

Is Cognitive Inflexibility Associated with Physical Aggression, Emotional Abuse, and/or Sexual Abuse in Relationships?



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Introduction

- People who consistently use their dominant hand to perform everyday tasks (i.e., consistent-handedness) tend to be more cognitively inflexible, have trouble with belief-updating, and have higher authoritarianism compared to inconsistent-handers (i.e., people who use their non-dominant hand for some everyday tasks) (Prichard et al., 2013)
- Cognitive inflexibility is the inability to transition from thinking about one concept to another and is measured in the present study by the degree to which an individual is a consistent-hander
- Previous research has not examined associations between consistent-handedness and abusive and aggressive behavior towards others
- This study examined whether or not cognitive inflexibility is associated with being more physically aggressive, emotionally abusive, and/or sexually abusive in romantic relationships

Method

Participants

- 135 undergraduate students
 - Ages: 18-48 years ($M=21.2$ years, $SD=4.15$ years)
 - Credits completed: 7.0-158.5 ($M=67.8$, $SD=36.05$)
 - 76% currently in romantic relationships
 - Length of current relationships: 1-181 months ($M=19$ months, $SD=26$ months)

Self Identified Race/Ethnicity	
Caucasian/White	57.8%
African American/Black	17.0%
Hispanic/Latino	5.9%
Asian	23.0%
American Indian or Alaska Native	0.8%
Native Hawaiian or Other Pacific Islander	0.8%

Self Identified Gender	
Male	20.0%
Female	78.5%
Gender fluid/None	1.5%

Measures

- The Edinburgh Inventory (R.C. Oldfield)
 - Measures handedness
- Conflict Tactics Scale, perpetration subscale (Straus & Douglas, 2004)
 - Measures Intimate Partner Violence (IPV) perpetration
- Multidimensional Measure of Emotional Abuse, perpetration items (MMEA: Murphy et al., 1999)
- Sexual Experiences Survey, perpetration items (SES; Koss & Oros, 1982)

Procedure

- Participants from Psychology classes at UMBC voluntarily completed an online survey through Qualtrics for extra credit in that course
- Data were analyzed using logistic regressions to test the association between handedness and dichotomous outcomes (any physical aggression, and any sexual aggression) and linear regressions to test the association between handedness and outcome variables that were measured with continuous measures (past emotional abuse and current emotional abuse)

Results

	Frequency of Aggression	
	Engaged in the act in the past year	Engaged in the act prior to the past year
Emotional Abuse	100%	100%
Sexual Abuse	37.0%	8.1%
Physical Aggression	24.4%	17.0%

Each participant had engaged in emotionally abusive behaviors at least once in the past year and prior to the past year.

Number of times an individual engaged in each behavior with a partner in the past year	Minimum	Maximum	Mean	Std. Deviation
Emotional Abuse	0.40	11.13	1.21	1.94
Sexual Abuse	0.00	23.00	1.47	3.45
Physical Aggression	0.00	85.00	2.38	8.98

Number of aggressive behaviors of this type an individual engaged in with a partner prior to the past year	Minimum	Maximum	Mean	Std. Deviation
Emotional Abuse	0.40	3.70	0.42	0.60
Sexual Abuse	0.00	1.00	0.08	0.27
Physical Aggression	0.00	8.00	0.46	1.36

Association between Consistent-Handedness and Aggression			
Type of Aggression	Beta	Standard Error	Sig.
Emotional Aggression in the past year	-0.21	0.35	0.55
Emotional Aggression prior to the past year	-0.00	0.10	0.97
Any Sexual Aggression	0.32	0.37	0.38
Any Physical Aggression	0.81	0.38	0.03

The analyses for Any Physical Aggression and Any Sexual Aggression were logistic regressions because these dependent variables are dichotomous. The analyses for Past and Current Emotional Abuse were linear regressions because these dependent variable are continuous measures.

Handedness	
Consistent-handers	34.5%
Inconsistent-handers	65.5%

Of the 127 participants that completed The Edinburgh Inventory, 49 were inconsistent-handers and 78 were consistent-handers.

Individuals engaging in Physical Aggression		
Handedness	Not engaging in Physical Aggression	Engaging in Physical Aggression
Inconsistent-Handers	26	23
Consistent-Handers	56	22

A higher number of consistent-handers are not engaging in physical aggression

Discussion

- Findings suggest that there is no association between consistent-handedness and engaging in greater emotional abuse and/or sexually abuse in romantic relationships
- Although it was hypothesized that consistent-handers would engage in more aggressive behaviors, we found a higher percentage of consistent-handers had **never** engaged in physical aggression compared to inconsistent-handers. In contrast, equal numbers of inconsistent-handed individuals had and had not engaged in physical aggression with a partner
- This may suggest that cognitive flexibility, rather than cognitive inflexibility is associated with physical aggression

Limitations

- Most participants were female. Males were not well represented. There could be associations between gender and either handedness or cognitive flexibility. This study did not account for those possible associations
- Results should be tested using different measures of cognitive flexibility

Future Directions

- A better, more representative participant sample should be used as undergraduates might not have ever been in a serious relationship