French Adaptation and Validation of the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale

Véronique Maheux-Caron[1], Dominick Gamache[1,2] (iD), Martin Sellbom[3], Elliott Christian[4], Yvan Lussier[1], and Claudia Savard[2,5] (iD)

Abstract

The goal of this study (N = 432 participants from a community sample) is to report on the psychometric properties of a French adaptation of the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale (E-LSRP), which was developed to alleviate some shortcomings of the original LSRP. A three correlated factor exploratory structural equation modeling model showed the best fits and attained satisfactory indices. There were significant, conceptually meaningful associations with measures of Dark Triad traits, pathological narcissism, empathy, impulsivity, substance misuse, and social desirability. Incremental validity over a 19-item scale proposed by Brinkley et al. was also mostly demonstrated, especially for convergent validity. Overall, the French E-LSRP possesses sound psychometric properties, comparable for the most part with the original instrument, and should be seen as a useful measure of psychopathic traits in community samples.

Psychopathy is defined by a constellation of traits including (but not limited to) egocentrism, callousness, lack of empathy, impulsivity, and antagonism (e.g., Hare, Neumann, & Widiger, 2012; Leistico, Salekin, DeCoster, & Rogers, 2008). While psychopathy has been, and continues to be, studied as a personality disorder (PD; e.g., Brinkley, Newman, Widiger, & Lynam, 2004; Harpur, Hart, & Hare, 1994), research has consistently demonstrated that psychopathy is better conceptualized as a dimensional construct rather than taxon (e.g., Edens, Marcus, Lilienfeld, & Poythress, 2006; Miller, Lynam, Widiger, & Leukefeld, 2001; Murrie et al., 2007; Walters, Brinkley, Magaletta, & Diamond, 2008). Investigations have uncovered the presence of subclinical levels of psychopathic traits and their ensuing impacts in the general population (e.g., Levenson, Kiehl, & Fitzpatrick, 1995; Savard, Sabourin, & Lussier, 2006). Consequently, several researchers sought to develop a number of well-validated self-report measures of psychopathy that better fit community samples. Recent research shows that results from self-report psychopathy questionnaires are congruent with clinical reports (e.g., Miller, Jones, & Lynam, 2011). Concerns pertaining to self-report methodology have been raised about a possible underreporting of criminal behavior (Kroner, Mills, & Morgan, 2007) and possible socially desirable responding. However, recent findings tend to alleviate these apprehensions, as

psychopathic traits have shown negative associations with socially desirable responding (e.g., Gamache, Savard, & Maheux-Caron, 2018; Ray et al., 2013; Savard, Simard, & Jonason, 2017; Verschuere et al., 2014).

A number of widely used self-report questionnaires have been developed and validated to measure psychopathy. Sellbom, Lilienfeld, Fowler, and McCrary (2018) recently conducted an extensive review of the five instruments for which there have been a substantial number of published studies and which, for various reasons, appear the most promising for research purposes. All five questionnaires appear to have relative strengths and shortcomings.

The Hare Self-Report of Psychopathy (SRP-III, recently renamed SRP-4; Paulhus, Neumann, & Hare, 2017) includes 64 items. It is based on Hare's most recent four-factor conceptualization of psychopathy (Interpersonal Manipulation,

[1]Université du Québec à Trois-Rivières, Trois-Rivières, Quebec, Canada
[2]CERVO Brain Research Centre, Quebec City, Canada
[3]University of Otago, Dunedin, New Zealand
[4]The Australian National University, Canberra, ACT, Australia
[5]Université Laval, Quebec City, Quebec, Canada

Corresponding Author:
Dominick Gamache, Département de psychologie, Université du Québec à Trois-Rivières, C.P. 500, Trois-Rivières, Quebec, G9A 5H7, Canada.
Email: dominick.gamache@uqtr.ca

Callous Affect, Erratic Lifestyle, Criminal Tendencies). It has been extensively studied worldwide in multiple and diverse settings and samples (e.g., Neumann, Schmitt, Carter, Embley, & Hare, 2012). The pattern of convergent–discriminant associations is mostly consistent with theoretical expectations (see Sellbom et al., 2018). Some concerns have been raised, however, about the reduced coverage of the boldness dimension in the SRP-4, and about weak associations between the SRP-III and core psychopathic traits as assessed by the PCL-R (Sandvik et al., 2012).

The Psychopathic Personality Inventory and the Psychopathic Personality Inventory–Revised (PPI and PPI-R; Lilienfeld & Andrews, 1996; Lilienfeld & Widows, 2005) include, respectively, 187 and 154 items. A 56-item short-form (PPI-SF; Tonnaer, Cima, Sijtsma, Uzieblo, & Lilienfeld, 2013) has also been developed and validated. A two-factor structure (Fearless Dominance [FD] and Self-centered Impulsivity [SCI]) underlies its eight subscales: Machiavellian Egocentricity (part of the SCI factor), Social Influence (FD), Fearlessness (FD), Cold-heartedness (not aligned with any factor), Rebellious Nonconformity (SCI), Blame Externalization (SCI), Carefree Nonplanfulness (SCI), and Stress Immunity (FD). The PPI and PPI-R have shown robust associations with other measures of psychopathy and antisocial behavior, along with promising convergent–discriminant validity results (Sellbom et al., 2018). Of note, intriguing associations have been found between the FD factor and adaptive correlates, which has generated considerable debate (e.g., Lilienfeld et al., 2012; Lynam & Miller, 2012). Findings on the nomological network of Coldheartedness are still scarce and warrant further investigations. At the present time, few data are available on the validity of the PPI-SF; it has shown some questionable internal consistency figures for a few subscales, but adequate convergent validity with PCL-R scores and aggression measures (Tonnaer et al., 2013).

The Triarchic Psychopathy Measure (TriPM; Patrick, 2010) includes 58 items and assesses three domains: Boldness (covering fearlessness, social dominance, and low stress reactivity), Meanness (callousness, exploitativeness, and interpersonal detachment), and Disinhibition (impulsivity, poor self-regulation, and low frustration tolerance). It has shown promising convergent and discriminant validity across multiple studies (Sellbom et al., 2018). However, despite results supporting the validity of the Boldness construct, some controversy regarding its relevance remains (e.g., Miller & Lynam, 2012). More research is needed to elaborate on its construct validity, clinical utility, and predictive validity (e.g., risk assessment).

The Elemental Psychopathy Assessment (EPA; Lynam et al., 2011) is based on the five-factor model (FFM) formulation, and assesses the maladaptive variants of 18 FFM traits. The 18 subscales can also be aggregated into four factors (Antagonism, Emotional Stability, Disinhibition,

and Narcissism; Few, Miller, & Lynam, 2013), and a total score can also be computed. Its original version includes 178 items; a short form, including 72 EPA items plus 16 validity items, has been developed recently (Lynam et al., 2013). It has the distinct advantage of being grounded in the extensively studied FFM model. Sellbom et al. (2018) report that most associations with external correlates (psychopathy measures, externalizing behaviors) are as expected from theory. However, some key validity features have been understudied thus far (e.g., its predictive validity, the associations between EPA scores and clinical ratings and laboratory tasks). Validation results from independent research teams are also lacking, as the only data available at the time of this writing have been reported by the authors of the instrument.

Finally, the Levenson Self-Report Psychopathy Scale (LSRP; Levenson et al., 1995) originally consisted of a 26-item questionnaire designed to assess primary (egocentrism, callousness, and relationships marked by duplicity and lack of empathy) and secondary (chronically unstable and antisocial lifestyle) psychopathy, mirroring the two-factor structure of Hare's Psychopathic Checklist (2003). The instrument has many highly valuable features for research and screening purposes: It is concise, free of charge, and validation data across multiple studies are mostly consistent with theory, as it has been associated in expected ways with other psychopathy and personality measures, externalized behavior, and results from laboratory tasks. Sellbom et al. (2018, p. 224) conclude that "the LSRP scales hold promise as a self-report of psychopathy."

However, some issues with regard to the psychometric properties of the original LRSP have been raised, including low internal consistency figures for the Secondary scale (approximately .60 to .70), poor coverage of the Fearless Dominance (PPI) or Boldness (TriPM) facets, and concerns regarding some aspects of its construct validity, for example, a failure for the Primary scale to show theoretically expected negative correlations with anxiety and neuroticism (Christian & Sellbom, 2016; Sellbom et al., 2018). The two-factor structure also showed poor replicability (e.g., Brinkley, Diamond, Magaletta, & Heigel, 2008; Sellbom, 2011).

In light of these results, and considering that many researchers have called into question the two-factor model of psychopathy (e.g., Cooke & Michie, 2001), Brinkley et al. (2008) have proposed a three-factor model of the LSRP, including Egocentric (10 items), Callous (4 items), and Antisocial (5 items) factors, akin to Cooke and Michie's (2001) conceptualization of psychopathy, which includes interpersonal, affective, and behavioral features. The three-factor model displayed better confirmatory factor analysis (CFA) model fits across multiple samples from community, college, university, and correctional settings across countries (e.g., Brinkley et al., 2008; Salekin, Chen, Sellbom,

Lester, & MacDougall, 2014; Sellbom, 2011; Shou, Sellbom, & Han, 2017). However, Brinkley et al.'s (2008) three-factor model showed some limitations in its correlations with external criteria (e.g., the Callous scale has not demonstrated the expected negative correlations with anxiety/neuroticism, while the Antisocial scale has been disproportionately associated to distress; Salekin et al., 2014; Sellbom, 2011). Furthermore, internal consistency reliability estimates for the Callous and Antisocial scales are frequently low ($\alpha < .70$) across studies, which can be explained by a limited number of items on each of these scales.

In an effort to refine the instrument, Christian and Sellbom (2016) recently developed the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale (E-LSRP), now including 36 items. Two of the three factors from Brinkley et al. (2008) benefited from additional items to significantly improve the representativeness of each construct and their internal consistency estimates (see Christian & Sellbom, 2016, for an in-depth description of the scale's development). The Callous (12 items) scale is more strongly correlated with psychopathic meanness and lack of empathy than the original scale, and is negatively related to distress, as expected from theory (e.g., Cleckley, 1941/1988). The Antisocial (13 items) scale is more strongly correlated with antisocial behaviors and has shown stronger associations with impulsivity scales. The Egocentric scale contains 11 items that were part of the initial LSRP version and remains largely unchanged. Correlations between E-LSRP and associated constructs, such as narcissism, lack of empathy, and antisocial behavior, showed better correspondence with theoretical predictions than Brinkley et al.'s (2008) 19-item model.

In sum, the E-LSRP represents an improvement over the original LSRP, which is one of the most commonly researched psychopathy self-report measures (e.g., Sellbom et al., 2018). It has shown solid internal consistency estimates and good external criterion validation, and maps onto the influential PCL-R three-factor model proposed by Cooke and Michie (2001). It also has its merits in contrast with the other existing instruments. The SRP-4 and the PPI-R are both proprietary instruments, and therefore not free for use; they are also longer than the E-LRSP. The TriPM and the EPA are free, but they are also both longer than the E-LSRP.

While there have been significant efforts to validate self-report psychopathy scales in English-speaking populations, there have been limited adaptations of valid self-report psychopathy questionnaires in the French language, despite the fact that French speakers represent a large population base of 274 million people worldwide (Organisation Internationale de la Francophonie, 2014). Savard, Lussier, and Sabourin (2014) did publish a validation study of the original 26-item LSRP, whose limitations were previously detailed. We were unable to find any published study pertaining to a French adaptation-validation of the PPI-R, the TriPM, or the EPA, and the only published study on a French adaptation of the SRP-III (Ducro, Saloppé, & Pham, 2016) was limited to $N = 18$ for its validation in a community sample. Therefore, the main purpose of this study was to validate the French version of the E-LSRP. Analyses include (a) internal consistency and item properties based on classical test theory; (b) factor structure using CFA and exploratory structural equation modeling (ESEM) to estimate model fits for the correlated three-factor proposed structure; (c) mean scale differences between women and men. Previous research on psychopathy suggests that men should evidence higher scores (e.g., Vitale, Smith, Brinkley, & Newman, 2002); (d) convergent and discriminant validity with measures of Dark Triad traits, pathological narcissism, empathy, impulsivity, substance abuse, and socially desirable responding; and (e) incremental validity of the 36-item version over Brinkley et al.'s 19-item scale.

Method

Participants and Procedure

A total of 432 French Canadian participants (342 women, age 18-76 years, $M = 30.79$, $SD = 11.78$) were recruited through social media, online message boards and institutional e-mail lists from two universities in the Province of Quebec, Canada. Informed consent was obtained from all individual participants included in the study. The only exclusion criterion was age less than 18 years. More than half of the participants were full-time or part-time students (51.3%), while 36.2% worked full-time or part-time as their main occupation. More than half (51.8%) had a university degree, and 64.9% had an annual revenue of CAD$30,000 or less.

Data were collected anonymously via online survey platforms (SurveyMonkey and LimeSurvey). No monetary compensation or incentive for participation was offered, but the participants had the opportunity to receive, on demand, a summary of the general findings (not their individual results) of the study. This study was approved by ethics review boards from Université du Québec à Trois-Rivières and Université Laval. As requested by the ethics review board, for the sake of informed consent, participants were informed that we were validating a personality questionnaire on undesirable social personality traits (psychopathic traits were not explicitly mentioned). Data were thoroughly examined by three of the authors in search of indiscriminate responding (i.e., selection of the same response option for every item on a scale); no participant was excluded on such basis.

Translation Procedure of the E-LSRP

A preliminary forward translation of the scale from English to French was made by two of the authors, who are fully

bilingual native French speakers with significant experience in the field of personality research and test adaptations; they made sure to use standard French and to avoid specific French Canadian words or idioms. Following suggestions by Jeanrie and Bertrand (1999), three content experts in the field of personality (who are both university professors and clinical psychologists) and one undergraduate student in psychology, all fully bilingual native French speakers, used quantitative ratings to assess content, conceptual, and linguistic equivalence of the original and the French versions. They were asked to rate items from both versions on a 0 to 3 scale (0 = different, 3 = similar) for all three forms of equivalence, and to comment on each item for clarity, relevance, and so on. Items with a mean rating <2.5 for any of the three forms of equivalence were revised until a score ≥2.5 was obtained. This resulted in minor revisions for three items (5, 10, and 36). A back-translation procedure was then performed by a native English qualified translator, who was blind to the original scale, and familiar with the field of psychology. Finally, back-translated items were reviewed for similarity to the original English version by both authors of the original E-LSRP, which resulted in fine-tuning and minor rewording of six items (5, 7, 8, 11, 25, and 26).

Measures

In addition to the 36-item E-LSRP, which was scored on a 6-point Likert-type scale, and a short sociodemographic form, the following instruments were used (they are presented here in the order in which they were administered):

The Interpersonal Reactivity Index–French Version (IRI-F; Davis, 1980; translated and validated by Gilet, Mella, Studer, Grühn, & Labouvie-Vief, 2013), measures empathy and its components. The 28-item self-report is scored on a 7-point Likert-type scale. Two subscales reflect the cognitive component of empathy: Fantasy ($\alpha = .81$) corresponds to a vivid involvement in imaginary stories, whereas Perspective Taking ($\alpha = .87$) reflects the ability to adopt other's point of view. Two other subscales assess the affective component of empathy: Empathic Concern ($\alpha = .76$) refers to the motivation to care about others, whereas Personal Distress ($\alpha = .83$) is defined by the tendency to feel discomfort in response to other's emotional distress. These subscales should be used separately since the instrument is not intended to measure global empathy (Konrath, 2013).

The French adaptation of the Short UPPS-P Impulsive Behavior Scale (SUPPS-P; Lynam, Smith, Whiteside, & Cyders, 2006; translated and validated by Billieux et al., 2012) provides a measure of impulsivity and its constituents. The 20-item self-report is scored on a 4-point Likert-type scale. It provides a global impulsivity score ($\alpha = .88$) and five subscores: (a) Urgency (experiencing strong impulses under negative affect states; $\alpha = .86$), (b) Positive Urgency (acting recklessly under positive affect states; $\alpha = .75$), (c) Lack of Premeditation (engaging in behaviors without pondering their consequences; $\alpha = .86$), (d) Lack of Perseverance (the incapacity to stay focused on a difficult task; $\alpha = .90$), and (e) Sensation Seeking (engaging in new and stimulating activities; $\alpha = .81$).

The Dirty Dozen (DD; Jonason & Webster, 2010; French translation and validation by Savard et al., 2017) is a 12-item measure, using a 9-point Likert-type scale, which assesses Machiavellianism ($\alpha = .88$), psychopathy ($\alpha = .73$), and narcissism ($\alpha = .85$) according to the Dark Triad conceptualization.

The Brief Version of the Pathological Narcissism Inventory (B-PNI; Schoenleber, Roche, Wetzel, Pincus, & Roberts, 2015; translated and validated by Diguer et al., 2014) is a 28-item self-report, scored on a 7-point Likert-type scale. It yields two dimensions of pathological narcissism: Grandiosity ($\alpha = .82$), which refers to an inflated self-image, exploitative behaviors, and fantasies of power and perfection; and Vulnerability ($\alpha = .89$), which corresponds to deflated self-esteem, proneness to feelings of shame and anger, and interpersonal hypersensitivity.

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.0; Humeniuk et al., 2008; Khan et al., 2011; adapted by Maheux-Caron, 2016), is a widely used measure of substance misuse. It covers a wide range of substances, and participants must answer seven questions for each of them pertaining to past and present use, impairment associated with use, and so on. It has been slightly adapted to change the question format from an interview to a self-report rating. Only questions pertaining to alcohol and marijuana use ($\alpha = .70$ and $.78$, respectively) were considered in the present study, other substances showing very low (<5%) levels of endorsement.

The brief 21-item adaptation of the Balanced Inventory for Desirable Responding (BIDR; Paulhus, 1984; French–Canadian translation and validation by D'Amours-Raymond, 2011) assesses socially desirable responding. It is scored on a 7-point Likert-type scale. Paulhus's (1984) suggested recode procedure to score items dichotomously was used. The instrument provides a global score (KR-20 = .67), and two subscale scores: Self-Deceptive Enhancement (KR-20 = .59), and Impression Management (KR-20 = .63).

Statistical Analyses

To assess factor structure, a correlated three-factor model was computed using CFA, where every item loads strictly on its respective factor (Egocentrism, Callous, Antisocial) without allowing cross-loading on the other latent factors (Marsh et al., 2009). Because correlations between factors were previously showed to be relatively large (Christian &

Sellbom, 2016), and because CFA models require strong measurement assumptions that do not always hold with actual personality data and therefore prevent to achieve reasonable fit to observed data (Hopwood & Donnellan, 2010; Marsh et al., 2009), a three-factor ESEM model was also examined. In ESEM models, items loadings on their a priori factors were freely estimated, as well as all cross-loadings (Asparouhov & Muthén, 2009). Following Marsh et al. (2009) and Morin, Marsh, and Nagengast (2013), we used an oblique Geomin rotation with an epsilon value of 0.5 in ESEM models.

All structural equation modeling analyses were performed using Mplus version 7.0 (L. K. Muthén & Muthén, 2012) with the robust weighted least square estimator (WLSMV), which is better suited to the ordered-categorical nature of Likert-type scales (Beaducel & Herzberg, 2006). Adequate model fit was determined using the χ^2 goodness-of-fit index, the comparative fit index (CFI; >.90), the Tucker–Lewis index (TLI; >.90), and the root mean square error of approximation with a 90% confidence interval (RMSEA; <.06; e.g., Marsh, Hau, & Wen, 2004). Model comparisons of fit improvement were evaluated using the MPlus DIFFTEST function (MD$\Delta\chi^2$; Asparouhov & Muthén, 2006; B. O. Muthén, 2004). All other analyses were carried out using the Statistical Package for the Social Sciences (SPSS) 24.0 software.

Results

Internal consistency was good for the global E-LSRP (α = .88) and its three subscales (Egocentric α = .84; Callous α = .77; Antisocial α = .81; see Table 1). One item from the Egocentric Scale (Item 7) and one from the Callous Scale (Item 23) had corrected item–scale correlation figures below the generally accepted threshold of .30 (Field, 2005). Item 7 was also significantly more endorsed by participants, as demonstrated by the item high average score. Men scored significantly higher on the global scale and on the three factors compared with women.

Six models were tested for factor analyses: (a) CFA three correlated factors (Model 1a), (b) CFA three correlated factors allowing correlations between residuals (Model 1b), (c) CFA 19-item version (Model 1c), (d) ESEM three correlated factors (Model 2a), (e) ESEM three correlated factors allowing correlations between residuals (Model 2b), and (f) ESEM 19-item version (Model 2c). The original CFA model (1a) was associated with a questionable incremental fit statistic (CFI < .90). Modification indices were consulted to determine whether correlations between item residuals would improve model fit; only theoretically defensible modifications were considered. Seven pairs of item residuals were eventually implemented (Item pairs 18-19, 18-20, 19-20, 24-26, 27-28, 30-35, and 32-34), which all shared systematic item variances above and beyond what was explained by the latent factor (e.g., anger, emotional detachment, nonplanfulness). These modifications resulted in a model (Model 1b) with still questionable but much improved model fit (see Table 2; MD$\Delta\chi^2$ = 547.89; df = 7, p < .001). Intercorrelations between the resulting latent factors were as follows: Egocentric–Callous r = .75, Egocentric–Antisocial r = .47, and Callous–Antisocial r = .45 (all ps < .001). Item loadings for the Egocentric (range .23 to .80; M = .62), Callous (range .38 to .69; M = .51), and Antisocial (range .31 to .83; M = .51) factors were acceptable.

As shown in Table 2, the original ESEM (Model 2a) showed superior fit indices, although CFI and TLI suggested an inadequate model fit. After implementing the same modifications as for the CFA model, the fit was substantially improved and deemed adequate (Model 2b; MD$\Delta\chi^2$ = 417.49; df = 7, p < .001). In comparison with the 19-item model, CFI coefficient was inferior, while TLI and RMSEA were better, for Model 2b. Most of the item loading coefficients from the final ESEM model were adequate and were associated with their expected factors (Figure 1). However, it was not the case for Items 12, 13, and 23 (not associated with their expected factor), and Items 3, 4, 14, 16, 17, and 22 (which showed low loading coefficients, <.40).

Convergent validity was assessed, first, through bivariate zero-order correlations between E-LSRP scores and external criteria. Unique contribution of each subscale, after partialing out shared variance with the other two subscales, was also computed. To do so, we created residualized scores for each E-LSRP subscale by computing a regression for each scale, with the two other subscales as predictors. These residualized scores, which represent the unique, unshared variance of each subscale, were then correlated with external criteria. Results from Table 3 show significant correlations between E-LSRP total score and almost all external criteria, in the expected direction. Among E-LSRP subscales, when considering unique variance from each subscale, egocentrism showed the strongest associations with DD, Machiavellianism and narcissism, and with B-PNI Grandiosity; callousness showed the strongest associations with DD psychopathy, and with IRI-F Fantasy, Empathic Concern and Personal Distress (negative); and antisociality showed the strongest associations with B-PNI Vulnerability, IRI-F Perspective-Taking (negative), all subscales and total score from the SUPPS-P, and with alcohol and marijuana abuse. Significant negative correlations with socially desirable responding (BIDR total and subscores) were found for E-LSRP Total score, egocentrism, and antisociality.

In line with Christian and Sellbom (2016), we tested the incremental convergent validity of the 36-item E-LSRP in comparison with the 19 items proposed by Brinkley et al. (2008). Comparisons for dependent samples were computed using Steiger's t test. Results from Table 3 show some

Table 1. Descriptive Statistics, Gender Differences, Internal Consistency, and Interitem Correlations for the French Version of the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale (E-LSRP; N = 432).

Total (α = .88, M = 2.38, SD = 0.52, t_{gender}[431] = 6.40, $p <$ .001, Hedges's g = 0.76, CI 95% = [0.52, 0.99])

Egocentric (α = .84, M = 2.25, SD = 0.70, t_{gender}[431] = 3.87, $p <$ .001, Hedges's g = 0.46, CI 95% = [0.22, 0.69])

	M	SD	ISC	1	2	3	4	5	6	7	8	9	10	11
1	2.00	1.05	.57		.49c	.29c	.26c	.42c	.37c	.14b	.38c	.32c	.39c	.43c
2	2.08	1.13	.47			.29c	.28c	.34c	.22c	.06	.28c	.24c	.36c	.38c
3	2.29	1.17	.46				.37c	.38c	.17c	.03	.36c	.31c	.36c	.31c
4	2.41	1.42	.42					.36c	.20c	.10a	.23c	.29c	.34c	.23c
5	2.05	1.17	.64						.37c	.23c	.56c	.31c	.50c	.40c
6	2.19	1.17	.48							.28c	.44c	.18c	.36c	.36c
7	4.40	1.36	.25								.30c	.06	.16b	.28c
8	2.03	1.16	.64									.31c	.54c	.48c
9	1.45	.84	.44										.44c	.32c
10	1.66	.93	.64											.45c
11	2.30	1.22	.59											

Callous (α = .77, M = 2.18, SD = 0.64, t_{gender}[431] = 9.10, $p <$ .001, Hedges's g = 1.07, CI 95% = [0.83, 1.31])

	M	SD	ISC	12	13	14	15	16	17	18	19	20	21	22	23
12	2.07	1.07	.32		.26c	.15b	.32c	.22c	.11a	.12a	.12a	.12a	.15b	.13b	.26c
13	2.16	1.27	.31			.31c	.26c	.19c	.09	.06	.08	.11a	.33c	.12a	.21c
14	2.08	1.11	.38				.28c	.20c	.12a	.09	.13b	.23c	.37c	.09	.23c
15	1.68	.98	.56					.32c	.22c	.36c	.32c	.34c	.41c	.19c	.25c
16	1.89	1.07	.45						.26c	.27c	.33c	.24c	.22c	.33c	.12a
17	2.02	1.26	.34							.27c	.32c	.21c	.15b	.26c	.05
18	2.53	1.20	.45								.43c	.39c	.29c	.19c	.11a
19	2.36	1.45	.50									.57c	.24c	.27c	.04
20	2.66	1.56	.48										.28c	.16b	.11a
21	1.84	1.03	.49											.15b	.26c
22	2.29	1.03	.31												.07
23	2.46	1.26	.25												

Antisocial (α = .81, M = 2.66, SD = 0.69, t_{gender} [431] = 2.50, $p =$ .02, Hedges's g = 0.30, CI 95% = [0.06, 0.53])

	M	SD	ISC	24	25	26	27	28	29	30	31	32	33	34	35	36
24	2.51	1.43	.52		.33c	.46c	.23c	.16b	.38c	.06	.45c	.16b	.29c	.31c	.21c	.28c
25	2.99	1.27	.36			.25c	.30c	.24c	.12a	.06	.33c	.18c	.13b	.21c	.09	.12a
26	2.56	1.37	.36				.18c	.16b	.21c	.00	.31c	.13b	.12a	.26c	.15b	.10a
27	3.44	1.48	.40					.52c	.21c	.10a	.32c	.10a	.23c	.14b	.14b	.16b
28	3.09	1.33	.43						.15b	.19c	.32c	.14b	.22c	.20c	.24c	.21c
29	3.37	1.38	.48							.22c	.32c	.19c	.53c	.16b	.32c	.33c
30	2.31	1.25	.34								.08	.27c	.29c	.15b	.59c	.29c
31	2.15	1.16	.53									.22c	.32c	.22c	.24c	.27c
32	2.52	1.12	.39										.26c	.44c	.30c	.29c
33	2.31	1.14	.52											.24c	.35c	.47c
34	2.82	1.25	.44												.34c	.24c
35	2.86	1.41	.50													.34c
36	1.61	.90	.47													

Note. ISC = Item–scale correlations (corrected); CI = confidence interval; SD = standard deviation. A 6-point Likert-type scale (1 = *Totally disagree*; 6 = *Totally agree*) was used.
[a]$p <$ .05. [b]$p <$ .01. [c]$p <$ .001.

Table 2. Goodness-of-Fit Statistics for the Models Estimated on the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale and Brinkley, Diamond, Magaletta, and Heigel's (2008) 19-Item Version.

Models	WLSMV χ^2 (*df*)	CFI	TLI	RMSEA	RMSEA 90% CI
1. CFA-correlated three-factor					
a. No correlations between residuals	2103.39* (591)	.786	.771	.077	[.073, .080]
b. With correlations between residuals	1582.08* (584)	.859	.847	.063	[.059, .066]
c. 19-Item version	556.85* (149)	.889	.872	.079	[.072, .086]
2. ESEM-correlated three-factor					
a. No correlations between residuals	1535.27* (525)	.857	.828	.067	[.062, .070]
b. With correlations between residuals	1144.83* (518)	.911	.892	.053	[.049, .057]
c. 19-Item version	411.09 (117)	.920	.883	.076	[.068, .084]

Note. WLSMV χ^2 = WLSMV robust weighted least square estimator chi square; *df* = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; RMSEA [90% CI] = 90% confidence interval for the RMSEA point estimate. Correlations between residuals have been applied to the model, based on conceptual similarities and overlaps between item pairs: Items 18 and 19 (shared emotional component); 18 and 20 (sadness); 19 and 20 (shared emotional component); 24 and 26 (anger); 27 and 28 (boredom); 30 and 35 (planning); and 32 and 34 (acting without thinking).
*$p < .01$.

significant differences between total scores from the 19-item and the 36-item version for DD psychopathy, and IRI-F Fantasy and Personal distress, for which the longer version showed stronger correlations in the expected direction. At factors level, significant differences were found for the two scales that benefited from significant item addition in the 36-item version (callousness and antisociality). For the Callous subscale, differences favoring the longer version were found for DD psychopathy, and for IRI-F Fantasy, Empathic Concern and Personal Distress; for the Antisocial subscale, significant differences in favor of the longer version were found for IRI-F Fantasy and Personal Distress, SUPPS-P total score, Lack of Premeditation and Sensation Seeking subscales, and marijuana abuse; the 19-item version showed a stronger association with vulnerable narcissism, indicating better discriminant validity for the longer version.

Discussion

The purpose of the present study was to report on the psychometric properties and validation of the French adaptation of the E-LSRP Scale. Analyses for validation purposes included internal consistency and item properties based on classical test theory, women–men differences, factor structure using CFA and ESEM, convergent–discriminant validity, and incremental validity of the 36-item version over a 19-item version (Brinkley et al., 2008).

Internal consistency coefficients were all within acceptable ranges for psychosocial research and were quite similar to the original English version. Means and ranges obtained in the current study were in between those reported by Christian and Sellbom (2016) in their two validation studies of the E-LSRP, which may reflect sampling differences, as our sample included a higher proportion of university students and

female participants. There were significant and theoretically meaningful correlations between items within each scale, with no disproportionately high figures. Based on descriptive results, Item 7 ("My main purpose in life is getting as many goodies as I can") seems problematic. This may be due to a lack of a satisfying French equivalent for the English term "goodies," which was translated into "*bonnes choses*" (back-translated into "good things"). This translation might not have captured the hedonistic connotation of the original item, and rather reflected a more normative behavior (i.e., to seek what is best for oneself).

The three-factor structure of the E-LSRP was reproduced in CFA and ESEM models. However, some fit coefficients were inferior compared with the 19-item version proposed by Brinkley et al. (2008). Adding items to the instrument might have entailed both benefits and costs: It not only allowed to capture a broader range of attitudes and behaviors pertaining to the construct, especially for the Callous and Antisocial scales, but it also reduced its homogeneity and parsimony. RMSEA was better for the longer instrument, but this result must be interpreted with caution, as this statistic tends to increase as the degrees of freedom decrease (Kenny, Kaniskan, & McCoach, 2015). In terms of factor loadings, these were generally acceptable in the CFA model, but the model itself was associated with questionable fit to the observed data.

For the ESEM models, despite being in an acceptable range (.30 to .39 for the most part), loadings for Items 3, 4, 14, 16, 17, and 22 were all below .40, which may suggest that they may not be the most central components of their respective factors. Items 12 and 23 had significant loadings with egocentrism rather than with callousness, while Item 13 did not load on any factor. One explanation could be that they are all reverse items. Problems related to reverse items have been well documented, particularly poor model fit in
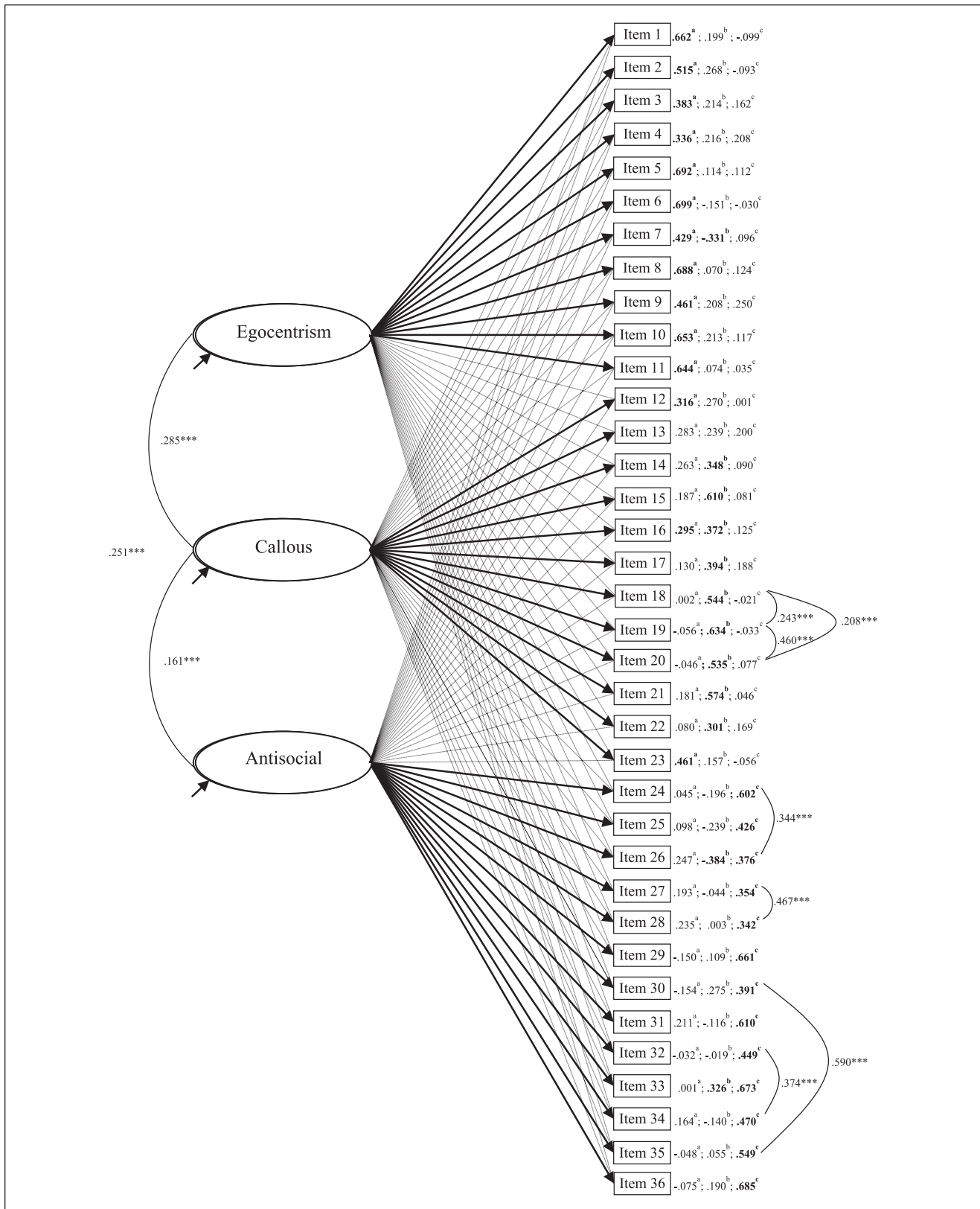
Figure 1. Exploratory Structural Equation Modeling (ESEM) of the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale Dimensions. Coefficients are in boldface when $\geqslant$ .30 (rounded).
[a]Item loading coefficient for the Egocentrism subscale. [b]Item loading coefficient for Callous subscale. [c]Item loading coefficient for the Antisocial subscale.
***$p < .001$.

Table 3. Convergent and Discriminant Validity of the French–Canadian Adaptation of the Expanded Version of the Three-Factor Levenson Self-Report Psychopathy Scale (E-LSRP), With a Comparison Between the 19-Item and the 36-Item Versions.

Variable	E-LSRP total score 19 Items	E-LSRP total score 36 Items	E-LSRP Egocentric 19 Items	E-LSRP Egocentric 36 Items	E-LSRP Egocentric Unique variance[d]	E-LSRP Callous 19 Items	E-LSRP Callous 36 Items	E-LSRP Callous Unique variance[d]	E-LSRP Antisocial 19 Items	E-LSRP Antisocial 36 Items	E-LSRP Antisocial Unique variance[d]
DD (n = 357)											
Machiavellianism	.67[c]	.63[c]	.64[c]	.65[c]	.42[c]	.49[c]	.45[c]	.10[a]	.30[c]	.38[c]	.15[b]
Psychopathy	.56[c]	.66[c]	.53[c]	.53[c]	.16[b]	**.41[c]**	**.65[c]**	.42[c]	.28[c]	.37[c]	.14[b]
Narcissism	.38[c]	.31[c]	.34[c]	.35[c]	.29[c]	.16[b]	.12[a]	−.10	.30[c]	.26[c]	.15[b]
B-PNI (n = 351)											
Grandiose	.48[c]	.40[c]	.42[c]	.42[c]	.34[c]	.19[c]	.11[a]	−.17[b]	.41[c]	.39[c]	.26[c]
Vulnerable	.52[c]	.43[c]	.41[c]	.39[c]	.26[c]	.12[a]	.17[b]	−.08	.55[c]	.43[c]	.31[c]
IRI-F (n = 381)											
Fantasy	−.04	−.18[c]	−.11[a]	−.10[a]	.09	**−.13[a]**	**−.37[c]**	−.39[c]	.15[b]	.02	.10[a]
Perspective-Taking	−.43[c]	−.43[c]	−.36[c]	−.36[c]	.15[b]	−.20[c]	−.27[c]	−.07	−.36[c]	−.36[c]	−.24[c]
Empathic Concern	−.52[c]	−.60[c]	−.51[c]	−.52[c]	−.14[b]	**−.47[c]**	**−.74[c]**	−.56[c]	−.16[b]	−.18[b]	.07
Personal Distress	*.10*	−.04	.03	.04	.15[b]	−.04	−.19[c]	−.26[c]	**.22[c]**	**.05**	.07
SUPPS-P total (n = 362)	.43[c]	.47[c]	.24[c]	.24[c]	.05	.18[b]	.08	.13[a]	**.56[c]**	**.70[c]**	.66[c]
Urgency	.37[c]	.34[c]	.20[c]	.20[c]	.07	.12[a]	.05	.12[a]	.51[c]	.51[c]	.48[c]
Positive Urgency	.24[c]	.23[c]	.12[a]	.13[b]	.08	.02	.07	.22[c]	.37[c]	.43[c]	.45[c]
Lack of Premeditation	.18[b]	.27[c]	.04	.05	.09	.07	−.01	−.09	**.31[c]**	**.53[c]**	.55[c]
Lack of Perseverance	.34[c]	.37[c]	.19[c]	.20[c]	.00	.19[c]	.17[b]	.04	.40[c]	.46[c]	.41[c]
Sensation Seeking	.21[c]	.26[c]	.17[b]	.17[b]	.04	.14[b]	.12[a]	.02	*.17[b]*	*.31[c]*	.26[c]
ASSIST V3 (n = 333)											
Alcohol	.10	.15[b]	.08	.08	.02	.03	.02	−.05	.11[a]	.23[c]	.22[c]
Marijuana	.31[c]	.35[c]	.26[c]	.26[c]	.11[a]	.16[b]	.16[b]	−.00	.24[c]	.37[c]	.29[c]
BIDR total (n = 131[e])	−.38[c]	−.37[c]	−.26[b]	−.27[b]	−.12	−.22[a]	−.14	.02	−.35[c]	−.38[c]	−.28[b]
Self-Deceptive Enhancement	−.20[a]	−.16	−.03	−.04	.02	−.04	.06	.12	−.40[c]	−.34[c]	−.33[c]
Impression Management	−.38[c]	−.39[c]	−.33[c]	−.34[c]	−.17	−.27[b]	−.22[a]	−.06	−.19[a]	−.28[b]	−.15

Note. E-LSRP = Expanded version of the three-factor Levenson Self-Report Psychopathy Scale; DD = Dirty Dozen; B-PNI = Brief Pathological Narcissism Inventory; IRI-F = Interpersonal Reactivity Index; SUPPS-P = Short UPPS-P Impulsive Behavior Scale; ASSIST = Alcohol, Smoking and Substance Involvement Screening Test; BIDR = Balanced Inventory for Desirable Responding. All instruments in their respective French adaptations.
ap < .05. bp < .01. cp < .001. dComputed for each factor of the 36-item version. eSmaller n due to the addition of the instrument later in the data collection process. All correlations using Pearson's r, two-tailed. Boldfaced entries denote correlations different at p < .01, two-tailed, for the 19-item and the 36-item versions. Italicized denote correlations different at p < .05, two-tailed, for the 19-item and the 36-item versions.

factor models (e.g., Marsh, 1986), because (a) they can lead to confusion for respondents due to increased difficulty in interpretation, (b) they cannot control for acquiescence bias in the factor structure of the scale even if they can control for acquiescence bias in the composite score of the scale, and (c) they may create a method factor, resulting in a scale measuring something that researchers did not intend to measure (Zhang, Noor, & Savalei, 2016). Some of the same reverse items were also problematic in the 26-item LSRP French adaptation (Savard et al., 2014). However, since the English version fits adequately, this issue appears to be more relevant to the translation than to the original instrument. On the other hand, these overlaps between these two factors may represent the vestiges of the original theoretical conceptualization of psychopathy (primary and secondary) on which the first version of the instrument was based on, as the Egocentric and Callous factors were regrouped in accordance with the classical two-factor psychopathy model (e.g., Hare, 2003). This may contribute to explain the mixed

results obtained, even with the ESEM model. Item 26 was also somewhat problematic, as it had very similar loadings for the Callous factor (−.384) and its intended Antisocial factor (.376). The reverse-keyed hypothesis mentioned above cannot account for this result. Problems relative to this item may be related to the use of an idiom ("blowing my top") which does not have a clear equivalent in the French language.

As expected based on previous studies from both forensic populations and community samples (e.g., Cale & Lilienfeld, 2002; Vitale et al., 2002), endorsement of psychopathic traits was higher in men than in women. A recent meta-analysis based on 50 studies reported an effect size of r = .29 for gender difference (men > women) in psychopathic traits (Muris, Merckelbach, Otgaar, & Meijer, 2017). These authors hypothesized that this difference might have to do with the loading of psychopathy on externalized antisocial behaviors, which might be due to biological and social factors (e.g., testosterone levels, gender role). Others

have speculated that psychopathy, from an evolutionary standpoint, might be more adaptive in men than in women (e.g., Jonason, Li, Webster, & Schmitt, 2009), and that men are more likely to benefit from short-term mating strategies, which entail risk taking, competitiveness, and limited emotional investment, all facilitated by psychopathic traits.

Convergent validity results are coherent for the most part with theoretical expectations about psychopathy. When considering the unique contribution of each E-LSRP factor based on the 36-item version, egocentrism was the most strongly associated with DD Machiavellianism and Narcissism, callousness showed the strongest association with DD Psychopathy, while antisociality was equally correlated with DD Machiavellianism and Psychopathy. Manipulativeness and egocentricity have typically been located in the interpersonal factor of PCL-R models of psychopathy (e.g., Cooke & Michie, 2001; Hare, 2003), rather than the affective factor. Given that the item content of the E-LSRP Egocentricity scale is closely related to scamming, lying, manipulating, and self-centeredness, the observed pattern of association with DD Machiavellianism and Narcissism is coherent with prediction.

One may have expected stronger associations between callousness and DD Narcissism based on Dark Triad theory, as the Dark Triad traits have been conceptualized as sharing a common callousness that promotes interpersonal manipulation (e.g., Jones & Paulhus, 2014). Of note, Jones and Paulhus found a nonsignificant correlation between DD narcissism and callousness, as measured by the SRP-III. Thus, these results call into question whether callousness is really a key factor underlying DD narcissism.

B-PNI grandiosity showed quite similar associations with E-LSRP egocentrism and antisociality, which raises some concerns about the discriminant validity of the two scales. Significant positive correlations between B-PNI vulnerable narcissism and the E-LSRP global scale and both the Antisocial and Egocentric factors were also found, a result that was somewhat unexpected. Narcissistic vulnerability has not only been linked with depressive states, shame, and interpersonal sensitivity but also with anger-hostility and reactive aggression (see, Krizan & Johar, 2015, for a review), which might be compatible with some antisocial features. Of note, a recent investigation about a hypothesized "vulnerable Dark Triad," including borderline PD, vulnerable narcissism, and Factor 2 psychopathy, has revealed significant interrelations and similar nomological networks between the three constructs (Miller et al., 2010). The interplay between narcissistic vulnerability and antisociality warrants further investigation, as they appear to present not only some similarities but also major conceptual differences (e.g., disinhibition is not considered central to vulnerable narcissism). Associations between E-LSRP egocentrism and B-PNI vulnerability might due to some conceptual overlap regarding one particular facet of vulnerability and egocentrism, that is,

Entitlement Rage, which corresponds to angry, resentful reactions when entitlement needs are frustrated.

As expected, callousness showed the strongest associations with three of the IRI-F subscales (Fantasy, Empathic Concern, and Personal Distress), highlighting a theoretically meaningful relation between insensitivity and an emptier, colder inner imaginary life, a markedly lower concern for other people's feelings, and less distress in the face of other's emotional distress. The strong, unique association between callousness and poor Empathic Concern is important, as the latter has received increased empirical attention in neurobiological studies as being a key feature of psychopathy (e.g., Decety & Cowell, 2014); the corresponding E-LSRP subscale might be a useful screening tool in neuropsychological studies pertaining to psychopathy and empathy. Antisociality showed the strongest unique association with diminished Perspective-Taking, a component of cognitive empathy; this is in line with previous research (e.g., Chalmers & Townsend, 1990) that showed that perspective-taking skills promote prosocial and reduce violent and aggressive behaviors. Christian and Sellbom (2016) found very similar correlations between the three E-LSRP scales and cognitive empathy deficits (as measured by the Basic Empathy Scale; Jolliffe & Farrington, 2006), while the Callous scale showed a markedly stronger negative association with affective empathy. These results highlight once again the centrality of affective empathy deficits in psychopathy, while also suggesting that some aspects of cognitive empathy may also be affected to a certain degree. Disentangling psychopathy and empathy components might be crucial for a better understanding of the interplay between psychopathic traits and empathic deficits (Decety & Cowell, 2014).

In accordance with the disinhibition and low constraint features of antisociality, this E-LSRP factor showed the strongest unique associations with all SUPPS-P subscales and substance misuse; unique associations with the two other factors were nonsignificant or much lower. Our pattern of results for impulsivity and sensation seeking is similar to the ones reported by Christian and Sellbom (2016), who used the Emotionality-Activity-Sociability-Impulsivity Temperament Survey (EASI; Buss & Plomin, 1984) and the Sensation Seeking Scale–V (Zuckerman, 1979).

E-LSRP global score showed negative associations with socially desirable responding, a result which was mainly driven by the Antisocial factor. Self-reports have been criticized for failing to accurately capture the core features of psychopathy, notably by underestimating criminal behavior (e.g., Hare, 1996). However, recent findings have contributed to alleviate this concern. Results from a recent study have disputed the widespread notion that the validity of self-report psychopathy measures is markedly weakened by response distortion (Watts et al., 2016). Evidence of negative and significant associations between psychopathy and

socially desirable responding is cumulating (e.g., Gamache et al., 2018; Ray et al., 2013; Savard et al., 2017; Verschuere et al., 2014). It has been suggested that faking good measures may reflect true variance in personality rather than response bias in individuals with psychopathic traits (Verschuere et al., 2014). Psychopathic traits may be egosyntonic, and psychopathic individuals may simply be unconcerned with social acceptability because of traits such as egocentrism, callousness, bravado, and the like.

Convergent validity results showed an incremental validity of the 36-item version of the French E-LSRP over Brinkley et al.'s 19 items; this advantage was more obvious at factors level. The Callous and Antisocial factors from the longer version showed stronger associations in a theoretically expected way with key components of empathy and impulsivity. The 19-item version, in contrast with the 36-item version, showed significant positive associations with IRI-F Fantasy and Personal Distress, which are at odds with theoretical expectations about psychopathy. The present results suggest that the 36-item version is preferable to the shorter 19-item version, a result in line with Christian and Sellbom's findings for the original English version (2016). Of note, these findings are strengthened by the fact that the present study used a totally different set of external criterion variables, which suggest that the incremental value of the longer version might be generalizable to a wide range of variables.

Limitations

Limitations to the present study include an unbalanced gender ratio (nearly 80% of women), which prevented the use of some supplemental analyses for validation (e.g., structural invariance analyses, distinct factor analyses for both genders). Of note, however, previous large-scale studies have shown the factor structure of psychopathy to be gender invariant. A large-scale, multicultural study (with $N >$ 33,000 from 58 nations across 11 major regions worldwide) showed invariance across gender, and reasonably good evidence of invariance across females from different regions (Neumann et al., 2012), for the SRP. With the E-LSRP, Christian and Sellbom (2016) found only one item loading differently across genders, and the magnitude of this effect did not appear to be theoretically or practically meaningful. Furthermore, the LSRP was found to be gender invariant in factor structure in a previous article that compared university and prison samples (Sellbom, 2011). Given that psychopathic traits are more salient in men, the present sample likely had relatively low levels of psychopathy. Even though the translation procedure closely followed reputable guidelines for test translation and adaptation (e.g., Hambleton, 2001; Vallerand, 1989), there were a few discrepancies with some of their recommendations, for example, the instrument's stability over time could not be tested. The mention

of "undesirable social personality traits" at the time of recruitment may have introduced a socially desirable responding bias; however, the administration of the BIDR for a significant portion of the sample mitigates this concern, as it did not reveal the presence of outlier responders. Even though data were thoroughly examined to rule out indiscriminate responding, the questionnaires did not include validity check items to rule out random or noncooperative responding. We did not control for the possibility that responders might have had personality traits (e.g., altruism, openness to experience) that influenced their decision to participate in this online study, for which we offered only a minimal compensation (i.e., a summary of the study's main findings). As mentioned earlier, French versions of other widespread psychopathy self-reports could not be used for concurrent validity purposes, as these measures are either unavailable in the French language (PPI, TriPM, EPA), or are available but with very limited validation data (SRP-4).

The lack of published studies about valid psychopathy measures in the French language underlines the dire need for such research, and the present study will contribute to fill this gap. Even though this validation study was conducted in the Province of Quebec, standard French was used for the translation, and French–Canadian words or idioms were avoided to maximize its generalizability to multiple French-speaking communities (e.g., France, Switzerland, Belgium).

Conclusion

Overall, the French adaptation of the E-LSRP Scale possesses sound psychometric properties, mostly comparable with the original version. The impetus of developing and disseminating valid and reliable measures of psychopathic traits in the general population, given the host of deleterious impacts associated with psychopathy, is glaring; the present validation study should contribute to this effort. In its present form, the E-LSRP should be considered as a viable option for research and screening purposes in French-speaking communities. It could open the field of psychopathy research to a greater degree in French-speaking populations, as there are at this time no other free of charge and/or properly validated alternatives, which are necessary for large-scale studies. Furthermore, the present study is also novel in that there has been no investigation of this updated version of the LSRP beyond Christian and Sellbom's (2016); it will contribute to build on their research and provide valuable additional data on the instrument. Our results also offer valuable insights on currently debated topics in the field of psychopathy assessment and research, for example, its underlying structure, the intriguing relationship between antisociality and vulnerable narcissism, the thorny relationship between psychopathy and self-report questionnaires, and the relationship between psychopathic

traits and affective–cognitive empathy. Further research on the E-LSRP should focus on collecting additional data on male, correctional, and forensic samples to allow for a more complete testing of the instrument's factor structure, criterion validity, and predictive validity.

Declaration of Conflicting Interests

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ORCID iDs

Dominick Gamache [iD] https://orcid.org/0000-0002-8735-712X
Claudia Savard [iD] https://orcid.org/0000-0002-1286-0257

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