

Questioning Fairness: An evaluation of relationships between clinical, demographic and legal history with Procedural Justice and Legitimacy among young offenders

Erika K. Penner  
BC Children's Hospital and Simon Fraser University

Catherine S. Shaffer Jodi L. Viljoen  
Simon Fraser University

Criminal Behaviour and Mental Health

DOI: <http://dx.doi.org/10.1037/lhb0000280>

This is the peer reviewed version of the following article: Penner, E. K., Shaffer, C. S., & Viljoen, J. L. (2017). Questioning fairness: the relationship of mental health and psychopathic characteristics with young offenders' perceptions of procedural justice and legitimacy. *Criminal Behaviour and Mental Health*, 27(4), 354-370, which has been published in final form at <http://dx.doi.org/10.1037/lhb0000280>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.

Author Note:

Erika K. Penner, BC Children's Hospital and Department of Psychology, Simon Fraser University. Catherine S. Shaffer and Jodi L. Viljoen, Department of Psychology, Simon Fraser University.

This research was supported by an operating grant from the Social Sciences and Humanities Research Council of Canada, but the views expressed herein are ours alone. We thank Dr. Kevin Douglas and Dr. Ronald Roesch for their helpful comments on early manuscript drafts.

Correspondence concerning this article should be addressed to Erika K. Penner, BC Children's Hospital, 4480 Oak Street, Vancouver, British Columbia, V6H 3V4. Contact: [erika\\_penner@sfu.ca](mailto:erika_penner@sfu.ca)

## Abstract

*Background:* Theories of procedural justice suggest that individuals who experience the processes and procedures used to make legal decisions as fair are more likely to perceive the legal system as legitimate, and in turn, less likely to offend. When individuals come into contact with the legal system, however, they are not blank slates but have beliefs and personality characteristics that may systematically influence their perception of justice and legitimacy.

*Aims:* Our aim was to establish the extent to which personal characteristics, whether demographic, legal or clinical, influence the degree to which young people experience the justice system as fair and legitimate.

*Method:* Self-report, file, and interview data were collected from 92 12-17 year-olds on probation in Western Canada.

*Results:* There was some relationship between scores on the youth version of the psychopathy checklist and perceptions of fairness and legitimacy, and between substance misuse and the justice variables, but after taking all significant variables into consideration, history of major traumatic experience was the only one to be independently associated with perceptions of justice. Those in the youngest age group in our sample were more likely to have positive perceptions of justice than the older, but demographics and legal history otherwise seemed irrelevant.

*Conclusions:* Our findings suggest that examining personal qualities and experiences which may have a relationship the relationship with perceptions of procedural justice and legitimacy are worth exploring further. It may be that young people who do not accept the law as legitimate or the criminal justice system as fair could be more likely to offend.

*Keywords:* legitimacy, mental health, procedural justice, psychopathy, youth

## Background

Theories of procedural justice hold that individuals who experience the processes and procedures used to make legal decisions as fair are more likely to perceive the legal system to be legitimate (Sunshine & Tyler, 2003; Tyler & Huo, 2002; Tyler & Wakslak, 2004; Wells, 2007) and are less likely to offend (Levi et al., 2009; Murphy & Gaylor, 2010; Murphy et al., 2008; Reisig et al., 2007; Tyler, 2004, 2006a; Tyler et al., 2007). When individuals come into contact with the justice system, however, they are not blank slates. They possess beliefs, personalities, and other characteristics that may influence their assessment of the fairness of their treatment and beliefs about legal legitimacy, irrespective of their actual, objective treatment by legal authorities. Given that adolescence is a critical period for the development of life-long attitudes toward the law and legal authorities (Fagan & Tyler, 2005; Lind & Tyler, 1988), and that adolescents may be particularly sensitive to perceived injustices (Woolard et al., 2008), it is important to understand the factors that predispose them to feeling fairly or unfairly treated.

Research on procedural justice has generally focused on its relationship as a concept to legal legitimacy and to outcome variables such as recidivism (e.g., Levi et al., 2009), legal compliance (e.g., Reisig et al., 2011, 2014) and/or cooperation with laws and legal authorities (e.g., Levi et al., 2009; Piquero et al., 2005). Although researchers have begun to examine how an individual's personal characteristics may influence their perceptions of these constructs, most focus has been on demographic characteristics (Fagan & Tyler, 2005; Piquero et al., 2005; Harvell, 2009; Hinds, 2007; Reisig et al., 2007; Woolard et al., 2008) or a small number of legal history variables (e.g., number of prior arrests, years of justice system involvement, quality of contact with the police; Piquero et al., 2005; Hinds, 2007; Woolard et al., 2008). Findings with respect to demographic variables have been mixed, some studies having found significant gender (e.g., Piquero et al., 2005; Murphy & Gaylor, 2010), age (Fagan & Tyler, 2005; Piquero et al., 2005) or ethnicity effects (Piquero et al. 2005), whereas others have found no such effects (Harvell, 2009; Hinds, 2007). These variables would, thus, bear further exploration.

Investigation of psychosocial characteristics has received only a little attention, for example to personality variables such as capacity for self-control (see Wolfe, 2011), and any association between clinical variables and procedural justice has been largely unexplored. McCluskey (2003) found that adults with mental illness, or who were abusing drugs or alcohol, were more likely to react negatively than those without such problems to experiences of perceived disrespect by police; Beijersbergen et al (2014) and Kopelovich et al (2013) similarly only studied adults.

Given that 60-80% of young people involved with the justice system meet criteria for a mental disorder (Shufelt & Coccozza, 2006; Teplin et al., 2002), it is important to consider whether they have certain mental health profiles which are associated with a perception of being less fairly treated by the justice system. Among these may be high scoring on the Psychopathy Checklist (PCL-R, Hare, 1991). Core features of 'psychopathy' include deficits in interpersonal domains and behavioural problems. Young people with high scores have been shown to have impairments in their ability to take the perspective of another person (Blair et al., 1995; Nelson et al., 1990; Smetana, 1990), to be developmentally immature in their moral judgments (Stams et al., 2006), to tend to live according to their own rules and to show contempt for social norms

(Neumann, et al., 2006). They have higher rates of criminal justice involvement compared to young people with low PCL-R scores (Neumann et al., 2006). Given that legitimacy is related to both morality and a respect for the societal standards (Trickner et al., 2011) and that ability to assess procedural justice involves gauging the fairness of one's treatment relative to how others are treated, young people with high PCL-R scores may be less likely to endorse being fairly treated or to believe the law to be legitimate. To date, there have been no studies on the relationship between psychopathy and procedural justice perceptions.

Our aim was to find out whether demographic characteristics, legal history, and clinical features are associated with how young people experience the justice system. Our main hypothesis was that young people with mental health problems and high scores on the youth version of the psychopathy checklist would be unlikely to perceive the system as fair and legitimate. In addition, we hypothesized small differences would exist in the relationship between demographic characteristics and procedural justice and legitimacy. However, given the mixed nature of previous findings, it was challenging to provide a priori hypotheses on the direction of these differences. Finally, we hypothesized that young people who had a longer and more entrenched legal history would perceive the justice system as less fair and legitimate.

## Method

Ethical approval to conduct this study was granted by the Research Ethics Boards of Simon Fraser University, British Columbia (BC) Youth Justice/Youth Forensic Psychiatric Services, and the BC Ministry of Child and Family Development.

### Participants and Procedure

Participants were recruited from probation offices and custody centers in Western Canada. Probation officers were asked to refer young people if they met the following criteria: (a) between the ages of 12 and 17 years, (b) adjudicated in the youth criminal justice system, (c) under active community supervision, and (d) able to speak English fluently. Consent to participate was sought from each young person and his/her guardian.

Consenting youths completed a semi-structured interview and self-report questionnaires examining their offence histories, perceptions of procedural justice and legitimacy, and mental health. Their legal history was extracted from files by research assistants, who also coded risk assessment tools using file and interview information.

A more detailed description of the study method is provided in Penner, Viljoen, Douglas, and Roesch (2014).

### Rating Schedules

**Youth Procedural Justice Scale.** A procedural justice scale was devised for this study based upon Tyler's (2000) theoretical conceptualization of the four primary aspects of procedural justice: participation, respect, impartiality, and trustworthiness. The *Youth Procedural Justice Scale* consists of 20 opinion items rated on a four-point Likert scale (1 = *Strongly Disagree*, 2 =

*Disagree*, 3 = *Agree*, 4 = *Strongly Agree*) with five items tapping each of the four facets of procedural justice (see Appendix A). A summary score, calculated by averaging all 20 items, was used to represent the young people's perceptions of procedural justice, with higher scores representing greater perceived procedural justice. This scale had excellent internal consistency ( $\alpha = 0.93$ ) and demonstrated good convergent validity with another measure of procedural justice, the *Court Fairness Scale* (Kaasa et al., 2008;  $r = 0.70$ ,  $p < 0.01$ ).

**Youth Justice System Legitimacy Scale.** The legitimacy scale developed for this project was adapted from Tyler's (2006a) legitimacy measure. Minor changes altered the scale so that it referred to the youth justice system. Six items tapped young people's perceived obligation to obey the law and seven tapped their support for the law and legal authorities (see Appendix B). Respondents rated each statement using a four-point Likert scale as above. A summary score representing youths' perceptions of legitimacy was calculated by averaging across all items, with higher scores representing greater perceived legitimacy. We found internal reliability of this scale was good ( $\alpha = 0.88$ ).

**Massachusetts Youth Screening Instrument-Second Version (MAYSI-2; Grisso & Barnum, 2006).** Mental health status was assessed using the MAYSI-2, a brief mental health screening tool which was designed specifically for use with justice system-involved youth. Young people responded *yes* or *no* to 52 items about behaviour, thoughts, and feelings that comprised seven clinical scales: Alcohol/Drug Use (8 items), Angry-Irritable (9 items), Depressed-Anxious (9 items), Somatic Complaints (6 items), Suicide Ideation (5 items), Thought Disturbance (5 items; boys only), and Traumatic Events (5 items; with separate scales for boys and girls). All items ask for responses relating to the three months prior to interview, except for items on the traumatic events scale which refer to entire lifetime. *Yes* items were summed within each domain to create continuous scale scores, with higher scores indicating higher levels of mental health difficulties. We examined all continuous scores on all MAYSI-2 subscales in this study to determine which clusters of mental health symptoms were related to perceptions of procedural justice. We found that Tetrachoric alpha (see Gadermann et al., 2012) of these scales ranged from  $\alpha_{tc} = 0.62$  for the suicide ideation scale to  $\alpha_{tc} = 0.94$  for the anger/irritability scale. Internal consistency of the suicide ideation scale alone was lower than the recommended cut-off of 0.70 (Nunnally, 1978) and the alpha reported in some studies (e.g.,  $\alpha = .73$  to  $.89$ ; Archer et al., 2004; Grisso et al., 2001; Hayes et al., 2005), so, although we present the findings on this subscale, we do so with caution

**Psychopathy Checklist: Youth Version (PCL: YV; Forth et al., 2003).** The PCL: YV is structured, clinical rating tool which was designed for 12-18 year-olds and is based upon the Hare Psychopathy Checklist-Revised (PCL-R; Hare, 2003). The PCL: YV consists of 20 items that tap the interpersonal (4 items), affective (4 items), lifestyle (5 items), and behavioral (5 items) domains of psychopathy. Each item is coded as 0 (*the item does not apply*), 1 (*the item applies to to some extent*) or 2 (*the item definitely applies*), drawing on both official probation file information and the young person's self-report. A total score is generated from the sum of the 20 individual items (range: 0-40), with scores of 25 or higher taken as the threshold for psychopathy (Forth et al., 2003). Factor scores were also calculated according to Hare's 4-factor model that includes interpersonal, affective, lifestyle and antisocial features. In our study, interrater reliability based on 26 cases was excellent (ICC = 0.89, two-way random effects

model, absolute agreement for single raters). Internal consistency of the PCL:YV ranged from  $\alpha = 0.64$  for the lifestyle scale to  $\alpha = 0.86$  for the total scores. Internal consistency of the lifestyle scale was lower than the recommended cut-off of 0.70 (Nunnally, 1978), so we present the findings on this subscale with caution.

**Demographic Characteristics and Legal History.** For this field we simply recorded what the young people reported on their age, gender, ethnicity, age at first arrest, number of lifetime arrests and number of years of involvement with the justice system.

### Analyses

Independent-samples t-tests and one-way analysis of variance (ANOVAs) were conducted to examine the gender, ethnic, and age differences in relation to procedural justice and legitimacy beliefs. For these purposes, age was treated categorically (12-14 ( $n = 12$ , 13%), 15 ( $n = 15$ , 16.3%), 16 ( $n = 31$ , 33.7%), 17 years ( $n = 34$ , 37%), according to the precedent set by (Fagan & Tyler, 2005). Correlation analyses were used to examine the association between legal history, mental health, psychopathy scores and each of the outcomes of interest. With procedural justice scale scores and legitimacy scale scores variously as the dependent variables, independent variables significant at the bivariate level were then entered into separate linear regression equations. A priori power analyses using G\*Power 3.1 (Faul et al., 2009) indicated that all linear regressions - containing from two to five independent variables - had sufficient power (i.e.,  $\leq 0.80$ ) to detect medium or large effect sizes, defined as  $f^2$  values of .15 and .35, but not small effect sizes ( $f^2$  values  $\leq 0.02$ ; see Cohen, 1988). Prior to conducting analyses, multicollinearity among the predictors was assessed using tolerance values and Variance Inflation Factor (VIF) scores. Tolerance values (0.59 – 0.91) and VIF scores (1.10 – 1.70) were within acceptable limits (see Stevens, 1984) indicating that multicollinearity would not be an issue in these analyses. Drug/Alcohol Use and Traumatic Experiences scores on the MAYSI-2 and antisocial subscale scores on the PCL:YV were significantly skewed. To reduce skew in these variables log plus one transformations were applied prior to conducting regression analyses. These analyses were successful in reducing non-linearity, non-normally distributed errors, and heteroscedasticity.

### Results

Of the 367 young people approached about participation, 338 expressed interest. Ninety-one (25%) did not meet eligibility criteria, 51 (14%) refused after hearing more about participation requirements, 43 (12%) could not be reached, for 24 (6.5%) potential participants the guardian consent was unobtainable and 27 (7%) did not participate for other reasons. Of the 102 youth who participated, 10 did not complete sufficient items on the procedural justice and legitimacy measures (i.e., 75% or more) for their data to be included, leaving a final sample of 92. Table 1 shows the demographic and offending characteristics of this final sample. The sex distribution in national and provincial summaries of justice-involved 12-17 year-olds on probation is 76% boys and 24% females and the ethnic distribution is 24% Aboriginal (proportion of Caucasian and mixed/other ethnic minority youth not reported; Calverley et al., 2010), suggesting that our sample was fairly representative in this regard.

-- Insert Table 1 about here --

Means and standard deviations of the major study variables are presented in Table 2. Distribution of scores on the procedural justice and legitimacy scales indicated that a majority of these young people reported some disagreement with statements regarding procedural justice ( $M = 2.63$ ,  $SD = 0.55$ ) and legitimacy ( $M = 2.46$ ,  $SD = 0.53$ ). Although the mean score on the youth version of the psychopathy checklist ( $M = 15.77$ ,  $SD = 7.30$ ) was lower than means reported in some studies, it was within the normal range reported in a recent meta-analysis of psychopathy research among youth offenders (weighted  $M = 20.50$ , range = 9 to 28; Edens et al., 2007).

-- Insert Table 2 about here --

### **Demographic variables associated with perceptions of procedural justice and legitimacy**

Table 3 shows that there were no significant differences between young male and female offenders on the Procedural Justice Scale or the Legitimacy Scale. When the relationship with age as a categorical variable was tested, there was no association with the justice scale scores, but a repeated contrast test (used to compare adjacent levels of the age variable) found that the 12-14 year-olds reported believing more strongly in the legitimacy of the law than the 15 year-olds ( $p < 0.05$ ); no differences in legitimacy scale scores were found between 15 and 16 year olds or 16 and 17 year-olds. Although procedural justice ratings followed this same pattern, with 12-14 year-olds demonstrating more positive views about the fairness of their treatment than their older peers, the difference was not significant. Neither procedural justice not legitimacy scale scores differed according to ethnicity.

-- Insert Table 3 about here --

### **Legal History and Clinical Predictors of Procedural Justice and Legitimacy**

Table 4 shows that young people who endorsed a greater number of items on the MAYSI-2 Alcohol/Drug Use and Traumatic Experiences scales were more likely to feel unfairly treated by justice system officials and to have less faith in the legitimacy of the law. In addition, higher scores on three of the four PCL:YV subscales and the PCL:YV total score were associated with lower legitimacy ratings. None of the other associations was significant.

-- Insert Table 4 about here --

Results of the regression analyses are shown in table 5. With procedural justice score as the dependent variable, regression produced a significant model with mental health scales explaining 9% ( $R^2 = 0.09$ ) of the variance in procedural justice scores. MAYSI-2 Traumatic Experience scores alone were independently associated with procedural justice perceptions. The  $\beta$  value for traumatic experience scores indicated that as scores on this scale increased by one standard deviation (1.50), procedural justice scores decreased by 0.23 standard deviations. The standard deviation for procedural justice scores was 0.55 and so this constitutes a change of 0.13 ( $0.23 \times 0.55$ ). Therefore, for every 1.50 unit increase in traumatic experiences score there was a 0.13 unit decrease in procedural justice score. This interpretation was true only when the effects of substance use were held constant.



When legitimacy was taken as the dependent variable, regression analysis again yielded a significant model, with mental health and psychopathy scales explaining 15% ( $R^2 = 0.15$ ) of the variance. Again, only Traumatic Experiences on the MAYSI-2 were independently associated with legitimacy scores. As scores on the traumatic experiences scale increased by one standard deviation (1.50), legitimacy scores decreased by 2.09 standard deviations. The standard deviation for legitimacy scores was 0.53 and so this constitutes a change of 1.11 ( $2.09 \times 0.53$ ). Therefore, for every 1.50 unit increase in traumatic experiences scores there was a 1.11 unit decrease in legitimacy scale scores. This interpretation was true only when the effects of substance use and scores on the interpersonal, affective, and antisocial scales of the PCL:YV were held constant.

-- Insert Table 5 about here --

### Discussion

Our most important finding was that, although there was some relationship between scores on the youth version of the psychopathy checklist and perceptions of fairness and legitimacy, once other significant variables had been taken into consideration, a history of major traumatic experience was the only variable to be independently associated with perceptions of justice. Demographic and previous experiences of the legal system were not strongly related appeared to sense of procedural justice, although the youngest age group in our sample were more likely to have positive perceptions.

#### Demographic and legal history variables, procedural justice and legitimacy

We found that neither gender nor ethnicity were related to procedural justice and legitimacy beliefs, but there was some support for an age effect. Compared to 15 year-olds, 12-14 year-olds believed more strongly in the legitimacy of the law. The former findings are consistent with previous research (e.g., Fagan & Tyler, 2005; Harvell, 2009; Hinds, 2007; Reising & Lloyd, 2009), while the age effect corresponds with findings by Piquero et al (2005) and Fagan and Tyler (2005) who found that legitimacy beliefs decline from ages 12 to ,14 and then stabilize from 14-16. It is possible that beliefs about the legitimacy of the legal system among young people are affected by the process of development from early to later adolescence, but that their perception of fair treatment in by justice system authorities are more affected by other factors, such as peer group views. Another explanation might rest in personal prior experience of the criminal justice system, likely to increase with increasing age, but we found no association between legal history variables and procedural justice or legitimacy. This is in contrast to Hinds' (2007) finding that negative contacts with police was associated with lower legitimacy ratings, it is possible that the *quality* of justice system contact may be more important than the quantity, and quality is perhaps more likely to vary between geographical areas and jurisdictions, making it likely that studies would yield different findings on this point.

#### Clinical associations with procedural justice and legitimacy

A number of mental health problems emerged as potentially relevant to perceptions of justice at the first level of analysis, including recent substance misuse, higher scores on the PCL:YV and history of experience of traumatic events. The fact that substance misuse was not

independently associated with perceptions of justice when trauma was included in the model suggests that traumatic experiences may explain the substance misuse. This possibility has been raised in other studies (see Kilpatrick et al., 2000). Our findings with respect to psychopathy scores were against our hypothesis, and, to some extent previous studies. Young high on people who have high psychopathy trait scores tend to interpret ambiguous behavior as having a hostile intent (Serin, 1991; Vitale et al., 2005). This could lead them to believe that justice officials are ‘out to get’ them, and may make them less likely to believe that one should respect justice officials, that obeying them and the law is justified, and that the courts make fair decisions. In our study, however, any relationship between PCL:YV scores and perceptions of justice seemed to be explained by trauma history.

It is possible that young people with trauma histories may be predisposed to perceive themselves as being unfairly treated because of their experiences of being a victim of authority figures. Research has demonstrated, for instance, that young people with trauma histories have a cognitive bias whereby they are more attentive to potential sources of threat in their environment and do not adequately attend to relevant non-hostile cues (Dodge et al., 1995; Fani et al., 2010). Hypervigilance to new potential experiences of victimization may include expectations of being treated in a biased fashion by the criminal justice system. They may also be more egocentric in their thinking and struggle more to take the perspective of others than their untraumatised peers (Burack et al., 2006) and if they feel aggression towards others expect others to feel similarly towards them.

Alternatively, young people with trauma histories may be accurate in their perception less fair treatment by justice officials. One study has shown that probation officers see those with abuse histories as more dangerous, more difficult to supervise and more in need of placement in a secure residential facility (Vidal & Skeem, 2007). Other studies, however, have found that when young people’s delinquent behaviour is attributed to a history of abuse, it mitigates the punitiveness with which they are treated (Horwitz et al., 2001) and leads probation officers to recommend treatment services more often and ‘go the extra mile’ in supervision (Vidal & Skeem, 2007). If young, traumatised people do not experience the criminal justice system in this way, however, legal professionals may need to work especially hard to ensure that they do feel that they are treated fairly, such as by giving them a greater voice in legal proceedings.

## **Limitations**

Our study has some important limitations. First, the design was cross-sectional, so, although we can make some inferences from the regression analyses, strictly we cannot infer directionality in relationships. Secondly, the sample size was rather small, so small effects may not have been detected. Further, this left us with insufficient power to examine the underlying latent structure of the procedural justice and legitimacy variables. Future research using Confirmatory Factor Analysis should be conducted to do so. Thirdly, our sample was mainly of male and Caucasian or Aboriginal adolescents, so findings may not generalize to young people of other backgrounds. Fourthly, mental health status was determined using a screening measure only; an important next step would be to explore relationships between mental health, procedural justice, and legitimacy using a more detailed measure of psychopathology. Fifthly, the measurement of legitimacy, although consistent with Tyler’s earlier work, has been challenged

recently and alternative underlying dimensions proposed (Tankebe, 2013; Tyler & Jackson, 2014). A different pattern of findings may emerge with a different legitimacy measure.

### **Conclusions**

Overall, our findings suggest that mental health and personality characteristics are likely to be important in how young people perceive the justice system and whether they accept it to be fair and legitimate. This is of practical relevance because if young people do not accept the justice system and laws to be legitimate, it is arguable that they will be less likely to abide by them.

## References

- Archer RP, Stredny RV, Mason JA, Arnau RC (2004). An examination and replication of the psychometric properties of the Massachusetts Youth Screening Instrument (MAYSI-2) among adolescents in detention settings. *Assessment* 11: 290-302. DOI: 10.1177/1073191104269863
- Beijersbergen KA, Dirkzwager AJ, Eichelsheim VI, Laan PH, Nieuwebeerta P (2014). Procedural justice and prisoners' mental health problems: A longitudinal study. *Criminal Behaviour and Mental Health* 24: 100-112. DOI: 10.1002/cbm.1881
- Blair RJR, Sellars C, Strickland I, Clark F, Williams AO, Smith M, Jones L (1995). Emotion attributions in the psychopath. *Personality and Individual Differences* 19: 431-437. DOI: 10.1016/0191-8869(95)00080-p
- Bridges G, Steen S (1998). Racial disparities in official assessments of juvenile offenders: Attributional stereotypes as mediating mechanisms. *American Sociological Review* 63: 554-570. DOI: 10.2307/2657267
- Burack JA, Flanagan T, Peled T, Sutton HM, Zygmuntowicz C, Manly JT (2006). Social perspective-taking skills in maltreated children and adolescents. *Developmental Psychology* 42: 207-217. DOI: 10.1037/0012-1649.42.2.207
- Calverley D, Cotter A, Halla E (2010). Youth custody and community services in Canada, 2008/2009. *Juristat* 30: 1-34. Available online at <http://statcan.gc.ca/pub/85-002-x/2010001/article/11147-eng.htm>
- Cohen J (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Hillsdale, NJ: Earlbaum.
- Cooke DJ, Michie C (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment* 13: 171-188. DOI: 10.1037/1040-3590.13.2.171
- Dodge KA, Pettit GS, Bates JE, Valente E (1995). Social information-processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology* 104: 632-43. DOI: 10.1037//0021-843x.104.4.632
- Edens JF, Campbell JS, Weir JM (2007). Youth psychopathy and criminal recidivism: A meta-analysis of the psychopathy checklist measures. *Law and Human Behavior* 31: 53-75. DOI: [10.1007/s10979-006-9019-y](https://doi.org/10.1007/s10979-006-9019-y)
- Fagan J, Tyler TR (2005). Legal socialization of children and adolescents. *Social Justice Research* 18: 217-242. DOI: 10.1007/s11211-005-6823-3
- Fani N, Bradley-Davino B, Ressler KJ, McClure-Tone E (2010). Attention bias in adult survivors of childhood maltreatment with and without posttraumatic stress disorder. *Cognitive Therapy and Research* 35: 57-67. DOI: 10.1007/s10608-010-9294-2
- Faul F, Erdfelder E, Buchner A, Lang AG (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods* 41: 1149-1160. DOI: 10.3758/brm.41.4.1149
- Forth AE, Kosson DS, Hare RD (2003). *The Hare Psychopathy Checklist: Youth Version*. Toronto: Multi-health Systems.
- Gadermann AM, Guhn M, Zumbo BD (2012). Estimating ordinal reliability for Likert-type and ordinal item response data: A conceptual, empirical, and practical guide. *Practical Assessment, Research & Evaluation* 17: 1-13. Available online at <http://www.pareonline.net/pdf/v17n3.pdf>

- Grisso T, Barnum R (2006). Massachusetts Youth Screening instrument Youth Version 2: User's Manual and Technical Report. Sarasota FL: Professional Resource Press.
- Grisso T, Barnum R, Fletcher KE, Cauffman E, Peuschold D (2001). Massachusetts Youth Screening Instrument for mental health needs of juvenile justice youths. *Journal of the American Academy of Child & Adolescent Psychiatry* 40: 541-548. DOI: 10.1097/00004583-200105000-00013
- Hare RD (2003). Hare Psychopathy Check-List-Revised. Toronto: Multi-Health Systems.
- Harvell SAS (2009). A developmental assessment of Procedural Justice: Does process matter to juvenile detainees? Unpublished dissertation. Georgetown University.
- Hayes MA, McReynolds LS, Wasserman GA (2005). Paper and voice MAYSI-2 format comparability and concordance with the voice DISC-IV. *Assessment* 12: 395-403. DOI: 10.1177/1073191105280359
- Hinds L (2007). Building police-youth relationships: The importance of Procedural Justice. *Youth Justice* 7: 195-209. DOI: 10.1177/1473225407082510
- Horwitz A, Widom C, McLaughlin J, White H (2001). The impact of childhood abuse and neglect on adult mental health: A prospective study. *Journal of Health & Social Behavior* 42: 184-201. DOI: 10.2307/3090177
- Kaasa SO, Malloy LC, Cauffman E (2008). Procedural Justice and the Adolescent Offender. Paper Presented at the Annual Meeting of the American Psychology-Law Society, Jacksonville, FL.
- Kopelovich S, Yanos P, Pratt C, Koerner J (2013). Procedural justice in mental health courts: Judicial practices, participant perceptions, and outcomes related to mental health recovery. *International Journal of Law and Psychiatry* 36: 113-120. DOI: 10.1016/j.ijlp.2013.01.004
- Kilpatrick Dg, Acierno R, Saunders B, Resnick HS, Best CL, Schnurr P (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology* 68: 19- 30. DOI: 10.1037/0022-006x.68.1.19
- Levi M, Sacks A, Tyler TR (2009). Conceptualizing Legitimacy, measuring legitimating beliefs. *American Behavioral Scientist* 53: 354-375. DOI: 10.1177/0002764209338797
- Lind EA, Tyler TR (1988). *The Social Psychology of Procedural Justice*. New York: Plenum Press.
- McCluskey JD (2003) *Police Requests for Compliance: Coercive and Procedurally Just Tactics*. New York: LFB Scholarly Publishing.
- Murphy K, Gaylor A (July 2010). Policing youth: Can procedural justice nurture youth cooperation with police? Alfred Deakin Research Institute, Working Paper No. 6: Deakin University.
- Murphy K, Hinds L, Fleming J (2008). Encouraging public cooperation and support for police. *Policing Society* 18: 136-155. DOI: 10.1080/10439460802008660
- Nelson JR, Smith DJ, Dodd J (1990). The moral reasoning of juvenile delinquents: A meta-analysis. *Journal of Abnormal Child Psychology* 18: 231-239. DOI: 10.1007/bf00916562
- Neumann CS, Kosson DS, Forth AE, Hare RD (2006). Factor structure of the Hare Psychopathy Checklist: Youth Version (PCL: YV) in incarcerated adolescents. *Psychological Assessment* 18: 142-154. DOI: 10.1037/1040-3590.18.2.142
- Nunnally JC (1978). *Psychometric Theory*. New York: McGraw-Hill.

- Penner EK, Viljoen JL, Douglas KS, Roesch R (2014). Procedural justice versus risk factors for offending: Predicting recidivism in youth. *Law and Human Behavior* 38: 225-237. DOI: 10.1037/lhb0000055
- Piquero AR, Fagan J, Mulvey EP, Steinberg L, Odgers C (2005). Developmental trajectories of legal socialization among serious adolescent offenders. *The Journal of Criminal Law and Criminology* 96: 267-298. DOI: 10.1177/0093854814556882
- Reisig M, Bratton J, Gertz M (2007). The construct validity and refinement of process-based policing measures. *Criminal Justice and Behavior* 34: 1005-1028. DOI: 10.1177/0093854807301275
- Reisig M, Lloyd C (2009). Procedural justice, police legitimacy, and helping the police fight crime: Results from a survey of Jamaican adolescents. *Police Quarterly* 12: 42-62. DOI: 0.1177/1098611108327311
- Reisig MD, Tankebe J, Gorazd M (2014). Compliance with the law in Slovenia: The role of procedural justice and police legitimacy. *European Journal on Criminal Policy & Research* 20: 259-276. DOI: 10.1007/s10610-013-9211-9
- Reisig MD, Wolfe SE, Holtfreter K (2011). Legal cynicism, legitimacy, and criminal offending: The non-confounding effect of low self-control. *Criminal Justice & Behavior* 38: 1170-1184. DOI: 10.1177/0093854811424707
- Serin RC (1991). Psychopathy and violence in criminals. *Journal of Interpersonal Violence* 6: 423-431. DOI: 10.1177/088626091006004002
- Shufelt JL, Cocozza JJ (2006). *Youth with Mental Health Disorders in the Juvenile Justice System: Results from a Multi-State Prevalence Study*. Delmar: National Center for Mental Health and Juvenile Justice.
- Siegel LJ, Welsh BC, Senna JJ (2003). Juvenile corrections: probation, community treatment, and institutionalization. In Siegel JL (ed) *Juvenile Delinquency: Theory, Practice, and Law*. Toronto: Wadsworth/Thompson Learning pp. 452-463.
- Smetana JG (1990). Morality and conduct disorders. In Lewis M, Miller SM (eds) *Handbook of Developmental Psychopathology*. New York: Plenum pp. 157-179.
- Stams GJ, Brugman D, Dekovic M, van Rosmalen L, van der Laan P, Gibbs JC (2006). The moral judgment of juvenile delinquents: A meta-analysis. *Journal of Abnormal Child Psychology* 34: 697-713. DOI: 10.1007/s10802-006-9056-5
- Stevens JP (1984). Outliers and influential data points in regression. *Psychological Bulletin* 95: 334-344. DOI: 10.1037//0033-2909.95.2.334
- Sunshine J, Tyler TR (2003). The role of Procedural Justice and Legitimacy in shaping public support for policing. *Law & Society Review* 37: 513-548. DOI: 0.1111/1540-5893.3703002
- Tankebe J (2013). Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology* 51: 103-135. DOI: 10.1111/j.1745-9125.2012.00291.x
- Teplin LA, Abram KM, McClelland GM, Dulcan MK, Mericle AA (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry* 59: 1133-1143. DOI: 10.1001/archpsyc.59.12.1133
- Teplin LA, Abram KM, McClelland GM, Mericle AA, Dulcan MK, Washburn JL (2006). *Psychiatric disorders of youth in detention*. Juvenile Justice Bulletin. Washington DC: Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

- Trickner R, Cohn ES, Rebellon CJ, Van Gundy K. (2011, March). Predictors of Legitimacy: Moral and Legal Reasoning and Legal Attitudes. Paper presented at the Fourth International Congress on Psychology and Law, Miami, FL.
- Tyler TR (2000). Social justice: Outcome and procedure. *International Journal of Psychology*, 35: 117-125. DOI: 10.1080/002075900399411
- Tyler TR (2004). Enhancing police legitimacy. *The ANNALS of the American Academy of Political and Social Science* 593: 84-99. DOI: 10.1177/0002716203262627
- Tyler TR (2006a). *Why People Obey the Law*. Princeton: Princeton University Press.
- Tyler TR (2006b). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology* 57: 375-400. DOI: 10.1146/annurev.psych.57.102904.190038
- Tyler TR, Blader SL (2003). The group engagement model: Procedural Justice, social identity, and cooperative behavior. *Personality & Social Psychology Review* 7: 349-361. DOI: 10.1207/s15327957pspr0704\_07
- Tyler TR, Huo YJ (2002). *Trust in the Law: Encouraging Public Cooperation with the Police and Courts*. New York: Russell Sage Foundation.
- Tyler TR, Jackson J (2014). Popular legitimacy and the exercise of legal authority: Motivating compliance, cooperation, and engagement. *Psychology, Public Policy, & Law* 20: 78-95. DOI: 10.2139/ssrn.2292517
- Tyler TR, Sherman LW, Strang H, Barnes GC, Woods D (2007). Reintegrative shaming, Procedural Justice, and recidivism: The engagement of offenders' psychological mechanisms in the Canberra RISE drinking-and-driving experiment. *Law & Society Review* 41: 553-586. DOI: 10.1111/j.1540-5893.2007.00314.x
- Tyler TR, Wakslak C (2004). Profiling and police Legitimacy: Procedural Justice, attributions of motive, and acceptance of police authority. *Criminology* 42: 253-281 DOI: 10.1111/j.1745-9125.2004.tb00520.x
- Vidal S, Skeem J (2007). Effect of psychopathy, abuse, and ethnicity on juvenile probation officers' decision-making and supervision strategies. *Law and Human Behaviour* 31: 479-498. DOI: 10.1007/s10979-006-9077-1
- Vitale JE, Newman JP, Serin RC, Bolt DM (2005). Hostile attributions in incarcerated adult male offenders: An exploration of diverse pathways. *Aggressive Behavior* 31: 99-115. DOI: 0.1002/ab.20050
- Wasserman GA, McReynolds LS, Ko SJ, Katz LM, Cauffman E, Haxton W, Lucas CP (2004). Screening for emergent risk and service needs among incarcerated youth: Comparing MAYSI-2 and Voice DISC-IV. *Journal of the American Academy of Child & Adolescent Psychiatry* 43: 629-639. DOI: 10.1097/00004583-200405000-00017
- Wells W (2007). Type of contact and evaluations of police officers: The effects of procedural justice across three types of police-citizen contacts. *Journal of Criminal Justice* 35: 612-621. DOI: 10.1016/j.jcrimjus.2007.09.006
- Wolfe SE (2011). The effect of low self-control on perceived police legitimacy. *Journal of Criminal Justice* 39: 67-74. DOI: 10.1016/j.jcrimjus.2010.10.006
- Woolard JL, Harvell SAS, Graham S (2008). Anticipatory injustice among adolescents: Age and racial/ethnic differences in perceived unfairness of the justice system. *Behavioral Sciences & the Law* 26: 207-226. DOI: 10.1002/bsl.805

## Tables

Table 1.  
*Sample Characteristics*

	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Age (years)			15.87	1.21
Gender				
Male	67	72.83		
Female	25	27.17		
Ethnicity				
Caucasian	39	42.39		
Aboriginal	30	32.61		
Mixed/Other	23	25.00		
Number of Index Charges			2.51	2.09
Number of Index Convictions			1.97	1.65
Type of Index Charges				
Violent Offense	60	65.20		
Property Offense	23	25.00		
Breach/Failure to Comply	26	28.30		
Weapons Offense	12	13.00		
Drug Offense	4	4.30		
Mischief	11	12.00		
Arson	3	3.33		
Other	9	9.80		
# of Previous Charges			1.64	0.48
# of Previous Convictions			1.73	0.45
# of Months on Probation			9.30	5.44



Table 2.  
*Descriptive Statistics of Measures*

	<i>Mean</i>	<i>Standard deviation</i>
Procedural Justice Scale	2.63	0.55
Legitimacy Scale	2.46	0.53
Age at First Contact with the Law	13.84 years	1.80 years
Number of Lifetime Arrests	15.73	29.66
Length of Justice System Involvement	2.71 years	1.81 years
MAYSI-2 Subscales		
Alcohol/Drug Use	3.45	2.75
Angry-Irritable	4.49	2.79
Depressed/Anxious	2.14	2.05
Somatic Complaints	2.90	1.95
Suicide Ideation	0.75	1.31
Thought Disturbance (boys only)	0.70	1.16
Traumatic Experiences	2.25	1.50
PCL-YV Scales		
Total	15.77	7.30
Interpersonal	1.83	1.89
Affective	2.90	2.05
Lifestyle	4.52	2.08
Antisocial tendencies	5.55	2.50

*Note.* MAYSI-2 = Massachusetts Youth Screening Instrument-Second Version. PCL-YV = Psychopathy Checklist - Youth Version. Higher scores indicate greater perceived procedural justice and legitimacy, more mental health symptoms (i.e., more “yes” responses), and more psychopathic characteristics.

Table 3.  
*Relationships between demographic variables and Procedural Justice and Legitimacy*

	Procedural Justice			Legitimacy		
	<i>M</i>	<i>SD</i>	<i>t/F</i> (df), Cohen's <i>d</i> / $\eta^2$	<i>M</i>	<i>SD</i>	<i>t/F</i> (df), Cohen's <i>d</i> / $\eta^2$
Gender						
Males	2.61	0.59		2.45	0.57	
Females	2.67	0.44	$t(90) = -.46$ , Cohen's $d = 0.11$	2.47	0.42	$t(90) = -.17$ , Cohen's $d = 0.04$
Ethnic Background						
Caucasian	2.58	0.09		2.38	0.59	
Aboriginal	2.65	0.10		2.46	0.48	
Other/Mixed	2.69	0.12	$F(2, 89) = .32$ , $\eta^2 = 0.0$	2.59	0.51	$F(2, 89) = 1.12$ , $\eta^2 = 0.02$
Age						
12 – 14	2.73	0.54		2.71	0.60	
15	2.43	0.61		2.23	0.53	
16	2.69	0.52		2.44	0.52	
17	2.63	0.56	$F(3, 88) = .86$ , $\eta^2 = 0.03$	2.48	0.51	$F(3, 88) = 1.84$ , $\eta^2 = 0.06$

*Note.* No differences were significant at  $p < .05$ .

Table 4.  
*Correlations between Procedural Justice and Legitimacy Scale Scores*

	Procedural Justice	Legitimacy
Procedural Justice Scale	---	
Legitimacy Scale	0.67	--
Age at First Arrest	0.08	0.16
Years Since First Arrest	-0.06	-0.17
Number of Previous Arrests	-0.06	-0.17
MAYSI-2 Subscales		
Alcohol/Drug Use	-0.21*	-0.22*
Angry/Irritable	-0.14	-0.17
Depressed/Anxious	-0.20	-0.12
Somatic Complaints	-0.02	-0.01
Suicide Ideation	-0.10	-0.00
Thought Disturbance	0.10	-0.06
Traumatic Experiences	-0.23*	0.28*
PCL-YV Scales		
Total	-0.19	-0.29**
Interpersonal	-0.14	-0.27**
Affective	-0.07	-0.14
Lifestyle	-0.20	-0.32**
Antisocial	-0.19	-0.21*

*Note.* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . MAYSI-2 = Massachusetts Youth Screening Instrument-Second Version. PCL-YV = Psychopathy Checklist - Youth Version. Higher scores indicate greater perceived procedural justice and legitimacy, more mental health symptoms (i.e., more “yes” responses), and more psychopathic characteristics.

Table 5.  
*OLS Regression Examining the Relationship between clinical variables and Procedural Justice and Legitimacy*

Procedural Justice					
Predictor	<i>B</i>	95% CI	<i>SE</i>	$\beta$	<i>t</i> (df)
MAYSI-2 Subscales					
Alcohol/Drug Use	-0.23	-0.43, 0.29	0.17	-0.15	<i>t</i> (89) = -1.37
Traumatic Experiences	-0.50	-0.95, -0.03	0.23	-0.23	<i>t</i> (89) = -1.37*
<i>R</i> <sup>2</sup>				.09	
<i>F</i>					<i>F</i> (2, 85) = 4.55*
Legitimacy					
Predictor	<i>B</i>	95% CI	<i>SE</i>	$\beta$	<i>t</i> (df)
MAYSI-2 Subscales					
Alcohol/Drug Use	-0.07	-0.43, 0.29	0.18	-0.04	<i>t</i> (87) = -.37
Traumatic Experiences	-0.50	-0.96, -0.02	0.24	-2.09	<i>t</i> (87) = -2.09*
PCL-YV Scales					
Interpersonal	-0.03	-0.10, -0.04	0.04	-0.09	<i>t</i> (87) = -0.78
Lifestyle	-0.05	-0.12, -0.03	0.04	-0.10	<i>t</i> (87) = -1.29
Antisocial	-0.00	-0.06, -0.05	0.03	-0.01	<i>t</i> (87) = -0.08
<i>R</i> <sup>2</sup>				.15	
<i>F</i>					<i>F</i> (2, 82) = 2.77*

*Note.* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . MAYSI-2 = Massachusetts Youth Screening Instrument-Second Version. PCL-YV = Psychopathy Checklist - Youth Version.

**Appendix A: Youth Procedural Justice Scale Items [to appear in supplementary online material only]**

Thinking back on the past year, please state how much you agree or disagree with each of the items below:

In my experience with the juvenile justice system generally (that is, with police, lawyers, judges, in court, and with probation officers)..

1. I was given the chance to express my opinions and feelings.
2. I was given the opportunity to describe my situation before decisions were made about how to handle it.
3. What I said about my case was taken into account in deciding what should be done.
4. I had enough of a chance to say what I wanted to say about my case.
5. I felt I had influence over decisions made about me.
6. I was treated politely.
7. Concern was shown for my rights.
8. I was treated with dignity and respect.
9. I was respected as a person.
10. People in the justice system, like my lawyer, the police, my judge, or my probation officer, thought they were much better than me.
11. I was treated the same way that anyone else in the same situation would have been treated.
12. The law was enforced fairly.

People in the justice system, like the police, lawyers, the judge, or my probation officer....

13. Had opinions about me before getting to know me.
14. Made decisions about me based on facts, not personal biases and opinions.
15. Had personal opinions and attitudes that affected the way they treated me.
16. Were honest with me.
17. Gave me honest explanations for their actions.
18. Followed through on the promises they made.
19. Tried hard to do the right thing by me.
20. Tried to take my needs into account

**Appendix B: Youth Justice System Legitimacy Scale [to appear in supplementary online material only]**

Please state how much you agree or disagree with the following statements:

1. People should obey the law even if it goes against what they think is right.
2. I always try to obey the law even if I think it is wrong
3. Disobeying the law is seldom justified.
4. It is difficult to break the law and keep one's self-respect.
5. A person who refuses to obey the law is a danger to society.
6. Obedience and respect for authority are the most important things children should learn.
7. I have a great deal of respect for justice officials (e.g. policemen, probation officers, judges, lawyers).
8. On the whole, justice officials (e.g. policemen, probation officers, judges, lawyers) are honest.
9. I feel proud of the justice officials (e.g. policemen, probation officers, judges, lawyers) in BC.
10. I support our justice officials (e.g. policemen, probation officers, judges, lawyers).
11. The courts generally guarantee everyone a fair trial.
12. The basic rights of citizens are well-protected in the courts.
13. Court decisions are almost always fair.