

Development and Initial Validation of the Comprehensive Assessment of Psychopathic Personality–Self-Report (CAPP-SR)

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The Comprehensive Assessment of Psychopathic Personality (CAPP; Cooke, Hart, Logan, & Michie, 2012) is a concept map that entails 33 personality traits; it integrates historical and contemporary conceptualizations and operationalizations of psychopathy. The current project sought to develop and validate a self-report inventory to operationalize this concept map. Study 1 reported on the development of a CAPP Self-Report (CAPP-SR) inventory using expert ratings to select items for an experimental version. Next, these experimental items were evaluated in an online sample of 550 community-dwelling U.S. participants who were carefully recruited to match current U.S. census data on gender, age, and race/ethnicity. The application of various latent modeling and classical test theory procedures resulted in the 99-item CAPP-SR measure. In Study 2, two samples from the United States and New Zealand were used for initial validation purposes. CAPP scales showed a promising pattern of convergent validity with other self-report psychopathy scales. The new CAPP-SR inventory is promising for furthering research on this emerging psychopathy model in correctional, forensic, business, and other settings in which this clinical construct is of high importance.

Public Significance Statement

This article details the development and validation of a new measure of the psychopathic personality from a new theoretical perspective. The results were supportive of the usefulness of this inventory in measuring these personality characteristics. These findings can have implications for both research practice, and possibly later, applied work.

Keywords: psychopathy, Comprehensive Assessment of Psychopathic Personality, scale development, self-report

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Psychopathy is an important clinical construct that has been discussed in the literature for centuries (e.g., Pinel, 1806). It has been operationalized in every iteration in the *Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 1952, 2013)*, albeit with varying degrees of construct validity.

This construct has become especially current in forensic and correctional psychology for its perceived utility in predicting reoffending (e.g., Skeem, Polaschek, Patrick, & Lilienfeld, 2011). Furthermore, the effect that individuals who have elevated psychopathic traits have on society beyond forensic/correctional settings have been documented as well (e.g., in organizational settings; Babiak, Neumann, & Hare, 2010; in community samples, Neumann & Hare, 2008). As such, accurate and valid assessment of this construct is of high importance to psychologists and researchers alike.

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Despite (or perhaps, because of) its popularity, the scholarly field has failed to come to a clear consensus of what constitutes psychopathy, exemplified by debates concerning latent factor models (e.g., Cooke, Michie, & Skeem, 2007; Cooke & Sellbom, 2018; Hare & Neumann, 2006) and whether certain aspects of the disorder are central to the construct (e.g., criminal/antisocial behavior or fearless-dominance/boldness; Cooke & Sellbom, 2018; Hare & Neumann, 2010; Lilienfeld et al., 2012; Miller & Lynam,

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2012; Skeem & Cooke, 2010). This state of affairs has led some scholars to make different attempts to integrate various theories and measures reported in the literature into a coherent framework (e.g., triarchic psychopathy model; Patrick, Fowles, & Krueger, 2009; a Five Factor Model of personality perspective; Lynam et al., 2011). The current project focuses on a relatively recent attempt: the Comprehensive Assessment of Psychopathic Personality (CAPP; Cooke et al., 2012).

Comprehensive Assessment of Psychopathic Personality

What is psychopathy? It is a general principle that the explication of a concept should precede the development of a measure (Cook & Campbell, 1979); however, in psychology, this principle is oft ignored. Inadequate concept explication will lead to inadequate measures; repeated analyses of imperfect methods can distort our understanding of the concept of interest (Skeem & Cooke, 2010). The CAPP is a concept map; that is, an attempt to represent the key elements of psychopathic personality disorder (PPD; for an overview of concept maps, see Edwards & Fraser, 1983; O'Donnell, Dansereau, & Hall, 2002). The concept map serves as the explicit definition of PPD upon which different measurement technologies can be built (clinical rating scales and interviews, e.g., Cooke & Logan, 2018; symptom self-ratings, e.g., Sellbom, Cooke, & Hart, 2015; and prototypicality ratings, e.g., Kreis, Cooke, Michie, Hoff, & Logan, 2012; all described elsewhere).

The CAPP concept map was founded on six principles (Cooke et al., 2012). First, the symptoms of PPD are pathological personality traits, that is, they belong to the domain of personal deviance not cultural or social deviance (Blackburn, 1992; Skeem & Cooke, 2010). Second, conceptual clarity is enhanced by defining symptoms in atomistic terms rather than in complex blends of symptoms that could be parsed into multiple symptoms (e.g., Shallow Affect from the Psychopathy Checklist—Revised [PCL–R]; Hare, 2003; see, e.g., Cooke, 2018; Cooke & Logan, 2018). Third, consistent with the lexical hypothesis which proposes that the frequent use of predicates indicate that they represent salient psychological phenomena (Saucier & Goldberg, 2001), symptoms were specified in the natural language of trait-descriptive adjectives. Fourth, symptoms were defined to reflect the growing consensus that symptoms of personality disorders, in general, are more dynamic than previously assumed (e.g., Grilo et al., 2004; Reichborn-Kjennerud et al., 2015). Fifth, in line with dimensional perspectives of personality disorder (e.g., Clark, 1995), the CAPP concept map is inherently hierarchical; the atomistic symptoms are rationally grouped into domains in conceptually meaningful ways; this grouping provides an additional framework for interpreting symptoms. Sixth, the concept map was designed to be comprehensive; there was an appreciation that it is better to be overinclusive in symptom selection as it is easier to use empirical results to remove rather than add symptoms to the model.

The CAPP model is based upon a multisource, bottom-up approach to construct explication (Blashfield & Livesley, 1991) rather than a top-down approach based on the views of one authority. Putative symptoms of PPD for inclusion in the model were derived, first, by a review of the relevant scientific, clinical, and professional literatures, and second, by interviewing subject-matter experts, specifically, a cohort of clinicians working within

different conceptual frameworks, about symptoms of PPD that they had observed in their patients. This corpus of information was translated into trait-descriptive adjectives. This process resulted in 33 symptoms of PPD described either as a single trait-descriptive adjective or a short adjectival phrase. For example, the symptom *domineering* was defined as arrogant, overbearing, and controlling. Using three trait-descriptive adjectives helps to triangulate the meaning of the symptom (see Cooke, 2018; Cooke et al., 2012, for more detail). The 33 symptoms were rationally organized into six domains of basic personality functioning: attachment, behavioral, cognitive, dominance, emotional, and self. These domains provide an additional framework for the interpretation of the meaning of the symptoms further reducing the potential for ambiguity in their meaning.

To summarize, the CAPP concept map is hierarchical in the sense that PPD is being organized into six conceptual domains, with the 33 symptoms being distributed within these six domains, each symptom is defined by three adjectives or adjectival phrases. The developers of the CAPP concept map recognized that the domains, being conceptual rather than statistical, should not be viewed as “factors” in a latent modeling sense (Cooke et al., 2012). The entire concept map, including all levels of the hierarchy can be represented in about 180 words of text or by a single graphic (see Cooke et al., 2012 for a detailed account of the development of the model as well as graphic illustration).

Previous CAPP Research

Research on the CAPP model has been promising. It has been translated into more than 25 languages, including all major European languages, as well as languages from completely different language families including Afro-Asiatic (Hebrew), Austronesian (Malay), Koreanic (e.g., Korean), Indo-Iranian (e.g., Persian) and Sino-Tibetan (e.g., various dialects of Chinese). The overarching finding of those translating the CAPP model is that it is possible to find cognate symptoms in their languages for all the CAPP symptoms (Cooke, 2018; Cooke & Logan, 2018). This finding not only supports that broad validity of the CAPP concept map, but also supports the cross-cultural validity of the core of the PPD concept.

Most of the studies to date have examined the content validity of the CAPP concept map across these multiple languages. In these studies, a variety of individuals (experts, mental health practitioners, nurses, lay people) have been asked to rate the degree to which each of the 33 CAPP symptoms are prototypical of PPD, compared with a set of “foil” symptoms that are conceptually irrelevant to the disorder (e.g., Flórez et al., 2015; Hoff, Rypdal, Mykletun, & Cooke, 2012; Kreis & Cooke, 2011; Kreis et al., 2012; Sea, 2018; Sörman et al., 2014). Across this research, CAPP symptoms are rated as more prototypical of PPD than are foil items, and symptoms in the attachment, dominance, and self domains are typically rated as more prototypical of psychopathy than are symptoms in the other domains (Flórez et al., 2015; Hoff et al., 2012; Kreis & Cooke, 2011; Kreis et al., 2012; Sörman et al., 2014). Also, in an international sample of 132 mental health professionals, Kreis and Cooke (2011) found that most CAPP items were deemed prototypical of both males and females with PPD, with symptoms in the attachment, behavioral, cognitive and dominance domains being deemed slightly more prototypical of males relative to females with PPD, whereas manipulative, lacks

emotional stability, and unstable self-concept were rated as more prototypical of females with PPD. Finally, [Viljoen et al. \(2015\)](#) examined the prototypicality of CAPP symptoms in respect to borderline personality disorder (BPD). They reported that CAPP symptoms had good specificity for PPD and deemed irrelevant to BPD.

[Sellbom et al. \(2015\)](#) examined the internal structure of lexical self-ratings (i.e., how descriptive each symptom is of the person) of the 33 CAPP symptoms in a large international community sample. They found support for a general psychopathy factor that accounted for variance in all symptoms but also for three orthogonal group factors that loosely resembled the triarchic psychopathy model. They viewed the general factor as support for the concept map as a whole. Other studies have examined overlap with the PCL-R. [Sandvik et al. \(2012\)](#) reported large correlations ($r_s = .66$ to $.73$) between clinical ratings of CAPP symptom domains and PCL-R total scores in a sample of 80 Norwegian prison inmates. Moreover, in a direct comparison between CAPP and PCL scores, [Pedersen, Kunz, Rasmussen, and Elsass \(2010\)](#) found that clinical ratings of CAPP total and domain scores evinced predictive validity with respect to violent and nonviolent recidivism that equaled that of ratings on the Psychopathy Checklist: Screening Version ([Hart, Cox, & Hare, 1995](#)) in a sample of 96 Danish forensic psychiatric patients. Most recently, [Flórez et al. \(2017\)](#) reported that CAPP scores, in general, and the dominance score in particular was more strongly related to heart rate variability parameters than the PCL-R scores; as such they argued that it a better measure of the emotional deficit that is a primary component of PPD. [Flórez et al. \(2018\)](#) and [Sea \(2018\)](#) have demonstrated the reliability and structural properties of interview based measures of the CAPP (i.e., CAPP-IRS) in diverse prison samples (Spain and Korea, respectively).

Of course, operationalization of constructs is critical for research to accumulate, but to date, there are only two methods available for assessment the 33 CAPP symptoms. The aforementioned CAPP-IRS ([Cooke, Hart, Logan, & Michie, 2004](#); [Cooke & Logan, 2018](#)) uses clinical interviews, record reviews, and institutional staff ratings to make clinical judgments about each of the symptoms. Although the CAPP-IRS is a comprehensive and promising clinical tool, it is also quite labor-intensive and time-consuming, which is often a barrier in some research contexts as well as for clinical screening purposes. The second operationalization is the CAPP Lexical Rating Scale (CAPP-LRS), which consists of 33 statements on which individuals rate themselves on a scale of 1–7 of how descriptive each symptom (with three descriptive adjectives to define each) is for them. Although this measure is efficient, one item measures of constructs are inadvisable for reliability purposes (e.g., [Nunnally, 1967](#)), and ratings about specific symptoms that require high verbal skills (e.g., “garrulous”) are likely suboptimal in many settings. Therefore, for research on the CAPP model to advance, we contend it is important to develop a self-report inventory with multiple items per symptom, reverse coded items to decrease the impact of acquiescent/counteracquiescent response styles and to get at symptoms from different angles, and using items that do not assume full literary comprehension of the symptom labels under assessment.

The Current Investigation

The current project was designed to develop the CAPP-Self-Report (CAPP-SR) and provide initial validation in independent samples from two different English-speaking countries. Study 1 details the development of the CAPP-SR, whereas Study 2 presents data on criterion and construct validity, as well as incremental validity over the CAPP-LRS.

Study 1

The first study was designed to develop the CAPP-SR. The details of these scale development procedures are also included in the CAPP-SR manual ([Sellbom & Cooke, 2019](#)), which serves as the formal citation for the instrument, and is at the time of this writing listed as “under preparation” to accommodate any changes necessary to the CAPP-SR over the course of the peer-review process. The manual will primarily contain nonredundant information about formal administration, scoring, and interpretation of test scores, including preliminary normative data.

Scale Development Overview

The first author wrote over 500 candidate items for the 33 CAPP symptoms. Various sources were considered, including theoretical notions of the various psychopathy symptoms, the lexical meaning of the symptoms, the CAPP-IRS interview and rating scales, and the formal CAPP glossary for each of the 33 symptoms. The candidate items were then subjected to expert review. Four independent CAPP experts (including the second author) reviewed each item and were asked to conduct two ratings. Specifically, they were provided with a list of each of the CAPP symptoms for a particular domain as well as an “Other” CAPP domain options (e.g., if an item was meant to be a candidate item for detached, then experts had the four attachment domain symptoms as well as “other CAPP domain” as sorting options) and asked to select which of the symptoms the item best described, as well as rate on a scale from 1 to 4 how well the item captured the symptom in question (with a higher rating indicating better quality). All four experts were blind to the intended target symptom for each candidate item. Items that were correctly sorted by at least three of the four experts as reflecting the target symptom as well as received at least an average quality rating of 2.75 were retained for a CAPP-SR experimental form. Experts were also allowed, post hoc, to recommend minor grammatical or stylistic wording edits to items.

The CAPP-SR experimental form was subsequently administered to participants in a large community sample to allow for statistical analysis to guide item selection. The ultimate goal was to select the three best items for each CAPP symptom. The reason for this decision was to ensure sufficient content coverage of the three key lexical aspects of each CAPP symptom (e.g., [Cooke et al., 2004, 2012](#)) but also to keep the overall inventory sufficiently short for research application.

Several key properties were considered in conjunction for item selection. First, we considered the amount of test information provided by each candidate item across the range of the latent construct. Because psychopathy is considered a personality disorder, items should provide the most amount of information at the

higher end (i.e., above average) levels of the latent construct. Item response theory (IRT) was used for this purpose. Second, we considered discriminant validity, in that items should be more strongly related to target symptoms than other nontarget CAPP symptoms. We examined this property through item loadings in confirmatory factor analyses and through corrected item-to-total correlations. Finally, we considered content breadth; items should cover the most important aspects of each CAPP symptom. This property was considered through the authors' expert judgment.

Method

Participants. The scale development sample consisted of 553 adults who were recruited via Qualtrics paneling services, which is an agency that specializes in the recruitment of research participants online. Qualtrics personnel were specifically asked to generate a sample representative of the adult U.S. population according to 2016 U.S. census demographics. More specifically, sex as reported as 50.5% female, 49.3% men, and 0.2% transgender. The age of participants ranged from 18 to 84 ($M = 45.8$; $SD = 16.3$). In terms of race/ethnicity, 65.1% reported White (non-Latino/a), 16.1% Latino/a, 11.9% African American, 3.3% Asian, 1.8% Native American, and the remaining 1.8% mixed race/ethnicity. With respect to educational attainment, 37.2% reported some college/university, 24.3% were high school graduates (or had obtained a GED), 23.3% had a bachelor's degree, 10.9% had some form of postgraduate degree, and 4.3% had not graduated high school. Finally, 49.1% of participants reporting being married, whereas 23.8% were single, 12.3% in a serious relationship/partner, 11.5% were divorced (and not in a relationship), and 3.3% were widowed.

All 553 participants had passed a validity screener, in that they did not endorse extremely improbable items (e.g., "I am allergic to water;" "I am a close personal friend of the Prime Minister of Zanzibar;" "When I see the color orange, I taste mustard") or failed attention checks (e.g., "If you are reading this statement, please respond 'Mostly True'").

Measures. The participants completed a 299-item experimental form of the CAPP-SR, which contained, on average, 9 experimental items for each of the 33 CAPP symptoms. Participants were asked to respond using one of four options: *true*, *mostly true*, *mostly false*, or *false*. The 299 items were selected from a substantially longer list of candidate items that had undergone expert review (described earlier).

Procedures. The research protocol was approved by the University of Otago Human Ethics Committee. Qualtrics paneling services contacted potential participants directly who completed the CAPP-SR experimental form online. All participants were reimbursed for their time.

Results and Discussion

IRT. We used IRT for initial item selection as this method would allow us to identify the items that provided most amount of information across the range of the latent construct. Samejima's graded response model (Samejima, 1969) was applied to evaluate candidate items for each of the 33 CAPP symptom scales. The IRT assumption of unidimensionality for each group of symptom candidate items was assessed via exploratory factor analysis (EFA)

based on the polychoric matrix and one-factor confirmatory factor analysis (CFA) with robust (mean- and variance-adjusted) weighted least square (WLSMV) estimation, whereas the IRT assumption of local independence was tested by examining the residual covariance of the CFA (Edelen & Reeve, 2007). The EFAs were conducted using the "psych" package (Revelle, 2017), whereas the CFAs were conducted using the "lavaan" package (Rosseel, 2012) in R program (Version 3.3.0).

For the initial IRT analysis for each symptom scale, a graded response model with marginal maximum likelihood estimation was used to fit items that did not violate assumptions. We focused on the discrimination parameters (which indicate how well an item performs at differentiating different levels of the construct) and the item information (indicates how reliable an item is in capturing latent traits) between $-4 SD$ and $+4 SD$ around the latent trait mean, though better performing items at the higher end of the construct were emphasized as the CAPP is a measure of dysfunction. The IRT analyses were conducted using the 'mirt' package (Chalmers, 2012) in R. Results for the initial IRT analysis are available in the online supplementary materials (see [Supplementary Table S1.1 to S1.33](#)). The best performing items in the IRT analyses were selected in balance with discriminant validity and content breadth. A second IRT model was estimated for each scale (i.e., 33 models) to evaluate the combination of the three selected items to ensure item parameters remained acceptable.

CFA. Items that had high information from the initial IRT analysis and covered sufficient content within each symptom were selected as candidate items for CFA testing to examine potential issues with discriminant validity. These analyses were conducted at the domain-level (i.e., attachment, behavioral, cognitive, etc.) for two reasons. First, CAPP symptoms within each domain have the most conceptual similarity, and therefore, potential problems with discriminant validity would most likely occur within this level. Second, it would likely introduce serious sample-dependent statistical artifacts to estimate a 33-factor model using 99 items, as the independent cluster model assumption is typically not tenable for multiscale personality inventories of this size (Hopwood & Donnellan, 2010; Marsh, Morin, Parker, & Kaur, 2014). For each of the six domains, the candidate items (three per symptom) were examined in a CFA with WLSMV estimation. Results were inspected in terms of fit indices, item loadings, and item cross-loading onto other CAPP symptom factors. Any item that displayed serious cross loading issues (i.e., cross loading on a nontarget factor that approximated or exceeded that of the target factor) was replaced by a new candidate item based on the initial IRT parameters and content breadth. This process necessitated at least two CFA models per domain. The average factor loading for each final symptom scale is displayed in [Table 1](#), with all symptom scales having an average factor loading above 0.50, and every item a loading above 0.40.¹ [Supplemental Figure S1](#) in the online

¹ [Supplementary Table S3](#) in the online supplemental material includes model fit statistics for the final CFA models. We note that the comparative fit index is slightly lower (.877) than conventional standards for the self domain model. However, the final self model consists of 21 items across seven factors, and it was not surprising there would be some degree of misfit owing to the lack of specification of dual loadings that typically emerge in personality research (e.g., Hopwood & Donnellan, 2010; Marsh et al., 2014). We therefore accepted this model with some caution.

Table 1
Final Psychometric Properties of 33 Comprehensive Assessment of Psychopathic Personality (CAPP) Symptom Scales

CAPP symptom	Mean λ	ω	IIC		CITC		NCITC	
			Range	M	Range	M	Range	M
A1. Detached	.71	.76	.31-.51	.41	.58-.76	.67	.20-.36	.29
A2. Uncommitted	.64	.69	.20-.35	.26	.45-.62	.56	.23-.32	.29
A3. Unempathic	.64	.68	.24-.28	.26	.52-.58	.55	.14-.23	.19
A4. Uncaring	.65	.69	.19-.40	.28	.53-.61	.57	.15-.35	.23
B1. Lacks perseverance	.76	.80	.42-.49	.45	.66-.74	.70	.21-.36	.28
B2. Unreliable	.69	.73	.26-.36	.31	.56-.60	.59	.12-.28	.21
B3. Reckless	.65	.72	.22-.48	.34	.56-.71	.63	.26-.34	.30
B4. Restless	.77	.81	.45-.53	.49	.68-.73	.70	.23-.29	.26
B5. Disruptive	.66	.70	.28-.38	.33	.54-.71	.62	.27-.40	.34
B6. Aggressive	.73	.78	.31-.36	.34	.58-.66	.62	.28-.33	.31
C1. Suspicious	.66	.72	.26-.47	.36	.55-.72	.64	.18-.29	.24
C2. Lacks concentration	.84	.88	.60-.63	.62	.77-.81	.79	.27-.33	.31
C3. Intolerant	.73	.78	.40-.45	.42	.63-.71	.67	.34-.38	.36
C4. Inflexible	.63	.66	.25-.39	.30	.51-.65	.59	.26-.30	.29
C5. Lacks planfulness	.68	.73	.30-.45	.37	.60-.65	.63	.12-.28	.18
D1. Antagonistic	.73	.77	.27-.53	.37	.61-.70	.65	.32-.35	.34
D2. Domineering	.75	.79	.29-.57	.43	.61-.76	.68	.12-.30	.21
D3. Deceitful	.73	.78	.32-.44	.37	.58-.68	.63	.27-.32	.29
D4. Manipulative	.86	.89	.57-.60	.59	.77-.78	.77	.35-.39	.36
D5. Insincere	.57	.61	.19-.34	.27	.53-.67	.58	.27-.36	.30
D6. Garrulous	.68	.73	.27-.42	.35	.55-.69	.61	.25-.31	.28
E1. Lacks anxiety	.68	.74	.38-.43	.41	.62-.68	.66	-.14-.30	-.05
E2. Lacks pleasure	.77	.81	.44-.54	.48	.63-.75	.70	.09-.21	.14
E3. Lacks emotional depth	.61	.64	.23-.31	.28	.51-.67	.57	.19-.35	.26
E4. Lacks emotional stability	.77	.82	.44-.56	.48	.67-.76	.72	.34-.37	.35
E5. Lacks remorse	.61	.67	.17-.31	.24	.47-.60	.55	.17-.36	.26
S1. Self-centered	.62	.67	.25-.44	.32	.54-.69	.62	.27-.36	.31
S2. Self-aggrandizing	.66	.71	.27-.40	.34	.59-.60	.60	.05-.27	.16
S3. Sense of Uniqueness	.74	.79	.42-.47	.45	.55-.70	.64	.05-.22	.15
S4. Sense of Entitlement	.66	.71	.35-.37	.36	.61-.65	.63	.24-.29	.27
S5. Sense of Invulnerability	.58	.65	.18-.38	.28	.54-.65	.58	-.09-.12	.01
S6. Self-justifying	.67	.71	.26-.43	.33	.56-.66	.62	.29-.37	.32
S7. Unstable self-concept	.73	.78	.35-.51	.44	.66-.73	.69	.20-.28	.25

Note. Mean λ = average item loading in CAPP domain-level CFA; ω = McDonald's omega total; IIC = inter-item correlations; CITC = item-total correlation corrected for item overlap by replacing the item variance with the squared multiple correlation of that item with the remaining items in a matrix; NCITC = average item-total correlation with nontarget scales.

supplemental material displays an example of one of the domain models (attachment).

Final Psychometric Properties.

Internal consistency reliability. Table 1 presents reliability estimates of the 33 final scales. We first calculated model-based estimates of internal consistency (omega; McDonald, 1999) and average interitem correlations (AIC). The latter values ranged from 0.24 (lacks remorse) to 0.60 (lacks concentration), with a median of 0.34. All scales had AIC values within the recommended range (i.e., 0.20–0.50; Clark & Watson, 1995) with the exception of lacks concentration, which was somewhat larger, indicating the potential for redundant item content. Omega estimates ranged from 0.61 to 0.89 with a median of 0.73. These values were deemed acceptable especially in light of quite significant scale brevity.

Next, we calculated corrected item-total correlations, which ranged from 0.55 (lacks remorse) to 0.79 (lacks concentration), with a median of 0.63. We also calculated the correlations between items with other scales to evaluate the general discriminability for the final item sets. The nontarget corrected item-total correlations ranging from -0.05 for lacks anxiety, to 0.36 for intolerant and manipulative, with a median of 0.28. All of these were lower than the target corrected item total correlations, indicating good discriminability.

Final IRT Parameters. The item discrimination parameters, location (difficulty) parameters, and information of the final scales are displayed in Table 2. All items exhibited acceptable discrimination power with alpha values above 0.65, ranging from 0.76 to 12.44, with the majority of the items (93 out of 99) exhibiting discrimination values above 1.00. The location parameters spanned from -2.65 to 3.83, corresponding to -2.65 to 3.83 *SD* around the latent distributions' means. It was observed that the location parameters were generally more positive for symptoms of the attachment domain than for the self domain. The average value of the beta1 for CAPP symptoms scales ranged from -0.57 for those within the Self domain to 0.36 for those within the attachment domain; the average value of the beta2 ranged from 0.59 for those within the self domain to 1.86 for those within the attachment domain; and the average value of the beta3 ranged from 1.93 for those scales within the self domain to 2.81 for those within the attachment domain.

The test information curves for the final 33 CAPP-SR scales are shown in the Supplemental Figures S1.1–S1.33 in the online supplemental material. Most curves are skewed toward the positive end of the latent trait continuum, indicating that most scales provide more

Table 2

Final IRT Parameters for the 33 Comprehensive Assessment of Psychopathic Personality–Self-Report (CAPP-SR) Symptom Scales

Symptom	Item content (abbreviated)	α	β_1	β_2	β_3	Info
A1. Detached	1. Being close to others . . .	1.17	-.31	1.72	3.28	2.22
	2. . . . described me as a loner	1.57	-.46	.34	1.37	2.95
	3. I often find socializing with others . . .	3.61	-.20	.73	1.71	9.61
A2. Uncommitted	1. Being unfaithful doesn't trouble me	1.25	1.58	2.68	3.48	1.76
	2. I feel little or no loyalty to . . .	1.58	.65	2.00	2.85	3.00
	3. Unless they are of use to me, I . . .	1.82	.90	1.91	2.57	3.40
A3. Unempathic	1. I can easily relate to other people . . .	1.52	-.39	1.86	3.08	3.32
	2. I would hate to hurt another . . .	1.22	.38	2.30	3.00	2.09
	3. Watching others in pain doesn't . . .	1.69	1.14	2.25	3.09	3.07
A4. Uncaring	1. I am often described as a kind p . . .	2.68	.24	1.95	2.75	6.73
	2. Others generally view me as a co . . .	1.76	.20	2.36	2.95	3.64
	3. I have been called thoughtless . . .	.85	.63	2.16	3.65	1.15
B1. Lacks perseverance	1. I have no difficulty keeping focus . . .	1.92	-.47	1.01	1.80	4.23
	2. I quickly lose interest in tasks . . .	2.48	-.15	1.08	2.05	6.07
	3. Others often call me lazy	1.98	.60	1.58	2.29	3.91
B2. Unreliable	1. I say I will do things but rarely . . .	1.24	.53	2.21	3.33	2.15
	2. I make a point to keep my promises	2.33	.64	2.35	3.27	5.49
	3. I keep commitments I have made	1.69	.41	2.32	3.06	3.42
B3. Reckless	1. I have made many hasty decisions . . .	3.72	-.55	.46	1.19	9.65
	2. I often act without thinking	1.42	-.26	1.31	2.39	2.86
	3. I take lots of risks	.84	-.56	1.63	3.44	1.34
B4. Restless	1. I am a bit "fidgety"	1.80	-.45	.57	1.98	3.99
	2. I have a difficult time sitting . . .	2.09	-.45	.30	1.27	4.35
	3. People often complain that I can . . .	2.62	.22	1.04	1.78	5.76
B5. Disruptive	1. It is important to follow rules	1.31	.21	2.73	3.82	2.36
	2. I admit, I am difficult to control	1.69	-.18	.57	1.74	3.31
	3. I resent people in positions of . . .	1.65	.19	1.54	2.60	3.42
B6. Aggressive	1. I intimidate others around if . . .	1.79	.41	1.30	2.42	3.63
	2. I use violence to control others	2.79	1.51	2.30	2.62	5.32
	3. I have no problem being violent . . .	1.44	.10	.93	1.98	2.59
C1. Suspicious	1. It is healthy to trust people	1.44	-.89	1.33	2.34	3.10
	2. I don't trust anyone	3.48	-.38	.45	1.49	9.07
	3. I always keep an eye out for what . . .	.98	-2.28	-.53	1.43	1.83
C2. Lacks concentration	1. I get bored easily and lose focus	2.69	-.46	.64	1.53	6.57
	2. I am easily distractible	3.05	-.46	.67	1.54	7.79
	3. It is often difficult for me to . . .	2.71	-.17	.83	1.63	6.38
C3. Intolerant	1. People who do not agree with me . . .	1.85	.61	1.90	2.70	3.78
	2. Most people are generally losers	2.12	.54	1.93	2.75	4.72
	3. Other people are mostly in my way	1.96	.30	1.56	2.51	4.31
C4. Inflexible	1. I am a stubborn person	1.92	-.93	-.03	1.13	4.12
	2. I find it hard to back down from . . .	1.47	-.79	.60	1.87	3.08
	3. Others seem frustrated with me . . .	1.00	.40	2.02	3.57	1.57
C5. Lacks planfulness	1. I am an organized person	2.22	-.34	1.09	1.85	5.09
	2. I often get into trouble for not . . .	1.19	-.16	1.55	2.97	2.23
	3. I plan things out carefully	1.92	-.56	1.46	2.51	4.62
D1. Antagonistic	1. I frequently find myself in argum . . .	2.71	.37	1.46	2.28	6.49
	2. I seem to argue with others . . .	2.64	.78	1.78	2.41	5.83
	3. Some people probably find me . . .	1.08	-.02	1.33	2.90	1.85
D2. Domineering	1. I frequently try to assume a lead . . .	1.66	-.95	.13	1.57	3.63
	2. I prefer to be in charge	12.44	-.89	-.04	1.04	37.31
	3. It is usually best if others just . . .	1.04	-.79	.73	2.89	1.92
D3. Deceitful	1. Lying doesn't bother me	2.03	.89	2.05	2.74	4.13
	2. Let's face it, I'm pretty good at . . .	2.41	.55	1.27	2.11	5.09
	3. I think telling the truth is the . . .	1.55	1.02	2.60	3.29	2.74
D4. Manipulative	1. It is sometimes necessary to . . .	3.21	.56	1.28	2.09	7.58
	2. Sometimes it is frankly necessary . . .	2.64	.26	.99	2.08	6.14
	3. I don't mind taking advantage of . . .	3.09	.76	1.57	2.22	7.04
D5. Insincere	1. I can be quite slick	1.88	-.24	.79	1.97	4.10
	2. I often tell people what I think . . .	.89	-1.00	.96	3.06	1.53
	3. Being vague is often a good tactic	1.19	-.68	.76	2.56	2.33
D6. Garrulous	1. At times I have used "big words" . . .	1.22	-.34	.91	2.16	2.23
	2. I tend to flood people with info . . .	2.87	.11	1.09	1.92	6.90
	3. . . . go on and on with stories . . .	1.44	.13	1.40	2.47	2.76

(table continues)

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Table 2 (continued)

Symptom	Item content (abbreviated)	α	β_1	β_2	β_3	Info
E1. Lacks anxiety	1. Very few things scare me	1.57	-1.27	-.29	1.28	3.36
	2. I am usually calm in situations . . .	2.16	-1.96	-1.02	.62	5.25
	3. I am usually relaxed and confide . . .	1.50	-1.30	-.37	1.14	3.08
E2. Lacks pleasure	1. I often feel cheerful	2.32	-.53	.92	1.81	5.62
	2. I am usually full of optimism	2.42	-.68	.82	1.65	5.88
	3. I think life is full of satisfying . . .	1.82	-.01	1.87	2.59	3.94
E3. Lacks emotional depth	1. Others seem to think that I am . . .	1.17	-.28	1.19	2.66	2.19
	2. With the exception of anger, . . .	1.25	-.22	1.19	2.62	2.38
	3. I just don't feel very strongly . . .	1.83	.04	1.34	2.42	4.02
E4. Lacks emotional stability	1. People tend to find my moods . . .	1.57	.02	1.03	2.24	3.12
	2. I get irritated very easily	2.65	-.41	.56	1.53	6.37
	3. It doesn't take much for me to . . .	2.66	.13	1.10	1.75	5.93
E5. Lacks remorse	1. I would feel no guilt if my words . . .	1.86	.35	1.46	2.35	3.84
	2. I usually feel justified in hurting . . .	1.50	1.24	2.35	3.14	2.50
	3. I feel bad when I do something . . .	1.07	.68	2.83	3.83	1.63
S1. Self-centered	1. I often get bored or zone out if . . .	1.72	-.35	.77	1.76	3.54
	2. To be honest, I don't really care . . .	.90	-.35	1.14	2.61	1.42
	3. I am mostly just interesting in . . .	1.98	-.57	.47	1.82	4.58
S2. Self-aggrandizing	1. I am (or, will one day be) very . . .	1.20	.37	1.50	2.69	2.04
	2. I am a very important person	2.18	-.70	.22	1.24	4.86
	3. I have special qualities	1.44	-1.89	-1.08	.78	2.95
S3. Sense of uniqueness	1. Most people think that I am . . .	1.99	.18	1.32	2.45	4.47
	2. Most people are envious of my . . .	2.38	-.42	.74	1.85	5.84
	3. When compared to others, I tend . . .	1.68	-.89	.21	1.62	3.71
S4. Sense of entitlement	1. I deserve special treatment	1.87	.32	1.39	2.09	3.69
	2. I often find that I have to be . . .	1.57	-.98	.09	1.64	3.38
	3. I might be perceived as demand . . .	1.49	-.46	.46	1.94	2.99
S5. Sense of invulnerability	1. I believe I can meet almost any . . .	3.54	-1.64	-1.01	.65	9.25
	2. I rarely fail	1.09	-1.37	.03	2.53	2.16
	3. I am not afraid to take risks	.76	-2.65	-.52	2.13	1.24
S6. Self-justifying	1. Others have told me that I refuse . . .	1.21	1.17	2.40	3.28	1.81
	2. I get blamed for too many things . . .	2.20	.15	1.14	1.97	4.75
	3. I often end up paying for others' . . .	1.56	-.46	.89	2.25	3.37
S7. Unstable self-concept	1. I often wonder who I am	3.45	-.23	.46	1.26	8.29
	2. My view of myself as a person is . . .	1.38	-.43	1.62	2.64	2.83
	3. I can't shake the feeling that I . . .	1.60	-.83	.15	1.30	3.22

Note. α = discrimination parameter; β = location (difficulty) parameters; info = item information.

reliable measurement at the higher end of the latent trait continuum, which was the expectation of measures of dysfunction.

Study 2

The second study was designed to provide initial criterion, convergent, and incremental validity evidence of the CAPP-SR scale scores. For criterion-related validity, we examined the CAPP symptom scales in direct relation to their CAPP-LRS counterparts (e.g., Detached with Detached; Uncaring with Uncaring). For broader convergent validity, we examined associations between CAPP-SR scores and other, common self-report measures of PPD operationalizing multiple theoretical perspectives (see Sellbom, Lilienfeld, Fowler, & McCrary, 2018). More specifically, we evaluated the CAPP-SR in relation to Hare's four-factor model of psychopathy based on the PCL-R (e.g., Hare, Neumann, & Mokros, 2018), the triarchic model of psychopathy (Patrick et al., 2009), and the Five Factor Model of personality perspective on psychopathy (e.g., Lynam et al., 2011; Lynam & Miller, 2015). We also included the Expanded Levenson Self-Report Psychopathy Scale (in one sample) and the Youth Psychopathic Traits Inventory (in a second sample), which are both modeled after Cooke and Michie's (2001) three-factor PCL psychopathy model. Finally, for

incremental validity, we examined the degree of variance that the CAPP-SR scale scores accounted for in other psychopathy measures relative to that of the CAPP-LRS scores. This research question was deemed of high importance, as if the latter provided sufficient coverage with its 33 items, then there would be little need for the much longer CAPP-SR.

We hypothesized that the 33 CAPP-SR scales would be meaningfully associated with their CAPP-LRS counterparts. Although the available CAPP research does not offer sufficient guidance for formal hypothesis testing, we did have some theoretical expectations for convergent validity with respect to the other PPD measures. These are highlighted in the tables that report these results and were based on the conceptual overlap between what is known about the other psychopathy perspectives and measures (e.g., Sellbom et al., 2018) and the various aspects of PPD that the 33 CAPP symptoms cover.

Method

Participants and procedures. We used two samples for criterion, convergent, and incremental validity testing.

University sample. Participants were 367 undergraduate students enrolled in first- or second-year psychology courses at a

large public university in New Zealand. They completed the study measures in groups up to 15, monitored by a trained research assistant, and received course credit for their participation. We excluded participants who endorsed one or more of the six validity items distributed throughout (e.g., “If you are reading this statement, please select [response],” “I am allergic to water,” “I am only friends with people who are born in August”). The final sample were 73.7% female and 26.3% male, and ranged in age from 18 to 57 ($M = 19.76$; $SD = 3.52$). The majority of participants reported their ethnicity as being New Zealand European (68.9%), with 17.2% being Other European (including Australian), 8.4% Chinese, 8.2% New Zealand Māori, 4.6% Indian, 2.8% Pacific Islander, and 12.5% selecting “other” (listing an assortment of countries from the Americas, Asia and Europe, with no clear pattern). These values add up to greater than 100% because some selected more than one option. In terms of relationship status, 69.4% reported being single, 29.0% being in a serious committed relationship, and 1.1% married.

Community sample. This sample was independent from the development sample. Participants were 407 adults who were recruited via Qualtrics paneling services and were reimbursed for their completion of the study. Qualtrics personnel were specifically asked to generate a sample representative of the U.S. population according to 2017 adult U.S. census demographics. All participants passed the same validity and attention checks as reported for the development sample. Sex was reported as 51.6% female, 48.2% men, and 0.2% transgender. The age of participants ranged from 18 to 84 ($M = 44.2$; $SD = 16.1$). In terms of race/ethnicity, 65.1% reported White (non-Latino/a), 17.8% Latino/a, 13.5% African American, 2.9% Asian, 1.7% Native American, and the remaining 1.3% mixed race/ethnicity. With respect to educational attainment, 37.2% reported some college/university, 24.8% were high school graduates (or had obtained a GED), 24.8% had a bachelor’s degree, 12.7% had some form of postgraduate degree, and 3.2% had not graduated high school. Finally, 43.3% of participants reporting being married, whereas 28.8% were single, 13.5% in a serious relationship/partner, 11.3% were divorced (and not in a relationship), and 3.0% were widowed.

Measures.

Comprehensive Assessment of Psychopathic Personality—Self-Report (CAPP-SR). The CAPP-SR (Sellbom & Cooke, 2019) is a 99-item measure that was developed in Study 1. Participants rated the items on a 4-point scale, ranging from 1 (*false*) to 4 (*true*). The 33 CAPP symptom scales consist of mean aggregates of their three items, with scoring ranging from 0–12 for each. The CAPP-SR has already been described in detail. Internal consistency reliability coefficients (Cronbach’s alpha/AICs due to scale brevity) ranged from .41/.19 (self-centered) to .85/.65 (lacks concentration), with a median of .62/.36, in the university sample and .49/.24 (sense of invulnerability) to .87/.69 (lacks concentration), with a median of .67/.40, in the community sample.

Comprehensive Assessment of Psychopathic Personality—Lexical Rating Scale. The CAPP-LRS (Cooke et al., 2004; Sellbom et al., 2015) consists of 33 statements (defined by three adjectives each) representing the CAPP symptoms. Participants rated themselves on a 7-point Likert scale, ranging from 1 (*not at all characteristic of me*) to 7 (*very characteristic of me*) for each symptom. Because of their one-item nature, reliability coefficients could not be calculated; however, the six CAPP Domain scores

which represent aggregates of symptom scores evidenced acceptable reliability in the current study. More specifically, internal consistency reliability coefficients (AICs due to scale brevity) ranged from .21 (emotional) to .45 (attachment, dominance) in the university sample and .36 (emotional) to .60 (attachment) in the community sample.

Triarchic Psychopathy Measure (TriPM). The TriPM (Patrick, 2010) operationalizes the triarchic psychopathy model (Patrick et al., 2009) and consists of 58 items that aggregate onto three distinct psychopathy domain scales of Boldness, Meanness, and Disinhibition. The Participants rated each item on a 4-point scale, ranging from 1 (*true*) to 4 (*mostly false*). The TriPM scale scores have amassed extensive validity support, including as accounting for variance in other psychopathy scales in a manner consistent with triarchic psychopathy theory (see Sellbom et al., 2018, for a review). Internal consistency reliability coefficients (Cronbach’s alpha) were .82 (boldness), .90 (meanness), and .85 (disinhibition) in the university sample and .81 (boldness), .92 (meanness), and .89 (disinhibition) in the community sample.

Hare Self-Report Psychopathy Scale-4 (SRP-4). The SRP-4 (Paulhus, Neumann, & Hare, 2016) is a 64-item self-report measure that assesses the constructs underlying the Hare Psychopathy Checklist-Revised (Hare, 2003). In addition to a total score, the SRP-4 can be scored according to four subscales of interpersonal manipulation, callous affect, erratic lifestyle, and criminal tendencies, designed to map onto the four-factor structure of the PCL-R. The SRP-4 total and subscale scores have documented validity support (see Sellbom et al., 2018, for a review). The SRP-4 was only administered in the university sample in which internal consistency reliability (Cronbach’s alpha) estimates ranged from .68 (criminal tendencies) to .86 (interpersonal manipulation).

Expanded Levenson Self-Report Psychopathy Scale (ELSRP). The ELSRP (Christian & Sellbom, 2016) is a 36-item expanded version of the original 26-item Levenson Self-Report Psychopathy Scale (Levenson, Kiehl, & Fitzpatrick, 1995). The ELSRP was developed in an attempt to bolster the reliability and content coverage of the three-factor LSRP model (Brinkley, Diamond, Magaletta, & Heigel, 2008), egocentricity, callousness, and antisocial, scale scores. The three-factor model, conceptually, maps onto Cooke and Michie’s (2001) three-factor PCL model. Christian and Sellbom (2016) showed promising support for the ELSRP in multiple samples, including the expected improvements in reliability and convergent and discriminant validity compared to the original LSRP. The ELSRP was only administered in the university sample in which internal consistency reliability (Cronbach’s alpha) estimates were .85 (egocentricity), .79 (callousness), and .82 (antisocial).

Elemental Psychopathy Assessment—Short Form (EPA-SF) and Super Short Form (EPA-SSF). The EPA was developed to assess traits from the perspective of the Five Factor Model (FFM) of personality that were deemed most relevant to the psychopathic personality (Lynam et al., 2011). More specifically, 18 scales designed to assess the maladaptive variants of their FFM trait counterparts were developed. The EPA-SF (Lynam et al., 2013) and EPA-SSF (Collison, Miller, Gaughan, Widiger, & Lynam, 2016) represent 72- and 18-item short versions of the full-length EPA. Each item is responded to on a 5-point scale, ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). The 18 EPA-SF scales conform to a four-factor structure (antagonism, emotional stability, disinhibition, and narcissism), whereas the 18 EPA-SSF items load onto three higher order dimen-

sions (antagonism, emotional stability, and disinhibition); the domain scores were used in the current study. The EPA-SF was administered in the university sample, whereas the EPA-SSF was administered in the community sample. The EPA instruments have garnered substantial validity support (Collison et al., 2016; Lynam et al., 2013; see Sellbom et al., 2018, for a review). In the current study, internal consistency reliability coefficients (Cronbach's alpha) ranged from .80 (narcissism) to .90 (antagonism, disinhibition) in the university sample and .67 (emotional stability) to .76 (disinhibition) in the community sample.

Youth Psychopathic Traits Inventory—Short Form (YPI-S). The YPI-S (van Baardewijk et al., 2010) is an 18-item short version of the full-length YPI (Andershed, Kerr, Stattin, & Levander, 2002), which was designed to assess for psychopathic personality traits in youth populations in accordance with Cooke and Michie's (2001) three-factor PCL-R model. The YPI-S has been extended to adult populations with good validity support (e.g., Colins & Andershed, 2016). The 18 YPI-S items adhere to a higher order three-factor structure of grandiose-manipulative, callous-unemotional, and impulsive-irresponsible.² The YPI-S was only administered in the community sample and internal consistency reliabilities (Cronbach's alpha) were .83 (grandiose-manipulative), .76 (callous-unemotional), and .83 (impulsive-irresponsible).

Results and Discussion

Criterion validity. First, we examined correlations between the CAPP-SR total, domain, and symptom scores with their direct counterparts of the CAPP-LRS. These correlations are listed in Table 3. As evident from this table, correlations between the respective total and domain scores were large ($r_s \geq .65$ in university sample; $\geq .55$ in community sample) as expected. The criterion correlations at the CAPP-SR symptom level was more variable. Twelve of these scales did not reach a large correlation magnitude ($r \geq .50$) in either sample, but most of the correlations were nonetheless associated at least a medium effect size ($r \geq .30$), with the majority being in the .40-.50 range across both samples. Two CAPP-SR scales (self-aggrandizing and sense of invulnerability) failed to reach even a medium effect size magnitude in either sample and two additional CAPP-SR symptom scales (garrulous and lacks anxiety) did not meet this threshold in the community sample. Of course, at this stage, it is not possible to determine if the poor convergence is due to problems with the CAPP-SR scales or the one-item CAPP-LRS scales, many of which were quite skewed and thus highly range restricted in the current samples. Moreover, the meaning of some words used for self-ratings are not immediately obvious to most people, such as *garrulous*, *self-justifying*, or *sense of invulnerability*, which might have introduced measurement error.

We also examined correlations between CAPP-SR scales with nontarget CAPP-LRS scales with the expectation that these would be lower than those for the target criterion scales. More specifically, for CAPP-SR domain scales, we calculated median nontarget correlations with other CAPP-LRS domain scales, whereas for the CAPP-SR symptom scales, we calculated median nontarget correlations with all other CAPP-LRS symptom scales. By and large, the median nontarget correlations were smaller than the criterion correlations, as expected, though there were a few exceptions to this pattern. Specifically, CAPP-SR self-centered did not

show a smaller median nontarget correlation than criterion correlation in either sample; and CAPP-SR insincere, garrulous, and self-justifying exhibited relatively little discrimination across CAPP-LRS scale scores in the community sample. It is noteworthy that all of these CAPP-SR scales exhibited relatively weak levels of criterion validity.

Convergent validity. Next, we examined associations between CAPP-SR total, domain, and symptom scale scores with those of other PPD measures. These are reported in Tables 4–6. In bold typeface, we indicate which external psychopathy scales we expected to be most conceptually relevant to a given CAPP-SR domain or symptom scale. Because of shared method variance inflating correlation coefficients to an unknown degree, we only interpreted medium effect sizes (i.e., $r \geq .30$) or larger as meaningful.

As evident from the tables, CAPP-SR domain and symptom scales converged to a substantial degree, frequently at large effect size magnitudes, with their most conceptually expected scales on the TriPM, SRP-4, ELSRP, YPI-S, and EPA-SF/EPA-SSF. Of course, these associations were far from discriminant as these psychopathy measure subscale scores are highly correlated themselves, but the general pattern converged for the most part with conceptual expectations. There were a few notable exceptions to this pattern. CAPP-SR reckless, for instance, was expected to converge with TriPM boldness in light of risk taking and thrill-and adventure-seeking proclivities, but CAPP-SR reckless was only associated with TriPM disinhibition and similar construct scales on other psychopathy measures. Similarly, CAPP-SR self-centered and sense of entitlement did not correlate to a meaningful degree with TriPM boldness but did with TriPM meanness. Although CAPP-SR aggressive was expected to be associated with a range of more behaviorally oriented psychopathy trait scores, it was generally more strongly associated with various psychopathy measures of affective and interpersonal traits. Finally, CAPP-SR lacks anxiety was associated with TriPM boldness and EPA-SF/EPA-SSF emotional stability, as expected, but did not converge with other psychopathy measures of affective deficiency.

Finally, there were four CAPP-SR symptom scale scores that did not reach a large effect size correlation (i.e., $r \geq .50$) with a single psychopathy score in either sample: restless, garrulous, lacks pleasure, and unstable self-concept. Although this finding might not bode well for these CAPP-SR scale scores with respect to construct validity, it is also worth noting that these symptoms are often viewed as less "prototypical" of psychopathy relative to many of the other CAPP symptoms. For instance, in Kreis et al.'s (2012) study of forensic mental health professionals with experience with psychopathy, these symptoms ranked #23 (restless), #30 (garrulous), #31 (unstable self-concept), and #33 (lacks pleasure; of 33 in total) in terms of perceived prototypicality.

Incremental validity. Finally, we examined the incremental validity of the CAPP-SR symptom scores over the CAPP-LRS symptom scores in capturing variance in other PPD measures' total and subscale scores. We conducted two series of hierarchical

² Although some have used more generic labels for these YPI-S factors (interpersonal, affective, behavioral; e.g., Colins & Andershed, 2016), we have retained the original YPI factor labels as they represent the underlying constructs more descriptively.

Table 3
Correlations Between Comprehensive Assessment of Psychopathic Personality–Self-Report (CAPP-SR) and Comprehensive Assessment of Psychopathic Personality–Lexical Rating Scale (CAPP-LRS) Scores in University and Community Samples

CAPP-SR scales	University		Community	
	Criterion <i>r</i>	Mdn. discriminant <i>r</i>	Criterion <i>r</i>	Mdn. discriminant <i>r</i>
Total	.84	—	.73	—
Attachment	.70	.51	.65	.54
A1. Detached	.56	.28	.55	.30
A2. Uncommitted	.46	.29	.53	.39
A3. Unempathic	.51	.30	.48	.33
A4. Uncaring	.46	.28	.46	.36
Behavioral	.74	.49	.66	.59
B1. Lacks perseverance	.46	.23	.42	.29
B2. Unreliable	.49	.19	.43	.28
B3. Reckless	.56	.20	.50	.33
B4. Restless	.66	.15	.60	.24
B5. Disruptive	.53	.30	.46	.40
B6. Aggressive	.58	.33	.51	.35
Cognitive	.74	.54	.67	.56
C1. Suspicious	.54	.28	.44	.29
C2. Lacks concentration	.80	.17	.67	.27
C3. Intolerant	.46	.35	.44	.39
C4. Inflexible	.60	.28	.54	.28
C5. Lacks planfulness	.63	.13	.55	.22
Dominance	.74	.52	.66	.55
D1. Antagonistic	.51	.33	.56	.39
D2. Domineering	.52	.23	.40	.19
D3. Deceitful	.51	.28	.54	.39
D4. Manipulative	.68	.36	.56	.40
D5. Insincere	.48	.29	.36	.34
D6. Garrulous	.36	.21	.25	.27
Emotional	.70	.56	.66	.55
E1. Lacks anxiety	.37	.07	.28	–.08
E2. Lacks pleasure	.62	.20	.58	.22
E3. Lacks emotional depth	.64	.30	.52	.34
E4. Lacks emotional stability	.62	.32	.59	.31
E5. Lacks remorse	.52	.34	.50	.34
Self	.67	.46	.55	.41
S1. Self-centered	.35	.34	.37	.36
S2. Self-aggrandizing	.27	.09	.24	–.01
S3. Sense of uniqueness	.51	.23	.51	.14
S4. Sense of entitlement	.54	.27	.41	.24
S5. Sense of invulnerability	.29	.03	.22	–.01
S6. Self-justifying	.42	.26	.31	.28
S7. Unstable self-concept	.48	.17	.42	.28

Note. Criterion *r* = correlation with corresponding CAPP Lexical Rating Scale; Mdn. discriminant *r* = median correlation with the 32 other nontarget CAPP Lexical Rating Scales. The bold type indicates CAPP Total and Domain correlations.

regression analyses. In the first series, we entered the 33 CAPP-LRS symptom scales in the first step, and the 33 CAPP-SR scales in the second step, in predicting each criterion variable. We calculated and statistically tested the amount of additional variance accounted for by the CAPP-SR scales. In the second series of regression analyses, we reversed the order of predictors and examined the amount of incremental variance accounted for in each criterion by CAPP-LRS scores, above and beyond CAPP-SR scale scores.

Table 7 shows these results. As evident from this table, the CAPP-SR outperformed the CAPP-LRS in every prediction (mdn. $R^2 = 0.70$ [CAPP-SR] vs. mdn. $R^2 = 0.59$ [CAPP Self Rating Form]), with two exceptions. Both instruments accounted for equivalent amounts of variance in the SRP-4 criminal tendencies

and YPI-S callous/unemotional scales. In terms of incremental validity, the CAPP-SR scales added substantial amounts of variance (mdn. $\Delta R^2 = 0.16$; range: 0.09–0.24) to the CAPP-LRS scale scores in every instance, except for SRP-4 criminal tendencies, which was nonsignificant. This SRP-4 subscale was very range restricted in the university sample, which likely led to significant attenuation in multiple correlation coefficients (i.e., 0.21 vs. median of 0.70 for all others). The CAPP-LRS scales accounted for far less variance above and beyond CAPP-SR scale scores (mdn. $\Delta R^2 = 0.07$; range: 0.03–0.10).

Overall, these analyses indicate that the CAPP-SR scales both outperform the CAPP-LRS in terms of the overall amount of variance accounted for in other well-established PPD measures, but also increment CAPP-LRS at a minimum of a me-

Table 4
Correlations Between CAPP-SR and TriPM and SRP-4 Scale Scores in University and Community Samples

CAPP-SR	TriPM				SRP-4				
	Total	Bold	M	Dis	Total	IPM	CA	ELS	CT
Total	.78/.75	.23/-.05	.78/.80	.68/.74	.80	.76	.73	.60	.33
Attachment	.55/.62	.05/-.14	.70/.79	.44/.58	.60	.56	.69	.30	.30
A1. Detached	.28/.30	-.14/-.32	.45/.47	.31/.43	.38	.35	.50	.12	.21
A2. Uncommitted	.45/.60	.11/-.01	.53/.71	.33/.51	.48	.47	.52	.24	.24
A3. Unempathic	.54/.59	.20/.02	.66/.73	.30/.43	.54	.51	.61	.28	.24
A4. Uncaring	.42/.50	.03/-.09	.49/.61	.39/.47	.45	.37	.47	.31	.22
Behavioral	.64/.63	.14/-.18	.55/.67	.71/.77	.65	.52	.50	.66	.29
B1. Lacks perseverance	.33/.22	-.09/-.04	.33/.32	.50/.50	.38	.29	.29	.43	.12
B2. Unreliable	.30/.33	-.10/-.28	.31/.43	.47/.51	.34	.26	.29	.30	.20
B3. Reckless	.54/.57	.26/-.02	.36/.51	.58/.64	.50	.33	.29	.66	.23
B4. Restless	.25/.29	.04/-.21	.17/.28	.35/.49	.25	.21	.15	.32	.07
B5. Disruptive	.55/.60	.19/-.05	.50/.63	.49/.62	.54	.44	.47	.49	.25
B6. Aggressive	.61/.68	.26/.21	.62/.68	.43/.47	.61	.58	.56	.41	.32
Cognitive	.59/.55	.06/-.26	.60/.63	.64/.73	.65	.57	.56	.57	.26
C1. Suspicious	.39/.46	.03/-.06	.48/.52	.33/.47	.44	.47	.48	.22	.16
C2. Lacks concentration	.30/.28	-.05/-.35	.22/.33	.51/.56	.36	.27	.20	.46	.15
C3. Intolerant	.47/.58	.08/-.04	.58/.67	.36/.53	.56	.55	.61	.29	.25
C4. Inflexible	.40/.44	.10/-.13	.43/.47	.35/.52	.39	.40	.35	.33	.09
C5. Lacks planfulness	.34/.23	.05/-.31	.26/.27	.45/.49	.36	.20	.23	.46	.19
Dominance	.72/.75	.32/.14	.71/.74	.52/.61	.72	.80	.63	.48	.27
D1. Antagonistic	.54/.56	.14/-.09	.57/.64	.46/.56	.57	.51	.51	.43	.29
D2. Domineering	.51/.48	.48/.45	.37/.34	.24/.20	.43	.46	.33	.33	.16
D3. Deceitful	.55/.61	.22/.01	.59/.67	.37/.55	.56	.66	.50	.34	.19
D4. Manipulative	.62/.70	.19/.10	.69/.72	.47/.57	.65	.76	.58	.37	.23
D5. Insincere	.44/.53	.12/.04	.49/.54	.34/.48	.47	.55	.46	.27	.11
D6. Garrulous	.43/.46	.20/.10	.35/.41	.38/.40	.43	.47	.33	.32	.18
Emotional	.68/.64	.21/-.06	.75/.75	.50/.60	.69	.66	.72	.46	.26
E1. Lacks anxiety	.46/.20	.74/.61	.22/-.02	.00/-.17	.28	.22	.27	.29	.02
E2. Lacks pleasure	.10/.08	-.37/-.49	.34/.29	.27/.32	.27	.28	.34	.09	.15
E3. Lacks emotional depth	.47/.45	.10/-.14	.61/.60	.29/.42	.50	.49	.60	.27	.16
E4. Lacks emotional stability	.40/.44	-.04/-.25	.42/.51	.52/.62	.44	.40	.36	.37	.22
E5. Lacks remorse	.62/.63	.20/.15	.69/.69	.45/.42	.60	.60	.60	.35	.27
Self	.62/.63	.33/.26	.51/.51	.52/.50	.59	.60	.48	.46	.25
S1. Self-centered	.47/.57	.07/-.05	.49/.61	.47/.57	.49	.47	.44	.37	.20
S2. Self-aggrandizing	.32/.29	.43/.51	.16/.09	.09/.01	.22	.26	.18	.12	.12
S3. Sense of uniqueness	.47/.41	.42/.46	.36/.24	.23/.15	.41	.46	.38	.24	.15
S4. Sense of entitlement	.44/.51	.16/.28	.40/.43	.41/.31	.42	.48	.31	.28	.23
S5. Sense of invulnerability	.30/.30	.55/.64	.10/.09	-.01/-.09	.19	.14	.12	.29	.00
S6. Self-Justifying	.38/.32	-.04/-.26	.39/.34	.50/.55	.42	.40	.35	.32	.22
S7. Unstable self-concept	.16/.23	-.24/-.41	.19/.30	.43/.45	.28	.25	.21	.27	.12

Note. CAPP-SR = Comprehensive Assessment of Psychopathic Personality–Self-Report; TriPM = Triarchic Psychopathy Measure; Bold = Boldness; M = Meanness; Dis = Disinhibition; SRP-4 = Hare Self-Report Psychopathy Scale–4; IPM = interpersonal manipulation; CA = callous affect; ELS = erratic lifestyle; CT = criminal tendencies. Correlations to left of slash are from university sample/correlations right of slash are from community sample. Correlations in bold typeface are conceptually expected. All $r \geq |.30|$ are statistically significant ($p < .001$); smaller correlations are not deemed meaningful.

dium effect size magnitude in every prediction. More broadly, the CAPP-SR symptoms account for 58% to 84% of variance in the total scores of PPD measures (and 73% to 84% in full-length forms) across samples. This finding indicates that the CAPP-SR appears to capture the full range of psychopathic personality traits, at least insofar as other self-report inventories are concerned.

General Discussion

Theoretical and Practical Implications

The goal of the current research was to develop and provide initial validation for a new operationalization of the CAPP model,

the CAPP-SR. Overall, the results were supportive of our development efforts. The use of IRT, CFA, and content evaluation yielded 33 internally consistent CAPP symptom scales with sufficient discriminant validity from the other scales. The validation study indicated that CAPP-SR symptom scales generally evinced good criterion-related validity, with a few exceptions as discussed earlier. The CAPP-SR scales also converged with other PPD measures in a manner that was generally consistent with conceptual expectations. And finally, the CAPP-SR outperformed the CAPP-LRS with respect to accounting for variance in other PPD measures. We discussed details of these findings earlier, so this general discussion focuses on broader implications of this research.

Table 5
Correlations Between CAPP-SR and ELSRP and YPI-S Scale Scores in University and Community Samples

CAPP-SR	ELSRP				YPI-S			
	Total	EGO	CAL	ANT	Total	G/M	C/U	I/I
Total	.88	.74	.67	.72	.65	.49	.47	.54
Attachment	.70	.57	.72	.43	.48	.30	.46	.38
A1. Detached	.44	.36	.47	.25	.26	.11	.26	.26
A2. Uncommitted	.57	.53	.56	.30	.48	.35	.44	.34
A3. Unempathic	.61	.51	.67	.33	.42	.28	.40	.31
A4. Uncaring	.52	.36	.50	.43	.39	.24	.37	.32
Behavioral	.68	.48	.40	.78	.58	.36	.37	.61
B1. Lacks perseverance	.44	.29	.23	.56	.28	.10	.14	.42
B2. Unreliable	.41	.30	.28	.42	.28	.11	.23	.34
B3. Reckless	.47	.28	.19	.66	.54	.36	.32	.59
B4. Restless	.28	.16	.13	.40	.31	.13	.15	.45
B5. Disruptive	.54	.40	.39	.54	.48	.35	.32	.43
B6. Aggressive	.62	.55	.47	.48	.54	.50	.41	.32
Cognitive	.72	.54	.47	.73	.49	.28	.32	.55
C1. Suspicious	.51	.50	.40	.34	.41	.29	.33	.33
C2. Lacks concentration	.40	.25	.16	.56	.32	.12	.13	.51
C3. Intolerant	.62	.58	.53	.38	.46	.37	.38	.32
C4. Inflexible	.46	.35	.34	.44	.37	.26	.22	.39
C5. Lacks planfulness	.33	.13	.14	.54	.18	-.03	.08	.37
Dominance	.78	.74	.61	.54	.64	.60	.44	.44
D1. Antagonistic	.61	.48	.44	.56	.43	.30	.35	.36
D2. Domineering	.44	.44	.31	.31	.39	.52	.23	.12
D3. Deceitful	.58	.52	.52	.38	.52	.43	.37	.41
D4. Manipulative	.71	.70	.61	.40	.59	.53	.43	.40
D6. Garrulous	.57	.58	.44	.34	.50	.45	.35	.37
Emotional	.77	.62	.69	.55	.52	.38	.44	.40
E1. Lacks anxiety	.19	.13	.21	.14	.11	.26	.03	-.07
E2. Lacks pleasure	.34	.29	.32	.23	.04	-.09	.07	.13
E3. Lacks emotional depth	.59	.49	.63	.33	.42	.28	.40	.31
E4. Lacks emotional stability	.53	.41	.32	.55	.40	.23	.26	.45
E5. Lacks remorse	.66	.57	.63	.41	.48	.41	.44	.26
Self	.64	.63	.39	.52	.60	.61	.39	.37
S1. Self-centered	.57	.53	.38	.47	.48	.37	.33	.42
S2. Self-aggrandizing	.25	.34	.16	.08	.29	.45	.20	-.01
S3. Sense of uniqueness	.42	.44	.31	.26	.41	.56	.23	.13
S4. Sense of entitlement	.53	.56	.31	.40	.48	.51	.39	.22
S5. Sense of invulnerability	.08	.03	.04	.11	.25	.41	.13	.01
S6. Self-Justifying	.49	.44	.30	.46	.32	.14	.21	.41
S7. Unstable self-concept	.30	.24	.11	.37	.27	.11	.15	.37

Note. CAPP-SR = Comprehensive Assessment of Psychopathic Personality–Self-Report; ELSRP = Expanded Levenson Self-Report Psychopathy Scale; EGO = egocentricity; CAL = callous; ANT = antisocial; YPI-S = Youth Psychopathic Traits Inventory–Short Form; G/M = grandiose/manipulative; C/U = callous/unemotional; I/I = impulsive/irresponsible. ELSRP was administered in the University sample, whereas the YPI-S was administered in the Community sample. Correlations in bold typeface are conceptually expected. All $r \geq |.30|$ are statistically significant ($p < .001$); smaller correlations are not deemed meaningful.

One of the most important findings is that the CAPP-SR appears to provide comprehensive assessment of PPD at least in the two samples considered here.³ Even in light of the potential range restriction associated with nonoffender and noninstitutionalized samples, the 33 CAPP-SR symptom scales accounted for a substantial amount of variance in other PPD measures. This finding is particularly important, as these other measures serves as operationalizations of several different psychopathy perspectives, some of which are at odds with one another in the field (see, e.g., Patrick et al., 2009). Moreover, at an individual level, the CAPP-SR symptom scales converged with all of the various domain/factor subscales of these other psychopathy measures in a pattern that would be conceptually indicated. Indeed, CAPP-SR symptoms map onto broader domains of emotional stability/boldness (e.g.,

lacks anxiety, sense of invulnerability, domineering, self-aggrandizing), callous affect/meanness (e.g., unemphatic, lacks emotional depth, lacks remorse), interpersonal (e.g., antagonistic, deceitful, manipulative, sense of uniqueness, sense of entitlement), and behavioral/disinhibition (e.g., reckless, disruptive, lacks emo-

³ Those readers who think that antisociality, as explicitly operationalized by PCL-R Facet 4 (antisocial; see e.g., Neumann, Hare, & Pardini, 2015), represents an important part of PPD will possibly disagree with this statement. We contend that the CAPP does cover antisociality, just not the criminal behaviors required to score high on PCL-R Facet 4. We refer to the debate on this issue (e.g., Hare & Neumann, 2010; Cooke & Sellbom, 2018; Skeem & Cooke, 2010) for greater context, as a more detailed coverage of this topic is beyond the scope of this article.

Table 6
Correlations Between CAPP-SR and EPA-SF/EPA-SSF Scale Scores in University and Community Samples

CAPP-SR	EPA-SF/EPA-SSF				
	Total	ANT	ES	DIS	NAR
Total	.78/.68	.78/.76	.06/-.16	.67/.67	.53
Attachment	.56/.53	.76/.71	.05/-.21	.41/.48	.24
A1. Detached	.29/.25	.58/.48	-.11/-.38	.24/.31	-.03
A2. Uncommitted	.48/.52	.62/.63	.08/-.07	.32/.42	.25
A3. Unempathic	.51/.53	.62/.61	.20/-.02	.29/.41	.29
A4. Uncaring	.45/.41	.49/.52	.01/-.14	.40/.38	.27
Behavioral	.64/.58	.49/.65	-.01/-.25	.74/.69	.40
B1. Lacks perseverance	.32/.23	.26/.40	-.16/-.37	.53/.35	.10
B2. Unreliable	.33/.31	.34/.47	-.12/-.29	.45/.36	.11
B3. Reckless	.55/.55	.25/.50	.09/-.08	.68/.63	.40
B4. Restless	.25/.29	.19/.34	-.03/-.27	.30/.46	.16
B5. Disruptive	.56/.51	.47/.54	.05/-.17	.53/.59	.40
B6. Aggressive	.57/.59	.53/.52	.14/.12	.43/.50	.45
Cognitive	.61/.49	.60/.63	-.06/-.34	.65/.62	.34
C1. Suspicious	.41/.42	.60/.50	-.03/-.15	.29/.42	.21
C2. Lacks concentration	.30/.27	.23/.39	-.16/-.37	.51/.45	.11
C3. Intolerant	.49/.47	.60/.62	-.01/-.15	.35/.41	.36
C4. Inflexible	.43/.39	.40/.43	.00/-.22	.36/.51	.36
C5. Lacks planfulness	.34/.23	.18/.31	.05/-.03	.50/.39	.09
Dominance	.70/.67	.69/.67	.13/.05	.49/.58	.57
D1. Antagonistic	.54/.51	.53/.54	.06/-.13	.44/.54	.40
D2. Domineering	.49/.47	.34/.32	.20/.34	.25/.30	.65
D3. Deceitful	.49/.50	.53/.58	.17/-.08	.35/.45	.25
D4. Manipulative	.61/.59	.69/.64	.09/.01	.42/.49	.45
D5. Insincere	.43/.49	.52/.51	.02/-.03	.33/.46	.25
D6. Garrulous	.43/.43	.37/.40	.00/.06	.33/.37	.44
Emotional	.68/.59	.73/.69	.14/-.11	.52/.53	.43
E1. Lacks anxiety	.44/.23	.15/-.06	.67/.63	.09/-.03	.47
E2. Lacks pleasure	.12/.00	.40/.30	-.36/-.54	.24/.15	-.11
E3. Lacks emotional depth	.47/.44	.62/.55	.14/-.10	.33/.38	.16
E4. Lacks emotional stability	.44/.43	.41/.50	-.22/-.30	.49/.58	.40
E5. Lacks remorse	.59/.54	.64/.60	.20/.08	.40/.36	.37
Self	.61/.60	.52/.56	.06/.10	.48/.51	.59
S1. Self-centered	.46/.49	.48/.59	-.06/-.14	.44/.46	.32
S2. Self-aggrandizing	.32/.27	.19/.13	.25/.39	.06/.05	.48
S3. Sense of uniqueness	.47/.42	.39/.27	.21/.34	.23/.24	.52
S4. Sense of entitlement	.47/.51	.42/.48	-.04/.17	.35/.36	.55
S5. Sense of invulnerability	.27/.33	.02/.07	.45/.47	.08/.18	.30
S6. Self-justifying	.36/.28	.39/.38	-.11/-.30	.40/.43	.23
S7. Unstable self-concept	.16/.20	.25/.39	-.41/-.46	.41/.39	.01

Note. CAPP-SR = Comprehensive Assessment of Psychopathic Personality–Self-Report; EPA = Elemental Psychopathy Assessment; SF = Short Form; SSF = Super Short Form; ANT = antagonism; ES = emotional stability; DIS = Disinhibition; NAR = narcissism. Correlations to left of slash are from university sample/ correlations right of slash are from community sample (NAR is only in university sample). Correlations in bold typeface are conceptually expected. All $r \geq |.30|$ are statistically significant ($p < .001$); smaller correlations are not deemed meaningful.

tional stability). Thus, the CAPP-SR appears to operationalize a comprehensive model that saturates all these different perspectives, including psychopathy concepts that are currently debated (e.g., boldness; see, e.g., Gatner, Douglas, & Hart, 2016; Lilienfeld et al., 2012; Miller & Lynam, 2012).

Cooke et al. (2012) made it clear that the CAPP concept map was meant to be over rather than underencompassing and anticipated that some symptoms would likely have less relevance to PPD relative to other symptoms. The current investigation identified some symptoms that appeared to function less well than others and, in light of other data published in the literature, could be candidates for removal. Four symptoms, in particular, were prob-

lematic in the broader convergent validity results, with three (garrulous, unstable self-concept, and lacks pleasure) being rated among the four least prototypical symptoms by forensic mental health experts (Kreis et al., 2012). They also appeared on the bottom third with respect to factor loadings on a general CAPP psychopathy factor (Sellbom et al., 2015), with restless and lacks pleasure exhibiting the smallest loadings.

Despite somewhat suboptimal results in the current study, a good conceptual case can be made for the retention of restless in light of its role as a marker of general disinhibition and ADHD, which are important developmental precursors to psychopathy (e.g., Lynam, 1996). This CAPP symptom also tends

Table 7
Hierarchical Regression Analyses Predicting Psychopathy Scores With the CAPP-SR and CAPP-LRS

Psychopathy measure	Step 1: CAPP-LRS; Step 2: CAPP-SR				Step 1: CAPP-SR; Step 2: CAPP-LRS			
	R ²	F	ΔR ²	ΔF	R ²	F	ΔR ²	ΔF
TriPM ^a	.69	21.15**	.15	8.08**	.80	37.24**	.04	2.34**
Boldness	.54	11.41**	.24	9.73**	.74	26.72**	.05	2.00*
Meanness	.71	23.58**	.11	5.32**	.78	33.33**	.05	2.16**
Disinhibition	.60	14.23**	.14	4.62**	.65	17.89**	.09	2.86**
TriPM ^b	.59	14.77**	.23	11.38**	.77	34.89**	.04	2.20**
Boldness	.50	10.05**	.24	8.45**	.70	23.16**	.04	1.52 [†]
Meanness	.62	16.70**	.23	14.27**	.82	46.60**	.03	1.92*
Disinhibition	.56	12.84	.19	6.88**	.68	21.46**	.07	2.50**
SRP-4 ^a	.66	18.73**	.13	5.31**	.73	26.20**	.06	2.41**
Interpersonal manipulation	.67	19.25**	.13	5.55**	.74	27.18**	.06	2.50**
Callous affect	.64	16.89**	.13	4.76**	.69	21.74**	.07	2.70**
Erratic lifestyle	.56	12.20**	.16	5.07**	.66	18.32**	.07	2.07*
Criminal tendencies	.22	2.70**	.09	1.10	.21	2.50**	.10	1.26
EPA-SF ^a	.68	20.02**	.15	7.10**	.77	31.73**	.06	2.65**
Antagonism	.71	23.51**	.12	5.70**	.76	30.56**	.07	3.19**
Emotional stability	.57	12.64**	.19	6.60**	.67	19.60**	.09	2.98**
Disinhibition	.65	17.50**	.14	5.35**	.70	22.25**	.08	3.27**
Narcissism	.51	10.02**	.23	7.51**	.71	23.08**	.03	1.08
EPA-SSF ^b	.56	12.76**	.20	7.30**	.67	20.30**	.09	3.22**
Antagonism	.59	14.75**	.15	5.43**	.67	20.47**	.08	2.70**
Emotional stability	.50	10.24**	.20	6.23**	.61	15.76**	.10	2.95**
Disinhibition	.51	10.51**	.20	6.17**	.63	17.26**	.08	2.40**
ELSRP ^a	.72	24.21**	.15	9.96**	.84	48.83**	.03	2.14*
Egocentricity	.59	13.83**	.17	6.19**	.71	23.93**	.05	1.73 [†]
Callousness	.61	15.06**	.16	5.72**	.72	24.44**	.05	1.77*
Antisocial	.65	17.69**	.16	7.17**	.74	27.93**	.06	2.86**
YPI-S ^b	.53	11.36**	.14	4.05**	.58	13.76**	.10	2.74**
Grandiose/manipulative	.49	9.71**	.18	4.76**	.58	13.87**	.09	2.34**
Callous/unemotional	.37	5.90**	.11	1.95*	.38	6.19**	.10	1.76*
Impulsive/irresponsible	.44	7.92**	.15	3.26**	.50	10.19**	.08	1.86*

Note. CAPP-SR = Comprehensive Assessment of Psychopathic Personality–Self-Report; TriPM = Triarchic Psychopathy Measure; SRP-4 = Hare Self-Report Psychopathy Scale–4; EPA = Elemental Psychopathy Assessment; SF = Short Form; SSF = Super Short Form; ELSRP = Expanded Levenson Self-Report Psychopathy Scale; YPI-S = Youth Psychopathic Traits Inventory–Short Form.

^a University sample. ^b Community sample.

[†] $p < .05$. * $p < .01$. ** $p < .001$.

to perform better than the other three in prototypicality ratings (e.g., Kreis et al., 2012; Sörman et al., 2014). Garrulous, conceptually, is intuitive as a representation of the classic superficial charm evident in some high on psychopathy (e.g., Cleckley, 1941; Hare, 2003), but the wording of this symptom might potentially inhibit its assessment. Also, being excessively talkative and glib are likely traits that are difficult to self-observe and therefore report on while completing a questionnaire. The other two CAPP symptoms, however, have less strong conceptual grounding in the psychopathy literature. Lacks pleasure and unstable self-concept emerged through clinical considerations of PPD, but an examination of various theoretical perspectives and operationalizations of this disorder do not consider these traits as reflective of PPD as other symptoms. In addition, they are rarely rated as highly prototypical of PPD, do not correlate strongly with other PPD measures (in fact, lacks pleasure correlated negatively with TriPM boldness and EPA emotional stability), and load (relatively) poorly on a general factor of PPD (Sellbom et al., 2015).

The most substantial implication of the current investigation is that the CAPP model now has another promising research operationalization. As mentioned earlier, the CAPP-IRS is labor-

intensive and time consuming and therefore not practical in many research contexts, especially in which self-report operationalization is sufficient. The CAPP-SR will also allow for examination of the CAPP model in contexts where institutional records are simply not available, including business, politics, and other settings in which so called “successful psychopaths” might operate. The CAPP measures dimensional traits that exist in anyone (mostly at nonpathological levels) and is therefore well suited to consider psychopathy across contexts. Furthermore, although far more validation is necessary and other elements will need to be made available (e.g., validity scales to assess response bias) before applied clinical use can be recommended, the CAPP-SR manual (Sellbom & Cooke, 2019) will have norm-referenced scores based on a large representative community sample unlike most other psychopathy self-reports. These scores can be used to gauge an individual’s relative standing on CAPP symptom scales as well as better characterize the clinical and research samples, and future research need to determine the degree of score elevation to be associated with actual impairment/pathology. In addition, dimensional scores also allow for severity consideration for each CAPP symptom and can be potentially be helpful in risk and rehabilitation contexts.

Strengths, Limitations, and Future Directions

There were several strengths associated with this investigation. The development of the CAPP-SR is a novel contribution to the operationalization of the CAPP model, which represents a major effort to consolidate various psychopathy perspectives in a highly contentious field. The CAPP perspective is quite promising in this regard, but this new measure will be an important ingredient to promote further research in noninstitutionalized settings. Moreover, the development itself was systematic and sought to balance multiple psychometric properties, including scale information, item difficulty, discriminant validity, and possibly most importantly, content validity (e.g., Clark & Watson, 1995). Finally, scale validation was conducted in two separate samples using common self-report measures of psychopathy representing multiple perspectives. The CAPP-SR also outperformed the CAPP-LRS showing evidence for a classic “bootstrapping” approach to construct validity (Cronbach & Meehl, 1955; Smith, Fischer, & Fister, 2003).

There were also limitations associated with this research and our generally positive conclusions must be viewed in this light. First, no offender or clinical/forensic patient samples were used for scale development and validation. Although we used a community sample generally representative of the U.S. population for development, which allowed us to select items that provide measurement in the clearly dysfunctional range, it could be argued that there was insufficient variability of psychopathy traits at the higher end of trait continua. Certainly, this issue affects generalizability to correctional, forensic, and other institutionalized populations, and therefore, additional validity studies needs to be conducted in such settings. It would be important to know whether there are meaningful differences across these populations. Second, all of our validity measures consisted of other self-report questionnaires; as a result, some of the correlation magnitudes might have been inflated to an unknown degree as a result of shared method variance. We attempted to correct for this potential problem by interpreting only medium (and even large, for some analyses) correlations as meaningful. Of course, the lack of validation against the CAPP-IRS is also a limitation that must be addressed in future research.

The development of the CAPP-SR affords a number of important research directions, both to further validate the instrument, but also to extend our understanding of PPD from the CAPP perspective. Given that PPD has in part become a salient clinical construct because of its utility in risk assessment and understanding offending behavior (e.g., Skeem et al., 2011), it will be important to evaluate CAPP-SR scale scores’ predictive validity in this regard. Furthermore, the hierarchical nature of the CAPP model includes a six-domain structure that is thematic/rational, and not meant to reflect unidimensional higher order domains in a latent modeling framework. Nevertheless, the CAPP-SR affords a potential opportunity to evaluate a higher order latent factor structure for the CAPP, across multiple settings, which might further assist with evaluating centrality of CAPP symptoms to the psychopathy construct, but also provide for a potential alternative organization of CAPP domains from a factor analytic paradigm. Such work would also potentially reveal a higher order structure for the CAPP-SR to facility domain level interpretation.

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