Measuring Personality Disorder Severity and Traits in DSM-5 and ICD-11

Doctoral Dissertation

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The Faculty of Health and Medical Sciences at the University of Copenhagen has accepted this dissertation for public defense for the doctoral degree in medical science.

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Bente Merete Stallknecht, Head of Faculty

The defense will take place on Thursday 21th of September 2023, at 13.00 in "Auditoriet", Psykiatrisygehuset in Slagelse, Fælledvej 6, Bygning 3, 4200 Slagelse, Denmark.

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Martin Balslev Jørgensen, Professor, University of Copenhagen, Chair of defense

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Preface

The selection of twelve papers included in the present thesis were written and published during my time as postdoctoral researcher from 2015 to 2022 at the Psychiatric Research Unit, Region Zealand Psychiatry, Slagelse – and in recent years as manager of the Center for Personality Disorder Research (CPDR). In the same period, I have been working as a part-time clinician in "Psykiatrisk Klinik", where I have supervised and carried out assessment and treatment of patients with personality disorders while tentatively experimenting with and learning to use the new dimensional diagnostic frameworks discussed in the present thesis.

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I express my special gratitude to Professor Erik Simonsen for paving the way for personality disorder research in Denmark as well as in my career, and for giving me the opportunity to complete this thesis. I also owe great thanks to patients, colleagues, collaborators, and co-authors in Denmark and around the world.

A most special thanks to my family.

"*Since the first classification by Schneider of 'psychopathic personalities' in 1923 there has been a great deal of argument over the best way of defining and describing abnormal personalities.*"

(Tyrer & Simonsen, 2003, p. 41) [1]

Structure of the Thesis

In this compressed account of the thesis, I aim to present the research findings concisely in relation to the existing body of knowledge within the aspiring field of research on the ICD-11 Clinical Descriptions and Diagnostic Requirements for Personality Disorders and the DSM-5 Alternative Model of Personality Disorders (AMPD). I will do so by initially providing a general introduction to the nosology of personality disorders in ICD-11 and the DSM-5 AMPD. Subsequently, five chapters will serve as an organizing structure covering separate themes related to the twelve papers (see below).

In order to minimize redundancy and information overload, I kindly refer to the attached papers for more details on methodology and specific findings.

Finally, a general discussion will summarize the findings and limitations, and touch on some of the most significant issues and unanswered questions in the field, followed by contemplations on the future direction toward DSM-6 and the impending implementation of ICD-11 in clinical practice.

- Chapter I. Screening for Global Personality Dysfunction and Severity
  (Paper 1, Paper 2, Paper 3)

- Chapter II. Measuring Maladaptive Personality Trait Dimensions
  (Paper 4, Paper 5, Paper 6)

- Chapter III. Harmonizing DSM-5 and ICD-11 Trait Dimensions
  (Paper 7, Paper 8)

- Chapter IV. Continuity between Categories and Trait Dimensions
  (Paper 9, Paper 10)

- Chapter V. Exploring Trait Configurations for Borderline PD
  (Paper 11, Paper 12)

All included papers were written after having completed a Ph.D. degree in Psychiatry. None of the papers or results herein have previously been submitted with the intention of acquiring an academic degree. However, a subsample from Paper 6 has partially been used by the second author of that paper to fulfill a Master of Science degree.

Access to ICD-11 descriptions of Personality Disorders and Related Traits

Clinical demonstrations of the ICD-11 Clinical Descriptions and Diagnostic Requirements (CDDR) for Personality Disorders and Related Traits are provided in the literature [2–5]. Please consult the official online version of ICD-11 CDDR for a complete up-to-date overview (https://icd.who.int) [6].

List of Papers

The present thesis is based on the following 12 papers:

1) **Bach, B.**, & Hutsebaut, J. (2018). Level of Personality Functioning Scale–Brief Form 2.0: Utility in Capturing Personality Problems in Psychiatric Outpatients and Incarcerated Addicts. *Journal of Personality Assessment*, *100*(6), 660–670. https://doi.org/10.1080/00223891.2018.1428984

2) **Bach, B.**, & Anderson, J. L. (2020). Patient-Reported ICD-11 Personality Disorder Severity and DSM-5 Level of Personality Functioning. *Journal of Personality Disorders*, *34*(2), 231–249. https://doi.org/10.1521/pedi_2018_32_393

3) **Bach, B.**, Brown, T. A., Mulder, R. T., Newton-Howes, G., Simonsen, E., & Sellbom, M. (2021). Development and initial evaluation of the ICD-11 personality disorder severity scale: PDS-ICD-11. *Personality and Mental Health*, *15*(3), 223–236. https://doi.org/10.1002/pmh.1510

4) **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

5) **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

6) **Bach, B.**, Christensen, S., Kongerslev, M. T., Sellbom, M., & Simonsen, E. (2020). Structure of clinician-reported ICD-11 personality disorder trait specifiers. *Psychological Assessment*, *32*(1), 50–59. https://doi.org/10.1037/pas0000747

7) **Bach, B.**, Sellbom, M., Kongerslev, M. T., Simonsen, E., Krueger, R. F., & Mulder, R. T. (2017). Deriving ICD-11 personality disorder domains from dsm-5 traits: initial attempt to harmonize two diagnostic systems. *Acta Psychiatrica Scandinavica*, *136*(1), 108–117. https://doi.org/10.1111/acps.12748

8) **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*(3–4), 179–188. https://doi.org/10.1159/000507589

9) **Bach, B.**, Anderson, J. L., & Simonsen, E. (2017). Continuity between interview-rated personality disorders and self-reported DSM–5 traits in a Danish psychiatric sample. *Personality Disorders: Theory, Research, and Treatment*, *8*(3), 261–267. https://doi.org/10.1037/per0000171

10) **Bach, B.**, Sellbom, M., Skjernov, M., & Simonsen, E. (2018). ICD-11 and DSM-5 personality trait domains capture categorical personality disorders: Finding a common ground. *Australian & New Zealand Journal of Psychiatry*, *52*(5), 425–434. https://doi.org/10.1177/0004867417727867

11) **Bach, B.**, Sellbom, M., Bo, S., & Simonsen, E. (2016). Utility of DSM-5 section III personality traits in differentiating borderline personality disorder from comparison groups. *European Psychiatry*, *37*(9), 22–27. https://doi.org/10.1016/j.eurpsy.2016.04.006

12) **Bach, B.**, & Sellbom, M. (2016). Continuity between DSM-5 Categorical Criteria and Traits Criteria for Borderline Personality Disorder. *The Canadian Journal of Psychiatry*, *61*(8), 489–494. https://doi.org/10.1177/0706743716640756

Abbreviations

APA	American Psychiatric Association
BPD	Borderline Personality Disorder
CFA	Confirmatory Factor Analysis
DSM	Diagnostic and Statistical Manual
EFA	Exploratory Factor Analysis
ESEM	Exploratory Structural Equation Modeling
FFM	Five-Factor Model
HiTOP	Hierarchical Taxonomy of Psychopathology
ICD	International Classification of Diseases
IUPsyS	International Union of Psychological Science
LPFS	Level of Personality Functioning Scale
LPFS-BF	Level of Personality Functioning Scale – Brief Form (12 items)
NIMH	National Institute of Mental Health
PD	Personality Disorder
PDS-ICD-11	Personality Disorder Severity ICD-11
PiCD	Personality Inventory for ICD-11 (60 items)
PiCD-IRF	Personality Inventory for ICD-11 – Informant Report Form (60 items)
PID-5	Personality Inventory for DSM-5 (220 items)
PID-5-BF	Personality Inventory for DSM-5 – Brief Form (25 items)
PID-5-BF+	Personality Inventory for DSM-5 – Brief Form Plus (36 items)
PID-5-SF	Personality Inventory for DSM-5 – Short Form (100 items)
PPDWG	Personality & Personality Disorders Work Group
RDoC	Research Domain Criteria
SASPD	Standardized Assessment of Severity of Personality Disorders (9 items)
SAPAS	Standardized Assessment of Personality - Abbreviated Scale (8 items)
SCID-II	Structured Clinical Interview for DSM-IV - Axis II
SCID-5-PD	Structured Clinical Interview for DSM-5 - Personality Disorders
SCID-AMPD	Structured Clinical Interview for DSM-5 - Alternative Model of Personality Disorders
STiP 5.1	Semi-structured Interview for Personality Functioning version 5.1
WHO	World Health Organization
WPA	World Psychiatric Association

General Introduction

In this introductory part of the thesis, I will present essential aspects of the historical context and background that have laid the foundation for the agenda of the present thesis. First, I will provide a brief overview of historical and current definitions of Personality Disorders (PD) followed by potential bio-psycho-social underpinnings, developmental psychopathology, and the context for the PD classification in DSM-5 and ICD-11. Recognized problems with the established PD diagnoses will also be highlighted. Table 1 below provides a contemporary definition of personality and personality disorder according to WHO's ICD-11 [6], which also serves as a core definition in the present thesis. I generally advice the reader to consult the list of abbreviations on the previous page when reading the thesis.

Table 1. Definition of personality and personality disorders

"Personality refers to an individual's characteristic way of behaving, experiencing life, and of perceiving and interpreting themselves, other people, events, and situations. Personality Disorder is a marked disturbance in personality functioning, which is nearly always associated with considerable personal and social disruption. The central manifestations of Personality Disorder are impairments in functioning of aspects of the self (e.g., identity, self-worth, capacity for self-direction) and/or problems in interpersonal functioning (e.g., developing and maintaining close and mutually satisfying relationships, understanding others' perspectives, managing conflict in relationships). Impairments in self-functioning and/or interpersonal functioning are manifested in maladaptive (e.g., inflexible or poorly regulated) patterns of cognition, emotional experience, emotional expression, and behavior."

Note. ICD-11 Clinical Descriptions and Diagnostic Requirements for Personality Disorders and Related Traits (WHO, 2022, pre-publication document, p.2).

Historical and Current Definitions of Personality Disorders

The history of personality disturbances can be traced back to Hippocrates (about 400 BC) who described four temperamental body fluids associated with specific personality patterns. However, it was not until the early 1800s that the French psychiatrist Phillippe Pinel (1745-1826) described "manie sans délire", which may be understood as "insanity without hallucinations", to characterize personality disordered individuals. Later in 1835, the British physician James C. Pritchard (1786-1848) described features of antisocial personality in terms of "moral insanity", which indicated that this kind of madness was not attributed to hallucinations but to perversions in natural feelings, temper, moral, and impulses [7–9]. In a another realm far away from both Pinel and Pritchard, the Russian psychologist Aleksandr Fyodorovich Lazursky (1874-1917) developed one of the first comprehensive theories of personality including features of temperament and character. However, for a long period in history, the work by Lazursky was separated from the rest of the international field of psychiatry and personality science [10].

Actual descriptions of personality pathology were initially introduced by the German psychiatrist Emil Kreapelin in the beginning of the 20th century. He defined what we now call "personality disorder" under the term "psychopathic personalities". Interestingly, Kraepelin stressed the existence of a continuum between normal personality features and actual psychopathology, and he considered the limits between normality and pathology as arbitrary. In that way, Kraepelin can be considered a forerunner of the dimensional approach to PDs that is now on the rise. Kreapelin's textbooks included personality types such as the born criminal, the irresolute or weak-willed, the pseudo-querulants, the excitable, the irresolute, persons following their instincts and pleasures, eccentrics, pathological liars and swindlers, enemies of society, and the quarrelsome [7, 8]. However, most of Kraepelin's personality types did not correspond the now established DSM-IV and 5 PD categories.

The German psychiatrist Kurt Schneider (1887-1967) probably played the most substantial role in developing the typology of PDs beginning with the ICD-6 and DSM-I (see Table 2). In his influential book "The Psychopathic Personalities" from 1923, a number of different character types were outlined including the insecure sensitive, the insecure anankastic, the fanatic, the self-assertive, the emotionally unstable, and the explosive, among others [8]. Individuals with such psychopathic personalities either suffered from their abnormal personality or they caused suffering to society because of it. Like Kraepelin, Schneider can also be viewed as a forerunner of the dimensional approach because he viewed abnormal personality as a statistical deviation from the norm rather than a qualitatively different condition [7].

From a theoretical point of view, the PD concept was essentially influenced by Sigmund Freud, Karl Abraham, and Wilhelm Reich who laid the foundation of the psychoanalytic character typology [7]. The first model of a psychoanalytic approach to personality pathology is Freud's paper on "Character and anal erotism," published in 1908, where he established a link between character traits and childhood experiences [7]. In particular the later DSM-II classification of PDs released in 1952 was heavily influenced by psychoanalytic theory [8], and psychoanalytic terminology largely survives until the release of DSM-III in 1980. From the 1960s, the Austrian-Chilean psychoanalyst, Otto F. Kernberg, conceptualized different levels of personality pathology (i.e., neurotic, borderline, psychotic) based on the individual's ability to have an integrated representation of self and others, maturity of defense operations, and capacity for reality testing [11]. In this approach, "borderline" served as a metaphor for the borderland between neurotic and psychotic functioning. Later, in the 1970s, the American psychiatrist John G. Gunderson (also referred to as "the father of borderline PD"), sought to define borderline features in terms of operational diagnostic criteria (i.e., a borderline "syndrome") [12]. Accordingly, the DSM-III introduced a fundamentally new diagnostic approach to PDs where specific types, including a new

borderline PD type, were diagnosed based on polythetic operational criteria [13]. The psychologist Theodore Millon (1928-2014) also had substantial influence on the emergence of this new PD typology and operationalization [7]. After this "new paradigm" within classification, the PD diagnoses have barely changed.

Table 2. Evolution of the Personality Disorder diagnosis across the DSM revisions

DSM-I (1952)	DSM-II (1968)	DSM-III (1980)	DSM-III-R (1987)	DSM-IV – DSM-5 (1994 - 2013)
Paranoid	Paranoid	Paranoid	Paranoid	Paranoid
Schizoid	Schizoid	Schizoid	Schizoid	Schizoid
-	-	Schizotypal	Schizotypal	Schizotypal
Antisocial	Antisocial	Antisocial	Antisocial	Antisocial
Emotionally unstable	-	Borderline	Borderline	Borderline
-	Hysterical	Histrionic	Histrionic	Histrionic
-	-	Narcissistic	Narcissistic	Narcissistic
-	-	Dependent	Dependent	Dependent
Compulsive	Obsessive Compulsive	Compulsive	Obsessive Compulsive	Obsessive Compulsive
-	-	Avoidant	Avoidant	Avoidant
Passive Aggressive	Passive Aggressive	Passive Aggressive	Passive Aggressive	-
Cyclothymic	Cyclothymic	-	-	-
Inadequate	-	-	-	-
Dyssocial	-	-	-	-
-	Explosive	-	-	-
-	Asthenic	-	-	-

Note. WHO's classification from ICD-6 to ICD-10 has generally aligned with the DSM classification, where DSM-I influenced ICD-7 and 8, DSM-II influenced ICD-9, and DSM-III, DSM-IV, and DSM-5 have overall been harmonized with ICD-10.

Epidemiology and Gender Distribution

According to meta-analytic evidence, the worldwide prevalence of any PD is 7.8% [14] and 12.2% in Western communities [15], which approximately corresponds to the prevalence of low back pain and chronic respiratory diseases [15]. This prevalence makes having a PD more common than having diabetes or cardiovascular disease in high-income adult populations [15]. In Western communities the most prevalent PD type is Obsessive-Compulsive PD (4.32%) and the least prevalent type is Dependent PD (0.78%). The prevalence rate is approximately equal for men and woman, although slightly higher for women [14, 15]. Nevertheless, women generally manifest more internalizing PD features (e.g., avoidant PD), while men generally manifest more externalizing PD features (e.g., antisocial PD). The prevalence rates in psychiatric outpatients range from 40% to 92% [16].

Developmental Psychopathology and Bio-Psycho-Social Underpinnings

Research generally suggests that early adversity and a range of vulnerability factors, including biogenetic and interpersonal diatheses, are likely to contribute to the development of personality pathology [17]. Thus, there is a general consensus among scholars that PDs emerge from an interaction between nature (i.e., biological temperament) and nurture (e.g., environmental factors) [18]. It is also particularly important to understand that early life experiences, such as childhood trauma or negative parental bonding, may be conceptualized as both a "vulnerability" factor and a "stress" factor. For example, early childhood attachment failures, rooted in problematic experiences with key attachment figures, may contribute to an enduring attachment style that interferes with healthy socialization [17]. For this very reason, the ICD-11 explicitly recognizes that early life adversity is a risk factor for later development of PD, as it is for many other mental disorders. However, it is not determinative [6]. For example, some individuals' biological temperament allows typical personality development despite an extremely adverse early environment, and the other way around [17, 18].

The ICD-11 maintains that a PD should not be diagnosed if the patterns of behaviour characterizing the personality disturbance are developmentally appropriate (e.g., problems related to establishing an independent self-identity during adolescence) or can be explained primarily by social or cultural factors, including socio-political conflict [6]. Moreover, WHO recognizes that manifestations of personality disturbance tend to appear first in childhood, increase during adolescence, and continue to be manifest into adulthood, although individuals may not come to clinical attention until later in life [6]. Nevertheless, caution should be exercised in applying a PD diagnosis to children because their personalities are still developing [6]. PD is only considered relatively stable after young adulthood, and may change such that a person who had PD during young adulthood no longer meets the diagnostic requirements by middle age [6]. Additionally, the ICD-11 also recognizes that in rare cases, a person who earlier did not have a diagnosable PD develops one later in life. Such emergence of a PD in older adults may be related to the loss of social supports that had previously helped to compensate for personality disturbance [6].

New Personality Disorder Proposals in DSM-5 and ICD-11

The shortcomings of the established classification of PDs have been recognized at least since the 1970s while the DSM-II and ICD-9 were employed [19]. Almost immediately after the publication of the DSM-III, the categorical PD approach was criticized [20]; a criticism that was empirically supported in the following years [21, 22]. Thus, when the World Health Organization (WHO) released the 10th revision of the International Classification of Diseases (ICD-10) in 1990/1992, certain nosological issues with *disorder of adult personality (F60)* were emphasized, and it was acknowledged that a new approach was warranted.[1]

> "In all current psychiatric classification, disorders of adult personality include a variety of severe problems, whose solution requires information that can come only from extensive and time-consuming investigations. The difference between observations and interpretation becomes particularly troublesome when attempts are made to write detailed guidelines or diagnostic criteria for these disorders; and the number of criteria that must be fulfilled before a diagnosis is regarded as confirmed remains an unsolved problem in the light of present knowledge. Nevertheless, the attempts that have been made to specify guidelines and criteria for this category may help to demonstrate that a new approach to the description of PDs is required […] After initial hesitation, a brief description of borderline PD (F60.31) was finally included as a subcategory of emotionally unstable PD (F60.3), again in the hope of stimulating investigations" [23] (ICD-10 "Blue Book", p. 20).

In December 2004, a conference was co-sponsored by the World Health Organization (WHO), the American Psychiatric Association (APA), and the National Institute of Mental Health (NIMH) to review the limitations of the current DSM-IV and ICD-10 classification systems and to recommend a research agenda aimed at incorporating a dimensional approach in the future [24–27]. Thus, when the APA released the DSM-5 in 2013, the shortcomings of categories were underscored (see overview in Table 3), while a future direction toward dimensional spectra was emphasized:

> "[…] Indeed, the once plausible goal of identifying homogeneous populations for treatment and research resulted in narrow diagnostic categories that did not capture clinical reality, symptom heterogeneity within disorders, and significant sharing of symptoms across multiple disorders. The historical aspiration of achieving diagnostic homogeneity by progressive subtyping within disorder categories no longer is sensible; like most common human ills, mental disorders are heterogeneous at many levels, ranging from genetic risk factors to symptoms" [28] (APA, 2013, p. 12).

[1] This section presents some of the essential but rather lengthy passages from the two authoritative diagnostic systems (i.e., ICD-10 and DSM-5) in order to let the official nosological descriptions speak for themselves.

> "[…] Such reformulation of research goals should also keep DSM-5 central to the development of dimensional approaches to diagnosis that will likely supplement or supersede current categorical approaches in coming years" [28] (APA, 2013, p. 13).

The aforementioned PD conference paved the way for a new proposal including dimensional assessment of personality functioning [29], personality traits [30], and a hybrid description of PD types. However, the APA board of trustees eventually decided to include this proposal as an Alternative Model of PDs (AMPD) in DSM-5 Section III[2], whereas the familiar categorical approach was retained in Section II to preserve continuity with clinical practice:

> "The current approach to Personality Disorders appears in Section II of DSM-5, and an alternative model developed for DSM-5 is presented here in Section III. The inclusion of both models in DSM-5 reflects the decision of the APA Board of Trustees to preserve continuity with current clinical practice, while also introducing a new approach that aims to address numerous shortcomings of the current approach to Personality Disorders." [28] (APA, 2013, p. 761).

Notably, the DSM-5 acknowledges that clinicians and researchers may use both the categorical and the dimensional approach: "As this field evolves, it is hoped that both versions will serve clinical practice and research initiatives, respectively." [28] (APA, 2013, p. 645).

More recently, the WHO PD working group has drawn the obvious conclusions of the aforementioned movement towards dimensions by including a fully dimensional classification system for PDs in ICD-11, which has been approved by the World Health Assembly and will be used for coding purposes by WHO member states after 2022. As I propose in the present thesis (relying on empirical findings), the aforementioned AMPD model can to a large extent be converted or translated into this ICD-11 classification of PDs.

The entire process of reclassifying PDs in both DSM-5 and ICD-11 has been characterized by intense debate and polemic, including personal opinions and investments as well as preferences and politics [31–38]. This will not be further dealt with in the present thesis because eventually the initially disapproved ICD-11 proposal was substantially changed in response to the criticism [39]. Nevertheless, there are, of course, certain opportunities and challenges related to the new dimensional approach that will be addressed in the thesis. An informative overview of the scientific and extra-scientific factors involved in the stormy process of reclassifying PDs are thoroughly discussed by Gøtzsche-Astrup & Moskowitz [40], Skodol et al. [41], and Tyrer et al [31]. The APA's DSM-5 PPDWG included psychiatrists

[2] Also the Clinician-Rated Dimensions of Psychosis Symptom Severity are introduced in DSM-5 Section III.

and psychologists [28], whereas the revision process of the entire ICD-11 chapter on mental disorders was formally represented by members of the World Psychiatric Association (WPA) [42] and the International Union of Psychological Sciences (IUPsyS) [43].

Table 3. Essential shortcomings of the DSM-IV and ICD-10 Personality Disorders

- Extensive co-occurrence of PDs such that the majority of patients receiving a PD diagnosis meets criteria for more than one diagnosis.
- Extreme heterogeneity among patients with the same PD diagnosis so that two patients with a particular disorder may share very few or only one feature.
- The temporal instability characterizing PD symptoms is not consistent with the basic definition of a PD (i.e., "the pattern is stable").
- Arbitrary diagnostic thresholds in polythetic criteria sets with insufficient or no empirical basis, which forces clinicians to diagnose PDs as either present or absent despite varying levels of underlying pathology.
- Insufficient coverage of personality pathology, which is revealed by the fact that the diagnosis of PD not otherwise specified (PDNOS) has been the PD most commonly diagnosed.
- Poor clinical agreement on presence versus absence of PDs in terms of insufficient categorical inter-rater reliability.
- As a consequense of the aforementioned flaws, the PDs have often not been diagnosed in clinical settings (e.g., the assessment is cumbersome and lack clinical utility), PD diagnostic criteria have been underused (e.g, the prevalence of PDNOS) or they have been used wrongly (e.g., diagnoses often made on the basis of too few of the required criteria).

Note. See overview of scientific evidence for these shortcomings in Skodol [44].

The DSM-5 Alternative Model of Personality Disorders (AMPD)

The very early preparation for the revision of DSM-IV PDs was initiated at a meeting in 1999 arranged by APA [45]. This meeting set the stage for defining a research agenda for DSM-5 [26] including the later establishment of the Personality and Personality Disorders Work Group (PPDWG) [46]. The extensive shortcomings of the categorical approach to personality pathology were highlighted, and the empirical evidence [25, 47] and clinical utility [48] of the proposed revision were underlined. The result was a DSM-5 hybrid categorical-dimensional PD model with the following new features:

First, a PD diagnosis must be established based on core impairments in personality functioning (i.e., Level of Personality Functioning [LPFS]), which is rated on a continuum of severity. Second, an empirically-derived framework of pathological personality traits must be used to describe stylistic features. Third, a subset of PD types[3] are described based on specified impairments and traits. Fourth, the concept of stability is revised so that PDs are allowed to be only *relatively* stable over time. Fifth, the adolescent conduct disorder requirement is eliminated for the Antisocial PD type. Sixth, the rule-outs for other co-occurring mental disorders are eliminated except for the effects of substances. The empirical foundation for this proposal was directly and indirectly supported by longitudinal PD research, over 30 years of psychodynamic research related to the LPFS, and thousands of empirical studies on adaptive and maladaptive traits (i.e., trait system) [41]. Nevertheless, the DSM-5 Scientific Review Committee considered the proposal *per se* as not strongly supported by published research at the time.

The final DSM-5 PD proposal was presented to the DSM-5 Task Force in 2012, which completely approved it for the main diagnostic section II of DSM-5, whereas the board of trustees recommended the placement of the proposal in Section III of DSM-5 ("Emerging Measures and Models") as an "Alternative DSM-5 Model for Personality Disorders (AMPD)". For this reason, I consistently refer to the AMPD model in the present thesis.

Since 2012, a large body of research has been published on the AMPD model, and already after one year, the PPDWG members declared that if "the Section III model continues to perform as early studies suggest, the possibility exists for it to migrate in its existing or some revised form into Section II of a planned DSM-5.1" (p. 348) [41]. Moreover, this new dimensional DSM-5 approach has been referred to as the vanguard of the post-DSM-5.0 era [13] because such a dimensional system has been called for by the field and is consistent with the NIMH RDoC agenda [49] as well as HiTOP [50]. This is significant

[3] These hybrid types serve to maintain continuity with respect to categorical constructs and take into account research developments since the time of *DSM–III* with minimal disruption of clinical practice and research.

because the powerful NIMH has signaled the end of funding of research on diagnostic categories because of their scientific limitations [51].

The ICD-11 Classification of Personality Disorders

It is important to distinguish between two stages of the process of developing the ICD-11 classification of PD: First, the initial proposal chaired by Peter Tyrer [52], and secondly, the finally released version, which was substantially revised through dialogues between work group members and representatives from international societies of experts and researchers [33, 39].

The Initial ICD-11 Personality Disorder Proposal

The early foundation of the initial proposal for a revision of the ICD-10 PD classification was centered around the Personality Assessment Schedule (PAS) [19], originally developed in 1976, which allowed the user to evaluate both trait-like features and overall severity of personality dysfunction. Later, Tyrer & Johnson [53] developed an algorithm for DSM-IV that allowed practitioners to estimate PD severity primarily based on the complexity and constellation of co-occurring DSM-IV PDs (see example in Table 6). Due to some political circumstances in the U.K., the estimation of PD severity also became more oriented toward risk of danger, so that the most severe level of PD should be characterized by co-occurring antisocial features in terms of a “dangerous and severe PD” [54].

To further support routine psychiatric assessment of PD, another British group developed a screening instrument for general PD features entitled the Standardized Assessment of Personality–Abbreviated Scale (SAPAS) [55]. The SAPAS later served as the foundation for the Standardized Assessment of Severity of Personality Disorder (SASPD) [56], which was specifically developed for the initial ICD-11 PD model (see Paper 2).

In December 2004, a conference was co-sponsored by WHO, APA, and NIMH to review the limitations of the current DSM-IV and ICD-10 classification systems, and to recommend a research agenda aimed at incorporating a dimensional approach in the future [24]. Six years after, the World Psychiatric Association (WPA) Section on PDs sought to examine new ways of classifying PDs from a global perspective in the ICD-11 [57]. Consequently, the appointed ICD-11 work group members conducted a systematic review of the literature on classifying PDs according to severity [58] and trait domains [59]. As shown in Table 13 (Chapter II), four central trait domains were identified that were similar to the four domains previously identified by Widiger & Simonsen [27]. A tentative ICD-11 proposal was published [60, 61] and subsequently pilot-tested in South Korea [62–65] and New Zealand

[66]. See reflections and a brief overview of these findings by Ekselius [67]. The final edition of this initial ICD-11 proposal was published in a special series about PDs in *The Lancet* [52].

The overall aim of the proposal was to rely on empirical evidence while keeping the classification simple and feasible for all health care practitioners across WHO member countries:

> "The proposed ICD-11 classification abolishes all type-specific categories of PD apart from the main one, the presence of PD itself." (p. 721) [52]."

> "Unlike the DSM-5 proposal, the ICD-11 classification contains no assessment of self-pathology, mainly because an accurate assessment of self-pathology of personality is highly complex and beyond the expectations of most practitioners." (p. 723) [52]."

It is noticeable, that the determination of severity in this initial proposal only relied on interpersonal problems and not on self-functioning as in the DSM-5 AMPD model. On the other hand, this ICD-11 proposal emphasized harm to self or others in the determination of severity. In addition to the rating of severity, the user is also allowed to specify up to five trait domains (i.e., negative affective features, dissocial features, feature of disinhibition, anankastic features, and features of detachment), which I will discuss further in Chapter II and Chapter III.

The Finally Approved ICD-11 Classification of PD

The aforementioned initial proposal caused a lot of controversy [31], and eventually resulted in a substantial revision before the final approval by WHO [39]. For a historical overview of these matters, I refer to Herpertz et al. [34], Hopwood et al. [32], and Huprich et al. [33] of which the latter reflects status quo. The finally agreed upon solution was a product of dialogues between ICD-11 work group members and representatives from the European Society for the Study of Personality Disorders (ESSPD), the International Society for the Study of Personality Disorders (ISSPD), and the North American Society for the Study of Personality Disorders (NASSPD). In the very final phase before its release, Lee Anna Clark (acting on behalf of the ICD-11 workgroup) and Michael B. First (chief technical and editorial consultant for ICD-11) made major contributions to the diagnostic guidelines in terms of definitions, structure, and clinical utility [68].

In comparison to the more simple but criticized model that was initially proposed for ICD-11 [52], the now released nomenclature integrates both self- and interpersonal functioning, a more comprehensive operationalization of personality functioning as well as five trait specifiers [39]. Importantly, it also provides the option of using a "borderline pattern specifier" which might be clinically useful in terms of facilitating the identification of individuals who may respond to certain

psychotherapeutic treatments. Encouraged by Geoffrey M. Reed, who is responsible for the ICD-11 process, Bach & First [2] provided an overview of this new ICD-11 PD classification including a demonstration of how it may be used in practice.

Essentials of DSM-5 AMPD and ICD-11 Personality Disorders

The AMPD model characterizes PDs in terms of impairments in personality functioning along with specification of pathological personality traits. The rationale for this procedure is explained in the following way: "Personality disorders are optimally characterized by a generalized personality severity continuum with additional specification of stylistic elements, derived from personality disorder symptom constellations and personality traits" (p. 772) [28]. Moreover, the AMPD model allows the user to derive six different PD types (i.e., antisocial, avoidant, borderline, narcissistic, obsessive-compulsive, and schizotypal) based on certain constellations of functioning and traits. This latter feature is being referred to as the "hybrid model", because it allows elements of functioning and traits to be communicated in terms of familiar categorical types for the sake of continuity with established clinical practice. When none of the specific types are sufficiently matched, a trait specified diagnosis may be provided instead of a "not otherwise specified (NOS)" diagnosis.

Table 4. Alignment between DSM-5 AMPD and ICD-11 Personality Disorders

DSM-5 Criterion A: Level of Personality Functioning	*ICD-11 Severity of Personality Dysfunction*
0) No impairment (Healthy Functioning)	None
1) Some impairment	Personality Difficulty
2) Moderate impairment	Mild PD
3) Severe impairment	Moderate PD
4) Extreme impairment	Severe PD
DSM-5 Criterion B: Trait Domains	*ICD-11 Trait Domain Specifiers*
Negative Affectivity	Negative Affectivity
Detachment	Detachment
Disinhibition	Disinhibition
Antagonism	Dissociality
(Rigid Perfectionism)	Anankastia
Psychoticism	(Schizotypal Disorder)
Hybrid types	*Continuity with clinical practice*
Antisocial, Avoidant, Borderline, Narcissistic, Obsessive-Compulsive, Schizotypal, Trait-Specified	Borderline Pattern Specifier

Note. The dashed line represents the threshold for a PD diagnosis.

Likewise, the ICD-11 classification of PDs involves rating of severity and the assignment of the applicable trait domain specifiers that are most prominent and that contribute to overall personality disturbance (e.g., Mild PD with Negative Affectivity and Anankastia; Severe PD with Dissociality and Disinhibition). The optional *Borderline pattern* specifier may be used after the coding of severity and trait domain

specifiers (e.g., Moderate PD with Negative Affectivity, Dissociality, and Disinhibition, Borderline pattern) [6].

As illustrated in Table 4, the DSM-5 AMPD and ICD-11 approaches to PDs are overall comparable. However, in order to ensure simplicity and ease of use, the ICD-11 offers a separate code for Anankastia (i.e., Compulsivity) instead of conceptualizing it as the opposite pole of Disinhibition. Finally, in contrast to the DSM-5 AMPD approach, the ICD-11 explicitly emphasizes harm to *self* and *others* as a part of the diagnostic guideline for determining severity. More details on similarities and differences between the DSM-5 AMPD and the ICD-11 models of PDs are elucidated and debated in the General Discussion.

Comparing DSM-5 AMPD and ICD-11 PD Frameworks

As illustrated in Tables 4 and 5, the DSM-5 AMPD and ICD-11 approaches to PDs are overall comparable (except for the Schizotypal hybrid type and the trait domain of Psychoticism), which is analogous to the overall comparability between ICD-10 and DSM-IV categorical approaches to PDs. Just like Schizotypal PD is only included among DSM-IV PDs, the trait domain of Psychoticism is only included in the DSM-5 AMPD model. This difference is due to the DSM tradition of considering features of schizotypy as more closely related to PDs than schizophrenia spectrum disorders, whereas the WHO tradition has the opposite perspective. In the following, I will review and discuss more specific similarities and differences.

In contrast to the DSM-5 AMPD model, the ICD-11 classification of PDs is not a “hybrid” model because the user must only characterize and code severity and trait dimensions, whereas an optional borderline pattern may be specified if appropriate. However, the ICD-11 acknowledges that there is considerable overlap between this borderline pattern and information contained in the trait domain specifiers, and for that reason this specifier may prove to be redundant (as discussed in Papers 11 and 12). Thus, when using the ICD-11 guidelines for PDs, clinicians are supposed to “go all in” and describe PDs in terms of severity and traits only (apart from the optional *borderline pattern*), whereas in the DSM-5 AMPD clinicians can still use some familiar PD types based on configurations of functioning and traits.

Finally, there are also evident differences between trait definitions across the two models, beyond the DSM-5 AMPD inclusion of Psychoticism. The DSM-5 AMPD defines and operationalizes 25 distinct trait facets that may be organized within five domains, whereas the ICD-11 provides broad and more narrative descriptions and exemplifications of 5 domains, which are elaborated with subfeatures that are somewhat similar to the DSM-5 AMPD trait facets. For example, the DSM-5 AMPD only includes a facet of depressivity (originally composed of guilt, shame, low self-esteem, and pessimism), whereas ICD-11 provides detailed descriptions of low self-esteem, low self-confidence, and negativistic attitudes as subfeatures of Negative Affectivity.

Table 5. Comparative Overview of Personality Functioning across DSM-5 AMPD and ICD-11

DSM-5 AMPD			ICD-11
Self	Identity	Experience of oneself as unique, with clear boundaries between self and others; Stability of self-esteem and accuracy of self-appraisal; Capacity for, and ability to regulate, a range of emotional experience.	Stability and coherence of one's sense of identity (e.g., extent to which identity or sense of self is variable and inconsistent or overly rigid and fixed). Ability to maintain an overall positive and stable sense of self-worth. Accuracy of one's view of one's characteristics, strengths, limitations.
	Self-direction	Pursuit of coherent goals and meaningful short-term life goals; Utilization of constructive and prosocial internal standards of behavior; Ability to self-reflect productively.	Capacity for self-direction (ability to plan, choose, and implement appropriate goals).
Interpersonal	Empathy	Comprehension and appreciation of others' experiences and motivations; Tolerance of differing perspectives; Understanding the effect of one's own behavior on others.	Ability to understand and appreciate others' perspectives.
	Intimacy	Depth and duration of connection with others; Desire and capacity for closeness; Mutuality of regard reflected in interpersonal behavior.	Interest in engaging in relationships with others; Ability to develop and maintain close and mutually satisfying relationships.

Note. Content is adapted from APA (2013) and WHO (2019).

Nosological Comparison Between DSM-5 and ICD-11 Personality Functioning

Table 5 organizes all capacities of personality functioning across DSM-5 and ICD-11 according to their affiliations with identity, self-direction, empathy, and intimacy. Table 6 shows a tentative nosological cross-walk for DSM-5 and ICD-11 impairments in relation to other approaches to severity. One of the most substantial differences between the two models is that the ICD-11 definition of self-functioning does not include the capacity for *emotion regulation*. Instead, features of emotion regulation are listed separately as an emotional manifestation of personality disturbance (e.g., "Tendency to be emotionally over- or underreactive").

Furthermore, in contrast to the ICD-11 model, the DSM-5 AMPD has a broader and somewhat more complex definition of *self-direction* including "utilization of constructive and prosocial internal standards of behavior" and the "ability to self-reflect productively". Likewise, the DSM-5 AMPD has a broader and somewhat more complex definition of *empathy* including "understanding the effect of one's own behavior on others." Finally, the DSM-5 AMPD model has a broader and somewhat more complex definition of *intimacy* including the capacity for "depth and duration of connection with others".

As a final point, in contrast to the DSM-5 AMPD, the ICD-11 describes the concept of *identity and sense of self* in a more elaborated and straightforward way by exemplifying that the sense of self can be either inconsistent (e.g., sense of self may be so unstable that individuals report not having a sense of who they are) or overly rigid (e.g., sense of self may be so rigid that they refuse to participate in any but an extremely narrow range of situations).

Taken together, the ICD-11 model seems to provide a terminology or nosology that is more straight to the point in comparison to the DSM-5 AMPD. In the ICD-11 framework, it also appears more obvious and transparent why certain capacities are conceptualized as aspects of the *self* versus aspects of *interpersonal functioning*. For example, the DSM-5 AMPD only conceptualizes emotional reactions as a part of self-functioning, whereas in ICD-11 such features can be a manifestation of both self- and interpersonal functioning. Finally, complex concepts such as "sense of self" or "identity" seem more elucidated in the ICD-11, whereas more concrete concepts such as "understanding others" and "self-direction" seem more succinct in their description. In general, the superior comprehensibility of the ICD-11 nosology seems more suitable for utility across all WHO member countries.

Table 6. Tentative Nosological "Cross Walk" for Personality Disorder Severity

ICD-11 Severity WHO (2019)		*DSM-5 AMPD LPFS APA (2013)*		*Personality Organization (STIPO) Kernberg (2007)*		*ICD-10/DSM-IV Complexity Tyrer & Johnson (1996)*		
None	No noteworthy problems	0. None (Healthy)	e.g., is capable of experiencing, tolerating, and regulating a full range of emotions.	Level 1 *Healthy*	e.g., control of aggression towards self or others including rare episodes of appropriate verbal aggression	None	Does not meet actual or sub–threshold criteria for any PD	INTENSITY OF CLINICAL MANAGEMENT AND/OR SUPPORT
Difficulty	Only intermittent or low intensity problems without notable disruptions in life.	1. Some	e.g., strong emotions may be distressing, associated with restriction in range of emotional experience.	Level 2 *Neurotic*	e.g., relatively good control of aggression towards self or others including minor self-neglect	Difficulty	Meets sub–threshold criteria for one or several PDs	
Mild	Notable problems that may not be apparent in some contexts or roles, and typically involve no harm to self or others.	2. Moderate	e.g., emotional regulation depends on positive external appraisal. Threats to self-esteem may engender strong emotions such as rage or shame.	Level 3 *High-level Borderline*	e.g., moderately poor control of aggression towards self or others including self-neglect	Simple	Meets actual criteria for one or more PDs within the same cluster	
Moderate	Often involving some harm to self or others without danger or long-term damage.	3. Severe	e.g., emotions may be rapidly shifting or a chronic, unwavering feeling of despair.	Level 4 *Medium Borderline*	e.g., poor control of aggression towards self or others including suicide gestures	Complex	Meets actual criteria for one or more PDs within more than one cluster	
Severe	Usually associated with a past history and future expectation of severe harm to self or others.	4. Extreme	e.g., emotions are not congruent with context or internal experience. Hatred and aggression may be dominant affects.	Level 5 *Low-level Borderline* *+ Psychotic experiences.*	e.g., little to no control of aggression with serious danger to the safety of others and/or self, including suicide attempts	Severe	Meets criteria for creation of severe disruption to both individual and to many in society	

Note. LPFS = Level of Personality Functioning Scale; STIPO = Structured Interview for Personality Organization. The examples primarily refer to features of aggression, harm to self and/or others.

Manifestation of ICD-11 Personality Disorders

Contrary to the DSM-5 AMPD model, the ICD-11 provides a separate list of explicit emotional manifestations (e.g., ability to recognize unwanted emotions), cognitive manifestations (e.g., appropriate stability and flexibility of belief systems), and behavioral manifestations (e.g., appropriate behavioral responses to intense emotions) of personality dysfunction that contribute to the severity determination in PD. For example, in the ICD-11 guidelines for PDs, the determination of severity is also based on the "accuracy of situational and interpersonal appraisals, especially under stress". Accordingly, severely impaired personality functioning may involve stress-related distortions in the individual's situational and interpersonal appraisals that often includes dissociative states or psychotic-like beliefs and perceptions (e.g., extreme paranoid reactions). In other words, the ICD-11 model's focus on accuracy of situational and interpersonal appraisals may be equated with reality testing, which is not explicitly covered in the DSM-5 AMPD approach. Nevertheless, severe impairment of DSM-5 AMPD personality functioning may involve often feeling "bewildered about peoples' thoughts and actions, with destructive motivations frequently misattributed to others" and "perception of slights from others" (APA, 2013, p. 777) [28].

Psychoticism, Psychotic-like Experiences, Dissociation-Proneness, and Schizotypy

Contrary to the DSM-IV/5, the ICD-11 PD classification does not include any trait specifier for Psychoticism or Schizotypy because such features are normally coded as Schizophrenia and other primary psychotic disorders according to WHO. However, many researchers and practitioners may remain dedicated to the familiar DSM-IV/5 schizotypal personality features (e.g., oddity, psychoticism, and thought disorder) including the emerging body of research. On the other hand, in addition to coding "Schizotypal Disorder", the ICD-11 classification of PD severity may take into consideration whether the patient experiences "dissociative states or psychotic-like beliefs or perceptions" and/or is "highly eccentric" corresponding to certain features of Schizotypy or Psychoticism. In this way, the ICD-11 approach can be said to be more consistent with the traditional structural approach to description of personality organization (e.g., neurotic, borderline, and psychotic levels), where the lowest and most severe borderline levels may include disintegration, dissociation, paranoid ideation, and transient psychotic conditions possibly serving as defensive functions [69]. Such features of ICD-11 PD severity may be equivalent to the potential difficulties in reality testing and ideational clarity measured with the Perceptual Thinking Index (PTS) from Exner's Rorschach scoring system [70].

Taken together, the ICD-11 model can be said to classify the capacity for reality testing (i.e., "accuracy of situational and interpersonal appraisals") according to level of PD severity rather than a distinct style or trait domain. In comparison, the DSM-5 level of personality functioning scale does not

explicitly take any psychotic-like features into consideration. Additionally, the ICD-11 Borderline Pattern specifier also involves "Transient dissociative symptoms or psychotic-like features (e.g., brief hallucinations, paranoia) in situations of high affective arousal." [6].

Are Psychotic-like Features a Matter of ICD-11 Reality Testing or DSM-5 Psychoticism?

In the following I will propose a tentative way of distinguishing between DSM-5 trait features of Psychoticism and ICD-11 severity features of psychotic-like experiences, which is further discussed in Paper 8. Essentially, the ICD-11 features of psychotic-like perceptions must be related to *situations of high affective arousal*, which does not necessarily apply to DSM-5 trait features of Psychoticism. For example, an individual characterized by DSM-5 Psychoticism may in fact live a fulfilling life with low distress despite eccentric ideas and unusual beliefs and experiences.

In contrast, an individual characterized by a Severe PD with *psychotic-like experiences in situations of high affective arousal* may have a highly vulnerable inner structure with strongly immature defenses in unstructured situations or when stressed out [69, 71]. However, there also seems to be an overlap between the two, because the specific features of cognitive and perceptual dysregulation comprise a part of both DSM-5 AMPD Psychoticism and ICD-11 Severity (i.e., severe distortions in situational and interpersonal appraisals).

Taken together, a general style of Psychoticism should not simply be equated with psychotic-like experiences in situations of high affective arousal. However, the Psychoticism subfacet of cognitive & perceptual dysregulation may be a more specific indicator of such psychotic-like experiences, whereas the subfacets of eccentricity and unusual beliefs & experiences may not.

Goal of the Present Thesis

The overall purpose of the work included in the present thesis was to evaluate different features of the DSM-5 AMPD and the ICD-11 PD dimensions by means of patient-reported, clinician-reported, interview-rated, and community-reported data. The thesis is subdivided into five thematically related chapters, which mirror the features in question: Global Personality Dysfunction and Severity (Chapter I), Measuring Maladaptive Personality Trait Dimensions (Chapter II), Harmonizing DSM-5 and ICD-11 Trait Dimensions (Chapter III), Continuity between Categories and Trait Dimensions (Chapter IV), Exploring Trait Configurations for Borderline PD (Chapter V).

Chapter V will particularly elaborate on the Borderline PD diagnosis because this PD pattern is retained as an additional specifier in the ICD-11, whereas it exists as a hybrid-type in DSM-5 AMPD, and in general it is the most frequently investigated and discussed PD diagnosis in mental health care (which will be further debated in the general discussion of the thesis). Analyses and discussions of Schizotypal PD are beyond the scope of the present thesis, which is also consistent with the fact that "schizotypy" is not coded as a PD within the ICD-11 system. Instead, features of schizotypy and psychoticism will be further discussed within some of the papers (see Papers 8, 9, and 10).

Hypotheses

Due to the exploratory nature of the 12 included studies, a list of research hypotheses may not be obvious for the present thesis. However, the individual studies do discuss results in relation to previous research and expected findings – which may be defined in terms of the following specified hypotheses.

- Study 1: LPFS-BF was expected to yield an empirically sound two-factor structure of self- and interpersonal features that captures external criteria for personality problems in a conceptually coherent manner.
- Study 2: LPFS-BF and SASPD were overall expected to align with one another in terms of incremental validity and external criterion validity. LPFS-BF was expected to capture aspects of self-functioning over and above SASPD.
- Study 3: PDS-ICD-11 was expected to comprise a unidimensional scale, to align with LPFS-BF in terms of both self- and interpersonal functioning, to capture external criteria for personality pathology, and to differentiate between PD diagnosis versus no PD diagnosis.

- Study 4: The three PID-5 forms were expected to yield a sound five-factor structure, to converge with one another, to capture interview-rated PD features in a conceptually coherent manner, and to differentiate between clinical and nonclinical respondents.
- Study 5: The PID-5 structure and factor scores were expected to be comparable across clinical and nonclinical respondents, when matched on age and gender, in terms of measurement invariance.
- Study 6: Clinician-Reported ICD-11 Traits – by means of the PiCD Informant-Report Form – were expected to be empirically organized in a sound five-factor structure corresponding to the five ICD-11 trait domain specifiers.
- Study 7: The new PID-5 algorithm – derived from ICD-11 trait domain definitions - was expected to yield a sound five-factor structure corresponding to the five ICD-11 trait domain specifiers.
- Study 8: The construction of the modified 36-item PID5BF+ for DSM-5 and ICD-11 trait domains and subfacets was expected to yield a sound 6-factor structure that is robust across 16 different samples and 12 different languages. Moreover, the 6 trait domain scores were expected to capture interview-rated PD types in a conceptually coherent manner.
- Study 9: The original 220-item PID-5 was expected to capture interview-rated PD types in a conceptually coherent manner – both at the domain and facet level; and associations were expected to support the AMPD model's 6 hybrid PD types based on specified trait-configurations.
- Study 10: The ICD-11 and DSM-5 AMPD trait domains were expected to converge with one another in a conceptually meaningful manner and capture PD types, categorically and dimensionally. It was expected that the ICD-11 trait domains were superior in capturing features of Obsessive-Compulsive PD while the DSM-5 AMPD trait domains were expected to be superior in capturing features of Schizotypal PD.
- Study 11: The PID-5 trait domain and facet scores were expected to differentiate individuals with BPD diagnosis from relevant comparison groups in a pattern that is consistent with the AMPD trait-hybrid configuration for the BPD type.
- Study 12: The PID-5 trait domain and facet scores were expected to capture BPD features at the criterion-level in a pattern that is consistent with the AMPD trait-hybrid configuration for the BPD type.

Methodology

Sample Characteristics

Table 7 provides an overview of the samples and subsamples that were included in the 12 studies. The analyses reported in Papers 4, 5, 7, and 8 were based on mixed samples of psychiatric outpatients and community-dwelling individuals with different demographic background.

All psychiatric outpatients included in the studies reported in Papers 1, 2, 4, 5, 6, 7, 9, 10, 11, and 12 were consecutively recruited and their assessment responses were accumulated in a dataset based on their informed consent. All patients were also given or offered feedback based on diagnostic conclusions and interpretative test profiles.

In addition to psychiatric outpatients, Papers 1 and 2 also included a subsample of incarcerated individuals in treatment for their addictions. Such composition also ensures some heterogeneity (e.g., both internalizing and externalizing features) that prevents range restrictions and benefits the investigation of structural validity.

The community-dwelling participants included in the studies reported in Papers 4, 5, 7, and 11 were initially recruited with assistance from the Danish Civil Registration System in order to match with age and gender of the clinical participants. These individuals were randomly selected among local 1,250 community-dwelling citizens, which all were sent a personal invitation letter (22 addresses proved out-dated). A total of 252 citizens accepted this invitation and were subsequently e-mailed a secure link to the online assessment program, which eventually was completed by 221 respondents. In order to increase the matching between clinical and non-clinical participants with respect to age, responses from 99 college students were also included this phase.

The community participants included in Paper 3 were representative of the U.S. population according to the projected 2020 U.S. census demographics. Qualtrics paneling services contacted potential participants directly, and those who gave consent to participate, completed the measures online.
The clinical subsample included in Paper 3 were recruited via community advertising in New Zealand. These participants were required to be in some form of mental health treatment, and they were reimbursed for their time. Finally, the multiple clinical and nonclinical samples included in Paper 8 were collected from 16 different international locations, including Danish psychiatric outpatients (see Paper 8 for more details).

Please consult the individual papers for more details on the specific sampling procedures. Potential strengths and limitations of the employed sampling approaches are further addressed later in the discussion section of the thesis.

Table 7. Sample characteristics for studies reported in Papers 1-12

	Total (*N*)	Women (%)	M_{age}	Clinical	Community
Paper 1	228	42%	31.1	228	-
Paper 2	150	33%	32.5	150	-
Paper 3	515	51%/62%	45.7/ 27.7	87	428
Paper 4	1,376	80%	33.0	451	925
Paper 5	1,196	81%	29.3	598	598
Paper 6	238	73%	33.2	238	-
Paper 7	1,541	81%	32.6	615	925
Paper 8	16,327	N/A	N/A	2,347	13,980
Paper 9	142	68%	29.0	142	-
Paper 10	226	58%	32.5	226	-
Paper 11	303	70%	28.6	202	101
Paper 12	142	68%	29.0	142	-

Measures and Instruments

Table 8 provides an overview of instruments and their administration across the 12 papers. Aspects of operationalization and related issues are further discussed later in the present thesis. The SCID-5-PD interview employed in Papers 9-12 was administered by a trained clinical psychologist or psychiatrist, and acceptable inter-rater reliability was supported (intra-class correlation coefficient of 0.98; $p < 0.001$). Likewise, the STiP 5.1 interview employed in Paper 3 was administered by a trained psychologist, and acceptable inter-rater reliability was supported (intra-class correlation coefficient of 0.95; $p < 0.001$). Potential limitations of the employed measurement approaches are further discussed in the section "Overview and Discussion of Limitations" in the general discussion later in the thesis.

Table 8. Overview of instruments and formats used in the studies reported in Papers 1-12

Instruments	Papers
SCID-5-PD Interview	Papers 4, 8, 9, 10, 11, 12
STiP 5.1 Interview	Paper 3
PiCD-IRF Clinician-Rating form	Paper 6
LPFS-BF Self-Report form	Papers 1, 2, 3
SASPD Self-Report form	Papers 2, 3
PDS-ICD-11 Self-Report form	Paper 3
PID-5 Self-Report forms	Papers 4, 5, 7, 8, 9, 10, 11, 12

Chapter I. Screening for Global Personality Dysfunction and Severity

This chapter is based on Papers 1, 2, and 3.

Evaluation of global personality dysfunction is central in both ICD-11 and the DSM-5 AMPD models of PDs. Before discussing core findings from the three papers in this section, I will briefly characterize the theoretical, historical, and empirical backgrounds for the Level of Personality Functioning Scale (LPFS), which eventually also influenced the definition of self- and interpersonal functioning in ICD-11 [33, 39]. Thus, the following introductory overview primarily relies on LPFS because no official literature on the development of the finally approved ICD-11 PD model has yet been published. Yet, it has been disclosed that the WHO work group eventually sought to align the ICD-11 model with the DSM-5 AMPD model [33, 39]. In other words, the evolutionary history of the final ICD-11 PD model is essentially the same as the evolutionary history of the DSM-5 AMPD. Specific elements of DSM-5 AMPD and ICD-11 Personality Functioning are listed in Tables 10 and 11.

Construction of the DSM-5 Level of Personality Functioning Scale

The initial construction of a scale for capturing DSM–5 levels of personality functioning was based on a comprehensive review of theoretical and empirical literature on self/other problems, which was carried out by participants of the DSM-5 Personality and PDs Work Group and involved identification of the psychological processes that are common to all PDs [29]. The overall aim was to construct a scale that would allow clinicians to denote not only the presence of personality pathology but also its severity. Because the DSM is mostly used for clinical purposes, the work group selected instruments and models that are typically employed in clinical practice. To guide the selection of relevant measures to review, a series of criteria were established [29], which eventually resulted in the inclusion of the seven models and instruments listed in Table 9.

Table 9. Seven models and instruments used as foundation for the development of LPFS

- Quality of Object Relations Scale (QORS) [72]
- Personality Organization Diagnostic Form (PODF) [73]
- Differentiation-Relatedness Scale (D-RS) [74]
- Conceptual Level of Descriptions of Self and Other (CLS) [75]
- Self-Description Scales (S-DS) [76]
- Social Cognition and Object Relations Scale (SCORS) [77]
- Reflective Functioning Scale (RFS) [78]

Subsequently, the various concepts across the seven models were synthesized to form a foundation for evaluating personality functioning on a single dimension. Based on this synthesis, the work group members reviewed and defined a continuum for self- and interpersonal functioning [46]. Additionally, work group members also sought to identify an empirically articulated continuum of severity of these impairments using item response theory (IRT) analysis on existing measures of hypothesized core dimensions of personality pathology in two samples of psychiatric patients [79]. An identified latent dimension of personality functioning was significantly related to the diagnosis of DSM-IV PD as well as PD comorbidity, and it captured severity of impairment across DSM-IV PD types [79]. Taken together, this evaluation provided the empirical foundation for the initial "levels of personality functioning" proposal. This initially proposed model was evaluated by external reviewers, who overall found it to be consistent with theory and research on PDs, including interpersonal, cognitive-behavioral, psychodynamic, developmental, social cognitive, attachment, and evolutionary theories, and to comprise key aspects of personality dysfunction in need of clinical attention [80].

Later, Morey et al. [81] investigated whether this new 5-point dimension of personality functioning provided an acceptable severity index with respect to PD diagnosis and other clinical outcome. Using ratings from 337 mental health clinicians, they found that at least "moderate" (level 2) impairment in personality functioning on LPFS demonstrated 84.6% sensitivity and 72.7% specificity for identifying patients meeting criteria for a specific DSM-IV PD. Their findings also supported convergent validity with other measures of personality pathology as well as expected alignment with clinically relevant outcomes such as risk, prognosis, and treatment intensity [81]. In recent years a number of empirical evaluations of the LPFS framework have been conducted [82, 83], which will not be further reviewed in the present thesis.

As a potential flaw, it seems important to highlight that the initial construction and evaluation of the 5-point LPFS dimension relied on a global and holistic approach to personality functioning. This is also reflected in the initial publication of the LPFS, where each level of self- and interpersonal functioning were rated globally - and were only supposed to be rated globally [29, 46, 79]. However, for the purpose of operationalization, the APA decided to divide the global rating into ratings of four subdomains and twelve distinct capacities that can be evaluated separately in a structured interview (Bender, 2017, personal communication). As a potential negative consequence of this, clinicians may get sidetracked by rating the four subdomains and twelve specific capacities instead of considering the global picture ("gestalt"), as originally intended by the authors.

Table 10. Areas of personality functioning in the DSM-5 Alternative Model of Personality Disorders

Self

- *Identity*: Experience of oneself as unique, with clear boundaries between self and others; stability of self-esteem and accuracy of self-appraisal; capacity for, and ability to regulate, a range of emotional experience.
- *Self-direction*: Pursuit of coherent and meaningful short-term and life goals; utilization of constructive and prosocial internal standards of behavior.

Interpersonal

- *Empathy*: Comprehension and appreciation of others' experiences and motivations; tolerance of differing perspectives; understanding the effects of one's own behavior on others.
- *Intimacy*: Depth and duration of connection with others; desire and capacity for closeness; mutuality of regard reflected in interpersonal behavior.

Note. APA, 2013, p. 762.

Table 11. Aspects of personality functioning in ICD-11 Personality Disorders

Degree and pervasiveness of disturbances in functioning of aspects of the *self*:

- Stability and coherence of one's sense of identity (e.g., extent to which identity or sense of self is variable and inconsistent or overly rigid and fixed).
- Ability to maintain an overall positive and stable sense of self-worth.
- Accuracy of one's view of one's characteristics, strengths, limitations.
- Capacity for self-direction (ability to plan, choose, and implement appropriate goals).

Degree and pervasiveness of *interpersonal* dysfunction across various contexts and relationships (e.g., romantic relationships, school/work, parent-child, family, friendships, peer contexts):

- Interest in engaging in relationships with others.
- Ability to understand and appreciate others' perspectives.
- Ability to develop and maintain close and mutually satisfying relationships.
- Ability to manage conflict in relationships.

Note. WHO, 2019.

Rationale and Utility of the LPFS

The DSM-5 AMPD asserts that general severity of personality pathology is the optimal way of characterizing PD. The most healthy personality functioning involves having a fully elaborated and well-integrated psychological world that includes an adaptive self-concept, a rich and appropriately regulated emotional life, and the capacity to behave as a productive member of the community with fulfilling interpersonal relationships. In contrast, the most severely impaired personality functioning involves having an impoverished and disorganized world that includes an unclear or maladaptive self-concept, negative or dysregulated emotions, and a compromised capacity for social behavior (see APA, 2013, p. 771) [28].

In order to capture global or general impairments underlying all types of PD, the DSM-5 PD work group constructed the Level of Personality Functioning Scale (LPFS). According to this LPFS framework, all PDs share some essential commonalities that essentially are thought to distinguish PDs from other mental conditions [79]. For example, people with avoidant PD and narcissistic personality may be very different in terms of external appearance, experienced burden, and symptom profile, but they may both be characterized by impairment of the same core capacities. Thus, in both cases self-appraisal may be unnuanced in terms of self-loathing and self-aggrandizing, respectively. Accordingly, Criterion A (LPFS) of the AMPD is used to determine "to which degree" the patient's personality is disordered in general. The following quotation from DSM-5 explains this rationale:

> "To use the Level of Personality Functioning Scale (LPFS), the clinician selects the level that most closely captures the individual's *current overall* level of impairment in personality functioning. The rating is necessary for the diagnosis of a PD (moderate or greater impairment) and can be used to specify the severity of impairment present for an individual with any PD at a given point in time. The LPFS may also be used as a global indicator of personality functioning without specification of a PD diagnosis, or in the event that personality impairment is subthreshold for a disorder diagnosis." (APA, 2013, p. 772) [28].

Refinement of the ICD-11 Personality Disorder Severity Model

In response to the concerns expressed by members of the ESSPD, ISSPD, and NASSPD [34] the WHO working group eventually revised the initial proposal so that it was better aligned with the more fine-grained LPFS framework – including a more rich description of both self- and interpersonal functioning as well as cognitive, emotional, and behavioral manifestations [33, 39]. In this way it was deemed more clinically useful. In Paper 3, I introduce a new measure of PD severity, the PDS-ICD-11, which is specifically developed for this new approach while also being more consistent with the LPFS-BF measure.

Evaluation of LPFS-BF (Paper 1)

This invited paper [84] was published in a special issue about the clinical utility of DSM-5 personality functioning, with Donna Bender and Johannes Zimmermann as guest editors. The study was the first published evaluation of the Level of Personality Functioning – Brief Form 2.0 (LPFS-BF), whereas the official Dutch construction study was published a little later [85]. The aim of this study was to evaluate the utility of the LPFS–BF 2.0 in capturing external correlates of personality-related functioning using two subsamples of psychiatric outpatients (n = 121) and incarcerated addicts (n = 107). Before I move on discussing the findings, a brief overview of the construction and rationale of the LPFS-BF 2.0 will be provided.

Level of Personality Functioning Scale – Brief Form 2.0

A number of patient-report instruments have been published to assess DSM-5 personality functioning (i.e., LPFS), including the 132-item DSM–5 Levels of Personality Functioning Questionnaire (DLOPFQ) [86], the 80-item Level of Personality Functioning Scale–Self-Report (LPFS-SR) [87], and the 97-item Level of Personality Functioning Questionnaire for adolescents (LOPF–Q12–18) [88], among others. Hutsebaut et al. [89] have taken another approach to measuring the LPFS by means of a more brief 12-item format with a focused set of items, which particularly reduces the burden on those who are completing the form. Hutsebaut et al. [89] simply formulated one item for each of the twelve LPFS capacities (see Table 12), aiming to capture the core impairment of the particular capacity. The initial version of this Level of Personality Functioning Scale – Brief Form (LPFS-BF) consisted of 12 items with a dichotomous yes–no response format, aimed to screen for possible impairments in personality functioning. A slightly revised LPFS–BF 2.0 has later been developed including a four-point Likert response scale [85], and the first published evaluation of this measure is included in the present thesis (i.e., Paper 1) [84]. The 12 items and their empirical loadings on self- and interpersonal subdomains are listed in Table 12.

A recent study [90] did a comparative analysis of nine emerging and existing self-report instruments for assessing personality functioning, of which the following were developed specifically to assess the DSM-5 LPFS framework: LPFS-BF 2.0 [85], LPFS-SR [87], DLOPFQ [86], and the recently developed Self and Interpersonal Functioning Scale (SIFS) [91]. Interestingly, the findings of this study indicate that the LPFS-BF 2.0 item content demonstrates coverage of LPFS constructs. Moreover, the study showed substantial correspondence of the LPFS-BF 2.0 with the other LPFS instruments, which despite its short format applied to both self- and interpersonal functioning. Taken together, these findings suggest that the LPFS-BF 2.0 is a sound instrument for capturing features of LPFS and that LPFS-

BF 2.0 data should be fairly comparable and generalizable to research using one of the other established LPFS measures. The LPFS-BF is provided in Appendix.

Essential Findings

The results presented in Paper 1 generally supported a sound two-factor structure consistent with the self-other structure described in both DSM-5 AMPD and ICD-11 as well as the psychodynamic tradition of conceptualizing personality pathology in terms of a dialectical interaction between self and interpersonal features [92]. Because of this anticipated intertwined relationship between self and others, it was not surprising that the self- and interpersonal factors were greatly correlated (close to .70), which is also consistent with other findings [93, 94]. When considering this, it also seems important to emphasize that the LPFS was not constructed within a factor analytical tradition such as the PID-5. Instead, the LPFS was developed within a psychodynamic and interpersonal tradition, where the content should not be viewed as individual items or indicators but as a holistic and global theme of self in relation to others [95, 96]. For the same reason, it was also not surprising that the two subdomains were equally related to other measures of personality pathology including poor healthy adult functioning. This speaks for using the global LPFS-BF 2.0 score (and not the subdomain scores) in the estimation of severity as originally intended by the DSM-5 work group [29].

Table 12. Twelve LPFS-BF 2.0 items with their loadings on self- and interpersonal subdomains

LPFS-BF 2.0 items	Self	Other
1) I often do not know who I really am	**0.76**	-0.03
2) I often think very negatively about myself	**0.85**	-0.12
3) My emotions change without me having a grip on them	**0.44**	0.43
4) I have no sense of where I want to go in my life	**0.69**	-0.02
5) I often do not understand my own thoughts and feelings	**0.53**	0.26
6) I often make unrealistic demands on myself	**0.65**	-0.15
7) I often have difficulty understanding the thoughts and feelings of others	-0.05	**0.74**
8) I often find it hard to stand it when others have a different opinion	-0.16	**0.67**
9) I often do not fully understand why my behavior has a certain effect on others	-0.20	**0.85**
10) My relationships and friendships never last long	0.30	**0.40**
11) I often feel very vulnerable when relations become more personal	0.17	**0.51**
12) I often do not succeed in cooperating with others in a mutually satisfactory way	0.22	**0.58**

Note. *N* = 121 (outpatient subsample). The strongest loading coefficient for each item is boldfaced.

It was noteworthy that the total LPFS-BF 2.0 score particularly captured lack of psychological health and lack of fulfillment (e.g., healthy adult mode and well-being), even beyond the influence of maladaptive PID-5 traits. On the other hand, the LPFS-BF 2.0 did not account for much of the variance in externalizing features (e.g., aggression and dominance). Accordingly, future revision of the LPFS-BF 2.0 as well as construction of new severity measures might benefit from taking more externalizing expressions of

personality dysfunction into account (e.g., risk of harm to others, self-worth characterized by self-aggrandizing, and self-view characterized by excessive self-confidence and lack of limitation).

For further discussion of the findings in this paper, I specifically refer to the general discussion (i.e., "Are personality functioning redundant with respect to personality traits?").

Comparative Evaluation of SASPD and LPFS-BF (Paper 2)

The Standardized Assessment of Severity – Personality Disorders (SASPD) was published as an official patient-report measure of ICD-11 PD Severity just before collecting data for the present paper. Accordingly, this study comprised the first evaluation after the original SASPD construction study [56]. However, after the subsequent WHO working group process, the ICD-11 proposal changed substantially (as reviewed in the introduction) so that the final ICD-11 approach to PD severity largely corresponds to the DSM-5 level of personality functioning focusing on both self- and interpersonal functioning. Thus, the findings of the present study *per se* are no longer considered timely or useful.

However, the rather unfavorable psychometric properties of the SASPD seem to support the decision by the ICD-11 work group members and consultants to pursue a harmonization with the established DSM-5 AMPD model of self- and interpersonal functioning, instead of following the original but simpler ICD-11 proposal. Thus, as an informative outcome of the present study, the data suggests that the finally approved ICD-11 approach, which emphasizes both self- and interpersonal functioning, is somewhat psychometrically superior (apart from features of danger and aggression which could be better covered in the LPFS). The SASPD is provided in Appendix.

Essential Findings

In general, both the SASPD score and the LPFS-BF 2.0 score were associated with relevant external correlates. Based on their correlational patterns, the LPFS-BF showed better sensitivity in detecting core PD features, including self-pathology (e.g., identity problems and personality-related distress), whereas the SASPD shows slightly better sensitivity in terms of capturing the potential for interpersonal harm, including violence and rage. Accordingly, the SASPD seems to mirror the ICD-11 proposal's approach where Severe PD is somewhat synonymous with a "dangerous" PD according to the British zeitgeist [54]. Taken together, the LPFS-BF 2.0 captured general features of personality dysfunction, including self-pathology, whereas SASPD showed some inadequacy in capturing self-pathology. This emphasis on interpersonal functioning (rather than self-functioning) is consistent with the rationale presented in the SASPD construction study, which only relied on the impact of a particular problem on social and interpersonal functioning as well as the potential harm to self or others.

Development of the PDS-ICD-11 Scale (Paper 3)

Due to the outdated status of the SASPD and because there are no other official instruments specifically developed for measuring the final ICD-11 PD severity model, my collaborators and I found it timely to develop a simple 14-item patient-report instrument that may serve as an empirical foundation for a future interview format [97]. As shown in Paper 3 (see "Table 1" in the paper), we created four items corresponding to the four features of self-functioning, four items corresponding to the four features of interpersonal functioning, and three items corresponding to the emotional, cognitive, and behavioral manifestations. Additionally, we created two items that should capture harm to self and harm to others. Finally, we included an item aimed at capturing the global level of distress and/or psychosocial impairment. For further details about item construction and cross-linguistic field-testing, see pages 3-4 in Paper 3. The final Personality Disorder Severity ICD-11 (PDS-ICD-11) scale is included in Appendix. A clinician-rating version of the PDS-ICD-11 has also been developed, which is currently under evaluation; this preliminary clinician-rating form is also included in Appendix.

Essential Findings

Using a representative sample (n = 435) from the U.S. general community, the study found that all PDS-ICD-11 items (apart from Item 13 "Harm to Others") fitted a one-factor model well, which is consistent with the anticipated unidimensionality of a global PD severity dimension [98, 99]. This preliminary finding can be said to support the structure of the ICD-11 PD severity dimension. The specific finding that item 13 showed poor loading on this global PD dimensions is probably related to pronounced range restriction because only 4.5% of the sample endorsed either "sometimes" (4.0%) or "often" (0.5%) harming others. Item 13 therefore needs to be further investigated in other relevant samples (e.g., clinical and correctional).

The total PDS-ICD-11 score also showed substantial convergence with other well-established measures of PD severity and psychosocial dysfunction including. For example, the scale was substantially associated with Social Functioning Questionnaire and a latent global factor derived from the Personality Disorder Questionnaire 4 (PDQ-4). Interestingly, this global PD factor was predominantly characterized by Borderline PD features. Of particular interest for the present thesis, the PDS-ICD-11 was most strongly associated with LPFS-BF (r = .68), which was significantly more than SASPD's association with LPFS-BF (r = .61). In a head-to-head comparison, the PDS-ICD-11 generally outperformed the SASPD with respect to their ability to explain the variance of the external measures of personality dysfunction and psychosocial functioning. Taken together, these findings suggest that the PDS-ICD-11 measures PD severity in a more comprehensive manner than the now outdated SASPD.

In terms of capturing categorical PD symptoms, the PDS-ICD-11 was most strongly associated with Borderline PD followed by Avoidant PD and Schizotypal PD, and it was least associated with Histrionic PD, Obsessive–Compulsive PD, and Schizoid PD. This pattern is largely consistent with the expected global impairment for each of these PD types [47, 100, 101] as well as the traditional organization of PD types according to their level of functioning [69, 102–104].

Finally, in order to establish diagnostic validity, the PDS-ICD-11 scale was also evaluated in terms of its ability to differentiate between those diagnosed with an ICD-11 PD and those who were not in a small clinical sample. In this part of the study, the ICD-11 PD diagnosis was established using the STiP 5.1 interview [105], which is useful for producing the information needed for the assessment of PD severity according to the ICD-11 CDDG [106]. Thus, respondents fulfilling the diagnostic requirements for an ICD-11 PD diagnosis at least had *Mild Personality Disorder*. Moreover, each PDS-ICD-11 item score was substantially associated with an ICD-11 PD diagnosis, and the PDS-ICD-11 total score was significantly larger in individuals with an ICD-11 PD diagnosis. Taken together, the PDS-ICD-11 overall seems to be a promising tool for measuring ICD-11 PD severity.

Discussion of Findings in Chapter I

In this discussion, I will consider the overall implications of the findings presented in Papers 1, 2 and 3 focusing on the utility of LPFS-BF and SASPD for measuring personality dysfunction.

The SASPD is essentially based on item-content from the Standardized Assessment of Personality - Abbreviated Scale (SAPAS) [55], which captures features from a range of ICD-10 PDs including paranoid PD (“Trusting other people”), borderline PD (“temper”, “acting on impulsive”), dependent PD (“self-reliance”), obsessive-compulsive PD (“being organized”), schizoid PD (“friendships”), and antisocial PD (“caring about other people”). Thus, according to the severity algorithm by Tyrer & Johnson [53], illustrated in Table 6, a simple or mild PD may only involve endorsement of few items (e.g., “worrying” and “being organized”), whereas a more severe and complex PD may involve a more heterogeneous blend of features including “temper” or “acting on impulse” to indicate potential danger. Likewise, both the SAPAS and the SASPD can be said to capture each of the five trait domains [107], which suggests that SAPAS and SASPD were not constructed to capture the psychodynamic and transdiagnostic core capacities as described in the DSM-5 AMPD and the final ICD-11 framework of personality functioning.

However, the aforementioned perspective is partially consistent with the final ICD-11 guidelines for Mild PD (”Disturbances affect some areas of functioning of the self but not others”) and Severe PD (”There are severe disturbances in multiple areas of functioning”), respectively. Thus, ICD-11 PD severity is partially defined by complexity and “co-morbidity”. Moreover, this complexity-oriented approach to

severity also aligns with the guidelines for ICD-11 trait specifiers: “Individuals with more severe personality disturbance tend to have a greater number of prominent trait domains.”

Nevertheless, the anticipated complexity captured by SASPD is not sufficient for capturing the global and psychodynamic personality impairment as defined in the DSM-5 AMPD and the final ICD-11 framework, including problems with sense of identity, sense of self-worth, and self-direction. This conclusion is consistent with the previously mentioned comparative content analysis by Waugh et al. [90], which confirms that LPFS-BF 2.0 captures problems related to sense of identity, whereas SASPD does not. Furthermore, the LPFS-BF 2.0 aligns with other instruments designed for LPFS, which does not apply so much to the SASPD [108]. Likewise, the inadequate psychometric features of SASPD for measuring personality functioning is also supported by a German study (*n* = 1,103 clinical and *n* = 888 nonclinical), which literarily concludes that the SASPD is a psychometrically questionable screening-instrument with clear limitations as a screening tool for severity of personality dysfunction [109]. Additionally, a recent comparative study of six PD severity measures [110] found that all the measures, except for the SASPD, capture a strong common factor of global personality dysfunction.

The PDS-ICD-11 scale was specifically developed in response to the shortcomings and outdated status of the SASPD as well as the LPFS-BF’s insufficient coverage of ICD-11 PD severity definitions. This was carried out by constructing items that specifically capture the now official version of the ICD-11 PD diagnostic desriptions. Nevertheless, the rating of harm to others and partially harm to self may not be appropriate for such self-rating format. In any case, future research must evaluate the utility of PDS-ICD-11 in forensic samples where harm to others is more common. To address this issue with self-reporting, the PDS-ICD-11 has also been adapted to a clinician-rating format (See Appendix). For now, the PDS-ICD-11 scale should not be considered a diagnostic tool per se but rather a screener or pre-assessment tool that may be used before conducting a structured diagnostic interview. The PDS-ICD-11 item-content currently serves as foundation for the development of such structured interview, which will be evaluated in future research.

Chapter II. Measuring Maladaptive Personality Trait Dimensions

This chapter is based on Papers 4, 5, and 6.

In this chapter, I will present essential findings from two papers focusing on the DSM-5 AMPD maladaptive trait system as well as one paper focusing on clinician-reported ICD-11 trait domain specifiers. Both the DSM-5 AMPD trait criterion as well as the ICD-11 trait specifiers are described as a separate diagnostic component relative to the core personality functioning. In the DSM-5 AMPD, this is somewhat underscored by distinguishing between Criterion A (i.e., functioning) and Criterion B (i.e., traits), whereas ICD-11 distinguishes between Severity of PD and Trait Domain Specifiers. However, as previously emphasized, the two components can be said to reflect two perspectives on the same thing as well as two different traditions (psychodynamic functioning *versus* quantitative trait science) rather than actually being different phenomena. Thus, in this chapter I will present research related to the measurement of trait expressions of personality dysfunction.

Before focusing on the findings presented in the three papers, I will provide a summary of how the trait models in DSM-5 AMPD and ICD-11 were developed and how they can be operationalized.

The DSM-5 AMPD Trait Criterion and the ICD-11 Trait Domain Specifiers

Before the final DSM-5 maladaptive trait model was released, various other trait models have been considered such as the seven traits of the Temperament and Character Inventory (TCI) [111], the MMPI Psychopathology Five (PSY-5) [112], the Schedule for Nonadaptive and Adaptive Personality (SNAP) [113], and the Dimensional Assessment of Personality Pathology (DAPP) [114] as well as the most recently developed Computerized Adaptive Test of Personality Disorders (CAT-PD) [115]. In fact, in their preparatory review, Widiger & Simonsen [27] identified a total of 18 alternative models of which all may not be judged as empirically credible.

For a long period, none of the authors of the aforementioned competing models seemed willing to compromise or work together, and therefore no progression had taken place toward a new diagnostic framework. However, the Widiger & Simonsen [27] review provided a proposal for an integrative framework, consisting of four broad, bipolar domains (see Table 13): extraversion versus introversion, antagonism versus compliance, constraint versus impulsivity, and emotional dysregulation versus emotional stability. Additionally, a fifth broad domain of unconventionality versus closed to experience was also suggested in order to fully account for schizotypal PD. However, this fifth domain (i.e., psychoticism, oddity, or unconventionality) was not officially included within the framework because it did not exist as a distinct domain in the DAPP and SNAP models. Thus, the review by Widiger & Simonsen

[27] lay the initial foundation for a common ground, which turned out to exist within the FFM framework consistent with its coverage of all adaptive and maladaptive trait terms across different languages.

Around the same time, Markon et al. [116] identified five major factors from analyzing meta-analytically derived datasets (52 studies) that included the SNAP, NEO-PI-R, and the DAPP along with other measures of normal and abnormal personality functioning. Equally important, they also identified two, three, and four-factor higher-order models[4] of the same scales, which resembled the other alternative trait models including the four-factor model of Livesley [114] as well as the three factor model of Clark [113]. Widiger et al. [117] eventually offered an integrative model of the SNAP, DAPP, and FFM trait models which is fairly similar to the later proposed DSM-5 trait model. Thus, it turned out that the alternative models were not incompatible with one another. Instead they represented different levels of the same hierarchical structure in which the five-factor structure, pragmatically speaking, seems to be the most appropriate solution. In other words, the two-, three-, four-, five-, and six-factor models are not really competing models, but rather different levels of the same hierarchical structure of personality and psychopathology (see Papers 6 and 7). Thus, there is nothing magical about the five-factor structure *per se*, but the FFM model happens to be a pragmatic and internationally robust consensus framework. As a matter of fact, the FFM has been considered "the most scientifically rigorous taxonomy that behavioural science has" [118].

Operationalization of the DSM-5 Maladaptive Trait Model

Notably, the PPDWG membership included the principle authors of the SNAP (Clark) and the DAPP (Livesley) and the initial trait proposal was said to be closely modeled after the Widiger & Simonsen [116] proposal. The initial construction of the DSM-5 maladaptive trait model was based on the aforementioned models and instruments along with work group discussions and literature reviews resulting in an initial list of 37 traits and six higher-order domains that were judged as important for describing phenotypic variability in personality pathology [30]. Subsequent analyses revealed that some of these traits were highly similar to one another ultimately resulting in the current DSM-5 model of 25 trait facets organized within five higher-order domains. This final model excluded Compulsivity as a separate domain, whereas the facets of rigid perfectionism and perseveration were retained as features of (low) Disinhibition and (high) Negative Affectivity, respectively.

[4] Notably, the two- three-, four-, and five-factor structures that can be found for normal and pathological personality traits have also been identified for symptoms of psychopathology in general (i.e., both PD and other mental disorders) [235]. This is consistent with the emerging *Hierarchical Taxonomy of Psychopathology* (HiTOP) framework, which substantially relies on different levels of the domains and facets captured by the PID-5 [239, 251].

The DSM-5 maladaptive trait model is measured using the Personality Inventory for DSM-5 (PID-5), which exists in the original 220-item form [30], an abbreviated 100-item form [119], a 25-item brief form [120], as well as a 218-item informant report [121]. Furthermore, a 36-item Modified PID5BF+ form that captures 18 facets organized in six domains has recently been developed [122]. All four self-report forms are being evaluated in the present thesis. Moreover, the Structured Clinical Interview for DSM-5 Alternative Model of PDs (SCID-AMPD) Module II has been developed to assess the trait criterion [123]. However, this SCID-AMPD instrument will not be employed in the present thesis.

Operationalization of the ICD-11 Trait Domain Specifiers

About the same time as the DSM-5 trait model was developed, a similar trait domain model was under construction for the ICD-11. This ICD-11 proposal was guided by a systematic review of the PD literature [59], which identified 1,408 studies potentially revealing the factor structure of PDs. These studies generally yielded three or four higher order trait domains, including externalizing, internalizing, aloof/schizoid, and compulsivity. However, Mulder et al. [59] also acknowledged that certain externalizing traits such as lack of remorse, callousness, and antisocial behaviors may represent a domain of antagonism/dissociality, which is separate from an externalizing domain. Eventually, the ICD-11 PD work group decided to include and validate five trait domain specifiers that are nearly concordant with the DSM-5 trait model (i.e., Negative affectivity, Dissociality, Disinhibition, Anankastia, and Detachment) [52, 66].

In contrast to the DSM-5 trait model, there are no formally sanctioned instruments for the ICD-11 trait domains. However, Oltmanns & Widiger recently published the domain-oriented *Personality Inventory for ICD-11* (PiCD) [124] and the facet-oriented *Five-Factor Personality Inventory for ICD-11* (FFiCD) [125]. The former also exists in an informant/clinician-report form, which is being evaluated in Paper 6 in the present thesis [126]. Moreover, as presented in Paper 7, an ICD-11 algorithm for the PID-5 has also been developed and validated [127, 128]. Finally, as already highlighted, a Modified PID5BF+ has been developed to rapidly capture both DSM-5 and ICD-11 traits [122, 129], which is evaluated in Paper 8.

Table 13. Trait Domains in Relation to Meta-Analytic Findings

WHO		APA	
ICD-11 domains	**Mulder et al.** [59]	**AMPD domains**	**Widiger & Simonsen** [27]
Negative affectivity	Internalizing factor	Negative affectivity	Emotional dysregulation
Detachment	Schizoid factor	Detachment	Introversion
Dissociality	Externalizing factor	Antagonism	Antagonism
Anankastia vs. Disinhibition	Compulsive factor	Disinhibition vs. Compulsivity	Constraint vs. Impulsivity
-	-	Psychoticism	Unconventionality

Note. The four domains correspond to the Five-Factor Model in terms of Neuroticism (i.e., Negative affectivity), low Extraversion (i.e., Detachment), low Agreeableness (i.e., Dissociality), and Conscientiousness (i.e., Anankastia).

Comparative Evaluation of Three PID-5 Forms (Paper 4)

The goal of this study was to evaluate the psychometric qualities of three different PID-5 forms (i.e., 25 items, 100 items, and 220 items), simultaneously [130]. The initial Danish psychometric evaluation of the original PID-5 has previously been published by Bo et al. [131]. To the best of my knowledge, the present study presented the first replication and psychometric evaluation of the abbreviated PID-5 Short Form (100 items) based on an algorithm developed by Maples et al. [119].

The analyses in the present study were based on complete 220-item PID-5 data derived from a Danish mixed sample (N = 1,376) of 451 psychiatric outpatients and 925 community-dwelling participants.

Essential Findings

As the most interesting aspect of the study, a simultaneous investigation of all three PID-5 forms demonstrated that the three versions strongly converged with one another, as expected. The scale reliability and structural validity were satisfactory across all three PID-5 forms. Moreover, the pattern of correlations with interview-rated DSM-IV PD criterion-counts was very similar across the three PID-5 forms, and all forms discriminated appropriately between psychiatric outpatients and community-dwelling individuals.

These findings are overall supportive of using the abbreviated versions of PID-5. Importantly, the findings suggest that these abbreviated formats are not only more feasible, but also remain reliable, valid, and comparable to the original PID-5 form. For example, clinical settings with low resources or patients with insufficient capacity for answering over 100 items may benefit from using the PID-5 Short

Form. Likewise, researchers conducting large-scale studies who need a certain response rate may benefit from using the more feasible PID-5 Brief Form. It also seems particularly important that the vast amount of psychopathological research that has recently been conducted using one of the shortened versions is generalizable to clinical settings, where the original PID-5 form may be used, and the other way around.

Finally, in contrast to the Original PID-5 portraying 25 trait facets [127], the PID-5 Brief Form only portrays the five higher-order trait domains, which cannot be completely converted to the ICD-11 trait domain system. Thus, Kerber et al. [129] have developed an alternative 34-item PID-5 Brief Form Plus (PID-BF+), which profiles all six combined DSM-5 and ICD-11 trait domains, including three primary facets per domain. In Chapter III (Paper 8), I present data from an international study where this PID-5-BF+ was further modified into a 36-item version (PID-5-BF+ Modified) and subsequently evaluated across 16 different samples.

Psychometric Generalizability of PID-5 Domain Scores (Paper 5)

The motivation for carrying out this study was driven by the condition that the majority of PID-5 research is derived from nonclinical student samples or other kinds of convenient sampling despite the fact that the PID-5 was developed for the assessment of pathological traits in clinical settings. Thus, the present study sought to investigate whether community-reported DSM-5 personality trait data are comparable and generalizable to patient-reported DSM-5 personality trait data, and vice versa? To date, the PID-5 has also been employed in a large number of psychopathological studies using both clinical and nonclinical samples [132]. These findings can only be generalized to other populations if the PID-5 actually measures the same constructs across the different populations, which involves that factors are not dependent on specific populations but are generalizable across populations. Before the present study was carried out, a number of studies had already supported the psychometric properties of the PID-5 including its five-factor structure [133, 134]. However, no research had yet investigated the actual comparability and generalizability of PID-5 constructs across nonclinical and clinical samples, apart from Tucker's congruence coefficients (which only provide information related to "weak" measurement invariance).

Hence, the present study sought to investigate the comparative five-factor structure and a more strict measurement invariance across clinical (n = 598) and nonclinical (n = 598) samples matched on age and gender. For this purpose, a 13-step two-group exploratory structural equation modeling (ESEM) approach was employed, which is described in detail in Paper 5 [135]. This procedure served to examine whether the PID-5 is psychometrically equivalent across clinical and nonclinical samples as this is important for generalizability and utility of findings in both research and clinical practice. More precisely,

establishing measurement invariance is important to guarantee that the same underlying constructs are being assessed across different populations.

Essential Findings

The results demonstrated acceptable psychometric properties of PID-5 for both samples, and the latent trait domains could be appropriately compared across clinical and nonclinical individuals in terms of partial strict invariance. Thus, these findings support strong measurement invariance across the groups at the domain level. Consequently, PID-5 data obtained in nonclinical samples are meaningful to compare with and generalize to data obtained in clinical samples, and vice versa. Potential limitations are discussed in the general discussion later in the thesis.

Clinician-Reported ICD-11 Trait Domain Specifiers (Paper 6)

This invited paper was published in a special issue on assessment of ICD-11 PD traits with Thomas A. Widiger and Michael Bagby as guest editors. The study served as the first evaluation of clinician-reported ICD-11 traits as well as the first evaluation of the Personality Inventory for ICD-11 Informant Report Form (PiCD-IRF). For the purpose of this study, we asked the authors of the Personality Inventory for ICD-11 (PiCD) [124] to adapt this instrument into an informant report version (i.e., PICD-IRF), which they subsequently did. The adapted PICD-IRF is provided in Appendix.

The essential goal of this study was to examine whether the five ICD-11 trait domain specifiers can be reported by mental health clinicians in a structurally valid manner? Thus, we sought to detect the most suitable factor structure of clinician-reported ICD-11 trait domain specifiers in mental health care patients. Consistent with previous research, we assumed that a four-factor model [124] and/or a five-factor model [127] would provide the most sound solutions for the included ICD-11 trait indicators.

For the purpose of this investigation, clinician-reported PiCD-IRF data were provided by mental health professionals on behalf of their own patients or clients (N = 238; 73% women; M_{age} = 33.21) who were predominantly characterized by personality pathology. Each respondent was asked to think of a patient or client they had seen for at least 5 hours, which is equivalent to at least five sessions of therapy, evaluation, or other kinds of clinical contact. Responses from the 60-item PiCD-IRF was subjected to an exploratory factor analysis (EFA) approach.

Essential Findings

As predicted, the EFA analyses suggested that a four-factor model as well as a five-factor model were both proper solutions that fitted the PiCD-IRF data. In general, the patterns of EFA loadings were consistent with findings from self-reported ICD-11 traits. Since both a four-factor and a five-factor solution are conceptually reasonable and consistent with previous research, this finding suggests that ICD-11 trait domain specifiers can be validly reported not only by patients [124, 127, 128, 136] but also by regular clinicians who know their patients fairly well. Nevertheless, based on this study, it is debatable whether a single "bipolar" Anankastia-Disinhibition factor is more appropriate than two separate Anankastia and Disinhibition factors; in other words, whether a four- or five-factor model is most reasonable for users of the ICD-11. This issue is further discussed in Papers 6, 7, and 8.

Discussion of Findings in Chapter II

In this discussion, I aim to elaborate on the implications of findings in the three papers – with respect to generalizability across clinical and non-clinical data, cross-loadings and coherence with meta-analytic findings, patient- versus clinician-reported traits, and discriminant validity.

Generalizability Across Clinical and Non-Clinical Data

Based on the conclusion in Paper 5, clinicians and researchers are allowed to assume that data obtained with the PID-5 are overall comparable across clinical (e.g., psychiatric patients) and nonclinical (e.g., general community, students) individuals. This conclusion may serve to defend the relevance and generalizability (at least at the domain level) of the large body of PID-5 research on psychopathology that is actually based on student samples and other non-clinical convenient samples. This rationale is consistent with previous measurement research on personality and psychopathology suggesting that structural differences between clinical and nonclinical samples are less pronounced [137]. Likewise, previous findings support the generalizability of a three-factor structure for schizotypal personality features across clinical and nonclinical samples [138], which basically indicates that the dimensional realms of normality and abnormality may be the same.

Cross-Loadings and Coherence with Meta-Analytic Findings

It is noteworthy that Paper 4 was included in a more recent meta-analysis of the five-factor internal structure of the PID-5 along with 13 other independent samples (N = 14,743) [134]. Interestingly, the identified pattern of loadings in Paper 4 overall aligned with the weighted mean factor loadings presented in the aforementioned meta-analysis, which suggests that the internal structure of the Danish PID-5 is overall consistent with the patterns identified across U.S., Dutch, Spanish, Norwegian, German,

and French samples. Such cross-national robustness is also clearly demonstrated in Paper 8, where a sound six-factor PID-5-BF+ structure is replicated across 16 international samples.

Importantly, the few deviating or unexpected loading patterns in Paper 4 are also consistent with weighted mean factor loadings presented in the aforementioned meta-analysis [134]. For example, instead of showing a primary loading on (low) Disinhibition, Rigid Perfectionism was found to load on Negative Affectivity and Psychoticism. Likewise, Perseveration loaded on both Negative Affectivity (as expected) and Psychoticism. As the only noticeable deviation in the Danish study from the meta-analytically derived pattern, the facet of Risk Taking was found to show a substantial loading on (low) Negative Affectivity apart from its expected loading on Disinhibition. This rather unique Danish pattern may indicate a local tendency to risk aversion (i.e., low risk taking) associated with Negative Affectivity. As further discussed in Papers 4 and 5, such features are often attributed to the fear of taking chances (i.e., Avoidant PD), a rigid need for control (i.e., Anankastic PD) as well as anxiousness in general [130]. Similar patterns of duplicity in facet affiliations are also discussed in Paper 7.

Taken together, I propose that the aforementioned deviating but meta-analytically robust findings inform modifications toward DSM-6. Thus, the potential domain affiliations may be reconsidered for Rigid Perfectionism and Risk Taking. Moreover, it may also be debated whether it makes sense, conceptually, to link Perseveration to the domain of Psychoticism [139], or maybe this facet should be completely omitted from calculation of any domain scores.

Patient- versus Clinician-Reported Traits

Paper 6 concludes that the ICD-11 trait domain specifiers can be reliably and validly reported not only by patients but also by clinicians who are well familiar with their patients. The identification of both four- and five-factor solutions as equally appropriate for PiCD informant-reports is somewhat consistent with findings derived from PiCD self-reports [124]. Likewise, a meta-analysis of the Schedule for Nonadaptive and Adaptive Personality (SNAP) data showed strong factor congruence of Negative Emotionality, Positive Emotionality, and Disinhibition vs. Constraints across self-reported and informant-reported data [140]. Such findings indicate that abnormal and normal personality has a robust structure across different rater perspectives (i.e., rating formats). Another recent study on PID-5 traits found that self-reporters tend to rate themselves only slightly lower than informant-reporters across all PID-5 scores [141], which suggests that self-reports in general are trustworthy indicators of authentic personality features. However, the study also found that the mean-level discrepancy between self- and informant-reports increased as the general severity of pathology increased [141]. This may suggest, that clinician-

reported or informant-reported ICD-11 or DSM-5 traits may be particularly relevant with respect to assessment of more severe PDs.

Discriminant Validity

The average inter-domain correlation observed for the three PID-5 forms (i.e., inter-domain convergence and divergence) is larger than inter-domain correlations typically found in personality inventories, which is consistent with previous research on the Original PID-5 [142]. Consequently, the PID-5 may not yield very differentiated trait profiles. Thus, it may be fairly common that a patient shows elevated scores on several PID-5 domains at the same time mirroring the clinical reality of strong global pathology. There may be at least two explanations for this issue of low discriminant validity: First, within the PID-5 development process, analyses were performed for each scale independently of the other domain scales, which is a conventional approach to scale construction in the field of personality science and psychometrics [30]. Second, interstitial correlations may also be an expected reflection of the complexity of pathological trait structure. Thus, cross-domain correlations may be an inherent and inevitable reflection of a general factor of maladaptivity or demoralization, which characterizes nearly all PID-5 scales as evidenced at the most general level of the hierarchical structure of personality pathology [127, 131, 143–145].

In order to improve this possible issue of discriminant validity, future researchers could seek to identify and remove the non-specific component of “demoralization” or “p-factor” from all PID-5 scales because such cross-cutting features are thought to impair the discriminant validity of many self-report measures of psychopathology. For example, by removing the MMPI-II items that were most related to “demoralization”, the discriminant validity of the abbreviated MMPI-II-RF has been substantially improved [146]. Finally, Paper 8 introduces a new abbreviated PID-5 operationalization of trait domains, which apparently solves some of the potential issues with discriminant validity [122].

Chapter III. Harmonizing DSM-5 and ICD-11 Trait Dimensions

This chapter is based on Papers 7 and 8.

Both the APA and the WHO have explicitly called for a harmonization of the DSM and ICD classification systems [1, 147]. Accordingly, the introduction of the DSM-5 manual states that "[…] most of the salient differences between the DSM and the ICD classifications do not reflect real scientific differences, but rather represent historical by-products of independent committee processes." (APA, 2013, p. 11) [28]. Thus, harmonization between the APA and WHO systems may solve issues related to 1) global applicability of the results by international regulatory agencies, 2) design of international clinical trials aimed at developing new treatments, and 3) collection and utility of national health statistics. More generally, two different classification systems make it difficult to replicate scientific results across nations [28].

The two papers presented in this chapter introduce new harmonized approaches to measurement of both DSM-5 and ICD-11 traits. Moreover, Paper 10 (Chapter IV) adds to this theme. This research may also help prepare the ground for a DSM-6 proposal discussed elsewhere in this thesis.

Using PID-5 Trait Facets to Describe ICD-11 Trait Domain Specifiers (Paper 7)

At the time of submitting this paper, no psychometrically validated instrument had been published for the assessment of ICD-11 trait domains. Accordingly, I considered it obvious to take advantage of an existing instrument (i.e., PID-5) that was already empirically tested and freely available. Thus, the present study sought to figure out whether DSM-5 AMPD personality traits (i.e., PID-5 facets) can be used for describing ICD-11 trait domain specifiers?

According to personal communication with Stephen Huprich (ISSPD president and representative in the final ICD-11 revision process) and Geoffrey M. Reed (in charge of the process as managing editor for ICD-11 mental disorders), the present paper (along with Paper 10 in Chapter IV) provided empirical evidence that allegedly was used to support the work group's final decision on the trait specifiers in ICD-11 at their meetings in Heidelberg, September 2017. Shortly after this PID-5 algorithm was published, Oltmanns & Widiger [124] released the Personality Inventory for ICD-11 (PiCD), which is evaluated in Paper 6 (Chapter II) using an adapted informant-report form.

Because the ICD-11 system will be the official nosology for coding purposes in all WHO member countries, it seems highly appropriate and obvious to develop an ICD-11 algorithm (i.e., DSM-5 to ICD-11 cross-walk) for researchers and clinicians already using the DSM-5 system. For this purpose, the present study sought to develop an algorithm for PID-5 trait facets to yield the proposed ICD-11 trait domain

specifiers. Thus, 16 out of 25 trait facets were selected based on their conceptual coverage of the proposed ICD-11 domains. Subsequently, the 16 designated PID-5 facet scales were subjected to an exploratory structural equation modeling (ESEM) analysis using a mixed derivation sample (*N* = 1,541). In this procedure, the ESEM model was fixed to five factors consistent with the ICD-11 proposal. Finally, a U.S. student sample (*N* = 637) was used to replicate the factor structure in a different sample and language.

Essential Findings

The primary finding of the present study was the identification of a five-factor structure that captured the content of all five proposed ICD-11 domains, including the Anankastia domain as well as a separate Disinhibition domain. Accordingly, it is possible for researchers and clinicians to measure and describe ICD-11 trait domains using a scoring algorithm for PID-5, which is provided in the appendix of Paper 7. As suggested by Bach & First [2], it seems reasonable to employ this ICD-11 algorithm for the DSM-5 AMPD trait system in general, including the Structured Clinical Interview for the DSM-5 Alternative Model of PDs (SCID-AMPD) Module II [123], which covers the 25 trait facets.

After the publication of this paper, various studies have employed and/or validated the PID-5 algorithm for ICD-11 across Danish, Canadian, Iranian, and Brazilian samples [128, 148–150]. Moreover, the algorithm has also served as foundation for developing the more feasible PID-5-BF+ [129], which is further modified and evaluated in the following Paper 9 [122].

International Assessment of Combined DSM-5 and ICD-11 Traits (Paper 8)

This invited paper has been accepted for publication in a special issue of *Psychopathology* ("International perspectives on DSM-5 AMPD and ICD-11") under the editorship of Mark Lenzenweger. The study served as an international construction- and evaluation study of a modified version of the Personality Inventory for DSM-5 – Brief Form Plus (Modified PID-5-BF+), which comprises 36 items and describes 6 higher-order DSM-5 and ICD-11 trait domains along with 18 subfacets. Essentially, the study sought to evaluate whether DSM-5 AMPD and ICD-11 traits could be measured simultaneously and in an internationally robust manner. The 36-item PID5BF+M is provided in Appendix.

As a novel and alternative approach to validation within the field of PID-5 research, we tested this new 6-domain model in three derivation samples (Denmark, Germany, U.S.) with subsequent replications across thirteen samples from Italy, France, French-speaking part of Switzerland, French-speaking part of Belgium, Dutch-speaking part of Belgium, Norway, Portugal, Spain, Poland, Czech Republic, Brazil, and the U.S. Thus, the study included a total of 16,327 participants (of which 2,347 were

clinical) from sixteen different samples and twelve different languages. To the best of my knowledge, this makes it the largest published cross-national study on PID-5 data to date.

The original 34-item PID-5-BF+ was developed by Kerber et al. [129] to delineate the combined DSM-5 and ICD-11 traits within 6 domains. This construction was inspired by the PID-5 algorithm presented in Paper 8 [127] in which Anankastia was solely estimated using facets of rigid perfectionism and perseveration. In order to further adjust the PID5BF+ to efficiently delineate the primary facets represented in the ICD-11 domain of Anankastia, the present study slightly modified the PID-5-BF+ operationalization of Anankastia (see Figure 1).

First, the facet of perseveration (2 items) was removed because this feature was originally intended to delineate features of Negative Affectivity (APA, 2013, p. 779) [28], which is also evident from its common loadings on the Negative Affectivity domain [134]. Moreover, meta-analytic findings show that perseveration tends to cross-load on both Negative Affectivity and Psychoticism [134]. Because of such duplicity, inclusion of perseveration appears to compromise the yielding of five pure trait domains.

Second, instead of perseveration, the features of rigidity and orderliness were extracted from the composite facet of rigid perfectionism and included as two distinct facets, which is consistent with the initial construction of the PID-5 trait model [30]. Eventually, instead of the 17 facets (34 items) comprising the original PID-5-BF+, the modified PID-5-BF+ included 18 facets (36 items) as illustrated in Figure 1.

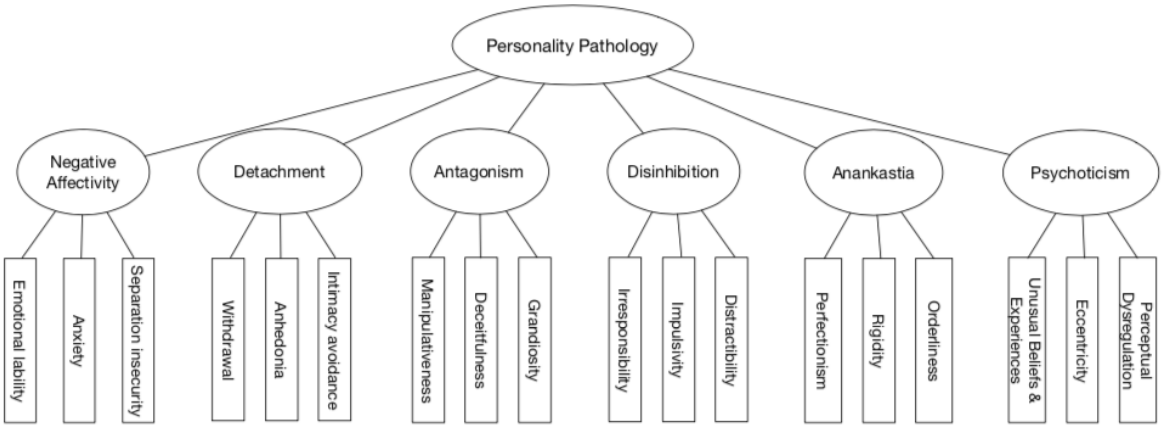

Figure 1. Modified PID-5-BF+ 18 trait facets and 6 higher-order domains

Essential Findings

The present multi-national study yielded two primary findings: First, the six-factor structure of the modified PID-5-BF+ was robustly replicated across all samples (i.e., different countries, languages, and populations) with good model fit and appropriate factor loading patterns. Secondly, the six modified PID5BF+ domain scores generally showed expected correlations with interview-rated PDs in a pattern that is consistent with previous findings on the original PID-5 traits [148, 151].

As a result of an additional evaluation, the modified PID5BF+ Anankastia domain was found to be more strongly correlated with interview-rated Obsessive-Compulsive PD (r = .66) in comparison to the original PID5BF+ Anankastia domain (r = .48). This suggests that the Modified 36-item PID-5-BF+ introduced in the present paper, is slightly more psychometrically sound than the original 34-item PID-5-BF+.

Finally, as a remarkable fact, the six-domain structure presented in the current study aligns with the six-domain trait model that was originally proposed for DSM-5 [46], before it ultimately was reduced to five domains in favor of parsimony [30].

Discussion of Findings in Chapter III

The two studies presented in this chapter can be said to support the utility of the established PID-5 item pool to delineate both DSM-5 and ICD-11 trait domain indicators. This may be viewed as one promising step closer to harmonization between DSM-5 and ICD-11.

The ICD-11 trait domain specifiers seem parsimonious and feasible for 'busy' clinicians across most clinical settings, whereas the absence of facet-level information may frustrate some clinicians with expertise in the field. Thus, for those practitioners who may have the resources and interest, the more comprehensive DSM-5 AMPD trait facet system may add more clinically applicable information to the simpler ICD-11 domain specifiers. Such an approach may potentially add to the harmonization between the DSM and ICD, while DSM may also enhance the utility of ICD by adding more detailed and clinically useful information to it. This topic will be further debated in the thesis' general discussion in relation to paving the way toward DSM-6.

Chapter IV. Continuity between Categories and Trait Dimensions

This chapter is based on Papers 9 and 10.

Apart from assessing personality functioning and traits, the DSM-5 AMPD was also constructed as a hybrid model in the sense that it may use dimensional trait "criteria" to inform categorical PD types. Thus, in addition to impaired capacities in personality functioning (Criterion A), the hybrid approach uses unique configurations of the 25 trait facets (Criterion B) to diagnose one of six PD types (specific trait-to-disorder matches are listed in APA, 2013, pp. 764–770) [28]. Such a hybrid approach is allowed because of concerns about losing the existing categorical diagnoses in the transition to a dimensional trait model of personality pathology. By retaining these types, the vast amount of research and treatment guidelines will not be redundant.

The retained hybrid PD types include Antisocial, Avoidant, Borderline, Narcissistic, Obsessive–Compulsive, and Schizotypal PDs, whereas additional trait constellations for Histrionic, Schizoid, Dependent, and Paranoid PDs are represented by the diagnosis of PD—Trait Specified (PD-TS). As such, conceptually coherent coverage of all 10 familiar PD diagnoses is an important aspect of the clinical utility of the DSM-5 AMPD trait model.

Moreover, while the DSM-5 AMPD and ICD-11 have the potential to provide a much-needed overhaul of a problematic DSM–IV and ICD-10 system, it is also important that useful clinical information from the DSM–IV and ICD-10 is not lost in the transition. Therefore, I naturally assume that the somewhat challenging shift from categorical types to dimensional traits will be smoother to the extent that connections across the models are understood and articulated empirically. In general, it is vital that valuable clinical information from the categorical PDs is not totally lost in the transition.

The two papers presented in this chapter sought to investigate 1) associations of categorical PD types with 25 DSM-5 trait facets, and 2) associations of categorical PD types with DSM-5 and ICD-11 trait domains.

Continuity between PD Categories and PID-5 Facets (Paper 9)

This study [152] aimed to evaluate the bivariate and unique associations between interview-rated DSM–IV/5 categorical PD types and patient-reported DSM-5 AMPD trait facets in a sample of psychiatric outpatients (N = 142) with predominant features of personality pathology. All patients were administered the Structured Clinical Interview for DSM-IV – Axis II (SCID-II) [153] interview by trained clinicians and were administered the PID-5. To the best of my knowledge, this study was the first to evaluate the association between PID-5 traits and categorical PD criteria using a structured interview in a

clinical psychiatric setting. Thus, the essential aim of the present study was to evaluate how well the DSM-5 personality trait facets capture features of DSM-IV PD types.

Essential Findings

The bivariate correlations between PD criterion-counts and trait facets overall aligned with the configurations presented in the hybrid model as well as the recently published meta-analytical findings on these matters [151]. Although the analyses did not show perfect matches according to the hybrid model, the "core" of each PD type was generally captured by essential trait facets in terms of unique regression-based associations. For example, Narcissistic PD was best explained by Grandiosity, Paranoid PD was most strongly associated with suspiciousness; Obsessive-Compulsive PD was most associated with rigid perfectionism; Histrionic PD was primarily associated with attention seeking; and Dependent PD was most strongly associated with separation insecurity. These findings were overall consistent with the hybrid configurations, previous research, and a more recently published meta-analysis [151].

However, the present study also yielded several deviations from the expected hybrid configurations. For example, Avoidant PD was uniquely associated with depressivity and (low) risk taking. Nevertheless, this is not conceptually incoherent because individuals with Avoidant PD tend to be characterized by shame and low self-worth (i.e., features of depressivity) as well as being "reluctant to take personal risks or to engage in any new activities because they may prove embarrassing" (APA, 2013, p. 649) [28]. Likewise, Antisocial PD was uniquely predicted by (low) Submissiveness, which is consistent with previous research showing that reversed Submissiveness predicts features of boldness in antisocial features including psychopathy [154, 155]. This makes sense because submissiveness corresponds to reversed social dominance, which is not already covered by any other facets. These findings therefore pave the way for future research on (low) risk taking and (low) submissiveness as potential indicators of Avoidant PD and Antisocial PD.

The present study was included in the aforementioned meta-analysis by Watters et al. [151], as one out of 25 independent studies. Remarkably, the average weighted mean correlations from this meta-analysis overall align with the pattern of correlations identified in the present study. The meta-analysis generally supports the established hybrid configurations. However, this did not quite apply to Obsessive-Compulsive PD, which was only associated with rigid perfectionism and partially with perseveration, but not with the remaining expected facets.

Continuity of PD Categories with ICD-11 and DSM-5 domains (Paper 10)

The aim of this study [148] was to evaluate how well the ICD-11 and DSM-5 personality trait domains capture DSM-IV PD types. According to personal communication with Stephen Huprich (ISSPD president and delegate in the final ICD-11 revision process) and Geoffrey M. Reed (managing editor for ICD-11 mental disorders), the present paper [148] - along with Paper 8 in Chapter III - provided evidence that allegedly was used to support the ICD-11 work group's final decision on the trait specifiers in ICD-11. Moreover, in an editorial letter entitled "Personality Disorders: Good reasons to reclassify" authored by the chair of the PD workgroup (Peter Tyrer) [156], the current paper was specifically cited as empirical evidence for adopting the ICD-11 trait proposal, among others.

In contrast to Paper 9, the present paper only examined associations at the trait domain-level. Thus, the overall goal of this study was to explore the associations of the five ICD-11 domains versus five DSM-5 domains with the 10 categorical PD types in a mixed sample of psychiatric outpatients (N = 226). This served as the first investigation of the ICD-11 personality trait domain specifiers' ability to explain the variance of categorical PD types. The ICD-11 trait domain scores were calculated using the PID-5 algorithm presented in Paper 7 [127], whereas the DSM-5 trait domain scores were calculated using the official APA algorithm [157]. By simultaneously investigating associations with both ICD-11 and DSM-5 trait domains, the present study also sought to evaluate and highlight potential harmonization between the two diagnostic frameworks.

Essential Findings

Overall, the study found both DSM-5 and ICD-11 trait domains to capture a substantial amount of reliable information in categorical PDs, which indicates that little information is actually lost in the transition to these trait models. This finding may also contribute to narrowing the gap between DSM-5 and ICD-11.

The categorical PDs showed correlational continuity with both ICD-11 and DSM-5 trait domain scores on equal terms and in conceptually coherent ways. As would be expected, the ICD-11 trait domain model was superior in capturing obsessive–compulsive PD, whereas the DSM-5 model was superior in capturing schizotypal PD.

Apart from the various expected findings, a number of expected as well as unexpected (but meaningful) patterns of associations were also observed. For example, Negative Affectivity captured Borderline PD (e.g., emotional lability) and Avoidant PD (e.g., anxiousness), whereas it negatively captured Antisocial PD (e.g., low anxiousness) and Schizoid PD (e.g., low emotional lability). Psychoticism not only captured Schizotypal PD (e.g., eccentricity) but also Borderline PD (e.g., perceptual

dysregulation), which is consistent with the dissociative or psychotic-like experiences often characteristic for this disorder. Anankastia captured Obsessive–Compulsive PD (e.g., rigid perfectionism) but may also apply to features of Schizotypal PD (e.g., perseveration). Disinhibition captured Antisocial PD (e.g., risk taking) and Borderline PD (e.g., impulsivity), but also Schizotypal PD (e.g., distractibility) and Dependent PD (e.g., irresponsibility). Detachment primarily captured Schizoid PD (e.g., restricted affectivity) and Avoidant PD (e.g., withdrawal), whereas it negatively captured Histrionic PD (e.g., low withdrawal, low intimacy avoidance, and low restricted affectivity). Finally, Antagonism/Dissociality primarily captured Antisocial PD (e.g., callousness) and Narcissistic PD (e.g., grandiosity), whereas it negatively captured Avoidant PD (e.g., low grandiosity). These expected and unexpected associations are further discussed in Paper 10.

Conclusively, the findings of this paper suggest that the ICD-11 and DSM-5 trait models may be used to delineate one another as well as features of familiar categorical PD types. A preliminary category-to-domain 'cross walk' is provided in Paper 10, which is also consistent with previous research [158–160] as well as the original DSM-5 hybrid "cross-walk" [46]. See also proposed cross-walk in Bach & First [2]

Discussion of Findings in Chapter IV

Knowledge of the empirical associations presented in Papers 9 and 10 may be useful for communicating the meaning of the new PD trait domains to practitioners that are already well familiar with the established PD categories. The pattern of associations demonstrates that the somewhat homogeneous DSM-5 and ICD-11 trait domains share essential features with the somewhat heterogeneous PD categories, which supports the continuity from categories to dimensional domains. Such continuity may indeed ease the transition (and burden) for clinicians when exchanging the polythetic categorical PD types with dimensional trait domains while also highlighting their common ground. As suggested in the introduction of this chapter, the empirically articulated connections across the models may smooth an otherwise challenging shift from PD types to trait dimensions. By making it possible to portray trait configurations of PD types, the large body of PD research and clinical guidelines will not be redundant. However, this conclusion should be interpreted in the light of the major limitation (and important future direction) of this chapter, that the psychological capacities of functioning (i.e., Criterion A) were not taken into account. Such features may particularly be important for Borderline-related issues with identity and goal-directedness, which are not explicitly captured by any trait.

Chapter V. Exploring Trait Configurations for Borderline PD

This chapter is based on Papers 11 and 12.

Although the BPD diagnosis has been extensively investigated and abundantly accompanied by theories, clinical guidelines, and treatment manuals [161], researchers and clinical experts have consistently questioned the diagnostic ‘‘construct’’ of BPD [162–165]. The most highlighted problems include within-diagnosis heterogeneity, polymorphous comorbidity, arbitrary diagnostic boundaries, and disagreement on the core features of the disorder [164]. Thus, for several reasons BPD has been labeled a ‘‘catch-all’’ diagnosis [166]. In fact, compelling research and theory suggest that BPD reflects a more general index of severity [98, 99] or lack of resilience [167] rather than a homogenous PD type *per se*.

Perhaps most importantly, the borderline diagnosis was originally referring to a level of psychopathology (i.e., between neurosis and psychosis) rather than a specific syndrome or type. Accordingly, this clinical phenomenon has traditionally been referred to as “borderline conditions” which also included schizotypal disorder [168]. After the initial observations of “borderline” patients by Stern [169] and Knight [170], an effort was made by Kernberg [11] to define their intrapsychic features, which were considered to be somewhere between severe psychotic personality organization and the less severe neurotic organization. The resulting construct of borderline personality organization comprised all serious forms of PD including identity diffusion, primitive defenses, and a reality testing that was vulnerable to alterations and failures. Later, Gunderson & Singer [171] along with Spitzer, Endicott, & Gibbon [172] identified features of dysphoric affects, impulsive action, interpersonal relationships, psychotic-like perceptions, and social maladaptation as putative descriptors in the DSM-III operationalization of BPD [173]. However, the original concept of borderline remained a matter of severity and intra-psychic functioning. Therefore, when taking recent scientific findings into account, BPD can be said to indicate a severity phenomenon as originally observed by clinicians [161], but the diagnosis does not seem to work as an actual phenotype or homogenous construct [98, 99, 165, 174]. Yet, some studies have claimed to support the BPD prototype validity [175], whereas other studies support a three-factor BPD structure comprising affective instability, impulsivity, and unstable relationships [164].

When all is said and done, BPD comprises the PD diagnosis that matters the most to mental health professionals as it is generally a *high volume*, *high risk,* and *high cost* condition [34, 161, 176]. For some practitioners, BPD is virtually synonym with having a PD, and therefore it may have been controversial that this diagnosis was not included in the initial ICD-11 proposal [34]. However, eventually

a *Borderline pattern* was included in the final ICD-11 guidelines as an optional specifier "to enhance the clinical utility of the classification of PD" and to "facilitate the identification of individuals who may respond to certain psychotherapeutic treatments" [6]. Thus, the Borderline pattern may be coded in ICD-11, not because of its validity but for the sake of convenience and continuity with clinical practice [39], which in my opinion seems to be a pragmatic and reasonable solution, so far. Likewise, the DSM-5 AMPD Hybrid approach allows the practitioner to describe a BPD type based on certain impaired capacities of functioning (e.g., instability of self-image, personal goals, interpersonal relationships, and affect regulation) along with seven specified trait facets as illustrated in Figure 2.

Given the large body of research and mental health resources devoted to the BPD diagnosis, it seems that further elaboration of the optimal BPD trait constellation is imperative for moving forward. Therefore, the present chapter includes two papers dealing with different aspects of DSM-5 AMPD trait configurations for BPD. However, it is important to emphasize that the ICD-11 borderline pattern specifier as well as the DSM-5 AMPD BPD hybrid type are only included in the classification systems to preserve continuity (and familiarity) with established clinical practice, and only the traits and not the BPD type/pattern have structural validity.

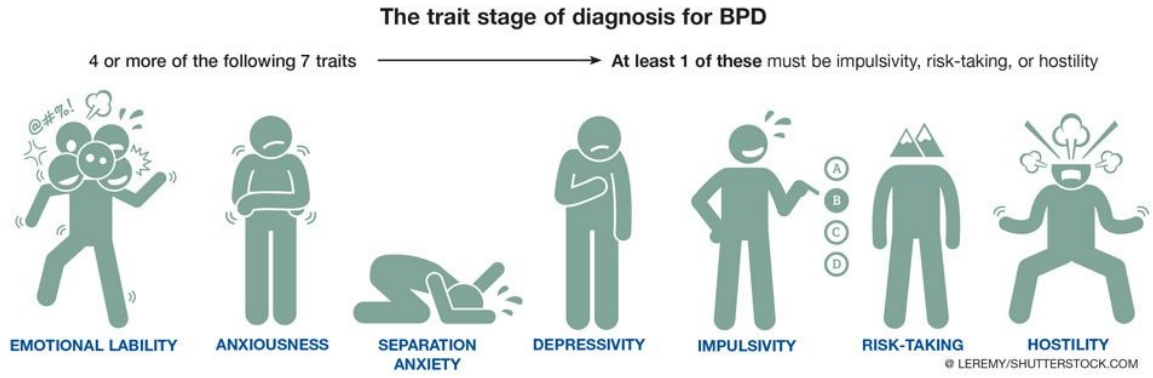

Figure 2. The seven designated BPD trait faces in the DSM-5 AMPD hybrid model.
Illustration from *Psychiatric Times.*

Utility of PID-5 Traits in Differentiating BPD from Controls (Paper 11)

This study [177] aimed to investigate the utility of DSM-5 AMPD traits in differentiating BPD patients from other PD patients and healthy controls, and to examine which traits, that are most unique to patients with BPD. To the best of my knowledge, no other study has yet endeavored this approach.

A sample of psychiatric outpatients diagnosed with BPD (n = 101) was matched with comparison samples of other PD patients (n = 101) and healthy controls (n = 101), so that all three groups approximately had the same composition of age and gender.

Consistent with the DSM-5 hybrid model for BPD, the facets of emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk taking, and hostility were hypothesized to differentiate BPD patients from the comparison groups. We particularly expected emotional lability to be potent in differentiating BPD from other PDs as both theory and research emphasize this as a core feature of BPD [178, 179]. Moreover, consistent with meta-analytical findings [151] including the BPD trait configuration identified in Paper 9, we also hypothesized that facets of suspiciousness and cognitive & perceptual dysregulation would contribute to the pattern of BPD in terms of paranoid ideations, mistrust, dissociation-proneness, and psychotic-like experiences in situations of affect.

Essential Findings

The findings generally indicate that the expected BPD trait configuration differentiated BPD patients from other PDs and/or healthy controls in terms of zero-order differences. In particular, facets of emotional lability and suspiciousness, and in part depressivity and risk taking, reflect unique core trait features of an otherwise heterogeneous diagnostic construct (see discussion in Paper 12). Thus, it would behoove decision-makers to consider whether the DSM-5 BPD trait profile might benefit from some augmentation by suspiciousness (and perhaps cognitive & perceptual dysregulation) in addition to the other specified facets.

Utility of PID-5 Traits for Characterizing BPD Criteria (Paper 12)

In addition to the category-to-trait continuity for BPD, it also seems important to delineate the criterion-to-trait continuity for the 9 DSM-IV polythetic diagnostic criteria for BPD. To date, no study has attempted such validation. Accordingly, the present criterion-focused study [180] can be considered as supplemental to the category-focused study in Paper 11. Thus, the present study sought to evaluate whether the nine specific DSM-IV Borderline PD criteria are coherent with designated DSM-5 trait facets. The results were derived from a secondary analysis of the data published in Paper 9, which included 142 patients who were diagnosed with SCID-II interviews and were administered the PID-5. The study

specifically examined the empirical association between PID-5 trait facets and the nine dichotomous criterion variables for BPD.

Essential Findings

The study showed that eight of the nine BPD criteria are associated with DSM-5 trait facets in ways that can be considered conceptually relevant. The lack of substantial associations with criterion 7 (chronic feelings of emptiness) may indicate that this feature is best captured by Criterion A (personality functioning) and/or is problematic to operationalize in a consistent manner.

The facets included in the official DSM-5 AMPD hybrid trait configuration of BPD were unique predictors of relevant categorical BPD criteria (except anxiousness). In this study, suspiciousness incremented this prediction. Similar to the findings in Paper 11, the present study also points at emotional lability, impulsivity, and suspiciousness as potential core features of BPD.

Discussion of Findings in Chapter V

As already highlighted in the introduction of this chapter, the original concept of “borderline” was never intended to be a homogenous construct or type but rather a level of personality functioning (i.e., somewhere between neurotic and psychotic functioning). Therefore, it may seem questionable and somewhat ignorant that Paper 11 and Paper 12 seek to uncover the unique trait facets for such a heterogeneous disorder (”catch all” syndrome). Nevertheless, because clinicians treat BPD patients at the level of problems and not at the level of disorder, it is certainly interesting to learn how each BPD feature and the BPD diagnosis in general are captured by specific PID-5 trait facets. Accordingly, it may be informative for clinicians to know the constellation of BPD problems (i.e., criteria) that apply to a specific patient, including features such as anger, affective instability, impulsivity, and chronic emptiness [181]. Moreover, such specific BPD features may also indicate underlying mental models and coping mechanisms [182, 183], that often serve as targets of treatment.

The findings in Papers 11 and 12 are generally consistent with the proposed hybrid trait configuration of BPD in DSM-5 AMPD. In addition to the proposed facets of emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk taking, and hostility, Papers 11 and 12 also indicated that suspiciousness (and perhaps perceptual dysregulation) contributes to the description of BPD, whereas anxiousness may be redundant. Moreover, the two studies generally suggest that core features of BPD may particularly include emotional lability, suspiciousness, risk taking, impulsivity, and depressivity.

These findings are also largely consistent with other recent studies. For example, a study by Fowler et al. [184] generally supported the accuracy of this PID-5 trait configuration for diagnosing BPD in a large inpatient sample (*N* = 1000). A Spanish clinical study found the PID-5 facets of emotional lability, [lack of] restricted affectivity, and impulsivity to be unique predictors of BPD [185]. An Italian study found PID-5 facets of separation insecurity, impulsivity, distractibility, and perceptual dysregulation to significantly discriminate BPD participants from comparison groups [186]. Moreover, research by Sellbom et al. [187] and Evans & Simms [188] also generally supported the BPD trait configuration, and research by Anderson et al. [189, 190] generally supported the criterion validity of the DSM-5 trait operationalization of BPD. However, both Evans & Simms [188] and Sellbom et al. [187] suggest that a more parsimonious BPD trait model would include either risk taking or impulsivity, but not both. Moreover, the findings partially support that PID-5 facets of perceptual dysregulation and suspiciousness may augment the prediction of BPD. Finally, a study on differential diagnostics [191], found the DSM-5 BPD trait configuration to accurately differentiate patients with BPD from patients with a Bipolar Disorder.

In addition to the aforementioned empirical associations and differentiations, some studies have also investigated more direct utility of the BPD trait configuration: In a study by Anderson et al. [192], a sample of 105 mental health professionals were asked to rate a prototypical individual with BPD using PID-5 trait facets. Results showed that the clinicians' ratings were generally consistent with the DSM-5 BPD trait configuration, by rating non-proposed facets as less prototypical than included facets (except for attention seeking which was rated as more prototypical, and anxiousness which was rated as less prototypical). Finally, in a paper by Mulay et al. [193], a group of 20 mental health professionals specifically demonstrated that the traditional BPD diagnosis reflects a common core of PD severity, which is essentially composed of LPFS and PID-5 facets of emotional lability, depressivity, impulsivity, and anxiousness. Interestingly, the authors conclude that the relative equivalence between the traditional BPD construct and the new DSM-5 AMPD dimensions of functioning and traits may bring the large body of clinical and research literature on BPD forward with the DSM-5 AMPD diagnosis of BPD. Nevertheless, from a rather critical perspective, such operationalization of specific functioning and trait configurations for specific PD types may also be experienced by many clinicians as "a trip in the jungle" [194].

General Discussion of Findings

In the following I will summarize the findings and limitations of the present thesis. Subsequently, I will further discuss the possible contributions of the present thesis, challenges in the field, and future directions. This will specifically include the possible redundancy of functioning with respect to traits, the survival and validity of the borderline construct, utility for epidemiology and genetic research, role of the RDoC and HiTOP initiatives, and future directions toward implementation of ICD-11, a proposal for DSM-6, and opportunities and challenges for clinical practice.

Structured Overview of Findings

The findings presented in this thesis overall support the utility and psychometric potentials of measuring PDs in terms of global functioning and specific trait dimensions cf. ICD-11 and DSM-5 AMPD.

- Papers 1, 2 and 3 indicate that global impairment of self- and interpersonal functioning can be appropriately measured using the LPFS-BF (Paper 1) and the PDS-ICD-11 (Paper 3), whereas the SASPD (Paper 2) seems less suitable for such purpose. This suggests that the LPFS-BF and PDS-ICD-11 may serve as appropriate measures for rapid assessment or pre-assessment screening of both DSM-5 AMPD and ICD-11 PD severity. In particular the most recently developed PDS-ICD-11 scale (Paper 3) addresses the need for a measure specifically constructed for the ICD-11 PD features of personality functioning, manifestations, and psychosocial impairment.
- Papers 4, 5, and 6 indicate that different forms of PID-5 can be used as psychometrically sound measures for capturing higher-order trait domains as well as 25 lower-order trait facets, and domain level trait information may be generalized across clinical and non-clinical populations. With respect to patient-report methodology, the aforementioned utility applies to the very brief PID-5-BF, the shortened PID-5-SF, and the original 220-item PID-5 form. With respect to clinician-reported methodology, the PiCD-IRF may specifically be used as a valid approach to capture the five ICD-11 trait domain specifiers.
- Papers 7 and 8 support that the DSM-5 trait framework may be harmonized with the five ICD-11 trait domain specifiers by means of an algorithm developed for that purpose. In particular, the Modified PID-5-BF+ is a feasible, psychometrically sound, and cross-cultural robust measure of both ICD-11 and DSM-5 AMPD trait domains.
- Papers 9 and 10 overall support the conceptually coherent continuity between categorical DSM-IV PD types and certain configurations of DSM-5 AMPD and ICD-11 trait facets and domains.

Similarly, Papers 11 and 12 partially supported the proposed DSM-5 AMPD configuration for BPD, while highlighting the potential of including facets of suspiciousness and perceptual dysregulation to portray BPD features.

Is Personality Functioning Redundant with Respect to Traits?

Paper 1 showed a strong correlation between the total scores of LPFS-BF 2.0 and PID-5 (r = 0.79), which indicates substantial overlap between the two measures (i.e., Criterion A and B; Severity and Trait Specifiers). This finding is consistent with previous research showing that the empirical distinction between Criterion A (i.e., functioning) and Criterion B (i.e., traits) is somewhat blurry and therefore questions the validity of the LPFS [94, 195–200]. In a recent study, Sleep et al. [94] found that PID-5 traits account for more unique variance in DSM-5 Section II categorical PDs than does the LPFS, and it therefore raises questions about whether the LPFS may need revision moving forward.

While considering the aforementioned potential flaw, it seems important to emphasize that no theory ever claimed that functioning and traits should be clearly or empirically distinct from one another. In fact, severity of impaired personality functioning may also be defined as the impact of underlying dysfunctional personality traits on psychosocial functioning [56]. Accordingly, severity is not just about intensity or extreme scores as reflected in the pathological trait system, but rather a matter of their impact on everyday functioning [201]. For example, one individual may experience a pronounced tendency to worry but handle this trait in a fulfilling and adaptive manner as an artist (i.e., milder impairment), whereas another individual with the same trait-disposition to worry may feel impaired by constant worrying that stops him or her from doing things he or she needs to do (i.e., severe impairment).

In line with this, the ICD-11 diagnostic classification explicitly describes personality traits as specifiers that *contribute* to personality disturbance [6]. Likewise, the DSM-5 AMPD distinguishes between *functional impairment* and *personality trait expression* as if they comprise two different aspects of the same phenomenon (APA, 2013, 762) [28]. Thus, level of functioning provides us with an idea about the overall impairment, whereas traits help us understand the more individual expression of this personality impairment. It therefore seems to make sense that the total LPFS-BF 2.0 score is strongly associated with the total PID-5 score (as presented in Paper 1). For example, a high score on LPFS–BF 2.0 may involve a particular high score on Item 3 “My emotions change without me having a grip on them” (referring to the capacity for emotion regulation), which we would also see as an elevated score on the PID-5 trait facet of emotional lability. Consequently, it seems obvious that an elevated score on PID-5 emotional lability would indicate impaired functioning in a way that is comparable to the LPFS-BF 2.0

aspects of impaired emotion regulation; from both standpoints, emotion dysregulation is anticipated to influence daily functioning. In fact, this perspective is supported in a study by Keeley et al. [202] showing substantial associations between PID-5 scores and functional impairment in terms of the World Health Organization Disability Assessment Schedule 2.0 (WHODAS).

Moreover, the official PID-5 guideline instructs the user to calculate "the overall personality dysfunction score", which may be employed "to track change in the severity of the individual's personality dysfunction over time" [157]. Accordingly, the total score of the PID-5 may be used as a proxy for general PD severity consistent with the view that severity corresponds to the global quality ("p-factor") that links all the maladaptive PD features [47, 58, 99, 203]. In my opinion, the aforementioned official definitions seem quite coherent with the purpose of LPFS. Such coherence is also particularly evident in the ICD-11 framework, where traits are used to describe the personality features that contribute to personality disturbance, and that individuals with more severe personality disturbance tend to have a greater number of prominent trait domains (i.e., higher total score indicating more complexity). Thus, maybe the strong overlap and perceived redundancy between functioning and traits could be an artifact of the maladaptivity (e.g., p-factor) that applies to both measures [99]. From this perspective, maladaptive traits are natural artifacts of maladaptive functioning (and vice versa), whereas normal or adaptive traits are not. Accordingly, research on levels of personality functioning in relation to normal Big Five personality traits suggests that functioning and traits are more distinct contributors to mental health [204].

A study by Roche et al. [205] suggests that the aforementioned concerns about LPFS being potentially redundant (with respect to PID-5 traits) must be attributed to the cross-sectional nature of the underlying research. Roche et al. [205] have demonstrated that incremental validity can be found when investigating personality dysfunction longitudinally (i.e., 14-day electronic diary and temporally dynamic analyses). Results from this approach generally showed that LPFS impairments oscillated across days and were triggered by daily negative emotions and cognitive distortions, whereas traits were more stable in nature.

Finally, a study by Sexton et al. [206] suggests that functioning and traits interact in a rich and meaningful way, which they use to highlight the dangers of just collapsing these concepts. For example, low levels of Antagonism rely on high levels of Empathy to be successful, whereas low levels of Detachment rely on high levels of Self-Definition (i.e., Identity) to be successful.

Survival of the Borderline Construct

Papers 11 and 12 explore the utility of trait dimensions in capturing BPD psychopathology, which may be considered informative for the continuity between the BPD category and a certain trait configuration of "borderlineness". Accordingly, the AMPD allows the user to operationalize the BPD type by means of a tentative trait configuration, whereas the ICD-11 allows clinicians, who may wish it, the option to add an additional specifier for a *Borderline pattern* to enhance clinical utility with respect to the widely established treatment guidelines and politically recognized health care needs for problems related to this pattern. In fact, the ICD-11 explicitly states that the borderline pattern specifier "may facilitate the identification of individuals who may respond to certain psychotherapeutic treatments" [6]. This seems to be a pragmatic and proper rationale for including such a specifier. Nevertheless, the borderline pattern specifier is only considered optional, and is intended to be used in combination with the trait domain specifiers (e.g., Severe Personality Disorder with Negative Affectivity, Disinhibition, and Dissociality; borderline pattern).

Is Borderline a Scientifically Valid Construct?

It must be recognized that the establishment of the categorical BPD diagnosis has spawned four decades of research and treatment development helping countless patients and their families [161]. Also, a significant body of research on BPD has been conducted throughout the years. Thus, many therapists and researchers may for obvious reasons be invested in this diagnosis due to costly longitudinal and experimental studies, clinical trials, treatment manuals, guidelines, and political goodwill. To the best of my knowledge, no scholar or clinician has yet questioned the massive amount of research on BPD that has been conducted during the years including identification of numerous associations and mechanisms [161]. However, this large body of high-quality research does not make BPD *per se* a structurally valid nosological construct or phenotype. Psychometric research has raised serious questions about the existence of BPD as a delimited construct that can be separated from other personality pathology [99, 207, 208] as well as other kinds of psychopathology [209]. All we may be able to conclude is that the empirical findings on BPD apply to individuals who fulfill at least five out of the nine BPD criteria (or a certain criterion-count), but we do not know for sure which of the heterogeneous criteria, what level of criterion-count, or what composition of co-morbidity the research findings actually apply to. For example, a Norwegian study found that individual BPD criteria are more associated with other PDs than with BPD itself [175]. Likewise, a U.S. study found BPD to constitute a very heterogeneous category that overlaps with many different disorders and shows unclear boundaries [22]. For such reasons, the BPD diagnosis has also been referred to as a "catch-all syndrome" [166]. By including diverse symptoms such

as mood and identity problems, self-mutilating behavior, feelings of emptiness, and episodic aggression, BPD is so heterogeneous and involves so much co-morbidity that it can hardly be said to exist alone [22], which eventually may complicate research and clinical management.

Taken together, no compelling empirical evidence seems to support the discrete nature of BPD. Thus, evaluating to what extent BPD is related to a certain mechanism, etiology, process or theory may be viewed as a less empirically grounded question to ask [210]. Instead, BPD can be said to represent all of personality pathology or common features shared by all or most PDs including diverse features of both internalizing and externalizing [99, 207, 208]. This empirical status is consistent with the original use of borderline as a metaphor for personality pathology including different levels and types of "borderline" organization [69].

Is the ICD-11 Borderline Pattern Specifier Redundant?

Consistent with the aforementioned discussion, the ICD-11 explicitly recognizes that the borderline pattern specifier may be redundant and that the trait specifiers may account for a considerable part of this pattern: "There is considerable overlap between this pattern and information contained in the trait domain specifiers" [6]. This statement partially aligns with Paper 10 showing that both DSM-5 and ICD-11 trait domains capture a substantial amount of the BPD category (i.e., binary category and criterion-count), which suggests that little information is lost in the transition between the BPD pattern and the trait approach. However, it often takes at least three trait domains (e.g., Negative Affectivity, Disinhibition, and Psychoticism) to capture BPD [148]. In other words, BPD is a heterogeneous construct composed of different psychopathological building blocks, and as long as we only rely on the heterogeneous BPD category, we do not know which specific traits are most prominent in the patient.

As a metaphor, one could say that different trait domains represent different types of fruits (e.g., apples, citrus, bananas). From this perspective, the BPD category may be viewed as a "heterogeneous" fruit-salad composed of apple, orange, and banana, while we do not know the composition of the different fruit types or which fruit is most prominent. Thus, from a clinical and a scientific perspective it may be worthwhile to focus on homogeneous and empirically sound building blocks (or specific types of "fruit"), such as trait domains, rather than the traditional BPD construct.

Beyond trait domains, it may be even more important to consider those aspects of BPD that determine PD severity as representing essential features of personality functioning in general [211]. Paper 3 can be said to support this presumption due to the strong correlation (.65) between PDS-ICD-11 and the BPD composite score [97]. Taken together, BPD seems to be an aspect of PD severity and trait complexity rather than typology.

Overview and Discussion of Limitations

The findings and conclusions presented in this thesis should be interpreted in the light of potential limitations related to sampling, representativeness, selection bias, measurement, and instruments.

Sampling, Representativeness, and Selection Bias

Sample sizes, populations, sex distributions, and age distributions for the 12 included studies are presented in the methodology section (see Table 7). As evident from Table 7, most of the samples were composed of a relatively high percentage of women. While this composition is not equally representative of males and females, it is fairly representative of a Danish psychiatric patient population.

Most of the studies did not take the influence of age, sex, age of onset, current medication, previous trauma, comorbidity, physical health, and socio-economic factors into account, statistically speaking. Nevertheless, such potential confounding factors would primarily be relevant for Paper 11 in which the three comparison groups were only matched on age and gender. Much larger samples of patients would have been necessary for matching on other variables such as socio-economic factors. Likewise, the two comparison groups (PD versus no PD) presented in Paper 3 were not truly matched on any of these factors, which should be taken into account in future studies.

The nature of the remaining 10 studies did not truly depend on the influence of such factors. From a psychometric standpoint, the heterogeneity of a mixed sample composed of community-dwelling individuals with different demographic background along with psychiatric patients with co-morbidity, may be considered a strength that prevents range restrictions. For example, the diversity among respondents (e.g., student, unemployed, patient, self-employed) may help ensure the inclusion of cases with both low and high levels of negative affectivity, which would not be the case if only psychiatric outpatients had been included. In other words, for the specific psychometric purposes of the 12 studies comprising the present thesis, this sampling procedures are generally deemed appropriate. The inclusion of students has also been supported because such younger population is generally characterized by elevated levels of psychological distress and personality problems. Moreover, meta-analytic studies estimate that around 12% of individuals in Western societies meet diagnostic requirements for a PD diagnosis [15], which is consistent with the normal variation of personality and personality pathology, where PD is at the most extreme end of this variation [212]. In addition, public health research suggests that certain PD features (e.g., obsessive–compulsive, schizoid, antisocial, narcissistic, and paranoid) are fairly common in the general community, but individuals with such features are less likely to show up in clinical settings [15, 213].

Finally, the value of using trait domain data from both community and clinical samples is somewhat supported by the results reported in Paper 5, which indicate that the findings on these domains are generalizable across the two populations in terms of measurement invariance [135].

Issues Related to Measures and Instruments

As an important strength of the present thesis, the ICD-11 and AMPD PD severity scales and trait scales showed acceptable scale reliability (i.e., internal consistency) and structural validity, which is an important precondition for trustworthy interpretation of the reported findings.

The majority of AMPD and ICD-11 PD data in the included studies were derived from self-reported PD severity and traits (see Table 8). For example, all the reported analyses and values in Papers 1 and 2 were entirely based on self-reports, which may have caused a risk for artificially high correlations between measures. Consequently, the analyses of variables that were exclusively derived from self-reports may have contributed to mono-method bias potentially producing artificially high inter-correlations [214]. It is therefore possible that these results would have been different if reports from multiple informants (e.g., spouse, parents, or siblings) had been available across all studies. Nevertheless, I have generally sought to account for potential mono-method bias by only focusing on correlation coefficients with a certain magnitude. In any case, more definitive findings would likely have been obtained if it had been possible to also administer structured interviews, informant-reports or clinician ratings across all studies.

Nevertheless, the ICD-11 PD diagnoses reported in Paper 3 were established using a standardized interview for level of personality functioning, and the ICD-11 trait domains investigated in Paper 6 were clinician-reported. Moreover, the DSM-IV PD categories included in Papers 4, 8, 9, 10, 11, and 12 were operationalized using a "golden standard" structured interview (i.e., SCID-II). Nevertheless, the use of self-report may be viewed as the most standardized, robust, and generalizable procedure, which eludes the significant effect of clinician-rater bias. Moreover, apart from the potential of using the SCID-AMPD or STiP 5.1 interviews, there are no structured interviews developed for the ICD-11 PDs. Thus, an official structured interview instrument for ICD-11 PDs is warranted for future research and clinical practice.

Along the lines of the aforementioned risk of self-report bias, virtually none of the self-report studies in the present thesis were actually screened for invalid or inconsistent responses. Nevertheless, Paper 3 employed screener questions to ensure valid responses. This includes extremely improbable items (e.g., I am allergic to water; I am a close personal friend of the Prime Minister of Zanzibar) or failed attention checks (e.g., "If you are reading this statement, please respond 'Mostly True'."). Moreover, Paper 8 screened for inconsistent responses using a PID-5 algorithm (i.e., PID-5 Response Inconsistency Scale) [215–218]. Accordingly, in Paper 8 this algorithm was systematically used to detect and exclude cases with

random responses prior to performing the statistical analyses. Ideally, such procedure had been used for all studies.

Finally, from a scientific perspective the self-report format may be considered a sampling of behaviour directly from the individual being assessed, and all the test items may be thought of as mini-quasi-experiments involving theories about the constructs being assessed [219]. Like this, all respondents are exposed to the exact same stimuli comprising the test items. In that sense, the self-report format may be considered a fully systematized patient interview in which the patient is both the interviewer and interviewee. Such a methodologically consistent procedure for data collection is hard to obtain when using other approaches.

In the present thesis, severity and trait domains were primarily investigated using a self-report format, while an interview-rating format (Paper 3) and a clinician-report format (Paper 6) were also employed. I recommend that ongoing research continues investigating severity and trait domains by means of both formats.

Specific Limitations for Papers 1-12

Paper 1

The study reported in Paper 1 is essentially limited by only using concurrently patient-reported data (with no interview-rated or informant reported data) potentially causing a risk for artificially high correlations among measures attributable to the so-called mono-method bias [214]. Accordingly, the blurred overlap between LPFS–BF 2.0 and PID–5 could in part be attributed to the mono-method cross-sectional approach, which likely have inflated all associations because of a shared method variance. This particular issue will be further discussed in the general discussion.

Second, this study did not include any external measures that explicitly cover aspects of identity disturbance and self-narrative (the *healthy adult scale* only partially covers identity and self-direction) as well as social cognition and mentalization. Thus, these features are not sufficiently validated in the present study.

Finally, the subsample of prisoners revealed a less sound self/other structure, which may be explained by a suboptimal item formulation in the LPFS–BF 2.0 to capture the characteristic manifestations of externalizing features as expressed in the types of PD that are most common in forensic samples (e.g., narcissism and dissociality). Thus, it seems likely that the brief format of LPFS-BF does not adequately cover LPFS features of aggression (e.g., “hatred and aggression”) and narcissistic functioning (e.g., “self-aggrandizing”).

Paper 2

Similar to Paper 1, Paper 2 also exclusively relied on concurrently patient-reported data, which may have increased the risk for artificially high associations among scales [214]. In order to account for this potential issue, only correlations that were at least moderate in magnitude were taken into consideration.

Paper 3

Primary findings in this study were based on a representative sample of U.S. community-dwelling individuals, which may have caused issues with range restriction. For example, the item-response theory analysis revealed that Item 13 ("Harm to Others") and to some extent Item 12 ("Harm to Self") showed restricted range. However, they should not be interpreted as dysfunctional items per se as they would be expected to be only modestly endorsed in a community sample. Thus, rather than eliminating Item 13 to improve unidimensional model fit in the present sample, we point out the necessity of examining the item parameters in other samples as well, including mental health and forensic samples, in which more variability may be observed. Finally, the study reported in Paper 3 did not include any external measures of harm to self and others, which should be considered in future research.

Paper 4

The study reported in Paper 4 may have been partially biased by an administration effect such that participants responded to the abbreviated forms within the 220-item context, which may have caused participant fatigue and therefore influenced the obtained data for the two shortened forms. Accordingly, we cannot be sure whether or not an independent administration of the 25-item PID-5-BF or the 100-item PID-5-SF would yield different results. Nevertheless, consistent with previous research [130, 220], we assume that the reported data for the designated PID-5 items mirror trustworthy responses.

Paper 5

The study reported in Paper 5 only investigated measurement invariance at the higher order five-factor level, and not the lower-order facet level. Second, the nonclinical participants were not screened for psychopathology or lifetime utilization of mental health care, and therefore I cannot guarantee the actual nonclinical status of all participants in this subsample. Third, the two samples were only matched on age and gender, whereas socioeconomic status and education may have been confounding factors. Finally, the clinical sample was recruited from an outpatient setting characterized by internalizing/emotional disorders. Thus, the conclusions of this study may not be adequately generalized to a forensic population.

Paper 6

First, despite attempts to attract a larger number of clinicians to participate in this study, the sample of 133 clinicians (reporting on behalf of 238 patients) may not be adequately representative of the approximately 2,500 clinicians that were initially asked to contribute. Second, only 17.2% of the total sample were below the age of 18, which may imply that the findings are not entirely generalizable to adolescent mental health care. Third, only 60% of the clinicians that participated in the present study were academically trained in the assessment of psychopathology (i.e., psychologists and medical doctors). However, WHO underscores that the ICD-11 is intended for all health care professionals [221].

Paper 7

The potential indicators of Anankastia among the PID-5 facets (i.e., rigid perfectionism and perseveration) reported in Paper 7 can be said to be insufficient for yielding one sound factor of Anankastia. The finally approved ICD-11 guidelines describe Anankastia using subfeatures of Perfectionism, Orderliness, Rigidity, Stubbornness, Risk Aversion, Emotional/Behavior Constraint, Perseveration, and Deliberativeness, among others [6]. Interestingly, the first phase of the initial construction of PID-5 included distinct facets of Orderliness, Perfectionism, Rigidity, and Risk Aversion [30], which should therefore be possible to extract from the PID-5 item pool in order to better capture the domain of Anankastia. In the following (Paper 8), I present a new operationalization of PID-5 items that takes advantage of such information.

Paper 8

As a potential limitation, the findings reported in Paper 8 only relied on data (i.e., 36 selected items) that were extracted from complete 220-item PID-5 datasets. This issue is further debated in relation to limitations of Paper 4. Thus, it is recommended that future research conducts independent evaluations of the modified PID5BF+ as a standalone 36-item instrument.

Paper 9

Various expected associations were not verified in the present study, whereas a number of unexpected associations emerged. These patterns are further elucidated and discussed in Paper 10, and they may also be attributed to sampling bias and the composition of PDs. Moreover, the study did not take capacities of functioning (Criterion A) into account, which would particularly make sense in relation to problems such as Borderline-related issues with identity and self-direction, which are not explicitly captured by any trait feature. Finally, several PDs showed very low prevalence rates. For example, there

was only one person in the sample who met the diagnostic threshold for Histrionic PD, which may partially compromise the generalizability of findings in the present study.

Paper 10

The PID-5 trait domain data were limited to patient-report measurement, which has been empirically validated, but future research should also take informant- and clinician ratings into account. See limitations for Paper 9, which partially apply to the present study as well.

Paper 11

As a potential limitation of this study, the co-occurring diagnosis of Paranoid PD was apparently overrepresented compared to compositions in U.S. samples, which could explain the strong influence of PID-5 suspiciousness. However, after controlling for the presence of other PDs (including Paranoid PD), the unique prediction of suspiciousness remained significant. Moreover, the composition of PDs in the present study is fairly consistent with findings in other Northern European studies [175, 222]. Moreover, the significant association between suspiciousness and BPD has also been supported in various other studies [155, 158, 187, 192], suggesting that it is unlikely to be an artifact of biased sampling. Finally, as a major weakness, the present study did not take LPFS ratings into account, which seems crucial for capturing BPD features of identity disturbance and feelings of emptiness because these aspects of BPD are essentially related to areas of self-functioning rather than stylistic traits [28]. For other potential limitations, I refer to the discussion section in Paper 11.

Paper 12

From a critical perspective, some of the so-called conceptually coherent associations emphasized in this study may be considered dubious or debatable. Moreover, it is a major weakness that ratings of LPFS were not included in this study because BPD features such as identity disturbance and feelings of emptiness are essentially related to areas of self-functioning rather than stylistic traits. Finally, the limited sample size may have been inadequate to identify a larger range of traits to uniquely predict BPD criteria.

Implications for Clinical Practice and Research

This section discusses potential utility of the ICD-11 and AMPD measures for epidemiology, genetic research, the role of RDoC and HiTOP, opportunities and challenges for clinical practice, and what we can do now in everyday clinical settings while we wait for the implementation of ICD-11.

Utility for Epidemiology and Genetic Research

In this subsection of the discussion, I propose that the 12-item LPFS-BF (Paper 1), the 14-item PDS-ICD-11 (Paper 3), the 25-item PID-5-BF (Paper 4), and the modified 36-item PID-5-BF+ (Paper 8) can serve as feasible, reliable, and valid tools for large-scale epidemiological and population-based research including twin-studies, genetic research, and cohort studies [223].

Epidemiology of ICD-11 and DSM-5 AMPD Personality Disorders

The aforementioned abbreviated self-report forms may be useful in a 2-stage procedure [224] for case identification of individuals with a certain level of self-reported impairment (e.g., at least a score of 2) or a trait domain (e.g., prominent features of Dissociality). Thus, after a self-rated case identification, the individual cases with a certain impairment level or trait style may be selected for a follow-up with a more comprehensive assessment or interview in order to confirm the actual prevalence. Such follow-up instruments could be the SCID-AMPD or the STiP 5.1 - until a specific instrument is developed for the ICD-11 approach. For the purpose of national statistics and mapping of public mental health, it seems particularly necessary that future research updates existing meta-analytical estimates for prevalence rates in the general community according to ICD-11 codes for *Mild*, *Moderate*, and *Severe* PDs [15, 225, 226]. A similar procedure could be employed for covering prevalence rates in general mental health care settings [16, 227]. In certain cases it may be most appropriate that clinicians administer these brief measures to patients in terms of a rapid screening interview [55].

The Utility of Personality Trait Dimensions for Genetic Research

Personality trait models have been used to delineate the phenotypic variation in the expression of personality pathology [228, 229]. Moreover, in contrast to DSM-IV and ICD-10 PD syndromes, trait models have been extensively employed in genetic research because of their homogenous and empirically-derived dimensions [230, 231]. For that reason, we already have a large body of genetic research on trait models that may be translated to DSM-5 AMPD and ICD-11 trait dimensions. Since the release of DSM-5, a number of studies have already employed the PID-5 framework in genetic research on psychopathology [223, 232–234]. Consequently, clinicians and researchers may begin using the very

same constructs (i.e., ICD-11 or DSM-5 AMPD trait domains), which potentially makes public health research and genetic studies more straightforward to translate into clinical practice.

Waszczuk and colleagues [234] argue that DSM-5 AMPD and ICD-11 trait dimensions may advance psychiatric genetics by addressing the shortcomings of existing diagnostic phenotypes. Despite some progress, genetic discoveries in psychiatry can be said to be compromised by flawed phenotypic definitions, including excessive comorbidity, insufficient diagnostic reliability, and within-diagnosis heterogeneity [50], which the DSM-5 AMPD and ICD-11 PD models were meant to address in relation to PD diagnostics.

First and foremost, the DSM-5 AMPD and ICD-11 trait domains may serve as useful frameworks for geneticists, who need valid and reliable phenotypes (i.e., homogenous building blocks of psychopathology) to maximize precision and statistical power in the search for genetic vulnerabilities to psychopathology [234].

Second, the trait *dimensions* embodied in DSM-5 and ICD-11 models frame mental health problems as continua, addressing several limitations of categorical classification, including arbitrary boundaries between disorder and normality, diagnostic instability, and inability to account for subthreshold cases. For example, the discarded information when using categorical diagnoses can weaken the genetic signal, such as when subthreshold cases are included in the control group [234].

Third, trait dimensions allow genetic studies to address problems related to comorbidity by focusing on higher-order domains underlying several mental disorders, and reduce issues of within-disorder heterogeneity by focusing on the homogenous "building blocks" of psychopathology. Currently, if a new genetic variant is significantly associated with a particular PD type (e.g., borderline), it would be uncertain whether it indicates risk for a particular symptom within this category (e.g., impulsivity, chronic emptiness, fear of abandonment) or a risk for a higher-order domain to which the PD belongs more broadly (e.g., disinhibition or negative affectivity) [234].

Finally, it is often difficult to recruit a sufficiently large sample with "rare" PDs to meet power requirements of case-control design (e.g., schizotypal or narcissistic PD). Therefore, higher-order domains may increase the precision of genetic findings, differentiating between genetic liabilities for general psychopathology versus dimension-specific genetic risk factors. Moreover, future studies could include a large number of cases ranging from low to high scores on such domains rather than only including those at the most maladaptive end (i.e., above arbitrary diagnostic threshold) as is the case in most current case-control studies [234].

Role of RDoC and HiTOP Initiatives

It has long been recognized that features of personality and trait-pathology exist in continuity with psychopathology in general, which virtually makes a traditional trait-state distinction rather artificial [235]. For example it is not a coincidence that individuals with high levels of trait negative affectivity tend to exhibit symptoms or states of anxiety and depression, and vice versa. Such integrated and transdiagnostic approach to psychopathology can be considered a premise for both the Research Domain Criteria (RDoC) [49] and the Hierarchical Taxonomy of Psychopathology (HiTOP) [236] frameworks.

Accordingly, maladaptive traits (including PD aspects) may be considered dispositional constructs that describe persistent tendencies to manifest features of psychopathology, whereas symptoms are features of psychopathology that are manifest during any specific time period (from moments to days to months). As a consequence, all RDoC and HiTOP dimensions could be assessed as either a trait or a symptom dimension, simply by adjusting the framing of the assessment [237]. In other words, for the conceptualization of PDs within these frameworks, one would have to focus on long-term patterns (e.g., years) rather than short-term patterns (e.g., days or months), while recognizing that long-term patterns may also involve moment to moment instability (e.g., emotional instability).

Tables 14 and 15 provide a tentative overview of alignments of these frameworks with the new PD classifications in AMPD and ICD-11. Notably, the RDoC and HiTOP frameworks may also be linked together in various ways [238]. In contrast to RDoC's more narrow focus on neurobiological systems, the HiTOP framework seeks to bridge empirically derived spectra of psychopathology with clinical symptomatology and familiar syndromes [239]. Moreover, due to empirically-derived and homogenous constructs, the HiTOP has also been highlighted as more appropriate for genetic and neurobiological research on psychopathology – including personality pathology [234, 240]. In general, both the RDoC and the HiTOP have promise to advance our understanding of the nature and neuroscientific underpinnings of personality and psychopathology – including PDs. In fact, such RDoC-HiTOP interface may have the potential to inform the development of a unified, dimensional, and biobehaviorally-grounded psychiatric nosology that also appeals to clinicians [238]. Because of the tentative alignments presented in Tables 14 and 15, such aspects of utility may also apply to the AMPD and ICD-11 PD classifications. Empirical investigation of these matters are highly warranted.

Table 14. Tentative Alignment Between RDoC and new Personality Disorder Classifications

RDoC	AMPD	ICD-11
Negative Valence Systems	• Self-functioning (e.g., impaired capacity for emotion regulation) • Negative Affectivity	• Emotional Manifestations (e.g., range and appropriateness of emotional experience and expression; emotionally over- or underreactive) • Negative Affectivity
Positive Valence Systems	• Healthy self-functioning (e.g., capacity for emotion regulation) • Low Detachment	• Emotional Manifestations (e.g., capacity for positive emotionality) • Low Detachment
Cognitive Systems	• Psychoticism	• Cognitive Manifestations (e.g., situational and interpersonal appraisals; reality testing; ability to make appropriate decisions in situations of uncertainty)
System for Social Processes	• Interpersonal Functioning • Detachment - Antagonism	• Interpersonal Functioning • Detachment - Dissociality
Arousal / Regulatory Systems	• Disinhibition	• Behavioral Manifestations (e.g., controlling impulses and modulating behavior). • Disinhibition versus Anankastia

Table 15. Tentative Alignment Between HiTOP and new Personality Disorder Classifications

HiTOP	AMPD	ICD-11
Internalizing	Negative Affectivity	Negative Affectivity
Thought Disorder	Psychoticism	Cognitive manifestations (e.g., distortions in situational and interpersonal appraisals; reality testing)
Disinhibited externalizing	Disinhibition	Disinhibition vs. Anankastia
Antagonistic externalizing	Antagonism	Dissociality
Detachment	Detachment	Detachment

Future Direction: Toward DSM-6 and Other Unanswered Questions

In this subsection, I provide an overview of four issues and unanswered questions, which I suppose are important to consider for a future direction in the field of PD classification and measurement:

1. As highlighted in Paper 8, the ICD-11 classification of PDs is not just an international "alternative" to the American DSM-5, because at the end of the day, the ICD-11 is the only legally authoritative nomenclature, even in countries such as the U.S., Australia, China, Japan, and U.K. Thus, even the many practitioners who are most loyal to the DSM-5 must eventually use the ICD-11 for coding purposes (e.g., legal decisions, health insurance, and national statistics). For this particular reason, it seems sensible that the DSM-5 framework aligns with the ICD-11 as much as possible (similar to the DSM-IV and ICD-10). Despite the proposed cross-walk in Paper 10, the current DSM-5 Section II PD categories are not just straightforward to translate into ICD-11 severity and traits. Consequently, a future DSM-6 could ideally adopt a diagnostic model that not only corresponds to the present DSM-5 AMPD model but also aligns with the ICD-11 nosology and codes. Thus, unless the APA should forgo publishing another edition of the DSM and instead adopt the WHO's ICD-11 (which could be an optimal solution), a future DSM-6.0 revision could be improved by further harmonization with the authoritative ICD-11 by including the same trait

domain specifiers which are empirically supported in Papers 6, 7, 8, and 10. Such harmonization could also involve that DSM-6 explicitly incorporated harm to self and/or others (i.e., danger) in the measurement of severity.

2. It also seems important to emphasize (and repeat) that there are no sanctioned measures or instruments for the ICD-11 classification of PDs, and as a rule of thumb, we should never confuse constructs with their measures (in particular for ICD-11, which does not provide diagnostic criteria but descriptions, features, and requirements). Therefore, future work may take advantage of diverse approaches to characterizing functioning and traits. For example, in one largescale study [241] researchers managed to characterize DSM-5 and ICD-11 PD trait features in psychiatric inpatients using notes from electronic health records.

3. In general, future work should focus on establishing clinical interpretative guidelines, treatment recommendations, normative reference data for interpretation of self-report scores, and computerized assessment that can be made freely available for professionals. Moreover, such implementation may pave the way for longitudinal prognostic research including measurement of change after intervention (e.g., from *Severe* PD before treatment to *Mild* PD after treatment).

Challenges and Opportunities for Clinical Practice in WHO Member States

The advent of the ICD-11 classification of PDs in WHO member countries, including Denmark, will be a significant change for health care professionals including psychotherapists, researchers, administrators, and service providers, as well as patients and their families. First of all, it must be acknowledged that a number of questions remain unanswered. These questions are expected to be discussed, studied, and answered in the coming years.

Diagnostic Reliability

Even though development of specific semi-structured interview instruments are underway, there are no default instruments for the ICD-11 PD classification. This seems consistent with WHO's rationale that the diagnostic guidelines per se should be sufficient to make a diagnosis in clinical practice. While this may be an advantage for worldwide feasibility and clinical utility, it may prove to be a disadvantage for diagnostic reliability (e.g., inter-rater reliability) and research. For example, what we gain in validity, we may lose in diagnostic precision or reliability? We therefore propose that rigorous field trials should be conducted to determine the reliability of the diagnostic guidelines, with reference to the reliability of other well-established instruments (e.g., SCID-5-PD).

Utility of severity classification for treatment decisions

The introduction of the ICD-11 classification of PD severity may help in clinical decision making and allocation of treatment resources (e.g., type, length, and intensity of treatment) [242]. More research is also needed to determine empirically-informed thresholds and the prognostic value of grouping patients into categories of severity.

Nevertheless, some practitioners may also be concerned that certain severity levels can fall under insurance companies' and service providers' criteria for support due to financial constraints. For example, service providers or insurance companies may decide only to cover treatment for those with a severe PD while neglecting those with milder forms. In the worst-case scenario, a simple ordinal scale intended for transparent use by clinicians may well turn into a political instrument of resource allocation in health systems or hospitals. At best, such approach to allocation of resources may actually help ensure treatment for those who need it the most rather than exclusively basing such decisions on individual practitioners' private observations and opinions. In any case, it would be helpful if such a PD severity classification could improve early detection, prognostic evaluation, and targeted treatment of mild, moderate, and severe PDs.

An exhaustive demonstration and discussion of how the ICD-11 and AMPD models of PDs may be used in clinical practice for treatment planning is beyond the scope of the present thesis. For more information on these matters I refer to two of my recent articles on this topic [242, 243].

Epilogue: While We Wait for the Implementation of ICD-11

The objectives of the present thesis have not emerged out of the blue. From more than a decade of clinical work with personality disordered patients, I have learned that assessment and classification of personality pathology have significant impact on the patient's self-knowledge, treatment plan, and future orientation. In fact, I have rarely (if ever) met a psychiatric patient without some level of personality difficulty, and a certain degree of personality disturbance is usually a part of being human [244, 245]. For that reason, it has been my own experience that a dichotomous distinction between healthy personality functioning and disordered personality functioning is artificial and arbitrary. Fortunately, this clinical observation is consistent with the fact that research has failed to validate the presence of a non-arbitrary distinction between normal and abnormal personality functioning [246, 247].

Against this background, I assume it would be appropriate for clinicians using the current PD categories in DSM-IV/5 (and ICD-10) to take into account that the threshold number of diagnostic criteria required for a diagnosis is mostly based on the subjective impressions of an advisory committee with no compelling rationale or evidence [20, 248, 249]. Therefore, I would first and foremost encourage

clinicians to rely on the statement in the established DSM-5 Section II categorical approach saying: "*Personality disorders must be distinguished from personality traits that do not reach the threshold for a personality disorder. Personality traits are diagnosed as a personality disorder only when they are inflexible, maladaptive, and persisting, and cause significant functional impairment or subjective distress*" (APA, 2013, p. 648) [28]. Thus, in routine clinical practice, the global clinical judgment of the individual case should overrule the practice of counting fulfilled criteria.

At the same time I fully acknowledge that our current diagnostic categories (including arbitrary thresholds) are familiar to clinicians, support clear communication by summarizing complex sets of clinically meaningful information into simple dichotomous syndromes, and are consistent with how decision-making actually works in clinical practice [36, 250]. Thus, for the sake of clinical management, this categorical distinction has been indispensable so far. Nevertheless, it has now been decided by the WHO to exchange the categorical ICD-10 focus on disorder/non-disorder with a "dimensional" ICD-11 focus on either mild, moderate, or severe disorder, which hopefully will help us move a step forward in providing the best help for individuals suffering from personality pathology.

Placing PD severity at the center of the diagnostic method may help service providers to distinguish those patients who have the largest impairment of personality functioning from those who have the least impairment. Thereby it may be more straightforward for services to target their treatment more efficiently, including distinguishing patients who may best be treated by specialist mental health services (i.e., Severe PD) from those who may be appropriately helped in primary care (i.e., Mild PD). In fact, such change of procedure may not be that offensive, because it is fairly similar to the procedure of diagnosing ICD-10 F32 Depressive episode, which has three levels of severity (mild, moderate, and severe), and which may, if applicable, be further qualified by additional codes/specifiers for specific features. For example, F32.11 Moderate depressive episode with somatic syndrome or F32.3 Severe depressive episode with psychotic symptoms. Moreover, in such severity-based classification, the three different PD diagnoses cannot co-exist with one another (i.e., a patient cannot have a Mild PD while also having a Severe PD). For this reason, we should prepare ourselves for a future without diagnostic "co-morbidity" among PDs as such.

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English Summary

This thesis provides a compressed account of findings in 12 published studies of measurement approaches to personality functioning and traits according to the *DSM-5 Alternative Model of Personality Disorders* (AMPD) and the *ICD-11 Clinical Descriptions and Diagnostic Requirements for Personality Disorders*. The foci of the thesis are presented within five thematically organized chapters covering I) Screening for Global Personality Dysfunction and Severity, II) Measuring Maladaptive Personality Trait Dimensions, III) Harmonizing DSM-5 and ICD-11 Trait Dimensions, IV) Continuity between Categories and Trait Dimensions, and V) Exploring Trait Configurations of Borderline Personality Disorder.

The DSM-5 AMPD and ICD-11 dimensions of personality functioning and traits were operationalized using patient/self-report and clinician-report measures including the Level of Personality Functioning Scale – Brief Form (LPFS-BF), the Standardized Assessment of Severity of Personality Disorders (SASPD), the Personality Inventory for DSM-5 (PID-5), and the Personality Inventory for ICD-11 – Informant Report Form (PiCD-IRF). The established DSM-IV and ICD-10 personality disorder diagnoses were operationalized using the Structured Clinical Interview for DSM-IV – Axis II (SCID-II) corresponding to the SCID-5-PD. One study (Paper 3) operationalized the ICD-11 PD diagnosis using the Semi-Structured interview for Personality Functioning DSM-5 (STiP 5.1). Additional patient-report measures were included to evaluate the criterion validity of the DSM-5 AMPD and ICD-11 dimensions. All data in the present thesis are cross-sectional.

Data were predominantly derived from psychiatric outpatients, incarcerated substance abusers, and community-dwelling participants in Denmark. However, three papers (Papers 3, 7, and 8) also included data from international samples, including the U.S. and Germany, among others.

Chapter I (Papers 1, 2, and 3) overall supports the utility of LPFS-BF and PDS-ICD-11 for capturing features of self- and interpersonal dysfunction according to both DSM-5 AMPD and ICD-11, whereas the SASPD appears less appropriate for capturing self-pathology (e.g., identity). Moreover, the most recently developed PDS-ICD-11 scale (Paper 3) addresses the need for a measure specifically constructed for the ICD-11 PD features of personality functioning, manifestations, and psychosocial impairment.

Chapter II (Papers 4, 5, and 6) demonstrates that DSM-5 AMPD traits are organized within five domains and may be properly measured using three different PID-5 forms. Moreover, this chapter also suggests that PID-5 data obtained from non-clinical populations are generalizable to clinical populations, and vice versa (i.e., measurement invariance). Finally, this chapter also reveals how ICD-11 trait domain specifiers can be validly reported not only by patients but also by clinicians who know their patients fairly well.

Chapter III (Papers 7 and 8) presents an algorithm for the PID-5 that may be used to describe the five ICD-11 trait domain specifiers, including a separate factor of Anankastia. Moreover, a new modified 36-item PID-5-BF+ is introduced, which is based on the PID-5 item pool and captures the six combined DSM-5 and ICD-11 trait domains. Based on such operationalization, the chapter discusses the potential for improved harmonization between ICD-11 and DSM-5.

Chapter IV (Papers 9 and 10) reviews how the familiar DSM-IV PD types can be captured by certain PID-5 facet configurations as well as DSM-5 and ICD-11 trait domains. The DSM-5 AMPD hybrid trait configurations for six PD types are largely supported. Overall, both DSM-5 and ICD-11 trait domains capture a substantial amount of reliable information in categorical PDs, which suggests that little information is lost in the transition between PD types and trait approach.

Chapter V (Papers 11 and 12) focuses on the utility of PID-5 traits to differentiate individuals with Borderline PD from comparison groups, as well as the utility of PID-5 traits to capture specific Borderline PD features. The trait configuration of the DSM-5 AMPD hybrid model for BPD is largely supported, potentially augmented by facets of *Suspiciousness* and *Perceptual Dysregulation*. Most of the individual BPD diagnostic criteria are captured by conceptually coherent PID-5 facets. The chapter generally proposes that such DSM-5 AMPD trait configuration may be used to bring the existing body of clinical and research literature on BPD forward into a future of trait dimensions.

Limitations are addressed in the discussion section of the thesis - including the limited coverage of overall personality functioning, the predominant use of patient-reported data, the risk of mono-method bias causing a risk for artificially high correlations among measures, and in some cases small sampling power, among others.

Finally, the presented findings are discussed in relation to the differential contribution of personality functioning versus traits, the survival and validity of the “borderline” construct, utility for epidemiology and genetic sciences, role of RDoC and HiTOP initiatives, the progression toward DSM-6, the future implementation of ICD-11, and the opportunities and challenges for clinical practice.

Danish Summary (resumé)

Denne afhandling udgør et samlet overblik over resultater fra 12 publicerede undersøgelser af målingsmetoder i forhold til global personlighedsfunktion og specifikke personlighedstræk jf. *DSM-5 Alternative Model of Personality Disorders* (AMPD) og *ICD-11 Clinical Descriptions and Diagnostic Requirements for Personality Disorders*. Afhandlingens fokusområder formidles inden for fem tematisk organiserede kapitler, som dækker I) undersøgelse af global personlighedsfunktion og sværhedsgrad, II) undersøgelse af maladaptive personlighedstræk, III) harmonisering mellem DSM-5 og ICD-11 personlighedstræk, IV) kontinuitet mellem kategoriale personlighedsforstyrrelser og nye personlighedstræk dimensioner, og V) afdækning af hvordan personlighedstræk er konfigureret for borderline personlighedsforstyrrelse.

DSM-5 AMPD og ICD-11 personlighedsfunktion og træk blev operationaliseret via patient/selv- og kliniker-rapportering inklusiv *Level of Personality Functioning – Brief Form* (LPFS-BF), *Standardized Assessment of Severity of Personality Disorders* (SASPD), *Personality Disorder Severity – ICD-11* (PDS-ICD-11) *scale, Personality Inventory for DSM-5* (PID-5)*, Modified Personality Inventory for DSM-5 and ICD-11 Brief Form Plus* (PID5BF+M) og *Personality Inventory for iCD-11 – Informant Report Form* (PiCD-IRF). De etablerede DSM-IV og ICD-10 diagnoser for personlighedsforstyrrelser blev operationaliseret via *Structured Clinical Interview for DSM-IV – Axis II* (SCID-II) som svarer til SCID-5-PD. Et enkelt studie (Artikel 3) operationaliserede ICD-11 personlighedsforstyrrelse med *Semi-Structured interview for Personality Functioning DSM-5* (STiP 5.1). Øvrige patient-rapporterings-instrumenter er inkluderet med henblik på evaluering af kriterie-validiteten for de pågældende DSM-5 AMPD og ICD-11 dimensioner.

Data er fortrinsvis baseret på besvarelser fra ambulante psykiatriske patienter, fængselsindsatte der modtager misbrugsbehandling og personer fra den danske almenbefolkning. Endvidere inkluderer tre artikler (Artikel 3, 7 og 8) data fra internationale populationer inklusiv bl.a. amerikanske og tyske data. Afhandlingen er udelukkende baseret på tværsnit-data.

Kapitel I (Artikel 1, 2 og 3) understøtter i hovedtræk anvendeligheden af LPFS-BF og PDS-ICD-11 til beskrivelse af personlighedsfunktion (selv og andre), jf. DSM-5 AMPD og ICD-11, mens SASPD er mindre velegnet til at beskrive personlighedsfunktioner, der vedrører selvet (f.eks., identitet). Den nyligt udviklede PDS-ICD-11 skala (Artikel 3) imødekommer især behovet for et målingsinstrument, der er specifikt konstrueret til iCD-11 definitioner på personlighedsforstyrrelse, herunder personlighedsfunktion, manifestationer og psykosocialt funktionsniveau.

Kapitel II (Artikel 4, 5 og 6) demonstrerer, at DSM-5 AMPD personlighedstræk er organiseret under fem domæner og på passende vis kan måles ved hjælp af tre forskellige PID-5 formater. Endvidere understøtter dette kapitel, at PID-5 data indsamlet i en ikke-klinisk population kan generaliseres til en

klinisk population, og vice versa (såkaldt ”measurement invariance”). Endelig, belyser dette kapitel også, at ICD-11 personlighedstræk ikke alene kan rapporteres på en valid måde af patienten selv, men også af klinikere som kender patienten rimelig godt.

Kapitel III (Artikel 7 og 8) præsenterer en algoritme for PID-5, som kan bruges til at beskrive de fem ICD-11 domæner, herunder også Anankasme. Endvidere, introduceres en ny modificeret 36-item PID-5-BF+, som er baseret på den totale PID-5 item-pulje og beskriver de seks kombinerede DSM-5 og ICD-11 personlighedstræk-domæner. Baseret på disse nye muligheder, diskuteres potentialet for at forbedre harmoniseringen mellem ICD-11 og DSM-5.

Kapitel IV (Artikel 9 og 10) undersøger, hvordan velkendte DSM-IV personligheds-forstyrrelser kan beskrives ved hjælp af bestemte PID-5 konfigurationer af DSM-5 træk-facetter samt DSM-5 og ICD-11 træk-domæner. Der findes overordnet belæg for den officielle træk-baserede DSM-5 AMPD hybrid model for seks typer af personlighedsforstyrrelse. Både DSM-5 og ICD-11 træk-domæner fanger en betydelig del af den information, der er gældende for kategoriale personligheds-forstyrrelser, hvilket indikerer at sparsom information går tabt i overgangen fra kategoriale personlighedsforstyrrelser til dimensioner af personlighedstræk.

Kapitel V (Artikel 11 og 12) fokuserer på egnetheden af PID-5 træk til at skelne individer med borderline personlighedsforstyrrelse fra andre grupper samt hvorvidt personlighedstræk kan afdække specifikke borderline kendetegn (dvs. 9 forskellige egenskaber). I hovedtræk understøttes den konfiguration af personlighedstræk, der gælder for den officielle DSM-5 AMPD hybrid model for borderline personlighedsforstyrrelse. Konfigurationen kan potentielt styrkes ved at inkludere PID-5 facetter af *Mistænksomhed* og *Perceptuel Dysregulering*. Størstedelen af de enkelte diagnostiske kriterier for borderline er relateret til tematisk meningsfulde PID-5 facetter. Generelt peger dette kapitel på, at den pågældende DSM-5 AMPD konfiguration af personlighedstræk kan anvendes til at bringe den etablerede viden om borderline (f.eks. forskning, guidelines og intervention) videre ind i en fremtid med fokus på bl.a. dimensionelle personlighedstræk.

I afhandlingens diskussion fremlægges på struktureret vis potentielle videnskabelige mangler og begrænsninger herunder bl.a. den overvejende brug af patient-rapporteret data, risiko for ”mono-method bias” der kan forårsage kunstigt høje korrelationer mellem tværsnits-målinger, og endelig at der i nogle af studierne er minimal statistisk styrke. Til allersidst opsummeres og diskuteres studiernes hovedfund med fokus på relevansen af personlighedsfunktion versus personlighedstræk, ”borderline” konstruktets overlevelse og validitet, anvendelsesmuligheder for epidemiologisk og genetisk forskning, RDoC og HiTOP, overvejelser ift. DSM-6, fremtidig implementering af ICD-11 samt muligheder og udfordringer for klinisk praksis.

Appendix

LPFS-BF 2.0

Level of Personality Functioning – Brief Form

Report for each of the following statements to what extent they apply to you at this moment.		Very false or Often False	Sometimes or Somewhat False	Sometimes or Somewhat True	Very true or often True
1	I often do not know who I really am	☐	☐	☐	☐
2	I often think very negatively about myself	☐	☐	☐	☐
3	My emotions change without me having a grip on them	☐	☐	☐	☐
4	I have no sense of where I want to go in my life	☐	☐	☐	☐
5	I often do not understand my own thoughts and feelings	☐	☐	☐	☐
6	I often make unrealistic demands on myself	☐	☐	☐	☐
7	I often have difficulty understanding the thoughts and feelings of others	☐	☐	☐	☐
8	I often find it hard to stand it when others have a different opinion	☐	☐	☐	☐
9	I often do not fully understand why my behavior has a certain effect on others	☐	☐	☐	☐
10	My relationships and friendships never last long	☐	☐	☐	☐
11	I often feel very vulnerable when relations become more personal	☐	☐	☐	☐
12	I often do not succeed in cooperating with others in a mutually satisfactory way	☐	☐	☐	☐

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

SASPD

Standardized Assessment of Severity of Personality Disorder (SASPD).

This questionnaire contains a series of items related to nine aspects of a person's life. For each area please could you indicate which of the four statements best describes how things are for you **in general**. We are keen to find out how things generally are for you, rather than how things might have been over recent days or weeks.

For each aspect of yourself or your life, please tick **ONE** box that best describes how you generally are.

1. Being with others

☐ I enjoy being with other people

☐ I sometimes find it difficult to be with other people

☐ In general, I do not like being with others

☐ I do not like being with other people at all and do everything to avoid them

2. Trusting other people

☐ I have no difficulty trusting others

☐ At times I find it difficult to trust others

☐ There are very few people I can trust

☐ I trust no one and this stops me from doing things I need to do

3. Friendships

☐ I have no difficulty making and keeping friends

☐ I find it difficult to make and keep friends

☐ I have very few friends

☐ I have no friends

4. Temper

☐ I do not lose my temper easily

☐ I lose my temper more easily than others

☐ I lose my temper easily and this gets me into difficult situations

☐ I lose my temper easily and this has led me to harm myself or other people

5. Acting on impulse

☐ I never or rarely act on impulse

☐ I sometimes act on impulse

☐ Acting on impulse gets me into trouble with others

☐ Acting on impulse has led me to harm myself or other people

6. Worrying

☐ In general, I am not a worrier

☐ I sometimes get worried about things that others don't

☐ I am generally a worrier

☐ Constant worrying stops me from doing things I need to do

7. Being organised

☐ It's fine with me if things are not well organised

☐ I dislike it when things are not well organised

☐ Trying to make things organised interferes with most things I need to do

☐ Trying to make things organised stops me doing everything

8. Caring about other people

☐ I care about how other people feel

☐ I don't pay much attention to whether what I do affects other people

☐ I don't care whether what I do hurts other people's feelings

☐ People say that I am 'cold blooded' or callous

9. Self-reliance

☐ I generally complete the things I need to do on my own

☐ When tackling things, I like to get help from other people

☐ When tackling things, I generally need help from other people

☐ I can't do anything by myself

Olajide, K., Munjiza, J., Moran, P., O'Connell, L., Newton-Howes, G., Bassett, P., Akintomide, G., Ng, N., Tyrer, P., Mulder, R. T., & Crawford, M. J. (2018). Development and Psychometric Properties of the Standardized Assessment of Severity of Personality Disorder (SASPD). *Journal of Personality Disorders*, *32*(1), 44–56. https://doi.org/10.1521/pedi_2017_31_285

PDS-ICD-11

Personality Disorder Severity – ICD-11 (PDS-ICD-11) Scale

Please select the one statement for each area that best describes you in general

1. Identity

- ☐ I often have no sense of who I am, especially when I am with other people
- ☐ I am sometimes confused about who I am, especially when I am with other people
- ☐ I have a stable sense of who I am
- ☐ My sense of who I am is generally too fixed and restricted (e.g., in relation to work or to another person)
- ☐ My sense of who I am is overly restricted and unchangeable no matter the circumstances

2. Self-worth

- ☐ Most of the time I feel worthless which affects how I relate to other people
- ☐ I often have a hard time feeling good about myself which sometimes affects how I relate to other people
- ☐ I usually feel good about myself
- ☐ I often feel I am better than others which affects how I relate to other people
- ☐ I feel superior to others which affects how I relate to other people

3. Self-perception

- ☐ I have no strengths
- ☐ I have few strengths
- ☐ I have a good sense of my strengths and weaknesses
- ☐ I have few weaknesses or limitations
- ☐ I have no weaknesses or limitations

4. Goals

- ☐ I am rarely able to set and follow goals
- ☐ I sometimes find it hard to set and follow goals
- ☐ I have no problem setting and following realistic goals
- ☐ I sometimes find it hard to change my goals even when they will be too difficult to achieve
- ☐ I regularly find it hard to change my goals even when they will be nearly impossible to achieve

5. Interest in relationships

- ☐ I have no interest in being with others and do anything to avoid them
- ☐ I have little interest in being with others and therefore avoid them
- ☐ I have a good balance of being by myself and being with others
- ☐ I sometimes feel upset when not around others
- ☐ I often feel upset when not around others

6. Perspective-taking

- ☐ I never think about other people's thoughts and feelings
- ☐ I often do not think about other people's thoughts and feelings
- ☐ I can easily relate to other people's thoughts and feelings
- ☐ I often think too much about how others think and feel
- ☐ I always think too much into how others think and feel

7. Mutuality in relationships

- ☐ People always complain that I am too selfish in relationships
- ☐ People have sometimes complained that I am too selfish in relationships
- ☐ I am able to establish and maintain close and mutually satisfying relationships
- ☐ I am sometimes unable to end relationships, even when they are harmful to me
- ☐ I am rarely able to end relationships, even when they are harmful to me

8. Disagreement management

- ☐ I often get into disagreements with others that cause serious relationship problems
- ☐ I sometimes get into disagreements with others that cause relationship problems
- ☐ I am able to manage disagreements in relationships in a cooperative manner
- ☐ I often avoid disagreements by giving into others, even if I will be worse off
- ☐ I avoid disagreements and conflicts with others at any cost

9. Emotional control and expression

- ☐ I often cannot control my emotions which causes serious problems with others
- ☐ I sometimes have trouble controlling my emotions which causes some problems with others
- ☐ I am generally able to control and express my emotions in an appropriate way
- ☐ People sometimes complain that I don’t express emotions
- ☐ People often complain that I never express emotions at all

10. Behavioral control

- ☐ I often act so rashly or impulsively that it causes serious problems
- ☐ I sometimes act on impulse without considering the consequences, which causes problems
- ☐ I am generally able to be spontaneous while keeping appropriate control of my actions
- ☐ I am sometimes so controlled in my actions that I don’t get the same out of life as others do
- ☐ I am often so over-controlled in my actions that I hardly get anything out of life

11. Experience of reality during stress

- ☐ My experience of situations is usually accurate when feeling stressed out
- ☐ My experience of situations is somewhat distorted when feeling stressed out (e.g., expecting the worst to happen, feeling rejected when criticized by others)
- ☐ I sometimes lose touch with what is real when feeling stressed out (e.g., suspicious, feeling disconnected from reality, or things around me are like in a dream)
- ☐ I often lose touch with reality when feeling stressed out (e.g., extreme suspiciousness, seeing or hearing things that other people can't, having out-of-body experiences)

12. Harm to self

- ☐ I never harm myself
- ☐ I rarely harm myself
- ☐ I sometimes harm myself
- ☐ I often harm myself

13. Harm to others (intentional or unintentional)

- ☐ I never harm others
- ☐ I rarely harm others
- ☐ I sometimes harm others
- ☐ I often harm others

14. In thinking about your answers to the above, how much do they cause problems in important areas of your life (e.g., personal, family, social, education, work)?

- ☐ Not at all
- ☐ A little
- ☐ Moderately
- ☐ A lot

Personality Disorder Severity ICD-11 (PDS-ICD-11) Scale

Scoring instruction

Items 1-10 are scored 2 – 1 – 0 – 1 – 2

Items 11-14 are scored 0 – 1 – 2 – 3

The PDS-ICD-11 is scored by summing scores for all 14 items (sum score ranges from 0 to 32).

Note. In cases where the respondent selects more than one answer to an item, the answer with highest score counts.

Citing PDS-ICD-11

Bach, B., Brown, T. A., Mulder, R. T., Newton-Howes, G., Simonsen, E., & Sellbom, M. (2021). Development and Initial Evaluation of the ICD-11 Personality Disorder Severity Scale: PDS-ICD-11. *Personality and Mental Health*. https://doi.org/10.1002/pmh.1510

Development and translation

The PDS-ICD-11 scale was developed according to the WHO ICD-11 Clinical Descriptions and Diagnostic Requirements (CDDR) for determining the presence and severity of personality disturbance. This was achieved through collaboration between the following two bodies:

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PDS-ICD-11 – Clinician-Rating Form

Personality Disorder Severity – ICD-11 (PDS-ICD-11) Scale – Clinician Rating Form (unofficial beta-vesion)

***Note*. This is an unofficial draft provided for this thesis only.**
Please keep confidential with no distribution. A final and official version is now available.

Please select the one statement for each area that best describes the person in general over the past two years

1. Identity

2	Often has no sense of self or identity, especially when with other people (e.g., has very weak boundaries between self and others; bases identity on external factors)
1	Is sometimes confused about own sense of self or identity, especially when with other people (e.g., overidentification with others; mirrors others' behaviours or interests)
0	Has a stable sense of self or identity
1	Has a sense of self or identity that is generally too fixed and restricted (e.g., rigidly focusing on a particular personal or occupational role)
2	Has a sense of self or identity that is overly restricted and unchangeable no matter the circumstances (e.g., extreme focus on a particular personal or occupational role at any cost)

2. Self-worth

2	Feels worthless most of the time, which causes significant distress or affects relationships with other people
1	Often experiences low self-worth which causes distress or sometimes affects relationships with other people
0	Usually experiences no difficulties with self-worth
1	Often feels better than others which affects relationships with other people
2	Feels superior to others which affects how they relate to other people

3. Self-perception

2	Believe that they have no strengths or abilities (i.e., lack of positive qualities)
1	Believe that they have have few strengths or abilities (i.e., few positive qualities)
0	Has a good sense of own strengths and limitations
1	Believe that they have few limitations or weakness (i.e., few negative qualities)
2	Believe that they have no limitations or weakness (i.e., absence of negative qualities)

4. Goals

2	Is rarely able to set and follow realistic goals (e.g., impulsive or rash behavior that causes problems with goal-directedness; significant goal inhibition due to fear or shame)
1	Sometimes finds it hard to set and follow realistic goals (e.g., due to insecurity, dependency, or lack of planning)
0	Has no problem setting and following realistic goals
1	Sometimes becomes overly goal-driven and has difficulties with adjusting or changing goals (e.g., rigid standards, overly stubborn, or unrealistic expectations; persists unreasonably in pursuit of goals that have little chance of success)
2	Regularly becomes overly goal-driven and finds it nearly impossible to adjust or change goals (e.g, completely uncompromising or extremely stubborn)

5. Interest in relationships

2	Has no interest in being with others and strives to avoid them to a degree where it causes significant problems
1	Sometimes has no interest in being with others and therefore avoids them to a degree it causes problems
0	Has a good balance of being comfortable with being alone *versus* being with others
1	Sometimes becomes distressed or upset when not around others
2	Often becomes distressed, upset, or desparate when not around others

6. Perspective-taking

2	Never considers or understands other people's thoughts and feelings, which causes serious problems in relationships (e.g., callous or cold-hearted about others' feelings or interests)
1	Rarely considers or understands other people's thoughts and feelings, which causes problems in relationships (e.g., inconsiderate or insensitive about others' feelings)
0	Considers and can easily understand other people's thoughts and feelings
1	Often thinks too much about what others think and feel, which causes distress (e.g., spends too much time, or considers too intensively what others think or feel)
2	Always reading too much into what others think and feel, which causes serious distress (e.g., considers far too intensively what others think or feel even for extended periods of time)

7. Mutuality in relationships

2	Is always very selfish which causes problems in relationships (e.g., abusive, manipulative, highly controlling)
1	Is sometimes too selfish which causes problems in relationships (e.g., rude, uncaring, insubordination, domineering)
0	Is able to establish and maintain close and mutually satisfying relationships (e.g., appropriately prioritizes the needs of self and others)
1	Is sometimes unable to prioritize self in relationships, even when harmful (e.g., putting others' needs above their own or staying in a dysfunctional relationship)
2	Is rarely able to prioritize self in relationships, even when harmful (e.g., highly submissive, feeling unable to leave despite being abused, controlled, or otherwise victimized by others)

8. Disagreement management

2	Often seeks out arguments or conflicts with others, which causes serious relationship problems (e.g., results in absence of reliable friendships or romantic relationships)
1	Sometimes gets into arguments or conflicts with others, which causes relationship problems (e.g., results in lack of friendships or difficulty maintaining romantic relationships)
0	Is able to manage disagreements or conflicts in relationships in a cooperative manner
1	Often avoids disagreements and conflicts with others which causes problems for them (e.g., having difficulties asserting their needs resulting in low fulfillment)
2	Avoids disagreements and conflicts with others at any cost, which causes serious problems (e.g., being unable to assert their needs resulting in lack of fulfillment)

9. Emotional control and expression

2	Frequently cannot regulate emotions which causes serious problems for them or others (e.g., frequent fits of temper; serious reactivity of mood including dysphoria, anger, and anxiety)
1	Sometimes have trouble regulating emotions which causes problems for them or others (e.g., sometimes becoming highly upset and giving up easily)
0	Is generally able to regulate and express emotions in an appropriate way
1	Sometimes suppresses or do not express emotions which causes some problems for them or others (e.g., some flat or blunted affect; some problems recognizing difficult emotions)
2	Almost always suppresses or never expresses emotions at all which causes serious problems for them or others (e.g., complete flat or blunted affect; does not recognize experiencing anger or sadness)

10. Behavioral control

2	Often acts so rashly or impulsively that it causes serious problems for them
1	Sometimes acts on impulse without considering the consequences, which causes problems for them
0	Is generally able to be spontaneous while keeping appropriate control of own actions
1	Is sometimes so controlled in their actions that they don't get the same out of life as others do
2	Is often so over-controlled in their actions that they hardly get anything out of life

11. Experience of reality during stress

0	Experience of situational or interpersonal reality is usually accurate when feeling stressed out
1	Experience of situational or interpersonal reality is somewhat distorted when feeling stressed out (e.g., expecting the worst to happen; feeling rejected when criticized by others)
2	Poor experience of situational or interpersonal reality is significantly distorted when feeling stressed out (e.g., overly suspicious of others; experiences of dream-like states)
3	Often loses touch with situational or interpersonal reality when feeling stressed out (e.g., transient hallucinations or other aberrant experiences; depersonalization experiences; extreme suspiciousness)

12. Harm to self (intentional or unintentional)

0	Never harms themselves
1	Rarely harms themselves (e.g., one or two minor self-injuries; no suicidal gestures)
2	Sometimes harms themselves (e.g., a few self-injuries; at least one suicidal gesture)
3	Often harms themselves (e.g., several self-injuries; significant suicidal gestures)

13. Harm to others (intentional or unintentional)

0	Never harms others
1	Rarely harms others (e.g., one physical assault; one incident of endangering others)
2	Sometimes harm others (e.g., multiple physical assaults or incidents of endangering others)
3	Often harms others (e.g., recurrent physical assaults or incidents of endangering others)

14. When considering all ratings (i.e., items 1-13), how much do they cause impairment in important areas of the person's life (e.g., personal, family, social, school, work)?

0	*None or some difficulty* (e.g., no notable disruption in social, occupational, and interpersonal relationships; problems are limited to specific relationships or situations)
1	*Mild impairment* (e.g., limited to circumscribed areas such as romantic relationships and employment; present in more areas but of milder severity; is generally able to sustain employment and maintain some relationships but may have issues with supervisors, co-workers, and friends)
2	*Moderate impairment* (e.g., marked impairment while functioning in circumscribed areas may be maintained; relationships are likely to be characterized by conflict, avoidance, withdrawal, or extreme dependency)
3	*Severe impairment* (e.g., severe impairment in all or nearly all areas of life; seriously affecting virtually all relationships; absent or severely compromised ability and willingness to perform expected social and occupational roles)

PiCD-IRF

The Personality Inventory for ICD-11 (PiCD) – Informant Report Form (Male)

By Joshua R. Oltmanns and Thomas A. Widiger

Instructions: Below are several statements about the way a person may feel or behave. Please answer each question in the way that best describes him on a 1 to 5 point scale, where 1 = strongly disagree with the statement, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree with the statement. Please read each item carefully and provide your answer that best corresponds to your agreement or disagreement. There are no right or wrong answers. Describe him honestly and state your opinions as accurately as possible.

1. He is usually an anxious person.
2. He tends to act impulsively.
3. He prefers to stay away from other people.
4. His anger has gotten him into fights.
5. He spends a large amount of time organizing and making arrangements.
6. When things do not go as planned in his life it upsets him greatly.
7. He is not a very responsible person.
8. Other people say he doesn't show his feelings.
9. Other peoples' problems are funny to him.
10. He does not take risks.
11. His mood often changes throughout the week.
12. He is not a very organized person.
13. He is quiet around others.
14. He can easily get people to do what he wants.
15. He carefully thinks things through before he acts.
16. When things are not going well for him, he becomes more nervous than most people.
17. He makes rash decisions.
18. He is not very close with anyone.
19. He is much more competitive than other people.
20. Other people think that he’s a perfectionist.
21. After some problem it takes him a long time to get back to normal.
22. Sometimes he leaves work without notifying his co-workers.
23. He feels pretty much the same all the time.
24. He believes that some people deserve to be homeless.
25. He always chooses the safest option.
26. Changes in his mood are unrelated to what is happening in his life.
27. He can be rather sloppy and disorganized.
28. He is best described as "bashful."
29. He often charms people that he doesn't really like.
30. He never acts impulsively.
31. Other people notice his nervousness.
32. He likes to act first and think later.
33. Other people say that he is distant and withdrawn.

34. He is always ready for conflict.
35. He strives for perfection.
36. He is thin-skinned.
37. When he feels like it, he fails to show up for work.
38. He has very rarely felt excited.
39. He is not concerned with hurting someone's feelings.
40. His top priority is being safe and secure.
41. He often alternates back and forth from feeling happy to feeling sad.
42. He doesn't worry about keeping to a set schedule or plan.
43. He talks less frequently than most other people.
44. He is a manipulative person.
45. He gives every decision a lot of careful thought.
46. A lot of times he is fearful for no specific reason.
47. He often does things without thinking.
48. He would not mind living completely on his own without any human contact.
49. He is experienced in the art of confrontation.
50. He takes great pride in doing high quality work.
51. He feels exposed.
52. He spends money on leisure when he has unpaid bills.
53. He doesn't feel emotions as much as other people.
54. He would be a good soldier because he wouldn't worry about harming someone.
55. He tends to be very cautious and careful.
56. His mood swings are much stronger than those of other people.
57. He doesn't follow any set order or plan when he works on something.
58. He is always a "wallflower" in social settings.
59. He has successfully deceived and manipulated persons.
60. He would love the motto, "think before you act."

All scale items are simply added together (note that each domain item is every fifth item).

Negative Affective = 1 + 6 + 11 + 16 + 21 + 26 + 31 + 36 + 41 + 46 + 51 + 56.
Disinhibition = 2 + 7 + 12 + 17 + 22 + 27 + 32 + 37 + 42 + 47 + 52 + 57.
Detachment = 3 + 8 + 13 + 18 + 23 + 28 + 33 + 38 + 43 + 48 + 53 + 58.
Dissocial = 4 + 9 + 14 + 19 + 24 + 29 + 34 + 39 + 44 + 49 + 54 + 59.
Anankastic = 5 + 10 + 15 + 20 + 25 + 30 + 35 + 40 + 45 + 50 + 55 + 60.

PID5BF+M

Personality Inventory for DSM-5 and ICD-11 – Brief Form Plus - Modified

0 = Very False or Often False	1 = Sometimes or Somewhat False	2 = Sometimes or Somewhat True	3 = Very True or Often True

Instruktion: This is a list of things different people might say about themselves. We are interested in how you would describe yourself. There are no "right" or "wrong" answers. So you can describe yourself as honestly as possible, we will keep your responses confidential. We'd like you to take your time and read each statement carefully, selecting the response that best describes you.

1. I have much stronger emotional reactions than almost everyone else.	0	1	2	3
2. I'm good at conning people.	0	1	2	3
3. I'm often pretty careless with my own and others' things.	0	1	2	3
4. I keep my distance from people.	0	1	2	3
5. I often see unusual connections between things that most people miss.	0	1	2	3
6. Even though it drives other people crazy, I insist on absolute perfection in everything I do.	0	1	2	3
7. I'm always worrying about something.	0	1	2	3
8. Sometimes you need to exaggerate to get ahead.	0	1	2	3
9. I feel like I act totally on impulse.	0	1	2	3
10. Nothing seems to interest me very much.	0	1	2	3
11. People have told me that I think about things in a really strange way.	0	1	2	3
12. It is important to me that things are done in a certain way.	0	1	2	3
13. I worry a lot about being alone.	0	1	2	3
14. I deserve special treatment.	0	1	2	3
15. I lose track of conversations because other things catch my attention.	0	1	2	3
16. I prefer to keep romance out of my life.	0	1	2	3
17. It's weird, but sometimes ordinary objects seem to be a different shape than usual.	0	1	2	3
18. I keep trying to make things perfect, even when I've gotten them as good as they're likely to get.	0	1	2	3
19. I get emotional easily, often for very little reason.	0	1	2	3
20. It is easy for me to take advantage of others.	0	1	2	3
21. I often forget to pay my bills.	0	1	2	3
22. I don't like spending time with others.	0	1	2	3
23. I've had some really weird experiences that are very difficult to explain.	0	1	2	3
24. I have a strict way of doing things.	0	1	2	3
25. I worry about almost everything.	0	1	2	3
26. I'll stretch the truth if it's to my advantage.	0	1	2	3
27. Even though I know better, I can't stop making rash decisions.	0	1	2	3
28. I rarely get enthusiastic about anything.	0	1	2	3
29. I have several habits that others find eccentric or strange.	0	1	2	3
30. I've been told that I spend too much time making sure things are exactly in place.	0	1	2	3
31. I can't stand being left alone, even for a few hours.	0	1	2	3
32. I often have to deal with people who are less important than me.	0	1	2	3
33. I am easily distracted.	0	1	2	3
34. I break off relationships if they start to get close.	0	1	2	3
35. Sometimes when I look at a familiar object, it's somehow like I'm seeing it for the first time.	0	1	2	3
36. People complain about my need to have everything all arranged.	0	1	2	3

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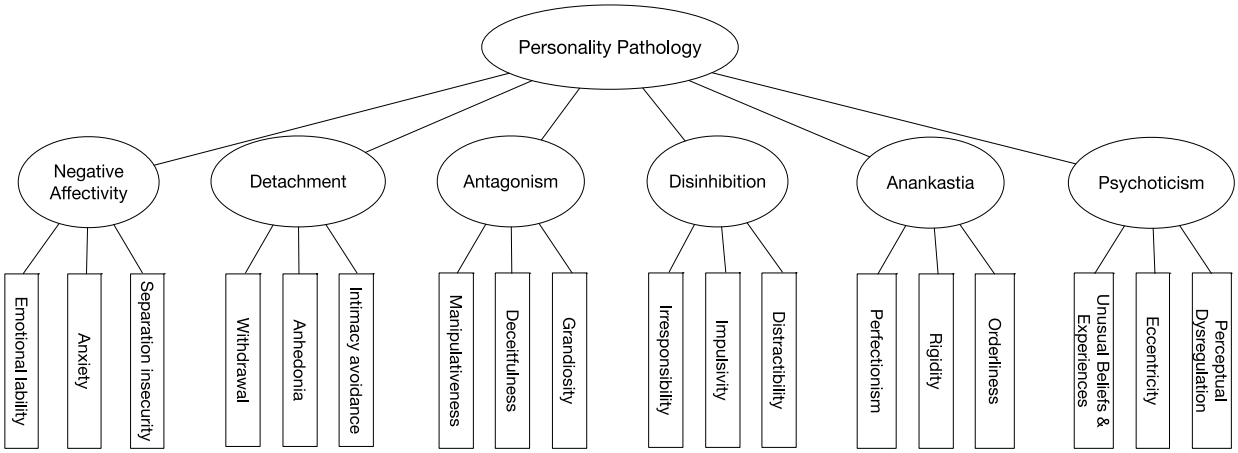
PID5BF+M Scoring algorithm

The PID5BF+ M is short form of the Personality Inventory for DSM-5 (PID-5), augmented with a scoring algorithm to assess the ICD-11 personality trait domain Anankastia. The PID-5 is the official rating scale of the American Psychiatric Association for the assessment of maladaptive personality traits according to criterion B of the alternative model for personality disorders in section III of the DSM-5. Criterion B is an empirically derived and hierarchical model of problematic personality expressions, which is compatible with 4 of the 5 maladaptive trait domains in the ICD-11. The PID5BF+ M is therefore suitable to assess maladaptive personality traits both according to DSM-5 and ICD-11.



PID5BF+ M SCORING ALGORITHM	Personality Trait Facet	PID5BF+ M item number	PID-5 item number	Trait Facet Score	Trait Domain Score	Trait Domain
	Emotional Lability	1, 19	62, 122			Negative Affectivity
	Anxiousness	7, 25	109, 110			
	Separation Insecurity	13, 31	50, 64			
	Withdrawal	4, 22	82, 136			Detachment
	Anhedonia	10, 28	23, 189			
	Intimacy Avoidance	16, 34	89, 108			
	Manipulativeness	2, 20	162, 219			Antagonism
	Deceitfulness	8, 26	126, 218			
	Grandiosity	14, 32	187, 197			
	Irresponsibility	3, 21	129, 160			Disinhibition
	Impulsivity	9, 27	4, 17			
	Distractibility	15, 33	6, 132			
	Perfectionism	6, 18	123, 176			Anankastia
	Rigidity	12, 24	140, 220			
	Orderliness	30, 36	34, 115			
	Unusual Beliefs & Experiences	5, 23	194, 209			Psychoticism
	Eccentricity	11, 29	25, 185			
	Perceptual Dysregulation	17, 35	44, 77			