1

Please note that this article has been accepted for publication at *Assessment*. This file version does not represent the final published version of the article.

Examining the Item-Level Structure of the Triarchic Psychopathy Measure:

Sharpening Assessment of Psychopathy Constructs

Kasey Stanton Virginia Tech, Western University

Matthew F. D. Brown Western University

David Watson University of Notre Dame

Correspondence concerning this paper should be addressed to Kasey Stanton, Virginia Tech, Psychology Department, 109 Williams Hall, Blacksburg, Virginia 24018. Email: kaseyjstanton@gmail.com. Please note that the ideas appearing in this manuscript have not been disseminated previously. Research ethics committee approval was obtained for this research, and all individual research participants provided informed consent for their participation. Ethics approval was not explicitly sought to post data presented in this manuscript to open access, online repositories, and thus, these data are not provided on such a forum. However, please contact Kasey Stanton should you have any questions or wish to access these data. Please also note that this research was supported by a University of Notre Dame Institute for Scholarship in the Liberal Arts Graduate Student Research Award awarded to Kasey Stanton.

TRIARCHIC PSYCHOPATHY MEASURE ITEM STRUCTURE

2

Abstract

The Triarchic Psychopathy Measure (TriPM; Patrick, 2010) has emerged as a widely used measure for assessing a three-trait model of disinhibition, meanness, and boldness. Building upon recent psychometric work, we examined the TriPM's item-level factor structure and correlates in both a clinically-oriented community sample (N = 700) and in undergraduates (N = 527). Our results indicated a replicable three-factor structure generally corresponding with disinhibition, meanness, and boldness, although many items were not clear indicators of their assigned TriPM domain scales. Consequently, these dimensions may be better represented by Alternate Disinhibition (14 items), Boldness (13 items), and Meanness (8 items) domain scales. Additionally, we identified sets of items defining distinct Self-Assurance and Fearlessness dimensions within Boldness and Irresponsibility and Impulsivity dimensions within Disinhibition. We discuss these findings in the context of other recent studies examining the TriPM's item-level structure, highlighting key future directions for sharpening measurement of the externalizing spectrum.

KEYWORDS: psychopathy; factor analysis; psychometrics; personality; externalizing spectrum

Examining the Item-Level Structure of the Triarchic Psychopathy Measure:

Sharpening Assessment of Psychopathy Constructs

The triarchic model consisting of the phenotypic traits of disinhibition, meanness, and boldness was proposed to integrate prior theoretical models of psychopathy (Patrick, Fowles, & Krueger, 2009). The triarchic perspective has generated significant research interest over the past decade and advanced our understanding of psychopathy and externalizing traits in many ways. For example, consistent with the triarchic model being proposed as an integrative framework, application of this model has improved knowledge regarding how to assess psychopathic traits in a diverse range of populations, as well as how biological processes are implicated in psychopathy across the lifespan (e.g., Drislane & Patrick, 2017; Lilienfeld et al., 2016; Patrick & Drislane, 2015; Somma, Borroni, Drislane, Patrick, & Fossati, 2018).

Much of the research from the triarchic model perspective has used the Triarchic Psychopathy Measure (TriPM; Patrick, 2010), a 58-item non-proprietary instrument that can be freely accessed by researchers. The 19 TriPM Boldness items were selected to capture fearless dominance as operationalized in the Psychopathic Personality Inventory (PPI; now PPI-Revised; Lilienfeld, & Widows, 2005). The Boldness scale measures a construct described as the "nexus of social dominance" and includes items assessing interpersonal dominance (e.g., "am a born leader"), emotional resiliency (e.g., "well-equipped to deal with stress"), and fearlessness (e.g., "afraid of few things"; Patrick, 2010; Drislane & Patrick, 2017). Items used to assess disinhibition and meanness were drawn from the Externalizing Spectrum Inventory (Krueger, Markon, Patrick, Benning, & Kramer, 2007), a measure providing thorough assessment of externalizing traits and behaviors. A range of item content comprises the 20-item Disinhibition scale (e.g., items assessing impulsivity, irresponsibility, and boredom proneness), whereas

aggression, excitement seeking, and callousness item content is emphasized in the 19-item Meanness scale.

Examining the Psychometric Properties of the Triarchic Psychopathy Measure

With the emergence of the TriPM in the psychopathy literature, there has been significant recent interest in examining its psychometric properties and factor structure. Some studies provide general support for the TriPM's three-factor structure. For example, Somma et al. (2018) conducted an array of confirmatory factor analytic (CFA) and exploratory structural equation model (ESEM) analyses in 1,082 community adults, finding that the TriPM's item-level structure generally aligns with targeted boldness, meanness, and disinhibition dimensions.

Latzman and colleagues (2019) present similar results when examining the factor structure of all 58 TriPM items using ESEM in a mixed sample of 470 undergraduates and community adults.

Across studies, the authors also examined indicators of model fit (e.g., the root mean square error of approximation [RMSEA]), finding that a three-factor structure yields acceptable fit.

However, these and other studies also indicate that some TriPM items fail to load strongly on factors corresponding to their assigned domain scale, show meaningful loadings on multiple factors, or do not load strongly on any factor. For example, in Somma et al.'s (2018) ESEM model including all 58 items, the Meanness item "I would enjoy being in a high-speed chase" failed to load onto the Meanness factor (loading = .01; see their Table 5), instead showing stronger loadings on the Boldness and Disinhibition factors (loadings = .24 and .25, respectively). Furthermore, Somma et al. (2018) specified a number of residual correlations between items when estimating their 58-item ESEM model to account for potentially meaningful variance not reflected by the Boldness, Meanness, and Disinhibition factors. Related to this issue of within-domain heterogeneity, other studies also indicate that items comprising broader

TriPM domains define distinct subdimensions (e.g., distinct Emotional Stability and Dominance facets define boldness; Shou, Sellbom, & Xu, 2018).

Other relevant recent studies examined how many distinct dimensions underlie the TriPM items (Collison, Miller, & Lynam, 2020; Roy et al., 2020). Using data from a number of samples, Roy and colleagues (2020) concluded that the TriPM's structure may be "septarchic" rather than "triarchic," as they found evidence for seven distinct TriPM factors (i.e., Positive Self-Image, Leadership, Stress Immunity, Callousness, Enjoying Hurting, Impulsivity, Antisociality). Collison et al. (2020) also found evidence that more than three TriPM factors could be identified in a sample of 431 adult participants. However, Collison et al.'s (2020) findings differed somewhat from those presented by Roy and colleagues (2020), as their results indicated six rather than seven distinct TriPM dimensions, which they labelled Antisociality, Stress Immunity, Callousness, Leadership, Sensation Seeking, and Impulsivity.

Current Study Goals

Building upon this prior work, our primary goal was to articulate the item-level factor structure of the TriPM at both broad (i.e., the domain level) and specific levels (i.e., identifying facets within TriPM domains). Although a number of recent studies now have examined the TriPM's item-level structure, our study design and data analytic approach differed from prior studies in some notable ways. First, some prior studies examining heterogeneity of the TriPM item sets have focused on analyses of individual domains rather than analyzing the structure of all 58 items concurrently (e.g., Shou et al., 2018; select analyses from Somma et al., 2018). Although these studies have advanced our understanding of the TriPM's item level structure, this approach assumes that all items traditionally assigned to each domain should be used when conducting factor analyses of a domain's items, even though some items may not be clear

indicators of that domain (e.g., the item assessing "finding danger fun" traditionally is scored with Meanness but may be a better indicator of Disinhibition or Boldness). Other recent studies sharpening our understanding of the TriPM conducted EFAs in a single sample (e.g., Collison et al., 2020) and/or focused on applying CFA structures in other samples after conducting initial EFAs (e.g., Roy et al., 2020).

In the current study, we examined the hierarchical structure of the TriPM's 58 items using exploratory factor analysis (EFA) in multiple samples concurrently (i.e., community adults reporting current psychiatric treatment, undergraduates). This approach is recommended for identifying how many replicable, interpretable dimensions can be identified across multiple samples when not assuming an a priori structure (Clark & Watson, 2019; Loehlin & Goldberg, 2014). With this approach, we used all 58 TriPM items in initial EFAs in both samples to enable us to select items that were clear indicators of identified factors across samples differing in important ways (e.g., by age and by levels of psychopathology). This multi-sample approach is necessary given that some items that function well in one sample may function poorly in another (e.g., items assessing serious theft may be rarely endorsed by undergraduates; Clark & Watson, 2019; Watson et al., 2012). Furthermore, by using a hierarchical EFA approach, we potentially could identify item sets that are clear indicators of both (a) broader TriPM domains (e.g., boldness) and (b) more specific facets defining each domain (e.g., stress immunity and dominance defining boldness).

In contrast, use of a CFA approach in one or both samples would have prevented us from identifying items that were poor indicators of any factor or that loaded strongly onto multiple factors. Identifying problematic cross-loadings represents a key consideration given that many TriPM items may load strongly onto multiple factors as stated. For example, some items

assessing specific illegal acts may load strongly onto both meanness and disinhibition, which could not be detected if these items were specified to load on only one factor using CFA.

That being said, prior to conducting the EFAs described, we briefly report results and model fit indices for CFA models representing the TriPM domains with their traditional scoring compositions, as has been done in prior research. However, we expected that model fit indices would indicate poor fit because CFA model fit (a) has been shown to be poor for the TriPM specifically (e.g., Somma et al., 2018) and (b) often is poor for multidimensional personality and psychopathology measures more generally (Hopwood & Donnellan, 2010). We also report fit indices for different EFA factor solutions. Again, we expected some indices to indicate poor fit for factor solutions with relatively few factors, as model fit even when using EFA can be suboptimal when analyzing the structure of complex measures such as the TriPM that include heterogeneous sets of content defining broader domains (Stanton, McArtor, & Watson, 2019).

Study predictions. We predicted that although we would be able to identify a three-factor structure corresponding with boldness, disinhibition, and meanness, there would be at least several items traditionally used to score each domain that would (a) fail to be clear indicators of the corresponding factor or (b) show significant cross-loadings on factors representing other domains (e.g., items loading strongly on both Meanness and Disinhibition). Additionally, we predicted that we would find evidence for distinct subdimensions within the TriPM domains based on prior research. However, we did not make more specific predictions regarding the nature and number of factors defining each domain given that (a) there are discrepancies in the number and nature of TriPM factors detected across studies and (b) our data analytic approach differed from prior studies in the ways described earlier.

Furthermore, participants from both samples completed other personality and externalizing psychopathology measures, enabling us to compare patterns of correlates for (a) the TriPM scales as they traditionally are scored and (b) TriPM domain and facet scales based on our factor analytic results. Because we did not know the nature of TriPM structures with greater than three factors, we were unable to make specific predictions regarding the correlates of scales representing narrower dimensions within broader TriPM domains. However, based on prior research using the TriPM domain scales, we predicted that boldness would associate robustly with extraversion and measures of some externalizing traits, such as grandiosity. Next, we anticipated that scales representing meanness and disinhibition would correlate strongly and negatively with agreeableness and conscientiousness indicators, respectively, based on prior research.

Method

Participants

Sample 1. Participants were 700 community adults recruited through Amazon Mechanical Turk (AMT). Participants were required to be 18 years or older and currently receiving psychotherapy and/or psychotropic medication. Current treatment status was ascertained by having participants complete a screening survey, which also included items assessing other behaviors (e.g., exercise frequency) to obscure its purpose. Although over 6,000 participants completed the initial screen, most did not report current treatment status or elected not to complete the full study after being invited to do so. Thus, we focus on the 700 participants here who reported current treatment status and completed the full study (also see Stanton et al., 2019 for additional details). We did not collect information regarding specific psychiatric diagnoses.

Of these 700 community adults (referred to as the "community sample" from here on), the majority identified as female (68.4%). The majority also identified as White/Caucasian (84.4%), with 4.3%, 3.4%, 3.4%, and 3.0% identifying as Multiracial, Black/African American, Asian/Asian American, and Hispanic/Latina, respectively. The small remaining percentage either identified as other ethnicities or did not provide this information. Average age was 32.8 years (SD = 10.1), and 63.0% of the sample reported current employment. The most common participant responses for highest level of education completed was an associate's degree or some college (41.6%), followed by having completed a bachelor's degree (35.3%).

Sample 2. The second sample consisted of 527 undergraduates, who again were required to be 18 years or older. Mean participant age was 19.2 years (SD=1.5), and the majority identified as female (71.2%). Most participants identified as White/Caucasian (74.0%), with 9.1%, 8.2%, 3.8%, and 3.6% identifying as Hispanic/Latina, Asian/Asian American, Black/African American, and Multiracial, respectively. The small remaining percentage either identified as other ethnicities or did not provide this information. Small percentages of the sample reported receiving current psychotropic medication (11.6%) or psychotherapy (7.6%)

Measures

Triarchic Psychopathy Measure. As discussed, the TriPM (Patrick, 2010) is a 58-item measure developed to assess boldness, meanness, and disinhibition. Participants responded to these items using a 4-point scale ranging from 0 (*false*) to 3 (*true*). The TriPM and all other measures described were completed by participants in both samples.

Other measures. We administered the 120-item International Personality Item Pool-NEO (Maples, Guan, Carter, & Miller, 2014) to assess five-factor model personality domains and facets. However, openness items were not administered because this domain tends to display

weak psychopathology associations. Additionally, note that one item ("jump into things without thinking") that normally is included in the Cautiousness facet scale of conscientiousness was dropped from this scale and from the conscientiousness domain score because it also was administered within the TriPM. Participants rated themselves on each item using a 5-point scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*).

Next, participants were asked to provide the number of times they have been arrested in their lifetimes, a variable we included in our analyses given its relevance to psychopathy. To assess other externalizing behaviors, participants completed the Externalizing Spectrum Inventory-Brief Form (ESI-BF; Patrick, Kramer, Krueger, & Markon, 2013) Drug (6 items; e.g., "used drugs when it might be hazardous") and Alcohol Use (9 items; e.g., "enjoy getting drunk") scales. Participants responded to these items using a scale ranging from 0 (*false*) to 3 (*true*).

Participants also completed other externalizing trait measures, including the Levenson Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995) and the Short Dark Triad (SD3; Jones & Paulhus, 2014). The LSRP's items define two factors of Primary Psychopathy (16 items; e.g., "looking out for myself is my top priority") and Secondary Psychopathy (10 items; e.g., "don't plan in advance"), and we focused on subscales modeling these factors in our analyses. Participants rated themselves on the LSRP items using a 4-point scale ranging from 1 (*disagree strongly*) to 4 (*agree strongly*). The SD3 assesses the dark triad constructs of Machiavellianism, psychopathy, and narcissism using 9-items for each construct. Participants rated themselves on the SD3 items using a 5-point scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*).

Results

Overview and Preliminary Analyses

First, we report CFAs examining the TriPM's item-level structure. Following that, we present the results of an iterative series of EFAs to address our primary study goal of explicating the item-level structure of the TriPM. Finally, we examine the personality and psychopathology correlates for TriPM domain and facet scales created based on our EFA results.

Prior to presenting the results of more substantive analyses, we computed (a) frequencies for TriPM item scores and (b) descriptive statistics and coefficient alpha estimates for all previously discussed measures. Although we do not present all TriPM item frequencies here, there was very little variation in responses for several items in the undergraduate sample (see online Supplemental Tables S1 and S2 for all individual item frequencies in the community and undergraduate samples, respectively). Specifically, over 90% of undergraduates responded with a score of "0" (*false*) for items 33 ("injured others to see them in pain"; 90.1% responded "0"), 52 ("robbed someone"; 94.7% responded "0"), and 55 ("stolen from a vehicle"; 95.3% responded "0").

Next, Supplemental Table S3 displays measure descriptive statistics and coefficient alpha estimates for both samples. Given the differing nature of these samples, it is unsurprising that there were notable mean differences for many measures; for example, community adults described themselves as much more neurotic and much less extraverted than did undergraduates (both Cohen's d estimates $\geq |.80|$, indicating a large effect size; Cohen, 1988). Note that Supplemental Table S3 also presents data for the newly created and traditionally-scored TriPM scales, which we discuss subsequently.

Confirmatory Factor Analyses

We examined CFA models for three-factor structures corresponding to the TriPM's standard item scoring (Patrick, 2010). We also conducted separate CFAs for each of the three

TriPM domains, as has been done previously (Somma et al., 2018). All CFAs were conducted with a weighted least squares mean and variance adjusted (WLSMV) estimator to account for the categorical nature of the data. To evaluate the model fit, we considered RMSEA, the weighted root mean squared residual (WRMR), Bentler's comparative fix index (CFI), and the Tucker-Lewis Index (TLI). For evaluating RMSEA, values < .08 or less indicate acceptable fit and for WRMR, values < 1.0 indicate acceptable model fit (Yu, 2002). For both CFI and TLI, values ≥ .90 are considered to indicate acceptable fit (Hu & Bentler, 1999).

Model fit for the three-factor structure was poor according to most indices in both the community (RMSEA = .079; CFI = .769; TLI = .760; WRMR = 3.06) and undergraduate samples (RMSEA = .069; CFI = .732; TLI = .722; WRMR = 2.45). Model fit also was poor when the 19 Boldness items were specified to load onto a single factor (i.e., across samples CFI and TLI values < .80; RMSEA values > .13, and WRMR > 2.50). Model fit for the single-factor structure of 19 Meanness items in the community (RMSEA = .132; CFI = .888; TLI = .874; WRMR = 3.012) and undergraduate data (RMSEA = .104; CFI = .883; TLI = .868; WRMR = 1.962) also was poor. Finally, when the 20 Disinhibition items were specified to load onto a single factor, model fit was acceptable according to some indices in the undergraduate data (RMSEA = .065; CFI = .922; TLI = .912; WRMR = 1.393), but was poorer in the community data (RMSEA = .100; CFI = .871; TLI = .856; WRMR = 2.159).

Hierarchical Exploratory Factor Analyses

Overview and preliminary analyses. We then conducted a series of hierarchical EFAs in each sample wherein all items were allowed to load on all factors when examining various factor solutions (Goldberg, 2006). To help us to determine how many possible factors to extract in each dataset, we used both parallel analysis and Velicer's minimum average partial (MAP) test

conducted with principal components analyses in both samples; although we report results on principal factor analyses subsequently, it is recommended that these procedures are run with principal components rather than principal factor analyses (O'Connor, 2000). We also subsequently report RMSEA, CFI, TLI, and WRMR values for each factor solution when describing them, although we anticipated that model fit would be poor with solutions for relatively few factors given that we factor analyzed 58 items assessing a diverse range of content.

In the community data, parallel analysis suggested up to six factors could be extracted, with the MAP test converging to suggest that a six-factor solution may be optimal. However, in the undergraduate dataset, the MAP test indicated that a six-factor solution may be optimal, but parallel analysis suggested that a seventh factor could be extracted.

Although we considered information provided by these analyses and model fit indices, our primary focus was on identifying the largest number of psychologically meaningful, well-defined factors (i.e., having at least several clear markers) that were replicable across samples. This approach of focusing on identifying replicable, interpretable dimensions is consistent with guidelines for articulating hierarchical factor structures using multiple datasets to avoid identification of dimensions that are sample specific and unlikely to replicate in other datasets (Loehlin & Goldberg, 2014; Stanton, McDonnell, Hayden, & Watson, 2020). Furthermore, other procedures and criteria described (e.g., parallel analysis, MAP test) that commonly are used to determine the optimal number of factors to extract often yield discrepant results when investigating complex factor structures involving many item indicators (Forbes et al., 2017). This was the case in the undergraduate dataset, as it was unclear based on conducting a parallel analysis and the MAP test whether extracting six or seven factors was preferable.

We considered a factor to be well-defined if it had at least several items that (a) loaded ≥ |.40| on that factor and (b) had cross-loadings on other factors ≤ |.30| across samples, consistent with recommendations for interpreting multisample factor analytic results (Clark & Watson, 2019). Additionally, we computed congruence coefficients (Gorsuch, 1983) to assess the similarity of the factor loadings across samples (e.g., comparing loadings for Boldness across samples). All factor solutions again were examined using a WLSMV estimator, and factors from multi-factor solutions were rotated with an oblique geomin rotation. We examined pathways for factors across solutions by computing correlations between factor scores (e.g., examining how factor scores from a two-factor solution correlate with factor scores derived from a three-factor solution; see Goldberg, 2006).

Hierarchical item-level structure. First, when extracting a single general factor, loadings were highly similar in nature across samples (congruence coefficient = .95). However, there were seven items that did not show substantial loadings on this general factor across samples (i.e., items 1, 3, 7, 22, 23, 26, 43 loaded \leq |.30| across samples; see online Supplemental Table S4). As expected, indices examined indicator poor model fit across samples for single-factor solutions (e.g., CFI and TLI < .60 across samples).

When we extracted two factors in each sample, Factor I was marked strongly by both Disinhibition and Meanness item content and was labeled *Antisociality*. The second factor was labeled *Boldness* as it was marked strongly by stress immunity and leadership content. These Antisociality and Boldness factors correlated positively but weakly in both the community (r = .16) and undergraduate (r = .22) samples. Both congruence coefficients for respective factors were .99. Once again, fit indices examined generally indicated poor model fit as expected (e.g., across datasets, CFI and TLI < .82; WRMR > 1.75).

Next, factor loadings for the three-factor solutions in the community and undergraduate samples are shown in Table 1 and Table 2, respectively. Some fit indices indicated acceptable model fit, whereas others began to approach guidelines for an acceptable model fit across both datasets (i.e., in the community data, RMSEA = .054, CFI = .899, TLI = .888, WRMR = 1.485; in the undergraduate data, RMSEA = .045, CFI = .894, TLI = .882, WRMR = 1.279). As Table 1 and Table 2 show, and a number of items loaded strongly on each of three emergent factors, which generally paralleled the TriPM Disinhibition, Meanness, and Boldness dimensions. We thus adopted these factor labels. However, it is worth noting here that some items traditionally used to score a domain actually loaded more strongly on factors representing other domains in one or both samples. For example, The TriPM item assessing things being "more fun if danger is involved" that traditionally is used to score Meanness loaded most strongly on Disinhibition in both sets of results, as did the item traditionally used to score Boldness that assesses "staying away from physical danger."

Once again, all factors were similar in nature across samples for these three-factor solutions (all respective congruence coefficients > .93). In the community sample, the Disinhibition and Meanness factors correlated .24; additionally, Boldness correlated positively, but very weakly, with both Disinhibition (r = .15) and Meanness (r = .07). In the undergraduate data, Disinhibition and Meanness correlated .40, whereas Boldness again correlated weakly with both other factors (r = .19 with Meanness and r = .04 with Disinhibition).

When four factors were extracted in each sample, fit indices generally indicated acceptable model fit across samples (i.e., in the community data, RMSEA = .048, CFI = .923, TLI = .910, WRMR = 1.262; in the undergraduate data, RMSEA = .039, CFI = .923, TLI = .911, WRMR = 1.087). For both four-factor solutions, Disinhibition and Meanness factors again emerged and

were congruent across samples (congruence coefficients for both factors > .92). In the community data, item content subsumed within the broader Boldness factor defined distinct factors we labeled *Fearlessness* and *Leadership*. The Fearlessness factor was defined most strongly by items assessing a lack of fear in response to various experiences, including physical danger. The Leadership factor was defined by items assessing the self-perception that one is a charismatic, influential leader (e.g., "knack for influencing others").

In the undergraduate data, the two remaining factors differed in nature from those from the community data. Specifically, a factor defined most strongly by items assessing optimism (e.g., "optimistic more often than not") and lack of fear and worry (e.g., "well-equipped to deal with stress"; "not scared easily") emerged and was labeled *Stress Immunity*. Loadings on this factor were not strongly congruent with any single factor from the community data, but overlapped to some degree with both the Fearlessness and Leadership factors from the four-factor community solution (both congruence coefficients = .75). Finally, only three items (i.e., "knack for influencing people"; "convince people to do what I want"; "not good at influencing people") were relatively clear markers of an additional factor we labeled *Influence*. This narrow factor had no clear cross-sample factor parallel, as its strongest congruence coefficient (.62) was with the Leadership factor from the community data (all other coefficients < .35). Although this factor was defined by items from the broader Boldness domain, its strongest pathway with factors from the three-factor solution actually was with Disinhibition. This may be due to these items loading strongly on both Disinhibition and Boldness (e.g., both loadings > .40 for item 35, "convince others") as our Table 2 results show.

Thus, there were clear cross-sample differences in the TriPM's four-factor structure, with the Influence factor in the undergraduate data being narrow in nature. These issues regarding poor factor definition and cross-sample congruency continued to arise when evaluating solutions with five or more factors. For example, when examining a six-factor solution in the undergraduate dataset, five items loaded \geq |.40| on the sixth factor, with two of these five items having stronger loadings on other factors. Furthermore, all five of these items had one or more crossloadings \geq |.39|, such that there were few to no clear item indicators of this factor. Thus, even though the MAP test and parallel analyses indicated that solutions with as many as six or seven factors may be optimal in these datasets, we do not consider solutions with more than three factors further, given that they yielded one or more dimensions that did not replicate across samples and/or were poorly defined.

Within-Domain Analyses: Identifying Facets of Triarchic Psychopathy Measure Domains

Rationale. Given that use of many items that (a) failed to load strongly on any factor or (b) loaded strongly on multiple factors may have affected the extent to which interpretable, replicable dimensions emerged in our previous analyses when extracting four or more factors, we then conducted EFAs separately for each domain using only items that emerged as clear domain indicators across both samples in our three-factor EFA analyses. This approach also has been adopted in other research examining issues related to heterogeneity within each broader TriPM domain (Roy et al., 2020).

Specifically, for these follow-up EFAs, we retained only items for analyses of each domain that (a) loaded \geq |.40| on their primary factor and (b) had cross-loadings on other factors \leq |.30| across samples, consistent with measurement development recommendations (Clark & Watson, 2019; Watson et al., 2012). However, we relaxed these selection criteria slightly in several cases. For example, although item 10 ("get scared easily") had a cross-loading of -.32 on Meanness in the community data, we included this item in our analyses of the Boldness domain

items because it loaded > |.50| on Boldness in both samples and had weak cross-loadings otherwise. Through this selection process, sets consisting of 14, 13, and eight items were identified for Disinhibition, Boldness, and Meanness, respectively (see Tables 1 and 2 for these item sets).

Our EFAs for these item sets were conducted using a WLSMV estimator. We again conducted parallel analyses and the MAP test using principal components for each analysis in each sample, and we again report RMSEA, CFI, TLI, and WRMR values for each model. However, as in our prior set of analyses, our primary goal was to identify the largest number of psychologically meaningful, replicable factors defining each item set, and we again computed congruence coefficients to examine cross-sample factor similarity.

Meanness. First, we examined the structure of the eight retained Meanness items, which reflected only 42.1% of the original 19 Meanness items. Across datasets, parallel analysis and the MAP test converged to indicate that only a single factor should be extracted. Additionally, examining two-factor structures in both samples indicated that distinct, interpretable factors failed to emerge (i.e., emergent factors correlated \geq |.74| in both datasets, and factors loaded on one factor or another based on whether they were reverse-keyed or not).

We therefore focused only on a Meanness total score for subsequent analyses. In the community data, some model fit indices suggested acceptable fit for a single-factor solution representing this composite score (CFI = .976, TLI = .966), whereas RMSEA (.131) and WRMR (1.513) indicated a poor fit. This also was the case in the undergraduate dataset (RMSEA = .129, CFI = .954, TLI = .936, WRMR = 1.397). Nonetheless, across samples, all 8 items loaded > |.55| on this single factor and these loadings were similar across samples (congruence coefficient = .99), suggesting that this factor was replicable.

Disinhibition. We then examined the structure of the 14 Disinhibition items, which represent 70% of the 20 items traditionally used to score this domain. In both datasets, parallel analysis suggested that up to two factors could be extracted, but the MAP test suggested extracting only a single factor. Although these analyses were discrepant, we examined a two-factor solution to determine if it yielded interpretable, well-defined factors.

As Table 3 shows, these items indeed defined a replicable (i.e., both respective congruence coefficients = .96), interpretable two-factor structure. In the community data, some indicators indicated acceptable model fit, but others did not (RMSEA = .092, CFI = .947, TLI = .924, WRMR = 1.350). Model fit indices consistently indicated acceptable model fit in the undergraduate data (RMSEA = .060, CFI = .965, TLI = .950, WRMR = .878).

The first factor was defined strongly by items assessing unreliability (e.g., "miss things I promise to attend") and was labeled *Irresponsibility*. The second factor was defined by items assessing poor self-control and was labeled *Impulsivity*. We also examined a three-factor structure of the Disinhibition items in both datasets, but found that one factor in this solution had only one clear item marker (i.e., item 6, "miss things I promise to attend") in the undergraduate data. Thus, we focused on the replicable two-factor structure of Irresponsibility and Impulsivity to guide the creation of Disinhibition facet scales.

Boldness. Finally, we examined the structure of the 13 items identified as clear Boldness markers, which reflect 68.4% of the original 19 Boldness items. In both datasets, parallel analysis suggested that up to two factors could be extracted, but the MAP test suggested extracting only a single factor. Once again, we examined a two-factor solution to determine if it reflected two meaningful factors defining distinct facets within the Boldness domain.

When we extracted two factors in each sample, the first factor (see Table 4) was defined strongly by items (e.g., "am afraid of few things") assessing a lack of fear; it therefore was labeled *Fearlessness*. The second factor was defined strongly by items assessing social influence (e.g., "am a born leader"), optimism, and having positive self-views and therefore was labeled *Self-Assurance*. Both of these factors were congruent across samples (both congruence coefficients > .94). In the community data, some fit indices for this two-factor model indicated acceptable model fit, but others did not reach thresholds for an acceptable fit (RMSEA = .094, CFI = .940, TLI = .912, WRMR = 1.305). In the undergraduate data, fit indices generally suggested that fit was not acceptable (RMSEA = .103, CFI = .897, TLI = .849, WRMR = 1.376).

However, we focused on this two factor-solution because it produced two well-defined, reliable factors, consistent with the goals of our analyses. Additionally, we examined three-factor solutions, but the third factor was very narrow and was defined strongly by only two items in each sample. Consequently, we focused on a two-factor solution to guide subscale creation for Boldness facets.

Triarchic Psychopathy Measure subscale creation. We created subscales to model each factor representing facets of broader TriPM Disinhibition and Boldness domains in subsequent analyses, reverse-scoring items for subscale creation when necessary. For item selection for subscales, we again retained only items that (a) loaded $\geq |.40|$ on their primary factor and (b) had cross-loadings on other factors $\leq |.30|$ across samples. We relaxed these criteria slightly for item 40, which was a clear marker of Irresponsibility within Disinhibition, but loaded only .38 on this factor in the community data (undergraduate data loading = .57; see Table 3). Similarly, we relaxed these criteria slightly for items 22 ("function well in new situations") and 30 ("can get over traumatizing events") when creating and scoring Boldness subscales (see Table 4).

Scale and subscale intercorrelations. Table 5 presents Pearson correlations amongst (a) the TriPM Disinhibition (20 items), Meanness (19 items), and Boldness (19 items) scales using their traditional scoring, (b) alternate domain scores guided by our factor analytic results, and (c) the Disinhibition and Boldness facet scales. We refer to the domain scores informed by our factor analytic results as "alternate" domain scores to distinguish them from the traditionally-scored domain scales. Given the large number of correlations reported, we considered statistical significance at a p < .001 level for Table 5 and all subsequent correlational analyses.

These Table 5 results indicate that TriPM Disinhibition, Meanness, and Boldness scales computed according to traditional scoring methods overlap very strongly with their respective alternate domain scores (i.e., all correlations for corresponding domain scores ≥ .85 across samples), as would be expected given that they share many items. Regardless of whether the traditional or alternate scoring formats were used, scores on the Boldness domain tended to correlate very weakly, and in some cases negatively, with Disinhibition (e.g., Alternate Boldness and Alternate Disinhibition correlated -.04 and -.08 in the community and undergraduate samples, respectively). Additionally, scores on TriPM Boldness and TriPM Meanness were weakly, positively correlated across samples (rs = .28 and .20 in the community and undergraduate data, respectively). However, Alternate Boldness and Alternate Meanness scores essentially were non-overlapping (rs = .11 and .02 in the community and undergraduate data, respectively). Alternate Meanness correlated .25 with the Boldness Fearlessness facet in the community data, but the correlation between these variables was somewhat weaker in the undergraduate sample (r = .16). The TriPM Meanness and Disinhibition scores correlated strongly (average r across samples = .54), with their alternate scale versions showing somewhat weaker overlap (average r across samples = .34).

Sample differences in Triarchic Psychopathy Measure scores. There were notable mean effect size differences for TriPM domain and facet scores across samples (see Supplemental Table S3). Scores for community adults were higher than those for undergraduates with at least a medium effect size (i.e., Cohen's $d \ge .50$) for Disinhibition domain and facet scales, regardless of whether alternate or traditional domain scoring formats were used. Conversely, Boldness domain and facet scale scores were higher with a large effect size (i.e., Cohen's $d \ge |.80|$) in the undergraduate sample, with the exception of the difference for the Fearlessness facet scale, for which only a small effect size difference was observed (d = .36).

Correlations with Personality and Externalizing Psychopathology

Overview. Next, we report Pearson correlations for the TriPM domain and facet scores. These analyses were used to determine the extent to which (a) alternate and traditionally-scored TriPM domains showed similar patterns of correlations and (b) facets defining Boldness and Disinhibition showed distinctive correlates. Due to the large number of correlations between the TriPM measures and normal range personality facets, these coefficients are provided in online Supplemental Tables S5-S8. However, we still describe notable TriPM-personality facet correlations subsequently. In describing these results, we focus on broad, replicable patterns of correlations rather than the significance of individual correlations.

Domain correlations. Table 6 presents correlations between the TriPM domain scores and (a) personality domains and (b) externalizing psychopathology indicators. These results indicate that alternate and traditionally-scored domains generally showed similar patterns of personality and psychopathology associations, and we computed vector correlations to quantify the degree of similarity between their correlates. Specifically, we computed vector correlations for corresponding domains in each sample based on both the Table 6 correlational results and the

correlations for TriPM domains with personality facets shown in Supplemental Tables S5 and S6. All vector correlations for corresponding domains in each sample and set of correlational analyses (e.g., comparing the similarity of the Table 6 correlates for Alternate Boldness with TriPM Boldness in the community data) were \geq .91, indicating that alternate and traditional TriPM domain scores indeed displayed similar correlates.

In regard to the nature of the correlates for each domain, Alternate Boldness and TriPM Boldness displayed strong positive associations with extraversion domain scores (all rs > .65), strong negative associations with neuroticism (all $rs \ge |.65|$), and moderate positive associations with conscientiousness in the community data. Boldness associated strongly with SD3 Narcissism (all $rs \ge .55$) and tended to be positively, albeit weakly in most cases, correlated with externalizing indicators. Both Alternate and TriPM Boldness also correlated strongly negatively with the Modesty facet of agreeableness (all rs > |.50|; see Supplemental Tables S5 and S6).

Both Alternate Meanness and TriPM Meanness essentially reflect low levels of agreeableness (all rs > |.70|) and were associated strongly with other measures assessing callousness and antagonism (e.g., LSRP Primary Psychopathy). However, Alternate Meanness showed somewhat weaker relations than TriPM Meanness with measures of disinhibited externalizing tendencies (e.g., rs = .71 and .68 for TriPM Meanness with SD3 Psychopathy in the community and undergraduate data, respectively, but the rs for Alternate Meanness only were .50 and .48). Next, Alternate and TriPM Disinhibition showed noteworthy associations with (high) neuroticism and (low) agreeableness, but correlated most strongly with (low) conscientiousness of any five-factor domain (all rs with conscientiousness $\geq |.58|$). Disinhibition domain scores also showed robust associations with measures such as LSRP Secondary Psychopathy and weak to moderate positive correlations with alcohol and drug use.

Facet correlations. Next, Table 7 displays correlations for subscales representing facets of the Alternate Boldness and Disinhibition domains. Note that we statistically compared correlations for facet scores from the same domain (e.g., comparing the correlations for the Boldness Fearlessness and Self-Assurance subscales with extraversion) to determine the extent to which they displayed divergent correlations with other variables. We conducted significance testing for each pair of correlations using the Williams modification of the Hotelling test for two correlations involving a common variable. The Table 7 results and these comparisons indicated that these facets scales showed distinctive correlates in some ways.

For example, the Boldness Self-Assurance facet subscale displayed significantly stronger associations with extraversion (both rs > .70) and SD3 Narcissism (both rs > .55) than the Boldness Fearlessness facet subscale (both rs < .50 with extraversion and < .40 with SD3 Narcissism) across samples. These Boldness facet subscales also displayed associations of very different magnitudes with some personality facet scales (see Supplemental Tables S7 and S8). For instance, Self-Assurance correlated significantly more strongly with the Self-Efficacy facet of conscientiousness (rs = .61 and .46 in the community and undergraduate data, respectively) than did Fearlessness (rs = .35 and .16, respectively; for both comparisons zs > 7.00, p < .001).

There was less differentiation in the patterns of correlates for the Disinhibition Irresponsibility and Impulsivity subscales, as shown in Table 7. However, some notable differences were observed, as Impulsivity correlated significantly more strongly with LSRP Secondary Psychopathy (rs = .67 and .63 in the community and undergraduate data, respectively) than did Irresponsibility (rs = .53 and .46, respectively). These scales also showed some noteworthy differences in their correlates with personality facets (again, see Supplemental Tables S7 and S8). For example, Impulsivity showed robust negative associations with the

Cautiousness facet of conscientiousness (rs = -.74 and -.73 in the community and undergraduate data, respectively) that were significantly stronger than Irresponsibility's correlations with Cautiousness (rs = -.43 and -.38, respectively; for both comparisons zs > 10.00, p < .001).

Discussion

Summary of Key Results

Our primary focus was on articulating the TriPM's item-level factor structure to advance prior research by (a) identifying items are clear markers of each TriPM domain and (b) determining the extent to which we could identify meaningful subdimensions within broader TriPM domains. As anticipated, model fit indices when applying a CFA approach to examining the TriPM's item-level structure generally indicated poor fit across the models considered. However, we do not necessarily view this as indicative of the TriPM being flawed, as complex personality and psychopathology measures often fail to conform neatly to type of the simple structure that is modeled by CFA (Hopwood & Donnellan, 2010; Stanton et al., 2019).

Our EFA results across samples indicate that when three factors are extracted, the TriPM's items define dimensions corresponding with Boldness, Meanness, and Disinhibition. The majority of items assigned to Boldness (13/19; 68.4%) and Disinhibition 70% (14/20; 70%) using traditional TriPM scoring methods (Patrick, 2010) emerged as clear indicators of their respective domains. Our results were less promising for items traditionally used to score Meanness, as only eight of 19 items (42.1%) strongly defined a factor representing this domain across samples. Many of the items identified as poor indicators of their respective domains (e.g., item 45, "things are more fun if danger is involved") also have been recognized as problematic in other studies (Latzman et al., 2019; Somma et al., 2018).

Nevertheless, scores on Alternate domain scales derived from our factor analyses assessing Meanness and the other two TriPM scales (a) correlated very strongly with their traditional counterparts and (b) manifested similar patterns of personality and psychopathology correlates to them. For example, both Alternate Boldness and TriPM Boldness correlated strongly positively with extraversion and strongly negatively with modesty and neuroticism. Both Alternate Disinhibition and TriPM Disinhibition appear to reflect low levels of conscientiousness and elevated neuroticism and disagreeableness to some degree. Finally, Alternate Meanness and TriPM Meanness both showed very strong negative correlations with agreeableness, although compared to TriPM Meanness, Alternate Meanness had somewhat weaker correlates with some measures of disinhibited externalizing traits (e.g., SD3 Psychopathy, LSRP Secondary Psychopathy). Scores on alternate Meanness and Disinhibition also were less overlapping (average r = .34) than were standard TriPM Meanness and Disinhibition scores (average r = .54), possibly due to removing items that overlap empirically with disinhibition but that traditionally are used to score Meanness (e.g., "enjoy high-speed chases").

Additionally, our factor analyses of items that were clear indicators of each TriPM domain (i.e., items used to score the Alternate Boldness, Meanness, and Disinhibition scales) indicated the presence of distinct dimensions within both Disinhibition and Boldness. However, we did not find evidence that Meanness was defined by different dimensions, which was not surprising given that only eight items emerged as clear indicators of this domain. For Disinhibition, we identified distinct Irresponsibility (e.g., "miss things I promise to attend") and Impulsivity (e.g., "lack self-control") subfactors. Although subscales modeling these dimensions generally showed similar correlates, they represent interpretable dimensions displaying some disparate

associations (e.g., Impulsivity associated more strongly with the Cautiousness conscientiousness facet than Irresponsibility).

Next, Boldness was defined by Self-Assurance (e.g., "am a born leader"; "am optimistic") and Fearlessness (e.g., "am afraid of few things") subfactors. Subscales created to model Fearlessness and Self-Assurance showed distinctive correlates in several ways, as scores on Self-Assurance were more closely tied to extraversion, assertiveness, conscientiousness, and immodesty than were Fearlessness scores.

Assessment of Triarchic Constructs in Future Research

Researchers interested in assessing TriPM domains could consider using our Alternate Boldness, Meanness, and Disinhibition scales. If researchers chose to focus on using these alternate TriPM domain scales rather than traditional administration methods, only 35 (i.e., 14, 13, and 8 items for Disinhibition, Boldness, and Meanness, respectively) rather than 58 items would be needed to administer the TriPM. Thus, use of this approach could improve the expediency of assessing TriPM dimensions using domain scales that appear to show similar personality and psychopathology correlates to their standard TriPM counterparts.

Researchers also potentially could use the Fearlessness and Self-Assurance subscales here to assess interrelated but distinct dimensions defining Boldness, and the Irresponsibility and Impulsivity subscales to assess different Disinhibition dimensions. However, several issues are important to note here. First, the majority of the items used to score Self-Assurance were reverse-keyed (e.g., "don't like to take the lead"; "don't compare well to others"), which complicates interpreting the nature of scores on this dimension (i.e., does this item set better represent a lack of self-assurance). The Fearlessness dimension also was narrowly defined, as only three items clearly marked this factor. Some model fit indices examined both for models

representing (a) the three triarchic domains and (b) facet models of these domains indicated poor fit even when conducting EFAs, which is not surprising given the complexity of some of these factor solutions and because the TriPM items were not created to assess distinct facets.

Most importantly, however, different studies now indicate discrepant findings regarding the number of potential factors defining the TriPM, making it challenging to determine how scale scoring configurations modeling triarchic traits should be applied in future research. For example, Roy et al. (2020) found that items traditionally used to score TriPM Disinhibition define distinct Impulsivity and Antisocial factors, even though we found evidence for Impulsivity and Irresponsibility dimensions within disinhibition. Furthermore, although they appear congruent based on their labels, these two Impulsivity factors differ somewhat from one another; for example, the item assessing having "missed things I promised to attend" was an indicator of the Impulsivity factor in Roy and colleagues' analyses, but defined Irresponsibility rather than Impulsivity in our datasets. More generally, the maximum total number of possible factors defining the TriPM appears to differ across studies (e.g., five factors representing Meanness, Impulsivity, Irresponsibility, Self-Assurance, and Fearlessness here; six factors in Collison et al., 2020; seven factors in Roy et al., 2020), which may make it confusing to determine how many dimensions beyond the three traditional triarchic domains should be assessed.

On this note, we commend recent efforts to develop comprehensive measurement models of psychopathic traits, which we believe will advance the rich triarchic model literature. For example, Patrick and colleagues (2019) recently articulated a measurement model of boldness consisting of nine facet dimensions (e.g., intrepidness, persuasiveness) comprising the Boldness Inventory across multiple samples. We see significant merit to this approach wherein

homogeneous facet dimensions are identified and then tested, which is consistent with measure development guidelines for assessing broad constructs and their facets (Clark & Watson, 2019). Given the discrepancies observed in the nature and number of TriPM factors identified in recent studies, applying this approach to articulating and measuring different dimensions defining boldness and other triarchic domains seems preferable to attempting to score scales using the existing set of 58 TriPM items, in light of differing results presented across recent studies.

Limitations, Future Directions, and Conclusions

Our findings provide informative data regarding the TriPM's item-level factor structure and add to the growing literature examining its structure. However, it is important to acknowledge several study limitations and related future directions. First, it is noteworthy that there was little variation in how participants responded to some TriPM items. For example, the vast majority of participants in both samples responded with a score of "0" (false) for some items related to serious criminal acts (e.g., item 55, "have stolen from a vehicle," for which over 95% of undergraduates and 87% of community adults responded "0" [false]). In some ways, this may be informative for understanding item functioning across sample types (e.g., for determining if items assessing criminal behavior are likely to be useful for assessing disinhibition in undergraduate and community samples). However, some of these items assessing specific illegal behaviors may have emerged as poor indicators of their respective factors at least partially as a result of there being very little variation in responses to them, especially in the undergraduate sample (Clark & Watson, 2019). Therefore, it would have been beneficial to examine how these items performed in samples reporting higher levels of eternalizing traits and behavioral histories (e.g., screening participants for a history of criminal behavior rather than a treatment history as was done in our community sample).

Related to this, our study focused exclusively on linking TriPM scores to other self-report indicators of personality and externalizing psychopathology. Therefore, examining relations for the TriPM measures identified here with personality traits and psychopathology assessed via other methods (e.g., interview and informant measures) also would be informative. For example, this could be useful for examining the degree to which our Alternate TriPM domain scales show similar correlates as traditionally scored TriPM domain scales with personality and psychopathology assessed via other methods.

Acknowledging these limitations and future directions, our findings suggest that the triarchic domains potentially could be assessed using briefer Alternate TriPM domain scales identified here and facet scales subsumed within Disinhibition and Boldness. However, the nature and overall number of factors defining the TriPM seems to differ across studies. Therefore, articulating and examining expanded measurement models of triarchic mode traits such as those described by Patrick et al. (2019) may be preferable to attempting to apply TriPM item sets to assess triarchic constructs at broad (e.g., boldness) or specific levels of abstraction (e.g., dominance, persuasiveness). Articulating and testing such models has the potential to facilitate sound assessment based on consensual models of psychopathy, thereby leading to a more unified and efficient approach to studying this condition and the externalizing spectrum.

References

- Clark, L. A., & Watson, D. (2019). Constructing validity: New developments in creating objective measuring instruments. *Psychological Assessment*. Advance online publication.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Collison, K. L., Miller, J. D., Lynam, D. R. (2020). Examining the factor structure and validity of the triarchic model of psychopathy across measures. *Personality Disorders: Theory,**Research, and Treatment. Advance online publication.
- Drislane, L. E., & Patrick, C. J. (2017). Integrating alternative conceptions of psychopathic personality: A latent variable model of triarchic psychopathy constructs. *Journal of Personality Disorders*, *31*, 110–132.
- Forbes, M. K., Kotov, R., Ruggero, C. J., Watson, D., Zimmerman, M., & Krueger, R. F. (2017). Delineating the joint hierarchical structure of clinical and personality disorders in an outpatient psychiatric sample. *Comprehensive Psychiatry*, 79, 19-30.
- Goldberg, L. R. (2006). Doing it all bass-ackwards: The development of hierarchical factor structures from the top down. *Journal of Research in Personality*, 40, 347-358.
- Gorsuch, R. L. (1983). Factor analysis (2nd ed.). Hillsdale, NJ: Erlbaum.
- Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and Social Psychology Review*, *14*, 332–346.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis:

 Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3): A brief measure of dark personality traits. *Assessment*, 21, 28-41.

- Krueger, R. F., Markon, K. E., Patrick, C. J., Benning, S. D., & Kramer, M. (2007).Linking antisocial behavior, substance use, and personality: An integrative quantitative model of the adult externalizing spectrum. *Journal of Abnormal Psychology*, 116, 645-666.
- Latzman, R. D., Palumbo, I. M., Sauvigné, K. C., Hecht, L. K., Lilienfeld, S. O., & Patrick, C. J. (2019). Psychopathy and internalizing psychopathology: A Triarchic Model perspective. *Journal of Personality Disorders*, 33, 262–287.
- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, 68, 151-158.
- Lilienfeld, S. O., Smith, S. F., Sauvigné, K. C., Patrick, C. J., Drislane, L. E., Latzman, R. D., & Krueger, R. F. (2016). Is boldness relevant to psychopathic personality? Meta-analytic relations with non-Psychopathy Checklist-based measures of psychopathy. *Psychological Assessment*, 28, 1172–1185.
- Loehlin, J. C., & Goldberg, L. R. (2014). Do personality traits conform to lists or hierarchies? Personality and Individual Differences, 70, 51-56.
- Maples, J. L., Guan, L., Carter, N. T., & Miller, J. D. (2014). A test of the International Personality Item Pool representation of the Revised NEO Personality Inventory and development of a 120-item IPIP-based measure of the five-factor model. *Psychological Assessment*, 26, 1070-1084.
- Miller, J. D., & Lynam, D. R. (2012). An examination of the Psychopathic Personality

 Inventory's nomological network: A meta-analytic review. *Personality Disorders: Theory,*Research, and Treatment, 3, 305–326.
- O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments*, &

- Computers, 32, 396-402.
- Patrick, C. J. (2010). *Triarchic Psychopathy Measure (TriPM):* PhenX toolkit online assessment catalog.
- Patrick, C. J., & Drislane, L. E. (2015). Triarchic Model of Psychopathy: Origins,

 Operationalizations, and observed linkages with personality and general psychopathology. *Journal of Personality*, 83, 627–643.
- Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness.

 *Development and Psychopathology, 21, 913-938.
- Patrick, C. J., Kramer, M. D., Krueger, R. F., & Markon, K. E. (2013). Optimizing efficiency of psychopathology assessment through quantitative modeling: Development of a brief form of the Externalizing Spectrum Inventory. *Psychological Assessment*, 25, 1332-1348.
- Patrick, C. J., Kramer, M. D., Vaidyanathan, U., Benning, S. D., Hicks, B. M., & Lilienfeld, S. O. (2019). Formulation of a measurement model for the boldness construct of psychopathy.

 *Psychological Assessment, 31, 643-659.
- Roy, S., Vize, C., Uzieblo, K., von Dongen, J. M. D., Miller, J. D., Lynam, D. R., . . . Neumann, C. S. (2020). Triarchic or septarchic? Uncovering the Triarchic Psychopathy Measure's (TriPM) Structure. *Personality Disorders: Theory, Research, and Treatment*. Advance online publication.
- Somma, A., Borroni, S., Drislane, L. E., Patrick, C. J., & Fossati, A. (2018). Modeling the structure of the Triarchic Psychopathy Measure: Conceptual, empirical, and analytic considerations. *Journal of Personality Disorders*, *32*, 1–27.

- Shou, Y., Sellbom, M., & Xu, J. (2018). Psychometric properties of the Triarchic Psychopathy

 Measure: An item response theory approach. *Personality Disorders: Theory, Research, and Treatment, 9,* 217–227.
- Stanton, K., McArtor, D. B., & Watson, D. (2019). Parsing the hypomanic personality: Explicating the nature of specific dimensions defining mania risk. *Assessment*, 26, 492-507.
- Stanton, K., McDonnell, C. G., Hayden, E. P., & Watson, D. (2020). Transdiagnostic approaches to psychopathology measurement: Recommendations for measure selection, data analysis, and participant recruitment. *Journal of Abnormal Psychology*, 129, 21–28.
- Watson, D., O'Hara, M. W., Naragon-Gainey, K., Koffel, E., Chmielewski, M., Kotov, R., . . . Ruggero, C. J. (2012). Development and validation of new anxiety and bipolar symptom scales for an expanded version of the IDAS (the IDAS-II). *Assessment*, *19*, 399–420.
- Watson., D., Stanton, K., Khoo, S., Ellickson-Larew, S., Stasik-O'Brien, S. M. (2019). Extraversion and psychopathology: A multilevel hierarchical review. *Journal of Research in Personality*.

 Advance online publication.
- Yu, C.Y. (2002). Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes. Doctoral dissertation, UCLA.

Table 1

Three-Factor Structure Geomin-Rotated Item Loadings in Community Adults

Item Content Disinhibition Meanness **Boldness** D: 9. Impulsive decisions cause problems^a .81 -.03 .25 D: 50. Known to lack self-control^a .78 .06 .28 D: 38. Get in trouble for my actions^a .77 .10 .29 D: 15. Jump into things without thinking^a .76 -.04 .25 D: 47. Lost friends due to irresponsibility^a .05 .72 .27 D: 37. Conned people to get money .69 .30 .02 D: 53. Work issues due to irresponsibility^a .67 .05 .31 M: 44. Insult people to get a reaction .64 .30 -.01 M: 28. Taunt people to stir things up .63 .31 -.10D: 25. Taken money without asking^a .61 .16 .10 D: 52. Have robbed someone .25 -.01 .60 M: 33. Injured others to see them in pain .40 -.02 .60 D: 18. Trouble for missing school^a .59 -.03 .24 D: 55. Have stolen from a vehicle .58 .23 .00 .09 D: 12. Missed work without calling in^a .58 .27 M: 45. More fun if danger is involved .58 .28 -.16 D: 40. Stolen items from a store^a .54 .14 .10 D: 6. Miss things I promise to attend^a .54 -.05 .36 M: 24. Enjoy pushing people around .53 .36 -.08 M: 14. Enjoy physical fights -.16 .51 .31 M: 5. Enjoy high-speed chase .30 -.21 .50 D: 29. Keep appointments I make^a -.50 .01 -.34 D: 46. Have a hard time waiting patiently^a .47 -.05 .30 .13 M: 17. Return insults .44 .05 D: 3. Often act on immediate needs .39 -.13 .08 D: 34. Get bored quickly^a .39 .05 .31 B: 42. Stay away from physical danger -.38 -.20 .15 M: 32. Honesty is the best policy -.32 -.20 -.19 D: 26. People abuse my trust .22 .30 -.14 B: 4. No desire to parachute -.28 -.19 .16 M: 11. Sympathize with others' problems^b -.89 .03 -.11M: 39. Sensitive to others' feelings^b -.07 -.88 -.14 M: 2. How others feel is important^b -.84 -.12.01 M: 41. Don't have much sympathy^b .81 .07 .18 M: 56. Not bothered when people are hurting^b .27 .80 .02

(table continues)

Table 1 (cont.)

Item Content	Disinhibition	Meanness	Boldness
M: 20. Not bothered when others in pain ^b	.27	.78	01
M: 54. Easily relate to others' emotions ^b	.02	76	25
M: 51. Don't care if what I do hurts others	.47	.69	01
M: 36. Don't worry about hurting others	.41	.59	03
M: 8. Don't mind if others get hurt ^b	.23	.52	.06
B: 7. Well-equipped to deal with stress	20	.16	74
B: 13. Am a born leader ^c	.23	10	74
B: 22. Function well in new situations ^c	01	.04	71
B: 43. Don't compare well to others ^c	.15	02	.71
B: 16. Struggle to make things turn out	.22	05	.65
B: 58. Am easily embarrassed ^c	.01	20	.65
D: 21. Have good control over myself	42	.04	65
B: 19. Knack for influencing others	.50	24	64
B: 57. Don't like to lead in groups ^c	18	.07	.62
B: 49. Not good at influencing others ^c	27	.21	.60
B: 1. Optimistic more often than not ^c	07	06	59
B: 10. Get scared easily ^c	.07	32	.57
B: 23. Don't think of myself as talented ^c	06	.01	.57
B: 35. Convince others to do what I want	.52	12	54
B: 31. Worry in unfamiliar situations ^c	09	22	.52
B: 48. Never worry about embarrassment ^c	.16	.22	51
B: 27. Afraid of few things ^c	.13	.33	49
B: 30. Get over traumatizing events ^c	.13	.18	49

Note. N = 700. Loadings $\geq |.40|$ are **bolded**. Items are paraphrased versions of the originals. Note that items in this and all subsequent tables are numbered according to the order in which they were administered to participants. All Triarchic Psychopathy Measure items were administered in the same order to participants across samples. The letter preceding each item indicates the scale for which that item traditionally is scored (D = Disinhibition, M = Meanness, B = Boldness). a = item retained for subsequent factor analyses of the Disinhibition domain; b = item retained for subsequent analyses of Meanness; c = item retained for subsequent analyses of Boldness.

Table 2

Three-Factor Structure Geomin-Rotated Item Loadings in Undergraduates

Item Content Disinhibition Meanness **Boldness** D: 9. Impulsive decisions cause problems^a .72 .00 .02 D: 53. Work issues due to irresponsibility^a .20 .71 -.17 D: 15. Jump into things without thinking^a .69 -.04 .08 D: 50. Known to lack self-control^a .68 .10 -.01 D: 38. Get in trouble for my actions^a .05 .00 .67 D: 29. Keep appointments I make^a .00 .12 -.65 D: 12. Missed work without calling in^a .62 .10 -.11 .44 D: 21. Have good control over myself -.62 .09 D: 18. Trouble for missing school^a .61 .03 -.13 D: 47. Lost friends due to irresponsibility^a .56 .19 -.03 D: 55. Have stolen from a vehicle .49 .56 .00-.07 -.20 D: 6. Miss things I promise to attend^a .55 D: 46. Have a hard time waiting patiently^a .53 -.17 -.13 M: 45. More fun if danger is involved .52 .12 .38 D: 40. Stolen items from a store^a .52 .15 .02 D: 37. Conned people to get money .51 .45 .13 B: 16. Struggle to make things turn out .49 .00-.45 D: 34. Get bored quickly^a .47 .11 -.13 M: 44. Insult people to get a reaction .45 .41 .13 D: 25. Taken money without asking^a .45 .26 .01 M: 5. Enjoy high-speed chase .41 .16 .36 M: 17. Return insults .37 .31 .08 D: 26. People abuse my trust .33 -.02 -.12B: 42. Stay away from physical danger -.09 -.32 -.28 D: 3. Often act on immediate needs -.15 .24 .05 M: 39. Sensitive to others' feelings^b .01 -.85 .17 M: 11. Sympathize with others' problems^b -.85 .16 .08 M: 41. Don't have much sympathy^b .81 -.13 .06 M: 51. Don't care if what I do hurts others .75 -.02.32 M: 56. Not bothered when people are hurting^b .74 .24 .03 M: 20. Not bothered when others in pain^b .15 .72 .03 M: 2. How others feel is important^b **-.71** .10 .03 M: 54. Easily relate to others' emotions^b .22 .00 -.64 D: 52. Have robbed someone .54 -.06 .45 .51 -.06 M: 8. Don't mind if others get hurt^b .13

Table 2 (cont.)

Item Content	Disinhibition	Meanness	Boldness
M: 24. Enjoy pushing people around	.37	.46	.07
M: 28. Taunt people to stir things up	.43	.46	.10
M: 33. Injured others to see them in pain	.44	.51	.04
M: 36. Don't worry about hurting others	.28	.68	01
M: 14. Enjoy physical fights	.33	.39	.31
M: 32. Honesty is the best policy	25	31	.12
B: 19. Knack for influencing others	.41	10	.70
B: 49. Not good at influencing others ^c	20	.19	69
B: 13. Am a born leader ^c	.01	10	.67
B: 22. Function well in new situations ^c	15	.00	.65
B: 58. Am easily embarrassed ^c	.09	10	59
B: 35. Convince others to do what I want	.44	.00	.59
B: 10. Get scared easily ^c	.21	19	57
B: 43. Don't compare well to others ^c	.31	.03	54
B: 31. Worry in unfamiliar situations ^c	02	04	52
B: 27. Afraid of few things ^c	.08	.26	.52
B: 30. Get over traumatizing events ^c	03	.14	.51
B: 57. Don't like to lead in groups ^c	.06	.16	50
B: 1. Optimistic more often than not ^c	27	18	.48
B: 23. Don't think of myself as talented ^c	.27	06	47
B: 7. Well-equipped to deal with stress	40	.20	.46
B: 48. Never worry about embarrassment ^c	.05	.11	.44
B: 4. No desire to parachute	23	.03	32

Note. N = 527. Loadings $\geq |.40|$ are **bolded**. Items are paraphrased versions of the originals. The letter preceding each item indicates the scale for which that item traditionally is scored (D = Disinhibition, M = Meanness, B = Boldness). a = item retained for subsequent factor analyses of the Disinhibition domain; b = item retained for subsequent analyses of Meanness; c = item retained for subsequent analyses of Boldness.

Table 3

Replicable Two-Factor Structure of Disinhibition Items

	Comn	<u>nunity</u>	<u>Undergraduate</u>		
Item Content	I	II	I	II	
29. Keep appointments I make*	82	.10	78	.02	
6. Miss things I promise to attend*	.72	.00	.69	06	
18. Trouble for missing school*	.55	.19	.66	.06	
12. Missed work without calling in*	.51	.24	.75	.03	
40. Stolen items from a store*	.38	.28	.57	.11	
25. Taken money without asking	.37	.32	.39	.21	
9. Impulsive decisions cause problems**	.00	.85	.12	.69	
38. Get in trouble for my actions**	01	.83	.02	.73	
15. Jump into things without thinking**	04	.80	19	.87	
47. Lost friends due to irresponsibility**	.06	.72	.23	.48	
50. Known to lack self-control**	.01	.82	.03	.76	
46. Have a hard time waiting patiently**	.06	.44	13	.61	
53. Work issues due to irresponsibility	.32	.50	.43	.49	
34. Get bored quickly	.12	.33	02	.52	

Note. N = 700 in the community sample; N = 527 in the undergraduate sample. Loadings $\geq |.40|$ are **bolded**. Items are paraphrased versions of the originals. * = Item scored for Irresponsibility subscale; ** = item scored for Impulsivity subscale. Scores on all 14 items shown here were used to compute the Disinhibition domain score.

Table 4

Replicable Two-Factor Structure of Boldness Items

	Com	<u>nunity</u>	<u>Undergraduate</u>		
Item Content	I	II	I	II	
10. Get scared easily*	76	01	67	.16	
27. Afraid of few things*	.74	.01	.81	.01	
30. Get over traumatizing events*	.46	18	.36	27	
31. Worry in unfamiliar situations	55	.18	31	.38	
58. Am easily embarrassed	52	.33	34	.48	
48. Never worry about embarrassment	.43	29	.26	37	
13. Am a born leader**	01	86	05	73	
57. Don't like to lead in groups**	02	.72	.23	.72	
23. Don't think of myself as talented**	.06	.69	10	.50	
43. Don't compare well to others**	06	.65	16	.51	
49. Not good at influencing others**	.00	.59	.01	.57	
1. Optimistic more often than not**	.06	49	.10	42	
22. Function well in new situations**	.34	46	.23	55	

Note. N = 700 in the community sample; N = 527 in the undergraduate sample. Loadings $\geq |.40|$ are **bolded**. Items are paraphrased versions of the originals. * = Item scored for Fearlessness subscale; ** = item scored for Self-Assurance subscale. Scores on all 13 items shown here were used to compute the Boldness domain score.

Table 5

Triarchic Psychopathy Measure Scale Intercorrelations in Both Samples

										1.0
	1	2	3	4	5	6	7	8	9	10
1. TriPM Boldness	-	.20	05	.96	.05	03	.73	.85	08	.02
2. TriPM Meanness	.28	-	.54	.12	.85	.53	.26	04	.36	.49
3. TriPM Disinhibition	00	.53	-	10	.36	.98	.01	22	.77	.88
4. Alternate Boldness	.98	.24	05	-	.02	08	.73	.88	12	02
5. Alternate Meanness	.13	.87	.34	.11	-	.34	.16	12	.23	.29
6. Alternate Disinhibition	.00	.52	.98	04	.33	-	.02	18	.79	.90
7. Boldness Fearlessness Facet	.74	.34	.03	.75	.25	.03	-	.43	03	.03
3. Boldness Self-Assurance Facet	.90	.10	10	.91	03	09	.49	-	19	11
9. Disinhibition Irresponsibility Facet	02	.39	.82	07	.27	.84	.00	11	-	.50
0. Disinhibition Impulsivity Facet	.03	.49	.88	01	.30	.89	.03	05	.56	-

Note. N = 700 in the community sample; N = 527 in the undergraduate sample. Correlations $\ge |.40|$ are **bolded**, and all correlations $\ge |.13|$ are significant at a p < .001 level. TriPM = Triarchic Psychopathy Measure. Scales numbered 1-3 are the original TriPM scales. Correlations below the diagonal are those in the community sample; correlations above the diagonal are for the undergraduate sample.

Table 6

Personality and Externalizing Correlates of Triarchic Psychopathy Measure Domains in Both Samples

	<u>S</u> :	tandard Scorin	<u>1g</u>	Alte	rnate Factor Se	coring
	Boldness	Meanness	Disinhibition	Boldness	Meanness	Disinhibition
Personality						
Extraversion	.78/.67	.19/04	.05/05	.78/.69	02/20	.04/03
Neuroticism	70/65	.04/.08	.37/ .44	72/68	.05/.06	.36/ .40
Agreeableness	30/21	84/81	48/48	26/16	75/71	47/47
Conscientiousness	.37/.12	28/31	58/65	.38/.17	22/15	59/64
Externalizing						
SD3 Narcissism	.68/.55	.33/.26	.15/.15	.66/.55	.15/.14	.15/.17
SD3 Psychopathy	.31/.21	.71/.68	.63/.54	.26/.14	.50/.48	.62/.53
LSRP Primary Psychopathy	.31/.10	.79/.75	.47/.44	.27/.04	.67/.68	.46/.43
LSRP Secondary Psychopathy	13/07	.49/.52	.72/.69	16/12	.34/.37	.70/.68
SD3 Machiavellianism	.18/.08	.57/.57	.41 /.39	.14/.03	.47/.49	.39/.38
Alcohol Use	.15/.18	.18/.16	.29/.22	.12/.14	.10/.05	.30/.24
Drug Use	.18/.16	.21/.27	.42 /.33	.14/.11	.12/.16	.42 /.33
Number of Lifetime Arrests	.16/.01	.19/.03	.24/.02	.15/.00	.14/.03	.22/.02

Note. N = 700 in the community sample except for correlations with the arrest variable, for which N = 687; N = 527 in the undergraduate sample except for correlations with the arrest variable, for which N = 505. Correlations before the dash are those in the community sample; those behind the dash are correlations from the undergraduate sample. Correlations $\geq |.40|$ are **bolded**, and all correlations $\geq |.15|$ are significant at a p < .001 level. SD3 = Short Dark Triad; LSRP = Levenson Self-Report Psychopathy Scale.

Table 7

Personality and Externalizing Correlates of Triarchic Psychopathy Measure Facets

	Boldness l	Facets	<u>Disinhibitio</u>	n Facets
	Fearlessness	Self-Assur	Irresponsibility	Impulsivity
Personality				
Neuroticism	56/50	65/62	.28/.29	.35/.35
Extraversion	.48 /.33*	.76/.71	06/10*	.13/.07
Conscientiousness	.22/.02*	.42 /.28	51/50	51/58
Agreeableness	27/22	18/04	37/35	44/42
Externalizing				
SD3 Narcissism	.38/.27*	.68/.56	.09/.08	.18/.21
SD3 Psychopathy	.33/.22*	.14/.01	.47 /.39	.60/.49
LSRP Primary Psychopathy	.29/.17	.19/08	.35/.32	.43 /.37
LSRP Secondary Psychopathy	03/.05*	22/25	.53/.46*	.67/.63
Drug Use	.15/.16	.08/.02	.42 /.30	.31/.25
SD3 Machiavellianism	.20/.13	.09/04	.30/.27	.36/.34
Alcohol Use	.11/.13	.09/.11	.23/.17	.28/.23
Number of Lifetime Arrests	.18/.00	.08/01	.19/.03	.21/.01

Note. N = 700 in the community sample except for correlations with the arrest variable, for which N = 687; N = 527 in the undergraduate sample except for correlations with the arrest variable, for which N = 505. Correlations before the dash are those in the community sample; those behind the dash are the undergraduate sample correlations. Correlations $\geq |.40|$ are **bolded**, and all correlations $\geq |.15|$ are significant at a p < .001 level. An asterisk (*) indicates that correlations for different TriPM facets of the same TriPM domain were significantly different in magnitude with the variable in that row at a p < .001 level in both samples. Self-Assur = Self-Assurance; SD3 = Short Dark Triad; LSRP = Levenson Self-Report Psychopathy Scale.

Supplemental Table S1

Triarchic Psychopathy Measure Item Frequencies in Community Adults

Item Content	0	1	2	3
1. Optimistic more often than not	27.4	30.0	29.0	13.6
2. How others feel is important*	46.3	39.1	10.1	4.4
3. Often act on immediate needs	4.3	17.9	52.9	25.0
4. No desire to parachute*	60.0	12.7	16.0	11.3
5. Enjoy high-speed chase	66.6	14.1	13.3	6.0
6. Miss things I promise to attend	21.1	25.6	32.9	20.4
7. Well-equipped to deal with stress	31.6	35.3	25.4	7.7
8. Don't mind if others get hurt	25.9	35.9	27.7	10.6
9. Impulsive decisions cause problems	34.6	22.1	26.3	17.0
10. Get scared easily*	24.4	33.4	24.3	17.9
11. Sympathize with others' problems*	46.3	40.3	9.4	4.0
12. Missed work without calling in	60.3	13.0	14.0	12.7
13. Am a born leader	41.0	28.0	23.0	8.0
14. Enjoy physical fights	72.1	16.0	9.1	2.7
15. Jump into things without thinking	35.7	28.9	26.7	8.7
16. Struggle to make things turn out*	17.3	34.3	33.6	14.9
17. Return insults	31.4	29.1	26.9	12.6
18. Trouble for missing school	49.3	13.7	17.1	19.9
19. Knack for influencing others	27.7	28.9	34.6	8.9
20. Not bothered when others in pain	69.3	20.1	7.3	3.3
21. Have good control over myself*	14.4	48.9	26.9	9.9
22. Function well in new situations	22.9	29.9	37.0	10.3
23. Don't think of myself as talented*	19.6	32.4	33.1	14.9
24. Enjoy pushing people around	62.1	24.1	11.7	2.0
25. Taken money without asking	65.4	10.0	12.7	11.9
26. People abuse my trust	15.6	29.7	34.6	20.1
27. Afraid of few things	42.0	33.6	17.6	6.9
28. Taunt people to stir things up	72.0	16.4	9.6	2.0
29. Keep appointments I make*	38.6	44.4	12.7	4.3
30. Get over traumatizing events	24.7	30.3	31.9	13.1
31. Worry in unfamiliar situations*	47.1	37.6	11.6	3.7
32. Honesty is the best policy*	46.4	38.4	10.6	4.6
33. Injured others to see them in pain	83.4	9.9	5.1	1.6
34. Get bored quickly	14.0	24.9	42.7	18.4
35. Convince others to do what I want	28.1	31.7	33.0	7.1

Supplemental Table S1 (cont.)

Item Content	0	1	2	3	
36. Don't worry about hurting others	73.6	19.3	5.0	2.1	
37. Conned people to get money	73.1	12.9	9.4	4.6	
38. Get in trouble for my actions	44.4	24.6	22.9	8.1	
39. Sensitive to others' feelings*	55.6	34.7	6.9	2.9	
40. Stolen items from a store	56.1	11.7	15.6	16.6	
41. Don't have much sympathy	58.3	24.3	13.3	4.1	
42. Stay away from physical danger*	54.0	29.9	10.7	5.4	
43. Don't compare well to others*	16.1	31.9	37.3	14.7	
44. Insult people to get a reaction	71.9	14.9	10.0	3.3	
45. More fun if danger is involved	50.9	25.4	18.3	5.4	
46. Have a hard time waiting patiently	13.4	15.3	43.4	27.9	
47. Lost friends due to irresponsibility	46.3	17.7	21.6	14.4	
48. Never worry about embarrassment	50.1	30.4	15.9	3.6	
49. Not good at influencing others*	18.3	28.9	36.4	16.4	
50. Known to lack self-control	55.9	19.4	16.9	7.9	
51. Don't care if what I do hurts others	75.9	16.1	6.3	1.7	
52. Have robbed someone	87.7	4.6	3.9	3.9	
53. Work issues due to irresponsibility	56.3	16.3	17.7	9.7	
54. Easily relate to others' emotions*	42.9	33.9	16.3	7.0	
55. Have stolen from a vehicle	87.4	4.1	4.0	4.4	
56. Not bothered when people are hurting	74.4	17.3	6.4	1.9	
57. Don't like to lead in groups*	31.6	28.7	25.4	14.3	
58. Am easily embarrassed*	32.6	34.0	21.9	11.6	

Note. N = 700. Scores of 0, 1, 2, and 3 correspond with the rating labels "false," "somewhat false," "somewhat true," and "true," respectively. An asterisk (*) indicates that an item is reversed keyed for scale scoring purposes; all frequencies shown here are those after reverse-keying was performed.

Supplemental Table S2

Triarchic Psychopathy Measure Item Frequencies in Undergraduates

Item Content	0	1	2	3
1. Optimistic more often than not	6.5	19.2	40.8	33.6
2. How others feel is important*	61.1	34.5	4.2	0.2
3. Often act on immediate needs	4.2	18.8	56.9	20.1
4. No desire to parachute*	31.5	17.3	29.0	22.2
5. Enjoy high-speed chase	48.6	22.2	19.4	9.9
6. Miss things I promise to attend	32.5	36.6	24.9	6.1
7. Well-equipped to deal with stress	8.7	24.3	45.7	21.3
8. Don't mind if others get hurt	26.6	42.3	27.1	4.0
9. Impulsive decisions cause problems	47.4	29.6	18.6	4.4
10. Get scared easily*	12.9	32.1	34.5	20.5
11. Sympathize with others' problems*	51.0	43.6	4.2	1.1
12. Missed work without calling in	75.9	16.1	4.7	3.2
13. Am a born leader	6.1	26.8	51.8	15.4
14. Enjoy physical fights	65.8	20.5	10.4	3.2
15. Jump into things without thinking	38.9	35.7	20.1	5.3
16. Struggle to make things turn out*	4.9	23.2	51.2	20.7
17. Return insults	34.5	31.9	26.9	6.6
18. Trouble for missing school	79.7	13.1	5.7	1.5
19. Knack for influencing others	16.5	30.4	45.7	7.4
20. Not bothered when others in pain	76.3	19.2	4.2	0.4
21. Have good control over myself*	35.3	50.3	12.1	2.3
22. Function well in new situations	7.8	22.6	53.7	15.9
23. Don't think of myself as talented*	4.6	22.8	47.1	25.6
24. Enjoy pushing people around	55.4	28.1	14.8	1.7
25. Taken money without asking	79.1	9.7	7.0	4.2
26. People abuse my trust	30.2	33.0	29.0	7.8
27. Afraid of few things	25.2	39.9	27.3	7.6
28. Taunt people to stir things up	67.7	23.7	7.0	1.5
29. Keep appointments I make*	54.1	39.9	5.7	0.4
30. Get over traumatizing events	12.9	30.7	40.8	15.6
31. Worry in unfamiliar situations*	31.7	43.1	18.0	7.2
32. Honesty is the best policy*	41.6	44.0	13.1	1.3
33. Injured others to see them in pain	90.1	7.4	2.5	0.0
34. Get bored quickly	22.6	30.9	38.3	8.2
35. Convince others to do what I want	19.4	34.9	41.6	4.2

Supplemental Table S2 (cont.)

Item Content	0	1	2	3
36. Don't worry about hurting others	77.8	18.0	3.2	1.0
37. Conned people to get money	86.9	9.7	3.0	0.4
38. Get in trouble for my actions	53.9	24.7	17.8	3.6
39. Sensitive to others' feelings*	61.9	33.2	3.8	1.1
40. Stolen items from a store	84.6	7.2	4.7	3.4
41. Don't have much sympathy	69.5	24.5	4.9	1.1
42. Stay away from physical danger*	44.8	32.1	15.6	7.6
43. Don't compare well to others*	3.8	15.0	48.8	32.5
44. Insult people to get a reaction	69.3	19.5	9.3	1.9
45. More fun if danger is involved	37.2	28.1	30.6	4.2
46. Have a hard time waiting patiently	19.4	23.9	40.4	16.3
47. Lost friends due to irresponsibility	70.0	17.1	9.5	3.4
48. Never worry about embarrassment	33.6	40.2	19.9	6.3
49. Not good at influencing others*	5.9	23.7	57.1	13.3
50. Known to lack self-control	69.1	18.2	10.3	2.5
51. Don't care if what I do hurts others	83.9	13.1	2.1	1.0
52. Have robbed someone	94.7	4.0	0.8	0.6
53. Work issues due to irresponsibility	86.0	9.9	3.4	0.8
54. Easily relate to others' emotions*	46.1	40.8	9.7	3.4
55. Have stolen from a vehicle	95.3	3.4	1.1	0.2
56. Not bothered when people are hurting	83.3	14.2	1.9	0.6
57. Don't like to lead in groups*	5.3	24.3	47.6	22.8
58. Am easily embarrassed*	18.2	36.6	29.8	15.4

Note. N = 527. Scores of 0, 1, 2, and 3 correspond with the rating labels "false," "somewhat false," "somewhat true," and "true," respectively. An asterisk (*) indicates that an item is reversed keyed for scale scoring purposes; all frequencies shown here are those after reverse-keying was performed.

Supplemental Table S3
Scale Descriptive Statistics and Coefficient Alpha Estimates for Both Study Samples

	<u>C</u>	Communi	ity	<u>Ur</u>	ndergrad	<u>luate</u>		
Scale	M	SD	α	M	SD	α	d	
Triarchic Psychopathy								
Boldness (19) ^c	21.9	10.4	.89	29.8	8.4	.84	.84	
Meanness (19)	11.6	9.4	.91	10.4	7.7	.88	.14	
Disinhibition (20) ^c	21.1	10.9	.88	13.4	7.6	.84	.82	
Alternate Boldness (13) ^c	15.4	7.7	.86	21.1	6.2	.82	.82	
Fearlessness (3) ^a	3.6	2.3	.68	4.4	2.1	.67	.36	
Self-Assurance (7) ^c	9.3	4.7	.81	13.3	3.5	.73	.97	
Alternate Meanness (8) ^a	5.5	5.1	.90	4.1	3.5	.83	.32	
Alternate Disinhibition (14) ^b	15.3	8.9	.87	9.2	6.3	.84	.79	
Irresponsibility (5) ^c	5.1	3.6	.70	2.5	2.4	.70	.85	
Impulsivity (6) ^b	7.0	4.6	.78	4.9	3.6	.78	.51	
Personality								
Neuroticism (24) ^c	81.5	17.6	.92	67.2	15.2	.91	.87	
Anxiety (4) ^b	15.4	3.8	.84	13.3	3.6	.77	.57	
Anger (4) ^b	12.8	4.3	.88	10.5	3.7	.86	.57	
Depression (4) ^c	14.0	4.4	.90	10.1	3.9	.86	.94	
Self-Consciousness (4) ^a	13.2	3.7	.75	11.6	3.2	.72	.46	
Immoderation (4) ^b	13.5	4.0	.81	11.5	3.5	.80	.53	
Vulnerability (4) ^b	12.6	3.9	.81	10.2	3.2	.78	.67	
Extraversion (24) ^c	65.0	16.8	.92	83.5	14.2	.91	1.19	
Friendliness (4) ^c	11.1	4.2	.87	14.3	3.5	.87	.83	
Gregariousness (4) ^c	8.4	3.9	.84	11.8	4.2	.87	.84	
Assertiveness (4) ^b	10.7	4.0	.87	13.5	3.1	.82	.78	
Activity Level (4) ^c	11.5	3.6	.75	14.6	3.0	.71	.94	
Excitement Seeking (4) ^c	10.8	3.7	.81	13.5	2.9	.70	.81	
Cheerfulness (4) ^c	12.6	3.5	.75	15.8	2.8	.77	1.01	
Agreeableness (24) ^a	88.1	13.1	.86	91.1	11.2	.86	.25	
Trust (4) ^b	12.0	4.0	.90	14.5	3.4	.89	.67	
Morality (4)	15.2	3.4	.76	15.2	2.9	.71	.00	
Altruism (4) ^b	15.7	2.9	.71	17.0	2.2	.73	.51	
Cooperation (4)	15.7	3.5	.75	16.2	3.0	.72	.15	
Modesty (4) ^b	14.5	3.6	.78	12.3	3.1	.72	.65	
Sympathy (4) ^a	15.1	3.4	.77	15.8	2.6	.67	.23	
- -						/ . 1.1	.• \	

Supplemental Table S3 (cont.)

	<u>C</u>	ommuni	ity	<u>Ur</u>			
Scale	M	SD	α	M	SD	α	d
Conscientiousness (23) ^b	77.4	14.4	.89	85.5	12.0	.89	.61
Self-Efficacy (4) ^b	14.3	3.2	.81	16.2	2.1	.76	.70
Orderliness (4) ^a	12.4	3.9	.78	13.6	3.9	.82	.31
Dutifulness (4) ^a	15.4	2.9	.72	16.1	2.3	.69	.27
Achievement Striving (4) ^c	14.4	3.3	.74	17.0	2.2	.66	.93
Self-Discipline (4) ^a	10.7	4.3	.88	11.8	3.9	.87	.27
Cautiousness (3) ^a	10.2	3.9	.89	10.9	2.9	.85	.20
Other Psychopathology							
SD3 Machiavellianism (9) ^a	27.1	6.0	.82	25.6	5.5	.79	.26
SD3 Narcissism (9) ^b	22.1	5.9	.77	26.1	4.6	.65	.76
SD3 Psychopathy (9) ^a	19.7	6.1	.78	17.6	4.7	.74	.39
LSRP Primary (16)	28.2	8.9	.91	27.1	7.5	.90	.13
LSRP Secondary (10) ^b	22.1	5.1	.76	19.2	4.4	.77	.61
BF-ESI Alcohol Use (9)	16.3	8.2	.90	15.7	8.7	.93	.07
BF-ESI Drug Use (6) ^c	8.2	6.0	.86	3.2	4.1	.77	.97
Lifetime Arrest Number (1) ^a	0.5	1.4	-	0.1	0.1	-	.40

Note. N = 700 in the community sample except for the arrest variable, for which N = 687; N = 527 in the undergraduate sample except for the arrest variable, for which N = 505. The number following each scale name represents the number of scale items. |d| = Cohen's d value presented as an absolute value; $^a = \text{the difference in sample means reflects a small effect size; }^b = \text{mean differences reflects a medium effect size; }^c = \text{mean differences reflects a large effect size.}$ All personality domain and facet scores were derived from the 120-item International Personality Item Pool-NEO; SD3 = Short Dark Triad; LSRP = Levenson Self-Report Psychopathy Scale; BF-ESI = Externalizing Spectrum Inventory-Brief Form.

Supplemental Table S4
Single-Factor Loadings in Both Study Samples

Item Content	Community	Undergraduate	
51. Don't care if what I do hurts others	.88	.86	
55. Have stolen from a vehicle	.62	.84	
56. Not bothered when people are hurting	.83	.82	
20. Not bothered when others in pain	.82	.74	
41. Don't have much sympathy	.78	.72	
39. Sensitive to others' feelings	78	69	
52. Have robbed someone	.66	.79	
36. Don't worry about hurting others	.75	.78	
37. Conned people to get money	.75	.79	
33. Injured others to see them in pain	.76	.75	
28. Taunt people to stir things up	.74	.72	
44. Insult people to get a reaction	.72	.71	
11. Sympathize with others' problems	72	63	
53. Work issues due to irresponsibility	.53	.72	
24. Enjoy pushing people around	.69	.67	
45. More fun if danger is involved	.69	.62	
38. Get in trouble for my actions	.67	.62	
50. Known to lack self-control	.66	.65	
14. Enjoy physical fights	.66	.64	
2. How others feel is important	66	5 3	
5. Enjoy high-speed chase	.65	.55	
9. Impulsive decisions cause problems	.65	.63	
35. Convince others to do what I want	.62	.56	
47. Lost friends due to irresponsibility	.59	.60	
19. Knack for influencing others	.60	.51	
25. Taken money without asking	.59	.57	
15. Jump into things without thinking	.58	.58	
40. Stolen items from a store	.51	.55	
8. Don't mind if others get hurt	.52	.49	
12. Missed work without calling in	.48	.58	
17. Return insults	.42	.56	
29. Keep appointments I make	32	54	
18. Trouble for missing school	.41	.52	
27. Afraid of few things	.48	.38	
13. Am a born leader	.45	.11	

Supplemental Table S4 (cont.)

Item Content	Community	Undergraduate	
54. Easily relate to others' emotions	54	48	
42. Stay away from physical danger	48	40	
34. Get bored quickly	.26	.44	
48. Never worry about embarrassment	.44	.23	
32. Honesty is the best policy	33	42	
49. Not good at influencing others	40	28	
4. No desire to parachute	39	25	
31. Worry in unfamiliar situations	39	17	
30. Get over traumatizing events	.38	.20	
6. Miss things I promise to attend	.33	.38	
21. Have good control over myself	13	37	
57. Don't like to lead in groups	36	.03	
58. Am easily embarrassed	36	15	
10. Get scared easily	34	12	
16. Struggle to make things turn out	08	.31	
46. Have a hard time waiting patiently	.28	.30	
22. Function well in new situations**	.29	.04	
23. Don't think of myself as talented**	26	.08	
1. Optimistic more often than not**	.09	25	
26. People abuse my trust**	.08	.24	
3. Often act on immediate needs**	.22	.10	
7. Well-equipped to deal with stress**	.21	10	
43. Don't compare well to others**	16	.16	

Note. N = 700 for the community sample; N = 527 for the undergraduate sample. Loadings \geq |.40| are **bolded**. Items are paraphrased versions of the originals. ** = item loaded \leq |.30| on the single factor across samples.

Supplemental Table S5
Personality Facet Correlates of Triarchic Psychopathy Measure Domains in the Community Sample

	<u>S</u> :	tandard Scorin	<u>ıg</u>	Alternate Factor Scoring		
	Boldness	Meanness	Disinhibition	Boldness	Meanness	Disinhibition
Self-Consciousness	74	14	.10	76	04	.10
Anxiety	69	16	.14	70	13	.14
Vulnerability	68	03	.28	68	.00	.27
Depression	61	.03	.26	62	.04	.25
Anger	19	.27	.40	20	.20	.39
Immoderation	21	.14	.41	23	.11	.40
Assertiveness	.72	.15	02	.73	.02	02
Friendliness	.60	01	08	.62	15	09
Gregariousness	.55	.22	.08	.55	.05	.07
Activity Level	.54	.14	09	.53	.02	10
Cheerfulness	.53	07	07	.53	19	07
Excitement Seeking	.48	.41	.40	.44	.17	.39
Modesty	65	35	07	65	22	08
Cooperation	23	68	5 3	19	44	51
Morality	40	65	52	34	43	51
Sympathy	14	64	17	13	77	17
Altruism	.14	63	32	.15	73	33
Trust	.18	30	23	.20	33	22
Self-Efficacy	.56	07	32	.57	10	33
Achievement Striving	.40	13	24	.40	19	25
Cautiousness	01	38	67	.01	22	67
Dutifulness	.09	43	56	.12	34	 57
Self-Discipline	.38	11	36	.39	09	37
Orderliness	.07	10	28	.07	02	28

Note. N = 700. Correlations $\geq |.40|$ are **bolded**.

Supplemental Table S6
Personality Facet Correlates of Triarchic Psychopathy Measure Domains in the Undergraduate Sample

	<u>S</u>	Standard Scoring			Alternate Factor Scoring		
	Boldness	Meanness	Disinhibition	Boldness	Meanness	Disinhibition	
Self-Consciousness	70	10	.12	74	02	.09	
Vulnerability	60	.01	.35	58	.01	.31	
Anxiety	59	12	.18	58	11	.14	
Depression	56	.07	.35	60	.06	.30	
Anger	18	.37	.46	23	.29	.44	
Immoderation	22	.08	.42	24	01	.41	
Friendliness	.58	10	10	.61	22	08	
Assertiveness	.58	.04	10	.59	03	09	
Excitement Seeking	.50	.20	.25	.47	04	.27	
Cheerfulness	.48	18	13	.51	31	11	
Gregariousness	.46	.04	.06	.48	09	.07	
Activity Level	.32	19	22	.32	20	19	
Modesty	52	29	08	53	20	12	
Cooperation	09	70	47	03	49	45	
Morality	30	64	52	22	44	52	
Altruism	.08	60	34	.13	66	33	
Sympathy	04	59	19	03	68	19	
Trust	.11	40	29	.14	40	27	
Self-Efficacy	.36	14	39	.36	11	36	
Cautiousness	11	33	66	07	16	66	
Dutifulness	.01	49	61	.06	35	60	
Self-Discipline	.21	05	40	.23	.06	39	
Orderliness	02	14	36	.03	01	37	
Achievement Striving	.13	27	33	.15	22	32	

Note. N = 527. Correlations $\ge |.40|$ are **bolded**.

Supplemental Table S7
Personality Facet Correlates of the Triarchic Psychopathy Measure Facets in the Community Sample

	Boldness	Facets	Disinhibition Facets		
	Fearlessness	Self-Assurance	Irresponsibility	Impulsivity	
Anxiety	65	56	.13	.13	
Depression	37	64	.21	.23	
Self-Consciousness	59	64	.11	.06	
Vulnerability	59	61	.20	.27	
Anger	16	19	.26	.42	
Immoderation	14	24	.29	.39	
Assertiveness	.48	.73	06	.04	
Friendliness	.32	.62	13	03	
Cheerfulness	.25	.59	12	01	
Activity Level	.35	.54	17	02	
Gregariousness	.36	.49	02	.14	
Excitement Seeking	.35	.39	.25	.44	
Modesty	38	68	01	11	
Cooperation	21	13	37	50	
Morality	30	28	41	49	
Altruism	.00	.25	29	26	
Trust	.06	.25	22	18	
Sympathy	19	04	13	15	
Self-Efficacy	.35	.61	28	28	
Achievement Striving	.22	.47	24	16	
Cautiousness	02	.06	43	74	
Dutifulness	.08	.15	55	47	
Self-Discipline	.25	.38	34	30	
Orderliness	.04	.09	27	22	

Note. N = 700. Correlations $\geq |.40|$ are **bolded**.

Supplemental Table S8
Personality Facet Correlates of the Triarchic Psychopathy Measure Facets in the Undergraduate Sample

	Boldness	Facets	Disinhibition Facets		
	Fearlessness	Self-Assurance	Irresponsibility	Impulsivity	
Depression	34	62	.26	.23	
Self-Consciousness	47	62	.08	.06	
Anxiety	57	42	.07	.15	
Vulnerability	50	54	.24	.30	
Anger	15	24	.30	.42	
Immoderation	16	24	.31	.37	
Assertiveness	.30	.65	11	03	
Friendliness	.26	.63	09	01	
Cheerfulness	.21	.56	14	03	
Gregariousness	.24	.45	.00	.12	
Excitement Seeking	.32	.40	.08	.35	
Activity Level	.12	.39	23	09	
Modesty	28	56	04	14	
Morality	27	10	41	44	
Cooperation	12	.07	31	43	
Altruism	05	.23	26	26	
Trust	01	.21	24	20	
Sympathy	12	.06	11	16	
Self-Efficacy	.16	.46	31	30	
Cautiousness	08	.01	38	73	
Dutifulness	02	.13	52	51	
Orderliness	03	.09	29	35	
Self-Discipline	.11	.28	31	33	
Achievement Striving	04	.31	31	22	

Note. N = 527. Correlations $\geq |.40|$ are **bolded**.