurt them; (b) push, grab, or shoved them; (c) pull their hair; (d) slap or hit them; (e) kick or bite them; (f) hit them with some object; (g) beat your partner up; (h) threaten them with a knife or other weapon besides a gun; and (i) use a knife or other weapon on you besides a gun.[5] Participants were allowed to answer each question with a yes or no response (0 = *no*, 1 = *yes*).[6] Responses were collapsed into a dichotomous variable, where 1 represented perpetrating at least one form of violence against an intimate partner and 0 indicating that the respondent had not perpetrated intimate violence.[7]

Independent Variables

Coercive forces. Various measures were used to capture different forms of coercion. These measures are similar to those of previous studies on DCSS in that they tap into victimization, whereas two measures tap into vicarious and anticipated strain. Relying again on items from the CTS-R, *emotional abuse victimization* was captured by asking respondents if they had been victimized by the following acts perpetrated by an intimate partner in the last 12 months: (a) tries to provoke arguments, (b) calls you names or puts you down in front of others, (c) makes you feel inadequate, (d) shouts or swears at you, (e) is jealous or possessive, (f) tries to limit your contact with family or friends, (g) insists on knowing who you are with at all times, and (h) he or she frightens you. Participants were allowed to answer each question with a yes or no response (0 = *no*, 1 = *yes*) and responses were collapsed into a dichotomous variable, where 1 represented being a victim of at least one form of violence and 0 indicating that the respondent had not been victimized by any of these acts.

Physical abuse victimization was captured by asking respondents if they had been victimized by the following acts perpetrated against them by an intimate partner in the last 12 months: (a) throw something that could hurt them; (b) push, grab, or shoved them; (c) pull their hair; (d) slap or hit them; (e) kick or bite them; (f) hit them with some object; (g) beat your partner up; (h) threaten them with a knife or other weapon besides a gun; and (i) use a knife or other weapon on you besides a gun. Participants were allowed to answer each question with a yes or no response (0 = *no*, 1 = *yes*). Responses were collapsed into a dichotomous variable, where 1 represented being a victim of at least one form of violence and 0 indicating that the respondent had not been victimized by any of these acts.

Questions to measure vicarious and anticipated strain were both borrowed from Baron (2009b). *Vicarious strain* was captured by asking respondents the following questions: "How many of your friends have been the victims of minor assaults?" "How many of your friends have been the victims of serious assaults?" "How many of your friends have been the victims of threats and/or have been subjected to force used against them to get something from them?" and "How many of your friends have been the victims of intimate partner violence?" Respondents marked their responses using a 5-point Likert-type scale (0 = *none of my friends*-4 = *all of my friends*). These four items were summed into an indexed variable, with higher scores indicating higher levels of vicarious strain (α = .83).

Anticipated strain was captured by asking respondents how afraid they are of "Becoming a victim of a serious assault perpetrated against you by your intimate partner?" "Becoming a victim of a minor assault perpetrated against you by your intimate partner?" and "Having physical force used against you to get your money or things by your intimate partner?" Respondents marked their responses using a 4-point Likert-type scale (0 = *not at all afraid*-3 = *very afraid*). These three items were summed into an indexed variable, with higher scores indicating higher levels of anticipated strain (α = .89).

Social-psychological deficits. The current study included three social-psychological deficits that have been used by prior studies on DCSS—anger, depression, and self-control. The current study used Aseltine, Gore, and Gordon's (2000) five-item measure of *anger*.[8] Specifically, respondents were asked the following, "During the past 12 months that you were having trouble with various problems, did you have (1) uncontrollable outburst of temper, (2) urges to beat or harm someone, (3) urges to break things, (4) frequent arguments, and (5) shouting or throwing things." Respondents marked their responses using a 5-point Likert-type scale (1 = *not at all*-5 = *extremely*). Responses were summed into an index, with higher values indicating higher levels of anger (α = .80).

The scale capturing *depression* was adopted from Piquero and Sealock (2004). Respondents were asked whether, during the past 6 months, they "felt sad and depressed," "felt nervous and tense," "preferred to be alone," "had difficulty going to sleep," "had difficulty staying asleep," "lost their appetite," "had difficulty thinking or concentrating," "had trouble remembering things," "had crying spells," "had stomach pains," "had headaches," "had nausea," "felt unable to keep going," "spent time daydreaming," "felt worthless," and "had numerous fears." Respondents were allowed to answer each question by indicating 0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*, and 4 = *almost always (daily)*. Responses were summed into an index, with higher values indicating higher levels of depression (α = .89).

To measure *self-control*, eight items from the index developed by Grasmick, Tittle, Bursik, and Arneklev (1993) were used to measure impulsivity and risk-seeking behaviors.[9] Respondents were asked the following eight questions: "I often act on impulse (spur of the moment) without stopping to think"; "I often devote much thought and effort to preparing for the future"; "I often do whatever brings me pleasure here and now, even at the cost of some distant goal"; "I am more concerned with what happens to me in the short run than in the long run"; "I like to test myself every now and then by doing something a little risky"; "Sometimes I will take a risk just for the fun of it"; "I sometimes find it exciting to do things for which I might get in trouble"; and "Excitement and adventure are more important to me than security." Respondents marked their responses using a 4-point Likert-type scale (1 = *strongly agree*-4 = *strongly disagree*). Scores were summed into an index to form the respondent's level of self-control. Higher scores indicate higher levels of self-control (α = .70).

Social support. The items capturing *social support* were borrowed from Tittle, Bratton, and Gertz (2003). Respondents were asked how likely they could get help if they "Needed a place to stay for a couple of days," "Needed someone to talk to when depressed," "Needed to borrow $100.00 dollars," "Needed to get transportation," and "Needed to get help if you fell and broke a leg." Respondents marked their responses using a 4-point Likert-type scale (1 = *not likely*-4 = *very likely*). Scores were summed into an index, with greater scores indicating higher levels of social support (α = .88).

Demographic and control variables. There are several demographic and control variables that will be included in the current study. *Sex* is coded 1 for female and 0 for male. *Age* is measured in years. *Race* is coded 1 for White and 0 for Non-White. *Sexual orientation* is captured by a single question asking respondents which sexual orientation they identified themselves. Respondents who indicated they were straight or heterosexual were grouped together as heterosexuals and those who indicated that they were gay, lesbian, bisexual, or questioning were grouped together as non-heterosexuals (0 = *non-heterosexual*, 1 = *heterosexual*).

Prior studies have found a correlation between problematic alcohol consumption and IPV (White & Chen, 2002), while other studies have documented the high use and misuse of alcohol among college students (Knight et al., 2002). Given these studies, we controlled for respondent's alcohol intake. The questions that captured *alcohol consumption* were borrowed from Franklin (2011). Respondents were asked, during the last 12 months, how often did they "drink any alcoholic beverages, including beer, light beer, wine coolers, or liquor"; "drink to the point of intoxication or drunkenness"; and

"drink five or more alcoholic beverages in one day or evening." Respondents marked their answers using a 5-point Likert-type scale (0 = *never*-4 = *always*). Scores were summed into an index, with greater scores indicating higher levels of alcohol consumption (α = .89).

Analytical Plan

The analyses are conducted in two steps. First, sample characteristics are presented to provide an overall view of the distribution of the measures. Second, given the dichotomous nature of the dependent variable, logistic regression models are produced to determine which independent variables are correlates of the dependent variable (Weisburd & Britt, 2014). To determine the impact of coercive forces on IPV, two logistic regression models are estimated. This technique will enable us to identify statistical changes that may occur when new variables are introduced into the model. Model 1 includes the dependent variable regressed on coercive forces, plus the social support and demographic and control variables. Model 2 adds the social-psychological deficits variables into the model. This method will assess whether these social-psychological deficits will mediate the relationship between the coercive forces and IPV. As with any regression procedure, multicollinearity may be a problem. To determine if multicollinearity is a problem in these data, tolerance and variance inflation factors (VIF) were calculated. VIFs were calculated by regressing each independent variable on other variables in the model. All tolerances are above 0.65 and all VIFs are below 2, indicating that multicollinearity is not a problem in the present study (Keith, 2015; Walker & Maddan, 2013). To account for the multistage cluster sampling design of the data, STATA options "robust" and "cluster" were used to produce the standard errors.

Sample characteristics. Descriptive statistics are presented in Table 1. The majority of respondents were female (69.3%) and non-White (54.3%). The average age in this sample is 23 years old and the majority reported being heterosexual (76.6%). Alcohol consumption ranged from 0 to 12 and had an average score of 3.73. Turning our attention to the dependent variable, about 15% of respondents reported perpetrating IPV toward their intimate partners. Looking at the independent variables, about 16% of respondents reported being victimized by physical abuse, while 46.5% reported emotional abuse victimization. Vicarious strain ranged from 0 to 16 and had an average score of 2.14, while anticipated strain ranged from 0 to 9 and had an average score of 0.75. The average score of anger is 8.16, while self-control ranged from 8 to 32 with an average score of 20.38. Depression had an average score of 21.92, while support had an average score of 16.19 on a 5 to 25 scale.

Table 1. Descriptive Statistics (*N* = 492).

Variable	Coded	*n*	*M* (%)	*SD*	Minimum/Maximum	Tolerance/VIF
Dependent variable						
IPV perpetration	0 = no	419	(85.2)			
	1 = yes	73	(14.8)			
Independent variables						
Coercive forces						
Physical abuse	0 = no	414	(84.1)			0.83/1.20
victimization	1 = yes	78	(15.9)			
Emotional abuse	0 = no	263	(53.5)			0.78/1.27
victimization						
	1 = yes	229	(46.5)			
Vicarious STRAIN	Four-item	492	2.14	2.11	0/16	0.87/1.14
Anticipated strain	Three-item	492	0.75	1.68	0/9	0.79/1.26
Social-psychological deficits						
Anger	Five-item	492	8.16	3.24	5/25	0.67/1.49
Self-Control	Eight-item	492	20.38	4.14	8/32	0.80/1.24
Depression	16-Item	492	21.92	9.85	0/64	0.76/1.30
Social support						
Support	Five-item	492	16.19	3.97	5/25	0.82/1.21
Control variables						
Sex	0 = male	151	(30.7)			0.91/1.10
	1 = female	341	(69.3)			
Age	(in years)	492	22.79	5.85	18/60	0.84/1.18
Race	1 = White	225	(45.7)			0.80/1.24
	0 = non-White	267	(54.3)			
Sexual Orientation	1 = heterosexual	377	(76.6)			0.91/1.09
	0 = non-heterosexual	115	(23.4)			
Alcohol Consumption	Three-item	492	3.73	2.75	0/12	0.79/1.25

Note. VIF = variance inflation factors; IPV = intimate partner violence.

Results

The results of the logistic regression analysis are reported in Table 2. Several control variables were found to be positive and significant. Females were more likely than males to report perpetrating IPV toward their partners. Results show that females were 99% more likely than males to perpetrate IPV. In regard to race, White respondents were less likely than non-Whites to engage in IPV. The analysis shows that White respondents are about 57% less likely to report perpetrating IPV toward their partners when compared with non-Whites. Finally, alcohol consumption was found to be positive and significant. There is a 20% increase in the likelihood of perpetrating IPV when respondents report higher levels of alcohol consumption. No other demographic or control variable was found to be significant.

Table 2. Logistic Regression Analysis of Correlates for Perpetration of IPV (N = 492).

Variable	Model 1			Model 2		
	B	SE	OR	B	SE	OR
Demographic and control variables						
Sex (1 = female)	0.69**	0.46	1.99	0.86*	0.89	2.36
Age	0.00	0.00	1.00	0.01**	0.00	1.00
Race (1 = White)	−0.82**	0.01	0.44	−0.66**	0.06	0.52
Sexual orientation (1 = heterosexual)	−0.10	0.11	0.90	−0.07	0.13	0.93
Alcohol consumption	0.18**	0.06	1.20	0.14**	0.04	1.15
Coercive forces						
Physical abuse (1 = yes)	3.01**	10.91	20.43	3.12**	11.11	22.4
Emotional abuse (1 = yes)	0.68**	0.35	1.97	0.42*	0.26	1.53
Vicarious strain	−0.01	0.11	0.99	−0.08	0.09	0.91
Anticipated strain	−0.09**	0.02	0.91	−0.11**	0.03	0.89
Social support						
Support	−0.02	0.02	0.98	−0.00	0.02	0.99
Social-psychological deficits						
Anger	—	—	—	0.22**	0.03	1.24
Self-control	—	—	—	−0.05*	0.03	0.94
Depression	—	—	—	−0.02	0.01	0.97
Constant	−3.48**	0.02	0.03	−4.17**	0.00	0.02
χ^2						
−2 log likelihood	−137.37			−128.10		
Pseudo R^2 =	.34			.38		

Note. IPV = intimate partner violence; OR = odds ratio.
*p ≤ .05. **p ≤ .01.

Model 1 of Table 2 includes the dependent variable regressed on the different types of coercive forces, plus the demographic and control variables. This model shows that both physical and emotional abuse victimization were found to be positive and significant. Respondents who indicated that they were physically abused by their intimate partners are 194% more likely to report that they perpetrated IPV toward their partner. Respondents who experienced emotional abuse are 97% more likely to report perpetrating IPV toward their partner. Perhaps surprising, anticipated strain was found to be negative and significant. Respondents who reported higher levels of anticipated strain are 10% less likely than respondents who reported lower levels of anticipated strain to report using IPV. Vicarious strain was not found to be significant. In addition, social support was also not found to be significant in these data.

Model 2 of Table 2 adds the social-psychological deficits variables into the model. Recall that this method helps assess whether these social-psychological deficits will mediate the relationship between the coercive forces and IPV. Physical and emotional abuse, as well as anticipated strain, remained significant. Only two out of three social-psychological deficit variables were found to be positive and significant. Respondents who reported higher levels of anger are 24% times more likely to report using IPV toward their partners, whereas respondents with higher levels of self-control are 6% less likely to use IPV than those with low levels of self-control. Depression was not found to be significant in these data. Demographic and control variables found to be significant in Model 1 remained significant in Model 2, with the exception of age. Age becomes significant in Model 2 when it was not in Model 1. Older respondents are more likely than younger respondents to engage in IPV.

Discussion

The purpose of this study is to apply differential coercion and social support theory to IPV. The most common utilized theories to explain IPV are social learning theory, a general theory of crime, and general strain theory. Although the studies that have used these theories have documented several important correlates of IPV, there is still the question of whether other criminological frameworks are useful in shedding light into this public health issue. Data obtained from two state universities were used to determine the efficacy of DCSS on IPV. Several hypotheses were tested using multivariate regression models and these hypotheses showed several interesting findings.

Hypothesis 1 stated that coercive forces in the form of physical and emotional victimization are positively related to IPV perpetration. This hypothesis was derived from previous studies on DCSS that have found victimization to be one of the most common forms of coercion. Hypothesis 1 was supported in these data. In both models, respondents who reported being physically victimized by their intimate partner were more likely to report using IPV. Furthermore, respondents who reported emotional abuse victimization were also more likely to use IPV toward their partners as indicated in Models 1 and 2. Such results are perhaps not surprising given the possibility that the respondent may be using IPV in self-defense as a response to this type of coercion (physical and emotional victimization). Nevertheless, the outcome is in concert with Colvin et al.'s (2002) contention that coercion is a "force that compels or intimidates an individual to act because of the fear and anxiety it creates" (p. 19). Given that being attacked may create fear and anxiety for the victim, these two types of coercion forces may have compelled the victim to fight back as the theory would suggest. These findings also support

the belief that individuals who experience excessive coercion may also develop a coercive or aggressive worldview and, thus, attempt to control situations via coercion.

This study also included two strains not often tested in IPV research. Vicarious and anticipated strains were examined to see their impact on IPV. Only anticipated strain was found to be negative and significant. Respondents who indicated that they believed their victimization will continue into the future were less likely to report IPV. One possible explanation for this finding may hinge on whether their anticipated strain was perceived as consistent coercion. Although the respondent experienced IPV, it may have occurred once or occasionally. The respondent may have anticipated further victimization, but such event did not occur. In such a situation, it did not generate a large amount of coercion necessary to motivate that victim to engage in some form of criminal behavior. Due to data limitations, we were not able to test this idea. However, it is to encourage that future research on DCSS measure the length of time experienced to determine the period under which a person is more likely to turn to criminal behavior because of coercion.

Hypothesis 2 stated that social support is negatively related to IPV perpetration. This hypothesis was derived from the literature documenting the importance of social support on decreasing the odds of committing criminal behavior. This study included a measure of social support that taps into the Colvin et al. (2002) concept of instrumental social support that includes providing financial and material assistance as well as guidance. In the current study, social support was not found to be significant in predicting IPV. Hypothesis 2 is not supported, but is in concert with previous studies testing DCSS. One possible explanation for this finding can be attributed to the stigma associated with openly talking to someone about personal victimization. Studies have generally shown that not all victims of IPV disclose or report their victimization to police, family members, or friends (Levendosky et al., 2004; Rose, Campbell, & Kub, 2000). This is particularly true when it involves members of minority groups, such as African American and Hispanic women (Fraser, McNutt, Clark, Williams-Muhammed, & Lee, 2002; Mojarro-Iniguez, Valdez-Santiago, Perez-Nunez, & Salinas-Rodriguez, 2014; Yoshioka, Gilbert, El-Bassel, & Baig-Amin, 2003). Nondisclosure hinders the possibility of obtaining support. Although respondents might have perceived the ability of getting support from family and friends, how many of them actually got support is unknown in these data. Such an event might have rendered this variable nonsignificant. Furthermore, it is important to note that other forms of social support other than family or friends may have altered the results of this variable. Future studies should look at different forms of social support provided by battered women shelters and hotlines, for example, to see if this measure of social support decreases the odds of IPV.

Two social-psychological deficits were found to be positive and significant. Anger and self-control both predicted IPV. This result is in concert with other studies that have found the same results (Kerley et al., 2008; Sellers, 1999). Respondents with higher levels of anger and low levels of self-control were in fact more likely to engage in IPV.

The finding that females are more likely to be perpetrators of IPV and less likely to be victims warrants additional attention, given that national statistics have found that females are the majority of victims (Catalano, 2007). The findings of this study are consistent with other studies on dating violence using college samples (e.g., Straus, 2004). A number of scholars have offered several explanations for why this may be the case. For example, some scholars suggest that this event may be explained by the fact that women's use of violence toward their partners are a reactive method in which IPV is used against them and, therefore, react in a physical, self-defensive manner (Gover, Kaukinen, & Fox, 2008). In such a case, females may report higher levels of perpetrating violence toward their partners. Other scholars suggest that males are uncomfortable about reporting their perpetration of violence toward their partners and, therefore, underestimate their involvement in IPV (Kaukinen, 2002). In such an event, the rates of IPV between sexes will be higher for females. Last, other scholars point to the nature of college dating relationships. Because there may be a lack of official commitment (i.e., marriage) among those dating in college, jealousy and frustration may drive some females to perpetrate violence toward their partners (Gover et al., 2008).

Limitations

The results of this study should be viewed with the study's limitations in mind. First, the data were drawn from a cross-sectional design, which cannot determine the time ordering among variables (Rindfleisch, Malter, Ganesan, & Moorman, 2008). That is, it cannot clearly establish a causal relationship between the independent and control variables with the dependent variable. This limitation prevented us from talking about causes, so it confined discussion to correlates among the variables. This body of literature would benefit greatly if future research on DCSS used longitudinal research designs. Second, other theoretical variables that have been established by prior research to influence IPV were not included in the current analysis. For example, witnessing violence at home or experiencing child maltreatment has been found to be correlated with IPV. The inclusion of these measures may have altered the results of the study. Future research attempting to replicate this study should include these measures to determine their predictability of IPV. We also encourage scholars to apply this theory to other study populations such as high school students because IPV is prevalent in this age group.

Third, like all studies using self-reported data, there may be an issue with recall problems among respondents and, therefore, inaccurate reporting of events. Fourth, although the survey was administered online and all respondents were guaranteed anonymity, we cannot rule out the possibility of social desirability as having an effect on how truthful respondents were when reporting behaviors such as perpetrating IPV. Fifth, our response rate may not be ideal and, thus, we cannot rule out the possibility of a selection effect—the idea that those who are more likely to be perpetrators or victims are also not likely to take the survey. Future research should attempt to replicate these findings using data gathered from a sample with higher participation rate to eliminate this possibility.

Some readers may suggest that the findings of the current study support Agnew's (2006) general strain theory rather than DCSS. After all, physical victimization has been shown to contribute to delinquency and other criminal behavior, as suggested by general strain theory (Hay & Evans, 2006; Lin, Cochran, & Mieczkowski, 2011; Manasse & Ganem, 2009; Agnew, 2002; McGrath, Marcum, & Copes, 2012). Four responses have been articulated by Unnever et al. (2004) with respect to this criticism. First, they suggest that many criminologists use the same variables to measure concepts taken from other theories. The reason why this occurs is because there are no clearly defined rules for determining why certain variables are only "strains," or "social bond," or "coercion," for example. Under this account Unnever et al. (2004) argued that "Colvin might rightly claim as much 'ownership' of items in a survey as does Agnew" (p. 259). Second, Colvin's (2000) theory is presented as an integrated theory, binding several theoretical constructs into one single theory. The theory is built around strain, control, learning, and critical theories as opposed to Agnew's single strain theory. Third, Unnever et al. (2004) pointed out that one of the weaknesses of Agnew's general strain theory is that it does not specifically state the types of strain that is more likely to induce criminal behavior. Unnever et al. (2004) saw Colvin's (2000) theory as providing a specific type of negative stimuli—those experienced as coercive—that increase the likelihood of criminal behavior. Finally, Unnever et al. (2004) argued that coercive forces generate social-psychological deficits.

Policy Implications and Diversity Statement

The results of the current study highlight two potential policy implications. First, given that physical and emotional abuse victimization significantly predicted IPV, efforts should be made to prevent, reduce, or eliminate these types of coercion in a person's life. Therefore, it is highly encouraged that practitioners and scholars create prevention or intervention programs that

focus on issues surrounding the perpetration of IPV. For example, dating violence awareness programs that target individuals at an early age will help them better recognize the red flags of abusive behavior. In return, these programs may help people from being victims of IPV altogether. In addition, high self-control seemed to protect individuals from perpetrating IPV. Therefore, programs should also be established to help people develop high self-control by teaching them the dangers of risk-taking and impulsive behaviors. These programs should be aimed toward young children, given that self-control is said to develop early in life and remain stable throughout a person's life (Gottfredson & Hirschi, 1990). Second, individuals who experienced or perpetrated IPV should be encouraged to seek the services of trained professional counselors. Counseling, for example, may help people address their issues with anger and problematic alcohol consumption, variables found to be significant in predicting IPV perpetration in the current study. Counseling can also teach respondents about healthy communication skills and prosocial conflict resolutions. Alternatively, local support groups should be created to help establish a controlled and safe experience for respondents going through a difficult time in their lives. These recommendations will surely have an impact in helping reducing or eliminating IPV.

Future research should also attempt to replicate this study by specifically applying it to a larger sample of non-heterosexual respondents. Prior research has shown that some non-heterosexuals face coercive forces not likely to be experienced by heterosexuals. For example, past studies have reported that internalized homophobia, stigma, prejudice, and discrimination, as well as antigay violence are all stressors that can motivate some individuals to engage in interpersonal violence (Zavala, 2016). In addition, other studies show that non-heterosexuals are less likely to receive support from family members or from friends who are heterosexuals (Nesmith, Burton, & Cosgrove, 1999). Therefore, DCSS is in a theoretical position to shed some light on why sexual minority stressors and a lack of social support may contribute to IPV in this study population. Such a study would ultimately help understand IPV risk factors in a population that has long been ignored in criminological research.

Conclusion

Criminological theories other than social learning, a general theory of crime, and a general strain theory have been rarely applied to IPV. This study analyzed data collected from two public universities in an effort to unmask other insights of IPV to improve our understanding of its correlates. Specifically, the study examined four coercive forces and one measure of social support on IPV. The results indicated that only three out of the four coercive forces were

found to be related to IPV perpetration, whereas social support was not found to be significant in the multivariate regression models. Results suggest that individuals who experience physical and emotional abuse are more likely to report perpetrating IPV. This offers insights as to why some victims of physical and emotional abuse perpetrate IPV. Evidently, additional research is needed and other criminological theories should be tested to enrich our understanding of the causes and correlates of this lingering public health issue.

Declaration of Conflicting Interests

Funding

Notes

1. Application forms were submitted to both of the universities' Institutional Review Board (IRB) for review. The study was approved by both IRBs and all participants gave informed consent. All participants were able to decline the research invitation and were also allowed to discontinue the study at any time without consequences.
2. It is important to note that although the response rate is not ideal, it is consistent with other studies using noncompensated, online surveys (see, for example, Fox, Nobles, & Fisher, 2016; Zavala, 2016). However, Dillman (2007) suggested that response rates more than 10% for online surveys should be acceptable.
3. There are several limitations when using cross-sectional data, such as not directly testing the causal effect between the different types of coercive forces and intimate partner violence (IPV). This limitation is discussed further in the "Discussion" section of the article.
4. Nevertheless, it is important to note that the *Revised Conflict Tactics Scale* (CTS-R) has been criticized for not capturing the context in which violence occurs or the motivations for using violence (Kimmel, 2002).
5. An exploratory analysis (not shown) revealed that only a small number of respondents reported perpetrating or being victimized by more severe forms of violence. For example, only four respondents said they were victimized by "a knife or other weapon besides a gun" and another six respondents reported that they were threatened by their partner "with a knife or other weapon." The vast majority of respondents reported what is called "common couple violence," which includes slapping, pushing, grabbing, hitting, naming calling, and so on. Due to this limitation in the data, we were not able to operationalize IPV in a way that would capture more severe forms of IPV.

6. Because the majority of respondents reported minor forms of IPV, a variety index (i.e., a count of the numbers of different types of IPV perpetrated or victimized) was not constructed due to the low variations of acts reported by respondents. In other words, the distribution of the summed items was skewed toward minor forms of IPV.

7. Dichotomizing victimization data is common practice. This is sometimes due to the fact that scholars are interested in the *occurrence* of violence rather than the *frequency* of violence. The current coding is consistent with prior studies using CTS (Cheung, Choi, & Cheung, 2014; Gover, Jennings, Tomsich, Park, & Rennison, 2011; Gover, Kaukinen, & Fox, 2008; Jennings, Park, Tomsich, Gover, & Akers, 2011).

8. We focused on *trait* anger (an enduring characteristic of individuals) rather than *situational* anger (a reaction to a specific set of circumstances) to remain consistent with prior studies (Hay, 2003; Hay & Evans, 2006; Pérez, Jennings, & Gover, 2008).

9. The decision to measure only impulsivity and risk-seeking behaviors was influenced by studies that have shown these two dimensions of self-control to carry the most explanatory power (Arneklev, Grasmick, & Bursik 1999; Lagrange & Silverman, 1999). It should be noted that other scholars have used these same eight items to measure self-control in studies testing Gottfredson and Hirschi's (1990) general theory of crime (see Agnew et al., 2011; Childs, Cochran, & Gibson, 2009; Higgins, Jennings, Tewksbury, & Gibson, 2009; Jennings, Higgins, Tewksbury, Gover, & Piquero, 2010).

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