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Validating the Police Legitimacy Scale with a Canadian Sample

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Abstract: For years, scholars and law enforcement agencies have been interested in examining the public's perceptions of police legitimacy. However, previous studies have operationalized "police legitimacy" in a wide variety of ways. In an attempt to standardize this construct, [Tankebe, Reisig, and Wang \(2016\)](#) recently developed and validated the Police Legitimacy Scale using samples from the United States and Ghana. To determine the validity of this scale in a Canadian context, we had 2,962 Canadian community members complete a demographics survey as well as [Tankebe et al.'s \(2016\)](#) Police Legitimacy Scale. Descriptive statistics suggest the majority of responses to the scale do not differ across demographic factors, such as gender or race. Results from a confirmatory factor analysis indicate the previously proposed four-factor model of police legitimacy (lawfulness, procedural fairness, distributive fairness, and effectiveness) strongly fits participants' responses.

Keywords: police legitimacy, attitudes towards police, perceptions of police, police legitimacy scale, Canadian police

Résumé : Depuis des années, chercheurs et organismes d'application de la loi s'intéressent à la perception du public envers la légitimité de la police. Par contre, des études antérieures ont opérationnalisé la « légitimité de la police » de nombreuses façons. Afin de normaliser ce modèle, [Tankebe, Reisig et Wang \(2016\)](#) ont récemment développé et validé l'Échelle de légitimité de la police à l'aide d'échantillons venus des États-Unis et du Ghana. Afin de déterminer la validité de cette échelle dans un contexte canadien, nous avons demandé à 2 962 membres de communautés canadiennes de remplir un sondage démographique ainsi que l'Échelle

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de légitimité de la police de [Tankebe et coll. \(2016\)](#). Les statistiques descriptives suggèrent que la majorité des réponses ne varient pas d'un facteur démographique à l'autre, notamment le sexe ou la race. Les résultats d'une analyse factorielle confirmatoire indiquent que le modèle à quatre facteurs précédemment proposé pour la légitimité de la police (caractère licite, équité procédurale, équité distributive et efficacité) s'arrime aux réponses des participants.

Mots-clés : légitimité de la police, attitudes envers la police, perceptions de la police, échelle de légitimité de la police, police canadienne

In the early morning of 27 July 2013, 18-year-old Sammy Yatim was shot and killed by Constable James Forcillo, a member of the Toronto Police Service (TPS; [TVO 2018](#)). Footage of the shooting (captured on bystanders' cellphones as well as closed-circuit television) was made widely available to the public. The footage sparked public outcry concerning police use of force and led to a series of protests and demonstrations that questioned the accountability of police officers ([Berry 2016](#)). Understandably, Yatim's death seemed to negatively affect the public's perception of the TPS. A Forum Research poll conducted during the trial of Forcillo indicated that 63% of respondents said they trusted Toronto police officers ([Hong 2016](#)). Before the trial, 78% of participants indicated they trusted Toronto police.

For years, both scholars and law enforcement agencies have been interested in understanding the factors that influence citizen perceptions of "police legitimacy" ([Tankebe 2013](#)). However, previous studies have operationalized police legitimacy in a wide variety of ways, making it unclear whether researchers have been studying the same construct. In an attempt to standardize this construct, [Tankebe et al. \(2016\)](#) recently developed and validated the Police Legitimacy Scale (PLS) using samples from the United States and Ghana. The purpose of the current study is to examine if the four-factor structure of the PLS proposed by Tankebe and his colleagues fits data collected from a large, community-based Canadian sample.

It is presently unclear whether Canadian citizens perceive police legitimacy in the same way that Americans and Ghanaians do (i.e., as a multidimensional construct consisting of police lawfulness, distributive fairness, procedural fairness, and police effectiveness). Establishing a valid scale to measure perceived police legitimacy in Canada would allow for higher quality (i.e., more valid) research to be conducted in the future. The presence of such a scale would also allow comparisons to be made between Canadian and American research, as participants would be responding to a standardized scale. Furthermore, if the multidimensional PLS adequately fits data collected from a Canadian sample, then Canadian police professionals may also have a clearer notion of what specific constructs compose the Canadian public's view of perceived police legitimacy. Knowing this could help police services develop strategies aimed at improving citizen perceptions of the police.

Literature review

The research surrounding citizens' perceptions of police legitimacy has received considerable attention for a number of reasons. One reason is citizens' perceptions of the police will likely influence their behaviour when interacting with officers. For example, a number of scholars have argued that the public will be more likely to obey orders from authorities they perceive as legitimate ([Kelman and Hamilton 1989](#); [Milgram 1963](#); [Tyler 2004](#)). Empirical research seems to support this line of thinking, as individuals with positive perceptions of the police are more likely to comply with officers' directives and cooperate with criminal investigations ([Brown and Benedict 2002](#); [Mazerolle, Antrobus et al. 2013](#); [Reisig, Tankebe,](#)

and Mesko 2014). Another reason for the interest in public perceptions of the police is that studies have demonstrated that attitudes towards police relate to the public's sense of safety; generally, people who are more confident in law enforcement are less likely to feel at risk of being victimized (Ho and McKean 2004; Nofziger and Williams 2005). Finally, the majority of law enforcement agencies across North America have shifted to a framework of community-oriented policing (COP; Bureau of Justice Statistics n.d.; Chow 2012). This approach involves a number of practices but primarily focuses on reducing local crime and increasing public safety through proactive community engagement (Schaefer Morabito 2010; Scheider, Chapman, and Schapiro 2009). Because of the framework's reliance on police-community relationships, researchers have argued COP will be most effective when community members perceive the police as legitimate (Tyler 1990; Tyler and Fagan 2008).

What is police legitimacy?

Clearly then, a number of studies have examined the relationship between perceptions of police legitimacy and a wide variety of variables (e.g., compliance and cooperation with the police, feelings of safety, receptivity towards community-oriented policing). However, these studies have been conducted without a consensus on how to operationalize "police legitimacy." Tyler's (1990) initial research measured police legitimacy using a two-factor model involving one's obligation to obey the law and general support for legal authorities. Tyler has continued to focus on citizens' perceived moral obligation to obey the law as a primary element of police legitimacy, while additionally implementing factors such as trust and confidence in the police (e.g., Mazerolle et al. 2013; Tyler, Fagan, and Geller 2014; Tyler, Schulhofer, and Huq 2010). In similar research, Jackson and his colleagues have also used obligation to obey the law and one's sense of moral alignment with the police as the two factors underlying police legitimacy (Bradford et al. 2014; Hough, Jackson, and Bradford 2013; Jackson et al. 2012).

In contrast to these views, Tankebe (2013) contends that perceived obligation to obey the law is an outcome rather than a component of police legitimacy, and should thus not be used when measuring this construct. Because of these contradictory measures of police legitimacy, researchers have recently argued that police legitimacy must be conceptualized in a multidimensional fashion to be properly understood, but should not include a focus on obligation to obey the law (Bottoms and Tankebe 2012; Beetham 2013; Tankebe et al. 2016). Specifically, Bottoms and Tankebe (2012), along with Tankebe and colleagues (2016), suggest the construct of police legitimacy comprises four distinct factors: police lawfulness, distributive fairness, procedural fairness, and police effectiveness.

Police lawfulness involves perceptions about whether police officers act and behave in accordance with the law, or if they operate outside the boundaries of the law (Bottoms and Tankebe 2012; Tankebe et al. 2016). For example, citizens who believe officers routinely use excessive force or coercive interrogation techniques will have unfavourable perceptions of the police's legitimacy. The second dimension of police legitimacy, distributive fairness, concerns perceptions about how objectively the police allocate their resources among groups (Roemer 1996; Tankebe et al. 2016). Scholars have theorized law enforcement agencies possess both concrete (e.g., police personnel) and symbolic resources (e.g., courtesy and respect; Lerner and Clayton 2011), and they decide how these resources are distributed across the groups they police. Enhanced perceptions of distributive fairness will be associated with favourable perceptions of police legitimacy. Relatedly, procedural fairness

involves the processes police use when reaching outcomes or decisions (Tyler 1990). There are two aspects of procedural fairness: quality of decision making (officer honesty, provision of legal representation, etc.) and quality of personal treatment (treating individuals with respect, dignity, courtesy, etc.; Sunshine and Tyler 2003). Both of these things can increase perceptions of police legitimacy if viewed favourably. Finally, police effectiveness relates to perceptions about whether the police are competent in performing their duties, such as combating crime and protecting citizens from danger. When the police are perceived as effective, they will be viewed as more legitimate (Tankebe 2013; Tankebe et al. 2016).

Using two university-based samples from the United States ($N = 516$) and Ghana ($N = 447$), Tankebe et al. (2016) recently performed a confirmatory factor analysis using a police legitimacy scale based on the four-dimensional model described above. In their study, Tankebe and colleagues began with a survey consisting of 42 items concerning participants' attitudes and perceptions about the law and criminal justice (scored on four-point Likert scales). The items were taken from previous research concerning police legitimacy (e.g., Tyler 1990; Sunshine and Tyler 2003; Tankebe 2013). The authors then selected 16 items that specifically related to law enforcement in order to construct the four-dimensional Police Legitimacy Scale (PLS). Lawfulness comprised three items concerning police officers' likelihood to follow the rules (e.g., "when the police deal with people, they always behave according to the law"; Cronbach's $\alpha = .76$ for United States; $.57$ for Ghana). Tankebe and colleagues operationalized procedural fairness using 7 items reflecting perceptions of how police exercise authority (e.g., "the police treat everyone with dignity"; Cronbach's $\alpha = .87$ for United States; $.80$ for Ghana). Distributive fairness consisted of three items asking about how fairly police allocate their resources (e.g., "the police provide the same quality of service to all citizens"; Cronbach's $\alpha = .73$ for United States; $.69$ for Ghana). The final dimension, police effectiveness, was made up of three items concerning the police's ability to protect the public's safety (e.g., "I feel safe walking around my neighbourhood at night"; Cronbach's $\alpha = .62$ for United States; $.69$ for Ghana).

For both the United States and the Ghana samples, Tankebe et al.'s (2016) proposed model demonstrated acceptable fit, coupled with significant loadings on the predicted factors, suggesting police legitimacy can indeed be conceptualized using this four-factor PLS (in the United States and Ghana). However, because the authors used university samples, their findings may not generalize to the broader population. Thus, further work examining a community-based sample is required. It would also be valuable to determine if their findings generalize to other countries, beyond the United States and Ghana.

Police legitimacy in the Canadian context

We could not find any research using the PLS with a Canadian sample. In fact, a recent review of studies that examined perceptions of police legitimacy reported on research conducted in the United States, Australia, and England (Mazerolle, Bennett et al. 2013). Unfortunately, no published study drawing on Canadian data met the inclusion criteria for that research. It therefore appears that a reliable measure of police legitimacy has yet to be established for the Canadian population. Given cross-national differences in crime rates, law enforcement strategies, police misconduct, and many other factors, perceptions of police legitimacy are likely to vary between countries. In addition, the underlying elements that constitute the police legitimacy construct may even vary across countries.

Despite the fact that perceptions of police legitimacy have not been extensively studied in Canada, researchers have examined the views of Canadians towards the police. As is the case in other countries, much of this research deals with the topic of race. While the majority of Canadians appear to have confidence in the police (e.g., Canada was ranked one of the highest in confidence out of 50 nations; [Cao, Lai, and Zhao 2012](#)), certain racialized groups do not appear to endorse the same positive views. Indeed, various Canadian studies have highlighted the fact that, compared to white individuals, blacks, Chinese, Aboriginals,¹ and a range of other racialized groups tend to express lower confidence in the police (e.g., [Cao 2014](#); [O'Connor 2008](#); [Wortley and Owusu-Bempah 2009](#)). With that being said, it is important to point out that, even within racialized groups, attitudes towards the police can vary substantially (e.g., depending upon what aspect of policing is being considered, or where one resides within Canada; [Spratt and Doob 2014](#)).

In addition to race, other factors also appear to impact the attitudes that Canadians have towards the police. For example, in addition to finding that visible minority groups are likely to endorse more negative views of the police, [O'Connor \(2008\)](#) found that this was also true for Canadians who perceive their neighbourhood to have high levels of crime and those who have experienced criminal victimization. Similarly, [Cheng \(2015\)](#) found that a variety of factors were associated with lower satisfaction ratings of the Saskatoon Police Service in Saskatchewan, Canada. For example, in addition to Aboriginal² status being associated with lower satisfaction ratings, Cheng demonstrated that more negative satisfaction ratings were provided by younger citizens, those who felt less safe in their community, and those who had previous involuntary contact with the police. [Cao and Wu \(2017\)](#) have recently argued that these sorts of variables might matter more than race when considering public confidence in the police. More specifically, they stated that “the magnitude of [the] race effect, compared to many other variables, such as contacts with the police, social and physical disorder, and concentrated disadvantage, is not the strongest in multivariate analyses of confidence in the police” (p. 9). Indeed, when Cao and Wu controlled for these variables, the effect of race on public confidence in policing decreased (or even became insignificant).

One of the challenges facing researchers who examine these topics, including researchers in Canada, is a lack of definitional clarity with respect to the constructs being studied. For example, [Cao \(2015\)](#) argued that while constructs such as confidence in the police, trust in the police, and satisfaction with the police are used interchangeably in most research, these constructs do in fact mean different things. To ensure definitional clarity in the current study, we have opted to focus on a single construct, police legitimacy, defined in a way that is consistent with [Tankebe et al.'s \(2016\)](#) PLS. To explore the views that Canadians have towards police legitimacy, and to better understand the varying views that might be endorsed by different demographic groups in Canada, the PLS must first be validated with a Canadian sample.

Hypotheses

This study aimed to validate the PLS as a measure of police legitimacy using a Canadian sample. Based on previous research ([Tankebe et al. 2016](#)), we hypothesized the sample of Canadian community members' responses would acceptably fit into the four pre-determined factors of the PLS: police lawfulness, distributive fairness, procedural fairness, and police effectiveness. Although no formal hypotheses were proposed, we were also interested in

exploring whether various demographic differences (specifically related to gender, race, age, and contact with the police) exist in relation to citizens' responses to the PLS.

Method

Participants

We recruited participants with the use of Qualtrics, an online crowdsourcing platform that can distribute surveys across Canada. Qualtrics recruits participants to panels through email lists, website intercepts, and a variety of other targeted methods. Through an opt-in process, participants agree to respond to online surveys in return for monetary incentives. After providing demographic information for their online profile, participants receive specific email invitations to relevant surveys. Qualtrics sent panel members across Canada an email invitation with a link to our online survey. The target audience was a quota sample based on Canadian census data related to gender, race, and age (Statistics Canada 2016) and aligned with the jurisdiction of a large Canadian law enforcement agency. Interested participants were able to click the link to enter and complete the survey. In total, 6,223 participants responded to the survey. However, we excluded 3,261 participants who withdrew from the survey, had missing responses to the PLS, or did not reside in the targeted police jurisdictions. We therefore retained 2,962 participants for the final sample.³

Materials⁴

Demographics questionnaire. Participants completed a questionnaire concerning their personal demographics (e.g., age, race, gender).

Police Legitimacy Scale. Participants were then asked to complete the PLS (Tankebe et al. 2016). The scale involves 16 items (e.g., when the police deal with people, they always behave according to the law; the police make decisions based on the facts). Responses to these items are provided on four-point Likert scales (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). The items all have a positive valence, such that higher scores indicate more favourable perceptions of police legitimacy. Table 1 displays the full list of items, which were presented to participants in a randomized order to minimize potential order-effects.

Procedure

We recruited participants using Qualtrics. After providing informed consent, participants completed the demographics questionnaire and the PLS online using Qualtrics survey software. They then proceeded to complete several other measures, as described in endnote 4, which relate to a larger study on public perceptions of police officer appearance. Following completion of the various measures, participants were debriefed, thanked for their participation, and compensated (\$3.41 CAD).

Results

Demographic analyses

We retained 2,962 participants for the final sample. Table 2 displays participants' demographic information (gender, age, race, province of residence, education, household income, arrest history). As seen in Table 2, the majority of participants were female, white,

Table 1: Police legitimacy scale**Factor and Item****Lawfulness**

L1 – When the police deal with people, they always behave according to the law.

L2 – If I were to talk to police officers in my community, I would find their values to be very similar to my own.

L3 – The police act in ways that are consistent with my own moral values.

Procedural Fairness

PF1 – The police treat citizens with respect.

PF2 – The police take time to listen to people.

PF3 – The police treat people fairly.

PF4 – The police respect citizens' rights.

PF5 – The police are courteous to citizens they come into contact with.

PF6 – The police treat everyone with dignity.

PF7 – The police make decisions based on the facts.

Distributive Fairness

DF1 – The police provide the same quality of service to all citizens.

DF2 – The police enforce the law consistently when dealing with people.

DF3 – The police make sure citizens receive the outcomes they deserve under the law.

Police Effectiveness

PE1 – Crime levels in my neighbourhood have changed for the better in the last year.

PE2 – There are not many instances of crime in my neighbourhood.

PE3 – I feel safe walking in my neighbourhood at night.

and resided in British Columbia. When asked about prior arrest history, most participants indicated they had never been arrested by the police. There was a relatively even split with regards to participants who were between 18 and 49 years old, and those age 50 or older. The majority of participants' highest level of education was either a high school diploma or a non-university certificate/diploma. The most commonly reported household income was \$20,000 to just under \$40,000.

Table 2: Participant demographics

Variable	Frequency	Percentage
Gender		
Male	1,182	39.9%
Female	1,776	60.0%
Missing	4	0.1%
Age		
18–19	1,650	55.7%
50 or older	12,98	43.8%
Missing	14	0.5%
Previously Arrested		
Yes	461	15.6%
No	2,472	83.5%
Missing	29	1%
Race		
White	2,393	80.8%
Asian	254	8.6%
Indigenous	99	3.3%
Black	40	1.4%
East Indian	31	1%
Middle Eastern	21	0.7%
Hispanic	22	0.7%
Other	55	1.8%
Prefer not to answer	36	1.2%
Missing	11	0.4%
Province/Territory		
British Columbia	1,228	41.5%
Alberta	644	21.7%
Saskatchewan	289	9.8%

Variable	Frequency	Percentage
Nova Scotia	215	7.3%
Manitoba	214	7.2%
New Brunswick	181	6.1%
Newfoundland and Labrador	139	4.7%
Prince Edward Island	32	1.1%
Northwest Territories	10	0.3%
Yukon	3	0.1%
Nunavut	2	0.1%
Missing	5	0.2%
Highest Level of Education		
Grade 8 or less	11	0.4%
Some high school	179	6.0%
High school diploma or equivalent	778	26.3%
Registered apprenticeship or other trades certificate or diploma	231	7.8%
College, CEGEP, or other non-university certificate or diploma	755	25.4%
University certificate or diploma below bachelor's level	181	6.1%
Bachelor's degree	588	19.9%
Post-graduate degree above bachelor's level	225	7.6%
Prefer not to answer	13	0.4%
Missing	1	< 0.1%
Household Income		
Under \$20,000	295	10.0%
\$20,000 to just under \$40,000	580	19.6%
\$40,000 to just under \$60,000	534	18%
\$60,000 to just under \$80,000	479	16.2%
\$80,000 to just under \$100,000	339	11.4%
\$100,000 to just under \$150,000	343	11.6%

Variable	Frequency	Percentage
\$150,000 and above	131	4.4%
Prefer not to answer	252	8.5%
Missing	9	0.3%

We conducted a series of corrected independent sample *t*-tests using the proposed factors of the PLS to determine if ratings differed across levels of the demographic factors we collected information on. We were primarily interested in how sub-scale scores varied across participant gender, race, age, and arrest status. The results from these analyses are presented in Table 3. As seen in this table, participants' responses to the PLS indicated that, on average, they regard the police as reasonably legitimate at the factor and item level (nearly all averages were about 2.5/4 and some exceeded 3/4). However, interesting differences were observed for some of the proposed PLS factors.

More specifically, the analyses indicated that male participants ($M = 2.76$, $SD = .61$) reported significantly more favourable perceptions regarding police effectiveness as compared to female participants ($M = 2.69$, $SD = .66$), $t(2,956) = 3.21$, $p = .002$, $MD = .09$, $d = .12$. With regard to age, participants who were 50 or older ($M = 2.85$, $SD = .52$) held more favourable perceptions regarding police lawfulness than those who were less than 50 ($M = 2.76$, $SD = .58$), $t(2,892.11) = 4.34$, $p < .001$, $MD = .09$, $d = .16$. Participants who were 50 or older ($M = 2.86$, $SD = .54$) also reported more favourable perceptions regarding police procedural fairness as compared to participants who were less than 50 ($M = 2.76$, $SD = .59$), $t(2,889.841) = 4.70$, $p < .001$, $MD = .10$, $d = .18$. Participants who had been previously arrested reported less favourable perceptions for all of the proposed PLS factors. No racial differences (between white and non-white participants) were observed across any of the PLS factors.⁵

The factor structure of the PLS

To investigate whether the PLS could be validated in our Canadian sample of community members, we conducted a second-order confirmatory factor analysis (CFA) to determine if the four-factor structure reported by Tankebe and colleagues (2016) could be replicated. We conducted the analyses in Mplus (Muthén and Muthén 1998–2017), with a weighted least-squares estimator (WLSMV). We evaluated the fit of the model using the χ^2 goodness of fit test statistic, the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the Standardized Root Mean Square Residual (SRMR).

The χ^2 test was significant, $\chi^2(100, N = 2,962) = 2,795.19$, $p < .001$. This was not surprising, as χ^2 values are sensitive to sample sizes and are nearly always significant with large samples (i.e., 400 or more; Bentler and Bonett 1980; Hooper, Coughlan, and Mullen 2008; Kenny 2014). In their work, Tankebe et al. (2016) also observed significant χ^2 values for both their U.S. and Ghana samples. Furthermore, our RMSEA (.095) indicated mediocre fit (MacCallum, Browne, and Sugawara 1996), although researchers typically recommend

RMSEA values between .6 and .8 (Schreiber et al. 2006). In comparison, both the CFI (.99) and the TLI (.98) demonstrated strong fit to the data, as Hu and Bentler (1999) suggest values greater than .95 are acceptable. Similarly, our SRMR (.031) indicated strong fit (Hu and Bentler 1999). Taken together, the fit indices indicate the model seems to fit the Canadian data reasonably well. Our fit indices were also somewhat comparable to those observed by Tankebe and colleagues (2016), who reported an RMSEA of .07 for their U.S. sample and .08 for their Ghana sample, CFI values of .97 and .96, respectively, and TLI values of .97 and .95, respectively. Tankebe et al. (2016) did not report their observed SRMR.

As seen in Figure 1 and Table 4, each item in the first order had a strong, significant ($p < .001$) loading onto its respective factor, with the majority of standardized loadings higher than .8. In the first order of the model, nearly all of the loadings we observed were larger than those reported by Tankebe et al. (2016). In the second order of the model, all four factors have significant ($p < .001$) loadings onto police legitimacy. The loadings for lawfulness, procedural fairness, and distributive fairness were all above .9. In comparison, the loading for police effectiveness (.44) was substantially lower than the other three factors, although still significant.

Discussion

The primary aim of this study was to investigate if the four-factor model of police legitimacy (lawfulness, distributive fairness, procedural fairness, and effectiveness) suggested by Tankebe and colleagues (2016) would fit the responses of a Canadian sample of community members. As hypothesized, the results from our study suggest this seems to be the case. The majority of fit indices and item loadings indicated Canadian participants' perceptions of police legitimacy appear to be measurable using this four-factor model. Therefore, the results suggest, for the most part, Canadian citizens perceive police legitimacy in a similar manner as their U.S. and Ghanaian counterparts: as a multidimensional construct consisting of lawfulness, distributive fairness, procedural fairness, and effectiveness.

If replicable, these results may have important implications for both Canadian law enforcement agencies and Canadian researchers who study policing issues, especially those related to police legitimacy. A valid scale could be used by Canadian law enforcement agencies to consistently measure and assess police legitimacy. The PLS can be easily incorporated into community consultations (e.g., surveys, focus groups) and could be used to help identify areas that agencies can specifically improve upon to enhance community attitudes towards police, as well as related behaviours (e.g., compliance and cooperation with the police, receptivity to community-oriented policing strategies). For example, because distributive fairness appears to be a valid dimension of perceived police legitimacy in Canada, law enforcement agencies may aim to allocate their resources in a more equitable manner as a means of enhancing the public's trust concerning the police. Furthermore, when using the PLS in future work, researchers who measure police legitimacy can be more confident that their results are credible and will be able to make accurate comparisons with other research conducted outside of Canada that has used the PLS.

The most notable difference observed between our results and those of Tankebe et al. (2016) is the strength of police effectiveness's loading onto police legitimacy. We found police effectiveness to have a rather weak (.44) loading onto police legitimacy. In

Table 3: Mean scores of items and factors by participant demographics

Factor/Item	Overall Sample	Male	Female	White	Not White	Less Than 50	50 or Older	Arrested	Not Arrested
Lawfulness	2.80	2.78	2.82	2.81	2.77	2.76 ^b	2.85 ^b	2.58 ^d	2.84 ^d
L1	2.63	2.59	2.65	2.61	2.70	2.63	2.62	2.36	2.68
L2	2.94	2.91	2.96	2.96	2.83	2.88	3.02	2.76	2.97
L3	2.84	2.84	2.84	2.85	2.77	2.78	2.92	2.61	2.88
Procedural Fairness	2.80	2.79	2.82	2.81	2.76	2.76 ^c	2.86 ^c	2.56 ^e	2.85 ^e
PF1	2.86	2.85	2.87	2.87	2.81	2.81	2.93	2.63	2.90
PF2	2.82	2.79	2.83	2.82	2.79	2.76	2.89	2.60	2.85
PF3	2.79	2.79	2.79	2.79	2.74	2.73	2.86	2.53	2.83
PF4	2.86	2.83	2.89	2.87	2.82	2.83	2.90	2.59	2.91
PF5	2.91	2.90	2.91	2.92	2.85	2.86	2.97	2.71	2.94
PF6	2.59	2.57	2.60	2.58	2.62	2.57	2.62	2.30	2.65
PF7	2.81	2.78	2.82	2.82	2.72	2.77	2.85	2.57	2.85
Distributive Fairness	2.63	2.61	2.65	2.63	2.63	2.63	2.64	2.38 ^f	2.68 ^f
DF1	2.50	2.50	2.51	2.51	2.47	2.48	2.54	2.21	2.56
DF2	2.67	2.65	2.69	2.66	2.70	2.68	2.67	2.46	2.72

Factor/Item	Overall Sample	Male	Female	White	Not White	Less Than 50	50 or Older	Arrested	Not Arrested
DF3	2.72	2.69	2.74	2.72	2.71	2.72	2.73	2.49	2.76
Police Effectiveness	2.71	2.76 ^c	2.69 ^a	2.72	2.72	2.71	2.73	2.60 ^g	2.74 ^g
PE1	2.45	2.50	2.47	2.47	2.56	2.49	2.48	2.33	2.52
PE2	2.77	2.76	2.78	2.78	2.75	2.77	2.78	2.59	2.80
PE3	2.90	3.03	2.80	2.90	2.84	2.87	2.92	2.86	2.90

a, b, c, d, e, f, g indicate a significant difference between the two groups at $p < .05$

Table 4: Factor loadings and standard errors for the confirmatory factor analysis

Factor/Item	Loading Estimate	Standard Error
Lawfulness		
L1	.81*	.01
L2	.83*	.01
L3	.92*	.01
Procedural Fairness		
PF1	.92*	< .01
PF2	.88*	< .01
PF3	.93*	< .01
PF4	.94*	< .01
PF5	.89*	.01
PF6	.90*	< .01
PF7	.85*	.01
Distributive Fairness		
DF1	.90*	.01
DF2	.89*	.01
DF3	.85*	.01
Police Effectiveness		
PE1	.86*	.02
PE2	.75*	.01
PE3	.71*	.02
Police Legitimacy		
Lawfulness	.94*	< .01
Procedural fairness	.99*	< .01
Distributive fairness	.94*	< .01
Police effectiveness	.44*	.02

* $p < .001$

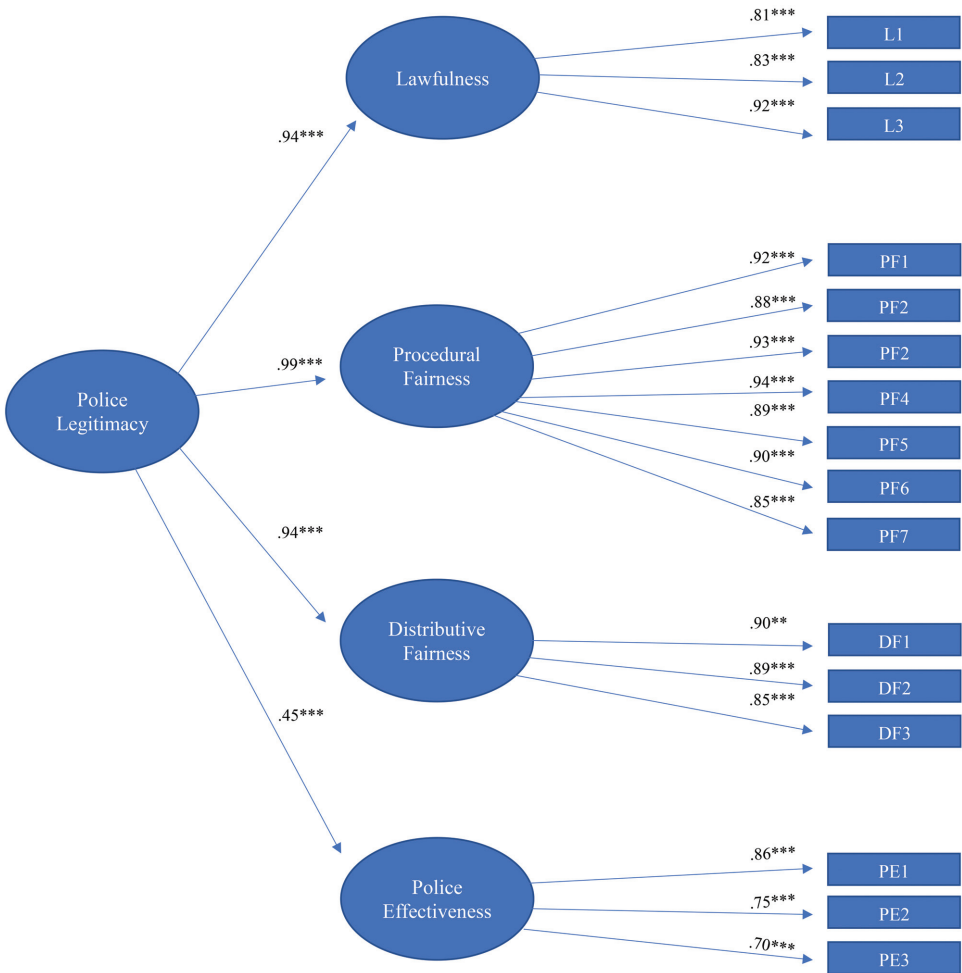


Figure 1: Confirmatory factor analysis on the police legitimacy scale

comparison, Tankebe and his colleagues reported loadings of .89 and .70 for their U.S. and Ghana samples, respectively. We can only speculate as to why this difference emerged. One possibility relates to the items included in each sub-scale. Our results suggest that, for Canadians, there may be something distinct about the items forming the police effectiveness sub-scale compared to distributive fairness, procedural fairness, and lawfulness, with regards to perceptions of police legitimacy. For example, the majority of PLS items seem to relate to how the police act, behave, or make decisions. However, the items measuring police effectiveness are somewhat different in the sense they depend not only on how the police act, but on how others act (i.e., criminals) or feel (i.e., the rater). Participants may therefore see police-initiated actions, behaviours, and decisions as being valid aspects of police legitimacy, but items that are not solely dependent on the police do not speak (at least as directly) to the police legitimacy construct. Alternatively, or in addition to the previous explanation, this difference in the police effectiveness loadings may relate

to citizens' overall feelings of safety and security. For example, the Global Peace Index ranks 163 countries according to their level of peacefulness ([Institute for Economics and Peace 2018](#)). In 2018, Canada was ranked 6th, while the United States and Ghana were ranked 121st and 41st, respectively. As such, Canadian citizens may not be as cognizant or fearful of local crime and thus do not consider levels of crime, or their safety, when conceptualizing police legitimacy. Therefore, in Canada, although attitudes concerning police effectiveness seem to relate somewhat to perceptions of police legitimacy, they may not be as relevant to this construct as attitudes regarding police lawfulness, distributive fairness, and procedural fairness.

Although examined in an exploratory fashion within this study, another important contribution made by this research is the clarification of demographic differences that might exist with respect to perceptions of police legitimacy within Canada. Our reliance on unequal and small sample sizes in some cases (see [Table 2](#)) means that our demographic analyses must be interpreted with caution, but several findings are worthy of discussion. Generally speaking, participants from various demographic groups responded to the PLS in a similar manner. However, potentially important differences were found. For example, female respondents rated police effectiveness lower than male respondents, younger respondents rated lawfulness and procedural fairness lower than older respondents, and people with an arrest history consistently assigned lower ratings to each sub-scale compared to people who have not been arrested.

Additionally, our demographic analyses suggest that a complex relationship might exist between a respondent's race and perceptions of police legitimacy. Interestingly, compared to white respondents, members of Middle Eastern and Indigenous groups provided the lowest ratings of police legitimacy in Canada, whereas Asians and East Indians provided the highest ratings. Relative differences for the remaining racial groups varied depending on the dimension of the PLS being considered. Although our findings concerning Indigenous and black Canadians' perceptions of police are consistent with previous research (e.g., [Cao 2014](#); [Cheng 2015](#); [Wortley and Owusu-Bempah 2009](#)), [Sprott and Doob \(2014\)](#), and [Wortley and Owusu-Bempah \(2009\)](#), observed that Asians held less favourable views of the police as compared to whites. Unfortunately, given the limits of our survey, it is impossible at this stage to know *why* these racial differences emerged or if the differences are in fact meaningful. But the results from these analyses arguably support the continued exploration of demographic variations in PLS scores and their potential meaning. The results also highlight the value of including sub-scale analyses in future research given that demographic differences appeared to vary as a function of specific PLS dimensions.

Future directions

Because this was the first instance of using the PLS on a Canadian sample, replication studies should be conducted to increase the validity and generalizability of the current study's findings. More specifically, future research should be conducted on additional samples outside of Canada (e.g., Asian and European countries) and on larger samples of marginalized Canadian populations given that they appear to be particularly likely to distrust the police and experience conflict with them (e.g., Indigenous individuals; [Cao 2014](#); [Wortley n.d.](#)). Such research might further legitimize this scale across an even wider variety of cultures and groups.

Additionally, further research should be conducted using the PLS to further examine demographic differences in Canadians' perceptions of law enforcement. Although an abundance of American research has revealed relationships between demographic variables and perceptions of the police (e.g., [Brown and Benedict 2002](#); [Gabbidon, Higgins, and Porter 2011](#); [Schuck, Rosenbaum, and Hawkins 2008](#)), literature on this topic in Canada is relatively scarce. As highlighted above, our results suggest that perceptions of important elements of police legitimacy may vary across certain demographic factors, but analyses of larger sub-samples are required before we can be confident in these results. If future research replicates these demographic differences in perceptions of police legitimacy, or reveals additional or larger demographic differences, subsequent research should then investigate contextual reasons for these differences, such as past personal experiences with police ([Weitzer and Tuch 2005](#)), or levels of localized neighbourhood crime ([Reisig and Parks 2000](#)).

Limitations

A number of limitations were present in the design of the current study. To begin, the survey questions explicitly asked participants about their beliefs and attitudes towards the police. As such, effects of social desirability may have influenced the manner in which participants responded. For example, people may not have wanted to indicate they believe the police treat citizens unequally or that the police do not make decisions based on facts. The anonymity of participants' online responses aimed to minimize this issue.

Additionally, the study may also have been limited by the online nature of the survey. Because the study was conducted online, a number of potential environmental confounds may have been present (e.g., participants not paying attention/distracted when completing their responses). However, relying on Qualtrics to distribute the survey meant our study included a broader sample than that used by [Tankebe et al. \(2016\)](#). Indeed, Qualtrics allowed us to recruit participants from across the entire country, which likely resulted in a sample that is more reflective of Canada's general population (certainly more representative than what would be captured with a conventional undergraduate sample, or what could be accomplished using face-to-face community sampling). That being said, although our final sample was fairly representative of the Canadian population with respect to race (81% of our sample were white, compared to approximately 78% of Canada's population; [Statistics Canada 2016](#)), other features of our sample were less representative (e.g., we had a greater percentage of female participants, 60%, than would be expected based on Canadian statistics; approximately 51% of Canadians are female according to [Statistics Canada, 2016](#)). This presumably impacts the generalizability of our findings to the Canadian population despite our relatively large sample.

Furthermore, we excluded a relatively large number of participants from the dataset because of withdrawals and incomplete responses to the PLS (only 48% of the responses were retained). Although the demographic background of the excluded individuals did not differ significantly from the retained group, the high rate of exclusion in our study is concerning, and readers should interpret the results with an appropriate degree of caution because of this. Additionally, because we do not know how many people Qualtrics sent the survey to, we are unfortunately unable to calculate a survey response rate.

Finally, we did not collect any data concerning participants' actual behaviour, such as cooperation or compliance with the police (although in the larger project that this paper is a

part of, we did collect measures relating to *intended* behaviour, which are being analyzed as part of a separate paper; see endnote 3). We were therefore unable to determine at this stage whether, or how, PLS scores relate to behavioural outcomes. As such, the practical implications of our results are not entirely clear at this stage (e.g., we do not know if the PLS is in fact predictive of individuals' behaviour when interacting with the police). However, the validation of the PLS facilitates future research to examine behaviours in relation to perceptions of police legitimacy.

Conclusion

The current study's findings regarding the conceptualization of police legitimacy in Canada were consistent with previous research conducted in the U.S. and Ghana (Tankebe et al. 2016). Specifically, a multidimensional model of police legitimacy (consisting of four factors, including lawfulness, procedural fairness, distributive fairness, and police effectiveness) fit participants' responses to questions that are presumed to reflect beliefs about police legitimacy. As such, any future research conducted in Canada or other countries that examines perceptions of police legitimacy should strongly consider implementing the PLS as it seems to be a valid instrument that generalizes well across borders. Because community members' behaviour towards, and cooperation with, police officers appears to be strongly related to perceptions of police legitimacy (Tyler and Fagan 2008), further research designed to investigate these issues in Canada may also prove to be very beneficial, both for the police and for the public they serve.

Notes

- 1 This is the language used in the original source.
- 2 This is the language used in the original source.
- 3 There were no demographic differences between participants whose responses were excluded as compared to those retained.
- 4 This study forms part of a more extensive survey study on public perceptions of police officer appearance that involved a large number of additional measures and in-depth attention checks that were beyond the scope of this paper. Because participants completed the measures reported in this study (i.e., the demographics questionnaire and the PLS) at the beginning of the Qualtrics session (before seeing anything else), the additional measures would not have affected the results of this study and are thus not described or reported on here in order to focus the scope of this manuscript and limit its length.
- 5 A more detailed comparison of the PLS factors between white and non-white participants is presented in Table 5. We did not perform inferential statistical tests in this case due to large differences in sample sizes and the increased likelihood of Type I error. Instead, we have reported effect sizes comparing white and non-white participants. As seen in Table 5, particular racial groups (e.g., Indigenous Canadians) reported less favourable perceptions of the police, while other groups (e.g., East Indians) seemed to hold more favourable perceptions of the police, as compared to whites' perceptions.

Table 5: Comparison of white and non-white participants' PLS scores

Factor	White Mean	Black Mean	Cohen's d	Indigenous Mean	Cohen's d	Asian Mean	Cohen's d	East Indian Mean	Cohen's d	Hispanic Mean	Cohen's d	Middle Eastern Mean	Cohen's d	Other Mean	Cohen's d
Lawfulness	2.81	2.60	-.34	2.63	-.33	2.88	.13	2.89	.15	2.79	-.03	2.54	-.45	2.65	-.30
Procedural fairness	2.81	2.68	-.22	2.62	-.32	2.87	.11	2.97	.28	2.74	-.11	2.41	-.58	2.65	-.30
Distributive fairness	2.63	2.58	-.07	2.42	-.32	2.74	.17	3.01	.64	2.77	.22	2.25	-.50	2.40	-.37
Police effectiveness	2.71	2.71	-.02	2.47	-.35	2.80	.13	2.97	.40	2.74	.04	2.78	.09	2.58	-.19

References

Beetham, David.

2013. *The Legitimation of Power*. New York, NY: Palgrave MacMillan.

Bentler, Peter M., and Douglas G. Bonett.

1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin* 88(3): 588–606. <https://doi.org/10.1037/0033-2909.88.3.588>

Berry, Sujata.

2016. Sammy Yatim family lawyer on his fight for police accountability. CBC News. <http://www.cbc.ca/radio/thecurrent/the-current-for-february-4-2016-1.3433226/sammy-yatim-family-lawyer-on-his-fight-for-police-accountability-1.3433310>

Bottoms, Anthony, and Justice Tankebe.

2012. Beyond procedural justice: A dialogic approach to legitimacy in criminal justice. *The Journal of Criminal Law and Criminology* 102(1): 119–70.

Bradford, Ben, Aziz Huq, Jonathan Jackson, and Benjamin Roberts.

2014. What price fairness when security is at stake? Police legitimacy in South Africa. *Regulations and Governance* 8(2): 246–68. <https://doi.org/10.1111/rego.12012>

Brown, Ben, and Reed Benedict.

2002. Perceptions of the police: Past findings, methodological issues, conceptual issues and policy implications. *Policing: An International Journal of Police Strategies and Management* 25(3): 543–80. <https://doi.org/10.1108/13639510210437032>

Bureau of Justice Statistics n.d. Community policing. <https://www.bjs.gov/index.cfm?ty=tp&tid=81>.

Cao, Liqun.

2014. Aboriginal people and confidence in the police. *Canadian Journal of Criminology and Criminal Justice* 56(5): 499–526. <https://doi.org/10.3138/cjccj.2013.e05>

Cao, Liqun.

2015. Differentiating confidence in the police, trust in the police, and satisfaction with the police. *Policing: An International Journal of Police Strategies and Management* 38(2): 239–49. <https://doi.org/10.1108/pijpsm-12-2014-0127>

Cao, Liqun, Yung-Lien Lai, and Rouhui Zhao.

2012. Shades of blue: Confidence in the police in the world. *Journal of Criminal Justice* 40(1): 40–49. <https://doi.org/10.1016/j.jcrimjus.2011.11.006>

Cao, Liqun, and Yuning Wu.

2017. Confidence in the police by race: Taking stock and charting new directions. *Police Practice and Research* 20(1): 3–17. <https://doi.org/10.1080/15614263.2017.1396460>

Cheng, Hongming.

2015. Factors influencing public satisfaction with the local police: A study in Saskatoon, Canada. *Policing: An International Journal of Police Strategies and Management* 38(4): 690–704. <https://doi.org/10.1108/pijpsm-11-2014-0125>

Chow, Henry P.H.

2012. Attitudes towards police in Canada: A study of perceptions of university students in a western Canadian city. *International Journal of Criminal Justice Sciences* 7(1): 508–23.

Gabbidon, Shaun L., George E. Higgins, and Hillary Potter.

2011. Race, gender, and the perception of recently experiencing unfair treatment by the police: Exploratory results from an all-black sample. *Criminal Justice Review* 36(1): 5–21. <https://doi.org/10.1177/0734016810379904>

Ho, Taiping, and Jerome McKean.

2004. Confidence in the police and perceptions of risk. *Western Criminology Review* 5(2): 108–18.

Hong, Jackie.

2016. Pollster finds rapid drop in public trust in police. *Toronto Star*. <https://www.thestar.com/news/crime/2016/01/31/pollster-finds-rapid-drop-in-public-trust-in-police.html>

Hooper, Daire, Joseph Coughlan, and Michael Mullen.

2008. Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods* 6(1): 53–60.

Hough, Mike, Jonathan Jackson, and Ben Bradford.

2013. Legitimacy, trust, and compliance: An empirical test of procedural justice theory using the European social survey. In *Legitimacy and Criminal Justice: An International Exploration*, ed. Justice Tankebe and Alison Lieblich. Oxford, UK: Oxford University Press.

Hu, Li-tze, and Peter M. Bentler.

1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal* 6(1): 1–55. <https://doi.org/10.1080/10705519909540118>

Institute for Economics and Peace.

2018. Global peace index 2018: Measuring peace in a complex world. <http://visionofhumanity.org/app/uploads/2018/06/Global-Peace-Index-2018-2.pdf>.

Jackson, Jonathan, Ben Bradford, Mike Hough, Andy Myhill, Paul Quinton, and Tom R. Tyler.

2012. Why do people comply with the law? Legitimacy and the influence of legal institutions. *British Journal of Criminology* 52(6): 1051–71. <https://doi.org/10.1093/bjc/azs032>

Kelman, Herbert C., and V. Lee Hamilton.

1989. *Crimes of Obedience: Toward a Social Psychology of Authority and Responsibility*. New Haven, CT: Yale University Press.

Kenny, David A.

2014. Measuring model fit. <http://davidakenny.net/cm/fit.htm>

Lerner, Melvin J., and Susan Clayton.

2011. *Justice and Self-Interest: Two Fundamental Motives*. Cambridge, MA: Harvard University Press.

MacCallum, Robert C., Michael W. Browne, and Hazuki M. Sugawara.

1996. Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods* 1(2): 130–49. <https://doi.org/10.1037//1082-989x.1.2.130>

Mazerolle, Lorraine, Emma Antrobus, Sarah Bennett, and Tom R. Tyler.

2013. Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology* 51(1): 33–63. <https://doi.org/10.1111/j.1745-9125.2012.00289.x>

Mazerolle, Lorraine, Sarah Bennet, Jacqueline Davis, Elise Sargeant, and Matthew Manning.

2013. Legitimacy in policing: A systematic review. *Campbell Systematic Reviews* 9(1): 1–146. <https://doi.org/10.4073/csr.2013.1>

Milgram, Stanley.

1963. Behavioural study of obedience. *The Journal of Abnormal and Social Psychology* 67(4): 371–78. <https://doi.org/10.1037/h0040525>

Muthén, Bengt O., and Linka K. Muthén

1998–2017. *Mplus User's Guide*. Los Angeles, CA: Author.

Nofziger, Stacey, and L. Susan Williams.

2005. Perceptions of police and safety in a small town. *Police Quarterly* 8(2): 248–70. <https://doi.org/10.1177/1098611103258959>

O'Connor, Christopher D.

2008. Citizen attitudes toward the police in Canada. *An International Journal of Police Strategies and Management* 31(4): 578–95. <https://doi.org/10.1108/13639510810910571>

Reisig, Michael D., and Roger B. Parks.

2000. Experience, quality of life, and neighbourhood context: A hierarchical analysis of satisfaction with police. *Justice Quarterly* 17(3): 607–30. <https://doi.org/10.1080/07418820000094681>

Reisig, Michael D., Justice Tankebe, and Gorazd Mesko.

2014. Compliance with the law in Slovenia: The role of procedural justice and police legitimacy. *European Journal on Criminal Policy and Research* 20(2): 259–76. <https://doi.org/10.1007/s10610-013-9211-9>

Roemer, John.

1996. *Theories of Distributive Justice*. Cambridge, MA: Harvard University Press.

Schaefer Morabito, Melissa.

2010. Understanding community policing as an innovation: Patterns of adoption. *Crime and Delinquency* 56(4): 564–87. <https://doi.org/10.1177/0011128707311643>

Scheider, Matthew C., Robert Chapman, and Amy Schapiro.

2009. Towards the unification of policing innovations under community policing. *Policing: An International Journal of Police Strategies and Management* 32(4): 694–718. <https://doi.org/10.1108/13639510911000777>

Schreiber, James B., Amaury Nora, Frances K. Stage, Elizabeth A. Barlow, and Jamie King.

2006. Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research* 99(6): 323–38. <https://doi.org/10.3200/joer.99.6.323-338>

Schuck, Amie M., Dennis P. Rosenbaum, and Darnell F. Hawkins.

2008. The influence of race/ethnicity, social class, and neighbourhood context on residents' attitudes towards the police. *Police Quarterly* 11(4): 496–519. <https://doi.org/10.1177/1098611108318115>

Sprott, Jane B., and Anthony N. Doob.

2014. Confidence in the police: Variation across groups classified as visible minorities. *Canadian Journal of Criminology and Criminal Justice* 56(3): 367–79. <https://doi.org/10.3138/cjccj.2013.e10>

Sunshine, Jason, and Tom R. Tyler.

2003. The role of procedural justice and legitimacy in shaping public support for policing. *Law and Society Review* 37(3): 513–48. <https://doi.org/10.1111/1540-5893.3703002>

Statistics Canada.

2016. Canadian demographics at a glance. Demography Division. <https://www150.statcan.gc.ca/n1/en/pub/91-003-x/91-003-x2014001-eng.pdf?st=B8DfFe1d>.

Tankebe, Justice.

2013. Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology* 51(1): 103–35. <https://doi.org/10.1111/j.1745-9125.2012.00291.x>

Tankebe, Justice, Michael D. Reisig, and Xia Wang.

2016. A multidimensional model of police legitimacy: A cross-cultural assessment. *Law and Human Behaviour* 40(1): 11–22. <https://doi.org/10.1037/lhb0000153>. Medline:26301708

TVO.

2018. Why police services need to reconsider their militaristic approach to community safety. *TVO News*. <https://tvo.org/article/current-affairs/why-police-services-need-to-reconsider-their-militaristic-approach-to-community-safety>.

Tyler, Tom R.

1990. *Why People Obey the Law*. New Haven, CT: Yale University.

Tyler, Tom R.

2004. Enhancing police legitimacy. *The Annals of the American Academy of Political and Social Science* 593(1): 84–99. <https://doi.org/10.1177/0002716203262627>

Tyler, Tom R., and Jeffrey Fagan.

2008. Legitimacy and cooperation: Why do people help the police fight crime in the communities. *Ohio State Journal of Criminal Law* 6: 231–75. <https://doi.org/10.2139/ssrn.887737>

Tyler, Tom R., Jeffrey Fagan, and Amanda Geller.

2014. Street stops and police legitimacy: Teachable moments in young urban men's legal socialization. *Journal of Empirical Legal Studies* 11(4): 751–85. <https://doi.org/10.1111/jels.12055>

Tyler, Tom R., Stephen Schulhofer, and Aziz Z. Huq.

2010. Legitimacy and deterrence effects in counterterrorism policing: A study of Muslim Americans. *Law and Society Review* 44(2): 365–402. <https://doi.org/10.1111/j.1540-5893.2010.00405.x>

Weitzer, Ronald, and Steven A. Tuch.

2005. Racially biased policing: Determinants of citizen perceptions. *Social Forces* 83(3): 1009–30. <https://doi.org/10.1353/sof.2005.0050>

Wortley, Scott.

n.d. *Police Use of Force in Ontario: An Examination of Data from the Special Investigations Unit*. Ottawa, Ontario: Ministry of the Attorney General.

Wortley, Scott, and Akwasi Owusu-Bempah.

2009. Unequal before the law: Immigrant and racial minority perceptions of the Canadian criminal justice system. *Journal of International Migration and Integration* 10(4): 447–73. <https://doi.org/10.1007/s12134-009-0108-x>