

**Pro-bullying attitudes among incarcerated juvenile delinquents: antisocial behavior,
psychopathic tendencies and violent crime**

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Abstract

The objective was to evaluate a new scale aimed at assessing antisocial attitudes, the Pro-bullying Attitude Scale (PAS), on a group of 259 voluntarily-recruited male juvenile delinquents from a juvenile correctional institution in Arkhangelsk, North-western Russia. Exploratory factor analysis gave a two-factor solution: Factor 1 denoted Callous/Dominance and Factor 2 denoted Manipulativeness/Impulsiveness. Subjects with complete data on PAS and Childhood Psychopathy Scale (CPS) (n= 171) were divided into extreme groups (first and fourth quartile) according to their total scores on PAS and the two factor scores, respectively. The extreme groups of total PAS and PAS Factor 1 differed in CPS ratings and in violent behavior as assessed by the Antisocial Behavior Checklist (ABC). They also differed in the personality dimension Harm Avoidance as measured by use of the Temperament and Character Inventory (TCI), and in delinquent and aggressive behavior as assessed by the Youth Self Report (YSR). The extreme groups of PAS Factor 2, in turn, differed in aggressive behavior as assessed by the YSR, and in the TCI scale Self-Directedness. When PAS was used as a continuous variable, total PAS and PAS Factor 1 (Callous/Dominance) were significantly positively related to registered violent crime. *In conclusion*, the possible usefulness of PAS in identifying high-risk individuals for bullying tendencies among incarcerated delinquents is discussed.

Key words: Pro-bullying attitudes, psychopathic tendencies, personality traits, violence, juvenile delinquents.

1. Introduction

1.1. Rationale

Antisocial behavior is common among young people, especially in teenage boys (Moffitt, 1993; Murray & Farrington, 2010). In fact, it is occurring so frequently that some authors have suggested that teenage antisocial behavior to some extent could be viewed as normative (Lynam, 1996; Eklund & af Klinteberg, 2006). There is also evidence that 50% of those who are delinquent in adolescence continue in criminality into adulthood (Farrington, 2005). At the same time many delinquent youths desist from criminality. There is a challenge for researchers and clinicians to identify those at risk of becoming chronic antisocial individuals and to further investigate the factors related to antisocial involvement in this group. There is also a need for assessment instruments, which would help in detecting individuals at risk of developing an antisocial life-style. Using the concepts of antisocial attitudes, proactive aggression, bullying, and psychopathy as a theoretical background, our aim was to develop an instrument that through individual perceptions and attitudes might assist in identifying youth at risk for violent and persistent offending. Such a self-assessment tool can be used potentially as a complementary measure in conducting individual risk-assessments, especially in environments with limited resources

1.2. Antisocial attitudes

An attitude is, according to Ajzen (1988), a relatively stable evaluative process, which makes it more probable for a person to behave in a certain way, according to his or her attitudes. When it comes to antisocial attitudes, there is a line of research that demonstrates a link between: antisocial attitudes and antisocial behavior (Gendreau, 1996); antisocial attitudes and criminal and violent recidivism (Simourd

& van de Ven, 1999; Mills, Kroner, & Hemmati, 2004); and between antisocial attitudes and prison misconduct (Gendreau, Goggin, & Law, 1997). Together with antisocial peers, antisocial attitudes are one of the strongest predictors of future delinquency (Simourd, Hoge, Andrews, & Leschied, 1994). Yet, in spite of its theoretical and empirical relevance to criminal behavior, the criminal attitude construct has been generally overlooked in the mainstream assessment and treatment of offenders (Simourd & Olver, 2002). Antisocial attitudes can be regarded as a readiness to act in an antisocial way, and such attitude assessment among norm-breaking youth is important for identifying those who are at risk of developing a chronic antisocial life-style.

1.3. Proactive aggression

There is also a great deal of evidence showing a continuity of severe aggressive, violent, and antisocial behavior. This pattern seems to be enduring, from early childhood to adolescence and from adolescence to adulthood (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989; Nagin & Tremblay, 2001; Brame, Nagin, & Tremblay, 2001). Aggressiveness shows high rank-order stability across development, indicating that those who are more aggressive in early childhood tend to be more aggressive as adults (Tremblay & Nagin, 2005). The concept of proactive aggression in understanding more severe forms of aggression has been shown to be important in numerous studies. According to Dodge's (1991) definition, proactive aggression includes unprovoked behaviors directed toward specific social goals, as well as behaviors directed toward position or object acquisition. The use of aggression as an instrument in order to achieve social goals (e.g. high status) was perceived more positively by the proactive aggressive children and these goals were preferred over the relational goals (Glick & Gibbs, 2011). Proactive aggression can

be seen as resulting from distorted or deviant processing of social information where aggressive acts are valued positively, with no regard for the feelings of the victims (Crick & Dodge, 1999). It has been shown that the use of proactive aggression in early adolescence can predict later delinquent involvement (Vitaro, Gendreau, Tremblay, & Oligny, 1998; Vitaro, Brendgen, & Tremblay, 2002; Fite, Colder, Lochman, & Wells, 2008). It has also been shown that proactive aggression is a unique predictor of delinquency-related violence (Brendgen, Vitaro, Tremblay, & Lavoie, 2001). Proactive aggression in adolescence is also associated with antisocial behavior in adulthood and adult psychopathic features (Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010). Continuity in proactive aggression seems to be primarily genetically mediated (Tuvblad, Raine, Zheng, & Baker, 2009).

1.4. Bullying

Bullying is usually defined as repeated oppression of a less powerful person by a more powerful one (Farrington, 1993), and proactive aggression is described as the characteristic type of aggression displayed by bullies (MacAdams III & Schmidt, 2007; Fossati et al., 2009). A longitudinal relationship between school bullying and later antisocial behavior from childhood to adolescence (Lösel & Bender, 2011), and from adolescence to adulthood has been shown (Bender & Lösel, 2011). Baldry and Farrington (2000), in their study of girls and boys aged 11-14, found that the association between bullying and delinquency was stronger for boys and for older students. They also suggested that bullying might be a developmental sequence leading to delinquency. Bullying also frequently occurs in prisons (Ireland, 1999a) and those who have had more extensive criminal careers and have spent more time imprisoned were most likely to engage in bullying while incarcerated (Power, Dyson, & Wozniak, 1997). In another study of bullying in prisons, those classed as

bullies showed higher scores than non-bullies on both direct and indirect verbal and physical aggression, (Archer, Ireland, & Power, 2007). In a study of college students, those who retrospectively reported being bullies in high school had higher scores in criminal thinking, proactive aggression, psychopathy, and had more criminal infractions (Ragatz, Andersen, Fremouw, & Schwartz, 2011). In a study of normal adolescent boys and girls, Jolliffe and Farrington (2010) found that low affective empathy was independently related to bullying in males. Further, results indicating lack of empathy among prison inmates toward victims of prison bullying have been reported (Ireland, 1999b).

Even though there are similarities between bullying and proactive aggression, the concepts are different, as bullying does not necessary include proactive aggression and proactive aggression does not necessary include bullying. Both of these norm-breaking behaviors however seem to pave the way for future violent and antisocial behavior and are therefore important signals of future problems.

1.5. Psychopathy

Psychopathy represents a specific pattern of behavior, which becomes apparent during childhood and continues through the life span (Frick, Kimonis, Dandeaux, & Farrel, 2003; Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007). It is characterized by callous, unemotional, manipulative interpersonal interactions. Psychopathic subjects also tend to demonstrate violent behavior more frequently than other subjects, which seems to be more often motivated by instrumental (e.g. material gain, revenge), rather than reactive reasons (e.g. state of high emotional arousal) (Cornell, Warren, Hawk, Stafford, Oram, & Pine, 1996; Serin, 1991; Williamson, Hare, & Wong, 1987). In a sample of male forensic patients, psychopathic traits demonstrated no relationship to reactive aggression, but were a

robust predictor of instrumental aggression (Vittaco, Van Rybroek, Rogstad, Yahr, Tomony, & Saewert, 2009). Even in a normal population, the psychopathy scores could differentiate between proactive and reactive aggressors (Nouvion, Cherek, Lane, Tcheremissine, & Lieving, 2007). Psychopathic traits predicted aggression and delinquency for both boys and girls in a general population sample (Marsee, Silverthorn, & Frick, 2005). In juvenile offenders, psychopathic traits were significantly related to violent behavior and to severity and instrumentality of prior violence (Murrie, Cornell, Kaplan, McConville, & Levy-Elkon, 2004). In Russian incarcerated juvenile offenders those with more psychopathic traits had higher levels of violent behavior and also regarded antisocial attitudes as more 'normative' (Väfors Fritz, Wiklund, Kuposov, af Klinteberg, & Ruchkin, 2008b).

Psychopathic traits are most reliably assessed by the structured interviews, such as the Psychopathy Checklist-Revised, PCL-R (Hare, 1991; 2003) and the Psychopathy Checklist-Youth Version, PCL-YV (Forth, Kosson, & Hare, 2003). However, several other valid, questionnaire-based instruments have been developed that utilize both the informant-based approach but even the self-report format, including the Antisocial Process Screening Device, APSD (Frick, & Hare, 2001) and the Child Psychopathy Scale, CPS (Lynam, 1997). There have also been studies that looked at psychopathy as a constellation of traditional personality traits measured by self-reports. Higher psychopathy scores were, for example, negatively correlated with the Big Five personality traits Agreeableness and Conscientiousness and positively correlated with Neuroticism (Lynam, Caspi, Moffitt, Raine, Loeber, & Stouthamer-Loeber, 2005). There is also a relation between psychopathy and personality traits as measured by the Karolinska Scales of Personality (KSP) indicating higher Impulsiveness and Sensation Seeking as well as higher Somatic Anxiety, Verbal

Aggression and hostility traits in high psychopathy groups (af Klinteberg, Humble & Schalling, 1992), and by Temperament and Character Inventory (TCI), with higher psychopathy scores being associated with higher scores on Novelty Seeking and lower scores on Harm Avoidance and Cooperativeness (Snowden & Gray, 2010).

1.6. The role of the four concepts

There is a substantial overlap between the above-mentioned concepts, which can be described as a combination of certain cognitive, emotional and behavioral characteristics that in the long run can lead to chronic antisocial behavior. Cognitive aspects are characterized by specific personal beliefs, such as moral justification to act in a certain way, for example to oppress those who allow doing so, as well as to step over certain boundaries such as common societal norms and values. They also include a positive apprehension of the proactive use of aggression in order to achieve personal goals, such as better self-esteem, social status or material gain. Emotional aspects include a clear reduced level of empathy and compassion, particularly towards the victim. The behavioral component is characterized by conduct that oversteps the boundaries generally accepted in a society, including acts of aggression.

1.7. Aims of present study

In the present study we wanted to analyze potential associations between self-reported pro-bullying attitudes and beliefs on the one hand, and self-reported delinquency, aggression, violence, personality, teacher-rated psychopathy, and registered violent crime on the other.

We applied a brief self-report measure, the Pro-Bullying Attitude Scale (PAS), developed by one of the authors (VR), combining some aspects of the concepts of proactive aggression, bullying, and psychopathy, as described above (see Method).

We expected the group with high scores on PAS to have high scores on aggressive and delinquent behavior as assessed by the Youth Self-Report and high scores on violent behavior, as assessed by relevant items from the Antisocial Behavior Checklist. We further expected the group with high scores on PAS to have a certain personality profile, as characterized by the specific personality trait scores on the Temperament and Character Inventory, such as high scores on Novelty Seeking (high level of exploratory activity) and low scores on Cooperativeness (high level of hostility and aggressiveness). We also expected the group with high scores on PAS to have higher psychopathy scores as assessed by the Childhood Psychopathy Scale. Finally, we expected to find a positive relationship between PAS and violent offending, based on the data from criminal register.

2. Method

2.1. Participants

The delinquent participants were recruited voluntarily from the approximately 300 male adolescents who are inmates in the only juvenile correctional facility in the Arkhangelsk region of Northern Russia, a catchment area with a population of 1.5 million. The population of the region is very homogenous ethnically, i.e. 98% Caucasian. All delinquents were referred to this institution by court decision. The reasons for correction were repeated thefts (about 60%), fighting, robbery, and in some cases, rape or murder. Generally, those institutionalized for theft had shown a repetitive pattern of this type of crime with multiple convictions. Referral to the correction facility generally occurs only after committing theft during parole. All participants were informed about the voluntary and confidential nature of their participation in the study. They were further assured that the staff would not obtain

any individualized information about results. Informed consent was obtained from all participants and 8 refused to enter the study.

The self-reported data on personality traits were obtained on two different occasions, from a group of 315 participants. There were also data missing due to release from the correctional institution before the study was finished (33 participants) or to inadequate completion of instruments (23 participants).

Finally, the group under investigation consisted of 259 participants. The total group was used for the factor analysis of PAS results. The other inventories were administered at different sessions, which resulted in varying numbers of participants completing the inventories. Participants included in the present study were all those with complete data on PAS and teacher-rated CPS ($n= 171$). In this group the age range was from 15 to 18 years ($M= 16.2$, $SD= 0.8$). The number of youths assessed with the other inventories was as follows: the YSR ($n= 115$), the violent item scale of the ABC ($n= 117$), and the TCI ($n= 123$). When performing calculations, we divided the participants into total PAS, PAS Factor 1, and PAS Factor 2 extreme groups: the lowest (the low score group) and the highest (the high score group) quartile, respectively. There were also official data concerning type of index crime committed by the participants: violence-related ($n= 68$), sex crimes excluded, and property-related, not including robbery ($n= 101$). In this case, PAS and the two PAS factor scores were used as continuous variables, where we investigated the relation between pro-bullying attitudes and type of crime(s) committed by the participants.

2.2. Instruments

2.2.1. Pro-bullying Attitude Scale (PAS)

This set of items was compiled by one of the authors (VR) based on experience of clinical work (see Väfors Fritz, Ruchkin, Kuposov, & af Klinteberg, 2008a; Väfors

Fritz et al., 2008b), using the definition of bullying (Farrington, 1993), the concept of proactive aggression (Dodge & Coie, 1987), and the concept of psychopathy (Hare, 1970; 1991; 2003; Frick, O'Brien, Wootton, & McBurnett, 1994; Silverthorn & Frick, 1999), as a theoretical background. Considering core traits of psychopathic personality, such as deceitfulness, lying, manipulation, and lack of insight into own behavior; it is difficult to obtain reliable responses to questions about psychopathic characteristics (Andershed, Kerr, Stattin, & Levander, 2002; Hare, 1996; Harpur, Hare, & Hakstian, 1989). Instead the following pivotal behaviors: manipulative use of direct and indirect aggression for achieving one's own purposes, lack of empathy and remorse, callousness, narcissistic feelings of self-appreciation, impulsiveness, and antisocial beliefs, were used for this measure while presenting them in a neutral, non-judgemental, or even positive way. The PAS self-report consists of 24 items to be answered on a five-point Likert-type scale ranging from 1 (not at all true of me) to 5 (very true of me). Examples of items include: "I like to take charge and I'll threaten and push people around if they don't listen"; "I believe anyone who allows others to humiliate him deserves it"; "It is fun for me to set someone up"; and, "I deserve to get what I want". All the items are presented in Table 1. In addition to the main 24 items, we also included a Social Desirability subscale consisting of five statements: "I am concerned about my schoolwork"; "I always keep my promises"; "If I did something wrong, I would feel guilty for a long time"; "I do not like to hurt other people's feelings"; and, "I am concerned about my friends and care about them".

2.2.2. Youth Self-Report (YSR)

This instrument was designed by Achenbach (1991) to obtain standardized self-reports on youth's view of competencies, feelings and behavioral/emotional

problems in a variety of areas, including Internalizing (Withdrawn, Somatic Complaints, Anxious/Depressed scales) and Externalizing (Delinquent and Aggressive Behavior) problem scales. Items are scored 0 if they are *not true*, 1 if they are *somewhat or sometimes true*, and 2 if they are *very true or often true*. The YSR contains 112 items that describe specific behavioral/emotional problems. A total problem score is computed, with higher scores indicating endorsement of higher levels of behavioral and emotional problems. For the purposes of the present study only Externalizing problem scales (Delinquent and Aggressive Behavior) were used, both showing good Cronbach α 's of .89.

2.2.3. *Antisocial Behavior Checklist (ABC); violent behavior*

To assess violent behavior we selected several items from the Antisocial Behavior Checklist (ABC), a 46-item self-report measure (Zucker & Noll, 1980; Ham, Zucker, & Fitzgerald, 1993) which asks respondents to report on the frequency of their participation in a variety of aggressive and antisocial activities, both in childhood and adulthood. Altogether 12 items that describe violent actions were selected, including: 'Suspended or expelled from school for fighting'; 'Hit a teacher or principal'; 'Taken part in a gang fight'; '“Beaten up” another person'; 'Teased or killed an animal (like a dog or cat) just for the fun of it'; 'Hit your parents'; 'Taken part in a robbery'; 'Taken part in a robbery involving physical force or a weapon'; 'Been arrested for a felony'; 'Resisted arrest'; 'Hit a girlfriend during an argument'. Participants were instructed to answer each question on a 4-point scale (1=Never, 2=Rarely (1-2 times in life), 3=Sometimes (3-9 times in life), 4=Often (more than 10 times in life)). The selected items showed a good internal consistency as a scale (Cronbach α = .84).

2.2.4. *Temperament and Character Inventory (TCI)*

This self-report inventory measures domains of temperament dimensions based on Cloninger's unified biosocial theory of personality (Cloninger, 1987). According to this theory, Harm Avoidance (HA) is part of the first domain and one of four independent, largely genetically determined temperament dimensions (Cloninger, 1994; Cloninger, Svrakic, & Przybeck, 1993). It reflects a heritable bias in the inhibition or cessation of behaviors. Individuals scoring low on HA are described as relaxed and optimistic, bold and confident, outgoing, vigorous. The second temperament dimension, Novelty Seeking (NS), is viewed as a tendency toward exhilaration in response to novel stimuli or cues. A high score on NS refers to a high level of exploratory behavior, impulsive decision-making, quick loss of temper, and active avoidance of frustration. The third dimension, Reward Dependence (RD), reflects the tendency to maintain or pursue ongoing behaviors, with individuals scoring high on RD described as sentimental, socially attached, and dependent on the approval of others. Persistence (P), originally thought of as a component of RD, is the fourth temperament dimension and reflects the tendency to persist in behavior, despite frustration and fatigue. From this domain, for the present purpose, aspects of aggressivity (HA) and impulsivity (NS) were of specific interest and included in the analyses.

The second domain of personality is character, predominantly determined by socialization processes during the life span (Cloninger, Przybeck, Svrakic, & Wetzel, 1994). It is described in terms of response biases related to different concepts of the self. Changes in cognition and the self-concept during the development of personality are supposedly related to personal, social, moral and spiritual development. Self-Directedness (SD) is related to the extent to which a person identifies the self as autonomous. An individual who is low on SD can be

described as irresponsible, aimless, undisciplined in behavior, and as having poor impulse control in general. Cooperativeness (C) is related to the extent to which a person identifies him/herself as an integral part of society as a whole. Low Cooperativeness is associated with deficits in empathy; such individuals are characterized as hostile, aggressive, and as revengeful opportunists. Self-Transcendence (ST) reflects the tendency to identify with the unity of all things. Individuals low in ST show conventional and materialistically-oriented behavior with little or no concern for absolute ideas such as goodness and universal harmony. In the present study, we used the short version of the TCI with 125 items to be answered by the participant as true or false (Cloninger et al., 1994). Cronbach α 's in our study were for HA .67, for NS .51, for SD .68, for C .55, and for ST .75.

2.2.5. Childhood Psychopathy Scale (CPS)

This instrument was developed by Lynam (1997) in order to measure psychopathic-like traits in children. The CPS is a downward extension of the PCL-R which was developed to assess psychopathy in adults. The present study used a revised version of the CPS that consists of 55 items capturing 13 of the 20 constructs in the PCL-R. For each item, respondents (teachers) indicated whether the item was (Yes=1) or was not characteristic (No=0) of the participant. Each CPS scale is comprised of the average of the items contributing to it. All 13 scales were combined to form a total score with good internal reliability score ($\alpha= 0.88$).

2.2.6. Translation

The translation of the scales into Russian followed established guidelines, including the appropriate use of independent back translations (Sartorius & Kuyken, 1994). The translations into Russian were made by the second and third authors, followed by discussion of the translated questionnaires with monolingual colleagues to

comment on them in an articulate way. Finally, an official interpreter made independent back translations. These versions were compared with originals, and inconsistencies were analyzed and corrected. The translation of the PAS into English was made following the same procedure.

2.2.7. Criminal offence

Official data from a registered crime index were analysed concerning property- and violence-related crime(s).

2.3. Statistical analysis

The data were analysed using the IBM SPSS Statistics program (PASW 18.0, 2010). To study the factor structure of the instrument, a Principal Component Analysis (PCA) with Direct Oblimin Rotation was performed to obtain an oblique factor solution. As the eigenvalue >1.0 criterion usually extracts too many factors and produces a distorted factor solution (Comrey, 1978), this was limited by choosing the eigenvalue >1.5 . An oblique solution was considered appropriate because the items described related concepts (i.e. bullying and psychopathic tendencies), and thus were not regarded as completely independent of each other. The lower bound cut-off for a meaningful factor loading was set at 0.40, which represents a *high* loading (criteria for inclusion).

The PAS and the two factors were divided into a low (first quartile) and a high score group (fourth quartile). Two-tailed independent *t*-tests were used to assess the differences between the low and high total PAS groups, and low and high PAS factor score groups, respectively, versus: 1) YSR problem scores; 2) violent behavior scores from the ABC; 3) personality (TCI) dimension scores; 4) psychopathy (CPS) rating scores; and, 5) type of registered crime. In the last case, PAS was used as a continuous variable and registered crime used to group the

subjects into property-related (n= 101) and violence-related (n= 68) crime(s), respectively. Because the assessments were made at different occasions there was a substantial attrition rate on some of the instruments (see 2.1. *Participants*).

3. Results

3.1. Restructuring and conceptualization of the PAS by factor analysis

The factor analysis yielded two components for the entire sample. There were no items that did not fit the criteria for inclusion. The rotated factor pattern, percentage of explained variance, and eigenvalues are presented in Table 1. Factor 1 contains items reflecting egocentric, non-empathic traits, with a neglecting and arrogant attitude toward others, and it incorporated, as predicted, bullying items. It was denoted Callous/Dominance. Factor 2 contains items dealing with manipulation, impulsiveness, and antisocial behavior. It was denoted Manipulativeness/Impulsiveness. These factors were found to be significantly intercorrelated ($r = .46$, $p < .001$). Cronbach α 's for Callous/Dominance and Manipulativeness/Impulsiveness were .84 and .73, respectively.

As previously mentioned, the instrument also contained a Social Desirability Scale (Cronbach $\alpha = .56$), comprising 5 positive statements that were used to control for participants' wishes to respond in a culturally-sanctioned way. When the scoring of these 5 items was reversed and the items were added to the factor analysis, they represented a separate factor and the original factor structure remained unchanged.

Table 1 in about here

3.2. Delinquent and aggressive behavior (YSR, self-rated)

Results of two-tailed *t*-tests of differences between the extreme groups indicated the following: the low and high total PAS and PAS Factor 1 (Callous/Dominance) score groups differed significantly in both delinquent and aggressive behaviors as assessed by the YSR, with the high PAS score groups displaying the higher scores (see Table 2). The low and high PAS Factor 2 (Manipulativeness/Impulsiveness) score groups also differed significantly in aggressive behavior, the high PAS Factor 2 group displaying the higher scores. In delinquent behavior however, there was only a tendency to higher scores for this high PAS Factor 2 group ($p = .075$).

3.3. Violent behavior (ABC, self-rated)

Results of two-tailed *t*-tests of differences between the extreme groups indicated the following: the low and high total PAS score groups differed significantly in violent behavior as assessed by the ABC, the high group displaying higher scores (see Table 2). The same was true for the low and high PAS Factor 1 (Callous/Dominance) score groups, the high PAS Factor 1 group displaying the higher scores. There was no significant difference between the low and high PAS Factor 2 (Manipulativeness/Impulsiveness) score groups in violent behavior.

3.4. Personality dimensions (TCI, self-rated)

As further presented in Table 2, results of two-tailed *t*-tests of differences between extreme groups indicated that the low and high total PAS and PAS Factor 1 (Callous/Dominance) score groups differed significantly in Harm Avoidance, the high groups being less harm avoidant. The low and high total PAS and PAS Factor 1 (Callous/Dominance) score groups displayed however only marginally significant differences in Novelty Seeking ($p = .055$ and $p = .052$, respectively), the high groups though displaying the higher scores. Further, the low and high PAS Factor 2

(Manipulativeness/Impulsiveness) score groups differed significantly on Self-Directedness, the high Factor 2 group being less self-directed. Finally, low and high PAS Factor 1 (Callous/Dominance) score groups differed in Cooperativeness, the high group being less cooperative; for total PAS score groups there was only a tendency to lower scores in Cooperativeness for the high group ($p = .084$). There were no differences between extreme groups in Self-transcendence.

Table 2 in about here

3.5. Psychopathic tendencies (CPS, teacher-rated)

Results of two-tailed t -tests of differences between the extreme groups indicated that the low and high total PAS score groups differed significantly in psychopathic tendencies as assessed by the teacher-rated CPS (see Table 2). The low and high PAS Factor 1 (Callous/Dominance) score groups likewise differed significantly in that the high PAS Factor 1 group displayed the higher scores. There was only a tendency to higher CPS scores in the high as compared to the low PAS Factor 2 (Manipulativeness/Impulsiveness) group.

3.6. PAS scores as related to type of registered crime (official data)

When studying total PAS scores as well as PAS factors 1 and PAS factor 2 scores for participants registered for violence-related crime(s) and property-related crime(s), respectively, results indicated significantly higher scores in total PAS and PAS Factor 1 scores for the participants registered for violence-related crime(s) ($t = 2.32$, $p = .022$; and $t = 2.17$, $p = .032$, respectively), and a tendency to higher scores in PAS Factor 2 ($t = 1.91$, $p = .058$), as compared to their counterparts registered for property-related crimes.

4. Discussion

In this study, a new scale to assess pro-bullying attitudes was evaluated with respect to its factor structure. After conducting a PCA with Direct Oblimin Rotation, two factors were obtained: Factor 1 (Callous/Dominance) and Factor 2 (Manipulativeness/Impulsiveness). Items intended to measure an oppressive/arrogant attitude to others and a positive attitude to bullying loaded well on the structure of the first factor. Items dealing with impulsiveness and antisocial behavior loaded on the structure of the second factor. When comparing extreme groups, results indicated that high total PAS and PAS Factor 1 (Callous/Dominance) score groups displayed significantly higher scores in self-reported delinquent and aggressive behavior, as well as self-reported violent behavior and lower Harm Avoidance. The low and high PAS Factor 2 (Manipulativeness/Impulsiveness) score groups differed only in self-reported aggressive behavior and Self-Directedness (the high group being more aggressive and less self-directed). Further, high total PAS and PAS Factor 1 (Callous/Dominance) score groups obtained higher CPS rating scores indicating psychopathic tendencies. Interestingly, when using PAS and its two factors as continuous variables, results indicated a significant relation between high scores in total PAS and PAS Factor 1 (Callous/Dominance) on the one hand and registered violence-related crime on the other.

The differences between the extreme total PAS and PAS Factor 1 (Callous/Dominance) score groups in delinquent and aggressive behavior, as well as violent behavior, are in line with the findings by Simourd and colleagues (1994) showing that antisocial attitudes are one of the strongest predictors of delinquent behavior. The results are also in agreement with another study reporting that violent

young delinquents perceived antisocial behavior as more 'normative' (Väfors Fritz et al., 2008b). The finding of the high total PAS and PAS Factor 1 (Callous/Dominance) score groups showing low scores on the personality trait Harm Avoidance is interesting. Low Harm Avoidance scores have been found in the research on alcoholics (Howard, Kivlahan, & Walker, 1997), known to be related to inhibition deficiencies (af Klinteberg, von Knorring, & Orelund, 2004). Harm Avoidance is, according to Cloninger's theory of personality, a reflection of a heritable bias in the inhibition or cessation of behaviors (Cloninger, 1994). The lower Harm Avoidance scores in the high total PAS and PAS Factor 1 (Callous/Dominance) score groups might reflect a heritable deficit to inhibit ongoing behaviors, making the individual more vulnerable to antisocial, aggressive, and violent behaviors. The significant difference in Cooperativeness between the low and high PAS Factor 1 (Callous/Dominance) score groups (the high group being less cooperative), suggests that these individuals tend to be hostile, aggressive, and revengeful opportunists (Cloninger, 1994). This finding is in line with the attitudes characteristic of PAS Factor 1 (Callous/Dominance). An individual low in self-directedness is described as irresponsible, aimless, and undisciplined in behavior (Cloninger, 1994), which corresponds with the attitudes characteristic of PAS Factor 2 (Manipulativeness/Impulsiveness) and is supported by the significant difference found between the low and high PAS Factor 2 (Manipulativeness/Impulsiveness) score groups in Self-Directedness.

The significant differences between the low and high total PAS and PAS Factor 1 (Callous/Dominance) score groups in psychopathic tendencies, furthermore, are in agreement with a study showing a positive association between the Youth Psychopathic Inventory and antisocial attitudes (Campbell, Doucette, & French,

2009). The obtained significant relations between total PAS, PAS Factor 1 (Callous/Dominance) and violence-related crime are in line with the findings that antisocial attitudes have a predictive validity for criminal behavior (Mills et al., 2004). In spite of the previous findings of higher levels of novelty seeking among criminal youth, there was only a marginally significant difference between the low and high groups of PAS and PAS Factor 1 (Callous/Dominance) in the personality dimension Novelty Seeking, even though the results showed a tendency for the high groups being higher on Novelty Seeking. This might imply that the present group of juvenile offenders are all relatively high on that personality characteristic.

As previously mentioned, imbalance of power is central to the concept of bullying. The PAS Factor 1 (Callous/Dominance), with items concerning feeling superior to others, being in charge, and feeling contempt for others, strongly reflects that aspect. Even if PAS does not measure the actual behavior, it assesses certain attitudes which together form an important aspect of personality/behavior when trying to understand and predict risk for violence and other types of antisocial behavior. Although there are only a few studies concerning the relation between bullying and psychopathy (e.g. Ragatz et al., 2011), we believe that pro-bullying attitudes are important for the understanding of interpersonal relations characterized by exploitation and violence (Ireland, 2002). Antisocial attitudes are regarded as a dynamic variable, which means that they are changeable (Andrews & Bonta, 1994). One way of changing antisocial attitudes is through cognitive behavioral programs in which an antisocial individual could learn prosocial attitudes and solutions to life problems (Glick & Gibbs, 2011). A short instrument that measures such attitudes can be useful in both short- and long-term perspectives.

4.1. Strengths and limitations

The multi-informant design of the study permitted some validation of the self-report information of behavior. Moreover, the sample studied, a group of incarcerated male juvenile delinquents, difficult to get access to, enabled us to examine the associations between the PAS instrument and various behaviors and aspects of personality in a relevant group. There are nevertheless some limitations that need to be recognised. The personality instrument applied report generally a low Cronbach's α in most of the scales that are used for analyses, only the ST scale had an acceptable value over .70. Although in line with previous research, both in the US and internationally (e.g. Cloninger et al., 1993; Kijima et al. 1996; Isen, Baker, Raine, & Bezdjian, 2009; Asch et al., 2009; Garcia, Aluja, Garcia, Escorial, & Blanch, 2012), this finding casts doubt on the reliability of the measurements. One explanation could be the low number of items in specific scales, since alpha increases with number of items (John & Soto, 2007). Another explanation could be sample specific or that the instrument was developed for use in different groups of adults, which might influence the validity in the present sample of young criminals. Hence, the present results must be interpreted with caution.

Taking those issues into consideration, presumably, the PAS might still be considered a useful complementary instrument for predicting bullying/externalizing tendencies in antisocial youth; however this has to be further investigated. While this approach worked well with the population of incarcerated delinquents in this study, in the general population different perceptions of these characteristics may prevail.

4.2. Concluding remarks

In the present study, the pro-bullying attitudes were found to be related to antisocial aggressive and violent behaviors. They were also found to be related to specific personality traits and even psychopathic tendencies. When studied in more detail,

the two PAS factors showed differential relationships with aggressive/violent behaviors, as well as a suggested specific personality profile, which might imply underlying innate differences. Our study offers some support for the value of using self-reported attitudes among antisocial adolescents, for example when investigating potential approaches to treatment and rehabilitation, and even in violence prevention programs in juvenile forensic institutions. However, further validation of the instrument is needed, including studies with a longitudinal design.

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Table 1

Factor loadings, explained variance and eigenvalues in a factor analysis (Principal Component Analysis) with Direct Oblimin Rotation of the Pro-bullying Attitude Scale (PAS) (n= 259)

Item	Factor 1	Factor 2
1. I always find someone else to take the blame	.53	
2. I like to take charge and I'll threaten and push people around if they don't listen	.72	
3. It's fun for me to set someone up	.58	
4. When I am with my friends I'm in charge	.46	.42
5. I don't care what I say, when I'm mad		.59
6. I believe anyone who allows others to humiliate him deserves it	.46	
7. I deserve to get what I want	.53	
8. Sometimes I put blame on other people, but what else should I do?		.56
9. Sometimes I enjoy doing things that are against the law		.58
11. Sometimes I act without thinking		.66
12. I deal with people without showing my real feelings		.62
13. I am good at getting my way with people	.59	
15. I like to act big		.47
16. I do whatever it takes to get what I want	.48	
17. I like to make fun of people	.66	
19. I can act very kind and respectful in order to get what I want		.54
20. I hate it when somebody tells me I'm wrong	.41	.41
21. Most people aren't worth very much	.53	
23. One should not trust anybody. That's why nobody knows what I think and feel		.40
25. I like to bully	.73	
26. Why should I care about other people's suffering?	.44	
27. I am better than everyone else, so why shouldn't they do things for me?	.63	
28. I do not care about my victim's feelings since I am locked up, not him	.45	
29. When I get mad, I am not responsible for what I do		.59
Percentage of total variance	25.7	6.9
Eigenvalue	6.16	1.66

Note. The factors were denoted as follows: Factor 1 = Callous/Dominance; Factor 2 = Manipulativeness/Impulsiveness.

Table 2

Mean scores (M) and standard deviations (SD) in YSR Externalizing problem scales, ABC violent behavior scale, TCI personality dimensions, and the CPS for total PAS, PAS Factor 1, and PAS Factor 2 low and high groups of males. Results of two-tailed *t*-test of differences between groups and significance level

	Low total PAS scores (n=30)	High total PAS scores (n=35)	<i>t</i> -value	Low Factor 1 Scores (n=27)	High Factor 1 scores (n=37)	<i>t</i> -value	Low Factor 2 scores (n=30)	High Factor 2 scores (n=34)	<i>t</i> -value
YSR:	(n=30)	(n=35)		(n=27)	(n=37)		(n=30)	(n=34)	
Delinquent behavior	7.50 (3.55)	9.37 (3.57)	2.11*	7.00 (3.28)	9.24 (3.77)	2.48*	7.73 (4.16)	9.53 (3.77)	1.81+
Aggressive behavior	11.50 (5.38)	16.29 (6.62)	3.16**	11.26 (5.42)	16.11 (6.83)	3.05**	11.77 (6.38)	15.59 (6.52)	2.36*
ABC:	(n=29) 18.38 (6.50)	(n=36) 24.69 (7.03)	3.72***	(n=27) 17.48 (5.41)	(n=38) 24.84 (6.84)	4.65***	(n=31) 19.94 (6.89)	(n=35) 22.77 (6.73)	1.69+
TCI:	(n=31)	(n=35)		(n=29)	(n=38)		(n=32)	(n=34)	
Harm Avoidance	10.90 (3.81)	8.34 (3.56)	2.82**	11.24 (4.11)	8.39 (3.51)	3.06**	9.72 (3.42)	10.18 (3.45)	0.54
Novelty Seeking	10.45 (3.10)	11.83 (2.63)	1.95 ⁺	10.42 (3.12)	11.79 (2.51)	1.98 ⁺	10.56 (3.30)	11.53 (2.51)	1.34
Self-directedness	10.71 (3.49)	10.31 (3.72)	0.44	10.24 (3.73)	10.42 (3.67)	0.20	11.03 (2.74)	9.24 (3.49)	2.32*
Cooperativeness	14.26 (3.44)	12.77 (3.43)	1.75 ⁺	14.52 (3.50)	12.71 (3.52)	2.09*	13.78 (3.57)	12.76 (3.30)	1.20
Self-transcendence	9.26 (3.52)	9.29 (3.27)	1.03	8.90 (3.51)	8.87 (3.26)	0.03	8.81 (3.32)	9.38 (3.65)	0.66
CPS:	(n=41) 80.32 (19.18)	(n=47) 89.89 (19.73)	2.30*	(n=38) 79.05 (15.43)	(n=51) 90.39 (18.44)	3.07**	(n=42) 80.52 (21.25)	(n=51) 87.96 (18.13)	1.82+

Note. ⁺ *p* < .10, * *p* < .05, ** *p* < .01, ****p* < .001.