

INTRODUCTION

- *Attitudes* are typically defined as summary evaluations (e.g., positive vs. negative) of psychological objects (e.g., Ajzen, 2001; Eagly & Chaiken, 1993; Fazio, 2007).
- However, in theory, research, and measurement, "attitude" is often used to refer to a wide range of cognitions that seem to extend beyond evaluation of crime, such as neutralizations, rationalizations, social norms, and intentions (Andrews & Bonta, 2010).
- As a result, the extent to which most scales designed to measure attitudes towards crime actually do so is unclear (Maruna & Copes, 2004; Simourd & Olver, 2002).
- Two main research questions were addressed in the current study:
 1. Do self-report scales designed to measure attitudes towards crime actually measure attitudes towards crime (i.e., evaluation of crime)?
 2. If these scales are measuring something distinct from evaluation of crime, do the distinctions matter? That is, do the different constructs provide complementary information relevant to criminal behavior?

Participants

• 502 male (29.4%) and female (70.6%) undergraduate university students completed an anonymous online survey.

METHODS

Measures

Measures of Criminal Attitudes and Associates - Part B: Criminal Attitudes (MCAA; Mills, Kroner, & Forth, 2002)

- *Attitudes Towards Violence* (12 Items; V; $M = 2.68$, $SD = 2.42$, Range = 0 to 12)
- *Sentiments of Entitlement* (12 Items; E; $M = 3.82$, $SD = 2.32$, Range = 0 to 10)
- *Antisocial Intent* (12 Items; I; $M = 3.89$, $SD = 1.90$, Range = 0 to 12)
- *Associates* (10 Items; A; $M = 4.01$, $SD = 1.53$, Range = 1 to 8)

Evaluation of Crime (EC)

- 6 self-report items (see Table 1) averaged for total score. Scores can range from 1 to 7. Higher scores indicate more positive evaluation of crime. ($M = 1.83$, $SD = 0.86$)

Identification of Self as Criminal (IDC)

- 4 self-report items (see Table 1) averaged for total score. Scores can range from 1 to 7. Higher scores indicate greater identification of self as criminal. ($M = 2.17$, $SD = 0.75$)

Evaluation of Criminals (ECR)

- 7 self-report items (see Table 1) averaged for total score. Scores can range from 1 to 7. Higher scores indicate more positive evaluation of criminals. ($M = 2.33$, $SD = 0.96$)

Delinquency Scale (DS)

- 31 self-report items assessing the number of times participants have committed various delinquent acts such as theft, fraud, and assault summed for total score. Scores can range from 0 to 279. Higher scores indicate more past delinquent behavior. ($M = 2.68$, $SD = 2.42$)

RESULTS

Table 1 Exploratory Factor Analysis (EFA) of Scale Items

Factor 1	Eigenvalue (Proportion of variance) = 15.81 (25.10%)	MCAA Scale	Rotated Factor Loading
EC1: Doing crime is very positive ^a (vs. very negative)			0.53
EC2: Doing crime is extremely enjoyable (vs. extremely not enjoyable)			0.67
EC3: Doing crime is very good ^a (vs. very bad)			0.54
EC4: Doing crime is extremely fun (vs. extremely not fun)			0.66
EC5: Doing crime is very right (vs. very wrong)			0.53
MCAA2: Stealing to survive is understandable		I	0.48
MCAA3: I am not likely to commit a crime in the future		I	0.44
MCAA11: I could see myself lying to the police		I	0.52
MCAA15: In certain situations I would try to outrun the police ^a		I	0.40
MCAA16: I would not steal, and I would hold it against anyone who does		I	-0.32
MCAA19: I would be open to cheating certain people		I	0.55
MCAA26: A hungry man has the right to steal		I	0.33

MCAA31: I would not enjoy getting away with something wrong	I	-0.45
MCAA35: I would run a scam if I could get away with it	I	0.44
MCAA39: For a good reason, I would commit a crime	I	0.62
MCAA43: I will not break the law again	I	-0.43
MCAA46: I would be happy to fool the police ^a	I	0.61
MCAA23: I could easily tell a convincing lie	E	0.33
MCAA36: I have committed a crime with friends	A	0.53
Factor 2	Eigenvalue (Proportion of variance) = 8.56 (13.59%)	
MCAA1: It is understandable to hit someone who insults you	V	0.73
MCAA5: There is nothing wrong with beating up a child molester	V	0.46
MCAA9: Sometimes you need to fight to keep your self-respect	V	0.61
MCAA13: Someone who makes you very angry deserves to be hit	V	0.82
MCAA17: People who get beat up usually had it coming	V	0.55
MCAA21: It's all right to fight someone if they stole from you	V	0.82
MCAA25: It's not wrong to hit someone who puts you down	V	0.52
MCAA29: Child molesters get what they have coming	V	0.35
MCAA30: Taking what is owed to you is not really stealing	V	0.60
MCAA33: It's not wrong to fight to save face	V	0.61
MCAA37: Someone who makes you really angry shouldn't complain if they get hit	V	0.72
MCAA41: There is nothing wrong with beating up someone who asks for it	V	0.74
MCAA44: It's reasonable to fight someone who cheated you	V	0.96
MCAA45: A lack of money should not stop you from getting what you want	E	0.50
MCAA6: A person is right to take what is owed to them, even if they have to steal it	I	0.58
MCAA7: I would keep any amount of money I found	I	0.30
MCAA22: It's wrong for a lack of money to stop you from getting things	I	0.46
MCAA27: Rules will not stop me from getting what I want	I	0.32
Factor 3	Eigenvalue (Proportion of variance) = 3.49 (5.54%)	
MCAA8: None of my friends have committed crimes	A	0.64
MCAA12: I know several people who have committed crimes	A	0.48
MCAA20: I always feel welcomed around my criminal friends	A	0.55
MCAA24: Most of my friends don't have criminal records	A	-0.34
MCAA28: I have friends who have been to jail	A	0.55
MCAA32: None of my friends has ever wanted to commit a crime ^a	A	-0.48
MCAA40: I have friends who are well known to the police	A	0.61
MCAA10: I should be allowed to decide what is right and wrong ^a	E	0.55
MCAA34: Only I can decide what is right and wrong ^a	E	0.66
MCAA4: I have a lot in common with people who break the law	I	0.42
Factor 4	Eigenvalue (Proportion of variance) = 2.98 (4.73%)	
EC6: Doing crime is very moral (vs. very immoral)		0.44
ECR1: Criminals are very positive (vs. very negative)		0.69
ECR2: Criminals are extremely fun (vs. extremely not fun)		0.71
ECR3: Criminals are very pleasant (vs. very unpleasant)		0.82
ECR4: Criminals are very right (vs. very wrong)		0.88
ECR5: Criminals are very good (vs. very bad)		0.91
ECR6: Criminals are enjoyable (vs. very unenjoyable)		0.77
ECR7: Criminals are very moral (vs. very immoral)		0.86

Factor 5	Eigenvalue (Proportion of variance) = 2.60 (4.13%)	
MCAA14: Only I should decide what I deserve ^a	E	0.49
MCAA18: I should be treated like anyone else no matter what I've done	E	0.89
MCAA34: Only I can decide what is right and wrong ^a	E	0.49
MCAA38: A person should decide what they deserve out of life	E	0.52
MCAA42: No matter what I've done, it's only right to treat me like everyone else	E	0.91
Factor 6	Eigenvalue (Proportion of variance) = 2.17 (3.44%)	
IDC1: I am very criminal (vs. law-abiding) ^a		0.69
IDC2: I am very unlawful (vs. lawful) ^a		0.70
IDC3: I am very violent (vs. peaceful)		0.67
IDC4: I am very aggressive (vs. gentle)		0.60

Note. EFA conducted using polychoric correlations with MPlus version 6.0 (Muthén & Muthén, 2010). Factors were extracted using the Weighted Least Square (WLSMV) method (Schmitt, 2011). Factors were rotated using an oblique rotation method (Geomin). Factor retention: parallel analysis = 8 factors; MAP Test = 5 to 9 factors; Scree Plot = 6 factors. 6 Factor model fit indices: RMSEA (ideal < .06) = 0.03, 90%CI [0.03, 0.04]; CFI (ideal > 0.95) = 0.96; SRMR (ideal < 0.08) = 0.07. ^a Item had a rotated factor loading > .40, significant standardized factor loading, and high correlation on multiple factors.

Table 2 Pearson Correlations: Relationships Between Each Factor and Delinquent Behavior

	DS	2	3	4	5	6	α
Factor 1	.50*	.27*	.29*	.58*	-.05	.50*	.79
Factor 2	.30*	-	.29*	.00	.15*	.33*	.80
Factor 3	.24*		-	.21*	.24*	.26*	.38
Factor 4	.23*			-	-.03	.27*	.92
Factor 5	.07				-	.04	.63
Factor 6	.47*					-	.73

Table 3 Sequential Multiple Regression Predicting Delinquent Behavior

Predictor	R	R ²	Adj R ²	ΔR^2	B	B SE	β
Step 1	.50	.25	.24	.25*			
Factor 1					0.65*	0.05	.50
Step 2	.53	.28	.28	.03*			
Factor 1					0.58*	0.05	.45
Factor 2					0.42*	0.09	.19
Step 3	.53	.28	.28	.00			
Factor 1					0.57*	0.06	.43
Factor 2					0.39*	0.10	.17
Factor 3					0.30	0.20	.06
Step 4	.53	.28	.28	.00			
Factor 1					0.61*	0.07	.47
Factor 2					0.37*	0.10	.16
Factor 3					0.33	0.20	.07
Factor 4					-0.05	0.05	-.05
Step 5	.54	.29	.28	.00			
Factor 1					0.62*	0.07	.47
Factor 2					0.35*	0.10	.15
Factor 3					0.26	0.20	.06
Factor 4					-0.05	0.05	-.05
Factor 5					0.32	0.21	0.06
Step 6	.58	.34	.33	.05*			
Factor 1					0.47*	0.07	.36
Factor 2					0.24*	0.10	.10
Factor 3					0.16	0.20	.04
Factor 4					-0.06	0.05	-.06
Factor 5					0.31	0.20	.06
Factor 6					0.64*	0.11	.26

DISCUSSION & CONCLUSION

The EFA suggests some items of the MCAA assess evaluation of crime. These consisted primarily of items from the *Antisocial Intent* subscale. However, most MCAA items did not load onto the same factor as the evaluation of crime items, suggesting the MCAA is also measuring cognitions other than evaluation of crime.

All of the factors except Factor 5 (Entitlement) had moderate to large positive correlations with self-reported delinquent behavior.

The sequential multiple regression analysis indicates that Factor 1 (Evaluation of Crime), Factor 2 (Cognitions Regarding Violence), and Factor 6 (Identification of Self as Criminal) were independently related to self-reported delinquent behavior and provided complementary information such that together they were more strongly associated with delinquent behavior than alone.

However, Factor 3 (Cognitions Regarding Antisocial Friends) and Factor 4 (Evaluation of Criminals), and Factor 5 (Entitlement) were not independently related to self-reported delinquent behavior.

Limitations of the current study include reliance on self-report measures, a student sample, and the inability to examine gender differences because of an insufficient number of male participants.

Our findings suggest that only some items of the MCAA are actually measuring attitudes towards crime. Future research should attempt to further disentangle the different constructs assessed by scales like the MCAA and determine the role each may play in criminal behavior.