

UNIVERSITÉ DU QUÉBEC À TROIS-RIVIÈRES

DE L'ÉVALUATION DE LA PERSONNALITÉ À L'ÉVALUATION DU RISQUE  
D'AGRESSION : QUEL EST L'APPORT DU MODÈLE ALTERNATIF POUR LES  
TROUBLES DE LA PERSONNALITÉ DU DSM-5 ?

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(PROFIL INTERVENTION ET RECHERCHE)

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## Sommaire

**Introduction générale.** Le *Manuel diagnostique et statistique des troubles mentaux* (5<sup>e</sup> éd.; DSM-5) a introduit le Modèle alternatif pour les troubles de la personnalité du DSM-5 (*Alternative Model for Personality Disorders* [AMPD]), soit un nouveau modèle faisant une large part à une perspective dimensionnelle, visant ultimement à supplanter la classification actuelle. L'aspect dimensionnel est représenté par le Critère A, portant sur le dysfonctionnement de la personnalité (sévérité), de même que par le Critère B, portant sur les domaines et facettes pathologiques de la personnalité (style). La recherche empirique portant sur des modèles apparentés (p. ex., le *Five-Factor Model*) a établi de manière robuste que certains aspects de la personnalité sont des facteurs de risque pour les conduites dommageables pour soi et autrui, dont l'agression. En ce sens, cette thèse vise à identifier l'apport de la personnalité évaluée sous l'angle de l'AMPD afin d'estimer le risque d'agression. **Objectifs.** Cette thèse comporte deux volets. Le premier, psychométrique en teneur, vise à valider une version abrégée d'un outil mesurant le Critère B (*Personality Inventory for DSM-5 Faceted Brief Form* [PID-5-FBF]) dans l'optique de favoriser la recherche auprès de populations francophones. Le second volet, appliqué, vise à approfondir la recherche sur une application précise de l'AMPD, soit l'agression, dans une perspective de consolider les fondements théoriques, de même que de faciliter l'évaluation et guider l'intervention clinique. Les trois questions de recherche qui sous-tendent cette thèse, et qui feront chacune l'objet d'un article, sont les suivantes :

- (a) quelles sont les propriétés psychométriques de la version francophone du PID-5-FBF ?
- (b) Existe-t-il un effet d'interaction entre les critères A et B de l'AMPD dans leurs

liens avec l'agression ? Puis, (c) comment les associations entre les facettes du PID-5 et l'agression diffèrent-elles, selon que l'agression soit évaluée par un questionnaire autorapporté ou par une mesure cotée à partir de dossiers ? **Méthode.** Des questionnaires portant notamment sur la personnalité (PID-5-FBF) et l'agression (version abrégée du *Buss-Perry Aggression Questionnaire* [BPAQ-SF]) ont été remplis par des participants d'échantillons cliniques et non cliniques. Une mesure cotée à partir de dossiers a également été utilisée dans la troisième étude. **Résultats.** Premièrement, le PID-5-FBF francophone a montré des propriétés psychométriques allant de bonnes à excellentes. L'invariance de mesure a atteint le niveau strict entre les hommes et les femmes, avec une invariance partielle obtenue entre les échantillons (participants de la communauté, clients de cliniques privées, puis patients consultant à l'externe). Deuxièmement, certaines interactions significatives de petite taille ont été trouvées entre les Critères A et B de l'AMPD. Ainsi, un niveau plus élevé de pathologie de la personnalité modérait la relation entre certains traits et l'agression. Troisièmement, les relations entre les facettes du PID-5 et l'agression étaient très similaires, indépendamment de l'opérationnalisation de l'agression (c.-à-d., autorapportée ou cotée à partir de dossiers). Les différences entre hommes et femmes étaient surtout apparentes dans leur degré respectif de variance expliquée. Spécifiquement, le degré de variance expliquée était plus faible chez les femmes lorsque l'agression était cotée à partir de dossiers. **Discussion générale.** Pris dans leur ensemble, les études de la thèse suggèrent notamment que, dans le domaine de l'AMPD, davantage d'attention devrait être portée aux spécificités psychométriques entre les sexes et les échantillons, puis que la recherche multiméthode devrait être plus courante

afin de conforter les conclusions. Dans le passage de l'évaluation de la personnalité vers l'évaluation du risque, le niveau de sévérité de la pathologie de la personnalité (Critère A) et l'accentuation de certaines facettes spécifiques (Critère B) associées à un niveau de risque accru (Dureté/insensibilité, Hostilité et Prise de risque) devraient être considérés.

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## **Introduction générale**

Le Modèle alternatif pour les troubles de la personnalité est un modèle contemporain constituant le cadre théorique général sur lequel la thèse prend appui. Cette thèse comporte deux volets, visant à faire le pont de l'évaluation de la personnalité vers l'évaluation de l'agression. Le premier volet, psychométrique en teneur, vise à valider le *Personality Inventory for DSM-5 Faceted Brief Form* (PID-5-FBF) dans l'optique de favoriser la recherche auprès de populations francophones. Le second volet, appliqué, vise à déterminer comment l'évaluation de la personnalité permet de renseigner sur une application précise du Modèle, soit l'agression, dans une perspective de consolider les fondements théoriques, faciliter l'évaluation et guider l'intervention clinique.

### **Préambule**

La personnalité est un mode stable de se comporter, de penser, puis de se sentir, qui varie d'un individu à l'autre (Jones et al., 2011). Plus formellement, l'American Psychological Association (n. d.) définit le concept de personnalité comme suit :

[L]a configuration durable des caractéristiques et du comportement qui comprend l'adaptation unique d'un individu à la vie, y compris les principaux traits, intérêts, motivations, valeurs, concept de soi, capacités et modèles émotionnels. La personnalité est généralement considérée comme une intégration ou une totalité complexe et dynamique façonnée par de nombreuses forces, y compris les tendances héréditaires et constitutionnelles; maturation physique; formation précoce; identification avec des individus et des groupes significatifs; valeurs et rôles culturellement conditionnés; et expériences et relations critiques.  
[traduction libre]

Le terme « personnalité » tire son origine du mot latin *persona*, désignant le masque des comédiens (Lilienfeld & Latzman, 2018; Teichman, 1985). L'origine du mot rend compte à la fois du fait que la personnalité renvoie (a) aux impressions qu'on se forme sur autrui, de même qu'au fait (b) qu'il est difficile de « lire » autrui, une partie d'eux demeurant inaccessible (Lilienfeld & Latzman, 2018). Si la personnalité est d'intérêt pour chercheurs et cliniciens depuis des décennies, et fait même partie de la culture populaire (Tellegen, 1993), sa définition et son développement ne font pas l'objet d'un consensus (American Psychological Association, n. d.), rendant son étude scientifique des plus complexes. Ces différends définitionnels et scientifiques sont d'autant plus remarquables lorsqu'il est question de ses troubles.

### **Troubles de la personnalité : généralités et classifications**

Un trouble de la personnalité (TP) est défini comme une façon d'être relativement stable et dysfonctionnelle guidant les actions et le vécu de l'individu, qui prend typiquement forme autour de l'âge de la majorité et qui n'est pas la résultante d'idiosyncrasies culturelles (American Psychiatric Association [APA], 2013). Dans la population générale, la prévalence des troubles de la personnalité est relativement élevée, des méta-analyses l'estimant à 12,16 % en Occident (IC<sup>1</sup> 95 % [8,01; 17,02 %]; Volkert et al., 2018) et à 7,8 % à travers le monde (IC 95 % [6,1; 9,5 %]; Winsper et al., 2020).

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<sup>1</sup> IC : intervalle de confiance.

L'inclusion du concept de personnalité pathologique au sein d'une nosologie psychiatrique remonte au moins au XIX<sup>e</sup> siècle, où Philippe Pinel (1801) y décrivait déjà la *manie sans délire*<sup>1</sup>. Dans un passé plus récent, une étude bibliométrique révélait que l'intérêt pour les TP dans la recherche scientifique ne se dément pas depuis les quarante dernières années (Reis et al., 2022). Néanmoins, la conceptualisation et le diagnostic des TP sont des sujets suscitant encore la controverse (p. ex., Herpertz et al., 2017; Hopwood et al., 2018; Krueger et al., 2014; Livesley, 2021; Tyrer et al., 2019; Widiger & Trull, 2007). Certains des points de discordance les plus centraux concernent leurs frontières floues, leurs manifestations, de même que leur étiologie (Lilienfeld & Latzman, 2018; Meehl, 1990). Certains vont même jusqu'à qualifier les TP comme étant le type de troubles mentaux le moins bien compris (p. ex., Clark, 2007). Longtemps considéré comme le mouton noir de la psychiatrie, le diagnostic de TP ne cadre pas bien dans le modèle biomédical axé sur l'identification de symptômes observables; en effet, les notions d'émotions, de conflits relationnels, de traits ou de problèmes identitaires, dont les composantes sont souvent floues et inférées, y sont difficilement conciliables (Livesley, 2021).

Les TP ont longtemps été étudiés et diagnostiqués selon une perspective *catégorielle*, héritée du modèle biomédical de la psychiatrie. Un patient reçoit un diagnostic lorsqu'il

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<sup>1</sup> Ces patients « sans délire » étaient notamment impulsifs et violents, bien que n'ayant aucun symptôme psychotique ou thymique; aujourd'hui, ils seraient probablement diagnostiqués avec un TP antisociale et/ou limite (Pinel, 1801, cité dans Crocq, 2013).

répond à un certain nombre de symptômes polythétiques<sup>1</sup> (APA, 2013). Par exemple, le diagnostic catégoriel de TP limite requiert la présence d'au moins cinq symptômes parmi une liste en comportant neuf en tout (p. ex., peur de l'abandon, relations instables, etc.; APA, 2013).

Dans la classification actuelle, les TP catégoriels sont au compte de 10 syndromes cliniques (APA, 2013; voir Tableau 1), en plus des autres troubles de la personnalité (modification de la personnalité due à une autre affection médicale, TP spécifié, puis TP non spécifié). Cette perspective conçoit les pathologies de la personnalité comme des entités discrètes et mutuellement exclusives, où la frontière entre la normalité et la pathologie est nette; c'est la conception officiellement adoptée par le *Manuel diagnostique et statistique des troubles mentaux* (5<sup>e</sup> éd.; DSM-5; APA, 2013), retenue dans une version révisée du texte (DSM-5 Text Revision [DSM-5-TR]; APA, 2022), de même longtemps utilisée par la *Classification internationale des maladies* (CIM), avant la parution de la 11<sup>e</sup> édition (CIM-11; Organisation mondiale de la santé [OMS], 2022).

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<sup>1</sup> « *Polythétique* [italique ajouté] fait référence au fait que des troubles mentaux spécifiques sont définis par de multiples symptômes, et que tous les symptômes énumérés ne sont pas nécessaires pour considérer un trouble mental présent chez un individu spécifique. Au contraire, une combinaison et un nombre spécifiques de symptômes — inférieurs au nombre total de symptômes du trouble — doivent être observés pour considérer un diagnostic présent. » [traduction libre] (Krueger & Bezdjian, 2009, p. 3).



**Tableau 1***Troubles de la personnalité catégoriels du DSM-5*

Groupe ( <i>cluster</i> )	Trouble de la personnalité	Caractéristique distinctive
A Personnalités bizarres	Paranoïaque	Mode relationnel basé sur la méfiance; attribution d'intentions malveillantes à autrui.
	Schizoïde	Mode relationnel basé sur le détachement; expression émotionnelle restreinte.
	Schizotypique	Mode relationnel basé sur l'inconfort avec l'intimité; distorsions perceptuelles; excentrisme.
B Personnalités dramatiques	Antisociale	Mode relationnel basé sur la transgression des droits d'autrui; manque d'empathie chronique.
	Borderline (limite)	Mode relationnel basé sur la peur de l'abandon et l'instabilité; image de soi et d'autrui instables; affect instable.
	Histrionique	Mode relationnel basé sur l'expression émotionnelle exagérée et la recherche attentionnelle; superficialité et sexualisation du contact avec autrui.
	Narcissique	Mode relationnel basé sur la recherche d'admiration; fantaisies et comportements grandioses; manque d'empathie.
C Personnalités anxieuses	Évitante	Mode relationnel inhibé socialement; crainte de ne pas être à la hauteur; crainte marquée du jugement d'autrui.
	Dépendante	Mode relationnel marqué par la soumission et la dépendance affective; souhait d'être pris en charge par autrui.
	Obsessionnelle- compulsive	Mode relationnel contrôlant et inflexible; recherche de perfection et d'ordre.

*Note.* Les groupes n'ont pas été validés sur le plan de la recherche, et représentent simplement des simplifications afin de faciliter la compréhension (APA, 2013).

Les troubles catégoriels sont diagnostiqués sur une base binaire (présent ou non), les gradations n'étant pas permises (c.-à-d., que la notion de présentation sous-clinique, pour un patient ayant quatre symptômes sur un minimum de cinq, par exemple, n'est pas officiellement admise; Krueger & Bezdjian, 2009)<sup>1</sup>. Les atouts de cette approche seraient notamment de donner un langage commun aux professionnels pour décrire et nommer les troubles (une *lingua franca*), de soutenir l'organisation et l'administration des services, puis de globalement déjà couvrir les syndromes retrouvés en clinique (pour une synthèse, voir Dalglish et al., 2020; Shedler et al., 2010). Ainsi, selon cette approche, chaque TP peut ainsi « s'ajouter » à un autre du fait de leur nature discrète (Widiger & Trull, 2007).

Cette perspective s'oppose à une approche *dimensionnelle*, héritée de la psychologie, qui conçoit la personnalité comme un ensemble de traits continus où tout un chacun peut y être représenté à différents points, puis où la frontière entre la normalité et la pathologie y est relativement floue (Widiger & Trull, 2007). Selon cette approche, traits et symptômes sont deux choses distinctes et doivent tous deux être considérés, un a priori appuyé par la recherche (p. ex., Hopwood et al., 2011). Ainsi, dans sa forme extrême, cette conception considère qu'une étiquette diagnostique n'est en fait qu'une heuristique artificielle servant à faciliter la compréhension et la communication (Widiger & Trull, 2007). Les avantages anticipés de cette perspective sont de mieux rendre compte de certains phénomènes mis en lumière par la recherche, notamment l'universalité de certains

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<sup>1</sup> Cette notion de binarité n'est toutefois plus vraie dans le cas de la CIM-11, car il est maintenant possible de poser une indication correspondant à une manifestation sous-clinique d'un TP (*Personality Difficulties*; Tyrer et al., 2019).

traits — présents chez les TP comme chez les autres syndromes cliniques —, de même que de mieux représenter le continuum existant de la normalité à la psychopathologie, permettant ainsi d'éviter la catégorisation binaire de l'approche catégorielle (p. ex., Hopwood & Sellbom, 2013). Bref, l'une des distinctions majeures qui existent entre les conceptions catégorielle et dimensionnelle des TP réside dans la définition des caractéristiques nécessaires afin de poser un diagnostic (Livesley, 2021).

### **Modèle alternatif pour les troubles de la personnalité du DSM-5**

Le regain d'intérêt pour la perspective dimensionnelle au cours des dernières années a généré un changement majeur de paradigme dans le domaine des troubles de la personnalité (Krueger et al., 2014; Tyrer et al., 2019). Cela a eu pour impact l'introduction d'un nouveau modèle, tant du côté du DSM-5 que du côté de la CIM-11. Du côté de la CIM-11, un nouveau modèle entièrement dimensionnel a été adopté, devenant effectif à compter de 2022 (Tyrer et al., 2019). Du côté du DSM, il s'agit du Modèle alternatif pour les troubles de la personnalité du DSM-5 (*Alternative Model for Personality Disorders* [AMPD]; APA, 2013). Ce modèle était initialement censé supplanter la classification catégorielle, mais fut finalement relégué à la Section III (Mesures et modèles émergents) par le Conseil d'administration de l'APA (*APA Board of Trustees*; APA, 2013). Toujours à l'étude, l'AMPD se veut à la fois catégoriel et dimensionnel. Il est également « panthéorique », c'est-à-dire à la confluence de plusieurs courants de pensée, soit psychodynamique, interpersonnel, quantitatif multivarié, etc. (Waugh et al., 2017). Il vise ultimement à pallier les nombreuses lacunes de la classification catégorielle actuelle

(p. ex., haut taux de comorbidité, surutilisation du diagnostic de TP non spécifié, hétérogénéité des diagnostics, faible fidélité interjuge, seuils cliniques arbitraires, etc.; p. ex., Hopwood et al., 2018). Son utilité anticipée est notamment de joindre diagnostic et profil psychométrique personnalisé (Waugh et al., 2017).

L'aspect dimensionnel est représenté principalement par deux critères diagnostiques. D'une part, le Critère A porte sur le dysfonctionnement de la personnalité (indicateur de sévérité), et se compose de quatre éléments touchant le fonctionnement du soi (Identité et Autodétermination) et le fonctionnement interpersonnel (Empathie et Intimité; Bender et al., 2011; voir Tableau 2)<sup>1</sup>. Le Critère A suppose que tous les troubles de la personnalité comportent un certain nombre de mécanismes de fonctionnement de base faisant défaut chez la personne (Krueger & Hobbs, 2020; Zimmermann et al., 2019), et permet théoriquement de discriminer les patients ayant un trouble de la personnalité des autres patients ayant un trouble « syndromique » (p. ex., trouble dépressif, trouble anxieux; p. ex., Sharp & Wall, 2021).

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<sup>1</sup> Il existe toutefois un certain contentieux entourant la structure du Critère A. Pour plus de détails, voir la sous-section « Description des prochains chapitres » (à la fin de l'Introduction générale) ou l'introduction de l'article 2 de la présente thèse.

**Tableau 2**

*Éléments du Critère A du Modèle alternatif pour les troubles de la personnalité du DSM-5*

Niveau de fonctionnement	Élément	Description
Soi	Identité	Sentiment d'unicité; frontières soi-autrui nettes; estime et vision de soi réalistes et stables; capacité de gestion d'une large gamme d'affects.
	Autodétermination	Capacité à investir de buts authentiques à court et long terme; valeurs et comportements prosociaux; capacité à réfléchir à propos de soi-même.
Interpersonnel	Empathie	Capacité à comprendre les pensées et émotions d'autrui; capacité à tolérer la diversité des points de vue; appréciation juste des impacts de son comportement sur l'autre.
	Intimité	Capacité à établir des relations significatives, durables et réciproques; souhait et capacité de développer une intimité avec autrui; considération pour autrui dans les interactions.

*Source* : American Psychiatric Association (2013).

Le Critère A est globalement calqué sur l'axe vertical de sévérité inclus dans certains modèles psychodynamiques (p. ex., le modèle des organisations de la personnalité de Kernberg; Caligor et al., 2018), puis permettrait de remplir un vide conceptuel entre la psychologie classique des traits et l'étiologie des troubles de la personnalité (Morey et al., 2022). Une nouveauté importante est que l'APA semble ainsi définir ce à quoi correspond une personnalité *saine* et tenter de résoudre le problème de comorbidité élevée inhérent à l'approche catégorielle (Zimmermann, 2022). D'autres vont plus loin en soulignant que le Critère A permet de définir quels sont les échecs adaptatifs à la vie adulte qui définissent les troubles de la personnalité, de même que la contribution des personnes, avec ou sans

TP, en tant qu'agents actifs de leur vie (p. ex., leurs motivations); cette lecture du Critère A vient ainsi intégrer une lecture idiographique ou phénoménologique à l'AMPD (p. ex., le sentiment « d'être soi-même », de former un tout cohérent et organisé; Sharp & Wall, 2021)<sup>1</sup>. Enfin, ce critère permettrait également d'aider les professionnels à déterminer le degré d'altération du fonctionnement du patient, ce qui serait notamment utile pour identifier les patients ayant le plus besoin de services (p. ex., pour orienter le patient vers une consultation en externe ou vers l'hospitalisation; Pires et al., 2021).

D'autre part, une fois le diagnostic posé, le Critère B permet de caractériser les différences individuelles à partir de traits de la personnalité (APA, 2013). Spécifiquement, le Critère B porte sur les facettes et domaines pathologiques de la personnalité (indicateur de style; Waugh et al., 2017), soit Affectivité négative, Détachement, Antagonisme, Désinhibition et Psychoticisme (Krueger et al., 2012; voir Tableau 3). Cette perspective découle de la tradition établie par Gordon Allport (Sharp & Wall, 2021), où l'on considère que les différences individuelles peuvent être quantifiées à des fins de comparaisons (Hyatt et al., 2018), ce qui trouve également un écho dans le Critère B. Il est possible de faire un rapprochement entre la nature et l'opérationnalisation du Critère B ainsi que l'hypothèse lexicale fondamentale (c.-à-d., que les caractéristiques les plus saillantes des individus trouvent un appui dans les mots du quotidien; p. ex., paresseux, gentil, attentionné, altruiste; Goldberg, 1990).

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<sup>1</sup> Cette notion idiographique n'est pas sans rappeler le Soi décrit par Carl Rogers (comme mentionné par Sharp & Wall, 2021).

**Tableau 3**

*Domaines et facettes du Critère B du Modèle alternatif pour les troubles de la personnalité du DSM-5*

Domaine	Facette
Affectivité négative	Labilité émotionnelle* Tendance anxieuse* Insécurité liée à la séparation* Tendance à la soumission Hostilité Persévération Affectivité restreinte (manque d')
Détachement	Retrait* Évitement de l'intimité* Anhédonie* Dépressivité Méfiance
Antagonisme	Tendances manipulatoires* Malhonnêteté* Grandiosité* Recherche d'attention Dureté/insensibilité
Désinhibition	Irresponsabilité* Impulsivité* Distractibilité* Prise de risque Perfectionnisme rigide (manque de)
Psychoticisme	Croyances et expériences inhabituelles* Excentricité* Dysrégulation cognitive et perceptuelle*

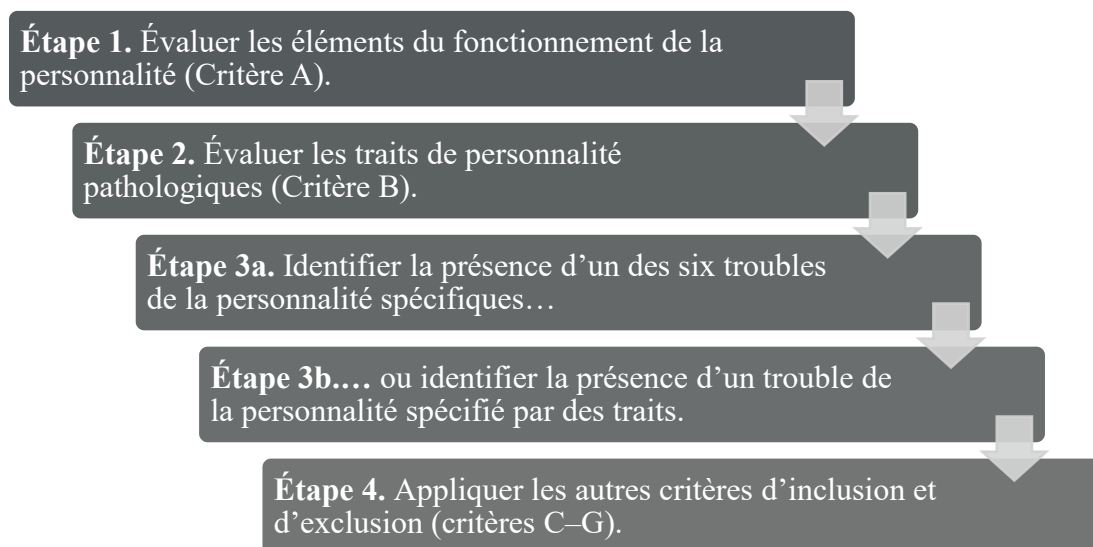
*Source* : Krueger et al. (2012).

*Note.* \* Facettes retenues dans la technique de cotation officielle des domaines de l'American Psychiatric Association (APA). En effet, contrairement à la technique de Krueger et al. (2012), qui incorpore les 25 facettes dans la cotation des domaines, la technique officielle de l'APA retient seulement 15 facettes (soit trois par domaines), correspondant à celles ayant les plus fortes saturations factorielles.

À partir des Critères A et B, il est possible de diagnostiquer l'un des six TP spécifiques (personnalité antisociale, évitante, borderline, narcissique, obsessionnelle-compulsive ou schizotypique) retenus de la classification catégorielle, ou bien le nouveau diagnostic de TP spécifié par des traits (qui remplace le TP non spécifié). Enfin, s'ajoutent d'autres critères généraux permettant de poser un diagnostic, soit les critères C et D (caractère envahissant et stabilité) ainsi que les critères E–G (critères d'exclusion; APA, 2013). Les étapes de la procédure diagnostique sont récapitulées dans la Figure 1.

**Figure 1**

*Étapes de la procédure diagnostique du Modèle alternatif pour les troubles de la personnalité du DSM-5*



*Source :* APA (2013). Figure inspirée de Skodol et al. (2015).



### Mesures des critères A et B : généralités

Le Critère B dispose d'un questionnaire autorapporté officiel, soit le *Personality Inventory for DSM-5* (PID-5; Krueger et al., 2012). Cet outil se veut une version pathologique unipolaire<sup>1</sup> composé de 25 facettes regroupées en cinq facteurs de second ordre ressemblant beaucoup à deux grands modèles de la personnalité (Waugh et al., 2017), soit le *Five-Factor Model* (FFM; Digman, 1990; McCrae & John, 1992) et le *Personality Psychopathology-Five* (PSY-5; Harkness & McNulty, 1994). Bien que l'intention initiale, lors de la formulation des items, n'était pas de s'ancrer dans la psychologie des traits, mais plutôt de formuler des items basés sur les critères diagnostiques des TP catégoriels de la version avec texte révisé de la quatrième édition du DSM (DSM-IV-TR; APA, 2000; voir Krueger et al., 2012), il n'en demeure pas moins que le produit final fut un modèle empirique très proche des modèles généralement adoptés en psychologie des traits (soit le FFM et le PSY-5; Hopwood & Sellbom, 2013).

D'ailleurs, au-delà de la correspondance conceptuelle, des études subséquentes ont montré une correspondance empirique forte entre les traits du PID-5 et les principaux modèles de la personnalité (p. ex., pour des revues, voir Al-Dajani et al., 2016; Widiger & McCabe, 2020); le domaine du Psychoticisme y fait toutefois généralement exception,

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<sup>1</sup> Une échelle unipolaire est une échelle allant dans un seul sens (→) : un faible score indique typiquement l'absence, puis un haut score une forte quantité d'un concept. Son contraire est une échelle bipolaire, soit allant dans les deux sens (←→); par exemple, le *Five-Factor Model/Big Five* utilise traditionnellement une échelle bipolaire (p. ex., continuum introversion–extraversion).

car peu de modèles généraux intègrent un facteur composé de manifestations à teneur dissociative ou psychotique (à l'exception du PSY-5; Widiger & Crego, 2019).

Le PID-5 a fait l'objet de bon nombre d'études soutenant globalement ses propriétés psychométriques (pour une revue de littérature, voir Zimmermann et al., 2019). Le développement de versions abrégées du PID-5, tout particulièrement celle à 100 items (*Personality Inventory for DSM-5 Faceted Brief Form* [PID-5-FBF]; Maples et al., 2015), semble avoir contribué au développement scientifique rapide du Critère B pour des raisons pratiques. Le Critère A peut être coté à partir d'une grille officielle remplie par un clinicien (APA, 2013), mais n'a aucun outil autorapporté officiel, ce qui a mené à la création parallèle de plusieurs questionnaires (p. ex., Gamache et al., 2019; Morey, 2017; Weekers et al., 2019). Cela a donc eu pour effet de retarder la recherche sur le Critère A, puis également la recherche sur les critères A et B combinés (Zimmermann et al., 2019).

### **Mesures des critères A et B : validité et pertinence des adaptations**

L'adaptation de mesures existantes s'avère souvent un défi, bien que représentant une étape essentielle afin de favoriser le développement scientifique en différentes langues et pour favoriser leur utilisation en contexte clinique (c.-à.-d., d'utiliser des tests aux propriétés établies). Ces défis sont clairement mis de l'avant au sein des *Standards for Educational and Psychological Testing* :

La simple traduction d'un test d'une langue à une autre ne garantit pas que la traduction produise une version du test comparable en contenu et en niveau de difficulté à la version originale, ou que le test traduit produise des scores tout

aussi fiables/précis et valides que ceux du test original. (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014, p. 60) [traduction libre]

Pourtant, les facteurs ethniques, culturels et linguistiques ont fait l'objet de peu d'études dans le contexte de l'AMPD. S'il est vrai que le PID-5 a été traduit en plusieurs langues et que sa structure factorielle a été répliquée auprès de plusieurs échantillons occidentaux dans des méta-analyses (Somma et al., 2019; Watters & Bagby, 2018), l'étude des versions abrégées du PID-5 demeure limitée, puis il en va de même pour leur application à certaines populations spécifiques (p. ex., clients en pratique privée).

Ce retard dans la recherche est d'autant plus vrai auprès de populations francophones. L'utilisation de versions longues est parfois difficile ou impossible dans un contexte de ressources limitées ou de *testing* à grande échelle (p. ex., administrer une longue liste de tests aux participants). En effet, le PID-5 original comporte 220 items. Une version abrégée à 25 items du PID-5 existe (Krueger et al., 2013), mais comporte des limites importantes (p. ex., elle ne permet pas d'évaluer les facettes, ce qui empêche de poser l'un des six diagnostics spécifiques de l'AMPD présentés précédemment). En ce sens, le premier objectif de la thèse est de valider la version du PID-5 à 100 items, soit le PID-5-FBF, qui permet d'évaluer à la fois les domaines et les facettes, alliant ainsi utilisation efficiente des ressources et profondeur, et ce, afin de faciliter le développement scientifique portant sur l'AMPD auprès de populations francophones.

### **Psychologie de la personnalité : pertinence pour l'étude de l'agression**

Le second objectif de la thèse est de favoriser le développement de l'AMPD pour une application spécifique, soit l'agression physique. L'intérêt de la psychologie de la personnalité pour l'agression est bien ancré, tout particulièrement sous l'angle de l'approche psychodynamique (p. ex., Caligor et al., 2018), sociocognitive (Anderson & Bushman, 2002; Bandura, 1973) et de la psychologie des traits (généralement opérationnalisé avec le FFM; p. ex., Hyatt et al., 2018). Les chercheurs issus de ce dernier courant ont été tout particulièrement prolifiques au cours des dernières années.

La conceptualisation catégorielle a été critiquée quant à sa capacité à lier TP et agression de manière précise et fiable, notamment à cause des hauts taux de comorbidité entre les TP (et avec d'autres troubles mentaux); en effet, une revue de littérature suggère que des caractéristiques transdiagnostiques devraient plutôt constituer les bases de l'étude de ces liens (Howard, 2015). Les traits de personnalité sont des facteurs de risque transdiagnostiques qui se différencient d'autres variables contextuelles typiquement associées à une hausse du risque d'agression (p. ex., fréquentation de pairs antisociaux) en ce que le locus est intra-individuel et comporte des origines (notamment) biologiques; conséquemment, les raisons de considérer la personnalité au sein de modèles théoriques de l'agression semblent justifiées (Hyatt et al., 2018; Jones et al., 2011). En outre, cet intérêt est soutenu par la recherche empirique; effectivement, les traits de personnalité — tout particulièrement ceux des domaines Agréabilité-Antagonisme et Conscience-Désinhibition — montrent une validité robuste afin de prédire l'agression (et les conduites

antisociales, plus généralement), d'après de nombreuses revues méta-analytiques (p. ex., Jones et al., 2011; Miller & Lynam, 2006; Vize et al., 2018).

Or, il semble y avoir un désintérêt historique datant de plusieurs décennies, voire une méfiance, au sein des courants dominants de la criminologie pour le concept de personnalité (Jones et al., 2011; Miller & Lynam, 2006). Certaines rares exceptions sont, d'une part, le concept de psychopathie, qui réfère notamment à la froideur émotionnelle et à l'incapacité à assumer la responsabilité de ses actes (p. ex., DeLisi, 2009) et, d'autre part, la théorie de l'autorégulation (*self-control* ou *self-regulation*; Gottfredson & Hirschi, 1990), qui réfère à la capacité individuelle à contrôler son comportement et ses émotions de manière prosociale (comme souligné par Jones et al., 2011). Pourtant, même les auteurs de cette dernière théorie, dans leur formulation originale<sup>1</sup>, se dissociaient de la psychologie en affirmant que l'autorégulation n'était *pas* un trait de personnalité (Gottfredson & Hirschi, 1990), réaffirmant le fossé existant entre les deux disciplines. Ce qui est clair, c'est que, en criminologie conventionnelle, peu d'intérêt est porté envers les modèles plus généraux de la personnalité (p. ex., comme le FFM) et peu d'efforts sont déployés pour mettre en lumière les associations (souvent très spécifiques) existant entre traits et agression (Vize et al., 2018).

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<sup>1</sup> Cette position fut cependant nuancée plus tard (Hirschi, 2004), où l'un des auteurs de la théorie reconnut timidement que leur formulation initiale était très similaire au concept de personnalité de la psychologie. Hirschi (2004) a cependant réaffirmé que la notion contemporaine d'autorégulation devait être dissociée de la personnalité, une position critiquée et jugée difficilement tenable par Jones et al. (2011).

Il y a pourtant de nombreuses raisons pour lesquelles une évaluation fine de la personnalité (c.-à-d., s'intéressant au degré de sévérité et aux traits) devrait intéresser davantage les criminologues (comme souligné par Jones et al., 2011) : (a) la relative stabilité de la personnalité pourrait refléter la relative stabilité des comportements antisociaux (dont l'agression) au cours de la vie; (b) la personnalité peut rendre compte des différences individuelles expliquant pourquoi seulement certains individus seront violents dans des conditions pourtant identiques (p. ex., quartier criminalisé, historique de victimisation); puis (c) l'affiliation préférentielle de l'humain pour des individus similaires à lui (soit l'*homophilie*; Matsueda & Anderson, 1998) pourrait expliquer pourquoi les gens violents choisissent de fréquenter d'autres gens violents (fournissant ainsi des explications à la formation de groupe et aux influences relationnelles). En prenant l'AMPD comme cadre conceptuel, cette thèse vise à rapprocher ces deux disciplines ayant traditionnellement évolué de manière insulaire, soit la psychologie de la personnalité et la criminologie, en effectuant le passage de l'évaluation de la personnalité à l'évaluation de l'agression physique de manière intégrée.

### **Trouble de la personnalité : un facteur de risque pour l'agression**

L'agression peut être définie comme un comportement délibéré visant à faire mal à autrui auquel la victime n'est pas consentante (Anderson & Bushman, 2002). Il y a donc trois notions dans cette définition : les aspects (a) observable (comportemental; cela exclut, par exemple, de maudire quelqu'un intérieurement); (b) intentionnel, et ce, même si la tentative échoue (c.-à-d., en connaissance des impacts possibles et non de manière

accidentelle); puis (c) non désiré (c.-à-d., que cela n'inclut pas le masochisme, par exemple, lors d'une relation sexuelle; Anderson & Bushman, 2002)<sup>1</sup>. Les lourdes conséquences sur le plan humain, social et économique de l'agression, en particulier de l'agression physique (p. ex., gifler, pousser, frapper), sont bien documentées. Aux États-Unis, plus d'un demi-million de personnes se retrouvent annuellement dans les urgences des hôpitaux pour des blessures reliées à l'agression physique (Kann et al., 2014). Un rapport de l'Organisation mondiale de la santé fait état d'études estimant les coûts monétaires directs (p. ex., hospitalisation des victimes, incarcération des agresseurs) et indirects (p. ex., suivis psychologiques, perte de productivité au travail) à quelques centaines de milliards de dollars (Waters et al., 2004).

Les nouvelles classifications des TP donnent davantage de place à la notion de risque. Dans la CIM-11, l'un des critères importants afin de déterminer le degré de sévérité du TP (ce qui correspond au Critère A, dans l'AMPD) est justement le danger pour soi et autrui (risque plus fréquent et/ou intense; p. ex., tel qu'indiqué par des antécédents d'agression ou un risque de passage à l'acte éventuel; Bach & First, 2018; Bach & Simonsen, 2021). Ainsi, plus le TP est sévère, plus le risque augmente. À l'inverse, lors de l'évaluation, un niveau de risque plus élevé pourrait être un indicateur discriminant sur

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<sup>1</sup> Certains universitaires dans le domaine de la psychologie différencient « agression » (p. ex., gifler, pousser, frapper) et « violence » (p. ex., poignarder, tenter de tuer) sur la base du degré d'intensité, la seconde étant associée à des dégâts aggravés ou à la mort; ainsi, selon cette définition, toute violence est une agression, mais pas nécessairement l'inverse (c.-à-d., que la violence serait un sous-type extrême d'agression; J. J. Allen & Anderson, 2017; Anderson & Bushman, 2002). Toutefois, cette distinction n'est pas toujours claire, puis n'est pas systématiquement adoptée par toutes les disciplines (p. ex., études politiques, criminologie, etc.; J. J. Allen & Anderson, 2017). Dans cette thèse, agression et violence ne seront pas différenciées.

le plan du diagnostic différentiel (Bach & First, 2018), car la présence de risque pour soi et autrui serait un marqueur d'une sévérité modérée ou élevée.

Cette notion de risque, au cœur des conceptualisations contemporaines des TP, est en continuité avec l'état des connaissances scientifiques. Bien que de commettre une agression soit probablement l'œuvre d'un sous-groupe restreint de patients (A. Allen & Links, 2012), il n'en demeure pas moins que la présence d'un diagnostic (catégoriel) de TP est un facteur de risque bien établi pour l'agression (voir la méta-régression de Yu et al., 2012), de même que pour d'autres formes de violence (p. ex., violence conjugale; Collison & Lynam, 2021). Comparativement à la population générale, il est estimé que la présence d'un diagnostic (catégoriel) de TP multiplie par trois les risques de commettre une agression, soit un risque comparable à la schizophrénie, le trouble bipolaire ou les blessures à la tête (Fazel et al., 2010; Fazel, Långström, et al., 2009; Fazel, Philipson, et al., 2009). Plus encore, ce risque serait multiplié par 12,8 dans le cas de patients ayant un TP antisociale, en faisant le TP le plus fortement associé à l'agression (Yu et al., 2012), puis représentant un risque comparable au trouble d'usage de substances (de drogue ou d'alcool; Fazel, Gulati, et al., 2009).

Il est même estimé qu'environ 19 % de toutes les agressions commises dans la société pourraient être l'œuvre de gens ayant un TP (Yu et al., 2012). Il s'avère aussi qu'un diagnostic (catégoriel) de TP est un prédicteur de la persistance de l'agression dans le temps (c.-à-d., la présence de trois condamnations ou plus pour crime violent; Falk et



al., 2014). Enfin, un TP dimensionnel (selon la conception de la CIM-11) serait présent chez l'agresseur dans plus de la moitié des meurtres (Swinson et al., 2021), soulignant à nouveau l'importance d'évaluer la personnalité dans un contexte clinique pour pouvoir ensuite gérer le risque adéquatement.

### **AMPD et agression**

Malgré l'ampleur et les lourdes conséquences du phénomène, la littérature portant sur l'AMPD et l'agression en est à ses balbutiements. Cela est surprenant étant donné que l'AMPD vise notamment à affiner l'évaluation clinique des TP. Il y a donc une pertinence de déterminer le profil (en termes de sévérité et de traits) plutôt que de simplement considérer la présence/absence d'un trouble sur une base binaire. Afin de procéder à l'évaluation du risque, il a déjà été suggéré qu'incorporer une évaluation de la personnalité basée sur l'AMPD pourrait être d'intérêt pour les cliniciens œuvrant dans divers contextes, notamment lors d'évaluations psycholégales (Hopwood & Sellbom, 2013).

La visée principale des études existantes était d'identifier les associations entre les traits de personnalité du PID-5 (Critère B) et diverses manifestations antisociales : l'agression (p. ex., Dunne et al., 2018; Somma et al., 2020), la violence conjugale (Dowgwillo et al., 2016; Munro & Sellbom, 2020) ou le harcèlement obsessionnel (*stalking*; Gamache, Cloutier, et al., 2022). Certaines études ont également mis en lien les relations du Critère A avec la violence conjugale (Gamache, Savard, et al., 2022; Munro & Sellbom, 2020). Considérées ensemble, ces études ont mis de l'avant qu'une analyse au niveau des

facettes s'avère importante (Dunne et al., 2018). Les principales facettes associées à l'agression seraient Hostilité, Dureté/insensibilité et Prise de risque, du moins parmi les hommes incarcérés (Dunne et al., 2020).

Cependant, deux limites importantes de la littérature viennent limiter la portée des conclusions : (a) l'absence d'analyses d'interaction entre les critères A et B ne permet pas d'informer les praticiens quant à l'intégration de résultats issus d'une évaluation exhaustive basée sur l'AMPD (c.-à-d., en se basant sur la sévérité et les traits). D'un point de vue conceptuel, cela donne une compréhension partielle d'un phénomène; l'agression ayant des causes très diverses et complexes (J. J. Allen et al., 2018), il est possible de croire que, entre autres, les divers facteurs intra-individuels pourraient interagir entre eux pour modifier la probabilité de survenue d'un comportement. Cela constitue un obstacle important à la validité des résultats rapportés jusqu'à maintenant, car le but de l'AMPD est de faire profiter d'une lecture riche et non linéaire aux cliniciens (Hopwood & Sellbom, 2013). Par exemple, certains traits de personnalité (p. ex., Antagonisme, Désinhibition) pourraient constituer un facteur de risque pour l'agression seulement sous certaines conditions (p. ex., degré élevé de sévérité), toutes choses étant égales par ailleurs. Ultimement, cela pourrait avoir une incidence sur les conclusions cliniques ainsi que sur les recommandations émises, y compris celles relatives à la gestion du risque.

Une autre limite importante est (b) qu'aucune étude n'a utilisé de devis multiméthode afin de conforter la robustesse des associations AMPD-agression et de limiter les biais

propres à une évaluation monométhode. Cela est un biais important d'un point de vue conceptuel, car l'utilisation d'un prédicteur et d'un critère issus d'une même méthode (généralement des questionnaires autorévélés) est susceptible d'accroître de manière artificielle l'association entre les deux variables (Bornstein, 2015; Meyer et al., 2001). Cette limite a été soulignée dans le cadre de l'AMPD par une revue systématique, où il fut suggéré que de nombreux indices de validité pourraient en fait être surestimés (Zimmermann et al., 2019). D'un point de vue clinique, l'utilisation de diverses sources (p. ex., tests psychométriques, informations contenues au dossier, observations cliniques, etc.) afin de conforter les conclusions cliniques constitue une pratique cruciale en évaluation psychologique, en contexte légal ou non (Meyer et al., 2001). Ces points soulignent l'importance de déterminer si différentes méthodes (p. ex., questionnaires, entrevues, grille) d'évaluation de l'agression génèrent des associations robustes avec le PID-5 (c.-à-d., qui peuvent être répliquées), cela étant crucial afin d'assurer une gestion du risque adéquate (p. ex., bien mesurer le risque d'agression chez un patient et prendre les mesures qui s'imposent, notamment cibler certains objectifs de traitement).

### **Questions de recherche et chapitres de la thèse**

Afin de permettre l'atteinte des deux objectifs de la thèse, soit de faciliter le développement scientifique de l'AMPD en langue française et de développer l'application de l'AMPD au phénomène de l'agression, un projet de thèse en trois sections est proposé. Les trois questions de recherche qui sous-tendent cette thèse, et qui feront chacune l'objet d'un article, sont les suivantes : (a) quelles sont les propriétés psychométriques de la

version francophone du PID-5-FBF ? (b) Existe-t-il un effet d'interaction entre les critères A et B de l'AMPD dans leurs liens avec l'agression ? Puis, (c) comment les associations entre les facettes du PID-5 et l'agression diffèrent-elles, selon que l'agression soit évaluée par un questionnaire autorapporté ou par une mesure cotée à partir de dossiers ?

### **Premier article**

S'inscrivant dans le courant des études à teneur résolument psychométrique, cet article vise à documenter les propriétés d'une version francophone du PID-5-FBF (Maples et al., 2015). En effet, cette version à 100 items du PID-5 n'a fait l'objet d'aucune validation formelle en français, ce qui constitue une limite importante au développement scientifique sur l'AMPD et à l'utilisation des outils qui en découlent auprès de populations de langue française. Le premier objectif de cet article est de documenter les propriétés psychométriques de base du PID-5-FBF francophone : (a) cohérence interne, (b) structure factorielle et (c) validité convergente-divergente.

Le second objectif est de documenter plus finement l'invariance de mesure de l'outil (c.-à-d., configurale, métrique, scalaire et stricte), qui a été relativement peu documentée de manière générale. Cette propriété est essentielle, notamment afin de déterminer si la structure factorielle demeure la même lorsqu'on s'intéresse à deux échantillons différents (p. ex., clinique et non clinique) ou à deux sous-groupes différents (p. ex., femmes et hommes; Fischer & Karl, 2019). L'invariance est une propriété permettant de déterminer si des comparaisons de scores valides peuvent être faites entre deux individus, c'est-à-dire

que les facteurs latents sont les mêmes et que les différences ne sont pas simplement le reflet de biais psychométriques (Fischer & Karl, 2019). Cela a notamment des implications importantes à la fois dans un contexte de recherche (p. ex., pour générer des conclusions valides) et dans un contexte de pratique clinique (p. ex., pour poser un diagnostic valide; American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014).

### **Deuxième article**

S'inscrivant dans le courant d'intégration des critères A (sévérité) et B (style), cet article vise à étudier, par la voie d'analyses de régression, la présence d'effets d'interaction entre les deux critères dans la prédiction statistique de l'agression. L'un des constats généraux qui émerge est que, lorsque des mesures des critères A et B sont corrélées ensemble, leur degré d'association est très élevé, puis leur validité incrémentielle généralement faible (p. ex., la variance unique à chaque critère est très modeste lorsqu'ils sont insérés successivement dans un modèle de régression multiple hiérarchique; Zimmermann, 2022; Zimmermann et al., 2019). Paradoxalement, ce constat donne lieu à des conclusions contradictoires et très polarisées : ceux en faveur du maintien du Critère A tel quel, puis ceux souhaitant carrément son abolition (débat résumé par Zimmermann, 2022).

Ainsi, il fut suggéré qu'une manière complémentaire d'étudier les associations, qui permettrait possiblement de nuancer les résultats et les positions actuelles (c.-à-d.,

maintien tel quel vs rejet complet du Critère A), serait d'étudier les interactions entre les critères A et B (p. ex., par un modèle de régression incorporant un effet d'interaction ou encore par une analyse factorielle comportant un terme d'interaction; Bach & Simonsen, 2021; Meehan et al., 2019). Ceci permettrait d'avoir une lecture moins linéaire (p. ex., en comparaison à une analyse de validité incrémentielle par régression hiérarchique), dans un contexte où la quasi-totalité de la littérature scientifique existante sur les liens AMPD-agression s'est centrée sur le Critère B (à certaines exceptions près, où le Critère A était également considéré; Gamache, Cloutier, et al., 2022; Gamache, Savard, et al., 2022; Munro & Sellbom, 2020). Un niveau de lecture plus dynamique entre les deux critères, qui doivent tous les deux être considérés pour poser un diagnostic selon l'AMPD, semble nécessaire afin de comprendre les relations complexes qui les unissent. Certains travaux portant sur d'autres thèmes (p. ex., détresse psychologique, satisfaction dans les relations amoureuses et au travail) font état d'interactions statistiquement significatives (Benzi et al., 2019; Sexton et al., 2019) entre les deux critères, réaffirmant l'importance d'affiner le degré d'analyse.

Un objectif secondaire à l'article est d'étudier la présence d'effets d'interaction selon deux conceptualisations différentes du Critère A : une conceptualisation unidimensionnelle (correspondant à un indice global de sévérité) ou quatre facteurs différents (représentant les quatre éléments du Critère A, soit Identité, Autodétermination, Empathie et Intimité). En effet, les chercheurs sont divisés sur cette question, des structures comportant un, deux

ou quatre facteurs, et chacune ayant leurs mérites respectifs, ayant été proposées (p. ex., Gamache et al., 2019; Morey, 2017; Weekers et al., 2019).

Cet article se veut conceptuel, mais comporte également une portée clinique importante. En effet, un patient ayant une accentuation de certains traits de personnalité pathologiques particuliers (p. ex., Antagonisme) combinés à un degré de sévérité élevé de pathologie de la personnalité pourrait, toute chose étant égale par ailleurs, poser un risque de passage à l'acte agressif plus important qu'un patient ayant un degré de sévérité de la pathologie plus faible.

### **Troisième article**

Enfin, s'inscrivant dans le courant de recherche multiméthode, le dernier article de la thèse vise à adopter une approche confirmatoire afin de répliquer les associations connues entre les facettes du PID-5 et l'agression; cette fois-ci, deux opérationnalisations différentes de l'agression seront utilisées afin d'en comparer les associations (c.-à-d., un questionnaire et une mesure cotée à partir de dossiers). Effectivement, la très grande majorité de la littérature existante sur l'AMPD adopte une approche monométhode, et plus spécifiquement a recours à des questionnaires (Zimmermann et al., 2019). L'un des risques associés à un développement scientifique monométhode est que les indices de validité soient surestimés (Zimmermann et al., 2019). Ce biais est dû à la « contamination de critère », soit le fait qu'une partie de la variance commune soit en fait due au partage d'une même méthode, entraînant ainsi des associations artificiellement élevées (Meyer et

al., 2001). Les relations entre les facettes du PID-5 et l'agression ont déjà été étudiées, notamment avec des échantillons de détenus (Dunne et al., 2018) et de patients (Somma et al., 2020). Toutefois, la littérature portant sur l'AMPD et l'agression ne semble pas avoir fait l'objet de recherches selon une approche multiméthode.

De plus, bien que des différences hommes-femmes aient été rapportées entre les associations des facettes du PID-5 dans la recherche sur la violence conjugale (Dowgwillo et al., 2016; Munro & Sellbom, 2020) et le harcèlement obsessionnel (Gamache, Cloutier, et al., 2022), il semble que ces différences n'aient pas été étudiées dans le cas de l'agression physique spécifiquement. Considérer le sexe dans les associations avec l'agression est une voie fortement encouragée afin d'éviter les généralisations hâtives et pour mieux évaluer le risque en pratique clinique; en effet, la recherche en criminologie a historiquement peu tenu compte des différences sexuelles, généralisant simplement les résultats issus de populations très spécifiques (p. ex., hommes incarcérés) à l'ensemble des groupes (Cook, 2016; Hodgins, 2022).

Les trois objectifs de cet article sont de (a) comparer les relations entre les facettes du PID-5 (évaluées par questionnaire) et l'agression évaluée selon deux méthodes différentes (questionnaire et mesure cotée à partir de dossiers); (b) comparer entre les hommes et les femmes les relations entre le PID-5 et l'agression; puis (c) comparer l'importance relative



des prédicteurs en utilisant l'analyse de dominance<sup>1</sup>. Cet article permettra de conforter et/ou de nuancer les résultats déjà rapportés (p. ex., par Dunne et al., 2020; Somma et al., 2020), de même que de générer certaines heuristiques qui pourront être utilisées par les cliniciens afin d'évaluer sommairement la propension d'un patient à être violent. Par exemple, cela pourrait être tout particulièrement avantageux dans les contextes où des instruments plus spécifiques afin d'estimer le risque ne peuvent pas toujours être utilisés, notamment les cliniques externes ou en pratique privée (p. ex., en n'ayant pas accès aux facteurs de risque historiques, par manque de temps ou de qualification, etc.; Kivisto, 2016).

### **Discussion générale**

Enfin, une discussion générale synthétisant l'ensemble des connaissances issues de la thèse suivra, mettant à l'avant-plan la portée théorique et clinique de la thèse. Dans un premier temps, les résultats seront contextualisés en regard de la littérature générale sur l'AMPD. Dans un second temps, des pistes seront proposées afin d'effectuer le passage

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<sup>1</sup> L'analyse de dominance (Azen & Budescu, 2003; Budescu, 1993) est une technique visant à comparer les prédicteurs en procédant par retrait individuel et successif de chaque prédicteur en testant toutes les combinaisons possibles (avec ou sans chacun des prédicteurs). Ultiment, cela permet de déterminer lesquels ont le plus d'impact sur le coefficient multivarié  $R$  (ou  $R^2$ ) et/ou ceux qui diminuent le plus l'erreur des estimations (Darlington & Hayes, 2016). Cette technique permet notamment de placer par ordre d'importance les prédicteurs (Budescu, 1993). Bien que plusieurs chercheurs utilisent de façon routinière les coefficients de régression standardisés (typiquement désignés par «  $\beta$  ») afin de comparer la force relative des prédicteurs d'une régression, cette approche serait fautive. En effet, ces coefficients ne devraient pas faire l'objet d'une comparaison directe, puisque ces indices sont couramment corrélés, en plus de souvent faire l'objet d'une interprétation subjective (Azen & Budescu, 2009). L'analyse de dominance se veut une technique permettant notamment de pallier ces limites (Azen & Budescu, 2009; Darlington & Hayes, 2016).

de l'évaluation de la personnalité à l'évaluation du risque d'agression de manière intégrée, cela en s'intéressant à la fois aux milieux thérapeutiques et légaux.

**Article scientifique 1**

Investigating the Validity and Measurement Invariance of the Personality Inventory for DSM-5 Faceted Brief Form among French-speaking Clinical and Nonclinical Samples

**Investigating the Validity and Measurement Invariance of the Personality  
Inventory for DSM-5 Faceted Brief Form among French-speaking Clinical and  
Nonclinical Samples**

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### **Author contribution according to the Contributor Roles Taxonomy (CRediT)**

Philippe Leclerc: conceptualization, data curation, formal analysis, methodology, writing—original draft

Claudia Savard: formal analysis, funding acquisition, methodology, project administration, supervision, writing—review and editing

Martin Sellbom: writing—review and editing

Alexandre Côté: investigation, writing—review and editing

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Maude Payant: investigation, writing—review and editing

David Roy: writing—review and editing

Dominick Gamache: conceptualization, formal analysis, funding acquisition, methodology, project administration, supervision, writing—review and editing

### **Data availability**

Due to ethical and privacy restrictions, the data is not publicly available, but could be provided on reasonable request.

*This version of the article has been accepted for publication, after peer review (when applicable) and is subject to Springer Nature's [AM terms of use](#), but is not the Version of Record and does not reflect post-acceptance improvements, or any corrections. The Version of Record is available online at: <https://doi.org/10.1007/s10862-022-10000-0>*

### Abstract

There has been no proper validation of the Personality Inventory for the *Diagnostic and Statistical Manual of Mental Disorders* (PID-5) *Faceted Brief Form* (PID-5-FBF), a shortened 100-item version of the original PID-5, in the French language. In addition, more than one domain scoring procedure has been proposed in the literature, and no study has attempted to compare them from a factor analytic standpoint. Also, no study about the PID-5 (nor the PID-5-FBF) has been conducted with private practice clients, to the best of our knowledge, despite the fact that it is a very common clientele. This study seeks to (a) provide initial evidence of reliability and validity for the PID-5-FBF among French-speaking samples, (b) compare the structure of the PID-5-FBF while using two different domain scoring procedures, and (c) investigate its measurement invariance between sexes and across samples following a theoretical gradient of psychopathology. Indices of reliability and validity were documented among three samples: a community sample ( $n = 526$ , 49.8% women), private practice clients ( $n = 544$ , 64.0% women), and outpatients with personality disorder ( $n = 288$ , 61.5% women). Results generally showed good to excellent psychometric properties, providing initial support for the PID-5-FBF for research and clinical applications. The results of both scoring procedures were good, but one showed a clear advantage, by having notably cleaner loadings. Using stringent criteria, strict invariance was supported between sexes, while partial invariance was supported across samples. Clinical implications are discussed, notably pertaining to private practice clients, an understudied group.

*Keywords:* DSM-5, Alternative Model for Personality Disorders, Personality Inventory for DSM-5, psychometric validation, measurement invariance

The *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.) (DSM-5; American Psychiatric Association [APA], 2013) introduced a new hybrid categorical-dimensional framework to assess personality disorders (PDs), the Alternative Model for Personality Disorders (AMPD). The AMPD seeks both to build on present knowledge concerning PDs and to overcome the multiple limitations related to the current categorical classification (e.g., weak interrater reliability, heterogeneous profiles, limited clinical coverage, etc.; Hopwood et al., 2018). The AMPD is defined by two criteria. Criterion A was developed to serve as a general personality dysfunction indicator. Criterion B pertains to 25 maladaptive lower-order personality facets regrouped into five higher-order personality domains: Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism. Its official APA-copyrighted measure is the Personality Inventory for DSM-5 (PID-5; Krueger et al., 2012), a 220-item self-report.

A shorter 100-item version, the Personality Inventory for DSM-5, Faceted Brief Form, Adult version (PID-5-FBF)<sup>1</sup>, was derived (initially in English) from the original PID-5 item pool using Item Response Theory (Maples et al., 2015). Even after reducing by about 55% the total number of items, nearly identical reliability and validity indices were obtained. The psychometric equivalence between the original PID-5 and the PID-5-FBF was further supported in a head-to-head study (Bach et al., 2016). Parsimony is highly desirable in scale construction (e.g., for assessments in contexts where resources are limited, when many tests are administered, etc.), and it seems that a shorter iteration

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<sup>1</sup> Formerly referred to as the “Personality Inventory for DSM-5–Short Form” (PID-5-SF).



with comparable psychometric properties was achievable. A 25-item PID-5 also exists (Krueger et al., 2013), but, as stated by Maples and colleagues (2015), its utility might be significantly limited by its capacity to assess domains only. Another shorter 34-item version has been recently proposed (Kerber et al., 2022), but its alignment with the AMPD is partial, as it can only assess 15 out of the 25 facets (e.g., Attention-Seeking, Callousness, Depressivity, Hostility, and Risk Taking are not present). This absence or partial representation of facets is a substantial drawback since all 25 facets are necessary to make up the six algorithm-based PD diagnoses as conceptualized by the AMPD<sup>2</sup>. Facets are also necessary to make up the new trait-specified PD (APA, 2013), which can be given when a PD is present, but the patient still does not “fit” into any of the six retained categorical PDs (APA, 2013). Therefore, the 100-item version (the PID-5-FBF), which can assess both higher-order domains and lower-order facets, seems to be an appropriate compromise between resource efficiency, depth of analysis, and usefulness for both clinical and research applications.

Despite that a proper validation of the internal structure of the original 220-item French PID-5 exists (Roskam et al., 2015), no data are currently available on its external validity, and no proper validation of the French PID-5-FBF has been conducted, to the best of our knowledge. This is a significant obstacle to the replicability of AMPD research

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<sup>2</sup> For instance, to qualify for a formal AMPD-based borderline PD diagnosis, the patient must have high elevations of four out of seven specific facets (i.e., Emotional Lability, Anxiousness, Separation Insecurity, Depressivity, Impulsivity, Risk Taking, Hostility), with at least one from the last three facets (APA, 2013).

in other languages, as well to its use in clinical practice. In addition, it is crucial to investigate the validity of the instruments across different populations to ensure that its use is indicated—especially when clinical decision-making is at stake (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014).

Emphasizing the importance of replication and clinical relevance leads naturally to another important consideration: measurement invariance (MI). Indeed, making comparisons between an individual and a reference group rests on the assumption that the scores generated will be invariant, that is, that they measure the same latent construct and are exempt from biases that may account for the observed score differences (Fischer & Karl, 2019). MI is also a necessary feature to make meaningful across-group comparisons or repeated measurements (e.g., clinical vs. nonclinical; pre- vs. post-intervention; Putnick & Bornstein, 2016). In a clinical setting, MI is particularly important for diagnostic considerations (e.g., to ensure that all groups have comparable chances of getting a given diagnosis; Suzuki et al., 2019). Some MI studies exist for the original PID-5 or the PID-5-FBF pertaining to some parameters. On the one hand, MI was notably supported for culture (Sorrel et al., 2021), sex (Suzuki et al., 2019), and community versus psychiatric membership (Bach et al., 2018; Somma, Krueger, Markon, Borroni, et al., 2019). On the contrary, MI was not supported based on White vs. Black American membership (Bagby et al., 2022), urging caution before generalizing MI to every group.

One such group for which the PID-5 (or the PID-5-FBF) invariance has not been investigated is clients drawn from private practice, which has been the object of few studies in general. Until now, doing research among “clinical samples” in the AMPD context has been mostly equated with research among psychiatric or correctional samples. This concern is not limited to AMPD research, as it had already been raised more than 15 years ago about the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; see Sellbom et al., 2006). Nonetheless, this population seems independent from other groups. Indeed, they have an “intermediate” level of personality pathology, that is, somewhere in between community participants and psychiatric outpatients (e.g., Gamache et al., 2021), and consequently likely have distinct epidemiological PD rates. This lack of research is paradoxical considering that, for instance, in Canada and the United States, practitioners in private practice represent about 40-45% of licensed psychologists (Chodos, 2017; Hamp et al., 2016), making it the most common area of practice. Finally, private practice clients are likely to be the object of psychological assessments (Sellbom et al., 2006), and the “research-practice gap” among psychologists in this area of practice is still a matter of concern (Stewart & Chambless, 2007). For instance, according to a survey conducted among psychologists and other licensed psychotherapists, practitioners reported only rarely using inventories (Bradley et al., 2019). Among those who did report using such tools, self-developed (or ad hoc) inventories—that is, inventories not validated—were the most commonly used (half of respondents reported using them at least “rarely”; Bradley et al., 2019), further underlining the importance of expanding personality assessment research in this population to provide clinicians with valid instruments.

## Objectives

The first objective of the present study is to report initial data on the psychometric properties of the French PID-5-FBF in both community and clinical samples, based on Classical Test Theory (CTT). The following psychometric properties will be investigated: (a) internal consistency, (b) construct validity using two domain scoring procedures detailed below (see third objective), and (c) convergent-divergent validity. Based on previous research, some predictions can be made: (a) Internal consistency indices should be high (Zimmermann et al., 2019), (b) A clear and theoretically congruent five-factor solution should be obtained (Maples et al., 2015; Roskam et al., 2015; Somma, Krueger, Markon, & Fossati, 2019), and (c) Relations with external criteria should be as follows (Widiger & Crego, 2019; Zimmermann et al., 2019): Negative Affectivity and Detachment should be more closely linked with measures of internalizing pathology, Disinhibition and Antagonism with measures of externalizing pathology, and Psychoticism should have the least clear nomological network (as shown by weak to moderate correlations with various criteria).

The second objective is to compare two domain scoring procedures that coexist in the literature (see Watters et al., 2019), but that have been the object of very little empirical attention. This is surprising considering that the facets incorporated into the higher-order domains are likely to affect the internal validity of the PID-5/PID-5-FBF. This topic is important to identify which is procedure is best, and therefore should be recommended, for both research and clinical practice. This article will address the issue from a factor

analytic standpoint (i.e., by comparing the PID-5-FBF structure and its MI with both procedures), which has not been done, to the best of our knowledge.

Finally, the third objective is to further document the MI of the PID-5-FBF, using a stepped approach (i.e., configural, metric, scalar, strict). Based on previous research, it is predicted that the PID-5-FBF will reach scalar invariance for sex (Suzuki et al., 2019). Previously, community versus psychiatric membership reached scalar invariance (Bach et al., 2018). Therefore, even in the absence of past research in private practice samples, we hypothesize that the PID-5-FBF will reach (at least) scalar invariance with regard to private practice versus outpatient versus community membership (Bach et al., 2018). Mean differences on the latent factors are to be expected. Clinical samples (especially outpatients) are expected to have higher scores than the community sample (Bach et al., 2018; Somma, Krueger, Markon, Borroni, et al., 2019).

## **Methods**

### **Participants and Procedures**

Three French-speaking samples<sup>3</sup> (community participants, private practice clients, outpatients with personality disorder) were recruited in the Province of Quebec, Canada, to complete the French PID-5-FBF. The use of multiple samples is strongly encouraged in validation studies (Fischer & Karl, 2019), and aims to increase data variability and the

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<sup>3</sup> This study was not preregistered. The outpatient sample and a part of the private practice sample (44%) have already been used in other studies from our group. Nonetheless, this study represents an original analysis.

generalizability of conclusions, following a theoretical gradient of psychopathology. The total sample size ( $N = 1358$ ), after participant deletion (details below), allows respecting both the recommended “10 participants per question” rule-of-thumb ratio (i.e., 100 PID-5-FBF items\*10 participants = 1000 participants; Nunnally, 1978) and falls into the “excellent” sample size for scale validation ( $\geq 1000$ ; Comrey & Lee, 1992). Available sociodemographic information for each sample is provided in the supplemental material (see Table S1).

### ***Community Sample***

The community sample ( $n = 526$ , 49.8% women,  $M_{\text{age}} = 35.16$ ,  $SD = 13.91$ , range 18--75) was recruited by snowball sampling on the Internet using the mailing list from a psychology research organization and social media on successful waves of recruitment between March 2017 and August 2020. Every participant was given the chance to win a CAN\$50 gift card from a popular online store as an incentive. Internet protocol (IP) filtering was used to ensure that individuals could not take part in the data collection more than once.

### ***Private Practice Sample***

Clients from two general private clinics ( $n = 544$ , 64.0% women,  $M_{\text{age}} = 34.01$ ,  $SD = 9.69$ , range 16-67) were recruited and completed computerized tests at intake between July 2019 and November 2021. Clients consulted in individual or couple therapy, but no information was available on initial diagnosis or reason for consultation. All

professionals working at these clinics are licensed clinical psychologists or trainees in clinical psychology under supervision, with some of them specialized in couple therapy. Clients are self-referred, with or without mental disorders (e.g., relational difficulties, personality difficulties/disorders, depression, anxiety, trauma, personal growth, sexual identity).

### ***Outpatients with Personality Disorder Sample***

Outpatients with PD from a specialized public clinic ( $n = 288$ , 61.5% women,  $M_{\text{age}} = 33.62$ ,  $SD = 10.58$ , range 18-69) were recruited during intake to complete a computerized battery of questionnaires between September 2017 and February 2020. The outpatients had at least one formal DSM-5 Section II PD diagnosis according to the referring source (general physician or psychiatrist). After initial assessment by a clinical psychologist, diagnoses were revised by a team of six clinical psychologists during weekly meetings. Formal DSM-5 Section II PD diagnoses were available for the majority of patients (254 patients or 87.9% of the sample): 65 narcissistic (22.5%), 48 borderline-narcissistic (16.6%), 46 borderline (15.9%), 41 mixed ( $\geq 3$  PDs; 14.2%), 23 not otherwise specified (8.0%), 10 schizotypal (3.5%), six schizoid (2.1%), five syndromic (i.e., main diagnosis is not a PD; 1.7%), four antisocial (1.4%), four histrionic (1.4%), and two paranoid (0.7%).

## Measures

The French translation (Roskam et al., 2015) of the original 220-item Personality Inventory for DSM-5 was developed using a translation/back-translation procedure and received the approval of two of the original PID-5 authors. The *French PID-5 Faceted Brief Form* (PID-5-FBF)<sup>4</sup> was constructed by extracting the 100 items retained by Maples et al. (2015). It consists of 25 lower-order facets (four items per facet, no reversed wording) regrouped into five higher-order domains. Items are scored on a four-point Likert scale.

For the rest of the tests, the samples were administered slightly different instruments, indicated by superscripts: (a) community, (b) private practice, and (c) outpatients.

The *Experiences in Close Relationships*<sup>a,b</sup> questionnaire (ECR; Brennan et al., 1998) is a measure of attachment that is comprised of two subscales, anxiety ( $\omega = .89$ ) and avoidance ( $\omega = .88$ ). Specifically, a shortened 12-item version has been used (ECR-12; Lafontaine et al., 2016). Items are scored on a seven-point Likert scale.

The *Interpersonal Reactivity Index*<sup>a,c</sup> (IRI; Davis, 1983; French validation by Gilet et al., 2013) is a 28-item measure of empathy. Two of its subscales were used, respectively

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<sup>4</sup> *Note de l'éditeur.* L'information concernant les items ainsi que la constitution des domaines et facettes est disponible en appendice (voir Appendix B, C et D.)



tapping more closely onto cognitive and affective empathy: Perspective-Taking ( $\omega = .83$ ) and Empathic Concern ( $\omega = .78$ ). Items are scored on a seven-point Likert scale.

The *Psychiatric Symptom Index*<sup>b</sup> (PSI; Ilfeld, 1976) is a general measure of psychological distress. Specifically, the 14-item version was used (Préville et al., 1992). It has a global score ( $\omega = .90$ ) and four subscales: Depression ( $\omega = .83$ ), Anxiety ( $\omega = .80$ ), Anger ( $\omega = .85$ ), and Cognitive Disturbance (2 items;  $\omega$  could not be computed). Items are scored on a four-point Likert scale.

The *Barratt Impulsivity Scale*<sup>c</sup> (BIS-11; Patton et al., 1995; French validation by Baylé et al., 2000) is a 30-item measure of impulsivity. It is composed of a global score ( $\omega = .86$ ) and three subscales: Attentional Impulsiveness ( $\omega = .60$ ), Motor Impulsiveness ( $\omega = .77$ ), and Nonplanning Impulsiveness ( $\omega = .69$ ). Items are scored on a four-point Likert scale.

The *Brief Version of the Pathological Narcissism Inventory*<sup>c</sup> (B-PNI; Schoenleber et al., 2015; French validation by Diguer et al., 2020) is a 28-item measure of narcissism. It has two scales: Grandiosity ( $\omega = .85$ ) and Vulnerability ( $\omega = .88$ ). Items are scored on a seven-point Likert scale.

The *Self and Interpersonal Functioning Scale*<sup>b,c</sup> (SIFS; Gamache et al., 2019) is a 24-item measure of the AMPD Criterion A. It consists of four subscales, Identity ( $\omega = .83$ ),

Self-Direction ( $\omega = .73$ ), Empathy ( $\omega = .72$ ), and Intimacy ( $\omega = .79$ ), regrouped into a global personality dysfunction score ( $\omega = .90$ ). Items are scored on a five-point Likert scale.

### **Data Diagnostics and Analytic Strategy**

Data from all samples were screened visually for valid responding (e.g., not having answered “0” to all questions) and missing data, which led to some suppression among the community sample (9), the private clinic sample (6), and the outpatient sample (1). In addition, for the community sample, only PID-5-FBF protocols containing  $< 5$  missing data were included for further analyses. The private clinic sample also contained 12 participants with English protocols, so they were removed as well. The private clinic sample contained 11 protocols with one or two missing data each. The outpatients’ PID-5-FBF protocols had no missing data. For factor and invariance analyses, full information maximum likelihood (FIML) was used to handle missing data. For the rest of the analyses, a list-wise deletion approach was used. Analyses were computed using IBM SPSS 28, *Mplus* 8.4, and JASP 0.13.1.

To assess internal consistency, both Cronbach’s alphas and McDonald’s omegas were computed (since the latter might artificially inflate in samples of  $N > 1000$ ; Ten Berge & Sočan, 2004), as well as mean inter-item correlations (MICs) to assess item redundancy. To assess the factor structure of the PID-5-FBF, Exploratory structural equation modeling (ESEM; Asparouhov & Muthén, 2009), with the Target rotation (Browne, 2001), was used

because (a) Confirmatory factor analysis (CFA) requires strong measurement assumptions that do not always hold with actual personality data (e.g., meaningful cross-loadings are common) and therefore prevent from achieving reasonable fit to observed data (e.g., Hopwood & Donnellan, 2010), (b) it is a powerful and flexible contemporary method combining the best features of CFA (e.g., *a priori* model specification) and exploratory factor analysis (EFA; e.g., cross-loadings are allowed; Marsh et al., 2014), and (c) ESEM models allow testing of MI instead of solely providing information pertaining to factor congruence coefficients (Marsh et al., 2014). Two different domain scoring procedures were evaluated to identify optimal model fit and MI: APA's (2013) official three facets per domain scoring procedure (i.e., using 15 facets out of 25, without expected cross-loadings); and Krueger et al.'s (2012) algorithms (i.e., using 25 facets out of 25, without expected cross-loadings)<sup>5</sup>. The appellations "15-facet" and "25-facet" procedures will be used hereinafter. Because it has been shown that larger and more diverse samples clarify the latent structure, reduce sample bias, and decrease the interstitial overlap between facets (Watters & Bagby, 2018), the ESEM model was computed with all three samples combined. Identifying the latent structure with all samples combined before testing for measurement invariance was also the approach taken by Suzuki et al. (2019). To identify the optimal model fit, standard indices were used (e.g., Hu & Bentler, 1999): *Comparative Fit Index* (CFI; > .95), *Tucker-Lewis Index* (TLI; > .95), *Root Mean Square Error of*

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<sup>5</sup> For a more thorough description of the similarities and differences between the two domain calculation methods, see Watters et al. (2019).

*Approximation* (RMSEA; < .06), and *Standardized Root Mean Square Residual* (SRMR; < .08).

For both scoring procedures, MI was tested between sexes first, and then between samples (community, private practice, and outpatient). MI testing was applied following four steps: (a) configural (the number and pattern of factors are identical across sex/samples), (b) metric/weak (factor loadings of the facets onto the domains are constrained to be the same across sex/samples), (c) scalar/strong (intercepts are forced to be equal across sex/samples), and (d) and strict/residual MI (the residual [i.e., error] variances are constrained to be equal across sex/samples). It should be noted that the absolute  $\Delta\chi^2$  test of differences between successive models seems to be overly sensitive to small-sized and trivial MI departures (especially among large samples), so the focus of the MI analysis will be put on finer grained indices (Putnick & Bornstein, 2016). Thus, we computed the *w*-coefficient and *McDonald's Noncentrality Index* ( $\Delta Mc$ ) proposed by Newsom (2015) to determine the magnitude of the  $\chi^2$  difference (with values near .00 indicating a small difference). Also, diminution of the CFI and TLI coefficients equal or superior to 0.010 and increase of the RMSEA coefficient equal or superior to 0.015 indicated a lack of invariance between sexes or among samples (Chen, 2007; Cheung & Rensvold, 2002).

## Results

### Reliability

Reliability indices (Cronbach's alphas, McDonald's omegas, and MICs) are presented in Table 1. When all samples are collapsed, all domain indices were high ( $\omega = 89\text{--}91$ ), and most facets were in the acceptable-excellent range ( $\omega = 69\text{--}93$ ). Only a few facets (i.e., Cognitive and Perceptual Dysregulation, Irresponsibility, Suspiciousness, Unusual Beliefs and Experiences) showed fair internal consistency (in one individual sample or more).

When samples are collapsed, MIC indices for domains were very good (.38–.44 range,  $M = .41$ ), falling right into the recommended .15–.50 range (Clark & Watson, 1995), and very close to the stricter .20–.40 range (Briggs & Cheek, 1986). For facets, MIC indices were generally higher (.35–.76 range,  $M = .56$ ), suggesting a higher content homogeneity (which is to be expected, since they measure a narrower construct), but possibly some item redundancy (i.e., the items share more common variance and might cover less exhaustively their respective construct).

**Table 1***Reliability Indices of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358)*

Variables	Community (n = 526)			Private Practice (n = 544)			Outpatients with PD (n = 288)			All samples (N = 1358)		
	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC
PID-5-FBF domains												
Negative Affectivity	.90	.90	.42	.88	.88	.37	.85	.85	.33	.90	.90	.43
Detachment	.91	.90	.44	.88	.87	.36	.85	.85	.33	.91	.90	.44
Antagonism	.88	.88	.38	.87	.86	.36	.90	.90	.42	.89	.88	.39
Disinhibition	.89	.89	.39	.89	.89	.39	.85	.85	.33	.90	.90	.42
Psychoticism	.91	.89	.41	.85	.84	.31	.87	.86	.34	.89	.88	.38
PID-5-FBF facets												
Anhedonia	.89	.88	.65	.86	.85	.59	.83	.83	.55	.89	.89	.67
Anxiousness	.88	.88	.66	.86	.86	.61	.85	.84	.57	.88	.88	.65
Attention-Seeking	.89	.88	.65	.89	.88	.65	.91	.91	.72	.89	.89	.67
Callousness	.84	.84	.58	.82	.82	.54	.81	.81	.52	.83	.83	.56
Cog. and Perc. Dys.	.74	.74	.42	.64	.62	.30	.69	.67	.34	.70	.69	.36
Deceitfulness	.82	.81	.52	.71	.70	.37	.85	.85	.58	.81	.80	.50
Depressivity	.88	.87	.64	.85	.84	.57	.80	.80	.50	.88	.88	.65
Distractibility	.92	.92	.74	.93	.93	.76	.91	.90	.70	.93	.93	.76

**Table 1***Reliability Indices of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358) (continued)*

Variables	Community (n = 526)			Private Practice (n = 544)			Outpatients with PD (n = 288)			All samples (N = 1358)		
	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC
PID-5-FBF facets (continued)												
Eccentricity	.91	.91	.71	.87	.87	.62	.86	.85	.59	.89	.89	.67
Emotional Lability	.82	.81	.52	.83	.82	.53	.83	.82	.54	.86	.85	.58
Grandiosity	.78	.78	.48	.76	.76	.45	.79	.79	.48	.77	.77	.47
Hostility	.83	.80	.49	.84	.82	.52	.82	.80	.49	.84	.83	.54
Impulsivity	.87	.87	.63	.89	.89	.68	.90	.90	.68	.90	.90	.69
Intimacy Avoidance	.86	.85	.58	.77	.74	.44	.84	.82	.54	.85	.83	.55
Irresponsibility	.68	.68	.35	.63	.62	.30	.68	.67	.34	.69	.68	.35
Manipulativeness	.80	.79	.49	.78	.77	.47	.85	.84	.57	.81	.80	.51
Perseveration	.80	.79	.51	.74	.73	.73	.80	.79	.48	.80	.80	.51
Restricted Affectivity	.84	.83	.55	.83	.82	.53	.75	.73	.40	.81	.80	.50
Rigid Perfectionism	.85	.84	.56	.82	.80	.51	.84	.83	.56	.85	.84	.56
Risk Taking	.84	.83	.57	.83	.83	.55	.88	.88	.64	.86	.86	.61
Separation Insecurity	.86	.85	.59	.80	.79	.48	.84	.84	.57	.85	.84	.58

**Table 1***Reliability Indices of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358) (continued)*

Variables	Community (n = 526)			Private Practice (n = 544)			Outpatients with PD (n = 288)			All samples (N = 1358)		
	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC	$\omega$	$\alpha$	MIC
PID-5-FBF facets (continued)												
Submissiveness	.83	.83	.55	.85	.85	.59	.86	.86	.61	.85	.85	.59
Suspiciousness	.80	.80	.52	.69	.69	.38	.76	.76	.44	.80	.79	.51
Unusual B. and Exp.	.79	.77	.46	.69	.68	.37	.71	.70	.37	.75	.74	.42
Withdrawal	.86	.85	.60	.82	.82	.55	.79	.79	.49	.85	.84	.58

*Note.* Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; MIC = mean inter-item correlation; Outpatients with PD = outpatients with personality disorder; Unusual B. and Exp. = Unusual Beliefs and Experiences.



### **Construct Validity**

Results for the ESEM model, based the 15-facet scoring procedure (three retained facets per domain), are presented in Table 2. Using the Robust Maximum Likelihood estimator, fit indices were good according to usual guidelines:  $\chi^2$  goodness-of-fit statistic = 135.389 ( $df = 40$ ,  $p < .001$ ), CFI = .987, TLI = .965, RMSEA = .042 (90% CI [.034–.050]), SRMR = .012. Target-rotated loadings for all facets were in line with the expected PID-5 model (i.e., all 15 facets had significant loadings only on their expected domain). The model reached a good fit without any adjustment.

Results for the ESEM model, based on the 25-facet scoring procedure, are presented in Table 3. Using the Robust Maximum Likelihood estimator and a target rotation, some fit indices were not quite satisfactory:  $\chi^2$  goodness-of-fit statistic = 1160.577 ( $df = 185$ ,  $p < .001$ ), CFI = .932, TLI = .890, RMSEA = .062 (90% CI [.059–.066]), SRMR = .025. Some facets showed cross-loadings (i.e., Restricted Affectivity, Attention-Seeking, Callousness, Distractibility) or did not load on any higher-order domain (i.e., Hostility). To reach a good fit, correlations between error terms had to be added for the following, conceptually related facets: (a) Depressivity and Anhedonia, (b) Deceitfulness and Manipulation, (c) Emotional Lability and Hostility, and (d) Emotional lability and Restricted Affectivity. The fit indices of the adjusted model are as follows:  $\chi^2$  goodness-of-fit statistic = 749.569 ( $df = 181$ ,  $p < .001$ ), CFI = .960, TLI = .934, RMSEA = .048 (90% CI [.045–.052]), SRMR = .021. This adjusted model was kept for MI analyses pertaining to the 25-facet scoring procedure (details below).

**Table 2**

*Best Fitting Factor Model of the Personality Inventory for DSM-5 Faceted Brief Form Trait Scales: Standardized Factor Loading and Factor Correlations Based on Robust Maximum Likelihood Exploratory Structural Equation Modeling Factor Analysis Using the 15-Facet Scoring Procedure (N = 1358)*

Facets	Domains				
	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Anxiousness	<b>.72</b>	.16	.06	-.08	.02
Emotional Lability	<b>.65</b>	.08	-.08	.16	.12
Separation Insecurity	<b>.62</b>	-.15	.10	.11	-.02
Anhedonia	.25	<b>.62</b>	.06	.06	-.01
Intimacy Avoidance	-.09	<b>.63</b>	-.05	.06	.04
Withdrawal	-.05	<b>.86</b>	.03	-.02	.02
Deceitfulness	-.01	.02	<b>.74</b>	.22	-.05
Grandiosity	.02	.09	<b>.59</b>	-.17	.10
Manipulativeness	.04	-.06	<b>.88</b>	-.04	.01
Distractibility	.27	.06	-.11	<b>.51</b>	.02
Impulsivity	.13	-.04	.08	<b>.58</b>	.07
Irresponsibility	-.17	.07	.12	<b>.76</b>	.06
Cog. and Perc. Dys.	.03	-.04	-.05	.05	<b>.77</b>
Eccentricity	.02	.22	.09	.14	<b>.41</b>
Unusual B. and Exp.	-.02	-.07	.02	-.06	<b>.96</b>

**Table 2**

*Best Fitting Factor Model of the Personality Inventory for DSM-5 Faceted Brief Form Trait Scales: Standardized Factor Loading and Factor Correlations Based on Robust Maximum Likelihood Exploratory Structural Equation Modeling Factor Analysis Using the 15-Facet Scoring Procedure (N = 1358) (continued)*

Facets	Domains				
	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Factor inter-correlations					
Detachment	.39				
Antagonism	.19	.29			
Disinhibition	<b>.60</b>	.45	<b>.50</b>		
Psychoticism	.40	.48	.44	<b>.53</b>	

*Note.* Factor loadings displayed after Target rotation. Factor loadings  $\geq .30$  and inter-factor correlations  $\geq .50$  are **bolded**. Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; Unusual B. and Exp. = Unusual Beliefs and Experiences.

**Table 3**

*Best Fitting Factor Model of the Personality Inventory for DSM-5 Faceted Brief Form Trait Scales: Standardized Factor Loading and Factor Correlations Based on Robust Maximum Likelihood Exploratory Structural Equation Modeling Factor Analysis Using the 25-Facet Scoring Procedure (N = 1358)*

Facets	Domains				
	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Anxiousness	<b>.68</b>	.24	.07	-.14	.10
Emotional Lability	<b>.63</b>	.11	-.12	.25	.15
Hostility	.29	.29	.07	.29	.01
Perseveration	<b>.43</b>	.23	.08	.21	.06
Restricted Affect	<b>-.42</b>	<b>.53</b>	.26	.04	-.01
Separation Insecurity	<b>.59</b>	-.03	.13	.09	-.01
Submissiveness	<b>.45</b>	.12	.15	-.04	-.06
Anhedonia	.21	<b>.73</b>	.05	.04	.03
Depressivity	.25	<b>.65</b>	-.01	.10	.09
Intimacy Avoidance	-.09	<b>.63</b>	-.06	.09	.09
Suspiciousness	.22	<b>.41</b>	.16	.03	.24
Withdrawal	-.08	<b>.75</b>	.01	.03	.10
Attention-Seeking	.27	<b>-.35</b>	<b>.53</b>	.16	-.04
Callousness	<b>-.30</b>	<b>.33</b>	<b>.41</b>	.22	.01
Deceitfulness	.01	-.01	<b>.79</b>	.12	-.04
Grandiosity	-.06	.03	<b>.65</b>	-.15	.11

**Table 3**

*Best Fitting Factor Model of the Personality Inventory for DSM-5 Faceted Brief Form Trait Scales: Standardized Factor Loading and Factor Correlations Based on Robust Maximum Likelihood Exploratory Structural Equation Modeling Factor Analysis Using the 25-Facet Scoring Procedure (N = 1358) (continued)*

Facets	Domains				
	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Manipulativeness	-.01	-.13	<b>.88</b>	-.05	.03
Distractibility	<b>.36</b>	.12	-.11	<b>.37</b>	.03
Impulsivity	.15	-.06	.04	<b>.76</b>	-.01
Irresponsibility	.05	.09	.23	<b>.47</b>	.06
Rigid Perfectionism	<b>.41</b>	.25	.15	-.14	.08
Risk Taking	-.17	-.08	.16	<b>.51</b>	.26
Cog. and Perc. Dys.	.07	-.00	-.03	.01	<b>.76</b>
Eccentricity	.02	.21	.10	.15	<b>.42</b>
Unusual B. and Exp.	-.02	-.08	-.00	-.01	<b>.94</b>
Factor inter-correlations					
Detachment	.28				
Antagonism	.21	.35			
Disinhibition	.39	.41	<b>.55</b>		
Psychoticism	.30	.42	.47	<b>.52</b>	

*Note.* Factor loadings displayed after Target rotation. Factor loadings  $\geq .30$  and inter-factor correlations  $\geq .50$  are **bolded**. Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; Restricted Affect. = Restricted Affectivity; Unusual B. and Exp. = Unusual Beliefs and Experiences.

### **Convergent and Divergent Validity**

Since results showed an advantage for the 15-facet domain scoring procedure and for the sake of parsimony, correlations with external criteria were computed only with that technique. Bivariate zero-order Pearson correlations between PID-5-FBF domains and facets with external variables are presented in Table 4. For domains, strong correlations were observed for Negative Affectivity with the ECR-12 (Anxiety) and the PSI (Total Score, Depression), for Antagonism with the B-PNI (Grandiosity), and for Disinhibition with the BIS-11 (all subscales). In addition, all domains but Antagonism showed strong correlations with the SIFS (two or more subscales). When considering individual facets, most showed a meaningful pattern of associations. For instance, Callousness was strongly (negatively) correlated with affective empathy (IRI Empathic Concern), but not correlated with personal distress (PSI variables, ECR-12 Anxiety).

Hostility was strongly associated with anger (PSI), its core emotion (APA, 2013), but not with anxiety (PSI, ECR-12). Anhedonia and Depressivity showed strong associations with depression (PSI), but not with impulsivity (BIS-11). Nevertheless, some facets did not show any clear association with any of the external variables (e.g., Cognitive and Perceptual Dysregulation, Rigid Perfectionism, Submissiveness), but that is likely because no instrument tapped precisely onto their content.

**Table 4**

*Convergent and Divergent Validity of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358)*

	ECR-12 (n = 1065) <sup>ab</sup>		IRI (n = 813) <sup>ac</sup>		PSI (n = 543) <sup>b</sup>					BIS-11 (n = 286) <sup>c</sup>				B-PNI (n = 262) <sup>c</sup>		SIFS (n = 741) <sup>b,c</sup>				
	ECR-12 Anxiety	ECR-12 Avoidance	IRI Perspective Taking	IRI Empathic Concern	PSI Total Score	PSI Depression	PSI Anxiety	PSI Anger	PSI Cog. Disturbance	BIS-11 Total Score	BIS-11 Attentional	BIS-11 Motor	BIS-11 Nonplanning	B-PNI Grandiosity	B-PNI Vulnerability	SIFS Total Score	SIFS Identity	SIFS Self-Direction	SIFS Empathy	SIFS Intimacy
PID-5-FBF domains																				
Neg. Affectivity	<b>.65</b>	.05	-.26	.14	<b>.61</b>	<b>.57</b>	<b>.60</b>	.41	.26	.32	.22	.28	.32	.24	.44	<b>.63</b>	<b>.67</b>	<b>.51</b>	.46	.39
Detachment	.24	.44	-.34	-.24	.46	.47	.32	.31	.29	.15	.11	.10	.18	-.07	.09	<b>.71</b>	<b>.62</b>	.43	<b>.50</b>	<b>.72</b>
Antagonism	.17	.16	-.33	-.28	.12	.06	.13	.15	.05	.42	.28	.47	.26	<b>.65</b>	.44	.39	.21	.39	.39	.35
Disinhibition	.35	.19	-.39	-.10	.46	.38	.38	.32	.42	<b>.75</b>	<b>.57</b>	<b>.66</b>	<b>.66</b>	.30	.40	<b>.67</b>	<b>.56</b>	<b>.72</b>	<b>.52</b>	.43
Psychoticism	.19	.19	-.19	-.08	.27	.22	.23	.21	.19	.40	.25	.37	.41	.37	.25	<b>.54</b>	.44	.41	.49	.44
PID-5-FBF facets																				
Anhedonia	.28	.30	-.33	-.19	<b>.54</b>	<b>.56</b>	.39	.38	.28	.23	.20	.15	.24	.10	.22	<b>.71</b>	<b>.69</b>	.48	<b>.50</b>	<b>.61</b>
Anxiousness	.47	.04	-.16	.12	<b>.57</b>	<b>.51</b>	<b>.61</b>	.36	.27	.11	.03	.06	.20	.15	.32	<b>.51</b>	<b>.56</b>	.36	.35	.34
Attention-Seeking	.27	.02	-.18	.03	.09	.04	.12	.10	.03	.43	.30	.45	.32	<b>.58</b>	.46	.23	.14	.30	.22	.14
Callousness	.02	.25	-.48	<b>-.53</b>	.08	.04	.01	.14	.08	.37	.29	.34	.29	.25	.24	.48	.24	.35	<b>.52</b>	<b>.50</b>

**Table 4**

*Convergent and Divergent Validity of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358) (continued)*

	ECR-12 (n = 1065) <sup>ab</sup>		IRI (n = 813) <sup>ac</sup>		PSI (n = 543) <sup>b</sup>					BIS-11 (n = 286) <sup>c</sup>				B-PNI (n = 262) <sup>c</sup>		SIFS (n = 741) <sup>b,c</sup>				
	ECR-12 Anxiety	ECR-12 Avoidance	IRI Perspective Taking	IRI Empathic Concern	PSI Total Score	PSI Depression	PSI Anxiety	PSI Anger	PSI Cog. Disturbance	BIS-11 Total Score	BIS-11 Attentional	BIS-11 Motor	BIS-11 Nonplanning	B-PNI Grandiosity	B-PNI Vulnerability	SIFS Total Score	SIFS Identity	SIFS Self-Direction	SIFS Empathy	SIFS Intimacy
PID-5-FBF domains																				
Cog. and Perc. Dys.	.21	.11	-.11	.00	.25	.23	.19	.15	.24	.27	.17	.23	.28	.28	.22	.38	.32	.29	.34	.31
Deceitfulness	.20	.17	-.34	-.24	.15	.10	.16	.15	.06	.44	.32	.47	.27	<b>.51</b>	.38	.46	.29	.48	.42	.37
Depressivity	.35	.25	-.28	-.12	<b>.57</b>	<b>.59</b>	.44	.37	.34	.33	.28	.24	.33	.11	.31	<b>.72</b>	<b>.73</b>	<b>.50</b>	.49	<b>.58</b>
Distractibility	.31	.11	-.21	.03	.44	.37	.40	.26	.40	.39	.25	.22	<b>.57</b>	.04	.21	.47	.45	.46	.35	.28
Eccentricity	.14	.21	-.20	-.12	.23	.18	.21	.19	.11	.39	.24	.35	.42	.30	.22	<b>.55</b>	.45	.41	<b>.51</b>	.44
Emotional Lability	.46	.06	-.25	.16	<b>.57</b>	<b>.51</b>	<b>.51</b>	.46	.24	.33	.25	.30	.29	.12	.30	<b>.61</b>	<b>.62</b>	<b>.50</b>	.45	.37
Grandiosity	.11	.14	-.25	-.27	.06	.02	.06	.10	.02	.23	.14	.26	.16	<b>.55</b>	.34	.24	.06	.16	.31	.29
Hostility	.30	.12	-.43	-.14	.46	.33	.29	<b>.59</b>	.19	.41	.30	.35	.40	.19	.35	<b>.56</b>	.45	.44	<b>.54</b>	.43
Impulsivity	.30	.14	-.42	-.13	.30	.23	.22	.27	.25	<b>.68</b>	<b>.53</b>	<b>.70</b>	.43	.32	.34	<b>.60</b>	.45	<b>.70</b>	.48	.38



**Table 4**

*Convergent and Divergent Validity of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358) (continued)*

	ECR-12 (n=1065) <sup>b</sup>		IRI (n=813) <sup>c</sup>		PSI (n = 543) <sup>b</sup>					BIS-11 (n = 286) <sup>c</sup>				B-PNI (n = 262) <sup>c</sup>		SIFS (n = 741) <sup>b,c</sup>				
	ECR-12 Anxiety	ECR-12 Avoidance	IRI Perspective Taking	IRI Empathic Concern	PSI Total Score	PSI Depression	PSI Anxiety	PSI Anger	PSI Cog. Disturbance	BIS-11 Total Score	BIS-11 Attentional	BIS-11 Motor	BIS-11 Nonplanning	B-PNI Grandiosity	B-PNI Vulnerability	SIFS Total Score	SIFS Identity	SIFS Self-Direction	SIFS Empathy	SIFS Intimacy
PID-5-FBF domains(continued)																				
Intimacy Avoidance	.11	.47	-.20	-.16	.19	.22	.10	.08	.18	.00	-.01	-.03	.05	-.14	.00	.43	.35	.24	.27	<b>.51</b>
Irresponsibility	.24	.23	-.35	-.17	.36	.30	.25	.25	.36	<b>.63</b>	<b>.51</b>	<b>.59</b>	.46	.31	.33	<b>.58</b>	.46	<b>.60</b>	.45	.40
Manipulativeness	.13	.11	-.24	-.21	.10	.04	.12	.12	.04	.37	.24	.43	.24	<b>.60</b>	.40	.29	.16	.31	.28	.25
Perseveration	.39	.20	-.38	-.05	.44	.42	.36	.33	.21	.37	.30	.34	.29	.25	.41	<b>.59</b>	<b>.53</b>	<b>.50</b>	<b>.50</b>	.40
Restricted Affectivity	-.02	.34	-.27	<b>-.52</b>	.01	.00	-.05	.02	.07	.15	.11	.17	.08	.02	.04	.30	.16	.17	.30	.36
Rigid Perfectionism	.29	.08	-.17	.03	.31	.25	.26	.29	.13	.00	-.16	.08	.07	.21	.28	.34	.32	.19	.30	.29
Risk Taking	.05	.13	-.23	-.12	.03	.01	-.01	.04	.10	.47	.32	<b>.51</b>	.33	.33	.13	.36	.23	.38	.32	.28
Separation Insecurity	<b>.67</b>	.02	-.25	.07	.31	.35	.31	.15	.12	.28	.22	.26	.23	.25	.35	.44	.45	.39	.33	.24

**Table 4**

*Convergent and Divergent Validity of the Personality Inventory for DSM-5 Faceted Brief Form Domains and Facets (N = 1358) (continued)*

	ECR-12 (n = 1065) <sup>b</sup>		IRI (n = 813) <sup>a,c</sup>		PSI (n = 543) <sup>b</sup>					BIS-11 (n = 286) <sup>c</sup>				B-PNI (n = 262) <sup>c</sup>		SIFS (n = 741) <sup>b,c</sup>				
	ECR-12 Anxiety	ECR-12 Avoidance	IRI Perspective Taking	IRI Empathic Concern	PSI Total Score	PSI Depression	PSI Anxiety	PSI Anger	PSI Cog. Disturbance	BIS-11 Total Score	BIS-11 Attentional	BIS-11 Motor	BIS-11 Nonplanning	B-PNI Grandiosity	B-PNI Vulnerability	SIFS Total Score	SIFS Identity	SIFS Self-Direction	SIFS Empathy	SIFS Intimacy
PID-5-FBF domains (continued)																				
Submissiveness	.34	.10	-.14	.07	.30	.29	.32	.15	.15	.05	-.01	.07	.05	.15	.26	.31	.38	.25	.17	.16
Suspiciousness	.40	.26	-.33	-.10	.42	.37	.32	.34	.23	.31	.21	.28	.30	.32	.40	<b>.65</b>	<b>.53</b>	.42	<b>.56</b>	<b>.62</b>
Unusual B. and Exp.	.14	.11	-.15	-.05	.17	.13	.13	.14	.16	.32	.21	.31	.28	.33	.16	.38	.29	.31	.34	.32
Withdrawal	.18	.31	-.32	-.26	.34	.32	.25	.25	.23	.13	.08	.12	.13	-.10	-.01	<b>.62</b>	.49	.35	.47	<b>.68</b>

*Note.* Coefficients of  $\geq .50$  are **bolded**. BIS-11 = Barratt Impulsivity Scale, 11<sup>th</sup> version; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Cog. Disturbance = Cognitive Disturbance; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; ECR-12 = Experiences in Close Relationships, 12-item version; IRI = *Interpersonal Reactivity Index*; PSI = *Psychiatric Symptom Index*; SIFS = *Self and Interpersonal Functioning Scale*; Unusual B. and Exp. = Unusual Beliefs and Experiences.

<sup>a</sup>Analysis includes the community sample.

<sup>b</sup>Analysis includes the private practice sample.

<sup>c</sup>Analysis includes the outpatients with personality disorder sample.

Inter-domain correlations (see Table S2) were in the moderate-high range ( $r = .26$  [Negative Affectivity with Antagonism] to  $.61$  [Negative Affectivity with Disinhibition]), a pattern very coherent with ESEM inter-factor correlations obtained with the 15-facet scoring procedure ( $r = .19$  [Negative Affectivity with Antagonism] to  $r = .60$  [Negative Affectivity with Disinhibition]; see Table 2), but slightly different from the 25-facet procedure ( $r = .21$  [Negative Affectivity with Antagonism] to  $r = .55$  [Antagonism with Disinhibition]; see Table 3). Inter-facet correlations (see Table S3) were more diverse, spanning from the complete absence of correlations to very high intercorrelations ( $r = .00$  [Restricted Affectivity with Anxiousness] to  $.81$  [Depressivity with Anhedonia]).

### **Measurement Invariance**

Results for the MI analyses are presented in Tables 5 (for the 15-facet procedure) and 6 (for the 25-facet procedure). For sex MI, the number and pattern of factors, factor loadings of the facets, intercepts, and residual variances were equal across sex, with negligible differences in fit coefficients.

**Table 5**

*Goodness-of-Fit Indices for the Invariance Analysis of the Personality Inventory for DSM-5 Faceted Brief Form Using the 15-Facet Scoring Procedure (N = 1358)*

Model	$\chi^2(df)$	CFI	TLI	RMSEA [90% CI]	SRMR	$\Delta$ CFI	$\Delta$ TLI	$\Delta$ RMSEA	$w$	$\Delta$ Mc	MI Level
ESEM	135.389(40)*	.987	.965	.042 [.034-.050]	0.012	–	–	–	–	–	–
Biol. Sex											
Configural	204.092(80)**	.983	.955	.048 [.040-.056]	0.015	–	–	–	–	–	–
Metric	296.497(130)**	.977	.963	.043 [.037-.050]	0.030	.006	.008	.005	0.056	0.033	Full
Scalar	371.421(140)**	.968	.952	.049 [.043-.055]	0.034	.009	.011	.006	0.114	0.048	Full
Strict	407.130(155)**	.965	.953	.049 [.043-.055]	0.038	.003	.001	.000	0.064	0.015	Full
Sample											
Configural	260.246(120)**	.978	.942	.051 [.042-.059]	0.018	–	–	–	–	–	–
Configural-2 <sup>a</sup>	227.628(117)**	.983	.953	.046 [.037-.055]	0.018	–	–	–	–	–	–
Metric	410.191(217)**	.970	.956	.044 [.038-.051]	0.038	.013	.003	.002	0.056	0.063	Full
Scalar	513.176(237)**	.956	.942	.051 [.045-.057]	0.043	.014	.014	.007	0.095	0.059	Not
Scalar-2 <sup>b</sup>	471.982(235)**	.963	.950	.047 [.041-.053]	0.041	.007	.006	.003	0.077	0.032	Partial
Strict	775.489(265)**	.919	.904	.065 [.060-.071]	0.058	.044	.046	.018	0.133	0.172	Not
Strict-2 <sup>c</sup>	548.477(255)**	.954	.943	.050 [.045-.056]	0.047	.009	.007	.003	0.081	0.039	Partial

*Note.* The MI Level column indicates whether the model is fully, partially, or not invariant. Biol. Sex = biological sex; CFI = *Comparative Fit Index*; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; ESEM = exploratory structural equation modeling; MI = measurement invariance; RMSEA = Root Mean Square Error of Approximation; SRMS = Standardized Root Mean Square; TLI = *Tucker-Lewis Index*;  $w$  =  $w$ -coefficient;  $\Delta$ Mc = *McDonald's Noncentrality Index*.

<sup>a</sup> Correlation between error terms of Grandiosity and Deceitfulness have been added to the initial model.

<sup>b</sup> Anxiousness' intercept was relaxed.

<sup>c</sup> Five residual variances were relaxed: Intimacy Avoidance, Grandiosity, Irresponsibility, Eccentricity, as well as Cognitive and Perceptual Dysregulation. \*  $p < .05$ . \*\* $p < .001$ .

**Table 6**

*Goodness-of-Fit Indices for the Invariance Analysis of the Personality Inventory for DSM-5 Faceted Brief Form Using the 25-Facet Scoring Procedure (N = 1358)*

Model	$\chi^2(df)$	CFI	TLI	RMSEA [90% CI]	SRMR	$\Delta$ CFI	$\Delta$ TLI	$\Delta$ RMSEA	w	$\Delta$ Mc	MI Level
ESEM	1160.577(185)**	.932	.890	.062 [.059–.066]	0.025	–	–	–	–	–	–
ESEM <sup>a</sup>	749.569(181)**	.960	.934	.048 [.045–.052]	0.021	–	–	–	–	–	–
Biol. Sex											
Configural	986.033(362)**	.956	.928	.050 [.047–.054]	0.023	–	–	–	–	–	–
Metric	1143.599(462)**	.952	.938	.047 [.043–.050]	0.034	.004	.010	.003	0.052	0.028	Full
Scalar	1251.613(482)**	.946	.933	.048 [.045–.052]	0.036	.006	.005	.001	0.097	0.041	Full
Strict	1342.708(507)**	.942	.931	.049 [.046–.052]	0.042	.004	.002	.001	0.080	0.029	Full
Sample											
Configural	1297.048(543)**	.942	.904	.055 [.052–.059]*	0.028	–	–	–	–	–	–
Metric	1542.276(743)**	.939	.926	.049 [.045–.052]	0.042	.003	.022	.006	0.046	0.020	Full
Scalar	1786.116 (783)**	.923	.912	.053 [.050–.056]	0.048	.016	.014	.004	0.103	0.081	Not
Scalar-2 <sup>b</sup>	1674.351(773)**	.931	.920	.051 [.047–.054]	0.045	.009	.006	.002	0.088	0.042	Partial
Strict	2400.351(823)**	.879	.868	.065 [.062–.068]**	0.066	.052	.052	.020	0.159	0.203	Not
Strict-2 <sup>c</sup>	1819.051(799)**	.922	.912	.053 [.050–.056]	0.050	.009	.008	.002	0.098	0.045	Partial

*Note.* The MI Level column indicates whether the model is fully, partially, or not invariant. Biol. Sex = biological sex; CFI = *Comparative Fit Index*; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; ESEM = exploratory structural equation modeling; MI = measurement invariance; RMSEA = Root Mean Square Error of Approximation; SRMS = Standardized Root Mean Square; TLI = *Tucker-Lewis Index*; w = w-coefficient;  $\Delta$ Mc = *McDonald's Noncentrality Index*.

<sup>a</sup>Correlation between error terms for Depressivity and Anhedonia, Deceitfulness and Manipulation, Emotional Lability and Hostility, and Emotional Lability and Restricted Affectivity. <sup>b</sup>Anxiousness, Anhedonia, Separation Anxiety, Suspiciousness, and Risk Taking's intercepts were relaxed for the three groups.

<sup>c</sup> 12 residual variances were relaxed: [lack of] Perseveration, Depressivity, Intimacy Avoidance, Suspiciousness, Callousness, Deceitfulness, Grandiosity, Irresponsibility, Risk Taking, Eccentricity, Cognitive and Perceptual Dysregulation, and Unusual Beliefs and Experiences. \* $p < .05$ . \*\* $p < .001$ .

These results suggest that a five-factor latent structure explains the covariation among 15/25 personality facets for both men and women reasonably well, with comparable loadings, intercepts, and variance errors. With both scoring procedures, full strict MI was confirmed. For sample MI, partial invariance was achieved for both scoring methods. For the 15-facet procedure, one intercept and five residual variances needed to be relaxed to reach strict invariance, while for the 25-facet procedure, five intercepts and 12 residual variances needed to be relaxed to achieve strict invariance. The sample MI seems better with the 15-facet method, since it required fewer adjustments and goodness-of-fit indices were superior.

### **Mean Differences**

On a post-hoc basis, considering that strict invariance was reached between women and men, observed means could be confidently analyzed (Putnick & Bornstein, 2016). Therefore, a series of between-group differences was computed (with bootstrapped bias-corrected and accelerated 95% confidence intervals) for all 5 PID-5-FBF domains and 25 facets. Results are displayed in supplemental material (see Tables S4-S6). At the domain level, between-sex differences were found and a generally coherent pattern emerged. Among all samples, women showed higher (i.e., more trait pathology for) Negative Affectivity, while men showed higher Antagonism. In addition, in the community and outpatient samples, men also showed higher Detachment and Psychoticism. At the facet level, small- to medium-sized between-sex differences were found, but the pattern of differences varied depending on the sample of reference. In the community sample, the

largest differences were found for Callousness, Eccentricity, Grandiosity, Restricted Affectivity, and Withdrawal (where men had higher scores). In the private practice sample, the largest differences were found for Anxiousness, Emotional Lability (where women had higher scores), and Restricted Affectivity (where men had higher scores). In the outpatient sample, the largest differences were found for Emotional Lability, Rigid Perfectionism (where women had higher scores), and Grandiosity (where men had higher scores).

Considering that the scalar model was shown to be partially invariant for samples, latent mean differences were computed for domains (with the 15-facet method, since fit indices were better and the structure more robust; e.g., Sharma et al., 2011). To assess if the patterns of latent and observed mean differences were similar, a series of group comparisons (with bootstrapped bias-corrected and accelerated 95% confidence intervals) was computed as well (for domains and facets; see Table S7 and Table 7 for observed and latent means, respectively). At the facet level, group comparisons based on observed means are reported as well (see Table S7), but should be considered cautiously because they could not be compared to latent means. Outpatients had higher scores on almost all facets (no difference was found between outpatients and private practice clients for Attention-Seeking, as well as between outpatients and community participants for Grandiosity) in comparison with the other samples.

**Table 7**

*Between-Sample Latent Mean Comparisons for the Personality Inventory for DSM-5 Faceted Brief Form Domains Using the 15-Facet Scoring Procedure (N = 1358)*

Model and Samples Compared	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>
Scalar					
Outpatients with PD vs. Community	1.71***	1.11***	0.14*	1.24***	0.81***
Private Practice vs. Community	0.48***	-0.27**	-0.20**	0.25***	-0.05
Scalar-2					
Outpatients with PD vs. Community	2.05***	1.14***	0.14*	1.19***	0.80***
Private Practice vs. Community	0.65***	-0.25**	-0.20**	0.23***	-0.06
Strict					
Outpatients with PD vs. Community	1.91***	1.09***	0.13	1.08***	0.74***
Private Practice vs. Community	0.63***	-0.26**	-0.20**	0.23***	-0.04
Strict-2					
Outpatients with PD vs. Community	1.95***	1.08***	0.14*	1.15***	0.80***
Private Practice vs. Community	0.64***	-0.26**	-0.20**	0.23***	-0.05

*Note.* The models displayed are those from Table 5. The community sample was used as the comparison group, so its latent means were constrained to be equal to zero. Effect sizes (*d*) with a positive sign indicate that the other sample (outpatient or private practice) shows a higher latent mean than the community sample, while, conversely, a negative sign indicates that the community sample shows a higher latent mean. DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition; Outpatients with PD = outpatients with personality disorder.

\* $p < .05$ . \*\* $p < .01$  \*\*\* $p < .001$ .



The private practice sample showed higher scores than the community sample on nine facets (e.g., Emotional Lability, Impulsivity, Perseveration), but lower scores on six others (e.g., Suspiciousness, Withdrawal). At the domain level, significant latent and observed mean differences showed an identical pattern. Using the Strict-2 model as a point of reference, a difference was observed for all five higher-order domains between community and outpatient samples (Cohen's  $d$  ranging from  $|0.14|$  [Antagonism] to  $|1.95|$  [Negative Affectivity]), and between community and private practice samples (except for Psychoticism; Cohen's  $d$  ranging from  $|0.20|$  [Antagonism] to  $|0.64|$  [Negative Affectivity]). The community sample had significantly lower mean scores on all factors compared to the outpatient sample, and on Negative Affectivity and Disinhibition compared to the private practice sample. On the contrary, the community sample had higher mean scores on Detachment and Antagonism compared to the private practice sample.

## Discussion

This study sought to (a) provide initial evidence of reliability and validity for the PID-5-FBF among French-speaking samples using CTT; (b) compare two PID-5 domain scoring procedures; and (c) investigate the MI of the PID-5-FBF, that is, the psychometric equivalence of the PID-5-FBF across groups to ensure generalizability of findings. The results generally showed good to excellent reliability, construct validity, and meaningful convergent-divergent validity, providing initial support for the linguistic equivalence of the PID-5-FBF for both research and clinical applications. Both scoring procedures

showed good results, but the 15-facet procedure showed a clear advantage. Pertaining to the MI of the PID-5-FBF, strict invariance was reached between sexes, and partial invariance across samples.

### **Basic Reliability and Validity**

The good internal consistency coefficients, with the advantage of domains over facets, are comparable to what is often reported for the original PID-5 (e.g., Zimmermann et al., 2019). The MIC indices are very similar to those reported by Maples et al. (2015), though some were far larger than the .50 threshold, indicating possible excessive item redundancy. This might suggest that internal consistency (i.e., the general degree of item intercorrelation) was prioritized over unidimensionality (i.e., whether items measure a single latent construct) in the PID-5-FBF item selection (i.e., when items were selected from the original PID-5 item pool), which might have resulted in a selection containing mostly similar items (instead of a fuller theoretical content coverage; Clark & Watson, 1995). Consistent with this hypothesis, Maples et al. have reported that the mean MIC of their derivation sample was slightly higher for the PID-5-FBF (.41 for domains, .54 for facets) than for the original PID-5 (.36 for domains, .43 for facets). In psychometric theory, this is referred to as the “attenuation paradox” (e.g., Briggs & Cheek, 1986)<sup>6</sup>.

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<sup>6</sup> Simply put, “a scale will yield far more information—and, hence, be a more valid measure of a construct—if it contains more differentiated items that are only moderately intercorrelated” (Clark & Watson, 1995, p. 316).

In addition, the expected five-factor structure of the French PID-5-FBF was obtained. Very neat loadings of facets on domains were obtained with the 15-facet method, containing no cross-loadings. The solution with 25 facets required some adjustments, but it nevertheless allowed reaching a good fit. This supports the assumption that each higher-order domain taps onto different constructs of pathological personality. Results are in line with those obtained for the original PID-5 (Roskam et al., 2015; Somma, Krueger, Markon, & Fossati, 2019), and for the PID-5-FBF (Maples et al., 2015), which obtained clearly delineated domains. Some of the cross-loadings of the unadjusted model (with the 25-facet method) were similar to those from a facet-focused meta-analysis (e.g., Restricted Affectivity, Callousness; Watters & Bagby, 2018). This reiterates that the PID-5 (and the PID-5-FBF) seems to have a complex structure. While this might be partly explained by theoretical arguments (e.g., some facets pertain to multiple concepts), it might also call for some revision of the instrument since it makes the interpretation of results more ambiguous in both research and clinical practice (Sorrel et al., 2021). This would be consistent with a recent structural review in which the authors concluded that a revised version of the PID-5 should identify, among all facets, a list of 15 primary facets (that ideally contain no cross-loadings) for making up each higher-order domain (Clark & Watson, 2022).

Negative Affectivity (primarily) and Detachment (secondarily) were more closely aligned with measures of internalizing pathology, mostly as expected. Both showed strong associations with measures of depression and anxiety (PSI, ECR-12), in comparison with

the other domains. Negative Affectivity also showed an association with the vulnerable component of narcissism (B-PNI), corroborating previous results suggesting that negative self-evaluation and low self-esteem characterizing narcissistic vulnerability are associated with negative emotions (Schoenleber et al., 2015). Among all domains, Detachment showed the strongest associations with intimacy impairment (SIFS) and avoidance (ECR-12). Furthermore, in partial support to our initial hypotheses, Disinhibition (but less so Antagonism) was the most closely aligned with measures of externalizing pathology, notably with impulsivity (BIS-11). Antagonism showed stronger associations with pathological narcissism, especially with grandiosity (B-PNI). As predicted, Psychoticism had the least clear nomological network (as shown by weak to moderate correlations with many variables); however, like all domains, it correlated strongly with personality impairment (SIFS variables). Indeed, no clear pattern emerged, even for its individual facets (Cognitive and Perceptual Dysregulation, Eccentricity, Unusual Beliefs and Experiences). Since it contains psychotic- and dissociation-like symptoms (e.g., Widiger & Crego, 2019), it seems that it did not align precisely with any of the other available measures; however, external indices of thought disorders were underrepresented in the present study, and including such measures might have yielded more definitive results for the Psychoticism domain and its facets.

### **Measurement Invariance**

Between men and women, the most severe level of MI was obtained (i.e., full strict MI), as expected. These findings are mostly in line with previous findings, where scalar

measurement invariance was supported between sexes for the original PID-5 (Suzuki et al., 2019), as well as partially supported for the 25-item version (Gomez et al., 2022)<sup>7</sup>, and confirm that the PID-5-FBF conceptualizes pathological personality traits similarly between sexes and in a comparable way to the original version. This men-women equivalence is similar to what was reported for the Five-Factor Model (Samuel et al., 2015), and is perhaps slightly better than what was reported for categorical PDs (Jane et al., 2007). This article provides strong evidence that meaningful PID-5-FBF comparisons can be made between men and women (drawn from the same sample), in both clinical and research settings.

Across samples, full metric invariance could be reached. In substantive terms, this means that the five-factor structure and the facet loadings were generally similar across the three groups (community, private practice clients, and outpatients with PD). Nonetheless, theoretically, failing to reach (at least) full scalar invariance implies that a difference between two (or three) observed group means cannot confidently be considered to reflect genuine differences on a trait (Fischer & Karl, 2019; Putnik & Bornstein, 2016). This result might seem to fall below what was reported for the original PID-5 (Bach et al., 2018), for which full scalar MI was reported, at the domain level<sup>8</sup>. For the Italian PID-5-FBF, even if the indices seem generally similar to ours, scalar invariance was reported

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<sup>7</sup> After adjustments were made at the scalar invariance step, full MI was also reported at the strict level (Gomez et al., 2022).

<sup>8</sup> The authors reported partial strict MI as well, but, as they stated, the general goodness-of-fit indices fell below the conventional standards (Bach et al., 2018).

(Somma, Krueger, Markon, Borroni, et al., 2019). However, the approach taken in the present study seems to have used more numerous and stringent criteria (e.g.,  $\Delta Mc$  near .00,  $\Delta CFI$  and  $\Delta TLI$  equal or inferior to 0.010,  $\Delta RMSEA$  equal or inferior to 0.015). It is likely that conclusions would have been very similar to the two aforementioned studies if the focus of the invariance analysis had been on general goodness-of-fit indices. In addition, unlike those two studies, it should be mentioned that the present study was not conducted with only two samples (community, psychiatric), but rather with three (i.e., with the addition of private practice clients), which might explain the results, at least in part (e.g., the PID-5 might function slightly differently among private practice clients).

Furthermore, very few previous studies had compared the differences between available scoring procedures. Watters et al. (2019) recommended using the 15-facet scoring method for research purposes, since it generates very similar mean results to the 25-facet method. The present study provided further support for this conclusion, this time by addressing the issue from a factor analytic standpoint. Still, there might be some specific contexts where the use of the 25-facet method might be sensible because some theoretically/empirically important facets are not considered with the 15-facet method. Moreover, the ESEM model with the 15-facet method was excellent from the start, while it required adjustments with the 25-facet method (for the invariance analysis across samples). The result for the latter method is aligned with what was previously reported for the original PID-5 (Bach et al., 2018; Sorel et al., 2021). The factor structure was most robust (i.e., invariant) with the 15-facet method and required fewer adjustments at each

step, enabling more meaningful and reliable comparisons in research and clinical contexts. This result is unsurprising since the 15-facet method incorporates fewer facets, so fewer parameters had to be estimated. Pragmatic considerations would also call for an advantage for the 15-facet method, since researchers are unlikely to systematically use adjusted, partially invariant models (and even less so clinicians).

### **Private Practice Clients**

It was predicted that mean differences would be found between samples, which was mostly supported, at least at the domain level. By far, and as expected, outpatients had higher scores (i.e., more trait pathology) in comparison with the other two samples. The private practice sample seems to have scores that are more similar to the community sample than to the outpatients, which also brings support to the discriminating ability of the instrument. Clinical versus nonclinical sample structural differences were small, which would be consistent with what is generally observed among personality/psychopathology inventories, that is, normality and abnormality are generally represented on a single, common spectrum (Bach et al., 2018; O'Connor, 2002). On the contrary, at the mean level, the *position* of each sample was expected to differ on that spectrum, following a theoretical gradient of psychopathology (i.e., community < private practice clients < outpatients). The domains of Negative Affectivity, Disinhibition, and Detachment seem to be particularly important in differentiating the three samples (i.e., higher effect sizes were found). Negative Affectivity and Disinhibition showed the expected pattern of differences (i.e., community < private practice clients < outpatients), but not Detachment (for which

private practice clients < community < outpatients). This last result might have to be considered cautiously, since it might reflect a sampling bias pertaining to the location where the data was collected (some professionals were specialized in couple/marital difficulties and were treating clients who, e.g., might have some desire to work on their relational patterns; also, “severely” detached [e.g., schizoid] clients might be unlikely encountered in this clinic). To the best of our knowledge, this is the first study that has investigated the MI of the PID-5/PID-5-FBF among clients drawn from private practice. Until now, AMPD research has mostly assimilated “clinical” samples with psychiatric or correctional samples. Nevertheless, our group reiterates that more research is needed in that population (Gamache et al., 2022), especially considering that a substantial proportion of practitioners work with those clients. More research would also help to promote knowledge transfer. It has been shown that, when provided with empirically supported information, private practice clinicians are more likely to use it to guide their decision-making (Stewart & Chambless, 2007). Providing clinicians with evidence-based information pertaining to assessment tools (e.g., the PID-5), with a benevolent attitude (e.g., in a clinical workshop), might be a first step toward that direction.

### **AMPD-Based Diagnoses**

Of note, the two facets that make up the narcissistic AMPD-based diagnosis—Grandiosity and Attention-Seeking—showed very limited endorsement across all samples and poorly differentiated clinical and nonclinical samples (e.g.,  $\eta^2 = .01$  and  $\eta^2 = .02$ , respectively; see Table S7). More specifically, Grandiosity was not significantly different



between the community and outpatient samples, and Attention-Seeking was not significantly different between the private practice and outpatient samples. While the absence of full MI between samples precludes strong conclusions on this topic, this study would not be the first to report a low endorsement rate of those facets (e.g., Somma, Krueger, Markon, Borroni, et al., 2019). On the one hand, previous research reported that narcissistic individuals are usually not bothered by the examiner's perceptions and therefore do not tend to underreport (e.g., Sleep et al., 2017). On the other hand, more recent research has shown that self-reported dimensional measures of narcissism only moderately correlated with a clinician-administered diagnostic interview assessing narcissistic PD, showing the limits of the former for screening purposes (Baggio et al., 2022). These observations might suggest that: (a) those two facets are poorly captured by the PID-5 (e.g., items might be too "direct" or transparent); (b) these specific traits are more reluctantly acknowledged in general (e.g., eliciting more shame and prompting a defensive response pattern); (c) the grandiosity of narcissistic patients may be "deflated" or less apparent when they finally seek consultation; and/or (d) patients lacked insight (e.g., narcissistic PD outpatients, which were well represented in the sample, might unrealistically see themselves as modest and discreet). These potentially overlapping possibilities warrant further investigation. Nonetheless, these results call into question the use of the PID-5-FBF in making an AMPD-based narcissistic diagnosis.

### **Limitations, Future Directions, and Strengths**

First, the test-retest reliability of the PID-5-FBF, as well as its temporal MI, could not be assessed. It would be important to identify those properties for the PID-5-FBF, since they may have important clinical implications for repeated measurement (e.g., to assess true clinical change). Second, the sample constitution should also be taken into account, since (a) the community sample was not recruited through a probabilistic design, so it might not perfectly represent the general population (e.g., they might have been attracted to the study because they had some specific personality characteristics), and (b) very few ethnic and cultural information was available (even though it should be assumed that the majority of participants, among all samples, was White and had French as first language), which prevents from making strong inferences as to the appropriateness of the PID-5-FBF for patients from a minority cultural group. Future research should put more focus on ethnic, sexual diversity (e.g., nonbinary people), and cultural differences, since previous research has shown some important differences in this regard pertaining to the invariance of the PID-5; for instance, the PID-5 might not be recommended at this time for Black patients (as suggested by Bagby et al., 2022). Third, while data were provided for facet- and domain-level MI, it would be important to narrow the scope at the item level (e.g., using Item Response Theory, as proposed by Suzuki et al., 2019). This would allow ruling out or identifying potential biases in the response patterns between men and women and/or across different populations. Fourth, very few information pertaining to diagnoses and consultation motives were available for the private practice sample. This makes the exact constitution of the sample somewhat unclear. Future studies should document those

aspects more precisely as they have important implications for generalizability and comparability of findings. Finally, monomethod assessment is likely to lead to inflated coefficients with external criteria (e.g., Zimmermann et al., 2019), so future research should further document the convergent-divergent validity of the PID-5/PID-5-FBF using a multimethod design (e.g., with informant reports, interviews, etc.). Nevertheless, this initial validation has strong internal and external validity, since it studied the psychometric properties of the PID-5-FBF in many samples (including two clinical samples), which increases the generalizability of conclusions and reduces bias due to homogeneous sampling. In addition, this study provides much needed data pertaining to private practice clients.

### **Implications**

From a psychometric standpoint, the French version of the PID-5-FBF had generally good to excellent basic validity and reliability indices. Therefore, those properties seem to be generally similar to those obtained elsewhere (Maples et al., 2015), providing initial support for its use in research and clinical practice. However, the literature is not entirely clear as to what to do in the presence of partial invariance or noninvariance (Gregorich, 2006; Putnik & Bornstein, 2016). Indeed, in general, the magnitude of the difference is somewhat hard to estimate, as well as its practical implications (Putnik & Bornstein, 2016). According to some, latent means (not observed means) can be confidently compared when partial scalar measurement is reached (e.g., Gregorich, 2006). In the present case, the fact that latent and observed mean differences showed an identical pattern

might suggest that some cautious comparisons could be made, at least at the domain level. This would be a similar conclusion to what was reported for the original PID-5, that is, that clinical and nonclinical samples can be compared at the domain level (Bach et al., 2018). According to others, reporting that no direct between-group comparisons can be made (at least between some groups) is important in and of itself (Fischer & Karl, 2019). Finally, it has also been suggested that, since little is known pertaining to the real-world implications of departures from invariance, a “gateway” approach would be precipitated (i.e., a systematic rejection of noninvariant models). Instead, it is proposed to argue (when appropriate) why small deviations should not be seen as meaningful (Putnik & Bornstein, 2016). Since the departures reported in this study are rather small (pertaining to the invariance among samples), we would be inclined to adopt this latter point of view, at least until more research is available to quantify its “clinical significance.” If clinically significant, however, those differences might call for the establishment of different norms for each clinical population (e.g., norms for outpatients, inpatients, inmates, private practice clients).

### **Conclusion**

This study sought to investigate the psychometric properties of the PID-5-FBF among French-speaking populations. Indices of reliability and validity were generally good to excellent, providing initial support for its use in clinical and research settings. The instrument was fully invariant between sexes and partially invariant across samples. The 15-facet domain scoring procedure showed a notable advantage in both factor and MI

analyses. An important implication is that it supported the use of the instrument among diverse populations, including private practice clients, an understudied group.

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**Conflict of Interest:** All authors have no conflict of interest of any kind to disclose.

**Ethics approval:** The standards of the 1964 Declaration of Helsinki and its later amendments (or its equivalent) were respected during this study. The project was approved by three ethics committees: Université du Québec à Trois-Rivières, Université Laval, Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale [Integrated University Health and Social Services Center of the Capitale-Nationale] Sectoral Research Ethics Committee in Neurosciences and Mental Health.

**Consent to participate:** All participants granted consent to participate in this study, which had no impact on their access to services (in the case of clinical samples).

**Consent to publish:** All participants granted permission to use their data for research purposes and for publication, which had no impact on their access to services (in the case of clinical samples).

## References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. American Educational Research Association.
- American Psychiatric Association. (APA, 2013). *Diagnostic and statistical manual of mental disorders* (5<sup>e</sup> éd.). <https://doi.org/10.1176/appi.books.9780890425596>
- Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling, 16*(3), 397-438. <https://doi.org/10.1080/10705510903008204>
- Bach, B., Maples-Keller, J. L., Bo, S., & Simonsen, E. (2016). The alternative DSM-5 personality disorder traits criterion: A comparative examination of three self-report forms in a Danish population. *Personality Disorders: Theory, Research, and Treatment, 7*(2), 124-135. <https://doi.org/10.1037/per0000162>
- Bach, B., Sellbom, M., & Simonsen, E. (2018). Personality Inventory for DSM-5 (PID-5) in clinical versus nonclinical individuals: Generalizability of psychometric features. *Assessment, 25*(7), 815-825. <https://doi.org/10.1177/1073191117709070>
- Bagby, R. M., Keeley, J. W., Williams, C. C., Mortezaei, A., Ryder, A. G., & Sellbom, M. (2022). Evaluating the measurement invariance of the Personality Inventory for DSM-5 (PID-5) in Black Americans and White Americans. *Psychological Assessment, 34*(1), 82-90. <https://doi.org/10.1037/pas0001085>
- Baggio, S., Iglesias, K., Duarte, M., Nicastro, R., Hasler, R., Euler, S., Debbané, M., Starcevic, V., & Perroud, N. (2022). Validation of self-report measures of narcissism against a diagnostic interview. *PLoS One, 17*(4), Article e0266540. <https://doi.org/10.1371/journal.pone.0266540>
- Baylé, F. J., Bourdel, M. C., Caci, H., Gorwood, P., Chignon, J.-M., Adés, J., & Léo, H. (2000). Structure factorielle de la traduction française de l'échelle d'impulsivité de Barratt (BIS-10) [Factor structure of the French translation of the Barratt Impulsivity Scale (BIS-10)]. *Canadian Journal of Psychiatry/Revue canadienne de psychiatrie, 45*(2), 156-165. <https://doi.org/10.1177/070674370004500206>
- Bradley, S., Roberge, P., Service, J., Vasiliadis, H.-M., & Drapeau, M. (2019). Psychotherapy in the private sector: A survey of licensed psychologists and psychotherapists in Quebec. *Canadian Journal of Counselling and Psychotherapy, 53*(1), 13-38. <https://cjc-rcc.ucalgary.ca/article/view/61191>

- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). Guilford.
- Briggs, S. R., & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of Personality*, *54*(1), 106-148. <https://doi.org/10.1111/j.1467-6494.1986.tb00391.x>
- Browne, M. W. (2001). An overview of analytic rotation in exploratory factor analysis. *Multivariate Behavioral Research*, *36*(1), 111-150. [https://doi.org/10.1207/S15327906MBR3601\\_05](https://doi.org/10.1207/S15327906MBR3601_05)
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, *14*(3), 464-504. <https://doi.org/10.1080/10705510701301834>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233-255. [https://doi.org/10.1207/S15328007SEM0902\\_5](https://doi.org/10.1207/S15328007SEM0902_5)
- Chodos, H. (2017). *Options for improving access to counselling, psychotherapy and psychological services for mental health problems and illnesses* (report). Mental Health Commission of Canada. [https://www.mentalhealthcommission.ca/wp-content/uploads/drupal/2017-07/Options\\_for\\_improving\\_access\\_to\\_counselling\\_psychotherapy\\_and\\_psychological\\_services\\_eng.pdf](https://www.mentalhealthcommission.ca/wp-content/uploads/drupal/2017-07/Options_for_improving_access_to_counselling_psychotherapy_and_psychological_services_eng.pdf)
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, *7*(3), 309-319. <https://doi.org/10.1037/1040-3590.7.3.309>
- Clark, L. A., & Watson, D. (2022). The trait model of the DSM-5 alternative model of personality disorder (AMPD): A structural review. *Personality Disorders: Theory, Research, and Treatment*, *13*(4), 328-336. <https://doi.org/10.1037/per0000568>
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*. Psychology Press.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, *44*(1), 113-126. <https://doi.org/10.1037/0022-3514.44.1.113>



- Diguer, L., Turmel, V., Brin, J., Lapointe, T., Chrétien, S., Marcoux, L.-A., Mathieu, V., & Da Silva Luis, R. (2020). Traduction et validation en français du Pathological Narcissism Inventory [Translation and validation in French of the Pathological Narcissism Inventory]. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 52(2), 115-120. <https://doi.org/10.1037/cbs0000140>
- Fischer, R., & Karl, J. A. (2019). A primer to (cross-cultural) multi-group invariance testing possibilities in R. *Frontiers in Psychology*, 10, Article 1507. <https://doi.org/10.3389/fpsyg.2019.01507>
- Gamache, D., Leclerc, P., Payant, M., Mayrand, K., Nolin, M. C., Marcoux, L. A., Sabourin, S., Tremblay, M., & Savard, C. (2022). Preliminary steps toward extracting the specific Alternative Model for Personality Disorders diagnoses from Criteria A and B self-reports. *Journal of Personality Disorders*, 36(4), 476-488. [https://doi.org/10.1521/pedi\\_2012\\_35\\_541](https://doi.org/10.1521/pedi_2012_35_541)
- Gamache, D., Savard, C., Leclerc, P., & Côté, A. (2019). Introducing a short self-report for the assessment of DSM-5 Level of Personality Functioning for personality disorders: The Self and Interpersonal Functioning Scale. *Personality Disorders: Theory, Research, and Treatment*, 10(5), 438-447. <https://doi.org/10.1037/per0000335>
- Gamache, D., Savard, C., Leclerc, P., Payant, M., Berthelot, N., Côté, A., Faucher, J., Lampron, M., Lemieux, R., Mayrand, K., Nolin, M. C., & Tremblay, M. (2021). A proposed classification of ICD-11 severity degrees of personality pathology using the Self and Interpersonal Functioning Scale. *Frontiers in Psychiatry*, 12, Article 628057. <https://doi.org/10.3389/fpsyg.2021.628057>
- Gilet, A.-L., Mella, N., Studer, J., Grünh, D., & Labouvie-Vief, G. (2013). Assessing dispositional empathy in adults: A French validation of the Interpersonal Reactivity Index (IRI). *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 45(1), 42-48. <https://doi.org/10.1037/a0030425>
- Gomez, R., Watson, S., Brown, T., & Stavropoulos, V. (2022). Personality inventory for DSM-5-Brief Form (PID-5-BF): Measurement invariance across men and women. *Personality Disorders: Theory, Research, and Treatment*. Advance online publication. <https://doi.org/10.1037/per0000569>
- Gregorich S. E. (2006). Do self-report instruments allow meaningful comparisons across diverse population groups? Testing measurement invariance using the confirmatory factor analysis framework. *Medical Care*, 44(11 Suppl 3), S78-S94. <https://doi.org/10.1097/01.mlr.0000245454.12228.8f>

- Hamp, A., Stamm, K., Lin, L., & Christidis, P. (2016). *2015 APA survey of psychology health service providers*. Center for Workforce Studies, American Psychological Association. <https://www.apa.org/workforce/publications/15-health-service-providers>
- Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and Social Psychology Review, 14*(3), 332-346. <https://doi.org/10.1177/1088868310361240>
- Hopwood, C. J., Kotov, R., Krueger, R. F., Watson, D., Widiger, T. A., Althoff, R. R., Ansell, E. B., Bach, B., Bagby, R. M., Blais, M. A., Bornovalova, M. A., Chmielewski, M., Cicero, D. C., Conway, C., De Clercq, B., De Fruyt, F., Docherty, A. R., Eaton, N. R., Edens, J. F., ... Zimmermann, J. (2018). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health, 12*(1), 82-86. <https://doi.org/10.1002/pmh.1408>
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Ilfeld, F. W. Jr. (1976). Further validation of a psychiatric symptom index in a normal population. *Psychological Reports, 39*(3, Pt 2), 1215-1228. <https://doi.org/10.2466/pr0.1976.39.3f.1215>
- Jane, J. S., Oltmanns, T. F., South, S. C., & Turkheimer, E. (2007). Gender bias in diagnostic criteria for personality disorders: An item response theory analysis. *Journal of Abnormal Psychology, 116*(1), 166-175. <https://doi.org/10.1037/0021-843X.116.1.166>
- Kerber, A., Schultze, M., Müller, S., Rühling, R. M., Wright, A. G. C., Spitzer, C., Krueger, R. F., Knaevelsrud, C., & Zimmermann, J. (2022). Development of a short and ICD-11 compatible measure for DSM-5 maladaptive personality traits using ant colony optimization algorithms. *Assessment, 29*(3), 467-487. <https://doi.org/10.1177/1073191120971848>
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine, 42*(9), 1879-1890. <https://doi.org/10.1017/S0033291711002674>
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 Brief Form (PID-5-BF)* [Psychometric test]. [https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA\\_DSM\\_5\\_The-Personality-Inventory-For-DSM-5-Brief-Form-Adult.pdf](https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM_5_The-Personality-Inventory-For-DSM-5-Brief-Form-Adult.pdf)

- Lafontaine, M.-F., Brassard, A., Lussier, Y., Valois, P., Shaver, P. R., & Johnson, S. M. (2016). Selecting the best items for a short-form of the Experiences in Close Relationships questionnaire. *European Journal of Psychological Assessment, 32*(2), 140-154. <https://doi.org/10.1027/1015-5759/a000243>
- Maples, J. L., Carter, N. T., Few, L. R., Crego, C., Gore, W. L., Samuel, D. B., Williamson, R. L., Lynam, D. R., Widiger, T. A., Markon, K. E., Krueger, R. F., & Miller, J. D. (2015). Testing whether the DSM-5 personality disorder trait model can be measured with a reduced set of items: An item response theory investigation of the Personality Inventory for DSM-5. *Psychological Assessment, 27*(4), 1195-1210. <https://doi.org/10.1037/pas0000120>
- Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology, 10*(1), 85-110. <https://doi.org/10.1146/annurev-clinpsy-032813-153700>
- Newsom, J. T. (2015). *Longitudinal structural equation modeling*. Routledge.
- Nunnally, J. C. (1978). *Psychometric theory*. Tata McGraw-Hill Education.
- O'Connor, B. P. (2002). The search for dimensional structure differences between normality and abnormality: A statistical review of published data on personality and psychopathology. *Journal of Personality and Social Psychology, 83*(4), 962-982. <https://doi.org/10.1037/0022-3514.83.4.962>
- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology, 51*(6), 768-774. [https://doi.org/10.1002/1097-4679\(199511\)51:6<768::AID-JCLP2270510607>3.0.CO;2-1](https://doi.org/10.1002/1097-4679(199511)51:6<768::AID-JCLP2270510607>3.0.CO;2-1)
- Préville, M., Boyer, R., Potvin, L., Perreault, C., & Légaré, G. (1992). *La détresse psychologique : détermination de la fiabilité et de la validité de la mesure utilisée dans l'enquête Santé Québec 87* [Psychological distress: Determining the reliability and validity of the measure used in the Santé Québec survey 87]. Ministère de la Santé et des services sociaux du Québec. <http://www.santecom.qc.ca/Bibliothequevirtuelle/santecom/35567000006905.pdf>
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review, 41*(1), 71-90. <https://doi.org/10.1016/j.dr.2016.06.004>

- Roskam, I., Galdiolo, S., Hansenne, M., Massoudi, K., Rossier, J., Gicquel, L., & Rolland, J.-P. (2015). The psychometric properties of the French version of the Personality Inventory for DSM-5. *PLoS One*, *10*, Article e0133413. <https://doi.org/10.1371/journal.pone.0133413>
- Samuel, D. B., South, S. C., & Griffin, S. A. (2015). Factorial invariance of the Five-Factor Model rating form across gender. *Assessment*, *22*(1), 65-75. <https://doi.org/10.1177/1073191114536772>
- Schoenleber, M., Roche, M. J., Wetzel, E., Pincus, A. L., & Roberts, B. W. (2015). Development of a brief version of the Pathological Narcissism Inventory. *Psychological Assessment*, *27*(4), 1520-1526. <https://doi.org/10.1037/pas0000158>
- Sellbom, M., Graham, J. R., & Schenk, P. W. (2006). Incremental validity of the MMPI-2 Restructured Clinical (RC) scales in a private practice sample. *Journal of Personality Assessment*, *86*(2), 196-205. [https://doi.org/10.1207/s15327752jpa8602\\_09](https://doi.org/10.1207/s15327752jpa8602_09)
- Sharma, S., Durvasula, S., & Ployhart, R. E. (2011). The analysis of mean differences using mean and covariance structure analysis: Effect size estimation and error rates. *Organizational Research Methods*, *15*(1), 75-102. <https://doi.org/10.1177/1094428111403154>
- Sleep, C. E., Sellbom, M., Campbell, W. K., & Miller, J. D. (2017). Narcissism and response validity: Do individuals with narcissistic features underreport psychopathology? *Psychological Assessment*, *29*(8), 1059-1064. <https://doi.org/10.1037/pas0000413>
- Somma, A., Krueger, R. F., Markon, K. E., Borroni, S., & Fossati, A. (2019). Item response theory analyses, factor structure, and external correlates of the Italian translation of the Personality Inventory for DSM-5 Short Form in community-dwelling adults and clinical adults. *Assessment*, *26*(5), 839-852. <https://doi.org/10.1177/1073191118781006>
- Somma, A., Krueger, R. F., Markon, K. E., & Fossati, A. (2019). The replicability of the personality inventory for DSM-5 domain scale factor structure in U.S. and non-U.S. samples: A quantitative review of the published literature. *Psychological Assessment*, *31*(7), 861-877. <https://doi.org/10.1037/pas0000711>
- Sorrel, M. A., García, L. F., Aluja, A., Rolland, J.-P., Rossier, J., Roskam, I., & Abad, F. J. (2021). Cross-cultural measurement invariance in the Personality Inventory for DSM-5. *Psychiatry Research*, *304*, Article 114134. <https://doi.org/10.1016/j.psychres.2021.114134>

- Stewart, R. E., & Chambless, D. L. (2007). Does psychotherapy research inform treatment decisions in private practice? *Journal of Clinical Psychology, 63*(3), 267-281. <https://doi.org/10.1002/jclp.20347>
- Suzuki, T., South, S. C., Samuel, D. B., Wright, A. G. C., Yalch, M. M., Hopwood, C. J., & Thomas, K. M. (2019). Measurement invariance of the DSM-5 Section III pathological personality trait model across sex. *Personality Disorders: Theory, Research, and Treatment, 10*(2), 114-122. <https://doi.org/10.1037/per0000291>
- Ten Berge, J. M. F., & Sočan, G. (2004). The greatest lower bound to the reliability of a test and the hypothesis of unidimensionality. *Psychometrika, 69*(4), 613-625. <https://doi.org/10.1007/BF02289858>
- Watters, C. A., & Bagby, R. M. (2018). A meta-analysis of the five-factor internal structure of the Personality Inventory for DSM-5. *Psychological Assessment, 30*(9), 1255-1260. <https://doi.org/10.1037/pas0000605>
- Watters, C. A., Sellbom, M., & Bagby, R. M. (2019). Comparing two domain scoring methods for the Personality Inventory for DSM-5. *Psychological Assessment, 31*(9), 1125-1134. <https://doi.org/10.1037/pas0000739>
- Widiger, T. A., & Crego, C. (2019). HiTOP thought disorder, DSM-5 psychoticism, and Five-Factor Model openness. *Journal of Research in Personality, 80*(1), 72-77. <https://doi.org/10.1016/j.jrp.2019.04.008>
- Zimmermann, J., Kerber, A., Rek, K., Hopwood, C., & Krueger, R. F. (2019). A brief but comprehensive review of research on the Alternative DSM-5 Model for Personality Disorders. *Current Psychiatry Reports, 21*(9), Article 92. <https://doi.org/10.1007/s11920-019-1079-z>

**Appendix A**  
Supplemental Materials

*Note.* For the whole document, domains were coded using the 15-facet scoring procedure (i.e., American Psychiatric Association's (2013) official three facets per domain).

**Table S1***Sociodemographic Information—All samples (N = 1358)*

Variables		Community (n = 526)	Private Practice (n = 544)	Outpatients with PD (n = 288)
Age	<i>M</i>	35.16	34.01	33.62
	<i>SD</i>	13.91	9.69	10.58
	Range	18–75	16–67	18–69
Sex	Female	262 (49.8%)	348 (64.0%)	177 (61.5%)
	Male	264 (50.2%)	196 (36.0%)	111 (38.5%)
Mother tongue	French	507 (96.4%)	–	–
	English	5 (1.0%)	–	–
	Other	13 (2.5%)	–	–
	N/A	1 (0.2%)	–	–
In a relationship or married	Yes	327 (62.2%)	387 (71.1%)	105 (36.5%)
	No	194 (36.9%)	157 (28.9%)	183 (63.5%)
	N/A	5 (1.0%)	0	0
Active (part or full-time work, school)	Yes	443 (84.2%)	485 (89.2%)	137 (47.6%)
	No	81 (15.4%)	59 (10.9%)	151 (52.4%)
	N/A	2 (0.4%)	0	0
Education (highest level completed)	High school not completed	6 (1.1%)	10 (1.8%)	45 (15.6%)
	High school completed	48 (9.1%)	31 (5.7%)	63 (21.9%)
	Technical or pre-university	207 (39.4%)	176 (32.4%)	126 (43.8%)
	University degree	265 (50.4%)	327 (60.1%)	54 (18.8%)

*Note.* N/A = not available.

**Table S2**

*PID-5-FBF Inter-Domain Zero-Order Bivariate Pearson Correlation Coefficients—All samples (N = 1358)*

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Psychoticism
Negative Affectivity					
Detachment	.44				
Antagonism	.26	.29			
Disinhibition	<b>.61</b>	.46	.43		
Psychoticism	.44	.49	.44	<b>.53</b>	

*Note.* Coefficients of  $\geq .50$  are in **bold**. PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult.



**Table S3**

*PID-5-FBF Inter-Facet Zero-Order Bivariate Pearson Correlation Coefficients—All samples (N = 1358)*

	Anhedonia	Anxiousness	Attention-Seeking	Callousness	Cog. And Perc. Dys	Deceitfulness	Depressivity	Distractibility	Eccentricity	Emotional Lability	Grandiosity	Hostility	Impulsivity	Intimacy Avoidance	Irresponsibility	Manipulativeness	Perseveration	Restricted Affectivity	Rigid Perfectionism	Risk Taking	Separation Insecurity	Submissiveness	Suspiciousness	Unusual B. and Exp.	
Anxiousness	.48																								
Attention-Seeking	.10	.20																							
Callousness	.38	.12	.18																						
Cog. And Perc. Dys.	.35	.30	.17	.26																					
Deceitfulness	.33	.24	.42	<b>.50</b>	.30																				
Depressivity	<b>.81</b>	<b>.51</b>	.12	.36	.41	.32																			
Distractibility	.42	.48	.24	.19	.30	.26	.43																		
Eccentricity	.45	.33	.20	.38	.49	.39	.49	.39																	
Emotional Lability	.49	<b>.62</b>	.26	.14	.39	.25	<b>.55</b>	<b>.53</b>	.41																
Grandiosity	.21	.14	.38	.43	.24	.45	.18	.10	.30	.11															
Hostility	<b>.51</b>	.46	.23	.37	.32	.34	<b>.51</b>	.42	.38	<b>.59</b>	.23														
Impulsivity	.38	.35	.37	.36	.34	.45	.43	.47	.40	<b>.52</b>	.20	<b>.52</b>													
Intimacy Avoidance	.48	.24	-.01	.32	.22	.18	.45	.25	.31	.23	.12	.25	.21												
Irresponsibility	.42	.31	.31	.40	.39	<b>.54</b>	.45	.49	.43	.39	.26	.39	<b>.55</b>	.25											
Manipulativeness	.23	.17	.45	.41	.25	<b>.71</b>	.22	.18	.32	.17	<b>.50</b>	.27	.34	.10	.41										
Perseveration	<b>.53</b>	<b>.54</b>	.27	.25	.38	.36	<b>.52</b>	.49	.47	<b>.56</b>	.20	.49	<b>.50</b>	.30	.49	.24									
Restricted Affectivity	.37	.00	-.01	.46	.15	.28	.29	.08	.29	-.10	.28	.17	.13	.30	.24	.23	.16								
Rigid Perfectionism	.39	.46	.19	.17	.26	.19	.38	.27	.29	.45	.21	.41	.25	.19	.19	.20	.42	.15							
Risk Taking	.26	.10	.32	.38	.37	.41	.32	.27	.44	.30	.26	.31	<b>.51</b>	.20	.45	.42	.29	.23	.20						
Separation Insecurity	.34	.47	.34	.08	.24	.27	.40	.37	.23	<b>.51</b>	.11	.32	.39	.06	.29	.18	.48	-.01	.34	.19					
Submissiveness	.33	.39	.20	.06	.20	.22	.32	.31	.19	.35	.08	.20	.24	.12	.29	.16	.40	.05	.29	.06	.38				
Suspiciousness	<b>.57</b>	<b>.52</b>	.18	.43	.43	.41	<b>.63</b>	.38	<b>.52</b>	.49	.30	<b>.54</b>	.43	.39	.43	.31	<b>.51</b>	.26	.43	.36	.36	.23			
Unusual B. and Exp.	.34	.29	.20	.30	<b>.69</b>	.33	.37	.28	<b>.55</b>	.36	.28	.31	.36	.24	.38	.32	.33	.18	.23	.45	.21	.12	.46		
Withdrawal	<b>.63</b>	.34	-.06	.43	.30	.27	<b>.57</b>	.27	.44	.35	.22	.46	.28	<b>.52</b>	.35	.18	.37	.44	.33	.23	.10	.19	<b>.54</b>	.32	

Note. Coefficients of  $\geq .50$  are in **bold**. PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. And Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences.

**Table S4**

*Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Community Sample (N = 526)*

Variables	Women (n = 262)					Men (n = 264)					Difference		
	M	BCa 95% CI	SD	Min	Max	M	BCa 95% CI	SD	Min	Max	BCa diff.	p <sup>a</sup>	d <sup>b</sup>
<b>PID-5-FBF domains</b>													
Negative Affectivity	1.15	[1.08, 1.23]	0.65	0.00	2.92	0.88	[0.81, 0.96]	0.62	0.00	2.75	<b>.27</b>	.001	.42
Detachment	0.61	[0.54, 0.67]	0.51	0.00	2.33	0.90	[0.82, 0.97]	0.68	0.00	3.00	<b>-.29</b>	.001	-.48
Antagonism	0.40	[0.35, 0.44]	0.42	0.00	2.25	0.65	[0.59, 0.71]	0.53	0.00	2.58	<b>-.25</b>	.001	-.53
Disinhibition	0.77	[0.71, 0.83]	0.58	0.00	2.67	0.85	[0.79, 0.93]	0.57	0.00	2.50	-.08	.088	-.15
Psychoticism	0.31	[0.26, 0.36]	0.44	0.00	2.58	0.51	[0.45, 0.58]	0.52	0.00	2.50	<b>-.20</b>	.001	-.41
<b>PID-5-FBF facets</b>													
Anhedonia	0.62	[0.53, 0.70]	0.66	0.00	2.75	0.93	[0.82, 1.03]	0.87	0.00	3.00	<b>-.31</b>	.001	-.40
Anxiousness	1.52	[1.41, 1.63]	0.86	0.00	3.00	1.28	[1.17, 1.38]	0.89	0.00	3.00	<b>.24</b>	.002	.28
Attention-Seeking	0.97	[0.88, 1.06]	0.77	0.00	3.00	0.95	[0.85, 1.03]	0.78	0.00	3.00	.02	.748	.03
Callousness	0.16	[0.13, 0.20]	0.31	0.00	1.75	0.46	[0.38, 0.55]	0.64	0.00	3.00	<b>-.30</b>	.001	-.61
Cog. and Perc. Dys.	0.16	[0.11, 0.20]	0.35	0.00	2.25	0.21	[0.17, 0.26]	0.42	0.00	2.25	-.06	.076	-.15
Deceitfulness	0.36	[0.30, 0.42]	0.51	0.00	2.50	0.58	[0.51, 0.65]	0.64	0.00	3.00	<b>-.22</b>	.001	-.38
Depressivity	0.41	[0.34, 0.49]	0.63	0.00	3.00	0.71	[0.62, 0.79]	0.78	0.00	3.00	<b>-.30</b>	.001	-.42
Distractibility	1.16	[1.06, 1.27]	0.89	0.00	3.00	1.12	[1.03, 1.21]	0.85	0.00	3.00	.04	.565	.05
Eccentricity	0.53	[0.44, 0.61]	0.71	0.00	3.00	0.94	[0.84, 1.04]	0.86	0.00	3.00	<b>-.41</b>	.001	-.52
Emotional Lability	1.06	[0.97, 1.14]	0.74	0.00	3.00	0.76	[0.67, 0.83]	0.71	0.00	3.00	<b>.30</b>	.001	.42
Grandiosity	0.27	[0.22, 0.32]	0.42	0.00	2.00	0.54	[0.47, 0.61]	0.60	0.00	3.00	<b>-.27</b>	.001	-.53
Hostility	0.78	[0.71, 0.86]	0.66	0.00	3.00	0.83	[0.75, 0.91]	0.69	0.00	3.00	-.05	.440	-.07
Impulsivity	0.69	[0.61, 0.77]	0.70	0.00	3.00	0.76	[0.68, 0.83]	0.69	0.00	3.00	-.07	.224	-.11
Intimacy Avoidance	0.53	[0.45, 0.60]	0.62	0.00	3.00	0.73	[0.64, 0.83]	0.81	0.00	3.00	<b>-.21</b>	.002	-.29
Irresponsibility	0.46	[0.41, 0.53]	0.51	0.00	2.75	0.68	[0.61, 0.75]	0.61	0.00	2.75	<b>-.22</b>	.002	-.39
Manipulativeness	0.56	[0.49, 0.64]	0.59	0.00	2.50	0.83	[0.75, 0.90]	0.68	0.00	3.00	<b>-.27</b>	.001	-.42
Perseveration	0.82	[0.74, 0.89]	0.64	0.00	3.00	0.90	[0.82, 0.98]	0.68	0.00	3.00	-.09	.128	-.13
Restricted Affectivity	0.67	[0.60, 0.75]	0.66	0.00	2.75	1.19	[1.10, 1.28]	0.75	0.00	3.00	<b>-.51</b>	.001	-.72

**Table S4***Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Community Sample (N = 526) (continued)*

Variables	Women (n = 262)					Men (n = 264)					Difference		
	<i>M</i>	BCa 95% CI	<i>SD</i>	Min	Max	<i>M</i>	BCa 95% CI	<i>SD</i>	Min	Max	BCa diff.	<i>p</i> <sup>a</sup>	<i>d</i> <sup>b</sup>
PID-5-FBF facets (continued)													
Rigid Perfectionism	0.97	[0.89, 1.06]	0.75	0.00	2.75	0.97	[0.89, 1.06]	0.78	0.00	3.00	.00	.966	.00
Risk Taking	0.47	[0.41, 0.54]	0.57	0.00	2.75	0.68	[0.61, 0.75]	0.65	0.00	3.00	<b>-.21</b>	.001	-.34
Separation Insecurity	0.88	[0.78, 0.97]	0.78	0.00	3.00	0.62	[0.55, 0.68]	0.67	0.00	3.00	<b>.26</b>	.001	.36
Submissiveness	0.98	[0.89, 1.06]	0.66	0.00	2.75	0.97	[0.90, 1.04]	0.66	0.00	2.75	.01	.902	.01
Suspiciousness	0.54	[0.47, 0.60]	0.60	0.00	2.75	0.66	[0.59, 0.74]	0.64	0.00	3.00	<b>-.13</b>	.013	-.21
Unusual B. and Exp.	0.25	[0.20, 0.30]	0.44	0.00	2.50	0.37	[0.30, 0.43]	0.55	0.00	2.50	<b>-.12</b>	.005	-.24
Withdrawal	0.68	[0.60, 0.76]	0.64	0.00	3.00	1.03	[0.93, 1.13]	0.76	0.00	3.00	<b>-.35</b>	.001	-.50

*Note.* Significant differences are **bolded**. For all variables, higher scores denote higher pathology. Variance corrections were applied for all comparisons. For all variables, higher scores mean higher pathology. PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences; BCa 95% CI = Bootstrapped bias-corrected and accelerated 95% confidence intervals (based on 1000 samples); BCa diff. = difference between the bootstrapped subsamples.

<sup>a</sup> The *p*-values represent the significance level of the difference between the bootstrapped samples.

<sup>b</sup> A positive *d* means that women have a higher score, while a negative *d* means that men have a higher score.

**Table S5**

*Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Private Practice Sample (N = 544)*

Variables	Women (n = 348)					Men (n = 196)					Difference		
	M	BCa 95% CI	SD	Min	Max	M	BCa 95% CI	SD	Min	Max	BCa diff.	p <sup>a</sup>	d <sup>b</sup>
PID-5-FBF domains													
Negative Affectivity	1.36	[1.30, 1.43]	0.61	0.00	2.92	1.06	[0.98, 1.15]	0.60	0.00	2.83	<b>.30</b>	< .001	.50
Detachment	0.65	[0.59, 0.69]	0.49	0.00	2.58	0.68	[0.60, 0.77]	0.57	0.00	2.67	-.04	.437	-.07
Antagonism	0.42	[0.38, 0.46]	0.40	0.00	1.92	0.55	[0.49, 0.61]	0.46	0.00	2.17	<b>-.14</b>	.002	-.32
Disinhibition	0.95	[0.89, 1.02]	0.59	0.00	2.83	0.89	[0.81, 0.98]	0.60	0.00	2.50	.06	.270	.10
Psychoticism	0.35	[0.31, 0.39]	0.41	0.00	2.08	0.43	[0.37, 0.49]	0.44	0.00	2.00	-.07	.050	-.18
PID-5-FBF facets													
Anhedonia	0.76	[0.68, 0.83]	0.70	0.00	3.00	0.83	[0.72, 0.94]	0.75	0.00	3.00	-.07	.306	-.10
Anxiousness	1.63	[1.54, 1.72]	0.82	0.00	3.00	1.25	[1.14, 1.36]	0.79	0.00	3.00	<b>.38</b>	< .001	.48
Attention-Seeking	1.08	[0.99, 1.16]	0.80	0.00	3.00	1.23	[1.12, 1.35]	0.80	0.00	3.00	<b>-.15</b>	.047	-.19
Callousness	0.19	[0.15, 0.23]	0.39	0.00	2.50	0.33	[0.27, 0.40]	0.48	0.00	3.00	<b>-.14</b>	.002	-.34
Cog. and Perc. Dys.	0.21	[0.17, 0.25]	0.35	0.00	2.25	0.24	[0.19, 0.30]	0.41	0.00	2.00	-.03	.387	-.08
Deceitfulness	0.36	[0.32, 0.41]	0.46	0.00	2.00	0.47	[0.40, 0.53]	0.50	0.00	2.25	<b>-.10</b>	.026	-.22
Depressivity	0.51	[0.45, 0.57]	0.65	0.00	2.75	0.50	[0.42, 0.58]	0.60	0.00	2.75	.01	.850	.02
Distractibility	1.45	[1.36, 1.54]	0.89	0.00	3.00	1.25	[1.13, 1.37]	0.90	0.00	3.00	<b>.20</b>	.010	.23
Eccentricity	0.56	[0.49, 0.63]	0.70	0.00	3.00	0.72	[0.63, 0.82]	0.73	0.00	2.75	<b>-.17</b>	.010	-.23
Emotional Lability	1.34	[1.26, 1.41]	0.75	0.00	3.00	0.91	[0.82, 1.00]	0.70	0.00	3.00	<b>.43</b>	< .001	.58
Grandiosity	0.30	[0.26, 0.35]	0.42	0.00	2.00	0.45	[0.38, 0.52]	0.51	0.00	2.25	<b>-.15</b>	< .001	-.33
Hostility	0.91	[0.84, 1.00]	0.69	0.00	3.00	0.89	[0.79, 0.99]	0.71	0.00	3.00	.03	.686	.04
Impulsivity	0.85	[0.78, 0.93]	0.77	0.00	3.00	0.80	[0.70, 0.90]	0.73	0.00	3.00	.05	.406	.07
Intimacy Avoidance	0.49	[0.43, 0.56]	0.56	0.00	3.00	0.46	[0.38, 0.54]	0.60	0.00	3.00	.03	.494	.06
Irresponsibility	0.56	[0.51, 0.61]	0.53	0.00	2.50	0.64	[0.56, 0.72]	0.57	0.00	2.50	-.08	.117	-.15
Manipulativeness	0.59	[0.52, 0.65]	0.57	0.00	2.50	0.74	[0.66, 0.83]	0.62	0.00	2.50	<b>-.15</b>	.004	-.26
Perseveration	0.99	[0.92, 1.06]	0.62	0.00	3.00	0.96	[0.87, 1.03]	0.62	0.00	2.50	.03	.532	.06

**Table S5**

*Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Private Practice Sample (N = 544)*  
(continued)

Variables	Women (n = 348)					Men (n = 196)					Difference		
	<i>M</i>	BCa95%CI	<i>SD</i>	Min	Max	<i>M</i>	BCa95%CI	<i>SD</i>	Min	Max	BCadiff.	<i>p</i> <sup>a</sup>	<i>d</i> <sup>b</sup>
PID-5-FBF facets (continued)													
Restricted Affectivity	0.65	[0.58, 0.72]	0.62	0.00	2.75	1.12	[1.01, 1.22]	0.73	0.00	3.00	<b>-.47</b>	< .001	-.70
Rigid Perfectionism	1.17	[1.08, 1.24]	0.77	0.00	3.00	1.10	[1.00, 1.19]	0.73	0.00	2.75	.07	.277	.09
Risk Taking	0.63	[0.56, 0.69]	0.61	0.00	2.75	0.85	[0.75, 0.95]	0.70	0.00	3.00	<b>-.22</b>	< .001	-.34
Separation Insecurity	1.12	[1.04, 1.20]	0.75	0.00	3.00	1.02	[0.93, 1.11]	0.70	0.00	3.00	.10	.111	.14
Submissiveness	1.32	[1.24, 1.40]	0.74	0.00	3.00	1.15	[1.05, 1.23]	0.63	0.00	2.75	<b>.17</b>	.005	.24
Suspiciousness	0.50	[0.44, 0.56]	0.50	0.00	2.25	0.49	[0.42, 0.55]	0.50	0.00	2.00	.01	.764	.03
Unusual B. and Exp.	0.29	[0.24, 0.33]	0.45	0.00	2.33	0.31	[0.25, 0.37]	0.46	0.00	1.75	-.03	.522	-.06
Withdrawal	0.69	[0.62, 0.76]	0.63	0.00	2.75	0.77	[0.68, 0.86]	0.67	0.00	3.00	-.08	.175	-.12

*Note.* Significant differences are **bolded**. For all variables, higher scores denote higher pathology. Variance corrections were applied for all comparisons. For all variables, higher scores mean higher pathology. PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences; BCa 95% CI = Bootstrapped bias-corrected and accelerated 95% confidence intervals (based on 1000 samples); BCa diff. = difference between the bootstrapped subsamples.

<sup>a</sup> The *p*-values represent the significance level of the difference between the bootstrapped samples.

<sup>b</sup> A positive *d* means that women have a higher score, while a negative *d* means that men have a higher score.

**Table S6**

*Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Outpatients with Personality Disorder  
Sample (N = 288)*

Variables	Females (n = 177)					Males (n = 111)					Difference		
	<i>M</i>	BCa 95% CI	<i>SD</i>	Min	Max	<i>M</i>	BCa 95% CI	<i>SD</i>	Min	Max	BCa diff.	<i>p</i> <sup>a</sup>	<i>d</i>
PID-5-FBF domains													
Neg. Affectivity	1.96	[1.87; 2.05]	0.60	0.17	3.00	1.75	[1.63; 1.87]	0.62	0.00	2.83	<b>.22</b>	.003	.36
Detachment	1.37	[1.29; 1.46]	0.62	0.00	3.00	1.54	[1.42; 1.65]	0.65	0.08	2.92	<b>-.16</b>	.032	-.26
Antagonism	0.60	[0.52; 0.68]	0.59	0.00	2.83	0.77	[0.64; 0.89]	0.63	0.00	2.67	<b>-.17</b>	.038	-.28
Disinhibition	1.51	[1.42; 1.59]	0.60	0.00	2.83	1.46	[1.34; 1.59]	0.64	0.00	3.00	.05	.551	.07
Psychoticism	0.79	[0.71; 0.86]	0.58	0.00	2.67	0.96	[0.84; 1.08]	0.63	0.00	2.58	<b>-.17</b>	.025	-.28
PID-5-FBF facets													
Anhedonia	1.74	[1.62; 1.86]	0.82	0.00	3.00	1.91	[1.77; 2.05]	0.76	0.00	3.00	-.17	.066	-.22
Anxiousness	2.23	[2.12; 2.34]	0.73	0.00	3.00	2.08	[1.91; 2.22]	0.84	0.00	3.00	.15	.111	.20
Attention-Seeking	1.26	[1.10; 1.40]	1.02	0.00	3.00	1.24	[1.08; 1.40]	0.86	0.00	3.00	.02	.875	.02
Callousness	0.48	[0.39; 0.58]	0.63	0.00	3.00	0.67	[0.54; 0.82]	0.74	0.00	3.00	<b>-.19</b>	.034	-.29
Cog. and Perc. Dys.	0.43	[0.35; 0.51]	0.57	0.00	2.75	0.55	[0.44; 0.67]	0.65	0.00	3.00	-.12	.094	-.20
Deceitfulness	0.65	[0.53; 0.76]	0.75	0.00	3.00	0.76	[0.63; 0.91]	0.78	0.00	3.00	-.12	.208	-.15
Depressivity	1.49	[1.37; 1.60]	0.84	0.00	3.00	1.59	[1.45; 1.74]	0.80	0.00	3.00	-.11	.265	-.13
Distractibility	1.99	[1.86; 2.13]	0.86	0.00	3.00	1.89	[1.72; 2.05]	0.87	0.00	3.00	.10	.349	.12
Eccentricity	1.27	[1.15; 1.39]	0.87	0.00	3.00	1.44	[1.26; 1.60]	0.87	0.00	3.00	-.17	.114	-.19
Emotional Lability	2.09	[1.99; 2.20]	0.72	0.00	3.00	1.71	[1.56; 1.87]	0.83	0.00	3.00	<b>.38</b>	.001	.49
Grandiosity	0.35	[0.27; 0.44]	0.58	0.00	3.00	0.64	[0.53; 0.75]	0.61	0.00	2.50	<b>-.29</b>	.001	-.49
Hostility	1.50	[1.39; 1.63]	0.79	0.00	3.00	1.38	[1.23; 1.53]	0.79	0.00	3.00	.12	.238	.15
Impulsivity	1.57	[1.45; 1.70]	0.85	0.00	3.00	1.39	[1.23; 1.55]	0.85	0.00	3.00	.18	.075	.21
Intimacy Avoidance	1.03	[0.90; 1.16]	0.88	0.00	3.00	1.16	[1.00; 1.33]	0.90	0.00	3.00	-.13	.209	-.14
Irresponsibility	0.95	[0.85; 1.07]	0.72	0.00	2.75	1.10	[0.95; 1.25]	0.76	0.00	3.00	-.14	.121	-.20
Manipulativeness	0.80	[0.69; 0.92]	0.79	0.00	3.00	0.91	[0.76; 1.05]	0.79	0.00	3.00	-.11	.279	-.13
Perseveration	1.54	[1.43; 1.66]	0.75	0.00	3.00	1.55	[1.42; 1.70]	0.75	0.00	3.00	-.02	.878	-.02

**Table S6**

*Between-Sex Observed Mean Comparisons for PID-5-FBF Domains and Facets—Outpatients with Personality Disorder  
Sample (N = 288) (continued)*

Variables	Females (n = 177)					Males (n = 111)					Difference		
	M	BCa 95% CI	SD	Min	Max	M	BCa 95% CI	SD	Min	Max	BCa diff.	p <sup>a</sup>	d
PID-5-FBF facets (continued)													
Restricted Affectivity	0.95	[0.84; 1.05]	0.76	0.00	3.00	1.24	[1.10; 1.38]	0.73	0.00	3.00	<b>-.29</b>	.001	-.39
Rigid Perfectionism	1.75	[1.62; 1.87]	0.83	0.00	3.00	1.40	[1.26; 1.55]	0.81	0.00	3.00	<b>.35</b>	.001	.42
Risk Taking	1.14	[1.01; 1.26]	0.87	0.00	3.00	1.35	[1.20; 1.52]	0.89	0.00	3.00	-.21	.052	-.24
Separation Insecurity	1.57	[1.43; 1.71]	0.92	0.00	3.00	1.44	[1.28; 1.60]	0.83	0.00	3.00	.12	.263	.14
Submissiveness	1.48	[1.36; 1.61]	0.81	0.00	3.00	1.25	[1.12; 1.39]	0.73	0.00	3.00	<b>.23</b>	.009	.30
Suspiciousness	1.21	[1.10; 1.32]	0.73	0.00	3.00	1.23	[1.08; 1.38]	0.78	0.00	3.00	-.02	.864	-.02
Unusual B. and Exp.	0.67	[0.57; 0.76]	0.67	0.00	2.75	0.88	[0.73; 1.03]	0.75	0.00	2.50	<b>-.21</b>	.021	-.30
Withdrawal	1.35	[1.24; 1.46]	0.75	0.00	3.00	1.53	[1.38; 1.68]	0.78	0.00	3.00	<b>-.18</b>	.048	-.24

*Note.* Significant differences are **bolded**. For all variables, higher scores denote higher pathology. Variance corrections were applied for all comparisons. For all variables, higher scores mean higher pathology. PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences; BCa 95% CI = Bootstrapped bias-corrected and accelerated 95% confidence intervals (based on 1000 samples); BCa diff. = difference between the bootstrapped subsamples.

<sup>a</sup>The *p*-values represent the significance level of the difference between the bootstrapped samples.

<sup>b</sup>A positive *d* means that women have a higher score, while a negative *d* means that men have a higher score.

**Table S7**

*Between-Sample Observed Mean Comparisons for PID-5-FBF Domains and Facets—All samples (N = 1358)*

Sample	Community (n = 526)			Private Practice (n = 544)			Outpatients with PD (n = 288)			Group differences <sup>a</sup>	
	M	BCa 95% CI	SD	M	BCa 95% CI	SD	M	BCa 95% CI	SD	η <sup>2</sup>	Post-hoc comparisons <sup>b</sup>
PID-5-FBF domains											
Negative Affectivity	1.02	[0.96, 1.07]	0.65	1.25	[1.20, 1.31]	0.62	1.88	[1.81, 1.96]	0.62	<b>.21</b>	C < P < O
Detachment	0.75	[0.70, 0.80]	0.62	0.66	[0.61, 0.70]	0.52	1.44	[1.37, 1.52]	0.63	<b>.21</b>	P < C < O
Antagonism	0.52	[0.48, 0.57]	0.49	0.47	[0.43, 0.50]	0.43	0.66	[0.59, 0.74]	0.61	.02	P < C < O
Disinhibition	0.81	[0.76, 0.86]	0.58	0.93	[0.88, 0.98]	0.59	1.49	[1.42, 1.57]	0.62	<b>.16</b>	C < P < O
Psychoticism	0.41	[0.37, 0.45]	0.49	0.38	[0.35, 0.41]	0.42	0.85	[0.79, 0.92]	0.60	.13	C, P < O
PID-5-FBF facets											
Anhedonia	0.77	[0.71, 0.84]	0.79	0.78	[0.72, 0.84]	0.72	1.81	[1.72, 1.89]	0.80	<b>.23</b>	C, P < O
Anxiousness	1.40	[1.32, 1.47]	0.88	1.49	[1.42, 1.56]	0.83	2.17	[2.08, 2.27]	0.78	.11	C, P < O
Attention-Seeking	0.96	[0.89, 1.02]	0.77	1.13	[1.06, 1.20]	0.80	1.25	[1.14, 1.36]	0.96	.02	C < O, P
Callousness	0.31	[0.27, 0.36]	0.52	0.24	[0.21, 0.28]	0.43	0.55	[0.49, 0.62]	0.68	.05	P < C < O
Cog. and Perc. Dys.	0.18	[0.15, 0.22]	0.39	0.22	[0.19, 0.25]	0.38	0.48	[0.41, 0.55]	0.60	.06	C, P < O
Deceitfulness	0.47	[0.42, 0.52]	0.59	0.40	[0.36, 0.44]	0.48	0.69	[0.61, 0.78]	0.76	.03	C, P < O
Depressivity	0.56	[0.50, 0.63]	0.72	0.50	[0.46, 0.56]	0.63	1.53	[1.43, 1.62]	0.83	<b>.25</b>	C, P < O
Distractibility	1.14	[1.06, 1.22]	0.87	1.38	[1.30, 1.45]	0.90	1.95	[1.86, 2.05]	0.86	.11	C < P < O
Eccentricity	0.73	[0.67, 0.81]	0.82	0.62	[0.56, 0.69]	0.71	1.33	[1.24, 1.43]	0.88	.11	P < C < O
Emotional Lability	0.91	[0.84, 0.97]	0.74	1.18	[1.12, 1.24]	0.76	1.95	[1.86, 2.03]	0.79	<b>.21</b>	C < P < O
Grandiosity	0.41	[0.36, 0.45]	0.54	0.35	[0.32, 0.39]	0.46	0.46	[0.40, 0.53]	0.61	.01	P < O
Hostility	0.81	[0.75, 0.87]	0.67	0.90	[0.85, 0.96]	0.69	1.45	[1.35, 1.55]	0.79	.11	C < P < O
Impulsivity	0.72	[0.66, 0.78]	0.69	0.83	[0.77, 0.89]	0.75	1.50	[1.41, 1.60]	0.85	<b>.14</b>	C < P < O
Intimacy Avoidance	0.63	[0.57, 0.70]	0.73	0.48	[0.43, 0.53]	0.57	1.08	[0.98, 1.19]	0.89	.09	P < C < O
Irresponsibility	0.57	[0.52, 0.63]	0.57	0.58	[0.54, 0.63]	0.54	1.01	[0.93, 1.10]	0.73	.08	C, P < O
Manipulativeness	0.69	[0.64, 0.75]	0.65	0.64	[0.59, 0.69]	0.59	0.84	[0.75, 0.92]	0.79	.01	C, P < O



**Table S7**

*Between-Sample Observed Mean Comparisons for PID-5-FBF Domains and Facets—All samples (N = 1358) (continued)*

Sample	Community (n = 526)			Private Practice (n = 544)			Outpatients with PD (n = 288)			Group differences <sup>a</sup>	
	<i>M</i>	BCa 95% CI	<i>SD</i>	<i>M</i>	BCa 95% CI	<i>SD</i>	<i>M</i>	BCa 95% CI	<i>SD</i>	$\eta^2$	Post-hoc comparisons <sup>b</sup>
PID-5-FBF facets (continued)	0.86	[0.80, 0.91]	0.66	0.98	[0.93, 1.03]	0.62	1.54	[1.46, 1.63]	0.75	.13	C < P < O
Perseveration											
Restricted	0.93	[0.87, 0.99]	0.75	0.82	[0.76, 0.88]	0.70	1.06	[0.98, 1.13]	0.76	.02	P < C < O
Affectivity											
Rigid Perfectionism	0.97	[0.91, 1.04]	0.77	1.14	[1.08, 1.21]	0.75	1.62	[1.52, 1.71]	0.84	.09	C < P < O
Risk Taking	0.58	[0.53, 0.63]	0.62	0.71	[0.65, 0.77]	0.65	1.22	[1.12, 1.32]	0.88	.11	C < P < O
Separation Insecurity	0.75	[0.68, 0.81]	0.74	1.09	[1.03, 1.15]	0.73	1.52	[1.42, 1.62]	0.89	.12	C < P < O
Submissiveness	0.98	[0.92, 1.03]	0.66	1.26	[1.19, 1.32]	0.71	1.39	[1.30, 1.49]	0.79	.05	C < P < O
Suspiciousness	0.60	[0.55, 0.65]	0.62	0.50	[0.46, 0.54]	0.50	1.21	[1.13, 1.30]	0.75	<b>.17</b>	P < C < O
Unusual B. and Exp.	0.31	[0.26, 0.35]	0.50	0.30	[0.26, 0.34]	0.46	0.75	[0.66, 0.83]	0.71	.10	C, P < O
Withdrawal	0.85	[0.79, 0.91]	0.72	0.72	[0.66, 0.77]	0.64	1.42	[1.33, 1.51]	0.76	.13	P < C < O

*Note.* Large effect sizes ( $\eta^2 \geq .14$ ) are in **bold**. For all variables, higher scores denote higher pathology. C = community sample; P = private practice sample; O = outpatients with personality disorder sample; Outpatients with PD = outpatients with personality disorder; PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences; BCa 95% CI = Bootstrapped bias-corrected and accelerated 95% confidence intervals (based on 1000 samples).

<sup>a</sup> Welch's *F* was used as robust omnibus test. All *F*s were significant at  $p < .001$ , except for Grandiosity and Manipulativeness, which were significant at  $p = .019$  and  $p = .001$ , respectively. For post-hoc comparisons, Tukey's HSD correction was applied to all 95% BCa CIs.

<sup>b</sup> For post-hoc comparisons, non-overlap of bootstrapped 95% BCa CIs was used as criterion to assess significance.

**Appendix B**  
PID-5-FBF Items in French and English

Item Number	French Item	English Item
1	Plein de gens cherchent à me nuire.	<i>Plenty of people are out to get me.</i>
2	Il me semble que j'agis de manière totalement impulsive.	<i>I feel like I act totally on impulse.</i>
3	Je change ce que je fais en fonction de ce que les autres veulent.	<i>I change what I do depending on what others want.</i>
4	En général, je fais ce que les autres pensent que je devrais faire.	<i>I usually do what others think I should do.</i>
5	D'habitude, je fais les choses impulsivement, sans réfléchir aux conséquences.	<i>I usually do things on impulse without thinking about what might happen as a result.</i>
6	Je sais que je ne devrais pas, mais je ne peux pas m'empêcher de prendre des décisions hâtives.	<i>Even though I know better, I can't stop making rash decisions.</i>
7	Cela ne me dérange vraiment pas si je fais souffrir les autres.	<i>I really don't care if I make other people suffer.</i>
8	Je fais toujours des choses sur un coup de tête.	<i>I always do things on the spur of the moment.</i>
9	Rien ne m'intéresse vraiment.	<i>Nothing seems to interest me very much.</i>
10	Des gens m'ont dit que je pense aux choses d'une façon vraiment étrange.	<i>People have told me that I think about things in a really strange way.</i>
11	Je ne profite presque jamais de la vie.	<i>I almost never enjoy life.</i>
12	Je me mets facilement en colère.	<i>I am easily angered.</i>
13	Quand il s'agit de faire des choses dangereuses, je n'ai pas de limite.	<i>I have no limits when it comes to doing dangerous things.</i>
14	En toute honnêteté, je suis tout simplement plus important que les autres.	<i>To be honest, I'm just more important than other people.</i>
15	C'est bizarre, mais parfois des objets ordinaires me paraissent avoir une forme différente de leur forme habituelle.	<i>It's weird, but sometimes ordinary objects seem to be a different shape than usual.</i>
16	Je fais un grand nombre de choses que les autres trouvent risquées.	<i>I do a lot of things that others consider risky.</i>
17	L'idée d'être seul(e) m'inquiète beaucoup.	<i>I worry a lot about being alone.</i>

Item Number	French Item	English Item
18	J'invente souvent des choses à mon sujet pour m'aider à obtenir ce que je veux.	<i>I often make up things about myself to help me get what I want.</i>
19	Je continue à aborder les choses de la même manière, même si ça ne marche pas.	<i>I keep approaching things the same way, even when it isn't working.</i>
20	Je fais ce que les autres me disent de faire.	<i>I do what other people tell me to do.</i>
21	J'aime prendre des risques.	<i>I like to take risks.</i>
22	Les autres semblent penser que je suis quelqu'un de vraiment bizarre ou étrange.	<i>Others seem to think I'm quite odd or unusual.</i>
23	J'aime attirer l'attention des autres.	<i>I love getting the attention of other people.</i>
24	Je me fais beaucoup de soucis à propos de choses terribles qui pourraient arriver.	<i>I worry a lot about terrible things that might happen.</i>
25	J'ai du mal à changer mes façons de faire même quand ce que je fais ne marche pas bien.	<i>I have trouble changing how I'm doing something even if what I'm doing isn't going well.</i>
26	Le monde se porterait mieux si j'étais mort(e).	<i>The world would be better off if I were dead.</i>
27	Je garde mes distances avec les gens.	<i>I keep my distance from people.</i>
28	Je ne suis pas émotif(ve).	<i>I don't get emotional.</i>
29	Je préfère garder les histoires d'amour hors de ma vie.	<i>I prefer to keep romance out of my life.</i>
30	Je ne montre pas beaucoup mes émotions.	<i>I don't show emotions strongly.</i>
31	Je suis très coléreux(se).	<i>I have a very short temper.</i>
32	Je fais une fixation sur certaines choses et je ne peux pas m'en détacher.	<i>I get fixated on certain things and can't stop.</i>
33	Si quelque chose que je fais n'est pas absolument parfait, c'est tout simplement inacceptable.	<i>If something I do isn't absolutely perfect, it's simply not acceptable.</i>
34	J'ai souvent des expériences inhabituelles, comme ressentir la présence de quelqu'un qui n'est pas réellement là.	<i>I often have unusual experiences, such as sensing the presence of someone who isn't actually there.</i>
35	Je suis doué(e) pour faire faire aux gens ce que je veux qu'ils fassent.	<i>I'm good at making people do what I want them to do.</i>

Item Number	French Item	English Item
36	Je me fais toujours du souci pour quelque chose.	<i>I'm always worrying about something.</i>
37	Je suis meilleur(e) que presque tout le monde.	<i>I'm better than almost everyone else.</i>
38	Je me tiens toujours sur mes gardes, dans l'idée que quelqu'un pourrait essayer de me rouler ou me faire du mal.	<i>I'm always on my guard for someone trying to trick or harm me.</i>
39	J'ai du mal à rester concentré(e) sur ce qui doit être fait.	<i>I have trouble keeping my mind focused on what needs to be done.</i>
40	Je ne suis tout simplement pas très intéressé(e) par les relations sexuelles.	<i>I'm just not very interested in having sexual relationships.</i>
41	Je suis facilement débordé(e) par mes émotions, même pour de petites choses.	<i>I get emotional easily, often for very little reason.</i>
42	Même si cela exaspère les gens, j'insiste pour que tout ce que je fais soit absolument parfait.	<i>Even though it drives other people crazy, I insist on absolute perfection in everything I do.</i>
43	Je ne me sens presque jamais heureux(se) dans mes activités quotidiennes.	<i>I almost never feel happy about my day-to-day activities.</i>
44	Flatter les autres m'aide à obtenir ce que je veux.	<i>Sweet-talking others helps me get what I want.</i>
45	Ce que crains plus que tout, c'est d'être seul(e) dans la vie.	<i>I fear being alone in life more than anything else.</i>
46	Je me bloque sur une manière de faire les choses, même quand il est évident que cela ne marche pas.	<i>I get stuck on one way of doing things, even when it's clear it won't work.</i>
47	Je suis souvent plutôt négligent(e) avec mes propres affaires et celles des autres.	<i>I'm often pretty careless with my own and others' things.</i>
48	Je suis une personne très anxieuse.	<i>I am a very anxious person.</i>
49	Je suis facilement distrait(e).	<i>I am easily distracted.</i>
50	Il me semble que je suis toujours mal traité(e) par les autres.	<i>It seems like I'm always getting a "raw deal" from others.</i>
51	Je n'hésite pas à tricher si cela me permet d'aller de l'avant.	<i>I don't hesitate to cheat if it gets me ahead.</i>
52	Je n'aime pas passer du temps avec les autres.	<i>I don't like spending time with others.</i>

Item Number	French Item	English Item
53	Je ne sais jamais, d'un moment à l'autre, dans quel sens vont aller mes émotions.	<i>I never know where my emotions will go from moment to moment.</i>
54	J'ai vu des choses qui n'étaient pas réellement là.	<i>I have seen things that weren't really there.</i>
55	Je n'arrive pas à me concentrer très longtemps.	<i>I can't focus on things for very long.</i>
56	Je me tiens à l'écart de toute relation romantique.	<i>I steer clear of romantic relationships.</i>
57	Me faire des amis ne m'intéresse pas.	<i>I'm not interested in making friends.</i>
58	Je ferais à peu près n'importe quoi pour empêcher quelqu'un de m'abandonner.	<i>I'll do just about anything to keep someone from abandoning me.</i>
59	Parfois, je peux influencer les autres simplement en leur envoyant mes pensées.	<i>Sometimes I can influence other people just by sending my thoughts to them.</i>
60	La vie me semble vraiment sombre.	<i>Life looks pretty bleak to me.</i>
61	Je pense aux choses d'une façon bizarre qui ne paraît pas cohérente à la plupart des gens.	<i>I think about things in odd ways that don't make sense to most people.</i>
62	Peu m'importe si mes actions blessent les autres.	<i>I don't care if my actions hurt others.</i>
63	Parfois je me sens "contrôlé(e)" par des pensées qui appartiennent à quelqu'un d'autre.	<i>Sometimes I feel "controlled" by thoughts that belong to someone else.</i>
64	Je fais des promesses que je n'ai pas vraiment l'intention de tenir.	<i>I make promises that I don't really intend to keep.</i>
65	Rien ne semble me rendre heureux(se).	<i>Nothing seems to make me feel good.</i>
66	Je suis facilement irrité(e) par toutes sortes de choses.	<i>I get irritated easily by all sorts of things.</i>
67	Je fais ce que je veux, même si cela peut être dangereux.	<i>I do what I want regardless of how unsafe it might be.</i>
68	J'oublie souvent de payer mes factures.	<i>I often forget to pay my bills.</i>
69	Je suis habile pour embobiner les gens.	<i>I'm good at conning people.</i>
70	Tout me paraît inutile et vain.	<i>Everything seems pointless to me.</i>
71	La moindre petite chose m'émeut.	<i>I get emotional over every little thing.</i>
72	Ce n'est pas bien grave si je blesse les sentiments des autres.	<i>It's no big deal if I hurt other peoples' feelings.</i>

Item Number	French Item	English Item
73	Je ne montre jamais d'émotions aux autres.	<i>I never show emotions to others.</i>
74	En tant que personne, je ne vauds rien.	<i>I have no worth as a person.</i>
75	En général, je suis assez hostile.	<i>I am usually pretty hostile.</i>
76	Il m'est déjà arrivé de décamper pour éviter mes responsabilités.	<i>I've skipped town to avoid responsibilities.</i>
77	J'aime être quelqu'un que l'on remarque.	<i>I like being a person who gets noticed.</i>
78	J'ai toujours peur que des choses mauvaises puissent arriver.	<i>I'm always fearful or on edge about bad things that might happen.</i>
79	Je ne veux jamais être seul(e).	<i>I never want to be alone.</i>
80	Je continue d'essayer que tout soit parfait, même quand j'ai déjà fait les choses aussi bien que possible.	<i>I keep trying to make things perfect, even when I've gotten them as good as they're likely to get.</i>
81	Mes émotions sont imprévisibles.	<i>My emotions are unpredictable.</i>
82	Je ne me soucie pas des problèmes des autres.	<i>I don't care about other peoples' problems.</i>
83	Je ne réagis pas beaucoup aux choses qui semblent émouvoir les autres.	<i>I don't react much to things that seem to make others emotional.</i>
84	J'évite de me retrouver en société.	<i>I avoid social events.</i>
85	Je mérite un traitement de faveur.	<i>I deserve special treatment.</i>
86	Je pense, que même mes soi-disant amis, me trahissent souvent.	<i>I suspect that even my so-called "friends" betray me a lot.</i>
87	J'ai un énorme besoin d'attention.	<i>I crave attention.</i>
88	Il m'arrive de penser que quelqu'un m'enlève les pensées de la tête.	<i>Sometimes I think someone else is removing thoughts from my head.</i>
89	Je ne supporte tout simplement pas que les choses ne soient pas à leur place.	<i>I simply won't put up with things being out of their proper places.</i>
90	Je dois souvent avoir affaire à des gens qui sont moins importants que moi.	<i>I often have to deal with people who are less important than me.</i>
91	Je suis déconcentré(e) de ce que je fais par la moindre petite distraction.	<i>I get pulled off-task by even minor distractions.</i>
92	J'essaie de faire ce que les autres veulent que je fasse.	<i>I try to do what others want me to do.</i>
93	Je préfère rester seul(e) que d'avoir une relation sentimentale intime avec quelqu'un.	<i>I prefer being alone to having a close romantic partner.</i>

Item Number	French Item	English Item
94	J'ai souvent des pensées que je trouve logiques, mais dont les autres disent qu'elles sont étranges.	<i>I often have thoughts that make sense to me but that other people say are strange.</i>
95	J'utilise les gens pour obtenir ce que je veux.	<i>I use people to get what I want.</i>
96	J'ai eu quelques expériences vraiment bizarres, très difficiles à expliquer.	<i>I've had some really weird experiences that are very difficult to explain.</i>
97	J'aime attirer l'attention.	<i>I like to draw attention to myself.</i>
98	Les choses autour de moi me paraissent souvent irréelles, ou plus réelles que d'habitude.	<i>Things around me often feel unreal, or more real than usual.</i>
99	Je n'hésite pas à déformer la vérité si c'est à mon avantage.	<i>I'll stretch the truth if it's to my advantage.</i>
100	Il m'est facile de profiter des autres.	<i>It is easy for me to take advantage of others.</i>

*Note.* Original English items by Krueger et al. (2012). Official French translation of items by Rossi et al. (2012) and validation by Roskam et al. (2015). Item selection for the reduced 100-item version (from the original PID-5 item pool) by Maples et al. (2015). ©American Psychiatric Association<sup>9</sup>. APA = American Psychiatric Association; PID-5 = Personality Inventory for DSM-5, Adult; PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult.

<sup>9</sup> APA: "Rights granted: This measure can be reproduced without permission by researchers and by clinicians for use with their patients." See: [https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA\\_DSM5\\_The-Personality-Inventory-For-DSM-5-Full-Version-Adult.pdf](https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM5_The-Personality-Inventory-For-DSM-5-Full-Version-Adult.pdf)

**Appendix C**  
PID-5-FBF Scoring Information (APA's [2013] 15-Facet Scoring Procedure)

Variables	Constituent (Facet)
PID-5-FBF domains	
Negative Affectivity	Anxiousness Emotional Lability Separation Insecurity
Detachment	Anhedonia Intimacy Avoidance Withdrawal
Antagonism	Deceitfulness Grandiosity Manipulativeness
Disinhibition	Distractibility Impulsivity Irresponsibility
Psychoticism	Cog. and Perc. Dys. Eccentricity Unusual B. and Exp.
Variables	Constituent (Item)
PID-5-FBF facets	
Anhedonia	9, 11, 43, 65
Anxiousness	24, 36, 48, 78
Attention-Seeking	23, 77, 87, 97
Callousness	7, 62, 72, 82
Cog. and Perc. Dys.	15, 63, 88, 98
Deceitfulness	18, 51, 95, 99
Depressivity	26, 60, 70, 74
Distractibility	39, 49, 55, 91
Eccentricity	10, 22, 61, 94
Emotional Lability	41, 53, 71, 81
Grandiosity	14, 37, 85, 90
Hostility	12, 31, 66, 75
Impulsivity	2, 5, 6, 8
Intimacy Avoidance	29, 40, 56, 93
Irresponsibility	47, 64, 68, 76



Variables	Constituent (Item)
Manipulativeness	35, 44, 69, 100
Perseveration	19, 25, 32, 46
Restricted Affectivity	28, 30, 73, 83
Rigid Perfectionism	33, 42, 80, 89
Risk Taking	13, 16, 21, 67
Separation Insecurity	17, 45, 58, 79
Submissiveness	3, 4, 20, 92
Suspiciousness	1, 38, 50, 86
Unusual B. and Exp.	34, 54, 59, 96
Withdrawal	27, 52, 57, 84

*Note.* APA's (2013) official three facets per domain scoring procedure is presented (the 15-facet procedure). No item must be reverse-coded. Facets are scored as the mean of the constituent items, while domains are scored as the mean of the constituent facets, therefore generating scores that vary between 0 and 3 in both cases. APA = American Psychiatric Association; PID-5-FBF = Personality Inventory for DSM-5, Faceted Brief Form, Adult; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences.

**Appendix D**  
SPSS Syntax for PID-5-FBF Facets and Domains

\*\*\*Copy, paste, and run the following syntax in a SPSS syntax box. This file does not come with any guarantee and should be carefully verified before use.

\*\*\**Facets*

COMPUTE Anhedonia = MEAN (PID9, PID11, PID43, PID65).

EXECUTE.

COMPUTE Anxiousness = MEAN (PID24, PID36, PID48, PID78).

EXECUTE.

COMPUTE Attention\_Seeking = MEAN (PID23, PID77, PID87, PID97).

EXECUTE.

COMPUTE Callousness = MEAN (PID7, PID62, PID72, PID82).

EXECUTE.

COMPUTE Cog\_and\_Perc\_Dys = MEAN (PID15, PID63, PID88, PID98).

EXECUTE.

COMPUTE Deceitfulness = MEAN (PID18, PID51, PID95, PID99).

EXECUTE.

COMPUTE Depressivity = MEAN (PID26, PID60, PID70, PID74).

EXECUTE.

COMPUTE Distractibility = MEAN (PID39, PID49, PID55, PID91).

EXECUTE.

COMPUTE Eccentricity = MEAN (PID10, PID22, PID61, PID94).

EXECUTE.

COMPUTE Emotional\_Lability = MEAN (PID41, PID53, PID71, PID81).

EXECUTE.

COMPUTE Grandiosity = MEAN (PID14, PID37, PID85, PID90).

EXECUTE.

COMPUTE Hostility = MEAN (PID12, PID31, PID66, PID75).

EXECUTE.

COMPUTE Impulsivity = MEAN (PID2, PID5, PID6, PID8).

EXECUTE.

COMPUTE Intimacy\_Avoidance = MEAN (PID29, PID40, PID56, PID93).

EXECUTE.

COMPUTE Irresponsibility = MEAN (PID47, PID64, PID68, PID76).

EXECUTE.

COMPUTE Manipulativeness = MEAN (PID35, PID44, PID69, PID100).

EXECUTE.

COMPUTE Perseveration = MEAN (PID19, PID25, PID32, PID46).

EXECUTE.

COMPUTE Restricted\_Affectivity = MEAN (PID28, PID30, PID73, PID83).

EXECUTE.

COMPUTE Rigid\_Perfectionism = MEAN (PID33, PID42, PID80, PID89).

EXECUTE.

COMPUTE Risk\_Taking = MEAN (PID13, PID16, PID21, PID67).

EXECUTE.

COMPUTE Separation\_Insecurity = MEAN (PID17, PID45, PID58, PID79).

EXECUTE.

COMPUTE Submissiveness = MEAN (PID3, PID4, PID20, PID92).

EXECUTE.

COMPUTE Suspiciousness = MEAN (PID1, PID38, PID50, PID86).

EXECUTE.

COMPUTE Unusual\_B\_and\_Exp = MEAN (PID34, PID54, PID59, PID96).

EXECUTE.

COMPUTE Withdrawal = MEAN (PID27, PID52, PID57, PID84).

EXECUTE.

**\*\*\*Domains**

COMPUTE Negative\_Affect\_APA = MEAN (Anxiousness, Emotional\_Lability,  
Separation\_Insecurity).

EXECUTE.

COMPUTE Detachment\_APA = MEAN (Withdrawal, Intimacy\_Avoidance, Anhedonia).

EXECUTE.

COMPUTE Antagonism\_APA = MEAN (Manipulativeness, Deceitfulness, Grandiosity).

EXECUTE.

COMPUTE Disinhibition\_APA = MEAN (Impulsivity, Distractibility, Irresponsibility).

EXECUTE.

COMPUTE Psychoticism\_APA = MEAN (Unusual\_B\_and\_Exp, Eccentricity,  
Cog\_and\_Perc\_Dys).

EXECUTE.

**Article scientifique 2**

Analysis of the interaction between personality dysfunction and traits in the statistical prediction of physical aggression: Results from outpatient and community samples

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## **RESEARCH ARTICLE**

### **ARTICLE TITLE**

**Interactions between Criterion A and B of the DSM-5 Alternative Model for Personality Disorders in the statistical prediction of physical aggression**

**Short Title:** Analysis of interaction for AMPD-aggression

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### **Abstract**

The Alternative Model for Personality Disorders (AMPD), included in the *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.) and the World Health Organization's *International Classification of Diseases* (11<sup>th</sup> ed.; ICD-11) are, respectively, hybrid categorical-dimensional and dimensional frameworks for personality disorders (PDs). Both models emphasize personality dysfunction and personality traits. Previous studies investigating the links between the AMPD and ICD-11, and self-reported physical aggression have mostly focused on traits and did not take into account the potential interaction between personality dysfunction and traits. Thus, the aim of this study is to identify dysfunction\*trait interactions using regression-based analysis. Outpatients with personality disorder from a specialized public clinic ( $N = 285$ ) and community participants ( $N = 995$ ) were recruited to complete self-report questionnaires. Some small-size, albeit significant and clinically/conceptually meaningful personality dysfunction\*trait interactions were found to predict physical aggression in both samples. Interaction analyses might further inform, to some degree, about the current discussion pertaining to the potential redundancy between dysfunction and traits, the optimal personality dysfunction structure (in the case of the AMPD), as well as clinical assessment based on AMPD/ICD-11 PD frameworks.

**Keywords:** Diagnostic and Statistical Manual of Mental Disorders (5<sup>th</sup> ed.), Alternative Model for Personality Disorders, International Classification of Diseases (11<sup>th</sup> ed.), personality dysfunction, personality traits, personality disorders, physical aggression, interaction

**Word count:** 7339



The Alternative Model for Personality Disorders (AMPD), included in Section III of the *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.; DSM-5; American Psychiatric Association [APA], 2013) and the World Health Organization’s *International Classification of Diseases* (11<sup>th</sup> ed.; ICD-11; Bach & First, 2018) are, respectively, hybrid categorical-dimensional and dimensional frameworks for personality disorders (PDs). Both seek to alleviate many of the shortcomings of the categorical classification (see Hopwood et al., 2018) and position personality dysfunction at their core, which is characterized by self and interpersonal pathology (referred to as “Criterion A”, in the case of the DSM-5). For AMPD Criterion A, self and interpersonal pathology is more specifically defined by Identity and Self-Direction disturbances, and Empathy and Intimacy disturbances, respectively. In both models, personality dysfunction is theoretically meant to reflect personality-specific impairments (i.e., not present in “syndromic” disorders) and to help at ruling whether a person has a PD diagnosis or not. Both the DSM-5 and the ICD-11 are also composed of pathological personality traits, allowing a fine-grained, individual profile (referred to as “Criterion B” in DSM-5’s AMPD, and as “Trait domain qualifiers” in the ICD-11): Negative Affectivity, Detachment, Antagonism/Dissociality, Disinhibition, Psychoticism (AMPD only), and Anankastia (ICD-11 only).<sup>1</sup>

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<sup>1</sup> The AMPD Criterion B pertains to 25 pathological personality lower-order traits (“facets”) organized into five higher-order traits (“domains”; i.e., Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism); the ICD-11 model does not have lower-order facets (Bach & Simonsen, 2021). Unless specified otherwise, the word “trait” is used throughout the text to refer to both AMPD domains and ICD-11 traits, for the sake of simplicity. For a thorough description of the similarities and differences between the AMPD and the ICD-11 PD model, see, e.g., Bach and First (2018) and Tyrer et al. (2019).

In the ICD-11, personality dysfunction is conceptualized as a single, global indicator, and it does not have an official instrument (Bach & Simonsen, 2021). The AMPD Criterion A can be assessed with the Level of Personality Functioning Scale (a clinician-rated grid), but it does not have an official self-reported instrument. Its conceptualization is also less consensual. Indeed, the DSM-5 itself is ambiguous as to how the Criterion A structure should be viewed (i.e., unidimensional versus multidimensional; Sleep et al., 2019); as a result, multiple instruments based on different plausible structures for Criterion A are currently available (Gamache et al., 2019; Morey, 2017; Siefert et al., 2019; Weekers et al., 2019). Morey (2017, 2019), who was part of the Personality and Personality Disorders Work Group that developed Criterion A, argues that its structure is best represented by a single score, which was recently supported by bifactor analyses that corroborated a unidimensional spectrum of personality dysfunction (Hummelen et al., 2020; Zimmermann et al., 2020). In the broader AMPD research community, academics are more divided, and it was suggested that Criterion A could be best represented by two dimensions or four distinct elements (Gamache et al., 2019; Siefert et al., 2019; Weekers et al., 2019). An intermediate position, in which both the total score and its four elements have merits from psychometric and clinical standpoints, has also been advocated (Buer Christensen et al., 2020; Gamache et al., 2019; Siefert et al., 2019).

Previous research using simultaneously personality dysfunction and traits aimed mainly at identifying their mutual incremental validity. In the context of the AMPD, when they are “pitted one against another” (e.g., through hierarchical regression analysis) or

jointly factor analyzed, their respective addition or delineation is not so obvious, and Criterion B seems to explain more variance than Criterion A in general (at least, using self-reports; Zimmermann et al., 2019). Different explanations have been put forth, e.g., that dysfunction and traits refer more or less to the same constructs but are rooted in different theoretical paradigms (Zimmermann et al., 2020). However, the interaction between dysfunction and traits has been understudied thus far, which has been underscored for both the AMPD (Meehan et al., 2019) and the ICD-11 (Bach & Simonsen, 2021). Indeed, if redundancy is complete, then no interaction should be obtained (e.g., through regressions or factor analyses incorporating an interaction term) (Sexton et al., 2019). This is a promising avenue to document both the combined utility of dysfunction and traits, as well as what is the most appropriate personality dysfunction structure (in the case of the AMPD). For instance, some Criterion A elements (Self-Direction, Empathy) and traits (Detachment, Antagonism) have shown interactions in the prediction of self-reported satisfaction in work and love relations (Sexton et al., 2019). In another study, the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008) dimensions (a measure of personality dysfunction) also moderated the relationship between three Criterion B traits (Negative Affectivity, Detachment, Psychoticism) and psychological distress (Benzi et al., 2019). Those studies supported both a non-static level of analysis (for the AMPD and, by extension, the ICD-11), as well as the contention that separate Criterion A elements (in the case of the AMPD) might be relevant.

One application that could benefit from a dysfunction\*trait analysis is physical aggression. Both the psychodynamic formulations pertaining to personality dysfunction (e.g., Kernberg's Level of Personality Organization; Caligor et al., 2018) and the multivariate paradigm pertaining to personality traits (Hyatt et al., 2018) consider personality as an important predictor for the perpetration of aggression. Nevertheless, both traditions have been historically quite isolated, leading to different lines of research, a gap mostly perpetuated in the existing AMPD/ICD-11 literature pertaining to aggression. Specifically, it was reported that the Criterion A total score predicted different types of intimate partner violence (IPV; Gamache et al., 2022). Other studies identified how personality traits predict aggression (Dunne et al., 2018, 2021; Sleep et al., 2018) and IPV (Dowgwillo et al., 2016; Munro & Sellbom, 2020). However, to the best of our knowledge, no published study has focused on the interplay between personality dysfunction and traits in the statistical prediction of physical aggression, i.e., whether the two might interact. This issue is particularly important since the level of personality dysfunction (akin to Kernberg's severity axis in his model) might be an important moderator of the effect of traits on aggression; a better understanding of the issue would have direct clinical implications (e.g., in the assessment of a patient's propensity towards aggression)—for instance, a patient with high personality impairment and an elevation of some traits (e.g., Antagonism/Dissociality) could have a higher propensity towards aggression than another patient with low personality impairment (other things being equal).

### **The present study**

This article aims at identifying how personality dysfunction and traits interact in their relation to self-reported physical aggression in order to gain a more nuanced conceptual understanding of the AMPD/ICD-11 models and to inform assessment. Since the discussion pertaining to the Criterion A structure is not resolved (in the case of the AMPD), different conceptualizations will be investigated. When personality dysfunction is conceptualized as a single-factor structure (as in the ICD-11 and as proposed by, e.g., Morey for the AMPD, 2017, 2019), it is expected that it will statistically predict aggression, based on previous results (Gamache et al., 2022). When it is conceptualized as a four-factor structure (as proposed by other AMPD researchers; Buer Christensen et al., 2020; Gamache et al., 2019; Siefert et al., 2019), it is expected that only Empathy (impairment) will statistically predict aggression, based on previous results (Gamache et al., 2019). With regard to personality traits, it is not clear which domains will predict aggression, as some inconsistencies exist in the literature. Dunne et al. (2018) found no significant trait predictors, but their group subsequently reported (Dunne et al., 2021) that AMPD Antagonism, Disinhibition, and Negative Affectivity (low) were predictive of aggression, using a shorter Criterion B instrument. Sleep et al. (2018) reported the exact same significant predictors, except for AMPD Negative Affectivity (high). In addition to AMPD Antagonism and Disinhibition, Dowgwillo et al. (2016) reported that Detachment significantly predicted IPV. Therefore, the following hypothesis must be considered with caution: Antagonism and Disinhibition will most likely statistically predict aggression, while prediction by Negative Affectivity and Detachment is possible although uncertain.

Personality dysfunction\*trait interactions have been reported only in non-aggression studies (Benzi et al., 2019; Sexton et al., 2019). Nevertheless, the following hypothesis can be formulated: dysfunction will moderate traits (i.e., higher personality impairment will increase the association between statistically significant trait predictors and aggression), in line with Kernberg's model.

## Methods

### Participants and procedures

Two samples of mainly French-speaking Canadians from the Province of Quebec, Canada were recruited in this study. The first sample is composed of PD outpatients ( $N = 285$ , 177 females, 108 males,  $M_{\text{age}} = 33.72$  years old,  $SD = 10.59$ , 18–69 range) recruited from a public clinic specialized in the assessment and treatment of severe PDs in Quebec City, Canada, between September 2017 and February 2020. Only a minority had completed a university degree (19%), was working full- or part-time (48%), and was in a romantic relationship or married (37%). Data were collected during the computer-based intake protocol at the clinic prior to a clinical interview and participants were presented with the possibility to give access to their data for research purposes. Access to services is available for adult patients ( $\geq 18$  years old) from the Quebec City area upon referral from a general physician or psychiatrist, and requires at least one formal DSM-5 Section II PD diagnosis. Diagnoses from the referring physician or psychiatrist are confirmed during an intake interview by a clinical psychologist, and all diagnoses are then reviewed by a team of six clinical psychologists during a weekly meeting. PD diagnosis

based on DSM-5 Section II was available for 254 patients (87.9%): 65 narcissistic (22.5%), 48 borderline-narcissistic (16.6%), 46 borderline (15.9%), 41 mixed (i.e.,  $\geq 3$  PDs; 14.2%), 23 not otherwise specified (8.0%), 10 schizotypal (3.5%), six schizoid (2.1%), five syndromic (i.e., non-PD main diagnosis; 1.7%), four antisocial (1.4%), four histrionic (1.4%), and two paranoid (0.7%). The second sample is comprised of community participants ( $N = 995$ , 764 females, 219 males, 6 of other gender identity, 6 who did not answer,  $M_{\text{age}} = 46.16$  years old,  $SD = 13.69$ , 18–84 range), who were recruited online from September 2020 to February 2021 by snowball sampling and through mailing lists from a psychology organization and Facebook advertisement. A majority had completed a university degree (54%), was working full- or part-time (59%), and was in a romantic relationship or married (64%). All data were inspected for valid responding (e.g., absence of repeated patterns of 1-2-3), missing data, and conformity with multivariate analysis assumptions. Then, a Mahalanobis Distance Analysis was performed with all predictors to identify multivariate outliers ( $p < .001$ ), which have already been excluded.

## **Measures**

### ***Personality dysfunction***

The Self and Interpersonal Functioning Scale (SIFS; Gamache et al., 2019) is a 24-item measure that assesses personality dysfunction based on the AMPD Criterion A. It has also demonstrated its validity to determine severity degrees of personality pathology based on the ICD-11 (Gamache et al., 2021). It was originally developed for screening

purposes based on a multi-element Criterion A conceptualization (i.e., four elements—Identity, Self-direction, Empathy, and Intimacy—organized into a higher-order personality dysfunction factor). An independent content comparative analysis (Waugh et al., 2020) showed that the SIFS has good content validity. Its factor structure makes it also an appropriate choice to investigate both a one- and a four-factor Criterion A conceptualization. The outpatients were administered the original SIFS (four elements [ $\alpha = .66-.72$ ] and global score [ $\alpha = .84$ ]), while the community participants were administered a slightly revised version which covers the exact same subscales but with slightly less items (20) and using no reversed wording items (four elements [ $\alpha = .67-.88$ ] and global score [ $\alpha = .90$ ]). Items are rated on a five-point Likert scale in both versions.

### ***Personality traits***

The Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF; Maples et al., 2015) is an abbreviated 100-item version of the original 220-item PID-5 (Krueger et al., 2012; French validation by Roskam et al., 2015) measuring the AMPD Criterion B. It is comprised of 25 maladaptive personality facets organized into five higher-order personality domains: Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism ( $\alpha = .82-.92$  [outpatients] and  $.79-.90$  [community]). In addition to being the official Criterion B measure for the AMPD, it can be considered as a legitimate (yet imperfect; e.g., Anankastia is not fully covered) proxy for ICD-11 traits (McCabe & Widiger, 2020). Only the higher-order traits were used. All analyses were computed using both APA's three facets procedure (2013) and Krueger et al.'s algorithms (2012) in the



coding of traits to widen the scope of our conclusions (see Watters et al., 2019). Indeed, some seemingly important facet predictors based on previous results (Dunne et al., 2018) are not incorporated in the APA scoring procedure (e.g., Hostility, Risk Taking). Items are rated on a four-point Likert scale.

### ***Physical aggression***

The Short-Form Buss-Perry Aggression Questionnaire (BPAQ-SF; Bryant & Smith, 2001, French validation by Genoud & Zimmerman, 2009) is an abbreviated 12-item and psychometrically improved measure of the 29-item BPAQ (Buss & Perry, 1992) assessing physical and verbal aggression, anger, and hostility. Only the Physical Aggression subscale ( $\alpha = .86$  [outpatients] and  $.61$  [community]) was used to focus on the physical component of aggression, as well as to avoid item content overlap with the SIFS or the PID-5-FBF (e.g., PID-5-FBF's Hostility "I have a very short temper" resembles BPAQ-SF's Anger "I have trouble controlling my temper"). Items are rated on a six-point Likert scale.

### **Analytic strategy**

Analyses were conducted using IBM SPSS 27. First, descriptive statistics and bivariate correlational analyses (between personality functioning, traits, and physical aggression) were computed. Second, two multiple regression models were computed including either the SIFS total score or all four elements, as well as traits to identify main effects. Since the number of predictors is uneven when using the total score or the four

elements, the Prediction Sum-of-Squares (PRESS) statistic (D. M. Allen, 1974) was computed manually to derive the Predicted  $R^2$ , which is unaffected by the number of predictors entered. This indicator also informs on the model's capacity to provide accurate predictions by sequentially taking out each case of the model and then using the predicted value to provide a new estimation. Considering that a regressor might obtain a nonzero regression weight even if it is uncorrelated with the dependent variable (Darlington & Hayes, 2016), all SIFS and PID-5-FBF variables were retained in the regression analyses. Third, to identify interactions, a series of 25 hierarchical multiple regression analyses were computed including a PID-5-FBF trait and a SIFS element (4 elements\*5 traits = 20 models) or the total score (1 total dysfunction score\*5 traits = 5 models) at Step 1, and an interaction term (i.e., element\*trait) at Step 2. All predictors were mean-centered prior to computing products of variables to reduce multicollinearity (Iacobucci et al., 2016). All analyses were computed with both scoring procedures (2 procedures\*25 models = 50 models) for each sample. Balancing statistical power and significance level ( $\alpha$  level) is a complicated matter when probing interactions, since much more power is needed. Indeed, most researchers seek at least 80% power to identify main effects—in practice, to detect an interaction effect half that size, power will actually be around 10% (Durand, 2013). Indeed, the required sample size to probe interactions grows dramatically for a decreasing interaction size. For instance, to detect an interaction effect that is half the size of the main effect, 16 times more power would theoretically be necessary (Durand, 2013). While elevating the  $\alpha$  level is generally not advisable (e.g., to put it at  $\alpha = .10$ ; Durand, 2013), a Bonferroni correction is usually too conservative for multiple regression analyses and

appropriate only to identify a parsimonious set of predictors in a model (Mundfrom et al., 2006), which is not the objective of the present study. Therefore, the  $\alpha$  level will be kept at .05. To guard against Type I inflation, a particular emphasis will be put on replication between samples and theoretical soundness.

## Results

Descriptive statistics and reliability indices are provided as supplemental material (see Tables S1 and S2). Bivariate zero-order Pearson correlations among physical aggression, personality dysfunction, and traits (for both samples) are provided in Table 1. Significant correlations with aggression were as follows: all traits (using both scoring procedures), and all personality dysfunction elements (except Identity in outpatients) in addition to the global score. For the main effect analysis, the complete outputs are shown in Tables 2 and 3 (traits using APA's procedure and Krueger et al.'s algorithms, and personality dysfunction either as a single score or as four elements). The two scoring procedures globally yielded similar results, i.e., Identity (outpatients) and Empathy (community and outpatients) were significant personality dysfunction predictors of aggression in both cases, but some differences for the significant trait predictors were found. When personality dysfunction was represented by a single score, it was a statistically significant predictor for the community sample only.

For the interaction analyses, a synthesis of all interaction models is provided in Tables 4 and 5 (only the output at Step 2 is shown, i.e., the interaction terms). Some

statistically significant dysfunction\*trait interactions were found in both samples: for the outpatient sample: Empathy\*Disinhibition (APA's:  $\beta = .12$ ,  $\Delta R^2 = 1.4\%$ ; Krueger's:  $\beta = .14$ ,  $\Delta R^2 = 1.9\%$ ), Intimacy\*Antagonism (APA's:  $\beta = -.13$ ,  $\Delta R^2 = 1.4\%$ ; Krueger's:  $\beta = -.14$ ,  $\Delta R^2 = 1.7\%$ ), Total score\*Disinhibition (APA's:  $\beta = .13$ ,  $\Delta R^2 = 1.7\%$ ; Krueger's:  $\beta = .11$ ,  $\Delta R^2 = 1.1\%$ ); for the community sample: Empathy\*Detachment (APA's:  $\beta = .09$ ,  $\Delta R^2 = 0.7\%$ ; Krueger's:  $\beta = .10$ ,  $\Delta R^2 = 0.8\%$ ), Empathy\*Antagonism (APA's:  $\beta = .09$ ,  $\Delta R^2 = 0.8\%$ ; Krueger's:  $\beta = .09$ ,  $\Delta R^2 = 0.8\%$ ), Empathy\*Disinhibition (APA's:  $\beta = .07$ ,  $\Delta R^2 = 0.4\%$ ; Krueger's:  $\beta = .07$ ,  $\Delta R^2 = 0.5\%$ ), Intimacy\*Antagonism (Krueger's:  $\beta = .07$ ,  $\Delta R^2 = 0.4\%$ ), Intimacy\*Disinhibition (Krueger's:  $\beta = .08$ ,  $\Delta R^2 = 0.7\%$ ), Intimacy\*Psychoticism (APA's:  $\beta = .08$ ,  $\Delta R^2 = 0.6\%$ ; Krueger's:  $\beta = .08$ ,  $\Delta R^2 = 0.6\%$ ), Total score\*Antagonism (APA's:  $\beta = .07$ ,  $\Delta R^2 = 0.4\%$ ; Krueger's:  $\beta = .08$ ,  $\Delta R^2 = 0.6\%$ ), Total score\*Psychoticism (APA's:  $\beta = .08$ ,  $\Delta R^2 = 0.5\%$ ; Krueger's:  $\beta = .08$ ,  $\Delta R^2 = 0.5\%$ ).

**Table 1**

*Bivariate zero-order Pearson correlations among physical aggression, personality dysfunction, and traits—outpatient with personality disorder and community samples (N = 1280)*

		Personality dysfunction					Personality traits (APA's)					Personality traits (Krueger's)					
		Phys. agg.	Identity	Self-direction	Empathy	Intimacy	Total score	Neg. Affect.	Detachment	Antagonism	Disinhibition	Psychoticism	Neg. Affect.	Detachment	Antagonism	Disinhibition	Psychoticism
Personality dysfunction	Phys. agg.		.23	.28	.34	.24	.33	.21	.22	.31	.29	.33	.25	.28	.32	.30	.33
	Identity	.05		.63	.43	.56	.87	.64	.60	.16	.47	.39	.66	.70	.19	.37	.39
	Self-direction	.33	.51		.43	.43	.79	.47	.38	.27	.62	.42	.51	.44	.29	.55	.42
	Empathy	.43	.39	.50		.54	.70	.30	.40	.34	.31	.41	.35	.48	.36	.27	.41
	Intimacy	.23	.38	.34	.47		.80	.32	.70	.16	.28	.37	.34	.73	.15	.22	.37
	Total score	.33	.76	.75	.76	.75		.57	.67	.27	.53	.49	.60	.76	.29	.44	.49
Personality traits (APA's)	Neg. Affect.	.15	.50	.39	.38	.20	.48		.35	.27	.47	.38	.92	.48	.29	.32	.38
	Detachment	.14	.33	.14	.27	.59	.46	.16		.13	.31	.37	.37	.95	.09	.22	.37
	Antagonism	.33	.21	.43	.43	.37	.47	.23	.12		.31	.35	.30	.20	.92	.29	.35
	Disinhibition	.41	.43	.67	.46	.26	.59	.51	.17	.44		.41	.52	.36	.35	.89	.41
	Psychoticism	.33	.28	.27	.42	.32	.42	.36	.25	.36	.40		.39	.46	.34	.41	–

**Table 1**

*Bivariate zero-order Pearson correlations among physical aggression, personality dysfunction, and traits—outpatient with personality disorder and community samples (N = 1280) (continued)*

		Personality dysfunction					Personality traits (APA's)					Personality traits (Krueger's)					
		Phys. agg.	Identity	Self-direction	Empathy	Intimacy	Total score	Neg. Affect.	Detachment	Antagonism	Disinhibition	Psychoticism	Neg. Affect.	Detachment	Antagonism	Disinhibition	Psychoticism
Personality traits (Krueger's)	Neg. Affect.	.18	.49	.40	.41	.18	.48	.92	.13	.24	.54	.35		.50	.33	.36	.39
	Detachment	.21	.45	.25	.40	.63	.59	.33	.92	.22	.30	.38	.30		.17	.27	.46
	Antagonism	.37	.24	.48	.48	.39	.52	.29	.15	.95	.51	.39	.29	.26		.34	.34
	Disinhibition	.45	.34	.64	.39	.21	.51	.31	.11	.45	.90	.40	.33	.22	.50		.41
	Psychoticism	.33	.28	.27	.42	.32	.42	.36	.25	.36	.40	–	.35	.38	.39	.40	

*Note.* The lower left half of the matrix shows correlations for the outpatient sample ( $n = 285$ ); the upper right half shows correlations for the community sample ( $n = 995$ ). The Psychoticism trait is scored in an identical manner with both scoring procedures, so the two 1.00 coefficients are hidden.

Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure; Phys. agg. = Physical aggression; Neg. Affect. = Negative Affectivity.

Correlations  $\geq .14$  (outpatient sample) and  $\geq .09$  (community sample) are, respectively, at least significant at  $p < .05$  and  $p < .01$ .

**Table 2**

*Multiple regression analysis of personality dysfunction and traits to statistically predict physical aggression—outpatient with personality disorder sample (N = 285)*

		APA's		Krueger's		APA's		Krueger's	
Predictors		$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>
Personality dysfunction	Identity	<b>-.26</b>	< .001	<b>-.27</b>	< .001				
	Self-direction	.09	.248	.04	.642				
	Empathy	<b>.28</b>	< .001	<b>.28</b>	< .001				
	Intimacy	.02	.817	.02	.757				
	Total score					.07	.351	.03	.725
Personality traits	Negative Affectivity	-.08	.218	.00	.950	<b>-.14</b>	.034	-.05	.450
	Detachment	.05	.471	.08	.272	.01	.838	.05	.474
	Antagonism	.05	.410	.06	.352	.12	.057	<b>.15</b>	.022
	Disinhibition	<b>.28</b>	< .001	<b>.33</b>	< .001	<b>.31</b>	< .001	<b>.32</b>	< .001
	Psychoticism	<b>.14</b>	.016	.09	.122	<b>.18</b>	.003	<b>.14</b>	.028
	<i>R</i> <sup>2</sup>	.31		.34		.23		.26	
Predicted <i>R</i> <sup>2</sup>	.26		.29		.19		.22		
$\Delta F$	14.02	< .001	15.80	< .001	13.95	< .001	15.89	< .001	

*Note.* Statistically significant predictors are **italicized and bolded**. For all variables, higher scores mean higher impairment/pathology/aggression. Dependent variable: Physical Aggression subscale from the Short-Form Buss-Perry Aggression Questionnaire.

Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure.

**Table 3**

*Multiple regression analysis of personality dysfunction and traits to statistically predict physical aggression — community sample (N = 995)*

	Predictors	APA's		Krueger's		APA's		Krueger's	
		$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>
Personality dysfunction	Identity	-.03	.569	-.09	.095				
	Self-direction	.05	.277	.05	.257				
	Empathy	<b>.16</b>	< .001	<b>.15</b>	< .001				
	Intimacy	.01	.807	-.01	.812				
	Total score					<b>.17</b>	< .001	<b>.10</b>	.041
Personality traits	Negative Affectivity	-.01	.908	.03	.534	-.04	.230	-.01	.698
	Detachment	.05	.261	<b>.13</b>	.009	.02	.678	.09	.058
	Antagonism	<b>.16</b>	< .001	<b>.16</b>	< .001	<b>.19</b>	< .001	<b>.20</b>	< .001
	Disinhibition	<b>.10</b>	.009	<b>.12</b>	.001	<b>.09</b>	.009	<b>.11</b>	.001
	Psychoticism	<b>.13</b>	< .001	<b>.11</b>	.002	<b>.15</b>	< .001	<b>.13</b>	< .001
	$R^2$	.20		.21		.19		.19	
Predicted $R^2$	.17		.18		.18		.19		
$\Delta F$	26.79	< .001	28.43	< .001	37.37	< .001	39.05	< .001	

*Note.* Statistically significant predictors are **italicized and bolded**. For all variables, higher scores mean higher impairment/pathology/aggression. Dependent variable: Physical Aggression subscale from the Short-Form Buss-Perry Aggression Questionnaire.

Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure.



**Table 4**

*Regression-based analysis of interaction between personality dysfunction and traits to statistically predict physical aggression: A synthesis of possible models—outpatient with personality disorder sample (N = 285)*

	Personality dysfunction														
	Identity			Self-Direction			Empathy			Intimacy			Total score		
	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$
Personality traits (APA's)															
Neg. Affect.	0.05	.829	.000	0.44	.507	.001	0.11	.742	.000	1.05	.306	.003	2.91	.089	.009
Detachment	0.72	.396	.003	0.01	.933	.000	3.47	.063	.010	0.84	.361	.003	1.03	.311	.003
Antagonism	1.24	.267	.004	1.90	.169	.006	0.29	.594	.001	<b>4.57</b>	.034	.014	1.85	.174	.006
Disinhibition	0.77	.380	.002	1.16	.283	.003	<b>5.42</b>	.021	.014	3.09	.080	.009	<b>6.02</b>	.015	.017
Psychoticism	1.42	.235	.004	0.18	.674	.001	0.07	.789	.000	0.02	.885	.000	0.01	.904	.000
Personality traits (Krueger's)															
Neg. Affect.	0.04	.841	.000	0.07	.798	.000	0.01	.907	.000	1.47	.227	.005	2.51	.114	.008
Detachment	0.34	.560	.001	0.04	.838	.000	3.46	.064	.010	1.50	.222	.005	1.68	.196	.005
Antagonism	0.27	.603	.001	0.67	.414	.002	0.02	.879	.000	<b>5.67</b>	.018	.017	0.98	.323	.003
Disinhibition	0.02	.892	.000	0.15	.697	.000	<b>7.74</b>	.006	.019	2.97	.086	.008	<b>3.97</b>	.047	.011
Psychoticism	1.42	.235	.004	0.18	.674	.001	0.07	.789	.000	0.02	.885	.000	0.01	.904	.000

*Note.* Statistically significant  $\Delta F$  are **italicized and bolded**. Dependent variable: Physical aggression. All models include a personality dysfunction element (e.g., Identity) or the total score and a trait (e.g., Negative Affectivity) at Step 1 (not presented) and an interaction term at Step 2 (e.g., Negative Affectivity\*Identity). The numbers ( $\Delta F$  and  $\Delta R^2$ ) represent the addition of Step 2 to Step 1, i.e., the addition of the interaction term (e.g., Negative Affectivity\*Identity).

Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure; Neg. Affect. = Negative Affectivity.

**Table 5**

*Regression-based analysis of interaction between personality dysfunction and traits to statistically predict physical aggression: A synthesis of possible models—community sample (N = 995)*

	Personality dysfunction														
	Identity			Self-Direction			Empathy			Intimacy			Total score		
	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$	$\Delta F$	$p$	$\Delta R^2$
Personality traits (APA's)															
Neg. Affect.	0.47	.492	.000	0.20	.657	.000	0.27	.601	.000	0.08	.784	.000	0.12	.725	.000
Detachment	0.66	.416	.001	2.18	.140	.002	<b>7.84</b>	.005	.007	1.03	.310	.001	2.95	.086	.003
Antagonism	0.34	.563	.000	0.66	.416	.001	<b>8.96</b>	.003	.008	3.49	.062	.003	<b>4.92</b>	.027	.004
Disinhibition	0.05	.825	.000	0.11	.740	.000	<b>4.81</b>	.028	.004	2.85	.092	.003	0.79	.375	.001
Psychoticism	3.09	.079	.003	2.83	.093	.002	2.68	.102	.002	<b>6.63</b>	.010	.006	<b>6.20</b>	.013	.005
Personality traits (Krueger's)															
Neg. Affect.	0.60	.439	.001	0.01	.922	.000	0.82	.366	.001	0.35	.554	.000	0.09	.763	.000
Detachment	0.40	.529	.000	1.78	.182	.002	<b>8.84</b>	.003	.008	0.98	.322	.001	2.99	.084	.003
Antagonism	0.93	.335	.001	1.27	.261	.001	<b>9.34</b>	.002	.008	<b>4.85</b>	.028	.004	<b>6.86</b>	.009	.006
Disinhibition	1.62	.203	.001	0.79	.374	.001	<b>5.93</b>	.015	.005	<b>7.72</b>	.006	.007	3.64	.057	.003
Psychoticism	3.09	.079	.003	2.83	.093	.002	2.68	.102	.002	<b>6.63</b>	.010	.006	<b>6.20</b>	.013	.005

*Note.* Statistically significant  $\Delta F$  are **italicized and bolded**. Dependent variable: Physical aggression (logarithmically transformed to improve univariate normality). All models include a personality dysfunction element (e.g., Identity) or the total score and a trait (e.g., Negative Affectivity) at Step 1 (not presented) and an interaction term at Step 2 (e.g., Negative Affectivity\*Identity). The numbers ( $\Delta F$  and  $\Delta R^2$ ) represent the addition of Step 2 to Step 1, i.e., the addition of the interaction term (e.g., Negative Affectivity\*Identity).

Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure; Neg. Affect. = Negative Affectivity.

## Discussion

This study aimed at identifying dysfunction\*trait interactions, based on the emerging AMPD/ICD-11 PD classifications, in the statistical prediction of aggression. The main hypothesis that higher personality dysfunction would moderate the association between significant traits and aggression was supported (in all but one model). A total of three small-size and conceptually meaningful interactions were found for the outpatient sample and eight for the community sample. Among those interactions, two were found in both samples.

This is the first study to report such effects in the AMPD/ICD-11 literature pertaining to aggression. All but one significant interaction effect had a positive regression coefficient, meaning that a PD outpatient or community person with both high levels of some pathological traits (Antagonism, Disinhibition, Psychoticism) and high personality impairment (Empathy, Intimacy, Total score) will have their aggression propensity increased by an interaction factor. Of note, results from both samples suggest that the interpersonal component of personality dysfunction (i.e., Empathy, Intimacy) is a more important moderator of aggression. Indeed, some interactions were significant in both samples (e.g., Empathy\*Disinhibition, Intimacy\*Antagonism). It is likely that social relationships are important “triggers” for the perpetration of aggression (e.g., having an argument with someone, feeling provoked). Intriguingly, the Antagonism\*Intimacy interaction was positive for the community sample, but yielded a negative coefficient for the outpatient sample. It might be that the relation of Antagonism with physical aggression

is more pronounced at low-moderate levels of Intimacy impairment (like what would be found in community participants or less impaired outpatients). Additionally, perhaps highly antagonistic patients with high Intimacy impairment tend to be more socially withdrawn, which in turn reduces “aggression opportunities.” On the contrary, it might be that some antagonistic patients involved in a love relationship—which could indicate some degree of Intimacy functioning—are more prone to IPV since they have a more “direct access” to a victim. This counterintuitive result is somewhat compatible with the DSM-5 AMPD antisocial PD diagnosis\*psychopathy specifier interactions that were reported for the prediction of dysfunctional outcomes (Miller et al., 2018); indeed, three out of four of the significant interactions reported had a negative coefficient, one of which being for the statistical prediction of proactive (premeditated, goal-directed) aggression.

Another observation is that the size of the statistically significant interactions reported was higher for the outpatient (1.1–1.9%) than the community sample (0.4–0.8%). Personality dysfunction and traits also accounted for more explained variance in the former sample (up to 29%) than in the latter (17–19%), when looking at main effects. Aggression is an extremely complex, multidetermined phenomenon (J. J. Allen et al., 2018), and the importance of each factor likely varies depending on the population of reference. It might be that, among personality disordered patients, dysfunction and pathological traits (including their interactions) are more elevated and account for more variance for some outcomes (e.g., aggression), thus supplanting other factors that could otherwise play a more important role in the general population (e.g., neighborhood,

socioeconomic status). Indeed, since a categorical PD diagnosis is a risk factor for violence (Yu et al., 2012), it would lend support to the hypothesis that personality and aggression share more variance in PD samples. Nonetheless, in both clinical and nonclinical populations, even small-size effects are important to consider when it comes to aggression, considering its multicausal origin and high societal impact (Hyatt et al., 2020). In an assessment context, in addition to taking into account a patient or inmate's general traits (as suggested by Dunne et al., 2018), the level of personality impairment might add precision to the risk a clinician would attribute to that individual. When placed in the broader AMPD/ICD-11 literature, the present results support the idea that the field could benefit from a more systematic investigation of interactions.

The two scoring methods globally generated similar interactions, with a slight advantage for Krueger et al.'s algorithms (for which two additional interactions were found in the community sample). This might suggest that the absence of some key facets in APA's method (e.g., Hostility, Risk Taking) makes it a less ideal procedure to study aggression. The size of the interaction terms (i.e., explained variance) was very similar, though. In all cases, the scope of our conclusions is therefore strengthened, given that the presence (or absence) of significant interactions was not simply an artifact of an arguably suboptimal scoring method for the specific application under investigation.

When considering the interaction effects (i.e., the addition of explained variance of significant interactions), it is not clear if a total score vs. four-element personality

dysfunction structure is optimal (in the case of the AMPD); indeed, both generated statistically significant interaction effects of comparable size. However, it must be noted that, when examining main effects (see Tables 2 and 3), results were less consistent. The Total score was significant for the community sample but not for the outpatients, while both had at least one statistically significant AMPD Criterion A element, suggesting an advantage of the four-factor structure over the single-factor structure in the latter sample (even with the use of the Predicted  $R^2$ , which prevents overfitting). In addition, as expected, outpatients and community participants with more Empathy impairment were more likely to commit physical aggression; on the other hand, outpatients (but not community participants) with more Identity impairment were less likely to do so.

When considering the trait regression weights, our results make clear that the scoring procedure used and the other predictors inserted into the model have an important impact on the significance level for traits (especially for outpatients), at least for main effects. Disinhibition and Psychoticism (and Antagonism, for community participants) were the most robust and consistent predictors, but Detachment and Negative Affectivity (low) also emerged as significant in at least one model. Taken as a whole, the present results are partly compatible with Dunne et al.'s (2021), Dowgwillo et al.'s (2016), and Sleep et al.'s (2018) results. In the present study, the discrepancies found across models, in terms of statistically significant traits, might shed some light on the inconsistencies of past research, as even small modifications (e.g., the scoring procedure for traits) led to divergent results; thus, additionally changing the population of reference (general

population vs. inmates vs. psychiatric patients vs. IPV perpetrators) or the instruments used (e.g., full vs. brief PID-5) will likely affect the associations.

Nonetheless, the present study was the first to highlight the significant role of Psychoticism as a predictor (in both the community and the outpatient samples). Psychoticism might notably capture the transient psychotic symptoms (e.g., paranoid ideation) and/or dissociative symptoms present in some individuals with borderline PD (Bach et al., 2020). In addition, Psychoticism was moderated by personality dysfunction (Intimacy, Total score) in the community sample. Of note, interpreting this interaction is complicated considering that the placement of Psychoticism itself within emergent PD models is contentious. In the AMPD, Psychoticism was assigned to Criterion B as a trait, breaking with the psychodynamic tradition of personality organization models (Caligor et al., 2018; Lingardi & McWilliams, 2017), in which reality testing impairment represents a structural element, much like identity or interpersonal/object relations, that contributes to determine the level of personality pathology. In the ICD-11, however, Psychoticism (or schizotypy) is not included in the PD model, since its constituting features are assigned to the Schizophrenia and other primary psychotic disorders category; some psychotic-like symptoms are included in the general PD definition, but it does not correspond to Psychoticism proper, as such symptoms must be associated with situations of high affective arousal (Bach et al., 2020). The present results might fuel further reflection on this topic, for both the AMPD and the ICD-11.

## Limitations

First, even if the study had strong statistical power, especially for the community sample (e.g., effects sizes in the  $< 1\%$  range could be detected), it cannot be ruled out that the high number of interaction models tested increased Type I error. Since this was the first study probing interactions in the prediction of aggression, however, a confirmatory approach restricting analyses to a few models or setting a more conservative  $\alpha$  level did not appear optimal at this time. As an initial step, a more flexible approach allowing testing for multiple combinations seemed justifiable in the absence of specific hypotheses pertaining to significant interactions or effect sizes. Still, some methodological considerations and results might partially mitigate those concerns, since some interactions were reported in both samples (e.g., Empathy\*Disinhibition, Intimacy\*Antagonism) and some results in the community sample reached a more conservative significance threshold (i.e.,  $p < .01$ ; e.g., Total score\*Antagonism, Empathy\*Detachment). The theoretical soundness (e.g., in line with psychodynamic models such as Kernberg's, more personality pathology moderated the effect of traits on aggression [in all but one model]) and overall consistency of results (e.g., the interpersonal component of dysfunction is at the core of all significant interactions, in both samples) also mitigates concerns of Type I error. Second, our results could not generate a very precise causal sequence for two reasons: we used a cross-sectional design and the BPAQ-SF Physical Aggression subscale is a broad and nonspecific measure of perpetrated aggressions (e.g., it does not offer specific information pertaining to frequency or severity of aggression). Finally, the monomethod



design (e.g., the absence of informant-report or behavioral data regarding aggression) also limits the scope of our conclusions.

### **Future directions**

It would be important to identify the interaction of personality dysfunction and specific trait facets (in the case of the AMPD). Since interactions were not studied before, it seemed parsimonious and compatible with the ICD-11 (which does not have facets) to start with domains; future research could narrow down to important facets using more specific hypotheses based on previous research (e.g., Dunne et al., 2018; e.g., Hostility and Risk Taking could be especially predictive in patients with high personality impairment). In addition, it would be relevant to identify if dysfunction\*trait interactions can be used as prognostic factors for clinical purposes (e.g., violent, disinhibited patients with high personality impairment could be less responsive to treatment than their low personality impairment counterparts). Finally, identifying interactions through a multimethod design would be highly relevant.

### **Conclusion**

The main result of this study is that some small-size dysfunction\*trait interaction effects were found in the statistical prediction of aggression. The results have the potential to be useful and informative to both ICD-11 and AMPD researchers and clinicians. A major strength of this study is the use of two samples, including an appreciably large sample of outpatients with PD, which adds substantially to the robustness and

generalizability of conclusions. These results suggest that interaction analyses might further inform, to some degree, about the contentious discussion pertaining to the potential redundancy between dysfunction and traits, the optimal AMPD Criterion A structure, as well as clinical assessment based on AMPD/ICD-11 PD frameworks.

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**Ethics approval:** The study was ethically approved by the Université du Québec à Trois-Rivières, the Université Laval, the Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale [Integrated University Health and Social Services Center of the Capitale-Nationale] Sectoral Research Ethics Committee in Neurosciences and Mental Health. Procedures were in accordance with the 1964 Helsinki declaration and its subsequent revisions and amendments, or comparable ethical guidelines. Written consent was obtained from every patient prior to the use of their data; provision of clinical services was not contingent upon patients’ decision to grant this access.

**Author Contribution:** **PL:** study concept and design, statistical analyses, initial draft. **CS:** data acquisition, obtained funding, review. **DDV:** review. **JF:** data acquisition, review. **MP:** data acquisition, review. **ML:** data acquisition, review. **MT:** data acquisition, obtained funding. **DG:** study concept and design, obtained funding, review.

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## References

- Allen, D. M. (1974). The relationship between variable selection and data augmentation and a method for prediction. *Technometrics*, *16*(1), 125-127. <https://doi.org/10.1080/00401706.1974.10489157>
- Allen, J. J., Anderson, C. A., & Bushman, B. J. (2018). The general aggression model. *Current Opinion in Psychology*, *19*(1), 75-80. <https://doi.org/10.1016/j.copsyc.2017.03.034>
- American Psychiatric Association. (APA, 2013). *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Bach, B., & First, M. B. (2018). Application of the ICD-11 classification of personality disorders. *BMC Psychiatry*, *18*(1), Article 351. <https://doi.org/10.1186/s12888-018-1908-3>
- Bach, B., Kerber, A., Aluja, A., Bastiaens, T., Keeley, J. W., Claes L., Fossati, A., Gutierrez, F., Oliveira, S. E. S., Pires, R., Riegel, K. D., Rolland, J.-P., Roskam, I., Sellbom, M., Somma, A., Spanemberg, L., Strus, W., Thimm, J. C., Wright, A. G. C., & Zimmermann, J. (2020). International assessment of DSM-5 and ICD-11 personality disorder traits: Toward a common nosology in DSM-5.1. *Psychopathology*, *53*(1), 179-188. <https://doi.org/10.1159/000507589>
- Bach, B., & Simonsen, S. (2021). How does level of personality functioning inform clinical management and treatment? Implications for ICD-11 classification of personality disorder severity. *Current Opinion in Psychiatry*, *34*(1), 54-63. <https://doi.org/10.1097/ycp.0000000000000658>
- Benzi, I. M. A., Preti, E., Di Pierro, R., Clarkin, J. F., & Madeddu, F. (2019). Maladaptive personality traits and psychological distress in adolescence: The moderating role of personality functioning. *Personality and Individual Differences*, *140*(1), 33-40. <https://doi.org/10.1016/j.paid.2018.06.026>
- Bryant, F. B., & Smith, B. D. (2001). Refining the architecture of aggression: A measurement model for the Buss-Perry Aggression Questionnaire. *Journal of Research in Personality*, *35*(2), 138-167. <https://doi.org/10.1006/jrpe.2000.2302>
- Buer Christensen, T., Eikenaes, I., Hummelen, B., Pedersen, G., Nysæter, T.-E., Bender, D. S., Skodol, A. E., & Selvik, S. G. (2020). Level of personality functioning as a predictor of psychosocial functioning—Concurrent validity of criterion A. *Personality Disorders: Theory, Research, and Treatment*, *11*(2), 79-90. <https://doi.org/10.1037/per0000352>

- Buss, A. H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459. <https://doi.org/10.1037/0022-3514.63.3.452>
- Caligor, E., Kernberg, O. F., Clarkin, J. F., & Yeomans, F. E. (2018). *Psychodynamic therapy for personality pathology: Treating self and interpersonal functioning*. American Psychiatric Publishing.
- Darlington, R. B., & Hayes, A. F. (2016). *Regression analysis and linear models: Concepts, applications, and implementation*. Guilford.
- Dowgwillo, E. A., Ménard, K. S., Krueger, R. F., & Pincus, A. L. (2016). DSM-5 pathological personality traits and intimate partner violence among male and female college students. *Violence and Victims*, 31(3), 416-437. <https://doi.org/10.1891/0886-6708.VV-D-14-00109>
- Dunne, A. L., Gilbert, F., & Daffern, M. (2018). Investigating the relationship between DSM-5 personality disorder domains and facets and aggression in an offender population using the Personality Inventory for the DSM-5. *Journal of Personality Disorders*, 32(5), 668-693. [https://doi.org/10.1521/pedi\\_2017\\_31\\_322](https://doi.org/10.1521/pedi_2017_31_322)
- Dunne, A. L., Trounson, J., Skues, J., Pfeifer, J., Ogloff, J., & Daffern, M. (2021). The Personality Inventory for DSM-5-Brief Form: An examination of internal consistency, factor structure, and relationship to aggression in an incarcerated offender sample. *Assessment*, 28(1), 1136-1146. <https://doi.org/10.1177/1073191120916790>
- Durand, C. P. (2013). Does raising type 1 error rate improve power to detect interactions in linear regression models? A simulation study. *PLoS One*, 8, Article e71079. <https://doi.org/10.1371/journal.pone.0071079>
- Gamache, D., Savard, C., Leclerc, P., & Côté, A. (2019). Introducing a short self-report for the assessment of DSM-5 level of personality functioning for personality disorders: The Self and Interpersonal Functioning Scale. *Personality Disorders: Theory, Research, and Treatment*, 10(5), 438-447. <https://doi.org/10.1037/per0000335>
- Gamache, D., Savard, C., Leclerc, P., Payant, M., Berthelot, N., Côté, A., Faucher, J., Lampron, M., Lemieux, R., Mayrand, K., Nolin, M.-C., & Tremblay, M. (2021). A proposed classification of ICD-11 severity degrees of personality pathology using the Self and Interpersonal Functioning Scale. *Frontiers in Psychiatry*, 12, Article 292. <https://doi.org/10.3389/fpsy.2021.628057>

- Gamache, D., Savard, C., Lemieux, R., & Berthelot, N. (2022). Impact of level of personality pathology on affective, behavioral, and thought problems in pregnant women during the coronavirus disease 2019 pandemic. *Personality Disorders: Theory, Research, and Treatment*, 13(1), 41-51. <https://doi.org/10.1037/per0000479>
- Genoud, P., & Zimmermann, G. (2009). *French version of the 12-item Aggression Questionnaire. Preliminary psychometric properties*. [https://www3.unifr.ch/cerf/fr/assets/public/pdf/pages%20personnelles/Genoud%20Philippe/2009\\_SSP.pdf](https://www3.unifr.ch/cerf/fr/assets/public/pdf/pages%20personnelles/Genoud%20Philippe/2009_SSP.pdf)
- Hopwood, C. J., Kotov, R., Krueger, R. F., Watson, D., Widiger, T. A., Althoff, R. R., Ansell, E. B., Bach, B., Bagby, R. M., Blais, M. A., Bornovalova, M. A., Chmielewski, M., Cicero, D. C., Conway, C., De Clercq, B., De Fruyt, F., Docherty, A. R., Eaton, N. R., Edens, J. F., ... Zimmermann, J. (2018). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health*, 12(1), 82-86. <https://doi.org/10.1002/pmh.1408>
- Hummelen, B., Braeken, J., Buer Christensen, T., Nysaeter, T. E., Germans Selvik, S., Walther, K., Pedersen, G., Eikenaes, I., & Paap, M. C. S. (2020). A psychometric analysis of the Structured Clinical Interview for the DSM-5 Alternative Model for Personality Disorders Module I (SCID-5-AMPD-I): Level of Personality Functioning Scale. *Assessment*, 28(5), 1320-1333. <https://doi.org/10.1177/1073191120967972>
- Hyatt, C. S., Chester, D. S., Zeichner, A., & Miller, J. D. (2020). Facet-level analysis of the relations between personality and laboratory aggression. *Aggressive Behavior*, 46(3), 266-277. <https://doi.org/10.1002/ab.21887>
- Hyatt, C. S., Sleep, C. E., Weiss, B. M., & Miller, J. D. (2018). Personality and aggression: A general trait perspective. In A. T. Vazsonyi, D. J. Flannery, & M. DeLisi (Eds.), *The Cambridge handbook of violent behavior and aggression* (2<sup>nd</sup> ed., pp. 221-238). Cambridge University Press. <https://doi.org/10.1017/9781316847992.014>
- Iacobucci, D., Schneider, M. J., Popovich, D. L., & Bakamitsos, G. A. (2016). Mean centering helps alleviate "micro" but not "macro" multicollinearity. *Behavior Research Methods*, 48(4), 1308-1317. <https://doi.org/10.3758/s13428-015-0624-x>
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, 42(9), 1879-1890. <https://doi.org/10.1017/S00332917111002674>
- Lingiardi, V., & McWilliams, N. (Eds.). (2017). *Psychodynamic diagnostic manual: PDM-2* (2<sup>nd</sup> ed.). Guilford.

- Maples, J. L., Carter, N. T., Few, L. R., Crego, C., Gore, W. L., Samuel, D. B., Williamson, R. L., Lynam, D. R., Widiger, T. A., Markon, K. E., Krueger, R. F., & Miller, J. D. (2015). Testing whether the DSM-5 personality disorder trait model can be measured with a reduced set of items: An item response theory investigation of the Personality Inventory for DSM-5. *Psychological Assessment, 27*(4), 1195-1210. <https://doi.org/10.1037/pas0000120>
- McCabe, G. A., & Widiger, T. A. (2020). A comprehensive comparison of the ICD-11 and DSM-5 section III personality disorder models. *Psychological Assessment, 32*(1), 72-84. <https://doi.org/10.1037/pas0000772>
- Meehan, K. B., Siefert, C., Sexton, J., & Huprich, S. K. (2019). Expanding the role of levels of personality functioning in personality disorder taxonomy: Commentary on "Criterion A of the AMPD in HiTOP". *Journal of Personality Assessment, 101*(4), 367-373. <https://doi.org/10.1080/00223891.2018.1551228>
- Miller, J. D., Lamkin, J., Maples-Keller, J. L., Sleep, C. E., & Lynam, D. R. (2018). A test of the empirical profile and coherence of the DSM-5 psychopathy specifier. *Psychological Assessment, 30*(7), 870-881. <https://doi.org/10.1037/pas0000536>
- Morey, L. C. (2017). Development and initial evaluation of a self-report form of the DSM-5 Level of Personality Functioning Scale. *Psychological Assessment, 29*(10), 1302-1308. <https://doi.org/10.1037/pas0000450>
- Morey, L. C. (2019). Thoughts on the assessment of the DSM-5 Alternative Model for Personality Disorders: Comment on Sleep et al. (2019). *Psychological Assessment, 31*(10), 1192-1199. <https://doi.org/10.1037/pas0000710>
- Mundfrom, D. J., Perrett, D., Schaffer, J., Piccone, A., & Roozeboom, M. (2006). Bonferroni, adjustments in tests for regression coefficients. *Multiple Linear Regression Viewpoints, 32*(1), 1-6.
- Munro, O. E., & Sellbom, M. (2020). Elucidating the relationship between borderline personality disorder and intimate partner violence. *Personality and Mental Health, 14*(3), 284-303. <https://doi.org/10.1002/pmh.1480>
- Roskam, I., Galdiolo, S., Hansenne, M., Massoudi, K., Rossier, J., Gicquel, L., & Rolland, J.-P. (2015). The psychometric properties of the French version of the Personality Inventory for DSM-5. *PLoS One, 10*, Article e0133413. <https://doi.org/10.1371/journal.pone.0133413>



- Sexton, J., Hilton, M., Benson, S., & Rosen, A. (2019). Exploring Kernberg's model of personality functioning as a moderator of traits: Focus on DSM-5's Section III Alternative Model of Personality Disorder. *Journal of the American Psychoanalytic Association, 67*(6), 1047-1055. <https://doi.org/10.1177/0003065119898772>
- Siefert, C. J., Sexton, J., Meehan, K., Nelson, S., Haggerty, G., Dauphin, B., & Huprich, S. (2019). Development of a short form for the DSM-5 levels of personality functioning questionnaire. *Journal of Personality Assessment, 102*(4), 516-526. <https://doi.org/10.1080/00223891.2019.1594842>
- Sleep, C. E., Hyatt, C. S., Lamkin, J., Maples-Keller, J. L., & Miller, J. D. (2018). Examining the relations among the DSM-5 Alternative Model of personality, the Five-Factor Model, and externalizing and internalizing behavior. *Personality Disorders: Theory, Research, and Treatment, 9*(4), 379-384. <https://doi.org/10.1037/per0000240>
- Sleep, C. E., Lynam, D. R., Widiger, T. A., Crowe, M. L., & Miller, J. D. (2019). Difficulties with the conceptualization and assessment of Criterion A in the DSM-5 Alternative Model of Personality Disorder: A reply to Morey (2019). *Psychological Assessment, 31*(1), 1200-1205. <https://doi.org/10.1037/pas0000758>
- Tyrer, P., Mulder, R., Kim, Y.-R., & Crawford, M. J. (2019). The development of the ICD-11 classification of personality disorders: An amalgam of science, pragmatism, and politics. *Annual Review of Clinical Psychology, 15*(1), 481-502. <https://doi.org/10.1146/annurev-clinpsy-050718-095736>
- Verheul, R., Andrea, H., Berghout, C. C., Dolan, C., Busschbach, J. J. V., van der Kroft, P. J. A., Bateman, A. W., & Fonagy, P. (2008). Severity Indices of Personality Problems (SIPP-118): Development, factor structure, reliability, and validity. *Psychological Assessment, 20*(1), 23-34. <https://doi.org/10.1037/1040-3590.20.1.23>
- Watters, C. A., Sellbom, M., & Bagby, R. M. (2019). Comparing two domain scoring methods for the Personality Inventory for DSM-5. *Psychological Assessment, 31*(1), 1125-1134. <https://doi.org/10.1037/pas0000739>
- Waugh, M. H., McClain, C. M., Mariotti, E. C., Mulay, A. L., DeVore, E. N., Lenger, K. A., Russell, A. N., Florimbio, A. R., Lewis, K. C., Ridenour, J. M., & Beevers, L. G. (2020). Comparative content analysis of self-report scales for level of personality functioning. *Journal of Personal Assessment, 103*(1), 161-173. <https://doi.org/10.1080/00223891.2019.1705464>

- Weekers, L. C., Hutsebaut, J., & Kamphuis, J. H. (2019). The Level of Personality Functioning Scale-Brief Form 2.0: Update of a brief instrument for assessing level of personality functioning. *Personality and Mental Health, 13*(1), 3-14. <https://doi.org/10.1002/pmh.1434>
- Yu, R., Geddes, J. R., & Fazel, S. (2012). Personality disorders, violence, and antisocial behavior: A systematic review and meta-regression analysis. *Journal of Personality Disorders, 26*(1), 775-792. <https://doi.org/10.1521/pedi.2012.26.5.775>
- Zimmermann, J., Kerber, A., Rek, K., Hopwood, C. J., & Krueger, R. F. (2019). A brief but comprehensive review of research on the Alternative DSM-5 Model for Personality Disorders. *Current Psychiatry Reports, 21*(9), Article 92. <https://doi.org/10.1007/s11920-019-1079-z>
- Zimmermann, J., Müller, S., Bach, B., Hutsebaut, J., Hummelen, B., & Fischer, F. (2020). A common metric for self-reported severity of personality disorder. *Psychopathology, 53*(1), 168-178. <https://doi.org/10.1159/000507377>

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**Appendix**  
Supplemental Materials

**Table S1**

*Descriptive statistics, internal consistency indices, and bivariate zero-order Pearson correlations between personality dysfunction and traits with physical aggression—outpatient with personality disorder sample (N = 285)*

Variables	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis	$\alpha$	Physical aggression	
								<i>r</i>	<i>p</i>
Physical aggression	2.54	1.61	1.00	6.00	0.87	-0.51	.86	–	–
Personality dysfunction									
Identity	2.56	0.71	0.57	4.00	-0.38	-0.30	.66	<b>.05</b>	.408
Self-direction	1.98	0.84	0.20	4.00	0.14	-0.56	.68	<b>.33</b>	< .001
Empathy	1.44	0.83	0.00	3.80	0.45	-0.40	.66	<b>.43</b>	< .001
Intimacy	1.74	0.88	0.00	4.00	0.25	-0.47	.72	<b>.23</b>	< .001
Total	1.97	0.61	0.26	3.65	-0.07	-0.14	.84	<b>.33</b>	< .001
Personality traits (APA's)									
Negative Affectivity	1.89	0.61	0.08	3.00	-0.51	-0.10	.85	<b>.15</b>	.011
Detachment	1.44	0.63	0.00	3.00	-0.05	-0.46	.85	<b>.14</b>	.021
Antagonism	0.66	0.60	0.00	2.83	1.01	0.29	.90	<b>.33</b>	< .001
Disinhibition	1.49	0.61	0.00	3.00	-0.16	-0.42	.85	<b>.41</b>	< .001
Psychoticism	0.85	0.60	0.00	2.67	0.67	-0.07	.86	<b>.33</b>	< .001
Personality traits (Krueger's)									
Negative Affectivity	1.72	0.46	0.43	2.82	-0.26	-0.28	.87	<b>.18</b>	.003
Detachment	1.42	0.57	0.00	2.95	-0.10	-0.24	.89	<b>.21</b>	< .001
Antagonism	0.75	0.57	0.00	2.90	0.86	0.34	.92	<b>.37</b>	< .001
Disinhibition	1.41	0.47	0.20	2.90	0.00	0.01	.82	<b>.45</b>	< .001
Psychoticism	0.85	0.60	0.00	2.67	0.67	-0.07	.86	<b>.33</b>	< .001

*Note.* Significant correlations are **italicized and bolded**. For all variables, higher scores denote higher impairment/pathology/aggression. Measures used: Personality Inventory for DSM-5 Faceted Brief Form (personality traits); Short-Form Buss-Perry Aggression Questionnaire, Physical Aggression Subscale (physical aggression); Self and Interpersonal Functioning Scale (personality dysfunction). Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure.

**Table S2**

*Descriptive statistics, internal consistency indices, and bivariate zero-order Pearson correlations between personality dysfunction and traits with physical aggression—community sample (N = 995)*

Variables	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis	$\alpha$	Physical aggression	
								<i>r</i>	<i>p</i>
Physical aggression <sup>a</sup>	1.41	.63	0.30	1.00	1.39	1.18	.61	–	–
Personality dysfunction									
Identity	1.39	1.02	0.00	4.00	0.63	-0.56	.88	<b>.23</b>	< .001
Self-direction	0.92	0.76	0.00	3.60	0.98	0.48	.80	<b>.28</b>	< .001
Empathy	0.68	0.59	0.00	3.40	1.19	1.57	.67	<b>.34</b>	< .001
Intimacy	0.91	0.82	0.00	3.80	0.85	0.06	.78	<b>.24</b>	< .001
Total	0.98	0.64	0.05	3.30	0.80	0.11	.90	<b>.33</b>	< .001
Personality traits (APA's)									
Negative Affectivity	1.13	0.59	0.00	2.92	0.27	-0.51	.88	<b>.21</b>	< .001
Detachment	0.79	0.55	0.00	2.83	0.65	0.04	.87	<b>.22</b>	< .001
Antagonism	0.48	0.40	0.00	1.92	0.99	0.61	.83	<b>.31</b>	< .001
Disinhibition	0.87	0.52	0.00	2.50	0.40	-0.33	.87	<b>.29</b>	< .001
Psychoticism	0.55	0.51	0.00	2.25	0.87	-0.02	.87	<b>.33</b>	< .001
Personality traits (Krueger's)									
Negative Affectivity	1.08	0.48	0.00	2.57	0.17	-0.40	.89	<b>.25</b>	< .001
Detachment	0.70	0.49	0.00	2.80	0.72	0.18	.90	<b>.28</b>	< .001
Antagonism	0.53	0.37	0.00	1.85	0.74	0.23	.87	<b>.32</b>	< .001
Disinhibition	0.89	0.45	0.00	2.44	0.32	0.02	.79	<b>.30</b>	< .001
Psychoticism	0.55	0.51	0.00	2.25	0.87	-0.02	.87	<b>.33</b>	< .001

*Note.* Significant correlations are **italicized and bolded**. For all variables, higher scores denote higher impairment/pathology/aggression. Measures used: Personality Inventory for DSM-5 Faceted Brief Form (personality traits); Short-Form Buss-Perry Aggression Questionnaire, Physical Aggression Subscale (physical aggression); *Self and Interpersonal Functioning Scale* (personality dysfunction). Abbreviations: APA's = American Psychiatric Association's three facets per domain scoring procedure; Krueger's = Krueger et al.'s algorithms scoring procedure.

<sup>a</sup>Logarithmically transformed to improve univariate normality and reduce residuals.

**Article scientifique 3**

Associations between the Personality Inventory for DSM-5 trait facets and aggression among outpatients with personality disorder: A multimethod study

**Associations between the Personality Inventory for DSM-5 Trait Facets and Aggression among Outpatients with Personality Disorder: A Multimethod Study**

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**Associations between the Personality Inventory for DSM-5 Trait Facets and  
Aggression among Outpatients with Personality Disorder: A Multimethod Study**

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**Highlights**

- Multimethod replication was attained for trait facets associated with aggression.
- Moderation analyses revealed few women-men differences among significant facets.
- Women-men discrepancies were most obvious in their amount of explained variance.
- The most important trait facets were Hostility, Risk Taking, and Callousness.

### Abstract

**Background.** Most research on the Personality Inventory for *DSM-5* (PID-5) was conducted with self-reports. One of the specific areas for which a multimethod design has yet to be implemented is for the PID-5's associations with aggression. The main objectives of this study were to (a) compare the PID-5 associations with self-reported and file-rated aggression, (b) compare these associations between women and men, and (c) identify the relative importance of PID-5 facet predictors. **Methods.** A sample of outpatients with personality disorder ( $N = 285$ ) was recruited in a specialized public clinic to complete questionnaires, and a subsample was assessed for file-rated aggression ( $n = 227$ ). Multiple regression analyses were performed with PID-5 facets as statistical predictors but using distinct operationalizations of aggression (self-reported vs. file-rated). Moderation analyses were performed to identify the moderating effect of biological sex. Dominance analyses were computed to identify the relative importance of predictors. **Results.** PID-5 facet predictors of self-reported and file-rated aggression were very consistent in both conditions. However, the amount of explained variance was reduced in the latter case (from 39% to 14%), especially for women (from 40% to 2%). The most important predictors were Hostility, Risk Taking, and Callousness. **Conclusion.** Pertaining to the statistically significant facets associated with aggression, strong evidence of multimethod replication was found. The women-men discrepancies were not most obvious in their specific associations with aggression, but rather in their amount of explained variance,

maybe reflecting examiners' or patients' implicit biases, and/or different manifestations of aggression between women and men.

**Keywords:** Alternative Model for Personality Disorders; Personality Inventory for *DSM-5*; personality disorders; aggression; multimethod assessment; dominance analysis.

## Introduction

### The Alternative Model for Personality Disorders

In Section III of the *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.) (DSM-5; American Psychiatric Association [APA], 2013), the *Alternative Model for Personality Disorders* (AMPD) was introduced as a candidate to replace the categorical classification for personality disorders (PDs). Its hybrid categorical-dimensional design seeks to build on current knowledge about personality, improve the utility of diagnoses, and mitigate some of the shortcomings associated with the current approach to classifying PDs (e.g., poor reliability, heterogenous clinical presentations, high comorbidity rates, Hopwood et al., 2018). The dimensional core of the AMPD resides in two criteria. Criterion A captures general, personality-based impairment pertaining to self (Identity, Self-Direction) and interpersonal (Empathy, Intimacy) functioning and is the basis to decide whether a patient qualifies for a formal PD diagnosis. Criterion B—the focus of this study—is based on a hierarchical model of personality that mostly taps into extreme, maladaptive variants of the Five-Factor Model (FFM) traits (Krueger & Hobbs, 2020). These traits include 25 maladaptive facets grouped into five higher-order domains: Negative Affect, Detachment, Antagonism, Disinhibition, and Psychoticism.

Criterion B can be assessed using the Personality Inventory for *DSM-5* (PID-5; Krueger et al., 2012), a 220-item self-report officially copyrighted by the APA. It has been the object of numerous studies, translated into several languages, and has shown sound psychometric properties (for a review, see Zimmermann et al., 2019). Despite a

fast-growing evidence base, one of the main limitations of the AMPD literature is the paucity of multimethod studies (i.e., combining self-reports, interviews, informant reports, etc.), which is problematic since a single methodology (usually self-reports) might artificially “inflate validity estimates” via shared variance (Zimmermann et al., 2019, p. 7). This phenomenon is sometimes referred to as “criterion contamination” (Meyer et al., 2001).

### **Multimethod Assessment**

Multimethod assessment is a fundamental part of clinical practice, which allows to reduce sources of biases (for a thorough review, see Meyer et al., 2001). Thus, the relative absence of multimethod AMPD studies is particularly surprising considering the lingering concerns about self-other agreement in FFM (which is largely overlapping with the PID-5) (Krueger & Hobbs, 2020) and PD research. Some reviews suggest modest self-other agreement (e.g., Klonsky et al., 2002), some suggest that it depends on whether the bulk of the pathology is internalized and/or externalized (e.g., Carlson et al., 2013), while others suggest moderate agreement (e.g., Connolly et al., 2007; Kim et al., 2019). What seems consistent, though, is that different methods capture a nonnegligible amount of unique information not simply attributable to measurement error (Cruitt & Oltmanns, 2018; Meyer et al., 2001).

The same concerns hold true for self-other agreement about the disclosure of socially reprehensible acts, such as aggression, a field that has surprisingly been the object of a limited number of cross-method (rather than cross-instrument) studies among adults, with

few exceptions (e.g., Berlin et al., 2021; Lewis et al., 2021). In the AMPD field, the convergence between the PID-5 traits and different operationalizations of aggression, which would likely each capture unique information, remains unknown. Yet, identifying how the PID-5 relates to aggression (and to which parts of the construct) is important to identify its potential for assessing risk in practice.

### **Risk Assessment in a Therapeutic Setting**

In a therapeutic setting, pretreatment assessment notably aims to determine current functioning, clarify a diagnosis, and identify treatment goals (Meyer et al., 2001). In addition, estimating a patient's propensity toward aggression must be part of a clinician's ongoing reflection and assessment to ensure appropriate risk management, regardless of the setting (e.g., therapeutic, forensic, etc., Kivisto, 2016). Indeed, since all categorical DSM PD diagnoses represent risk factors for the perpetration of aggression (Yu et al., 2012), clinicians working with PD patients should continuously pay attention to this issue. In addition, aggression propensity seems to be an important prognostic factor, since it has been associated to early treatment drop-out (Gamache et al., 2018), which further underscores its relevance in practice. While clinicians working in the forensic field might have access to a plethora of instruments and information to assess risk, making it the focus of their assessment, so is not typically the case for clinicians working in general mental health or therapeutic settings (Kivisto, 2016). Therefore, accessible clinical indicators of aggression propensity from a broad personality measure such as the PID-5, which might

also inform treatment planning (e.g., by identifying potential treatment targets), might be valuable.

### **Aggression and the AMPD**

The existing AMPD-aggression literature has generally focused on identifying how PID-5 domains and facets relate to physical aggression (Dunne et al., 2018; Sleep et al., 2018; Somma et al., 2020), as well as to intimate partner violence (IPV; Dowgwillo et al., 2016; Munro & Sellbom, 2020). The importance of facet-level analysis was previously underscored (Dunne et al., 2018), like it has been before for the FFM (Jones et al., 2011), and PID-5 Hostility, Callousness, and Risk Taking seem to be the “key facets” involved in physical aggression, at least among male offenders (Dunne et al., 2020). The latter researchers concluded that the common variance among facets largely explains how the PID-5 statistically predicts aggression, which they interpret as symptomatic of a lack of PID-5 discriminant validity.

Additionally, research on IPV suggests differential sex effects, with some different domains and facets predicting IPV in women and men (Dowgwillo et al., 2016; Munro & Sellbom, 2020). However, these findings may or may not generalize to broader tendencies toward physical aggression outside the marital context. Further investigation of these differences is important considering that both aggression and personality are likely influenced by biological sex (e.g., Denson et al., 2018; Marsh et al., 2013), to a degree that led some researchers to call for a more “specific” study of aggression among women

(e.g., Denson et al., 2018; Hodgins, 2022). For instance, recent reviews have concluded that women could be as likely as men to commit aggression, but it might be manifested differently and cause less physical damage. Nevertheless, the aggression literature pertaining to women has substantially more empirical gaps (Denson et al., 2018; Hodgins, 2022).

One major limitation of previous AMPD-aggression (and AMPD-IPV) studies is an exclusive reliance on self-reports (Dowgillo et al., 2016; Dunne et al., 2018; Munro & Sellbom 2020; Sleep et al., 2018; Somma et al., 2020). Monomethod assessment might be biased because, for instance, in non-AMPD aggression research, self-reported aggression and file-rated aggression were unrelated (Lewis et al., 2021). To further complicate the matter, another multimethod study revealed that self-reported and clinician-rated aggression were strongly related, but both were only weakly related to official records of violent offenses (Berlin et al., 2021). From a conceptual point of view, monomethod research might lead to potentially exaggerated, or even flawed, conclusions. From a practical point of view, when clinical decision-making is at stake (e.g., estimating a patient's risk of harm to others), relying on biased research results might lead to dire consequences such as inappropriate management and treatment (Berlin et al., 2021). Therefore, multimethod replication seems important to improve the confidence that clinicians can put on PID-5 facets as indicators of aggression propensity.



### **The Present Study**

This multimethod, cross-sectional study has four objectives: (a) to replicate previously identified associations between the PID-5 and self-reported aggression (Dunne et al., 2018; Somma et al., 2020) among outpatients with personality disorder; (b) to cross-validate those associations with both self-reported and file-rated aggression; (c) to verify if those associations are comparable between women and men; and (d) to identify the relative importance of predictors. For objective (a), it is predicted that Hostility and Risk Taking will be significant predictors of self-reported aggression (based on Dunne et al., 2018), while prediction by Callousness is possible although uncertain (based on Somma et al., 2020). For objective (b), it is predicted that PID-5 associations should be more strongly related to self-reported aggression than file-rated aggression (since different methodologies usually lead to smaller correlations; e.g., Meyer et al., 2001). For objective (c), it is predicted that some differences among PID-5 facet predictors should emerge between women and men (based on IPV research; Dowgwillo et al., 2016; Munro & Sellbom, 2020). Objective (d) is in continuity with previous research (Dunne et al., 2020) that aimed at ranking predictors for practical considerations (e.g., facets associated with a higher risk). For instance, identifying which facets have the most crucial role in the prediction of physical aggression might help clinicians to have some sort of valuable clinical heuristic to use in their assessment. Dunne et al. (2020) already made a first most-welcome attempt to identify the importance of predictors by using a commonality analysis. In order to try to replicate Dunne et al.'s results, an analysis that is much more straightforward in interpretation is dominance analysis (detailed in the Methods section).

It is considered as one of the two best available techniques to compare predictors (along with relative weights; Johnson & Lebreton, 2004). Based on Dunne et al.'s results, it is predicted that dominance analysis should identify Hostility, Risk Taking, and Callousness as the most important (risk-increasing) facets in the statistical prediction of physical aggression.

## **Material and Methods**

### **Participants and Procedures**

A sample of outpatients with personality disorder ( $N = 289$ ) from a specialized public clinic was recruited between September 2017 and February 2020 in Quebec City, Canada, to complete a computer-based battery of self-reported questionnaires in the French language during intake; of that number, a subset ( $n = 228$ ) had accessible/sufficient file data to assess file-rated physical aggression. Some had a university degree (19%), were employed in a part- or full-time job (48%), and were married or in a relationship (37%). All participants had to be adults ( $\geq 18$  years old) and were referred to the clinic by a general physician or psychiatrist who identified at least one formal *DSM-5* Section II PD diagnosis. The intake procedure at the clinic includes a computer-based battery of self-report questionnaires along with a two-hour interview, which allowed confirming/reviewing referral diagnoses; a final diagnosis is then consensually determined by a team of six clinical psychologists during weekly meetings. The final list of *DSM-5* Section II PD diagnoses, which was available for 254 patients (87.9%), is the following: 65 narcissistic (22.5%), 48 borderline-narcissistic (i.e., comorbid borderline

and narcissistic PD diagnoses; 16.6%), 46 borderline (15.9%), 41 mixed (i.e., three or more comorbid PDs; 14.2%), 23 not otherwise specified (8.0%), 10 schizotypal (3.5%), six schizoid (2.1%), five syndromic (i.e., PD not the main diagnosis; 1.7%), four antisocial (1.4%), four histrionic (1.4%), and two paranoid (0.7%). All participants consented to grant access to their data for research purposes, which had no impact on provision of services. This research was approved by the Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale [Integrated University Health and Social Services Center of the Capitale-Nationale] Sectoral Research Ethics Committee in Neurosciences and Mental Health.

## **Measures**

### ***Self-Reported Traits***

The Personality Inventory for *DSM-5* Faceted Brief Form (PID-5-FBF; Maples et al., 2015) is a 100-item version of the original 220-item PID-5 (Krueger et al., 2012; French validation: Roskam et al., 2015) abbreviated using Item Response Theory. It is composed of 25 facets ( $\alpha = .67$  [Cognitive and Perceptual Dysregulation] to  $.91$  [Attention-Seeking]) regrouped into five domains: Negative Affect, Detachment, Antagonism, Disinhibition, and Psychoticism. The focus of this study will be put on facets, as recommended in PID-5 (Dunne et al., 2018) and FFM research (Jones et al., 2011). Items are rated on a four-point Likert scale (higher score means more trait pathology).

### ***Self-Reported Physical Aggression***

The Short-Form Buss-Perry Aggression Questionnaire (BPAQ-SF; Bryant & Smith, 2001; French validation: Genoud & Zimmermann, 2009) is a 12-item measure that assesses different components of aggression, i.e., Physical Aggression, Verbal Aggression, Anger, and Hostility, as well as a Total Score. It is a shortened, psychometrically enhanced, derivation of the 29-item version of the questionnaire (Buss & Perry, 1992). The focus of this study will be put on the Physical Aggression subscale ( $\alpha = .86$ ) since it is the outcome of interest (hereinafter referred to as “self-reported aggression”). Items are rated on a six-point Likert scale (higher score means more aggression).

### ***File-Rated Physical Aggression***

Patient files were reviewed by two authors of the present study (C. S., D. G.), who both have significant clinical experience with PD assessment and treatment (respectively 18 and 13 years). Both evaluators scored 25 randomly selected files and reached an almost perfect agreement (intra-class correlation = .992, range .981–.996). All other files were then reviewed by only one of the authors (D. G.). Most files contained at least one detailed evaluation report, which included information pertaining to numerous clinical indicators. One of the important admission criteria to the clinic is a risk of harm to self and others, which is consequently emphasized in clinicians’ intake assessment and systematically included in their evaluation report. To put things into context, the prospective patients included in the present study generally have a long history of psychiatric treatment, often

going back to their first years of adulthood. Therefore, the psychological report, written by a clinical psychologist after intake, is based on (a) a two-hour interview with the patient, but also, most of the times, (b) numerous previous psychiatric or psychological evaluation reports, and (c) progress notes from previous treatments. When the patient is known to have a criminal record, has a history of violence, and/or directly reports violence not previously documented in the file, the clinical psychologist has the possibility to (d) consult the patient's court register (called "*plumitif*", which contains court records in civil, criminal, and penal matters) through an organization that grants access to judicial information known as the Société québécoise d'information juridique (Quebec Legal Information Society) in the Province of Quebec. Detailed evaluation reports were missing from 58 files because either (a) prospective patients completed the first portion of the intake procedure from the clinic (i.e., self-report computerized questionnaires), but declined to go further in the admission process; or (b) the evaluation report had not been completed or archived. Both evaluators were blind as to PID-5-FBF and BPAQ-SF scores for all patients. Evaluators used a three-point scale to assess antecedents of violence, with scoring anchors inspired by the (Historical Clinical Risk Management-20, Version 3 (HCR-20<sup>V3</sup>; Douglas et al., 2013): *no prior physical violence* (0); *possible* (1), corresponding to rare or minor acts of physical violence (i.e., one or two minor acts of violence that did not cause or did not intend to cause serious injury); or *confirmed* (2), corresponding to repeated or severe acts of violence (i.e., at least three occurrences of minor acts, or one severe act causing or intended to cause injuries, or that led to hospitalization). Evaluators were allowed to score mid-points (i.e., 0.5 and 1.5).

### **Data Diagnostics and Analytic Strategy**

All data were checked to ensure adequate response patterns (e.g., absence of a repeated pattern of 4-3-2-1, suggesting random responding), to rule out protocols with missing data, and to ensure conformity with multivariate assumptions. Two participants had to be removed because of missing data. The rest of the dataset was complete and no protocol showed indices of inadequate responding. For the rest of the data diagnostics, even if their constitution overlap, the subsample with the self-reported aggression variable ( $n = 287$ ) and the subsample with the file-rated indicator variable ( $n = 228$ ) were the object of independent data analyses (i.e., an outlier or influential case for self-reported aggression was not necessarily an outlier or influential case for the analyses with file-rated aggression). To identify multivariate outliers, a series of Mahalanobis Distance tests ( $p < .001$ ) and influential case tests (e.g., Cook's Distance, DFBeta, etc.) were computed for each of the subsamples; this led to the complete elimination of one patient from all analyses, and three others for the self-reported aggression analyses (final sample:  $N = 285$ , 176 women,  $M_{\text{age}} = 33.71$  years old,  $SD = 10.55$ , 18–69 range). Analyses were conducted using IBM SPSS 28 (descriptive statistics, correlations, regressions, moderations), R 4.1.0 (dominance analyses), and ASA 1.0.0 (coefficient comparisons).

First, descriptive statistics, reliability indices (Cronbach's alphas), and group comparisons between women and men (with variance corrections, as well as bootstrapped bias-corrected and accelerated [BCa] 95% confidence intervals) were computed for each variable. Second, because some variables were not normally distributed, produced

outliers, and/or the size of subsample was small, Spearman bivariate correlations were computed between PID-5-FBF facets and each of the outcome variables. To guard against Type I error due to the high number of correlations tested, the  $\alpha$  level was lowered to .01 for the correlational analyses.

Third, a multiple regression model was computed for each of the two outcome variables (i.e., self-reported aggression and file-rated aggression). To avoid entering a disproportionate number of predictors in relation to sample size, because facets are known to share a lot of common variance (Dunne et al., 2020), and because the self-reported analysis is confirmatory and the file-rated analysis exploratory in nature, a subset of predictors had to be selected. More specifically, the selection was based on the significant Spearman correlation coefficients identified with the file-rated aggression variable (i.e., if the PID-5-FBF facet was significantly correlated [ $p < .01$ ] among females, males and/or the total subsample, it was included into the regression analyses). This yielded a consistent set of predictors for both outcome variables, thus facilitating multimethod comparisons. For all regression models, the Predicted  $R^2$  was computed manually based on the Prediction Sum-of-Squares (PRESS) statistic (Allen, 1974). In addition to being less influenced by the number of predictors inserted into the model (like the adjusted  $R^2$ ), it estimates the model's capacity to provide accurate predictions (instead of solely providing information about model fit) by removing each data point in the model and then re-estimating it with the predicted value.

Fourth, to test for the moderating effect of biological sex on the outcomes of interest (self-reported and file-rated physical aggression), a series of regression-based simple moderation analyses was computed with each facet as focal antecedent predictor and biological sex as moderator, for both outcome variables ([2 outcomes\*8 facets] = 16 models). In addition, for each model, the remaining facets were entered as covariates. The PROCESS macro for SPSS (Hayes, 2021) was used. Statistically significant moderation effects were plotted into a graph to support interpretation.

Fifth, to identify the relative importance of significant predictors, a dominance analysis was computed (Azen & Budescu, 2003). It is deemed a rigorous and straightforward way to identify the relative importance of predictors (Johnson & Lebreton, 2004). The particularity of dominance analysis, in comparison with other indices (e.g., standardized regression coefficients), is that it identifies the  $R^2$  change created by each predictor in the analysis and/or how much it reduces the error of estimation while taking out each predictor of the model individually.<sup>1</sup> The relevance of this technique is notably to rank a set of predictors or to determine the most prominent predictor from a given model (Azen & Budescu, 2003). More specifically, a series of quantitative dominance analyses was computed with the “dominanceanalysis” package for R (Bustos Navarrete & Coutinho Soares, 2020). To simplify the comparisons between women and men, six

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<sup>1</sup> The focus will be put on “general dominance weights” (or “contribution averages”), that is, on the average  $R^2$  contribution of each predictor across all nested subsets. Accordingly, one predictor is said to be more “dominant” than another if it makes a more substantial contribution to the model. General dominance weights can be summed up to the full model  $R^2$ , yielding a straightforward interpretation (i.e., the predictor with the highest average contribution is considered the most important predictor; Azen & Budescu, 2003).



subgroups were created (one for women/men/total samples, with both the self-reported and the file-rated variables).

Finally, a test of difference in explained variance for independent samples with confidence intervals was computed (Olkin & Finn, 1995) on the Predicted  $R^2$  to determine if there was a statistically significant difference between women and men (for both the self-reported and file-rated coefficients). This test determines whether the coefficient differs in two populations when inserting the same predictors and predicted variable into the model. The analyses were computed on the female and male subgroups, for both methods (self-reported and file-rated aggression). Variance-stabilizing transformation indices ( $z^*$ ) were also computed, which are similar to Fisher's  $z$  (Olkin & Finn, 1995).

## Results

First, descriptive statistics, group comparisons, and reliability indices are provided as supplemental material (see Table S1). Second, bivariate Spearman correlations between the PID-5-FBF traits and aggression are presented in Table 1. Self-reported and file-rated aggression showed moderate-high correlations ( $r_s = .45-.46$ ; BCa 95%  $CI_{\text{Total Sample}} [.34, .56]$ ). The triad composed of Callousness, Hostility, and Risk Taking was significantly associated with both measures of aggression (except Risk Taking with file-rated aggression among women).

**Table 1**

*Bivariate Spearman Correlations for the PID-5-FBF Facets with Self-Reported and File-Rated Physical Aggression (N = 285)*

Variables	Females				Males				Total			
	Self-reported (n = 174)		File-rated (n = 144)		Self-reported (n = 109)		File-rated (n = 83)		Self-reported (n = 283)		File-rated (n = 227)	
	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>
<b>Aggression</b>												
Self-reported	–	–	<b>.45</b>	< .001	–	–	<b>.46</b>	< .001	–	–	<b>.46</b>	< .001
File-rated	–	–	–	–	–	–	–	–	–	–	–	–
<b>PID-5-FBF facets</b>												
Anhedonia	.00	.992	.06	.475	.19	.052	-.05	.672	.08	.203	.05	.462
Anxiousness	.04	.565	.01	.865	.04	.653	.02	.840	.03	.567	.02	.786
Attention-Seeking	<b>.24</b>	.002	.05	.585	<b>.30</b>	.002	<b>.32</b>	.003	<b>.26</b>	< .001	.14	.033
Callousness	<b>.43</b>	< .001	<b>.27</b>	< .001	<b>.36</b>	< .001	<b>.44</b>	< .001	<b>.40</b>	< .001	<b>.36</b>	< .001
Cog. and Perc. Dys.	<b>.26</b>	< .001	.06	.515	<b>.25</b>	.008	.10	.380	<b>.26</b>	< .001	.09	.189
Deceitfulness	<b>.34</b>	< .001	.05	.539	<b>.28</b>	.003	.21	.060	<b>.33</b>	< .001	.12	.065
Depressivity	.07	.370	.09	.297	.12	.204	-.13	.250	.10	.106	.03	.695
Distractibility	.19	.013	.06	.472	.17	.083	.08	.463	<b>.18</b>	.003	.06	.397
Eccentricity	<b>.30</b>	< .001	.11	.193	<b>.26</b>	.007	.06	.594	<b>.28</b>	< .001	.11	.106
Emotional Lability	.18	.019	.15	.070	.24	.011	.20	.075	<b>.19</b>	.001	.14	.041
Grandiosity	<b>.26</b>	< .001	.01	.934	<b>.34</b>	< .001	.21	.055	<b>.29</b>	< .001	.13	.060
Hostility	<b>.51</b>	< .001	<b>.34</b>	< .001	<b>.52</b>	< .001	<b>.35</b>	.001	<b>.51</b>	< .001	<b>.34</b>	< .001
Impulsivity	<b>.50</b>	< .001	<b>.25</b>	.003	<b>.37</b>	< .001	<b>.33</b>	.002	<b>.45</b>	< .001	<b>.28</b>	< .001
Intimacy Avoidance	.08	.327	.11	.184	.06	.561	-.03	.816	.08	.160	.07	.275

**Table 1**

*Bivariate Spearman Correlations for the PID-5-FBF Facets with Self-Reported and File-Rated Physical Aggression (N = 285) (continued)*

Variables	Females				Males				Total			
	Self-reported (n = 174)		File-rated (n = 144)		Self-reported (n = 109)		File-rated (n = 83)		Self-reported (n = 283)		File-rated (n = 227)	
	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>	<i>r<sub>s</sub></i>	<i>p</i>
PID-5-FBF facets (continued)												
Irresponsibility	<b>.36</b>	< .001	.02	.829	<b>.32</b>	< .001	.20	.077	<b>.35</b>	< .001	.08	.208
Manipulativeness	<b>.32</b>	< .001	.14	.102	<b>.31</b>	.001	<b>.29</b>	.007	<b>.32</b>	< .001	<b>.21</b>	.002
Perseveration	<b>.27</b>	< .001	.00	.986	.16	.092	.04	.720	<b>.23</b>	< .001	.02	.810
Restricted Affectivity	<b>.21</b>	.006	.08	.367	.15	.110	.13	.249	<b>.19</b>	.001	.12	.070
Rigid Perfectionism	-.03	.694	.02	.776	.21	.028	.17	.130	.05	.393	.04	.547
Risk Taking	<b>.45</b>	< .001	.21	.011	<b>.50</b>	< .001	<b>.45</b>	< .001	<b>.47</b>	< .001	<b>.31</b>	< .001
Separation Insecurity	.09	.233	-.10	.229	.11	.245	.08	.454	.09	.123	-.04	.589
Submissiveness	-.12	.129	-.12	.140	-.02	.880	-.22	.043	-.09	.133	<b>-.17</b>	.009
Suspiciousness	<b>.31</b>	< .001	.09	.290	<b>.45</b>	< .001	<b>.29</b>	.007	<b>.36</b>	< .001	<b>.18</b>	.006
Unusual B. and Exp.	<b>.29</b>	< .001	.10	.230	<b>.41</b>	< .001	.25	.025	<b>.34</b>	< .001	.17	.011
Withdrawal	.07	.372	.04	.602	<b>.25</b>	.008	.22	.042	.14	.020	.13	.048

*Note.* Statistically significant Spearman correlations ( $p < .01$ ) are in **bold**. The global sample ( $N = 285$ ) comprises all participants who were included at least for one of the analyses. For all variables, higher scores mean higher pathology/aggression. Self-reported aggression: Physical Aggression subscale of the Short-Form Buss-Perry Aggression Questionnaire. PID-5-FBF = Personality Inventory for DSM-5 Faceted Brief Form; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences.

The pattern of associations between self-reported aggression and facets was rather indiscriminate in general. On the contrary, the pattern of associations was much clearer (i.e., more discriminant) between file-rated aggression and facets. The pattern seemed to differ among women ( $r_s = .25$  [Impulsivity] to  $.34$  [Hostility]) and men ( $r_s = .29$  [Manipulativeness, Suspiciousness] to  $.45$  [Risk Taking]). Based on the facets significantly correlated with file-rated aggression (among females, males and/or the total subsample), the consistent set of facet predictors that was used for all subsequent regression-based analyses (i.e., multiple regression analyses, moderation analyses, dominance analyses) is the following: Attention-Seeking, Callousness, Hostility, Impulsivity, Manipulativeness, Risk Taking, Submissiveness, and Suspiciousness.

Third, multiple regression analyses with facets as predictors, including moderation analyses, are presented in Table 2. Callousness, Hostility, Risk Taking, and Submissiveness (negative predictor) were significant predictors of both self-reported ( $\beta = -.17-.36$ ) and file-rated aggression ( $\beta = -.16-.22$ ). In the prediction of self-reported aggression, Callousness was moderated by biological sex ( $\Delta R^2 = 1.1\%$ ); Callousness was significant among women ( $p = .002$ ), but not among men ( $p = .685$ ; see Figure S1). In the prediction of file-rated aggression, Risk Taking was moderated by biological sex ( $\Delta R^2 = 2.6\%$ ); that is, Risk Taking was significant among men ( $p = .001$ ), but not among women ( $p = .763$ ; see Figure S2).

Fourth, pertaining to the dominance analyses, general dominance weights are displayed in Table 3. When facets were entered as predictors of self-reported aggression,

Hostility was the most important predictor for all subgroups (i.e., with an  $R^2$  proportion of 28% for women, 32% for men, and 33% for the total sample, respectively). The most important predictor of file-rated physical aggression was again Hostility (40%) for women, but it was Risk Taking (31%) for men, and Callousness (29%) for the total sample.

Finally, pertaining to the between-sex difference in terms of explained variance for the self-reported aggression variable, no statistically significant difference was found between women (Predicted  $R^2 = .40$ ,  $n = 174$ ) and men (Predicted  $R^2 = .36$ ,  $n = 109$ ),  $\Delta = .04$ , 95% CI [-.13, .21],  $z^* = 0.44$ ,  $p = .661$ . On the contrary, a statistically significant difference was found for the file-rated aggression variable between women (Predicted  $R^2 = .02$ ,  $n = 144$ ) and men (Predicted  $R^2 = .19$ ,  $n = 83$ ),  $\Delta = -.18$ , 95% CI [-.32, -.04],  $z^* = 2.52$ ,  $p = .012$ .

**Table 2**

*Multiple Regression Analysis of PID-5-FBF Facets in the Statistical Prediction of Self-Reported and File-Rated Physical Aggression and Analysis of the Moderating Effect of Biological Sex (N = 285)*

Predictors	Self-reported ( <i>n</i> = 283)					File-rated ( <i>n</i> = 227)				
	$\beta$	<i>p</i>	Moderated by biol. sex <sup>a</sup>			$\beta$	<i>p</i>	Moderated by biol. sex <sup>a</sup>		
			<i>F</i>	<i>p</i>	$\Delta R^2$			<i>F</i>	<i>p</i>	$\Delta R^2$
Attention-Seeking	.01	.883	0.44	.506	.001	-.02	.829	2.54	.112	.009
Callousness	<b>.11</b>	.040	<b>5.40</b>	.021	.011	<b>.22</b>	.003	1.15	.285	.004
Hostility	<b>.36</b>	< .001	0.28	.594	.001	<b>.17</b>	.026	0.13	.722	.001
Impulsivity	.07	.261	3.74	.054	.008	.03	.724	0.91	.342	.003
Manipulativeness	.02	.771	1.45	.229	.003	.01	.869	1.46	.228	.005
Risk Taking	<b>.25</b>	< .001	0.13	.722	.000	<b>.17</b>	.026	<b>7.52</b>	.007	.026
Submissiveness	<b>-.17</b>	< .001	1.76	.186	.004	<b>-.16</b>	.013	0.92	.339	.003
Suspiciousness	.10	.059	0.79	.374	.002	-.04	.548	1.44	.231	.005
<i>R</i> <sup>2</sup>	.44					.21				
Predicted <i>R</i> <sup>2</sup>	.39					.14				

*Note.* Statistically significant predictors and moderators ( $p < .05$ ) are in **bold**. Only the facets with a statistically significant correlation with the file-rated variable were entered into the analyses (see Table 1). Dependent variables: self-reported aggression (Physical Aggression subscale of the Short-Form Buss-Perry Aggression Questionnaire); file-rated aggression. PID-5-FBF = Personality Inventory for DSM-5 Faceted Brief Form; biol. sex = biological sex.

<sup>a</sup> Displays the results for the test of highest order unconditional interaction (trait\*sex), which was conducted separately for each trait predictor with the other traits entered as covariates.

**Table 3**

*General Dominance Weights of PID-5-FBF Facets in the Statistical Prediction of Self-Reported and File-Rated Physical Aggression (N = 285)*

Biol. sex	Facet	Self-Reported Aggression				File-Rated Aggression			
		General dominance weight (contribution average)	R <sup>2</sup> proportion (weight/R <sup>2</sup> )	R <sup>2</sup>   Pred. R <sup>2</sup>	n	General dominance weight (contribution average)	R <sup>2</sup> proportion (weight/R <sup>2</sup> )	R <sup>2</sup>   Pred. R <sup>2</sup>	n
Females	Attention-Seeking	.014	.03	.46   .40	174	.002	.01	.14   .02	144
	Callousness	.085	.18			.037	.26		
	Hostility	<b>.130</b>	<b>.28</b>			<b>.056</b>	<b>.40</b>		
	Impulsivity	.085	.18			.020	.14		
	Manipulativeness	.024	.05			.003	.02		
	Risk Taking	.061	.13			.006	.04		
	Submissiv. (neg.)	.045	.10			.013	.09		
	Suspiciousness	.021	.05			.004	.03		
Males	Attention-Seeking	.016	.03	.48   .36	109	.028	.08	.35   .19	83
	Callousness	.031	.06			.076 <sup>a</sup>	.22		
	Hostility	<b>.155</b>	<b>.32</b>			.026	.07		
	Impulsivity	.029	.06			.025	.07		
	Manipulativeness	.015	.03			.021	.06		
	Risk Taking	.130	.27			<b>.108</b>	<b>.31</b>		
	Submissiv. (neg.)	.005	.01			.048	.14		
	Suspiciousness	.099	.21			.017	.05		

**Table 3**

*General Dominance Weights of PID-5-FBF Facets in the Statistical Prediction of Self-Reported and File-Rated Physical Aggression (N = 285) (continued)*

Biol. sex	Facet	Self-Reported Aggression				File-Rated Aggression			
		General dominance weight (contribution average)	R <sup>2</sup> proportion (weight/R <sup>2</sup> )	R <sup>2</sup>   Pred. R <sup>2</sup>	n	General dominance weight (contribution average)	R <sup>2</sup> proportion (weight/R <sup>2</sup> )	R <sup>2</sup>   Pred. R <sup>2</sup>	n
Total	Attention-Seeking	.014	.03	.44   .39	283	.003	.01	.21   .14	227
	Callousness	.051	.12			<b>.060</b>	<b>.29</b>		
	Hostility	<b>.143</b>	<b>.33</b>			.041	.20		
	Impulsivity	.058	.13			.019	.09		
	Manipulativeness	.020	.05			.009	.04		
	Risk Taking	.080	.18			.037	.18		
	Submissiv. (neg.)	.026	.06			.030	.15		
	Suspiciousness	.044	.10			.007	.03		

*Note.* The most important predictor for each subset is in **bold**. Dependent variables: self-reported aggression (Physical Aggression subscale of the Short-Form Buss-Perry Aggression Questionnaire); file-rated aggression. PID-5-FBF = Personality Inventory for DSM-5 Faceted Brief Form; Biol. sex = biological sex; Submissiv. = Submissiveness; neg. = negative regression weight; Pred. R<sup>2</sup> = Predicted R<sup>2</sup>.

<sup>a</sup>Logarithmically transformed to reduce regression residuals and improve model fit. The transformation was kept only for this model since it made no difference in other models, likely because of the higher sample sizes.



## Discussion

This is the first multimethod study pertaining to the associations between the PID-5 facets and two operationalizations of physical aggression, to the best of our knowledge. The objectives were to: (a) replicate previously identified associations between the PID-5 and self-reported aggression; (b) compare those associations with self-reported and file-rated aggression; (c) compare those associations between women and men; and (d) identify the relative importance of trait predictors using dominance analysis.

### Main findings

As predicted, Hostility and Risk Taking were significant predictors of self-reported aggression (in line with Dunne et al., 2018). In addition, Callousness emerged as significant (in line with Somma et al., 2020), and Submissiveness (negative predictor) as well. Those results provide strong evidence of replication of, and even expand, previous findings.

Pertaining to the multimethod replication, results were very consistent. In regression analyses, the four facets mentioned above (Hostility, Risk Taking, Callousness, and Submissiveness) also emerged as predictors in file-rated analyses, providing strong multimethod consistency (in terms of statistical significance). Furthermore, facet predictors accounted for considerably more variance in the statistical prediction of self-reported (Predicted  $R^2 = 39\%$ ) than of file-rated aggression (Predicted  $R^2 = 14\%$ ). Among women, PID-5 facets very weakly predicted file-rated aggression (as shown by a Predicted

$R^2$  of 2%), in comparison with self-reported aggression (40%). Of note, women and men had similar self-reported aggression scores, but women had lower scores on the file-rated measure.

Finally, this study is the first to identify the relative importance of predictors using dominance analysis in the AMPD-aggression literature, to the best of our knowledge. The hypothesis that Hostility, Risk Taking, and Callousness would be the most important predictors was mostly supported, in line with Dunne and colleagues' (2020) results.

### **Multimethod Assessment in Aggression and Personality Literatures**

First, the present results depart from Lewis and colleagues' (2021) findings, who found a nonsignificant association ( $r_s = .18$ ) between self-reported and file-rated aggression in a small sample. However, their operationalization of the latter variable differed in many ways from ours (e.g., their definition of aggression was not restricted to the physical component). In another multimethod aggression study, a strong association was reported between self-reported and clinician-rated aggression ( $r_s \approx .60$ ; Berlin et al., 2021), while both were only weakly related to official records. Of note, acquaintanceship with the patient was found to be a significant, large moderator of construct overlap in a meta-analytic review examining the self-informant correspondence in FFM research (Connolly et al., 2007). In the present study, files were rated by external raters. As a result, acquaintanceship with the patient was very low, maybe resulting in a greater focus on more distal sources by raters (e.g., criminal records). Accordingly, since the correlations

between both methods were moderate-high ( $r_s = .45-.46$ ) in this study, since the file-rated variable often included a review of the criminal record, and since the scoring required an examiner not knowledgeable of the patient, the file-rated variable might represent a hybrid between an informant report and an official record. What appears clear, though, is that self-reported and file-rated aggression only roughly measure the same construct and consequently cannot be used interchangeably.

The same conclusion was drawn for psychopathy research, where it was found that informant-assessed and self-reported psychopathy only shared a modest amount of variance (13%–36%; Kelley et al., 2018), a result similar to ours (20–21% was shared between self-reported and file-rated aggression). In personality research, the aforementioned meta-analytic review comparing self-assessed vs. informant-assessed FFM traits provided evidence of moderate-high to high convergence (corrected  $r = .46-.62$ ; Connolly et al., 2007), a result somewhat comparable to ours, if not slightly more favorable. Nevertheless, the present results are consistent with the fact that different methods usually capture simultaneously shared and distinct information that is not simply attributable to measurement error (Cruit & Oltmanns, 2018; Meyer et al., 2001). Therefore, a monomethod assessment seems to provide an “incomplete picture” (Kelley et al., 2018, p. 746). This suggests that researchers should emphasize multimethod replication and that clinicians should contrast different sources of information while conducting an assessment (e.g., assessment reports, self-reports, clinical observations, etc.) to alleviate potential biases.

### **Discriminant Validity of the PID-5**

The results of this study can also be analyzed in the context of the potential discriminant validity issue of the PID-5, including for the prediction of aggression (Dunne et al., 2020). To explain that problem, some have suggested that the PID-5 might measure simultaneously personality dysfunction and normal personality traits (Morey et al., 2022). On the one hand, without invalidating the latter hypothesis, the present study also points to the fact that discriminant validity might be improved with a multimethod design (e.g., fewer correlations were found for file-rated aggression). On the other hand, it also shows that the overlap (e.g., in terms of explained variance) seems to decrease with the use of different types of measures, which lends some support to the idea that monomethod studies might generate exaggeratedly optimistic validity estimates (as suggested by Zimmermann et al., 2019).

### **Women-Men Discrepancies: Facet Predictors**

The hypothesis that PID-5 predictors would vary between women and men received conflicting support. In contrast with what was initially predicted, the women-men discrepancies were not most obvious in their associations to aggression, as aforementioned, but rather in their amount of explained variance. Overall, Hostility and Callousness were very consistently associated to aggression. The main exception seems to be the explanation of file-rated aggression among men, which seems to be mainly driven by Risk Taking. However, moderation analyses revealed some additional nuances, which were further substantiated when inspecting the general dominance weights. In the

prediction of self-reported aggression, Callousness was significant among women only and it had a higher dominance weight (8.5%) than for men (3.1%). Among male offenders, Callousness was also not significant in regression analyses (Dunne et al., 2018), even if it shared common variance with aggression (Dunne et al., 2020). Callousness might have an indirect impact among men (e.g., by interacting with Hostility and/or Risk Taking), a hypothesis that should be examined in future studies. On the contrary, Risk Taking seems to make a much more substantial contribution among men. In the prediction of file-rated aggression, Risk Taking was significant among men only. The general dominance weight was also much higher among men (10.8%), while it made virtually no contribution among women (0.6%). Risk Taking was the most important facet in the statistical prediction of file-rated aggression among men, as well as the second most important facet of self-reported aggression. Observers might have considered heuristically that “global recklessness” was more indicative of violence among men. Perhaps Risk Taking leads to “observable” behaviors that are indicative of general antisociality (e.g., reckless driving, aggression), which are then easy to record (e.g., in reports).

The differential associations between men and women were also discussed by Munro and Sellbom (2020) in the context of IPV, who suggested that the higher externalizing propensity of men and higher internalizing propensity of women could logically be reflected in the AMPD-IPV (and therefore AMPD-aggression) associations; Risk Taking might be a facet that contributes to that higher externalization propensity. In addition, Risk Taking shares significant content coverage with some facets of the FFM Conscientiousness

domain (which notably relate to a lack of capability to anticipate consequences) that were found to be strong and consistent predictors of aggression and antisocial behavior in a meta-analytic review (Jones et al., 2011).

### **Women-Men Discrepancies: Methodological Considerations**

Among men, the amount of explained variance by facets was slightly reduced when aggression was assessed by file review, to a degree that might simply reflect multimethod assessment. Among women, in comparison, a neat multimethod disparity was found depending on how aggression was assessed. First, it might be that female-perpetrated aggression is as frequent but less severe than male-perpetrated aggression (such hypothesis was previously suggested (Denson et al., 2018; Dowgwillo et al., 2016). The current file-rated assessment procedure might have overly focused on serious behavioral acts of aggression (e.g., physical acts that caused injuries, that led to hospitalization, convicted offenses), while the patient might have focused on a more general tendency toward aggression, including less severe forms (e.g., slapping) that might have been overlooked and/or underreported during the clinical evaluation. Aggressive behaviors might elicit shame in some patients who may have concealed them during the face-to-face clinical interview (and were therefore less “accessible” by an examiner through file review), but were less reluctant to disclose them during the computer-based self-report assessment.

Second, it may also reflect implicit biases in the clinicians who conducted the initial assessment with the patient, in the evaluators who reviewed the files, or even in the justice system itself (e.g., an implicit propensity to assess woman-perpetrated aggression less thoroughly, to report it less systematically in a clinical file, or to rate it with a lower score). For instance, in the Province of Quebec, where the study was conducted, 78.8% of alleged perpetrators of recorded offenses against the person in a conjugal context are men (Quebec Ministry of Public Security, 2016), while paradoxically in the same province 3% of women and 3.5% of men report physical or sexual victimization in a conjugal context; however, women report a higher degree of severity (e.g., being victims of injuries, threatened with a weapon, etc.; Perreault, 2015). This phenomenon is sometimes referred to as the “Sex-Symmetry Theory” of IPV. Similarly, it has been suggested that, among women, events pertaining to aggressive (or other antisocial) behaviors are only rarely recorded or prosecuted, in comparison to men (Hodgins, 2022), which was perhaps reflected in the records clinicians had access to when writing their reports. Those elements are consistent with the hypothesis that, in this study, male-perpetrated aggression might have been more “noticeable” and thus more likely to be recorded in clinical files, perhaps explaining why men received higher scores through file review (but not through self-report). Finally, from a clinical standpoint, a complementary or alternative hypothesis is that women with PD may have a representation of themselves as “all-bad”, violent, out-of-control perpetrators, that is not fully grounded in reality (e.g., akin to Gregory’s, 2007 “guilty” or “demigod perpetrator” self-representations). This “bad” representation might be fueled by guilt-inducing social expectations toward women (e.g., social roles might

discourage aggression even more among women than men). It could explain why women self-rated themselves as high as men even in the eventuality that their aggressive behaviors were indeed less severe.

### **Limitations and Strengths**

First, the cross-sectional design of this study precludes any strong causal or predictive inference. Even if ad hoc indices might be invaluable to clinicians (to assess present risk), a longitudinal design would be necessary to assess the long-term predictive validity of the PID-5 on aggression. Second, even if analyses merging both men and women had an appreciable sample size, analyses by biological sex had smaller sizes (especially for men), which might have resulted in more vulnerability to sampling variance and less power to detect moderation effects. Third, while raters were blind to BPAQ-SF and PID-5-FBF scores for all patients, they were not blind to biological sex, which could have led to implicit biases, as aforementioned. Fourth, the important number of analyses performed (e.g., correlations, moderation analyses) might have inflated Type I error. Even if the main findings were cross-validated with two methods (e.g., predictors of aggression) and, in many cases, two sets of analyses (i.e., moderation and dominance analyses), we cannot completely exclude that, for instance, some correlations were simply artifacts. Finally, the external validity of findings is strong for at least three reasons: (a) the use of a clinical sample in itself (and of patients with PD, all the more) improves significantly the scope of conclusions, (b) the sample was recruited in a naturalistic setting with few exclusion



criteria, and (c) the use of a multimethod design allowed cross-validation, improving the robustness of results.

### **Main Conclusions and Clinical Implications**

The most important, innovative, and clinically relevant findings of this study are that: (a) when the predicted variable (i.e., aggression) and the predictors (i.e., traits) are assessed through different methods, the amount of explained variance tends to shrink (in line with, e.g., Meyer et al., 2001); (b) clinicians might have to attribute a different importance to facet predictors depending on the sex of the patient (in line with Dowgwillo et al., 2016; Munro & Sellbom, 2020; e.g., Risk Taking seems more important among men); and (c) a facet-level analysis of the PID-5 seems very important to optimize aggression assessment, since facet predictors seem more consistent across the literature (Dunne et al., 2018; Somma et al., 2020) than domain predictors (Leclerc et al., 2022), and since FFM research suggested that facets had a better predictive ability than domains (Jones et al., 2011).

From a criminological standpoint, it is well known that criminal records (which might be, in part, approximated by the file-rated variable) often represent only the “tip of the iceberg” (Berlin et al., 2021, p. 9). Accordingly, some experts have already put forth that “[a] far more representative estimate can be drawn from *patterns* [emphasis put in the original text], which are recurring aspects of behaviour that are far more likely to reflect what needs to change.” (Heilbrun, 2021, p. 10). Thus, self-reported aggression might

provide a more accurate picture of the overall pattern of aggression (i.e., more sensitive), while file-rated aggression might be more focused on severe behavioral acts (i.e., more specific). In practice, since every method provides only a partial representation of a construct (Meyer et al., 2001), both operationalizations might be incrementally useful to clinicians in assessing risk by providing distinct nuances (e.g., pertaining to the severity and frequency of the acts), supporting their combined use. Nevertheless, more research is necessary to parse out their unique and common contributions.

Relatedly, since personality traits should theoretically explain behavioral patterns (at least to some degree), this suggests that using the PID-5 as a broadband measure to assess aggression might be indicated in an outpatient clinic, where standard risk instruments (e.g., HCV-20<sup>V3</sup>) cannot always be used systematically for a number of reasons (e.g., lack of proper clinician training, lack of time, administrative constraints, unavailability of historical risk factors information, etc.; see Kivisto, 2016). A cautious point of view would be that, since it received more consistent multimethod support, using the PID-5 is more indicated among men, especially if the clinical objectives are to assess more serious acts of aggression. However, an alternative point of view might be that, since female-perpetrated aggression might otherwise “slip under the radar”, using the PID-5 would be particularly indicated, because clinical risk might be underestimated through file reading only, and lead to a rough estimation of clinical change (e.g., a female patient might have few formal aggressive/violent offenses in her criminal record, but nevertheless be assaultive in her day-to-day life). This latter hypothesis would be consistent with the

conclusion that mental health professionals often have a limited ability to assess future violence risk in female psychiatric patients, often resulting in an underestimated prediction (Skeem et al., 2005).

### **Future Directions**

To facilitate knowledge translation into clinical heuristics, Dunne and colleagues (2020) suggested that the development of an interpretive guide for the PID-5 should be a high priority. Specifically, they suggested that “code types” (e.g., H-C for Hostility-Callousness) akin to those of the Minnesota Multiphasic Personality Inventory (MMPI) series could be a promising avenue. Even if they represent widespread coding strategies among practitioners, there is a high degree of heterogeneity in how scales are combined and how they relate to the predicted outcomes (e.g., McGrath & Ingersoll, 1999), so the value of eventual PID-5 code types should be empirically evaluated and possible interactions (e.g., Hostility\*Callousness) should be investigated (e.g., by aggregating data in a meta-analysis). Another option that could be empirically tested could be to build a weighted chart that assigns “risk points” to each key facet based on their elevation (e.g., a cut-off where Hostility becomes a particularly significant risk factor for the perpetration of aggression). Then, raters could sum up the points from those facets (e.g., Hostility, Risk Taking, Callousness) to get a cumulative risk level. This raw score could then be transformed to yield a probability (e.g., low, medium, or high risk) somewhat similar to that of many violence risk instruments. In addition, the present study underscores that such a guide might have to consider nuances pertaining to biological sex.

Also, longitudinal studies with many testing points could establish a more robust causal sequence. A multimethod study that compares trait-aggression associations by using other operationalizations of aggression (e.g., official records of violent offenses or convictions) or the informant version of the PID-5 (Markon et al., 2013) could also be relevant to expand findings (e.g., by testing if a combination of the self-reported and informant-reported traits result in an improved prediction of aggression). Finally, it would be important to clarify to what extent facets can serve as malleable transdiagnostic treatment indicators. To date, even if a meta-analysis has revealed that traits do improve through treatment for a number of psychiatric disorders—PDs being among the two conditions with the highest amount of change (with anxiety disorders; Roberts et al., 2017)—data pertaining to the PID-5 are, except for a few commendable exceptions (Kerber et al., 2021), sorely lacking. Testing existing psychotherapy or psychoeducation protocols (e.g., anger management) and measuring their efficacy (e.g., in terms of “Hostility reduction”) would be highly relevant. Bridging the gap between dimensional personality assessment and treatment is a challenge that the AMPD literature has to address more generally (Krueger & Hobbs, 2020).

**Abbreviations:** AMPD = Alternative Model for Personality Disorders. BPAQ-SF = Short-Form Buss-Perry Aggression Questionnaire. DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.). IPV = intimate partner violence. PD = personality disorder. PID-5 = Personality Inventory for DSM-5. PID-5-FBF = Personality Inventory for DSM-5 Faceted Brief Form.

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**Conflict of interest:** None.

**Data statement:** This study was not preregistered. The sample was also used in other studies from the same author group, but the objectives and analyses presented here are original. The data cannot be made publicly available because of ethical/privacy restrictions, but could be provided upon reasonable request on an individual basis from the corresponding author.

#### **Supplemental material**

**Download supplemental file(s)**

## References

- Allen, D. M. (1974). The relationship between variable selection and data augmentation and a method for prediction. *Technometrics*, *16*(1), 125-127. <https://doi.org/10.1080/00401706.1974.10489157>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Azen, R., & Budescu, D. V. (2003). The dominance analysis approach for comparing predictors in multiple regression. *Psychological Methods*, *8*(2), 129-148. <https://doi.org/10.1037/1082-989X.8.2.129>
- Berlin, J., Tärnhäll, A., Hofvander, B., & Wallinius, M. (2021). Self-report versus clinician-ratings in the assessment of aggression in violent offenders. *Criminal Behaviour and Mental Health*, *31*(3), 198-210. <https://doi.org/10.1002/cbm.2201>
- Bryant, F. B., & Smith, B. D. (2001). Refining the architecture of aggression: A measurement model for the Buss-Perry Aggression Questionnaire. *Journal of Research in Personality*, *35*(2), 138-167. <https://doi.org/10.1006/jrpe.2000.2302>
- Buss, A. H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, *63*(3), 452-459. <https://doi.org/10.1037/0022-3514.63.3.452>
- Bustos Navarrete, C. E., & Coutinho Soares, F. (2020). *Package 'dominanceanalysis'. Version 2.0.0* [software macro] [cited June 2021]. <https://cran.r-project.org/web/packages/dominanceanalysis/index.html>
- Carlson, E. N., Vazire, S., & Oltmanns, T. F. (2013). Self-other knowledge asymmetries in personality pathology. *Journal of Personality*, *81*(2), 155-170. <https://doi.org/10.1111/j.1467-6494.2012.00794.x>
- Connolly, J. J., Kavanagh, E. J., & Viswesvaran, C. (2007). The convergent validity between self and observer ratings of personality: A meta-analytic review. *International Journal of Selection and Assessment*, *15*(1), 110-117. <https://doi.org/10.1111/j.1468-2389.2007.00371.x>
- Cruitt, P. J., & Oltmanns, T. F. (2018). Incremental validity of self- and informant report of personality disorders in later life. *Assessment*, *25*(3), 324-335. <https://doi.org/10.1177/1073191117706020>
- Denson, T. F., O'Dean, S. M., Blake, K. R., & Beames, J. R. (2018). Aggression in women: behavior, brain and hormones. *Frontiers in Behavioral Neuroscience*, *12*, Article 81. <https://doi.org/10.3389/fnbeh.2018.00081>

- Douglas, K. S., Hart, S. D., Webster, C. D., Belfrage, H. (2013). *HCR-20V3 Historical, Clinical, Risk Management (Version 3): Professional guidelines for evaluating risk of violence*. Mental Health, Law, and Policy Institute, Simon Fraser University.
- Dowgwillo, E. A., Ménard, K. S., Krueger, R. F., & Pincus, A. L. (2016). DSM-5 pathological personality traits and intimate partner violence among male and female college students. *Violence and Victims, 31*(3), 416-437. <https://doi.org/10.1891/0886-6708.VV-D-14-00109>
- Dunne, A. L., Gilbert, F., & Daffern, M. (2018). Investigating the relationship between DSM-5 personality disorder domains and facets and aggression in an offender population using the Personality Inventory for the DSM-5. *Journal of Personality Disorders, 32*(5), 668-693. [https://doi.org/10.1521/pedi\\_2017\\_31\\_322](https://doi.org/10.1521/pedi_2017_31_322)
- Dunne, A. L., Lloyd, C., Lee, S., & Daffern, M. (2020). Associations between the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, alternative model of antisocial personality disorder, psychopathic specifier, and psychopathy-related facets with aggression in a sample of incarcerated males. *Personality Disorders: Theory, Research, and Treatment, 11*(2), 108-118. <https://doi.org/10.1037/per0000369>
- Gamache, D., Savard, C., Lemelin, S., Côté, A., & Villeneuve, E. (2018). Premature psychotherapy termination in an outpatient treatment program for personality disorders: A survival analysis. *Comprehensive Psychiatry, 80*(1), 14-23. <https://doi.org/10.1016/j.comppsy.2017.08.001>
- Genoud, P., & Zimmermann, G. (2009). *French version of the 12-item Aggression Questionnaire. Preliminary psychometric properties*. [https://www3.unifr.ch/cerf/fr/assets/public/pdf/pages%20personnelles/Genoud%20Philippe/2009\\_SSP.pdf](https://www3.unifr.ch/cerf/fr/assets/public/pdf/pages%20personnelles/Genoud%20Philippe/2009_SSP.pdf)
- Gregory, R. J. (2007). Borderline attributions. *The American Journal of Psychotherapy, 61*(2), 131-147. <https://doi.org/10.1176/appi.psychotherapy.2007.61.2.131>
- Hayes, A. F. (2021). The PROCESS macro for SPSS, SAS, and R. Version 3.5.3 [software macro] [cited June 2021]. <https://www.processmacro.org/index.html>
- Heilbrun, K. (2021). Using theory and data in forensic research and practice. *Criminal Behaviour and Mental Health, 31*(1), 9-12. <https://doi.org/10.1002/cbm.2172>
- Hodgins, S. (2022). Female forensic patients may be an atypical sub-type of females presenting aggressive and antisocial behavior. *Frontiers in Psychiatry, 13*, Article 809901. <https://doi.org/10.3389/fpsy.2022.809901>

- Hopwood, C. J., Kotov, R., Krueger, R. F., Watson, D., Widiger, T. A., Althoff, R. R., Ansell, E. B., Bach, B., Bagby, R. M., Blais, M. A., Bornovalova, M. A., Chmielewski, M., Cicero, D. C., Conway, C., De Clercq, B., De Fruyt, F., Docherty, A. R., Eaton, N. R., Edens, J. F., ... Zimmermann, J. (2018). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health, 12*(1), 82-86. <https://doi.org/10.1002/pmh.1408>
- Johnson, J. W., & Lebreton, J. M. (2004). History and use of relative importance indices in organizational research. *Organizational Research Methods, 7*(3), 238-257. <https://doi.org/10.1177/1094428104266510>
- Jones, S. E., Miller, J. D., & Lynam, D. R. (2011). Personality, antisocial behavior, and aggression: A meta-analytic review. *Journal of Criminal Justice, 39*(4), 329-337. <https://doi.org/10.1016/j.jcrimjus.2011.03.004>
- Kelley, S. E., Edens, J. F., Donnellan, M. B., Mowle, E. N., & Sörman, K. (2018). Self- and informant perceptions of psychopathic traits in relation to the triarchic model. *Journal of Personality, 86*(4), 738-751. <https://doi.org/10.1111/jopy.12354>
- Kerber, A., Schaeuffele, C., Krieger, T., Urech, A., Riper, H., Berger, T., Boettcher, J., & Knaevelsrud, C. (2021). Differential effects of psychological interventions in online and face-to-face settings on DSM-5 and ICD-11 maladaptive trait domains: An exploratory pilot study. *Frontiers in Psychiatry, 12*, Article 648367. <https://doi.org/10.3389/fpsy.2021.648367>
- Kim, H., Di Domenico, S. I., & Connelly, B. S. Self-other agreement in personality reports: A meta-analytic comparison of self- and informant-report means. *Psychological Science, 30*(1), 129-138. <https://doi.org/10.1177/0956797618810000>
- Kivisto, A. J. (2016). Violence risk assessment and management in outpatient clinical practice. *Journal of Clinical Psychology, 72*(4), 329-349. <https://doi.org/10.1002/jclp.22243>
- Klonsky, E. D., Oltmanns, T. F., & Turkheimer, E. (2002). Informant report of personality disorder: Relation to self-reports and future directions. *Clinical Psychology: Science and Practice, 9*(3), 300-311. <https://doi.org/10.1093/clipsy.9.3.300>



- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine, 42*(9), 1879-1890. <https://doi.org/10.1017/S00332917111002674>
- Krueger, R. F., & Hobbs, K. A. (2020). An overview of the DSM-5 Alternative Model of Personality Disorders. *Psychopathology, 53*(3-4), 126-132. <https://doi.org/10.1159/000508538>
- Leclerc, P., Savard, C., Vachon, D. D., Faucher, F., Payant, M., Lampron, M., Tremblay, M., & Gamache, D., (2022). Analysis of the interaction between personality dysfunction and traits in the statistical prediction of physical aggression: Results from outpatient and community samples. *Personality and Mental Health, 16*(1), 5-18. <https://doi.org/10.1002/pmh.1522>
- Lewis, D., Dunne, A. L., Meyer, D., & Daffern, M. (2021). Assessing schema modes using self- and observer-rated instruments: Associations with aggression. *Journal of Interpersonal Violence, 36*(17-18), 9908–9929. <https://doi.org/10.1177/0886260519860088>
- Maples, J. L., Carter, N. T., Few, L. R., Crego, C., Gore, W. L., Samuel, D. B., Williamson, R. L., Lynam, D. R., Widiger, T. A., Markon, K. E., Krueger, R. F., & Miller, J. D. (2015). Testing whether the DSM-5 personality disorder trait model can be measured with a reduced set of items: An item response theory investigation of the Personality Inventory for DSM-5. *Psychological Assessment, 27*(4), 1195-1210. <https://doi.org/10.1037/pas0000120>
- Markon, K. E., Quilty, L. C., Bagby, R. M., & Krueger, R. F. (2013). The development and psychometric properties of an informant-report form of the personality inventory for DSM-5 (PID-5). *Assessment, 20*(3), 370-383. <https://doi.org/10.1177/1073191113486513>
- Marsh, H. W., Nagengast, B., & Morin, A. J. S. (2013). Measurement invariance of big-five factors over the life span: ESEM tests of gender, age, plasticity, maturity, and la dolce vita effects. *Developmental Psychology, 49*(6), 1194-1218. <https://doi.org/10.1037/a0026913>
- McGrath, R. E., & Ingersoll, J. (1999). Writing a good cookbook: I. A review of MMPI high-point code system studies. *Journal of Personal Assessment, 73*(2), 149-179. [https://doi.org/10.1207/S15327752JPA7302\\_1](https://doi.org/10.1207/S15327752JPA7302_1)

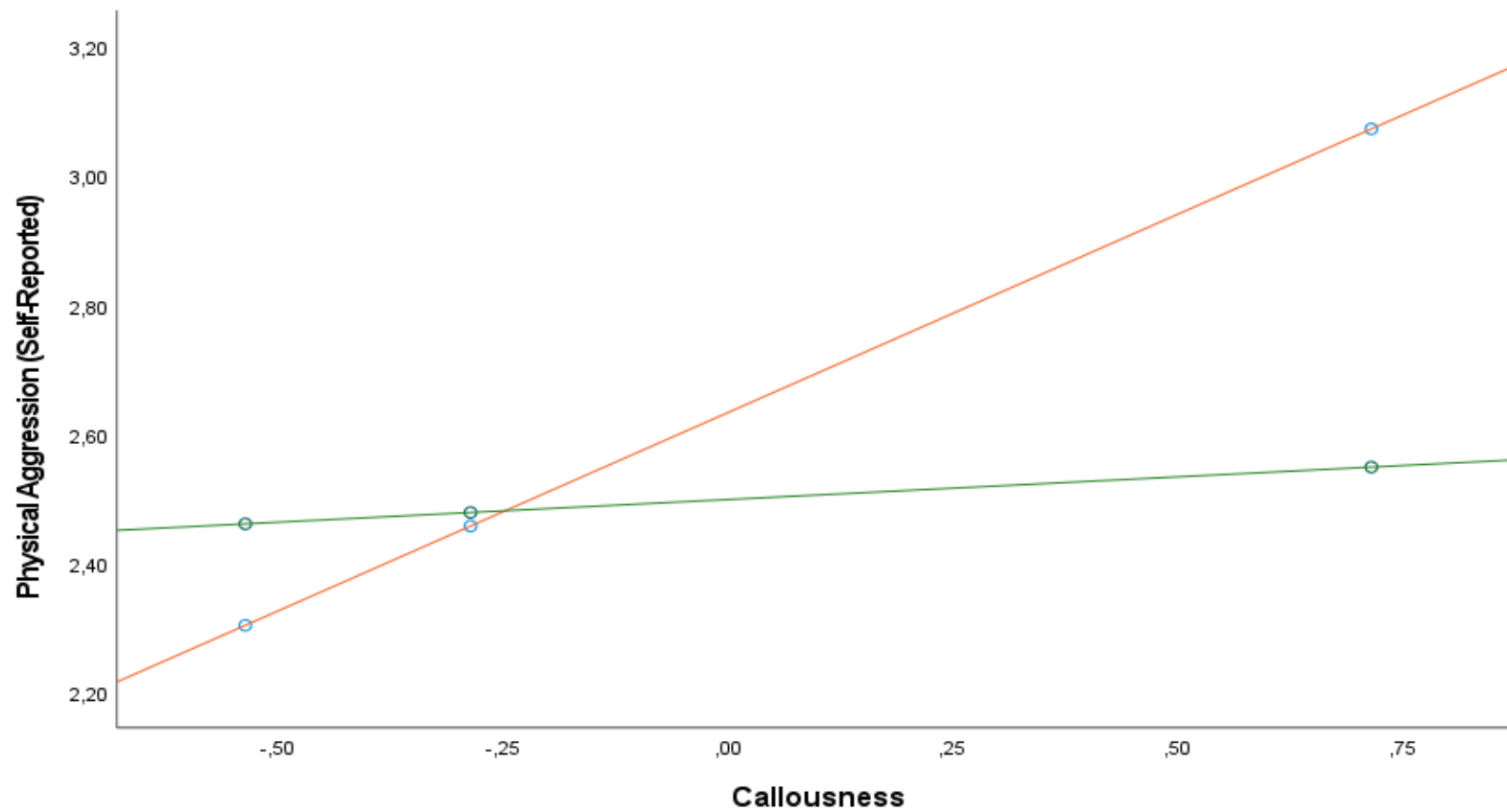
- Meyer, G. J., Finn, S. E., Eyde, L. D., Kay, G. G., Moreland, K. L., Dies, R. R., Eisman, E. J., Kubiszyn, T. W., & Reed, G. M. (2001). Psychological testing and psychological assessment: A review of evidence and issues. *American Psychologist*, *56*(2), 128-165. <https://doi.org/10.1037/0003-066X.56.2.128>
- Morey, L. C., Good, E. W., & Hopwood, C. J. (2022). Global personality dysfunction and the relationship of pathological and normal trait domains in the DSM-5 Alternative Model for Personality Disorders. *Journal of Personality*, *90*(1), 34-46. <https://doi.org/10.1111/jopy.12560>
- Munro, O. E., & Sellbom, M. (2020). Elucidating the relationship between borderline personality disorder and intimate partner violence. *Personality and Mental Health*, *14*(3), 284-303. <https://doi.org/10.1002/pmh.1480>
- Olkin, I., & Finn, J. D. (1995). Correlations redux. *Psychological Bulletin*, *118*(1), 155-164. <https://doi.org/10.1037/0033-2909.118.1.155>
- Perreault S. (2015). *Criminal victimization in Canada, 2014*. Statistics Canada. Report No.: 85-002-X. <https://www150.statcan.gc.ca/n1/pub/85-002-x/2015001/article/14241-fra.htm>
- Quebec Ministry of Public Security. (2016). *Statistiques sur la criminalité commise au Québec : principales tendances 2016* [Statistics on crime committed in the Province of Quebec: Main trends 2016]. Report No.: AP-005. [https://www.securitepublique.gouv.qc.ca/fileadmin/Documents/police/statistiques/criminalite/2016/stats\\_criminalite\\_2016\\_2.pdf](https://www.securitepublique.gouv.qc.ca/fileadmin/Documents/police/statistiques/criminalite/2016/stats_criminalite_2016_2.pdf)
- Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin*, *143*(2), 117-141. <https://doi.org/10.1037/bul0000088>
- Roskam, I., Galdiolo, S., Hansenne, M., Massoudi, K., Rossier, J., Gicquel, L., & Rolland, J.-P. (2015). The psychometric properties of the French version of the Personality Inventory for DSM-5. *PLoS One*, *10*, Article e0133413. <https://doi.org/10.1371/journal.pone.0133413>
- Skeem, J., Schubert, C., Stowman, S., Beeson, S., Mulvey, E., Gardner, W., & Lidz, C. (2005). Gender and risk assessment accuracy: Underestimating women's violence potential. *Law and Human Behavior*, *29*(2), 173-186. <https://doi.org/10.1007/s10979-005-3401-z>

- Sleep, C. E., Hyatt, C. S., Lamkin, J., Maples-Keller, J. L., & Miller, J. D. (2018). Examining the relations among the DSM-5 Alternative Model of personality, the Five-Factor Model, and externalizing and internalizing behavior. *Personality Disorders: Theory, Research, and Treatment*, 9(4), 379-384. <https://doi.org/10.1037/per0000240>
- Somma, A., Krueger, R. F., Markon, K. E., Alajmo, V. B. M., Arlotta, E., Beretta, S., Boni, F., Busso, S. L., Manini, R., Nazzaro, G., Maffei, C., & Fossati, A. (2020). DSM-5 Alternative Model of Personality Disorder dysfunctional personality traits as predictors of self-reported aggression in an Italian sample of consecutively admitted, personality-disordered psychotherapy patients. *Journal of Personality Disorders*, 34(Supplement C), 5-24. [https://doi.org/10.1521/pedi\\_2019\\_33\\_430](https://doi.org/10.1521/pedi_2019_33_430)
- Yu, R., Geddes, J. R., & Fazel, S. (2012). Personality disorders, violence, and antisocial behavior: A systematic review and meta-regression analysis. *Journal of Personality Disorders*, 26(1), 775-792. <https://doi.org/10.1521/pedi.2012.26.5.775>
- Zimmermann, J., Kerber, A., Rek, K., Hopwood, C. J., & Krueger, R. F. (2019). A brief but comprehensive review of research on the Alternative DSM-5 Model for Personality Disorders. *Current Psychiatry Reports*, 21(9), Article 92. <https://doi.org/10.1007/s11920-019-1079-z>

**Appendix**  
Supplemental Materials

**Figure S1**

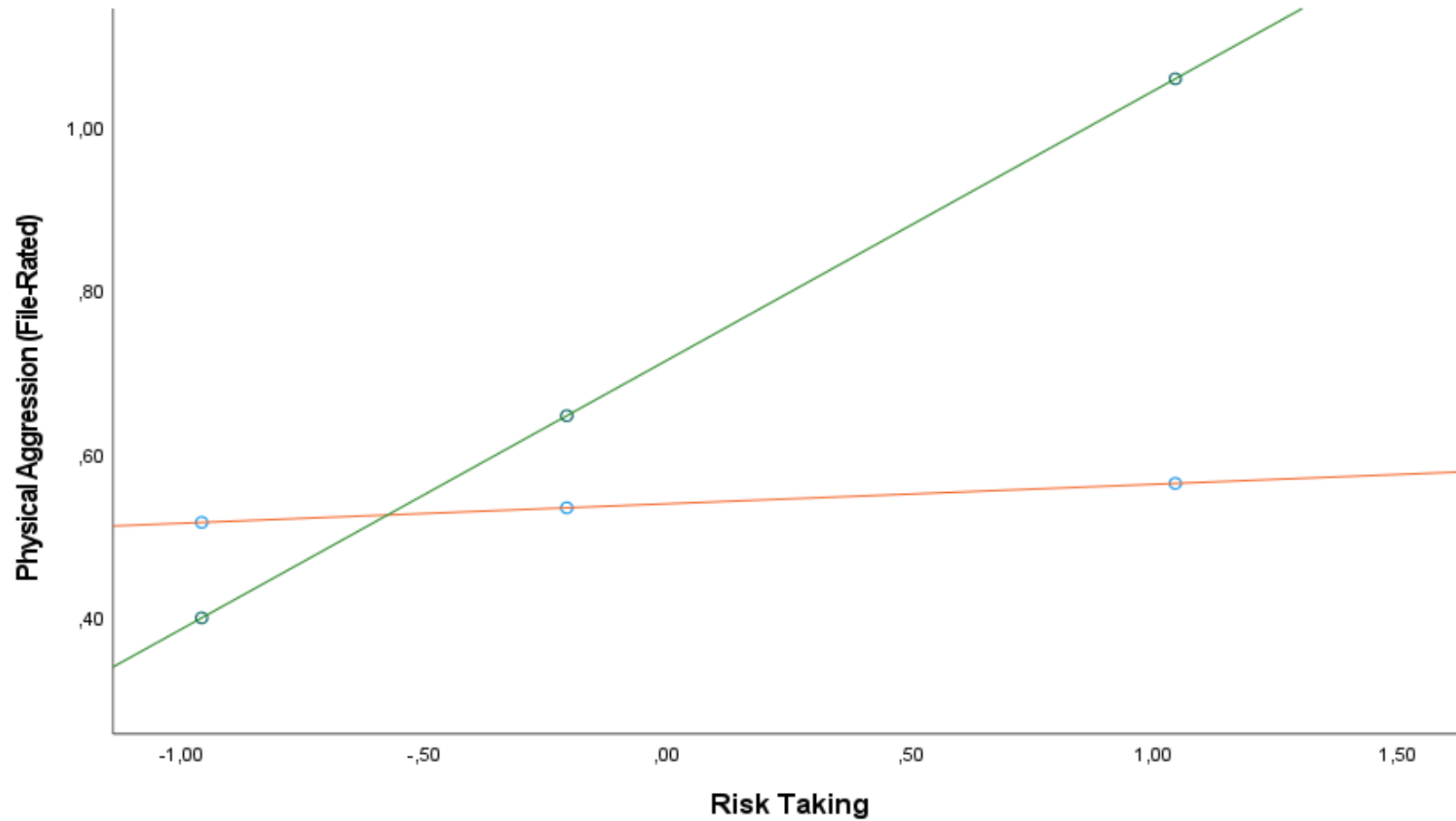
*Moderation by Biological Sex (Women in Orange, Men in Green) on the Effect of Callousness on Self-Reported Aggression (N = 283)*



*Note.* The dots represent the 16<sup>th</sup>, 50<sup>th</sup> and 84<sup>th</sup> percentiles. The x-axis is mean-centered, while the y-axis is not.

**Figure S2**

*Moderation by Biological Sex (Women in Orange, Men in Green) on the Effect of Risk Taking on File-Rated Aggression (N = 227)*



*Note.* The dots represent the 16<sup>th</sup>, 50<sup>th</sup> and 84<sup>th</sup> percentiles. The x-axis is mean-centered, while the y-axis is not.

**Table S1**

*Descriptive Statistics and Internal Consistency of Variables (N = 285)*

Variables	Females (n = 176)				Males (n = 109)				Difference			$\alpha$
	<i>M</i>	BCa 95% CI	<i>SD</i>	Range	<i>M</i>	BCa 95% CI	<i>SD</i>	Range	BCa diff.	<i>p</i> <sup>a</sup>	<i>d</i>	
<b>Aggression</b>												
File-rated <sup>b</sup>	0.50	[0.38; 0.63]	0.74	0.00–2.00	0.82	[0.64; 0.99]	0.86	0.00–2.00	<b>-0.32</b>	.006	-.40	–
Self-reported <sup>c</sup>	2.52	[2.27; 2.81]	1.67	1.00–6.00	2.59	[2.30; 2.86]	1.53	1.00–6.00	-0.07	.712	-.04	.86
<b>PID-5-FBF facets</b>												
Anhedonia	1.72	[1.60; 1.83]	0.82	0.00–3.00	1.93	[1.79; 2.07]	0.75	0.00–3.00	-0.21	.034	-.26	.83
Anxiousness	2.22	[2.11; 2.33]	0.73	0.00–3.00	2.09	[1.94; 2.25]	0.83	0.00–3.00	0.13	.179	.17	.84
Attention-Seeking	1.23	[1.08; 1.39]	1.00	0.00–3.00	1.24	[1.06; 1.41]	0.86	0.00–3.00	-0.01	.946	-.01	.91
Callousness	0.46	[0.38; 0.54]	0.59	0.00–3.00	0.70	[0.56; 0.85]	0.75	0.00–3.00	<b>-0.24</b>	.004	-.37	.80
Cog. and Perc. Dys.	0.43	[0.34; 0.52]	0.57	0.00–2.75	0.55	[0.43; 0.67]	0.65	0.00–3.00	-0.12	.111	-.20	.67
Deceitfulness	0.62	[0.52; 0.73]	0.72	0.00–2.75	0.77	[0.63; 0.94]	0.78	0.00–3.00	-0.15	.096	-.21	.84
Depressivity	1.48	[1.36; 1.60]	0.85	0.00–3.00	1.61	[1.47; 1.76]	0.79	0.00–3.00	-0.13	.172	-.16	.80
Distractibility	1.99	[1.87; 2.12]	0.84	0.00–3.00	1.89	[1.72; 2.05]	0.87	0.00–3.00	0.10	.307	.12	.90
Eccentricity	1.27	[1.15; 1.40]	0.88	0.00–3.00	1.44	[1.25; 1.60]	0.87	0.00–3.00	-0.17	.104	-.19	.86
Emotional Lability	2.09	[1.98; 2.20]	0.72	0.00–3.00	1.72	[1.58; 1.88]	0.83	0.00–3.00	<b>0.36</b>	.001	.48	.82
Grandiosity	0.34	[0.26; 0.42]	0.55	0.00–2.50	0.64	[0.52; 0.76]	0.61	0.00–2.50	<b>-0.30</b>	.001	-.52	.77
Hostility	1.50	[1.38; 1.61]	0.78	0.00–3.00	1.40	[1.27; 1.55]	0.79	0.00–3.00	0.10	.313	.12	.79
Impulsivity	1.55	[1.43; 1.67]	0.84	0.00–3.00	1.42	[1.25; 1.57]	0.86	0.00–3.00	0.14	.182	.16	.89
Intimacy Avoidance	1.03	[0.91; 1.16]	0.88	0.00–3.00	1.17	[1.00; 1.37]	0.91	0.00–3.00	-0.14	.194	-.16	.83
Irresponsibility	0.95	[0.85; 1.07]	0.71	0.00–2.75	1.11	[0.96; 1.25]	0.76	0.00–3.00	-0.16	.096	-.21	.68
Manipulativeness	0.77	[0.67; 0.88]	0.76	0.00–3.00	0.90	[0.74; 1.06]	0.80	0.00–3.00	-0.12	.189	-.16	.83
Perseveration	1.53	[1.42; 1.65]	0.75	0.00–3.00	1.54	[1.40; 1.67]	0.73	0.00–3.00	0.00	.979	.00	.79
Restricted	0.93	[0.83; 1.04]	0.74	0.00–3.00	1.25	[1.11; 1.41]	0.73	0.00–3.00	<b>-0.32</b>	.002	-.43	.73
<b>Affectivity</b>												
Rigid Perfectionism	1.73	[1.60; 1.85]	0.82	0.00–3.00	1.42	[1.27; 1.58]	0.82	0.00–3.00	<b>0.31</b>	.002	.38	.83
Risk Taking	1.12	[0.99; 1.26]	0.86	0.00–3.00	1.35	[1.17; 1.54]	0.89	0.00–3.00	-0.23	.045	-.26	.88

**Table S1***Descriptive Statistics and Internal Consistency of Variables (N = 285) (continued)*

Variables	Females (n = 176)				Males (n = 109)				Difference			
	<i>M</i>	BCa 95% CI	<i>SD</i>	Range	<i>M</i>	BCa 95% CI	<i>SD</i>	Range	BCa diff.	<i>p</i> <sup>a</sup>	<i>d</i>	<i>α</i>
Separation Insecurity	1.56	[1.42; 1.69]	0.91	0.00–3.00	1.44	[1.29; 1.59]	0.84	0.00–3.00	0.12	.275	.13	.84
Submissiveness	1.48	[1.35; 1.60]	0.81	0.00–3.00	1.24	[1.09; 1.39]	0.72	0.00–3.00	<b>0.24</b>	.009	.31	.86
Suspiciousness	1.21	[1.10; 1.32]	0.73	0.00–3.00	1.24	[1.08; 1.38]	0.78	0.00–3.00	-0.03	.782	-.03	.76
Unusual B. and Exp.	0.67	[0.57; 0.77]	0.66	0.00–2.75	0.88	[0.72; 1.02]	0.76	0.00–2.50	-0.21	.020	-.30	.69
Withdrawal	1.36	[1.24; 1.47]	0.75	0.00–3.00	1.55	[1.41; 1.69]	0.79	0.00–3.00	-0.19	.040	-.25	.80

*Note.* Significant differences ( $p < .01$ ) are in **bold**. For all variables, higher scores mean higher pathology/aggression. Self-reported aggression = (Physical Aggression subscale of the Short-Form Buss-Perry Aggression Questionnaire); PID-5-FBF = Personality Inventory for DSM-5 Faceted Brief Form; Cog. and Perc. Dys. = Cognitive and Perceptual Dysregulation; Unusual B. and Exp. = Unusual Beliefs and Experiences BCa 95% CI = Bootstrapped bias-corrected and accelerated 95% confidence intervals (based on 1000 samples); BCa diff. = difference between the bootstrapped subsamples.

<sup>a</sup>The  $p$ -values represent the significance level of the difference between the bootstrapped samples.

<sup>b</sup>Only the participants from the file-rated aggression sequences are considered for that analysis ( $n = 227$ , 144 females).

<sup>c</sup>Only the participants from the self-reported aggression sequences are considered for that analysis ( $n = 283$ , 174 females).



## **Discussion générale**

Afin de faciliter le passage de l'évaluation de la personnalité à l'évaluation du risque d'agression, cette thèse comportait les deux objectifs suivants : faciliter le développement scientifique de l'AMPD en langue française et développer l'application de l'AMPD au phénomène de l'agression. Les trois questions qui sous-tendaient la thèse, et qui correspondent respectivement aux articles 1, 2 et 3, étaient les suivantes : (a) quelles sont les propriétés psychométriques de la version francophone abrégée à 100 items du PID-5, soit le PID-5-FBF ? (b) Existe-t-il un effet d'interaction entre les critères A et B de l'AMPD dans leurs associations avec l'agression ? Puis, (c) comment les associations entre les facettes du PID-5 et l'agression diffèrent-elles, selon que l'agression soit évaluée par un questionnaire autorapporté ou par une mesure cotée à partir de dossiers ?

## **Principaux résultats**

De nombreux résultats se dégagent des études de cette thèse. Les plus saillants sont ici repris pour chaque article.

### **Article 1**

Les résultats suggèrent que les propriétés psychométriques du PID-5-FBF francophone sont généralement bonnes à excellentes, notamment en ce qui a trait aux indices de cohérence interne, de validité de construit, puis de validité convergente-divergente.

Bien que le patron de moyenne des corrélations inter-items montrait des coefficients généralement plus élevés qu'attendu, les indices de cohérence interne étaient généralement très bons. La structure attendue à cinq facteurs a été obtenue et les saturations étaient très nettes (c.-à-d., Affectivité négative, Détachement, Antagonisme, Désinhibition, puis Psychoticisme).

Le patron de validité convergente-divergente était généralement cohérent avec ce qui était attendu : l'Affectivité négative et le Détachement étaient davantage associés à des mesures de pathologie intériorisée, l'Antagonisme et (surtout) la Désinhibition étaient associés à des mesures de pathologie extériorisée, puis le Psychoticisme avait un patron d'associations généralement moins clair (c.-à-d., qu'il y avait des corrélations faibles à modérées avec diverses variables). De plus, les analyses d'invariance ont révélé que la structure factorielle est solide entre les femmes et les hommes, puis relativement bonne entre les échantillons. Les implications sont que des comparaisons hommes-femmes peuvent être faites avec un très haut degré de confiance envers les résultats (du moins, au sein d'une même population), puis qu'elles peuvent raisonnablement être considérées comme valides entre les échantillons, à tout le moins lorsque les comparaisons sont basées sur les moyennes latentes.

Offrant des données auprès de populations francophones, cette étude psychométrique ouvre de nombreuses voies quant à des travaux subséquents dans le domaine, puis permettra d'étudier la validité de l'AMPD au sein de populations ayant des origines

linguistiques plus diversifiées. Une force additionnelle de cet article est de notamment fournir des résultats pour une population clinique peu étudiée, mais pourtant largement répandue (Hamp et al., 2016), soit les clients consultant en pratique privée. En outre, cette première validation du PID-5-FBF soutient son utilisation en contexte clinique, du moins pour certaines populations spécifiques, d'une manière à réduire le fossé couramment relevé entre science et pratique clinique (Stewart & Chambless, 2007).

## **Article 2**

Les principaux résultats sont que certaines interactions de petite taille entre les critères A et B de l'AMPD ont été trouvées dans la prédiction statistique de l'agression, dont deux ont pu être répliquées entre l'échantillon de patients à l'externe ainsi qu'un échantillon issu de la population générale (c.-à-d., Empathie\*Déshinhibition; Intimité\*Antagonisme). Par exemple, cela signifie qu'un patient ayant un haut niveau de dysfonctionnement de l'empathie (Critère A) et étant très déshinhibé (Critère B), soit deux prédicteurs significatifs de l'agression pris individuellement, verra sa propension à l'agression augmentée par un facteur d'interaction. Cela peut suggérer qu'un niveau d'analyse moins linéaire peut être une avenue pertinente pour étudier l'AMPD, dans une certaine mesure. En effet, bien que les deux critères partagent beaucoup de variance commune (p. ex., Zimmermann et al., 2019), une attention plus systématique devrait être portée aux interactions potentielles sur le plan de la recherche. Cliniquement, cela souligne qu'une lecture plus exhaustive (sévérité et style) permet d'apprécier certaines subtilités additionnelles, et de personnaliser davantage l'évaluation. Les interactions ont aussi été étudiées selon que le Critère A soit

conceptualisé comme étant unidimensionnel ou quadridimensionnel (Identité, Autodétermination, Empathie et Intimité). Les effets d'interaction étaient plutôt similaires, mais les effets principaux d'une conceptualisation quadridimensionnelle étaient plus élevés.

### **Article 3**

Les principaux résultats sont (a) que l'agression autorapportée et cotée à partir de dossiers montrent une bonne cohérence dans leurs associations avec le PID-5; (b) que les associations entre l'agression et les facettes du PID-5, en termes de facettes statistiquement significatives, variaient peu entre les hommes et les femmes; (c) que les différences hommes-femmes étaient les plus flagrantes en comparant le degré de variance expliquée selon la méthode utilisée pour évaluer l'agression (qui était beaucoup plus faible lorsque cotée à partir de dossiers, chez les femmes); puis (d) que les prédicteurs les plus importants étaient l'Hostilité pour les femmes, l'Hostilité et la Prise de risque pour les hommes ainsi que l'Hostilité et la Dureté/insensibilité pour l'échantillon total.

Les résultats sont généralement compatibles avec ceux ayant déjà été rapportés (Dunne et al., 2018; Somma et al., 2020). Cependant, d'importantes nuances sont relevées. Par exemple, la facette Prise de risque a un rôle très important dans l'agression chez les hommes (autorapportée et cotée à partir de dossiers), mais bien moindre chez les femmes. Cette disparité pourrait refléter la plus grande propension à l'extériorisation des hommes comparativement aux femmes (comme suggéré par Munro & Sellbom, 2020), à laquelle

la facette Prise de risque pourrait contribuer. En outre, le fait que le risque d'agression soit plus difficile à évaluer chez les femmes à partir de dossiers pourrait suggérer que l'utilisation du PID-5 pourrait être particulièrement indiquée auprès d'elles, car ce risque serait davantage susceptible de « passer sous le radar » lors de l'évaluation par un clinicien ou un observateur externe et d'être ainsi sous-estimé.

### **Implications générales**

Plusieurs résultats ont une portée importante, que ce soit (a) sur le plan psychométrique-conceptuel; (b) de l'évaluation du risque; puis (c) de l'intervention.

### **Implications psychométriques et théoriques**

Les études de cette thèse réaffirment la place importante que doit avoir la considération de biais (p. ex., linguistiques, sexuels, méthodologiques, etc.) au sein de l'AMPD. En ce sens, si certains résultats étaient conformes à ceux attendus (p. ex., la structure factorielle du PID-5-FBF auprès d'une population francophone), d'autres ne l'étaient pas (p. ex., le PID-5 pourrait prédire moins efficacement l'agression chez les femmes dans un devis multiméthode). Ces résultats peuvent être contextualisés plus largement au sein de la littérature.

### ***Validité des comparaisons cliniques***

L'identification de biais psychométriques est cruciale afin de s'assurer que les comparaisons entre un patient et un groupe de référence soient valables. Il est

généralement souhaitable qu'un instrument soit invariant (p. ex., afin de favoriser son usage dans divers contextes et auprès de diverses populations). Toutefois, lorsqu'elles existent, ces variations dans la validité d'un outil doivent être relevées et prises en ligne de compte (Fischer & Karl, 2019). Par exemple, une étude comparant des personnes de couleur blanche à des personnes de couleur noire a révélé une structure factorielle radicalement différente au sein de ce second groupe (c.-à-d., comportant un seul facteur de second ordre [Démoralisation] au lieu des cinq domaines théoriquement attendus [Affectivité négative, Détachement, etc.]; Bagby et al., 2022). Concrètement, cela veut donc dire que les comparaisons cliniques entre ces deux groupes sont, par définition, invalides (p. ex., une élévation supérieure dans le second groupe ne peut être considérée comme significative en substance), de même que les conclusions cliniques qui pourraient en découler (p. ex., diagnostic psychologique; Bagby et al., 2022). Dans cette thèse, les variations sur le plan de la validité interne entre les clients en pratique privée et d'autres échantillons sont bien moindres. Cependant, leur ampleur exacte n'est pas claire, ce qui incite à la prudence et appelle à davantage d'études (p. ex., au niveau des items via la théorie des réponses aux items).

### ***Recherche multiméthode***

Cette thèse réaffirme la place importante que devrait avoir la recherche multiméthode au sein de l'AMPD. Ce type de design est largement minoritaire au sein de la littérature, ce qui suggère que bon nombre d'indices de validité (p. ex., concourante, prédictive) pourraient être surestimés (Zimmermann et al., 2019) par la contamination de critère

(Meyer et al., 2001). Les résultats de cette thèse sont cohérents avec cette hypothèse. Une nuance additionnelle est que, au-delà que les coefficients soient simplement surestimés, les conclusions elles-mêmes pourraient être fonction de la méthodologie utilisée dans certains cas. En effet, en l'occurrence, les associations personnalité-agression variaient, en termes de variance expliquée, selon le sexe tout dépendamment de la méthodologie utilisée (c.-à-d., monométhode vs multiméthode). Cela peut presque être assimilé à une interaction entre des caractéristiques individuelles et méthodologiques (c.-à-d., sexe\*méthode).

Pourtant, il est tout à fait possible que des méthodes différentes génèrent des résultats qui semblent diverger, voire qui semblent en contradiction, vis-à-vis de ceux obtenus par un devis monométhode (Bornstein, 2015; Meyer et al., 2001). Il est même suggéré que de relever ces apparentes contradictions pourrait être utile, car cela permettrait de s'engager davantage dans le processus d'intégration intellectuelle de l'information afin de comprendre cette disparité (p. ex., identifier les sources de bruit, mieux cerner la part de variance due à la contamination de critère); ultimement, cela pourrait ainsi se solder par une meilleure compréhension d'un phénomène (Bornstein, 2015). En plus de mieux rendre compte de la complexité d'un objet d'étude, la recherche multiméthode permet également de limiter les biais chez l'évaluateur (p. ex., heuristiques mentales, erreurs fondamentales d'attribution, etc.; Bornstein, 2015). En effet, différentes méthodes donnent accès à différents « morceaux de casse-tête », c'est-à-dire qu'une part importante de l'information obtenue par chaque méthode est unique (variance unique) et n'est pas



simplement attribuable à de l'erreur de mesure (Cruitt & Oltmanns, 2018; Meyer et al., 2001). Il paraît donc clair que, dans un monde idéal, la recherche portant sur l'AMPD devrait systématiquement passer par l'utilisation de devis multiméthodes.

De surcroît, les résultats de cette thèse remettent également en question l'a priori (fréquemment véhiculé et tenu pour acquis) que les outils autorapportés (p. ex., questionnaires) sont systématiquement moins valides que les outils cotés par un observateur (p. ex., qui seraient plus fiables ou exhaustifs). Au contraire, cette thèse suggère plutôt que les questionnaires semblent plus sensibles pour identifier l'agression que la mesure cotée à partir de dossiers (et ce, même si l'échantillon de patients en consultation externe utilisé dans cette thèse avait un historique médical et psychosocial fortement documenté). Cela soulève des questionnements sur la sensibilité des professionnels et des chercheurs à la question de l'évaluation de l'agression, du moins auprès d'échantillons non judiciairisés. Ce constat est d'autant plus vrai en ce qui concerne les femmes, car c'est auprès d'elles que les disparités multiméthodes (en termes de variance expliquée) étaient les plus flagrantes. Les résultats montrent que, soit des biais existent, soit l'agression prend une forme différente entre hommes et femmes, soit les méthodes utilisées sont généralement inadéquates.

La réponse exacte se situe probablement à la confluence de toutes ces hypothèses. Premièrement, d'autres chercheurs ont montré que les cliniciens avaient une habileté limitée afin d'évaluer l'agression chez les femmes, ce qui se soldait souvent par un risque

sous-estimé (Skeem et al., 2005). Deuxièmement, certains suggèrent que l'agression chez les femmes prendrait une forme plus réactive (c.-à-d., motivée par la colère) et prenant davantage place au sein de relations amoureuses ou familiales, par comparaison aux hommes (Hodgins, 2022). Troisièmement, le contraste entre les données officielles, qui montrent une très grande différence sur le plan des taux d'agression entre les sexes, et les résultats d'études longitudinales, qui n'en montrent peu ou pas, suggèrent que les femmes « échappent aux poursuites » au sein du système de justice par rapport aux hommes (de Vogel & Nicholls, 2016; Hodgins, 2022). Par exemple, seulement 6–10 % des détenus et patients en psychiatrie légale sont des femmes en Occident (de Vogel & Nicholls, 2016), mais les études montrent peu de différences, voire aucune (p. ex., 57,5 % de la violence conjugale pourrait être bidirectionnelle), entre la prévalence de la violence conjugale chez les hommes et chez les femmes (Denson et al., 2018; de Vogel & Nicholls, 2016). La sensibilité au sexe dans la recherche sur l'agression semble donc particulièrement importante.

### ***Prédiction de l'agression : des résultats robustes ?***

Dans un même ordre d'idées, s'assurer de la validité d'un outil et des inférences qui peuvent en être faites est d'autant plus important quand il est question de comportements extériorisés, comme la délinquance ou l'agression. En effet, le niveau de lecture est couramment considéré comme « androcentrique », c'est-à-dire biaisé à l'avantage des hommes (Cook, 2016). Plusieurs théories ou résultats en criminologie ont longtemps été généralisés aux femmes, alors qu'ils avaient été obtenus à partir de populations très

spécifiques (p. ex., hommes incarcérés), sans que la validité de telles généralisations soit remise en cause (Cook, 2016; de Vogel & Nicholls, 2016). Les résultats de cette thèse appuient la pertinence de faire preuve de davantage de précautions à cet effet, bien que l'origine exacte des différences hommes-femmes reste à confirmer.

À l'inverse, il y a lieu de se questionner sur l'applicabilité de généralisations provenant d'échantillons cliniques généraux aux échantillons médicolégaux/correctionnels. En effet, dans le second cas, les implications sur le plan juridique de l'évaluation sont souvent bien plus grandes (p. ex., si l'évaluation porte sur le niveau de risque et pourrait déterminer l'octroi d'une libération conditionnelle ou le maintien à l'hôpital). Si certaines études sur le PID-5 portant sur des clientèles judiciairisées ont montré que les personnes évaluées divulguaient un niveau important de pathologie de la personnalité (p. ex., Dunne et al., 2018), d'autres n'ont trouvé aucun lien entre le degré de dysfonctionnement de la personnalité de l'ICD-11 (similaire au Critère A) lorsqu'évalué par un entretien semi-structuré et un questionnaire (Hutsebaut et al., 2021). Ces derniers résultats incitent à la prudence, car il pourrait être nécessaire de concevoir des instruments spécialisés et plus difficiles à déjouer spécifiquement pour les patients judiciairisés (Hutsebaut et al., 2021), d'autant plus que cela souligne à nouveau le rôle crucial de la recherche multiméthode afin de mettre en lumière les disparités soi-même/autrui. Ainsi, les implications pratiques suivantes doivent être considérées comme provisoires et nécessitent des études supplémentaires, tout particulièrement lorsqu'elles sont applicables à des populations médicolégales/correctionnelles.

### **Implications pour l'évaluation du niveau de risque**

L'évaluation du niveau de risque en contexte thérapeutique et en contexte légal possèdent certaines similitudes, mais divergent également à de nombreux égards (Kivisto, 2016). En contexte thérapeutique<sup>1</sup>, notamment dans la plupart des cliniques externes ou en pratique privée, pour considérer que le niveau de danger que représente un individu est suffisant afin de prendre une action immédiate (p. ex., prévenir la police pour protéger un tiers), plusieurs organisations de régulation de la profession — y compris au Québec (Castonguay, 2010) — exigent que le risque de violence soit saillant pour une victime *précise* et que ce risque soit *imminent* (Kivisto, 2016). Par opposition, en contexte légal, un patient peut être réputé dangereux pour des victimes inconnues et pour une période temporelle beaucoup plus étendue (Kivisto, 2016). Le contexte dans lequel se tient l'évaluation du risque diffère également. Dans le contexte légal, l'évaluation fait généralement suite à une demande explicite des tribunaux, cela afin de répondre à une question précise et circonscrite (Melton et al., 2018). Par opposition, l'évaluation prétraitement qui caractérise l'évaluation en contexte thérapeutique provient rarement d'un tribunal (Kivisto, 2016), puis vise généralement plutôt à identifier un diagnostic, le fonctionnement psychosocial de l'individu, de même que les objectifs thérapeutiques (Meyer et al., 2001).

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<sup>1</sup> Les termes « contexte thérapeutique » sont ici utilisés afin de faire référence à un patient non judiciairisé qui serait suivi sur une base volontaire (Kivisto, 2016).

### ***Évaluation en contexte thérapeutique***

Les cliniciens en contexte thérapeutique utiliseraient rarement des outils d'évaluation du risque, puis les pratiques d'évaluation du risque seraient très variables (Higgins et al., 2005). Ce fossé entre science et pratique clinique ne serait toutefois pas unique au contexte thérapeutique, car même parmi les professionnels œuvrant dans le milieu légal, les pratiques seraient variables et montreraient certaines lacunes (p. ex., utilisation d'outils d'évaluation du risque seulement par certains professionnels; Singh et al., 2014). Cela étant dit, certains outils plus généraux et facilement utilisables en contexte thérapeutique pourraient être utiles; les outils associés à l'AMPD, notamment le PID-5, pourraient être utilisés à cette fin.

Le concept de personnalité réfère aux prédispositions d'un individu. Comme le nom l'indique, les « traits » (de personnalité) sont des patrons généraux (p. ex., de pensée, d'émotions, etc.) relativement stables, par opposition aux « états » (*states*), qui sont passagers et propres à une situation et un moment spécifiques (p. ex., Schmitt & Blum, 2020). Le PID-5 est un instrument qui devrait, en théorie, renseigner sur les prédispositions (traits) d'un individu (p. ex., tendance à être colérique ou froid émotionnellement) et non sur un état associé à un risque circonstanciel (p. ex., crise de colère associée à un évènement spécifique). En contexte thérapeutique, ce second volet doit être évalué par un autre instrument, et évidemment mettre à contribution le jugement clinique (Kivisto, 2016). Donc, en contexte thérapeutique, cela suggère qu'une utilisation adéquate du PID-5 afin d'évaluer le risque serait d'aider à « voir la forêt derrière l'arbre »,

c'est-à-dire d'estimer le risque en fonction de prédispositions de l'individu (p. ex., propension à en venir aux actes lorsqu'il énonce vouloir frapper quelqu'un) — non pas d'estimer si le risque est immédiat ni de déterminer la victime. Selon la terminologie utilisée en évaluation du risque, les traits du PID-5 seraient des *facteurs de risque dynamiques stables* : des caractéristiques psychologiques relativement stables, mais potentiellement malléables, et associées au risque de (re)commettre un comportement/crime (p. ex., agression; Ferretti et al., 2021; Hanson & Harris, 2000).

### ***Évaluation en contexte légal***

L'intégration de l'AMPD au sein de procédures d'évaluation du risque en contexte légal est une voie qui mériterait d'être approfondie. Certains auteurs ont déjà discuté des bénéfices potentiels d'une approche dimensionnelle de la personnalité (basée sur l'AMPD ou la CIM-11), notamment de fournir une description plus fine, plus valide et plus crédible des personnes évaluées, de même que d'éviter certains problèmes communs de communication entre experts et juristes au tribunal (p. ex., certaines nuances sont difficiles à mettre en exergue par l'utilisation d'étiquettes catégorielles, notamment en ce qui a trait au potentiel de réhabilitation; Carroll et al., 2022; Hopwood & Sellbom, 2013).

Certaines études empiriques ont déjà ouvert cette voie (Ferretti et al., 2021; Gualco et al., 2021; Somma et al., 2021), notamment en identifiant les associations entre le PID-5, la *Psychopathy Checklist-Revised* (PCL-R; Hare, 2003), de même que la *Historical Clinical Risk Management-20*, Version 3 (HCR-20<sup>V3</sup>; Douglas et al., 2013). En effet, étant

donné que l'un des buts de l'AMPD est justement d'affiner l'évaluation (au-delà de poser un diagnostic), la question de l'usage conjoint avec d'autres outils d'évaluation du risque demeure une avenue importante à développer. Même s'ils ne sont pas conçus spécifiquement afin d'évaluer la violence ou la récidive, certains outils montrent déjà un rôle complémentaire dans le contexte psycholégal (p. ex., les outils de la gamme du *Minnesota Multiphasic Personality Inventory* [MMPI]; p. ex., Butcher et al., 2001; voir Olver, 2020). Les outils de l'AMPD comme le PID-5 pourraient être utiles à cette fin.

Historiquement, l'intérêt des courants dominants en criminologie (et même de la psychologie légale) pour une évaluation fine de la personnalité semble limité, comme exposé précédemment (Jones et al., 2011). Cela semble également se refléter dans les outils d'évaluation du risque. Par exemple, la HCR-20<sup>V3</sup> traite très succinctement de la personnalité, celle-ci étant réduite à un seul item (sur un total de 20 pour l'outil complet) coté en trois points déterminant la présence d'un TP (ou de psychopathie). Pourtant, ce désintérêt est surprenant considérant que, même parmi les TP catégoriels, ceux-ci ne sont pas tous associés au même degré de risque (Yu et al., 2012, et qu'il est établi depuis longtemps (dans le domaine de la psychologie de la personnalité) qu'une analyse par les traits, et spécialement par les facettes, montre une validité prédictive efficace et précise afin de prédire l'agression, de même que les conduites antisociales en général (Jones et al., 2011; Miller & Lynam, 2006; Vize et al., 2018). En outre, l'efficacité des politiques publiques et des interventions visant la réduction de l'agression, de même que l'octroi prioritaire des ressources humaines et financières, s'appuient notamment sur une

identification sensible et spécifique du niveau de risque d'un individu et de ses besoins (Somma et al., 2021; van den Berg et al., 2018), ce qui devrait passer notamment par une évaluation de la personnalité. Considérer toute l'information disponible — y compris celle relative à la personnalité — afin d'identifier adéquatement les individus à risque (Yu et al., 2012) semble d'autant plus crucial considérant que la recherche montre qu'un nombre excessivement restreint d'individus serait responsable d'une majorité d'actes violents (p. ex., 1 % de la population serait responsable de 63 % des condamnations pour crimes violents; Falk et al., 2014).

Considérant que le risque pour soi et autrui semble une variable importante associée à la sévérité d'un trouble de la personnalité (Bach & First, 2018), préciser avec davantage de finesse cette sévérité (Critère A) pourrait probablement donner une estimation plus juste de la propension d'un individu à se montrer violent. Il en va de même pour la spécification des traits de personnalité (Critère B) de l'individu évalué, car le risque d'agression semble bonifié par l'accentuation de certains traits spécifiques (c.-à-d., Hostilité, Prise de risque, Dureté/insensibilité). En effet, ces deux critères comportent la plus-value d'être beaucoup plus spécifiques que la simple mention d'un diagnostic de TP (comme c'est le cas dans la HCR-20<sup>V3</sup>). Dans le cas du Critère A, la relation est probablement assez linéaire (gravité modérée à sévère associée à davantage de risque). Dans le cas du Critère B, une analyse au niveau des facettes pourrait permettre de limiter le nombre de faux positifs (p. ex., chez un patient ayant un diagnostic de TP, sans pour autant avoir une accentuation des facettes clés), de même que de faux négatifs (p. ex., chez



un patient n'ayant pas un diagnostic de TP formel, mais montrant tout de même une accentuation des facettes clés). Les résultats de cette thèse suggèrent même qu'un niveau plus sévère de pathologie de la personnalité pourrait moduler le niveau de risque associé à certains traits de la personnalité (c.-à-d., par l'interaction entre les Critères A et B). Néanmoins, la validité incrémentielle (p. ex., la plus-value en termes de variance expliquée des Critères A et B par rapport à la HCR-20<sup>V3</sup>) d'une telle combinaison reste à être testée empiriquement.

Affiner l'évaluation (c.-à-d., en s'intéressant aux traits) permettrait peut-être également de mieux prédire le type de violence. Considérant que l'une des fonctions de la HCR-20<sup>V3</sup> est d'exposer certains scénarios probables de passage à l'acte violent (scénarios à risque) en fonction de l'individu, certains aspects de la personnalité permettraient hypothétiquement de raffiner cette estimation. Par exemple, la facette Hostilité est intimement associée à la colère, alors un individu ayant un niveau élevé de ce trait pourrait être prédisposé à l'agression *réactive* (c.-à-d., « chaude », colérique, impulsive, aversive). À l'inverse, la facette Dureté/insensibilité est associée au manque d'empathie et de remords, donc un individu ayant un niveau élevé de ce trait pourrait être prédisposé à l'agression *proactive* (c.-à-d., « froide », calculée, délibérée, appétitive).

Une évaluation de la personnalité permettrait probablement de mieux prédire, de manière générale, le type de criminalité auquel un patient est enclin. En effet, la présence d'un diagnostic catégoriel de TP différencierait difficilement les types de crimes

(Ferracuti et al., 2020), puis il en va de même pour le concept de psychopathie — largement utilisé dans le domaine de la criminologie — lorsque considéré comme un construit unitaire (c.-à-d., unidimensionnel; Ferretti et al., 2021; Walters, 2012). Les problèmes de validité associés à l’approche catégorielle sont probablement en cause, en partie du moins, rendant difficile l’identification de relations personnalité-crime spécifiques (Ferretti et al., 2021). L’hypothèse selon laquelle il existerait des associations personnalité-crime spécifiques dispose d’appuis abondants dans la littérature sur le FFM (Jones et al., 2011; Miller & Lynam, 2006; Vize et al., 2018), puis trouve également quelques appuis dans la littérature sur l’AMPD. Ainsi, une étude menée auprès de délinquants divers a révélé que la facette Irresponsabilité du PID-5 (qui n’est pas associée à l’agression physique) caractérisait tout particulièrement les agresseurs sexuels d’enfants (Ferretti et al., 2021). En outre, d’autres facettes du PID-5 (qui ne sont pas non plus associées à l’agression physique, p. ex., Malhonnêteté, Impulsivité, Méfiance) caractérisaient tout particulièrement les comportements de harcèlement obsessionnel (Gamache, Cloutier, et al., 2022). Considérés ensemble, ces résultats suggèrent que certains crimes spécifiques peuvent être différenciés (entre autres) sur la base de caractéristiques de la personnalité.

Enfin, certains aspects de la personnalité pourraient être utiles comme facteurs pronostiques pour prédire l’engagement thérapeutique ainsi que le déroulement du suivi. Même si l’hypothèse de non-traitabilité de la psychopathie semble globalement invalide (pour une méta-analyse sur l’efficacité thérapeutique, voir Salekin, 2002), il n’en demeure

pas moins que l'un des meilleurs prédicteurs de l'abandon thérapeutique est la présence de psychopathie ou d'un TP antisociale ou borderline (pour une méta-analyse, voir Olver et al., 2011). Les aspects affectifs de la psychopathie seraient tout particulièrement problématiques pour le bon déroulement du suivi, ceux-ci étant également associés à une réponse thérapeutique plus faible et à une moins bonne alliance thérapeutique (Olver, 2020; Reidy et al., 2013). Plus encore, l'intervention auprès de psychopathes pourrait être iatrogène dans certains cas selon une revue de littérature, c'est-à-dire que certaines interventions pourraient *exacerber* le niveau de risque d'agression (Reidy et al., 2013), d'où l'importance d'évaluer adéquatement le patient avant d'entreprendre un suivi. Les facettes du PID-5, y compris celles conceptuellement associées à la psychopathie (p. ex., Dureté/insensibilité), pourraient donc avoir une utilité particulière pour se prononcer sur le pronostic d'un patient, y compris de déterminer sa disposition à recevoir une intervention thérapeutique et ses chances d'en tirer bénéfice.

### **Implications pour l'intervention**

Le passage de l'évaluation à l'intervention est un des défis que doit surmonter l'AMPD en général (Krueger & Hobbs, 2020), puis cela est d'autant plus vrai en regard de l'intervention pour réduire le risque d'agression. La question se complexifie dépendamment que l'on s'intéresse à la gestion du risque en contexte thérapeutique ou légal, car chacun de ces deux contextes a des dispositifs différents<sup>1</sup>.

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<sup>1</sup> En contexte thérapeutique, les professionnels sont souvent limités dans leur capacité à intervenir directement pour gérer le risque, notamment en impliquant des tiers (Kivisto, 2016). En effet, ils sont liés

Cela étant dit, l'hypothèse de base rendant la considération de la personnalité pertinente en regard de la gestion du risque réside dans sa *malléabilité* à l'intervention (Yu et al., 2012), ce qui est appelé la *cause-correction hypothesis* (Soskin et al., 2012). Simplement résumée, cette hypothèse postule qu'un changement observé dans un construit psychologique (p. ex., agression) résulte d'un changement durable dans le trait sous-jacent (et non d'un changement d'état). Une méta-analyse a révélé que les traits de personnalité changent durablement par l'intervention thérapeutique au sens causal — en soutien à la *cause-correction hypothesis* —, les troubles de la personnalité étant l'une des deux catégories de troubles mentaux où cela est le plus marqué (Roberts et al., 2017). Qui plus est, le changement ne serait pas modéré par le sexe ni l'âge, puis serait le plus marqué dans les premières semaines de la psychothérapie (montrant que les traits de personnalité peuvent aussi se prêter à l'intervention thérapeutique dans une optique de court terme; Roberts et al., 2017). Plus spécifiquement, les traits associés à la stabilité émotionnelle seraient les plus malléables (Roberts et al., 2017), suggérant que la facette Hostilité du

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par le secret professionnel à leur patient, ce qui fait en sorte que, même si un patient partage des fantasmes à caractère violent (p. ex., vague envie de frapper quelqu'un), ils ne pourront généralement pas intervenir (Castonguay, 2010). De plus, le consentement aux services se fait souvent sur une base volontaire, ce qui fait qu'il est fort possible que le potentiel d'agression d'un patient ne soit pas la cible d'intervention principale (Kivisto, 2016). Il serait toutefois possible d'inclure certains facteurs de risque dynamiques typiquement associés au passage à l'acte agressif (p. ex., gestion de la colère) comme des conditions essentielles du traitement lors de la détermination du contrat thérapeutique. En contexte légal, la gestion du risque se fait très différemment. Cela est dû notamment au fait que les balises entourant la confidentialité sont distinctes, car il est généralement attendu que certains tiers soient impliqués et aient accès aux résultats de l'évaluation (Kivisto, 2016; Melton et al., 2018). Il est généralement possible pour le clinicien d'intervenir, comme de prévenir un agent de probation ou la police, cela dans la perspective d'assurer le respect de certaines règles ou de relever les bris (p. ex., se tenir loin d'un conjoint ou des écoles). L'accès aux services psychosociaux se fait parfois aussi sur une base obligatoire ou, du moins, se fait avec une motivation extrinsèque (p. ex., redorer son dossier pour éventuellement demander une libération conditionnelle).

PID-5 (conceptuellement associée à l'instabilité émotionnelle, entre autres) serait la plus susceptible de changer en thérapie.

En évaluation du risque, les aspects de la personnalité sont assimilables à des besoins criminogènes (selon le modèle *Risk-Need-Responsivity* [RNR]; Andrews et al., 1990; Bonta & Andrews, 2017). Ces besoins sont des cibles spécifiques d'intervention intimement liées aux facteurs de risque<sup>1</sup>. Spécifiquement, les besoins criminogènes seraient malléables par l'intervention (c.-à-d., que ce sont des facteurs de risque dynamiques), auraient un rôle causal dans le risque que représente un patient, et puis leur travail thérapeutique permettrait conséquemment de réduire le niveau de risque d'un patient. Toutefois, bien que la littérature sur la malléabilité des traits soit encourageante, aucune étude n'a spécifiquement évalué l'effet du changement thérapeutique des traits du PID-5 sur le risque d'agression. Cela reste donc à être testé.

Déterminer comment les psychothérapies pourraient générer les changements désirés (en termes d'élévation des facettes du PID-5) est une question importante. Il demeure toutefois improbable que des protocoles d'intervention « par facette » voient le jour (p. ex., traitement de l'Hostilité), pour des raisons logiques et pratiques (Clark et al., 2020).

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<sup>1</sup> Dans le domaine de la criminologie et de la psychologie légale, les besoins criminogènes réfèrent à un lot très circonscrit de cibles d'intervention intimement associées à la récidive criminelle, dont les principaux sont appelés les *Central Eight*. À l'exception des antécédents criminels, tous ces facteurs centraux sont dynamiques, c'est-à-dire qu'ils se prêtent à l'intervention (p. ex., traits antisociaux, consommation de substances psychoactives). Les besoins criminogènes sont à différencier des cibles d'intervention générales en santé mentale (besoins non criminogènes), qui sont généralement beaucoup moins associées à la récidive (p. ex., estime de soi, symptômes anxiodépressifs; Bonta & Andrews, 2017; Olver, 2020).

En effet, il y aurait peu de sens à développer des psychothérapies aussi spécifiques, car les cliniciens — tout particulièrement en contexte thérapeutique — travaillent souvent avec des objectifs plus généraux (p. ex., avoir des relations plus fonctionnelles, avoir une meilleure estime, être moins déprimé ou anxieux). Cela serait également plus aligné avec le courant de traitements transdiagnostiques (par opposition aux protocoles pour un diagnostic spécifique; Dalgleish et al., 2020). L'approche dimensionnelle de la personnalité, notamment celle de l'AMPD, est tout à fait compatible avec ce courant, car l'accent n'est non plus mis sur le diagnostic lui-même (surtout considérant les problèmes de validité et de fidélité des TP), mais plutôt sur des cibles générales communes (Clark et al., 2020).

Dans le passage de l'évaluation à l'intervention, il y aurait possibilité de « recycler » les thérapies déjà existantes, dont la plupart ont été développés à l'origine pour le trouble de la personnalité limite (Krueger & Hobbs, 2020). Alors, il serait possible de voir si certaines psychothérapies travaillant conceptuellement certains aspects de la personnalité permettraient de réduire le risque d'agression. Par exemple, il fut suggéré que le module de régulation des émotions de la Thérapie dialectique comportementale (Linehan, 1993) pourrait être utile afin d'améliorer la pathologie de la personnalité (spécifiquement, les traits de personnalité limite; Munro & Sellbom, 2021) chez les auteurs de violence conjugale, de manière à réduire leur risque de récurrence. Il serait possible de croire que la participation à un tel module permettrait d'atténuer la facette Hostilité du PID-5, provoquant ainsi une baisse du risque d'agression. En outre, un essai clinique randomisé

portant sur la Psychothérapie focalisée sur le transfert (Caligor et al., 2018) a également montré que cette thérapie était associée à des effets uniques, dont une réduction de la colère et des actes d'agression physique (Clarkin et al., 2007). Pris ensemble ces hypothèses et résultats empiriques suggèrent que certains modèles traditionnellement utilisés dans la psychothérapie des gens ayant un TP pourraient montrer certains ingrédients actifs pertinents en regard de la réduction de l'agression.

### **Limites et forces de la thèse**

Hormis les limites précédemment mentionnées dans chacune des études, certaines limites générales à la thèse doivent être relevées. La constitution des échantillons utilisés doit être prise en compte lors de la généralisation des résultats. D'une part, peu d'attention fut portée sur la diversité ethnoculturelle, car peu d'information sur ce sujet était disponible. Néanmoins, il faut considérer que la majeure partie des échantillons utilisés (cliniques et non cliniques) était caucasienne et parlait français. Cela constitue une limite importante à la validité externe pour certains groupes, car certaines conclusions sont susceptibles d'être invalides. Comme mentionné précédemment, les rares études ayant porté sur la structure interne du PID-5 au sein de minorités racialisées (Bagby et al., 2022; Hyatt et al., 2020) ont révélé une structure radicalement différente, suggérant logiquement que les indices de validité concurrente (p. ex., associations avec l'agression) seront aussi différents.

D'autre part, bien que cela ne soit pas spécifique aux études de cette thèse (p. ex., Bach et al., 2018), la constitution exacte des échantillons cliniques demeure ambiguë, rendant la comparaison entre les études difficile. Par exemple, dans l'échantillon de patients avec TP en consultation externe, aucune information n'était accessible sur la comorbidité (c.-à-d., sur les troubles « syndromiques » des patients). Cela pourrait avoir certaines implications pour la validité interne des résultats, car il est difficile de déterminer si la présence de certains troubles a affecté les associations d'une manière confondante (p. ex., trouble d'usage de substances, trouble dépressif; A. Allen & Links, 2012; Yu et al., 2012). Néanmoins, la présence élevée de comorbidité constitue la réalité des patients ayant un TP en contexte naturaliste (Hopwood et al., 2018), venant a contrario soutenir la validité externe des résultats.

Les forces de cette thèse méritent également une mention particulière. Premièrement, celles-ci incluent l'utilisation d'échantillons cliniques en contexte naturaliste. Cela est important pour la validité externe des résultats, comme mentionné, car cela permet de donner une appréciation plus précise de l'ampleur et de la nature des associations ainsi que de la structure factorielle des outils. Deuxièmement, l'utilisation d'un devis multiméthode constitue une force en soi, d'autant plus considérant la relative rareté de ce type de devis au sein de la littérature sur l'AMPD. En effet, cela a notamment comme avantage de mieux rendre compte de la part de variance existant entre deux construits (p. ex., personnalité et agression) qui est probablement due à la contamination de critère.



Troisièmement, la sensibilité pour les différences hommes-femmes dans les études permet globalement de rehausser le degré de confiance quant à la validité des résultats (p. ex., structure factorielle du PID-5-FBF), tout en permettant d'ajouter les nuances qui s'imposent dans certains contextes spécifiques (p. ex., l'association entre la facette Prise de risque et l'agression serait plus importante chez les hommes). Enfin, l'utilisation de techniques statistiques robustes et novatrices (p. ex., équations structurelles, analyses d'invariance, interaction/modération, analyse de dominance) afin de répondre aux questions de recherche constitue un gage important de validité interne. En effet, plusieurs méthodes d'analyse conventionnelles (p. ex., analyse factorielle confirmatoire, régression multiple) ne permettent pas toujours, par exemple, de rendre compte adéquatement de la structure des données (p. ex., Marsh et al., 2014) ou d'apprécier l'importance relative des prédicteurs (p. ex., Azen & Budescu, 2009). Les analyses utilisées ont permis de limiter plusieurs de ces biais statistiques et d'asseoir solidement les conclusions dégagées.

### **Pistes de recherche futures**

Déterminer comment l'atténuation de certaines facettes pathologiques se transpose en réduction du risque d'agression est une question qui demeure entière. La littérature portant sur le traitement des délinquants est assez claire quant au fait que la psychothérapie (p. ex., TCC, entretien motivationnel, gestion de la colère) peut réduire le risque (en termes de récurrence violente; Papalia et al., 2020). Il est aussi clair que les facettes de la personnalité sont malléables par la psychothérapie, tout particulièrement chez les patients ayant un TP (Roberts et al., 2017). Il reste maintenant à lier ces deux champs de recherche, soit la

criminologie et la psychologie de la personnalité, qui ont traditionnellement évolué en vase clos (Jones et al., 2011; Miller & Lynam, 2006).

Considérant que la vaste majorité des études visant la réduction de l'agression est issue de la psychologie correctionnelle, davantage d'études devraient porter sur la psychothérapie en contexte thérapeutique, diversifier les opérationnalisations de l'agression (c.-à-d., que la majeure partie de la recherche actuelle utilise les données officielles, comme les condamnations), puis diversifier la gamme de modèles thérapeutiques utilisés (c.-à-d., que la majeure partie des études à ce jour portent sur des modèles apparentés à la TCC). Ces études permettraient notamment d'augmenter la validité externe des résultats (plutôt que de simplement transposer ceux issus de programmes conçus pour la psychologie correctionnelle), puis de sensibiliser les professionnels (tout particulièrement en contexte thérapeutique) à l'importance de gérer le risque d'agression et de les outiller pour le faire. Il est aussi important de mentionner que la méta-analyse précédemment mentionnée a révélé que le type de thérapie était faiblement associé au degré de changement des traits (Roberts et al., 2017), ce qui est cohérent avec l'hypothèse que le type de thérapie n'est généralement pas fortement associé à l'efficacité thérapeutique lorsque l'allégeance théorique des chercheurs est contrôlée (p. ex., Luborsky et al., 2002).

Il serait également important de déterminer comment les patrons de réponse biaisés au PID-5 (p. ex., incohérences, *faking bad*, *faking good*) influencent la validité des

prédictions qui en découlent. Cela est d'autant plus vrai si l'on souhaite utiliser le PID-5 en contexte légal, où les patrons de réponses sont particulièrement susceptibles d'être biaisés (Hopwood & Sellbom, 2013). En effet, une revue récente révèle que bien peu de choses sont connues en ce qui a trait à la manière dont les traits de personnalité modulent l'autorévélation des symptômes (van Helvoort et al., 2022). Cela a des implications importantes pour l'évaluation de l'agression, car un biais dans l'évaluation des traits par le PID-5 pourrait mener à une sur- ou une sous-évaluation du risque d'agression, ce qui serait préjudiciable pour l'individu ou la société, respectivement. Quantifier ce biais serait important. Les échelles de validité proposées pour le PID-5 pourraient possiblement être mises à contribution à titre de variables modératrices entre les associations du PID-5 avec l'agression : (a) la *Response Inconsistency Scale* (INC/VRIN; Keeley et al., 2016); (b) la *Overreporting Scale* (ORS; Sellbom et al., 2018); et (c) de même que le duo d'échelles *Positive Impression Management* (PIM) *Response Distortion Scale* (PRD) et *Social Desirability-Total Denial Scale* (SD-TD; Williams et al., 2019).

Enfin, la plus-value du PID-5 (p. ex., en termes de variance expliquée additionnelle) pour l'évaluation et l'intervention pour des échantillons médico-légaux/correctionnels reste à être testée. En effet, même si certaines études auprès d'une population judiciarisée ont montré plusieurs correspondances avec les résultats de cette thèse (p. ex., Dureté/insensibilité, Hostilité et Prise de risque sont associées à l'agression; Dunne et al., 2020), la validité incrémentielle du PID-5 vis-à-vis d'autres outils demeure à être déterminée (p. ex., HCR-20, PCL-R). La plus-value pour des populations en contexte

thérapeutique est plus claire (car les cliniciens utilisent généralement peu ou pas d'outils d'évaluation du risque; Higgins et al., 2005), mais plus incertaine en contexte légal (car cette population est déjà souvent soumise à de multiples tests). Déterminer la valeur de l'ajout du PID-5 dans la prédiction de certaines variables cliniques pertinentes (p. ex., agression, succès thérapeutique), par des régressions multiples hiérarchiques par exemple, demeure un test crucial afin de soutenir la pertinence du PID-5 auprès de ces populations.

## **Conclusion générale**

En prenant le Modèle alternatif pour les troubles de la personnalité du DSM-5 comme cadre de référence, cette thèse visait à permettre le passage de l'évaluation de la personnalité vers l'évaluation du risque d'agression d'une manière intégrée. Les deux objectifs étaient, d'une part, de favoriser le développement scientifique portant sur l'AMPD auprès de populations francophones, puis, d'autre part, de développer l'application du modèle à l'agression physique.

Les principaux résultats des trois articles de la thèse sont ici repris. Premièrement, les propriétés psychométriques du PID-5-FBF francophone sont généralement bonnes à excellentes. L'invariance entre hommes et femmes était très bien soutenue, puis relativement bien soutenue entre les échantillons. Deuxièmement, les critères A et B du Modèle ont montré certaines interactions dans leurs associations avec l'agression physique. Ainsi, un niveau plus élevé de pathologie de la personnalité modérait l'association entre certains traits de personnalité et l'agression. Troisièmement, les associations entre les traits de personnalité du PID-5 et l'agression sont demeurées similaires dans un devis multiméthode (c.-à-d., selon que l'agression soit autorévélee ou cotée à partir de dossiers). Les associations elles-mêmes étaient très similaires entre hommes et femmes, mais le degré de variance expliquée montrait certaines différences. Spécifiquement, le degré de variance expliquée était similaire entre hommes et femmes

pour l'agression autorévélee, mais bien moindre pour les femmes lorsque l'agression était cotée à partir de dossiers

Pris dans leur ensemble, les résultats suggèrent notamment que les chercheurs devraient favoriser les devis multiméthodes de manière systématique, puis montrer une plus grande sensibilité pour la question des différences hommes-femmes, surtout dans le contexte de conduites extériorisées (p. ex., antisocialité, agression; Munro & Sellbom, 2020). Cela a des implications à la fois sur les plans théoriques (dans la conceptualisation des phénomènes comme l'agression) et cliniques (validité de l'évaluation du niveau de risque).

Bien que psychologie de la personnalité et criminologie soient deux disciplines ayant évolué en silo, il n'en demeure pas moins que les concepts de personnalité et d'agression sont intimement liés, et donc d'intérêt l'un pour l'autre (Jones et al., 2011). En effet, l'hypothèse selon laquelle il existerait des associations personnalité-crime spécifiques dispose d'appuis abondants dans la littérature sur le FFM (Jones et al., 2011; Miller & Lynam, 2006; Vize et al., 2018), qui tendent à être également soutenus dans la littérature sur l'AMPD (p. ex., Dunne et al., 2020; Munro & Sellbom, 2020). Partant de ce constat, il semble alors d'autant plus pertinent d'utiliser, de manière complémentaire au jugement clinique et à l'utilisation d'outils, la personnalité comme indicateur de risque en pratique clinique. La plus-value en contexte thérapeutique de l'utilisation d'instruments psychométriques validés comme le PID-5 (ou le PID-5-FBF) semble évidente, car les

thérapeutes ne disposent que rarement des outils nécessaires pour moult raisons (p. ex., contraintes administratives, accès limité aux facteurs historiques), et ce, malgré que l'évaluation du risque soit une composante essentielle des entretiens cliniques préliminaires (Kivisto, 2016). Le degré général de pathologie de la personnalité (Critère A) et les traits spécifiques (Critère B) sont donc fortement susceptibles de venir compléter le reste de l'information accessible, et ce, d'une manière possiblement plus sensible que la consultation du dossier. Toutefois, la valeur ajoutée demeure plus incertaine en contexte légal, où des évaluations longues et exhaustives sont déjà couramment effectuées. Dans ce contexte, la validité incrémentielle devra donc être testée dans des études ultérieures. Cela étant dit, considérant que les traits de personnalité sont malléables à l'intervention (Roberts et al., 2017) et qu'ils sont susceptibles d'avoir un lien causal dans leurs associations avec l'agression, les associations personnalité-agression sont du plus grand intérêt pour chercheurs et cliniciens, peu importe leur discipline ou leur allégeance théorique.



## **Références générales**

- Al-Dajani, N., Gralnick, T. M., & Bagby, R. M. (2016). A psychometric review of the Personality Inventory for DSM-5 (PID-5): Current status and future directions. *Journal of Personality Assessment, 98*(1), 62-81. <https://doi.org/10.1080/00223891.2015.1107572>
- Allen, A., & Links, P. S. (2012). Aggression in borderline personality disorder: Evidence for increased risk and clinical predictors. *Current Psychiatry Reports, 14*(1), 62-69. <https://doi.org/10.1007/s11920-011-0244-9>
- Allen, J. J., & Anderson, C. A. (2017). Aggression and violence: Definitions and distinctions. Dans P. Sturmey (Éd.), *The Wiley handbook of violence and aggression* (pp. 1-14). Wiley. <https://doi.org/10.1002/9781119057574.whbva001>
- Allen, J. J., Anderson, C. A., & Bushman, B. J. (2018). The general aggression model. *Current Opinion in Psychology, 19*(1), 75-80. <https://doi.org/10.1016/j.copsyc.2017.03.034>
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. American Educational Research Association.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, text revision* (4<sup>e</sup> éd.). American Psychiatric Publishing.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5<sup>e</sup> éd.). <https://doi.org/10.1176/appi.books.9780890425596>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders, text revision* (5<sup>e</sup> éd.). <https://doi.org/10.1176/appi.books.9780890425787>
- American Psychological Association. (n. d.). *Personality*. APA Dictionary of Psychology. <https://dictionary.apa.org/personality>
- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology, 53*(1), 27-51. <https://doi.org/10.1146/annurev.psych.53.100901.135231>
- Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior, 17*(1), 19-52. <https://doi.org/10.1177/0093854890017001004>

- Azen, R., & Budescu, D. V. (2003). The dominance analysis approach for comparing predictors in multiple regression. *Psychological Methods*, 8(2), 129-148. <https://doi.org/10.1037/1082-989X.8.2.129>
- Azen, R., & Budescu, D. V. (2009). Applications of multiple regression in psychological research. Dans R. E. Millsap & A. Maydeu-Olivares (Éds), *The SAGE handbook of quantitative methods in psychology* (pp. 285-310). Sage. <https://doi.org/10.4135/9780857020994>
- Bach, B., & First, M. B. (2018). Application of the ICD-11 classification of personality disorders. *BMC Psychiatry*, 18(1), Article 351. <https://doi.org/10.1186/s12888-018-1908-3>
- Bach, B., Sellbom, M., & Simonsen, E. (2018). Personality Inventory for DSM-5 (PID-5) in clinical versus nonclinical individuals: Generalizability of psychometric features. *Assessment*, 25(7), 815-825. <https://doi.org/10.1177/1073191117709070>
- Bach, B., & Simonsen, S. (2021). How does level of personality functioning inform clinical management and treatment? Implications for ICD-11 classification of personality disorder severity. *Current Opinion in Psychiatry*, 34(1), 54-63. <https://doi.org/10.1097/ycp.0000000000000658>
- Bagby, R. M., Keeley, J., Williams, C., Mortezaei, A., Ryder, A., & Sellbom, M. (2022). Evaluating the measurement invariance of the Personality Inventory for DSM-5 (PID-5) in Black Americans and White Americans. *Psychological Assessment*, 34(1), 82-90. <https://doi.org/10.1037/pas0001085>
- Bandura, A. (1973). *Aggression: A social learning analysis*. Prentice-Hall.
- Bender, D. S., Morey, L. C., & Skodol, A. E. (2011). Toward a model for assessing level of personality functioning in DSM-5, part I: A review of theory and methods. *Journal of Personality Assessment*, 93(4), 332-346. <https://doi.org/10.1080/00223891.2011.583808>
- Benzi, I. M. A., Preti, E., Di Pierro, R., Clarkin, J. F., & Madeddu, F. (2019). Maladaptive personality traits and psychological distress in adolescence: The moderating role of personality functioning. *Personality and Individual Differences*, 140(1), 33-40. <https://doi.org/10.1016/j.paid.2018.06.026>

- Bonta, J., & Andrews, D. A. (2017). *The psychology of criminal conduct* (6<sup>e</sup> éd.). Routledge.
- Bornstein, R. F. (2015). Personality assessment in the diagnostic manuals: On mindfulness, multiple methods, and test score discontinuities. *Journal of Personality Assessment*, 97(5), 446-455. <https://doi.org/10.1080/00223891.2015.1027346>
- Budescu, D. V. (1993). Dominance analysis: A new approach to the problem of relative importance of predictors in multiple regression. *Psychological Bulletin*, 114(3), 542-551. <https://doi.org/10.1037/0033-2909.114.3.542>
- Butcher, J. N., Graham, J. R., Ben-Porath, Y. S., Tellegen, A., Dahlstrom, W. G., & Kaemmer, B. (2001). *MMPI-2: Manual for administration and scoring* (éd. rév.). University of Minnesota Press.
- Caligor, E., Kernberg, O. F., Clarkin, J. F., & Yeomans, F. E. (2018). *Psychodynamic therapy for personality pathology: Treating self and interpersonal functioning*. American Psychiatric Publishing.
- Carroll, A., Walvisch, J., & Marsh, T. (2022). Personality disorders and forensic assessments: The benefits of ICD-11. *Medicine, Science and the Law*. Publication en ligne devancée. <https://doi.org/10.1177/00258024221094188>
- Castonguay, S. (2010). La divulgation dans un contexte de dangerosité. *Psychologie Québec*, 27(1), 14-15. <https://www.ordrepsy.qc.ca/documents/26707/63191/La-divulgation-dans-un-contexte-de-dangerosite/586d827b-02cb-4fe4-8fe8-d7c466c46927#:~:text=Elle%20permet%20au%20psychologue%20la,8>
- Clark L. A. (2007). Assessment and diagnosis of personality disorder: Perennial issues and an emerging reconceptualization. *Annual Review of Psychology*, 58(1), 227-257. <https://doi.org/10.1146/annurev.psych.57.102904.190200>
- Clark, L. A., Nuzum, H., Shapiro, J. L., Vanderbleek, E. N., Daly, E. J., Simons, A. D., & Ro, E. (2020). Personality profiles as potential targets for intervention: Identification and replication. *Personality and Mental Health*, 14(1), 142-163. <https://doi.org/https://doi.org/10.1002/pmh.1455>
- Clarkin, J. F., Levy, K. N., Lenzenweger, M. F., & Kernberg, O. F. (2007). Evaluating three treatments for borderline personality disorder: A multiwave study. *American Journal of Psychiatry*, 164(6), 922-928. <https://doi.org/10.1176/ajp.2007.164.6.922>
- Collison, K. L., & Lynam, D. R. (2021). Personality disorders as predictors of intimate partner violence: A meta-analysis. *Clinical Psychology Review*, 88, Article 102047. <https://doi.org/10.1016/j.cpr.2021.102047>

- Cook, K. J. (2016). Has criminology awakened from its “androcentric slumber”? *Feminist Criminology, 11*(4), 334-353. <https://doi.org/10.1177/1557085116660437>
- Crocq, M. A. (2013). Milestones in the history of personality disorders. *Dialogues in Clinical Neuroscience, 15*(2), 147-153. <https://doi.org/10.31887/DCNS.2013.15.2/macrocq>
- Cruitt, P. J., & Oltmanns, T. F. (2018). Incremental validity of self- and informant report of personality disorders in later life. *Assessment, 25*(3), 324-335. <https://doi.org/10.1177/1073191117706020>
- Dalgleish, T., Black, M., Johnston, D., & Bevan, A. (2020). Transdiagnostic approaches to mental health problems: Current status and future directions. *Journal of Consulting and Clinical Psychology, 88*(3), 179-195. <https://doi.org/10.1037/ccp0000482>
- Darlington, R. B., & Hayes, A. F. (2016). *Regression analysis and linear models: Concepts, applications, and implementation*. Guilford.
- DeLisi, M. (2009). Psychopathy is the unified theory of crime. *Youth Violence and Juvenile Justice, 7*(3), 256-273. <https://doi.org/10.1177/1541204009333834>.
- Denson, T. F., O’Dean, S. M., Blake, K. R., & Beames, J. R. (2018). Aggression in women: Behavior, brain and hormones. *Frontiers in Behavioral Neuroscience, 12*, Article 81. <https://doi.org/10.3389/fnbeh.2018.00081>
- de Vogel, V., & Nicholls, T. L. (2016). Gender matters: An introduction to the special issues on women and girls. *International Journal of Forensic Mental Health, 15*(1), 1-25. <https://doi.org/10.1080/14999013.2016.1141439>
- Digman, J. M. (1990). Personality structure: Emergence of the Five-Factor Model. *Annual Review of Psychology, 41*, 417-440. <https://doi.org/10.1146/annurev.ps.41.020190.002221>
- Douglas, K. S., Hart, S. D., Webster, C. D., Belfrage, H. (2013). *HCR-20V3 Historical, Clinical, Risk Management (Version 3): Professional guidelines for evaluating risk of violence*. Mental Health, Law, and Policy Institute, Simon Fraser University.
- Dowgwillo, E. A., Ménard, K. S., Krueger, R. F., & Pincus, A. L. (2016). DSM-5 pathological personality traits and intimate partner violence among male and female college students. *Violence and Victims, 31*(3), 416-437. <https://doi.org/10.1891/0886-6708.VV-D-14-00109>

- Dunne, A. L., Gilbert, F., & Daffern, M. (2018). Investigating the relationship between DSM-5 personality disorder domains and facets and aggression in an offender population using the Personality Inventory for the DSM-5. *Journal of Personality Disorders, 32*(5), 668-693. [https://doi.org/10.1521/pedi\\_2017\\_31\\_322](https://doi.org/10.1521/pedi_2017_31_322)
- Dunne, A. L., Lloyd, C., Lee, S., & Daffern, M. (2020). Associations between the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, alternative model of antisocial personality disorder, psychopathic specifier, and psychopathy-related facets with aggression in a sample of incarcerated males. *Personality Disorders: Theory, Research, and Treatment, 11*(2), 108-118. <https://doi.org/10.1037/per0000369>
- Falk, O., Wallinius, M., Lundström, S., Frisell, T., Anckarsäter, H., & Kerekes, N. (2014). The 1% of the population accountable for 63% of all violent crime convictions. *Social Psychiatry and Psychiatric Epidemiology, 49*(4), 559-571. <https://doi.org/10.1007/s00127-013-0783-y>
- Fazel, S., Gulati, G., Linsell, L., Geddes, J. R., & Grann, M. (2009). Schizophrenia and violence: Systematic review and meta-analysis. *PLoS Medicine, 6*(8), Article e1000120. <https://doi.org/10.1371/journal.pmed.1000120>
- Fazel, S., Långström, N., Hjern, A., Grann, M., & Lichtenstein, P. (2009). Schizophrenia, substance abuse, and violent crime. *JAMA, 301*(19), 2016-2023. <https://doi.org/10.1001/jama.2009.675>
- Fazel, S., Lichtenstein, P., Grann, M., Goodwin, G. M., & Långström, N. (2010). Bipolar disorder and violent crime: New evidence from population-based longitudinal studies and systematic review. *Archives of General Psychiatry, 67*(9), 931-938. <https://doi.org/10.1001/archgenpsychiatry.2010.97>
- Fazel, S., Philipson, J., Gardiner, L., Merritt, R., & Grann, M. (2009). Neurological disorders and violence: A systematic review and meta-analysis with a focus on epilepsy and traumatic brain injury. *Journal of Neurology, 256*(10), 1591-1602. <https://doi.org/10.1007/s00415-009-5134-2>
- Ferracuti, S., Mandarelli, G., & Del Casale, A. (2020). Psychopathy, personality disorders, and violence. Dans B. Carpinello, A. Vita, & C. Mencacci (Éds), *Violence and mental disorders* (pp. 81-94). Springer. [https://doi.org/10.1007/978-3-030-33188-7\\_5](https://doi.org/10.1007/978-3-030-33188-7_5)
- Ferretti, F., Carabellese, F., Catanesi, R., Coluccia, A., Ferracuti, S., Schimmenti, A., Caretti, V., Lorenzi, L., Gualtieri, G., Carabellese, F., & Pozza, A. (2021). DSM-5 personality trait facets amongst child molesters: An exploratory comparison with other types of offenders. *BMC Psychology, 9*(1), Article 117. <https://doi.org/10.1186/s40359-021-00619-1>

- Fischer, R., & Karl, J. A. (2019). A primer to (cross-cultural) multi-group invariance testing possibilities in R. *Frontiers in Psychology, 10*, Article 1507. <https://doi.org/10.3389/fpsyg.2019.01507>
- Gamache, D., Cloutier, M.-È., Faucher, J., Leclerc, P., & Savard, C. (2022). Stalking perpetration through the lens of the Alternative DSM-5 Model for Personality Disorders. *Personality and Mental Health*. Publication en ligne devancée. <https://doi.org/10.1002/pmh.1567>
- Gamache, D., Savard, C., Leclerc, P., & Côté, A. (2019). Introducing a short self-report for the assessment of DSM-5 level of personality functioning for personality disorders: The Self and Interpersonal Functioning Scale. *Personality Disorders: Theory, Research, and Treatment, 10*(5), 438-447. <https://doi.org/10.1037/per0000335>
- Gamache, D., Savard, C., Lemieux, R., & Berthelot, N. (2022). Impact of level of personality pathology on affective, behavioral, and thought problems in pregnant women during the coronavirus disease 2019 pandemic. *Personality Disorders: Theory, Research, and Treatment, 13*(1), 41-51. <https://doi.org/10.1037/per0000479>
- Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216-1229. <https://doi.org/10.1037/0022-3514.59.6.1216>
- Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.
- Gualco, B., Scarpa, F., & Rensi, R. (2021). Assessment of recidivism risk in sex offenders: A pilot study in central Italy. *Healthcare, 9*(11), Article 1590. <https://www.mdpi.com/2227-9032/9/11/1590>
- Hamp, A., Stamm, K., Lin, L., & Christidis, P. (2016). *2015 APA survey of psychology health service providers*. Center for Workforce Studies, American Psychological Association. <https://www.apa.org/workforce/publications/15-health-service-providers>
- Hanson, R. K., & Harris, A. J. R. (2000). Where should we intervene?: Dynamic predictors of sexual assault recidivism. *Criminal Justice and Behavior, 27*(1), 6-35. <https://doi.org/10.1177/0093854800027001002>
- Hare, R. D. (2003). *Manual for the Revised Psychopathy Checklist (2<sup>e</sup> éd.)*. Multi-Health Systems.

- Harkness, A. R., & McNulty, J. L. (1994). The Personality Psychopathology Five (PSY-5): Issues from the pages of a diagnostic manual instead of a dictionary. Dans S. Strack & M. Lorr (Éds), *Differentiating normal and abnormal personality* (pp. 291-315). Springer.
- Herpertz, S. C., Huprich, S. K., Bohus, M., Chanen, A., Goodman, M., Mehlum, L., Moran, P., Newton-Howes, G., Scott, L., & Sharp, C. (2017). The challenge of transforming the diagnostic system of personality disorders. *Journal of Personality Disorders, 31*(5), 577-589. [https://doi.org/10.1521/pedi\\_2017\\_31\\_338](https://doi.org/10.1521/pedi_2017_31_338)
- Higgins, N., Watts, D., Bindman, J., Slade, M., & Thornicroft, G. (2005). Assessing violence risk in general adult psychiatry. *Psychiatric Bulletin, 29*(4), 131-133. <https://doi.org/10.1192/pb.29.4.131>
- Hirschi, T. (2004). Self-control and crime. Dans R. F. Baumeister & K. D. Vohs (Éds), *Handbook of self-regulation: Research, theory, and application* (pp. 537-552). Guilford.
- Hodgins, S. (2022). Female forensic patients may be an atypical sub-type of females presenting aggressive and antisocial behavior. *Frontiers in Psychiatry, 13*, Article 809901. <https://doi.org/10.3389/fpsy.2022.809901>
- Hopwood, C. J., Kotov, R., Krueger, R. F., Watson, D., Widiger, T. A., Althoff, R. R., Ansell, E. B., Bach, B., Bagby, R. M., Blais, M. A., Bornovalova, M. A., Chmielewski, M., Cicero, D. C., Conway, C., De Clercq, B., De Fruyt, F., Docherty, A. R., Eaton, N. R., Edens, J. F., ... Zimmermann, J. (2018). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health, 12*(1), 82-86. <https://doi.org/10.1002/pmh.1408>
- Hopwood, C. J., Malone, J. C., Ansell, E. B., Sanislow, C. A., Grilo, C. M., McGlashan, T. H., Pinto, A., Markowitz, J. C., Shea, M. T., Skodol, A. E., Gunderson, J. G., Zanarini, M. C., & Morey, L. C. (2011). Personality assessment in DSM-5: Empirical support for rating severity, style, and traits. *Journal of Personality Disorders, 25*(3), 305-320. <https://doi.org/10.1521/pedi.2011.25.3.305>
- Hopwood, C. J., & Sellbom, M. (2013). Implications of DSM-5 personality traits for forensic psychology. *Psychological Injury and Law, 6*(4), 314-323. <https://doi.org/10.1007/s12207-013-9176-5>
- Howard, R. (2015). Personality disorders and violence: What is the link? *Borderline Personality Disorder and Emotion Dysregulation, 2*(1), Article 12. <https://doi.org/10.1186/s40479-015-0033-x>



- Hutsebaut, J., Weekers, L. C., Tuin, N., Apeldoorn, J. S. P., & Bulten, E. (2021). Assessment of ICD-11 personality disorder severity in forensic patients using the Semi-structured Interview for Personality Functioning DSM-5 (STiP-5.1): Preliminary findings. *Frontiers in Psychiatry, 12*, Article 617702. <https://doi.org/10.3389/fpsyt.2021.617702>
- Hyatt, C. S., Maples-Keller, J. L., Crowe, M. L., Sleep, C. E., Carter, S. T., Michopoulos, V., Stevens, J. S., Jovanovic, T., Bradley, B., Miller, J. D., & Powers, A. (2020). Psychometric properties of the Personality Inventory for DSM-5-Brief Form in a community sample with high rates of trauma exposure. *Journal of Personality Assessment, 103*(2), 204-213. <https://doi.org/10.1080/00223891.2020.1713138>
- Hyatt, C. S., Sleep, C. E., Weiss, B. M., & Miller, J. D. (2018). Personality and aggression: A general trait perspective. Dans A. T. Vazsonyi, D. J. Flannery, & M. DeLisi (Éds), *The Cambridge handbook of violent behavior and aggression* (2<sup>e</sup> éd., pp. 221-238). Cambridge University Press. <https://doi.org/10.1017/9781316847992.014>
- Jones, S. E., Miller, J. D., & Lynam, D. R. (2011). Personality, antisocial behavior, and aggression: A meta-analytic review. *Journal of Criminal Justice, 39*(4), 329-337. <https://doi.org/10.1016/j.jcrimjus.2011.03.004>
- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., Lowry, R., O'Malley Olsen, E., McManus, T., Chyen, D., Whittle, L., Taylor, E., Demissie, Z., Brener, N., Thornton, J., Moore, J., & Zaza, S. (2014). Youth risk behavior surveillance—United States, 2013. *Morbidity and Mortality Weekly Report: Surveillance Summaries, 63*(4), 1-168. <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6304a1.htm>
- Keeley, J. W., Webb, C., Peterson, D., Roussin, L., & Flanagan, E. H. (2016). Development of a Response Inconsistency Scale for the Personality Inventory for DSM-5. *Journal of Personality Assessment, 98*(4), 351-359. <https://doi.org/10.1080/00223891.2016.1158719>
- Kivisto, A. J. (2016). Violence risk assessment and management in outpatient clinical practice. *Journal of Clinical Psychology, 72*(4), 329-349. <https://doi.org/10.1002/jclp.22243>
- Krueger, R. F., & Bezdjian, S. (2009). Enhancing research and treatment of mental disorders with dimensional concepts: Toward DSM-V and ICD-11. *World Psychiatry, 8*(1), 3-6. <https://doi.org/10.1002/j.2051-5545.2009.tb00197.x>

- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine, 42*(9), 1879-1890. <https://doi.org/10.1017/S0033291711002674>
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 Brief Form (PID-5-BF)* [Test psychométrique]. [https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA\\_DSM5\\_The-Personality-Inventory-For-DSM-5-Brief-Form-Adult.pdf](https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM5_The-Personality-Inventory-For-DSM-5-Brief-Form-Adult.pdf)
- Krueger, R. F., & Hobbs, K. A. (2020). An overview of the DSM-5 Alternative Model of Personality Disorders. *Psychopathology, 53*(3-4), 126-132. <https://doi.org/10.1159/000508538>
- Krueger, R. F., Hopwood, C. J., Wright, A. G. C., & Markon, K. E. (2014). Challenges and strategies in helping the DSM become more dimensional and empirically based. *Current Psychiatry Reports, 16*(12), Article 515. <https://doi.org/10.1007/s11920-014-0515-3>
- Lilienfeld, S. O., & Latzman, R. D. (2018). Personality disorders: Current scientific status and ongoing controversies. Dans J. N. Butcher & J. M. Hooley (Éds), *APA handbook of psychopathology: Psychopathology: Understanding, assessing, and treating adult mental disorders. Vol. 1* (pp. 557-606). American Psychological Association.
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. Guilford Press.
- Livesley, W. J. (2021). Why is an evidence-based classification of personality disorder so elusive? *Personality and Mental Health, 15*(1), 8-25. <https://doi.org/10.1002/pmh.1471>
- Luborsky, L., Rosenthal, R., Diguer, L., Andrusyna, T. P., Berman, J. S., Levitt, J. T., Seligman, D. A., & Krause, E. D. (2002). The dodo bird verdict is alive and well—mostly. *Clinical Psychology: Science and Practice, 9*(1), 2-12. <https://doi.org/10.1093/clipsy.9.1.2>
- Maples, J. L., Carter, N. T., Few, L. R., Crego, C., Gore, W. L., Samuel, D. B., Williamson, R. L., Lynam, D. R., Widiger, T. A., Markon, K. E., Krueger, R. F., & Miller, J. D. (2015). Testing whether the DSM-5 personality disorder trait model can be measured with a reduced set of items: An item response theory investigation of the Personality Inventory for DSM-5. *Psychological Assessment, 27*(4), 1195-1210. <https://doi.org/10.1037/pas0000120>

- Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology, 10*(1), 85-110. <https://doi.org/10.1146/annurev-clinpsy-032813-153700>
- Matsueda, R. L., & Anderson, K. (1998). The dynamics of delinquent peers and delinquent behavior. *Criminology, 36*(2), 269-308. <https://doi.org/10.1111/j.1745-9125.1998.tb01249.x>
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality, 60*(2), 175-215. <https://doi.org/10.1111/j.1467-6494.1992.tb00970.x>
- Meehan, K. B., Siefert, C., Sexton, J., & Huprich, S. K. (2019). Expanding the role of levels of personality functioning in personality disorder taxonomy: Commentary on “Criterion A of the AMPD in HiTOP”. *Journal of Personality Assessment, 101*(4), 367-373. <https://doi.org/10.1080/00223891.2018.1551228>
- Meehl, P. E. (1990). Toward an integrated theory of schizotaxia, schizotypy, and schizophrenia. *Journal of Personality Disorders, 4*(1), 1-99. <https://doi.org/10.1521/pedi.1990.4.1.1>
- Melton, G. B., Petrila, J., Poythress, N. G., Slobogin, C., Otto, R. K., Mossman, D., & Condie, L. O. (2018). *Psychological evaluations for the courts: A handbook for mental health professionals and lawyers* (4<sup>e</sup> éd.). Guilford.
- Meyer, G. J., Finn, S. E., Eyde, L. D., Kay, G. G., Moreland, K. L., Dies, R. R., Eisman, E. J., Kubiszyn, T. W., & Reed, G. M. (2001). Psychological testing and psychological assessment: A review of evidence and issues. *American Psychologist, 56*(2), 128-165. <https://doi.org/10.1037/0003-066X.56.2.128>
- Miller, J. D., & Lynam, D. R. (2006). Structural models of personality and their relation to antisocial behavior: A meta-analytic review. *Criminology, 39*(4), 765-798. <https://doi.org/10.1111/j.1745-9125.2001.tb00940.x>
- Morey, L. C. (2017). Development and initial evaluation of a self-report form of the DSM-5 Level of Personality Functioning Scale. *Psychological Assessment, 29*(10), 1302-1308. <https://doi.org/10.1037/pas0000450>
- Morey, L. C., Good, E. W., & Hopwood, C. J. (2022). Global personality dysfunction and the relationship of pathological and normal trait domains in the DSM-5 Alternative Model for Personality Disorders. *Journal of Personality, 90*(1), 34-46. <https://doi.org/10.1111/jopy.12560>

- Munro, O. E., & Sellbom, M. (2020). Elucidating the relationship between borderline personality disorder and intimate partner violence. *Personality and Mental Health, 14*(3), 284-303. <https://doi.org/10.1002/pmh.1480>
- Munro, O. E., & Sellbom, M. (2021). Evaluating borderline personality disorder traits in the context of an intimate partner violence intervention programme. *Psychology, Crime & Law*. Publication en ligne devancée. <https://doi.org/10.1080/1068316X.2021.1929976>
- Olver, M. E. (2020). Personality-based violence risk assessment. Dans J. S. Wormith, L. A. Craig, & T. E. Hogue (Éds), *The Wiley handbook of what works in violence risk management* (pp. 203-222). Wiley. <https://doi.org/10.1002/9781119315933.ch10>
- Olver, M. E., Stockdale, K. C., & Wormith, J. S. (2011). A meta-analysis of predictors of offender treatment attrition and its relationship to recidivism. *Journal of Consulting and Clinical Psychology, 79*(1), 6-21. <https://doi.org/10.1037/a0022200>
- Organisation mondiale de la santé. (OMS, 2022). *CIM-11 pour les statistiques de mortalité et de morbidité* (Version : 02/2022). <https://icd.who.int/browse11/l-m/fr>
- Papalia, N., Spivak, B., Daffern, M., & Ogloff, J. R. P. (2020). Are psychological treatments for adults with histories of violent offending associated with change in dynamic risk factors? A meta-analysis of intermediate treatment outcomes. *Criminal Justice and Behavior, 47*(12), 1585-1608. <https://doi.org/10.1177/0093854820956377>
- Pinel, P. (1801). *Traité médico-philosophique sur l'aliénation mentale ou la manie*. Richard, Caille & Ravier.
- Pires, R., Henriques-Calado, J., Sousa Ferreira, A., Bach, B., Paulino, M., Gama Marques, J., Ribeiro Moreira, A., Grácio, J., & Gonçalves, B. (2021). The utility of ICD-11 and DSM-5 traits for differentiating patients with personality disorders from other clinical groups. *Frontiers in Psychiatry, 12*, Article 633882. <https://doi.org/10.3389/fpsy.2021.633882>
- Reidy, D. E., Kearns, M. C., & DeGue, S. (2013). Reducing psychopathic violence: A review of the treatment literature. *Aggression and Violent Behavior, 18*(5), 527-538. <https://doi.org/10.1016/j.avb.2013.07.008>
- Reis, T., Gekker, M., Land, M., Mendlowicz, M. V., Berger, W., Luz, M. P., Vilete, L., Figueira, I., & Araújo, A. (2022). The growth and development of research on personality disorders: A bibliometric study. *Personality and Mental Health*. Publication en ligne devancée. <https://doi.org/10.1002/pmh.1540>

- Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin*, *143*(2), 117-141. <https://doi.org/10.1037/bul0000088>
- Salekin, R. T. (2002). Psychopathy and therapeutic pessimism: Clinical lore or clinical reality? *Clinical Psychology Review*, *22*(1), 79-112. [https://doi.org/10.1016/S0272-7358\(01\)00083-6](https://doi.org/10.1016/S0272-7358(01)00083-6)
- Schmitt, M., & Blum, G. S. (2020). State/trait interactions. Dans V. Zeigler-Hill & T. K. Shackelford (Éds), *Encyclopedia of personality and individual differences* (pp. 5206-5209). Springer. [https://doi.org/10.1007/978-3-319-24612-3\\_1922](https://doi.org/10.1007/978-3-319-24612-3_1922)
- Sellbom, M., Dhillon, S., & Bagby, R. M. (2018). Development and validation of an Overreporting Scale for the Personality Inventory for DSM-5 (PID-5). *Psychological Assessment*, *30*(5), 582-593. <https://doi.org/10.1037/pas0000507>
- Sexton, J., Hilton, M., Benson, S., & Rosen, A. (2019). Exploring Kernberg's model of personality functioning as a moderator of traits: Focus on DSM-5's Section III Alternative Model of Personality Disorder. *Journal of the American Psychoanalytic Association*, *67*(6), 1047-1055. <https://doi.org/10.1177/0003065119898772>
- Sharp, C., & Wall, K. (2021). DSM-5 Level of Personality Functioning: Refocusing personality disorder on what it means to be human. *Annual Review of Clinical Psychology*, *17*(1), 313-337. <https://doi.org/10.1146/annurev-clinpsy-081219-105402>
- Shedler, J., Beck, A., Fonagy, P., Gabbard, G. O., Gunderson, J., Kernberg, O., Michels, R., & Westen, D. (2010). Personality disorders in DSM-5. *American Journal of Psychiatry*, *167*(9), 1026-1028. <https://doi.org/10.1176/appi.ajp.2010.10050746>
- Singh, J. P., Desmarais, S. L., Hurducas, C., Arbach-Lucioni, K., Condemarin, C., Dean, K., Doyle, M., Folino, J. O., Godoy-Cervera, V., Grann, M., Ho, R. M. Y., Large, M. M., Nielsen, L. H., Pham, T. H., Rebocho, M. F., Reeves, K. A., Rettenberger, M., de Ruiter, C., Seewald, K., & Otto, R. K. (2014). International perspectives on the practical application of violence risk assessment: A global survey of 44 countries. *International Journal of Forensic Mental Health*, *13*(3), 193-206. <https://doi.org/10.1080/14999013.2014.922141>
- Skeem, J., Schubert, C., Stowman, S., Beeson, S., Mulvey, E., Gardner, W., & Lidz, C. (2005). Gender and risk assessment accuracy: Underestimating women's violence potential. *Law and Human Behavior*, *29*(2), 173-186. <https://doi.org/10.1007/s10979-005-3401-z>

- Skodol, A. E., Morey, L. C., Bender, D. S., & Oldham, J. M. (2015). The alternative DSM-5 model for personality disorders: A clinical application. *American Journal of Psychiatry*, *172*(7), 606-613. <https://doi.org/10.1176/appi.ajp.2015.14101220>
- Somma, A., Fossati, A., Carabellese, F., Santoro, G., Schimmenti, A., Caretti, V., & Carabellese, F. (2021). Dysfunctional personality traits and demographic variables associated with violence risk in male sexual offenders: A study on Italian adult inmates. *Journal of Forensic Psychiatry & Psychology*, *32*(2), 242-260. <https://doi.org/10.1080/14789949.2020.1857425>
- Somma, A., Krueger, R. F., Markon, K. E., Alajmo, V. B. M., Arlotta, E., Beretta, S., Boni, F., Busso, S. L., Manini, R., Nazzaro, G., Maffei, C., & Fossati, A. (2020). DSM-5 Alternative Model of Personality Disorder dysfunctional personality traits as predictors of self-reported aggression in an Italian sample of consecutively admitted, personality-disordered psychotherapy patients. *Journal of Personality Disorders*, *34*(Suppl. C), 5-24. [https://doi.org/10.1521/pedi\\_2019\\_33\\_430](https://doi.org/10.1521/pedi_2019_33_430)
- Somma, A., Krueger, R. F., Markon, K. E., & Fossati, A. (2019). The replicability of the personality inventory for DSM-5 domain scale factor structure in U.S. and non-U.S. samples: A quantitative review of the published literature. *Psychological Assessment*, *31*(7), 861-877. <https://doi.org/10.1037/pas0000711>
- Soskin, D. P., Carl, J. R., Alpert, J., & Fava, M. (2012). Antidepressant effects on emotional temperament: Toward a biobehavioral research paradigm for major depressive disorder. *CNS Neuroscience & Therapeutics*, *18*(6), 441-451. <https://doi.org/10.1111/j.1755-5949.2012.00318.x>
- Stewart, R. E., & Chambless, D. L. (2007). Does psychotherapy research inform treatment decisions in private practice? *Journal of Clinical Psychology*, *63*(3), 267-281. <https://doi.org/10.1002/jclp.20347>
- Swinson, N., Webb, R., & Shaw, J. (2021). The prevalence of severe personality disorder in perpetrators of homicide. *Personality and Mental Health*, *15*(1), 49-57. <https://doi.org/https://doi.org/10.1002/pmh.1503>
- Teichman, J. (1985). The definition of person. *Philosophy*, *60*(232), 175-185. <https://doi.org/10.1017/S003181910005107X>
- Tellegen, A. (1993). Folk concepts and psychological concepts of personality and personality disorder. *Psychological Inquiry*, *4*(2), 122-130. [https://doi.org/10.1207/s15327965pli0402\\_12](https://doi.org/10.1207/s15327965pli0402_12)

- Tyrer, P., Mulder, R., Kim, Y.-R., & Crawford, M. J. (2019). The development of the ICD-11 classification of personality disorders: An amalgam of science, pragmatism, and politics. *Annual Review of Clinical Psychology, 15*(1), 481-502. <https://doi.org/10.1146/annurev-clinpsy-050718-095736>
- van den Berg, J. W., Smid, W., Schepers, K., Wever, E., van Beek, D., Janssen, E., & Gijs, L. (2018). The predictive properties of dynamic sex offender risk assessment instruments: A meta-analysis. *Psychological Assessment, 30*(2), 179-191. <https://doi.org/10.1037/pas0000454>
- van Helvoort, D., Merckelbach, H., van Nieuwenhuizen, C., & Otgaar, H. (2022). Traits and distorted symptom presentation: A scoping review. *Psychological Injury and Law*. Publication en ligne devancée. <https://doi.org/10.1007/s12207-022-09446-0>
- Vize, C. E., Miller, J. D., & Lynam, D. R. (2018). FFM facets and their relations with different forms of antisocial behavior: An expanded meta-analysis. *Journal of Criminal Justice, 57*(1), 67-75. <https://doi.org/10.1016/j.jcrimjus.2018.04.004>
- Volkert, J., Gablonski, T. C., & Rabung, S. (2018). Prevalence of personality disorders in the general adult population in Western countries: Systematic review and meta-analysis. *British Journal of Psychiatry, 213*(6), 709-715. <https://doi.org/10.1192/bjp.2018.202>
- Walters, G. D. (2012). Psychopathy and crime: Testing the incremental validity of PCL-R-measured psychopathy as a predictor of general and violent recidivism. *Law and Human Behavior, 36*(5), 404-412. <https://doi.org/10.1037/h0093928>
- Waters, H., Hyder, A., Rajkotia, Y., Basu, S., & Rehwinkel, J. A. (2004). *The economic dimensions of interpersonal violence*. Organisation mondiale de la santé. <https://apps.who.int/iris/bitstream/handle/10665/42944/9241591609.pdf?sequence=1>
- Watters, C. A., & Bagby, R. M. (2018). A meta-analysis of the five-factor internal structure of the Personality Inventory for DSM-5. *Psychological Assessment, 30*(9), 1255-1260. <https://doi.org/10.1037/pas0000605>
- Waugh, M. H., Hopwood, C. J., Krueger, R. F., Morey, L. C., Pincus, A. L., & Wright, A. G. C. (2017). Psychological assessment with the DSM-5 Alternative Model for Personality Disorders: Tradition and innovation. *Professional Psychology: Research and Practice, 48*(2), 79-89. <https://doi.org/10.1037/pro0000071>
- Weekers, L. C., Hutsebaut, J., & Kamphuis, J. H. (2019). The Level of Personality Functioning Scale-Brief Form 2.0: Update of a brief instrument for assessing level of personality functioning. *Personality and Mental Health, 13*(1), 3-14. <https://doi.org/10.1002/pmh.1434>

- Widiger, T. A., & Crego, C. (2019). HiTOP thought disorder, DSM-5 psychoticism, and Five-Factor Model openness. *Journal of Research in Personality, 80*(1), 72-77. <https://doi.org/10.1016/j.jrp.2019.04.008>
- Widiger, T. A., & McCabe, G. A. (2020). The Alternative Model of Personality Disorders (AMPD) from the perspective of the Five-Factor Model. *Psychopathology, 53*(3-4), 149-156. <https://doi.org/10.1159/000507378>
- Widiger, T. A., & Trull, T. J. (2007). Plate tectonics in the classification of personality disorder: Shifting to a dimensional model. *American Psychologist, 62*(2), 71-83. <https://doi.org/10.1037/0003-066X.62.2.71>
- Williams, M. M., Rogers, R., Sharf, A. J., & Ross, C. A. (2019). Faking good: An investigation of social desirability and defensiveness in an inpatient sample with personality disorder traits. *Journal of Personality Assessment, 101*(3), 253-263. <https://doi.org/10.1080/00223891.2018.1455691>
- Winsper, C., Bilgin, A., Thompson, A., Marwaha, S., Chanen, A. M., Singh, S. P., Wang, A., & Furtado, V. (2020). The prevalence of personality disorders in the community: A global systematic review and meta-analysis. *British Journal of Psychiatry, 216*(2), 69-78. <https://doi.org/10.1192/bjp.2019.166>
- Yu, R., Geddes, J. R., & Fazel, S. (2012). Personality disorders, violence, and antisocial behavior: A systematic review and meta-regression analysis. *Journal of Personality Disorders, 26*(5), 775-792. <https://doi.org/10.1521/pedi.2012.26.5.775>
- Zimmermann, J. (2022). Beyond defending or abolishing Criterion A: Comment on Morey et al. (2022). *Personality Disorders: Theory, Research, and Treatment*. Publication en ligne devancée. <https://psyarxiv.com/ypg4b/>
- Zimmermann, J., Kerber, A., Rek, K., Hopwood, C., & Krueger, R. F. (2019). A brief but comprehensive review of research on the Alternative DSM-5 Model for Personality Disorders. *Current Psychiatry Reports, 21*, Article 92. <https://doi.org/10.1007/s11920-019-1079-z>