

## Implicit and Explicit Measures of Antisocial Attitudes of Criminal Offenders

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**Abstract:** At the present antisocial attitudes measured by implicit and explicit methods have been studied insufficiently. Research aim is to investigate attitudes towards violence of criminal offenders with Implicit Association Test (IAT) and self-report procedure. Participants: 53 convicted individuals, 28 ex-convicts and 78 previously not convicted individuals. Research methods: with an experimental procedure of IAT one variable was obtained – “implicit preference for verbal categories associated with physical violence”. By using self-report procedure, the second variable was obtained: “explicit attitude towards physical violence”. The results showed that there is a significant difference between explicitly measured variables of the groups “Convicts” and “Ex-convicts”. There was no significant difference found of implicitly measured attitudes between the groups, but a slight tendency of the fact that previously not convicted individuals had more negative attitude towards violence was revealed. A significant correlation was found between implicit and explicit measurement results for the group “Convicts”.

**Keywords:** antisocial attitudes, attitudes towards violence, implicit measures, explicit measures.

### Introduction

#### *Theoretical approaches for studying antisocial attitudes*

The importance of antisocial attitudes predicting antisocial behaviour has been studied for decades (Glueck, Glueck, 1934). Nowadays the studies of antisocial attitudes have regained their popularity, because of the recent violence and aggression domain that has become a global problem. The advantage of assessing antisocial attitudes by explicit or/and implicit measures rather than the proxy of antisocial behaviour is that there is a potential for change even before the behaviour has taken place (Mills, Anderson, 2004).

Strong empirical evidence suggests that *antisocial attitudes* can be linked to criminal behaviour (Andrews, Bonta, 2010; Gendreau, Little, 1996). In a meta-analysis of 37 studies, it was concluded that antisocial attitudes out of six groups of risk factors showed the strongest correlation with criminal behaviour (Grendreau, Little, 1996).

There is no specific theoretical model explaining how antisocial attitudes should be classified or grouped (Andrews, Bonta, 2010). Antisocial attitudes have been referred to as thinking errors or cognitive distortions and have been defined as a thought process that supports criminality, meaning that interpretations of situations help to justify or commit specific criminal behaviours. In other words, antisocial attitudes point to a belief that individuals feel entitled to engage in criminal behaviours, regardless of the norms of the society or the negative effect on other individuals (Egan, McMurrin, 2000). Research has shown that antisocial attitudes, also known as distorted thought processes, are important originators in the development and maintenance of antisocial behaviours (Barriga, Hawkins, 2008). *Antisocial behaviour* refers to any kind of behaviour, which radically differs from social norms and standards, and also violates the rights of other people, which can be violent or non-violent (Concise Dictionary..., 2009).

As there is no single model explaining how these cognitive distortions (aka. antisocial attitudes) are formed and maintained, it is essential to view the most important general models that explain how attitudes – association between a psychological object and evaluation of that object (Fazio, 2007) - have a practical and theoretical ability to predict and influence wide range of behaviours (Anderson, Bushman, 2002) thus – how an antisocial attitude can lead to the antisocial behaviour.

R.H. Fazio (1990) stated that attitudes, which are stored in memory, may have an uncontrollable and spontaneous influence on behaviour. Attitudes are formed through various exposures to an attitude object and become more permanent over time. R.H. Fazio developed Motivation and Opportunity as Determinants (MODE) model stating that attitudes are activated in the presence of an attitude object and the immediate activation (implicit attitude) is more likely to occur with stronger attitudes. In contrast, the deliberative propositional reasoning (explicit attitude) occurs when there is no set attitude towards an object (Fazio, 1990). In considering this, pro-antisocial attitudes are more likely to occur if the prior antisocial behaviour has resulted in a positive outcome.

The Associative-Propositional Evaluation (APE) model views attitudes as evaluations, which are underlined by two forms of mental processes- associative processes underline implicit attitudes and propositional processes underline explicit attitudes. APE differs from all the other models with the suggestion that implicit attitudes can be activated regardless if one believes them to be positive or not. Also it is stated that implicit attitude in combination of evaluation of validation or truth can become explicit (Gawronski, Bodenhausen, 2006).

### ***Explicit and implicit methods in researches of attitudes towards violence***

According to all the discussed theories antisocial attitudes, in this case- attitudes towards violence are evaluations of violence. *Violence* is defined as the most severe type of physical or nonphysical aggression that is likely to cause serious physical or psychological harm. The process of turning *violence* in to *criminal violence* is determined by the law. Without the law the severity of violence is not important, it is not a crime. These violent acts usually involve *physical violence*- the use of physical force, often causing serious injury (Riedel, Welsh, 2002).

APE and MODE model suggests the duality of attitudes, meaning that it would be necessary to assess both implicit and explicit attitudes towards violence, because they may be differently linked to violent behaviour, thus using implicit measurements (defined as “unconscious, automatic and indirect”) and explicit measurements (defined as “conscious, controlled and direct”) (Petty, Fazio, 2009). Unfortunately, mostly explicit methods are used when attitudes towards violence are assessed.

In comparison with investigations researching different forms of violence, antisocial attitudes towards criminal violence of criminal offenders is less popular study field. Nevertheless several researches have been conducted on the topic, for example, J. F. Mills studied attitudes and recidivism and the results have shown that there is a link between antisocial attitudes and prior convictions and incarcerations (Mills, Kroner, 2002). The same findings L. Simane et al. concluded using implicit measurement methods in the research of attitudes towards theft (Simane, Plotka, 2013).

Up to date not many researches (Snowden, Gray, 2004; Polaschek, Bell, 2010; Robertson, Murachver, 2007; Eckhardt, Samper, 2012) on attitudes towards violence have been published, using implicit measurement methods, e.g., Implicit Association Test (IAT) and only a couple of the researches used violent criminal offenders as a sample. IAT is a computerized experimental procedure where the participant is asked to sort categories and attributes. The reaction times are fixed and faster response times are expected when sorting stimulus for categories that are more strongly associated (Greenwald, McGhee, 1998).

A study was conducted by R.J. Snowden et al. (2004) in which IAT was used to assess implicit attitudes towards violence among a sample of violent offenders. The sample consisted of two groups – murderers and non-murderers. As explicit measures semantic differential and a feeling thermometer rating the target concept was used. The results showed significant three way interaction between IAT condition, offender group and psychopathy on IAT scores. No significant differences on IAT scores were found between murderers and non-murderers (Snowden, Gray, 2004).

D. L. Polaschek et al. (2010) conducted a study with the aim to assess if cognitive behavioural therapy affects attitudes towards violence of criminal men using two IAT procedures and Criminal Attitudes to Violence scale (CAVS) (Polaschek, Collie, 2004) and an aggression questionnaire. The results showed that participants had pre-programme preference for the non-violence category on both IATs. Violence IAT showed no significance in the result comparison before and after the therapy. The explicit methods showed that after the therapy the participants became less aggressive and their preference for violence

decreased. There was no correlation found between results of explicit and implicit measurements, which suggest that explicit and implicit measures of aggressive cognition are not related (Polaschek, Bell, 2010).

This article presents a study using IAT method to research antisocial attitudes, more specifically – attitudes towards violence of criminal offenders. The modified two categories IAT and CAVs were based on D. L. Polascheks et al. (2010) research and applied to the languages and cultural settings of Latvia. Numerous empirical studies conducted in recent years pointed out on controversial judgments on the understanding of the correlation between implicit and explicit measures of the same psychological construct. The issue of congruency of implicit and explicit measures is very complex and is seen differently in the frames of different approaches (Rudman, 2013; Fazio, Olson, 2003; Plotka, Urbane, 2015).

The *aim* of the research is to investigate antisocial attitudes (attitudes towards violence) of criminal offenders with Implicit Association Test (IAT) and self-report procedure.

#### *The Research questions*

1. Is there difference in attitudes towards violence measured by IAT and self-report procedure of convicted individuals, ex-convicts currently undergoing probation and individuals, who have never been convicted?
2. Is there a compliance of measurements of attitude towards violence obtained by experimental procedure IAT and self-report procedure?

### **Methodology**

#### *Participants*

Three groups of participants were formed:

- “Convicted” (Con) group consisted of 53 volunteers drawn from a population of federally incarcerated adult males sentenced and residing at a penitentiary institution in the East of Latvia. All of them have committed at least one violent crime.
- “Ex-Convicts” (ExCon) group consisted of 28 volunteers on probation- adult males, who have served their time in a closed-type penitentiary institution for committing a violent offence and at the moment are under supervision of the State Probation Services.
- “Non-convicts” (NonCon) group consisted of previously not convicted adult male volunteers (N=78).

#### *Implicit measure*

A modified version of Implicit Association Test – Criminal Violence IAT was specially designed for the experiment. The modified IAT method was created, based on the classical seven block IAT design (Greenwald, McGhee, 1998). The Criminal Violence IAT categories and stimulus were based on D.L. Polaschek’s et al. (2010) Violence-Houswork IAT. The verbal stimulus were applied to the cultural settings of Latvia and the IAT was created in both- Latvian and Russian languages to match the mother tongue of the participant.

#### *Explicit measure*

Linguistic adaptation of “Criminal Attitude towards Violence scale” (CAVs) (Polaschek, Collie, 2004) was conducted. The questionnaire is one factor instrument measuring attitudes towards non-sexual physical aggression.

The method of three times reverse translation was used. The scale was translated in Latvian and Russian languages. After previous experiment where 100 ex-convicts were surveyed, the questions that caused suspicion were overlooked. This time the internal consistency was satisfactory ( $\alpha=0,8$ ) meaning that the translations are adequate and the next stage of the adaptation can occur.

#### *Procedure*

Phase 1: Data collection from the groups “Convicted” and “Ex-convicts”

Researchers gained permission to be able to go in to penitentiary institution and probation centre. Participants were briefly explained of the aims of the study and that the participation is voluntary and that this experiment will not affect the process of their probation or the enforcement of the sentence in any way. After individually they were offered to complete the experimental procedure IAT on the computer and fill in the questionnaire.

Phase 2: Data collection from the group “Non-convicts”

Previously not sentenced individuals were asked to provide details of their profession and daily job so we could assess if their profession is associated with violence, which is a rather controversial subject and lacks theoretical background, but professions as police men, fire fighters, lawyers etc. were excluded. The rest of the mail participants were individually asked to complete the experimental procedure IAT on the computer and fill in the questionnaires.

## Results and discussion

*Explicitly measured variable:* “Explicit attitude towards physical violence” (CAVs).

*Implicitly measured variable:* “Implicit preference for verbal stimulus associated with physical violence” (D(IAT)).

*First research question*

For each group the indicators of descriptive statistics were calculated and the compliance of data distribution with normal distribution was verified. It was found that variables D(IAT) and CAVs can be studied by methods of parametric statistics.

The means of variables D(IAT) and CAVs for the groups “Convicted” (Con), “Ex-convicts” (ExCon) and “Not-Convicted” (NonCon) were researched. Figure 1-2 shows the means of these variables.

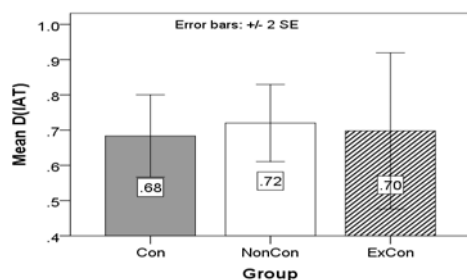


Figure 1. The Means of D(IAT).

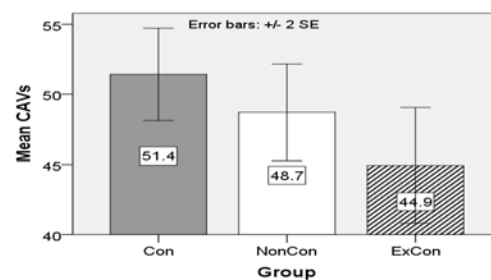


Figure 2. The Means of CAVs.

CAVs has a single-factor structure and lower score indicates strong disagreement with the beliefs about violence and upward of this indicates greater endorsement of the beliefs about violence. The authors, using the quartiles, separated the results in to three levels, which provide an estimate of the magnitude of the violence effect: CAVs statistics of 39- 57 correspond to medium effect size, above 57 - large effect size. The mean value of the variable CAVs for Group “Con” is significantly higher than the mean for Group “ExCon”:  $t(79)=2.38$ ;  $p \leq 0.05$  (Figure 2). Thus the convicted individuals (Con) had significantly higher explicit preference towards violence than the individuals on probation (ExCon). It could be possible that individuals on probation more likely provided socially desirable answers in fear that the results might influence their probation.

IAT scores discovered that pro-violence attitude obtained only some individuals in each group, but the mean D scores of all three groups indicates implicit preference for the non-violence stimulus. These findings are common (Polaschek, Bell, 2010; Eckhardt, Samper, 2012) and could be explained that not the right category was chosen to oppose violence or if the third and fourth IAT trials would be violence + positive words and the last trials would be violence + negative words, the findings would be different. Further research is necessary to compare or deny these allegations.

The D statistic provides an estimate of the magnitude of the IAT effect: D statistics of 0.15, 0.35, and 0.60 correspond to small, medium, and large effect sizes, respectively (Rudman, 2013). Significant

difference between groups for the variable D(IAT) has not been found (Figure 1). Although the mean implicit preference for groups “Con” and “ExCon” was in the range of “medium effect size”, but the means of the D score of previously not convicted individuals were in the range of “large effect size”, meaning that even though there was no significant difference found, the mean difference shows that previously not convicted individuals have stronger preference to non-violent stimulus than previously convicted individuals. The authors believe that with the change of the experimental procedure (e.g., designing Single-Category IAT (SC-IAT)) it is possible to gain significant difference between the groups.

#### *Second research question*

The research of the compliance of measurement results of violence’s attitudes, obtained with experimental procedures of the IAT and self-report procedures was performed using Spearman correlation coefficients. The results showed compliance of implicit and explicit measurements of researched constructs evaluated by the correlation coefficients, the values of which fall within the valid range from 0.12 to 0.72 (Rudman, 2013). In the groups “NonCon” and “ExCon” no correlation was found between implicitly and explicitly measured attitudes, as it was in our previous researches (Simane- Vigante, Plotka, 2015). Interestingly, there was a statistically significant relationship found in the group “Con”  $r(53) = -0.276, p \leq 0.05$ . The “minus” sign indicates that large D(IAT)-scores and small CAVs-scores match preference to non-violence.

### **Conclusions**

As a result of the research, its aim and objectives have been implemented and the main results are presented. Theoretical analysis of various models of antisocial attitudes indicates the insufficiency of empirical verification of violence as an attitude and the need to develop alternative methods for its consideration.

The research questions have been answered – there is a mean difference in attitudes towards violence of convicts, ex-convicts (individuals on probation) and previously not convicted individuals on both implicit and explicit levels and there is statistically significant compliance between attitudes of violence obtained by implicit and explicit measurement methods in the group “convicts”. The gained results correspond to previous researches.

The limitation of the study: when studying attitudes towards violence, it is difficult to find the opposite category to compare it with. The use of *House work* as an opposite category to violence has proven to be not entirely suitable. It has been planned to create a Single-Category IAT (SC-IAT) or personalized IAT for further research.

IAT is a useful tool in social and psychological rehabilitation for criminal offenders to monitor the change of criminal attitudes. IAT is also very valuable tool in recruitment and psychotherapy, because it was discovered that some individuals, who have never been convicted before show a very high level of implicitly measured pro-violence attitudes, meaning that some of the most dangerous criminals may never commit a crime, but may act violent if situation presents itself.

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