Adolescent Personality Pathology

Tromp, N.B.

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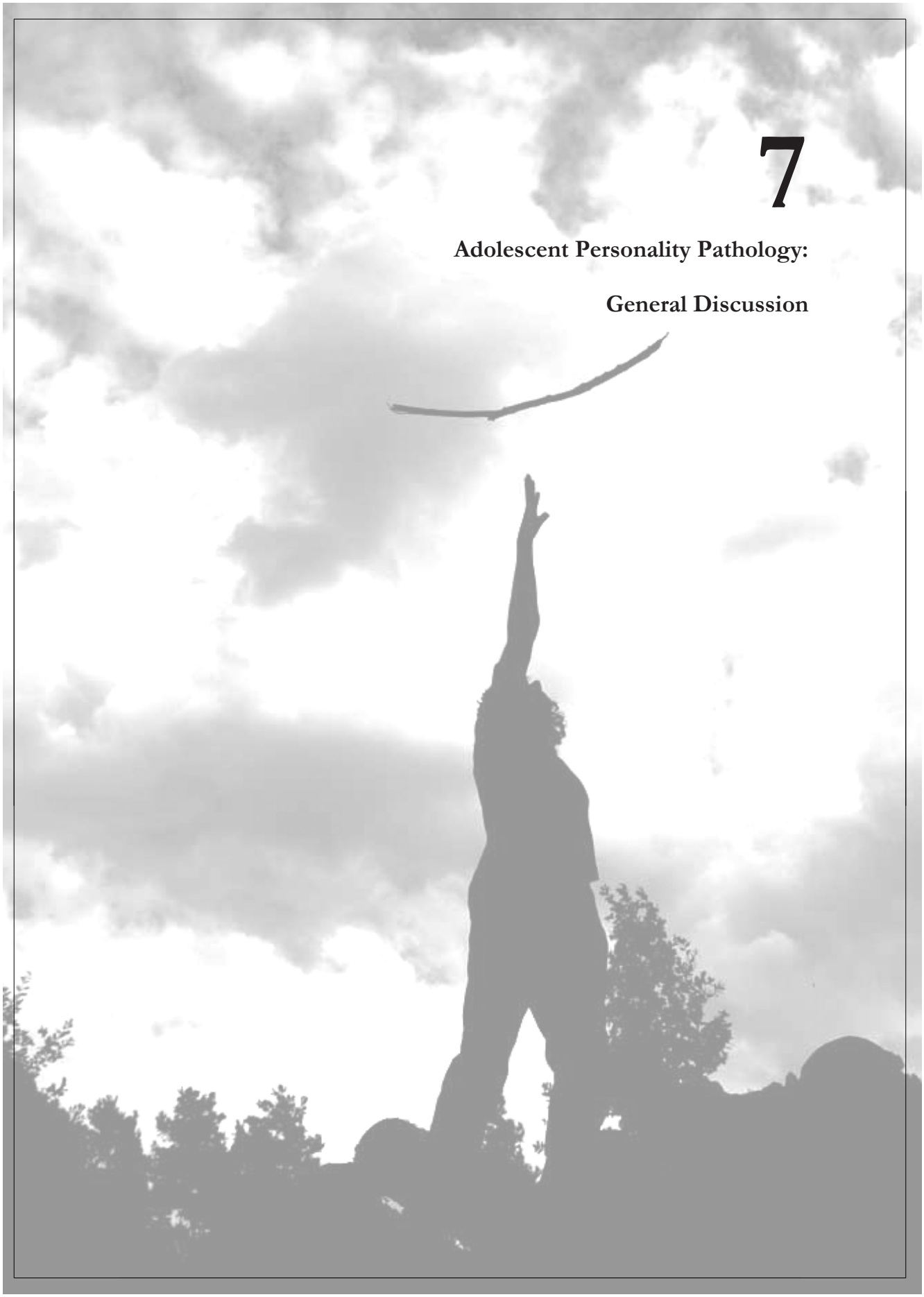
Adolescent Personality Pathology:

General Discussion



Introduction

Two developments in the field of psychiatry have set the stage for the work described in this thesis. The first development regards a growing interest in the developmental antecedents of adult personality pathology. Research increasingly indicates that personality pathology is not limited to adulthood, supporting its validity as a construct in both clinical and non-clinical adolescent populations (for a review, see Johnson, Bromley, Bornstein, & Sneed, 2006). Not surprisingly, a developmental perspective on the construction of the future edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*, American Psychiatric Association, 2000), the most widely used classification system of personality disorders (PD), is a major issue raised by the *DSM-V* Research Planning Work Groups (Widiger, Simonsen, Krueger, Livesley, & Verheul, 2005). The second development concerns a careful but certain movement towards a dimensional approach to personality pathology in the field of adult psychiatry. Researchers and clinicians are increasingly dissatisfied with the categorical *DSM*-system. At the same time, the advantages of a dimensional model of personality pathology are increasingly recognized, both in adulthood (Clark, 2007; Trull & Durrett, 2005) and childhood (Mervielde, De Clercq, De Fruyt, & Van Leeuwen, 2005). These developments have prompted the present investigation of adolescent personality pathology using a dimensional model.

The objective of this thesis was twofold. First, the aim was to conceptualize and operationalize personality pathology in adolescence using a dimensional approach. The second aim was to extend knowledge on adolescent personality pathology when conceptualized from a dimensional perspective. The Dimensional Assessment of Personality Pathology-Basic Questionnaire for Adolescents (DAPP-BQ-A) was evaluated as a conceptualization and operationalization of the dimensional model of personality pathology in adolescents. Subsequently, adolescent personality pathology dimensions, as assessed by the DAPP-BQ-A, were related to a wide variety of domains in order to gain insight into what exactly constitutes personality pathology at this young age. These domains included *DSM-IV* PD symptoms, normal personality traits, domains of functional impairment, and personal and ecological factors.

The introductory Chapter 1 provided a theoretical framework for the studies included in the thesis. Chapter 2 described the development of the DAPP-BQ-A and its psychometric properties in referred and non-referred adolescents. Chapter 3 extended the previous chapter by showing how the dimensions within the DAPP-BQ-A are related to PD symptoms, as defined by the *DSM-IV-TR* (APA, 2000). Chapter 4 investigated the contribution of dimensional models of normal and abnormal personality to the description of *DSM-IV* PD symptoms. Chapter 5 examined reports of adolescents and parents on dimensions of adolescent personality pathology and their relations to clinician-reported dysfunction. Chapter 6 investigated the associations between adolescent personality pathology dimensions and a wide range of potentially associated factors, including school functioning, psychiatric treatment, police contact, substance use, stressful life events, social support, and family composition. The present chapter, Chapter 7, summarizes and integrates the findings presented in the preceding chapters. First, a comprehensive evaluation of the DAPP-BQ-A is provided. Second, adolescent personality

pathology and its associated factors are described. Subsequently, an analysis of the strengths and limitations of this thesis is presented, followed by general conclusions. The final part of this chapter discusses the implications of the findings, and includes suggestions for directions in future research.

Evaluating the DAPP-BQ-A

The first purpose of the present thesis regarded an evaluation of the DAPP-BQ-A as an age-appropriate conceptualization and operationalization of a dimensional model of personality pathology for use in adolescence. For a comprehensive evaluation, the value of the DAPP-BQ-A, as well as the value of the dimensional approach in general, is examined along the lines of several issues suggested in the recent literature (Allik, 2005; De Clercq, De Fruyt, & Widiger, 2009; Kreuger, 2005; Trull, 2005; Verheul, 2005; Widiger et al., 2005). Many of these issues were raised during the conference "Dimensional Models of Personality Disorder: Etiology, Pathology, Phenomenology, & Treatment" of the *DSM-V* Research Planning Work Groups (Widiger et al., 2005), and were published in two special sections of the *Journal of Personality Disorders* in 2005. The conference aimed at reviewing the available research and setting a future research agenda that would be most effective in leading the field toward a dimensional classification of PD.

An important issue that must be addressed is coverage, or the extent to which a model adequately represents those conditions that are frequently encountered by clinicians (Trull, 2005). Furthermore, issues concern a conceptual fit within a common trait hierarchy proposed in the literature (Widiger & Simonsen, 2005), as well as a conceptual fit within a developmental model of personality pathology, with convergence between childhood, adolescence, and adulthood. In addition, a dimensional model should be able to determine whether trait elevations are dysfunctional and thus, whether a *disorder* of personality is present (Trull, 2005). Also, a feasible dimensional model of personality pathology should provide an integrative perspective on Axis I and Axis II psychopathology (Krueger, 2005). These issues can be further complemented with issues regarding the model's clinical utility (Verheul, 2005), sensitivity to gender differences, sensitivity to differences in clinical status, cross-cultural application (Allik, 2005), sensitivity to stability and change, and finally, the model's predictive validity.

Coverage

One of the major points of critique on the *DSM-IV* (APA, 2000) concerns the failure to provide adequate coverage of maladaptive personality functioning, as indicated by the high prevalence of the wastebasket category of PD-NOS (Verheul & Widiger, 2004). At the same time, however, extensive co-occurrence among diagnostic categories seems to indicate that there is substantial redundancy in the PD criteria described by the *DSM-IV*. A dimensional model of personality pathology, such as the DAPP-BQ-A, is likely to provide a viable solution to this problem. Dimensional assessment affords the possibility to characterize unique patterns of personality dimensions that are not adequately covered by one of the diagnostic categories within the *DSM-IV*. In other words, each idiosyncratic profile can be scored on the dimensions within

the model, without having to fit necessarily into the straitjacket of the *DSM-IV* categories. Moreover, dimensional models, including those that were partly based on criteria defined in the *DSM-IV* (e.g., DAPP-BQ-A, SNAP), include additional traits not included within the *DSM-IV* categories. For example, the DAPP-BQ-A places more emphasis on interpersonal features than the *DSM-IV* categories (Livesley & Schroeder, 1990, 1991).

Subthreshold traits. The issue of coverage may also apply to the ability to classify subthreshold personality pathology. Unlike a categorical model, a dimensional model is not restricted to the classification of personality pathology based on symptom levels above a certain threshold. Instead, all levels of personality pathology can be demarcated on the continuous dimensions. Hence, dimensional models retain important information concealed in subthreshold symptom levels. This may be particularly valuable in adolescent populations. In adolescents, especially those at risk for developing full-blown pathology, the degree of personality pathology may not yet have reached the threshold level. In terms of early intervention and prevention strategies, important information is lost when using a categorical model and adolescents in need of care may slip through the cracks in the system. The DAPP-BQ-A offers a valid and reliable assessment in adolescents that counters these drawbacks and is suitable to detect early manifestations of personality pathology.

Normal traits. Dimensional models of normal personality, such as the Big Five (John, Donahue, & Kentle, 1991) and the Five Factor Model (Digman, 1990) have been repeatedly employed in an attempt to understand personality pathology (Costa & Widiger, 2002). As described in Chapter 4, it can be argued that dimensions of normal personality provide insufficient coverage of the dysfunctional characteristics inherent in disordered personality. Indeed, the complexity of disordered personality may be more completely covered by Livesley's (2006) conceptualization of personality pathology. The DAPP-BQ-A, an operationalization of this conceptualization, includes characteristics highly relevant to disordered personality that are not covered by the dimensions of normal personality, such as identity problems, disturbances in attachment and autonomy, self harm, and cognitive distortion. The results described in Chapter 4 demonstrated that lower-order dimensions within the DAPP-BQ-A showed unique relations to adolescent disordered personality, over and above the effects of the higher-order dimensions of normal personality, as measured by the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991). This provides evidence for the comprehensiveness of the DAPP-BQ-A as an instrument to assess adolescent personality pathology.

Content validity. As described by Trull (2005), the investigation of a model's coverage should include an evaluation of its content validity. The process of development and refinement of the items within the DAPP-BQ seems to ensure adequate content validity. Steps taken in this process encompassed an extensive content analysis of the clinical literature, including official classifications such as the *DSM*-system, analysis of interviews with personality disordered patients, and prototypicality ratings by clinical judges (Livesley, 2001). The content of the items within the DAPP-BQ-A are essentially the same as those in the original DAPP-BQ. Thus, it is likely that support for the content validity of the adult version (Livesley, 1987) extrapolates to the adolescent version.

Factorial validity and internal consistency. As described by Trull (2005), other aspects that may provide insight into a model's coverage include evidence for its factorial validity and the internal consistency of its constituent scales. In Chapter 2 the factorial validity of the DAPP-BQ-A was demonstrated. Factor analysis in a large combined sample of general population and referred adolescents resulted in a strong replication of the original structure, with the 18 lower-order dimensions loading on the 4 higher-order dimensions in a similar fashion as reported for adult populations. Also described in Chapter 2, internal consistency proved to be adequate for both referred and non-referred adolescents. The internal consistency of Intimacy problems was relatively low in both populations, most likely due to applicability issues as discussed below.

Age-specific traits. In order to draw firm conclusions on the comprehensiveness of the DAPP-BQ-A, it should also be investigated whether the model adequately covers the range of personality pathology that is observable in adolescence. It is possible that phenotypic expressions of personality pathology differ across the life span. Hence, a conceptualization of personality pathology originally developed for adults, such as the DAPP-BQ, may need adaptations for use in adolescents or children.

As described in Chapter 2, the adult version of the DAPP-BQ was only slightly adapted, with adaptations mostly confined to textual modifications. Although, to our knowledge, it has never been studied empirically, the available literature on adolescent personality pathology seems to demonstrate a great deal of conceptual overlap with personality pathology observed in adulthood. Also, findings from normal personality development show that childhood temperament traits have much in common with adult personality traits (Shiner, 2005). However, two potentially problematic areas come to mind that show strong development during adolescent years and may be age-specific: identity and intimacy. As these areas are subject to significant change in adolescent years, they may be difficult to cover by an instrument designed to assess aspects of adult personality, such as the DAPP-BQ. According to Erikson's stages of psychosocial development (Erikson, 1968), the establishment of identity is an age-specific developmental task to be faced in adolescence. As identity problems form an important aspect of adult personality pathology (Marcia, 2006), this construct is included within the adult version of the DAPP-BQ. The dimension of Identity Problems, as assessed using the DAPP-BQ-A, seems to perform well in adolescent populations. As described in Chapter 2, the scale tapping identity problems has good psychometric properties. In addition, its validity was well supported as it proved to be a strong discriminator between referred and non-referred adolescents, as well as between referred adolescents with and without a PD. Finally, as illustrated in Chapter 3, the dimension of Identity Problems also shows strong and conceptually meaningful relations with symptoms of several PDs (Borderline, Avoidant, Depressive PDs). Thus, DAPP-BQ-A Identity Problems performs well in adolescents despite the fact that its items were originally developed for adults.

A second important aspect of adolescent development is the establishment of intimate relationships. As described in several Chapters of the present thesis, the dimension of Intimacy Problems included within the DAPP-BQ-A does not seem to allow for reliable assessment of the (in)ability to establish close relationships. The Intimacy Problems items, as translated and adapted

in the DAPP-BQ-A, seem to represent a heterogeneous construct (e.g., tapping intimate non-love relationships as well as sexual experiences) and need further investigation. Thus, apart from the area of intimacy problems, the DAPP-BQ-A seems an age-appropriate instrument that adequately covers the range of personality pathology that is observable in adolescence.

Conceptual fit within a common trait hierarchy

Many different dimensional models have been proposed as alternatives to the *DSM* categorical system. Widiger and Simonsen (2005) argued that each of these models will have merits and limitations, and suggested to integrate them into one common representation that includes the important contributions and potential advantages of each of the models. They continued to evaluate 18 dimensional models and their conceptual fit in a common hierarchical structure. The proposed structure comprises four levels. At the highest level, it includes two broad band factors identified as the clinical spectra of internalization and externalization, describing problem behavior in both children and adults (Achenbach, 1966; Krueger, 1999). Underlying these two broad band factors could be three to five higher-order domains of personality, with general consensus of the relevance of four domains: extraversion, dissocial/antagonistic behavior, constraint/compulsivity, and emotional dysregulation/ neuroticism (Trull & Durrett, 2005; Widiger & Simonsen, 2005). At the third level, each of these four domains includes a number of lower-order personality trait scales. And finally, at the lowest level, the more behaviorally specific diagnostic criteria are organized.

As described in Chapter 2, the factorial structure of the DAPP-BQ-A closely aligns with the hierarchical model proposed by Widiger and Simonsen (2005). The DAPP-BQ-A includes 18 lower-order dimensions, which could represent Widiger and Simonsen's third and fourth level, depending on either a trait-like (e.g., submissiveness) or behavioral (e.g., self-harm) definition. These 18 dimensions can be organized into four higher-order dimensions, which correspond to the domains at Widiger and Simonsen's second level. The higher-order dimensions can be subsequently organized into a two-dimensional structure with factors identifiable as Internalizing and Externalizing, similar to the broad band factors within Widiger and Simonsen's highest level. The hierarchical structure of the DAPP-BQ-A thus shows a conceptual fit within a compelling common trait hierarchy postulated in the recent literature (Widiger & Simonsen, 2005).

Conceptual fit within a developmental model

A developmental perspective on the construction of the *DSM-V*, which is to replace the *DSM-IV*, is one of the major issues raised by the *DSM-V* Research Planning Work Groups (Widiger et al., 2005). Defining similar models of personality pathology across a wide age range may facilitate longitudinal research on the developmental course of personality pathology across the life span. Therefore, it is of interest to examine how the DAPP-BQ-A fits within a developmental model of personality pathology. As described in Chapter 2, the four DAPP-BQ-A higher-order dimensions closely resemble those found in adult samples. In addition, the four factors showed clear conceptual correspondence to the factors of the DIPSI retrieved in children and adolescents (De Clercq et al., 2006). Likewise, the two overarching metatraits Internalizing

and Externalizing were reported in studies across different ages (Chapter 2; De Clercq et al., 2006; Markon, Krueger, & Watson, 2005). Thus, a similar hierarchical structure of dimensional models can be found across childhood, adolescence, and adulthood. The evidence is especially convincing at the levels of higher-order dimensions and the overarching metatraits. Further research should determine whether the lower-order dimensions of the DAPP-BQ-A can be fully accommodated within a developmental model of personality pathology applicable across the life span. Possibly, models of personality pathology are highly similar across childhood, adolescence, and adulthood, with small adaptations or additions for each of these developmental stages.

Adaptations or additions specific for the adolescent years may be found within problems in the areas of emotion regulation, identity, impulse control, or attachment. DAPP-BQ-A lower-dimensions such as Affective Instability, Identity Problems, Conduct Problems, and Insecure Attachment are designed specifically to assess these problems. Interestingly, as these aspects are also included within the adult DAPP-BQ (Livesley & Jackson, 2009), they seem to play a similarly important role in adult personality pathology. As noted before, the DAPP-BQ-A dimension of Intimacy Problems, a potentially important developmental domain in adolescence, needs further investigation.

Relations to dysfunction

As argued by Trull (2005), one of the major questions that must be addressed when considering dimensional models as viable alternatives to the *DSM*-system concerns the issue of how to determine whether a *disorder* of personality is present. Inherent in the notion of disorder are not only extreme trait levels but also distress or disturbance of functioning (APA, 2000). Thus, whereas extreme trait levels alone may qualify abnormal personality, they do not necessarily qualify disordered personality (cf. Livesley & Jang, 2005). Using a dimensional model, extreme trait levels can be easily conceptualized. However, proof of distress or dysfunction may not be as easily established. Moreover, similar trait elevations may not be similarly distressing across traits or across domains of functioning (Widiger & Trull, 1992). Consequently, several authors have advocated independent assessment of dysfunction, not confounded by personality trait content, since the latter may be inherently maladaptive (Clark, 2007; Trull, 2005).

Traits and dysfunction. In the present thesis, traits and dysfunction were assessed through different informants. Dysfunction was assessed independently from trait levels by the primary responsible clinician using the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1990, 1994). This instrument assesses dysfunction in eight domains relevant to personality pathology. Chapter 5 presented relations between the DAPP-BQ-A lower-order dimensions and these domains. DAPP-BQ-A dimensions were associated with conceptually related domains of dysfunction. For example, Affective Instability and Anxiety were significantly related with dysfunction in the regulation of Moods/emotions, Self Harm with Self-harmful behavior, and Conduct Problems with dysfunction at Home, Behavior towards others, and Substance use. The results presented in Chapter 5 also demonstrated that some dimensions (e.g., Social Avoidance, Stimulus Seeking, and Conduct Problems) were more frequently related to domains of dysfunction than others (e.g., Narcissism, Restricted Expression, and Intimacy

Problems). This suggests that elevated symptom levels on some dimensions of personality pathology are more dysfunctional than those on others.

Of similar importance in the distinction between trait and dysfunction is the assessment of trait, not confounded by dysfunction. The DAPP-BQ-A scales have been criticized for confounding the assessment of traits and dysfunction (Thomas Widiger, personal communication, August 20th, 2008). This may have contributed to the relations discussed in the previous paragraph. For example, DAPP-BQ-A Self Harm may assess both trait and dysfunction. However, self harm is a dysfunctional behavioral characteristic highly associated with disordered personality (Klonsky, Oltmanns, & Turkheimer, 2003). Hence, a comprehensive conceptualization of personality pathology traits must include assessment of self harm.

Instruments that solely assess general (normal) personality traits may not be hampered by the limitation of confounding traits and dysfunction. However, as described in Chapter 4, the higher- and lower-order dimensions of the DAPP-BQ-A afforded a supplementary contribution to variance in adolescent PD symptoms, over and above the higher-order normal personality traits. This suggests that adolescent PDs are more than extreme, maladaptive variants of higher-order normal personality traits. Adolescent PDs seem to encompass characteristics that may be more completely covered by dimensions of abnormal personality. Although these empirical findings do not support a supplementary model including higher-order dimensions of both normal and abnormal personality, such a model may be interesting as a potential solution to the limitation of confounding traits and dysfunction. Normal personality models may assess traits that not also tap dysfunction.

Another potential answer may be to extend or complement the DAPP-BQ-A with an evaluation of dysfunction, assessed independently from the severity of symptoms. Most valuable will be an assessment by well-informed informants, such as parents, clinicians, and/or teachers, on different domains of dysfunction relevant to personality pathology, such as interpersonal, intrapersonal, and school- or work-related problems. The domain-specific dysfunctional nature of several personality pathology dimensions should be kept in mind when interpreting outcomes: similar trait elevations may not be equally disrupting across traits or across domains of functioning.

Cut offs. Another related issue raised by Trull (2005) is the establishment of cut off scores within dimensional models to determine whether a *disorder* of personality is present. However, dividing a continuous scale into a non-PD range (below the cut off) and a PD range (above the cut off) runs counter the philosophy behind a dimensional model. It may also undo a major advantage of dimensional models to retain important information about subthreshold traits and symptoms. An alternative may lie within Livesley's (2003) proposal of a two-step approach to diagnosing PD. In the first step, the categorical decision is made of whether or not a generic PD is present. Three key features, independently assessed from individual differences in personality traits, may inform this decision: a failure to establish and maintain stable representations of self and others, interpersonal dysfunction, and a failure to develop prosocial behavior and cooperative relationships. The second step provides a dimensional representation of an individual's scores on lower-order personality traits descriptive of PD trait variation. Livesley

(2003) proposes the DAPP-BQ as a viable operationalization of this second step. Thus far, empirical evidence is not available to establish the clinical utility of the two-step approach. Moreover, it is not yet clear how to measure the defining features of a generic PD as described in the first step.

Integrative perspective on Axis I and Axis II psychopathology

In recent years, it has been suggested that the traditional distinction between Axis I and Axis II disorders in the consecutive *DSM* versions should be reconsidered (Krueger, 2005). Current evidence suggests that Axis I and Axis II disorders may not be as distinct as they are often conceived of. For example, high levels of co-occurrence of Axis I and Axis II disorders have been reported (Clark, 2007; Kantojärvi et al., 2006; see also Chapter 3). In addition, longitudinal associations between Axis I and Axis II disorders may be accounted for by shared underlying pathological structures or processes (Klein & Schwartz, 2002). Krueger (2005) suggested that the connection between Axis I and Axis II disorders can be understood from the perspective of general personality functioning. Research on personality could provide a framework that may be useful in understanding psychopathology.

The present thesis provides preliminary evidence for an integrative framework of normal personality, personality pathology, and psychopathology in adolescents. Chapter 2 reported on the hierarchical structure of personality pathology in adolescents. At the highest level, two metatraits of personality pathology were recovered that can be identified as Internalizing and Externalizing pathology. These metatraits show a strong resemblance to the two broad band factors comprising the taxonomy of psychopathology in children and adolescents (Achenbach, 1966). The Internalizing and Externalizing metatraits may be the two common factors underlying both personality pathology and psychopathology. At the next level in the hierarchical structure of personality pathology, four higher-order dimensions were found that can be labeled Emotional Dysregulation, Dissocial Behavior, Inhibitedness, and Compulsivity. Chapter 4 showed that these four dimensions are related to the higher-order dimensions of normal personality in conceptually meaningful ways. This suggests that models of normal personality and personality pathology can be integrated in a common hierarchical structure. Hence, the findings presented in this thesis seem to point toward a unified model of normal personality, personality pathology, and psychopathology in adolescence. Future research should examine the interconnections in more detail. For example, researchers may wish to conduct analyses at the lower-order level of normal personality and personality pathology. In addition, researchers may wish to include instruments that assess the internalizing and externalizing spectra of psychopathology, such as the Childhood Behavior Checklist (CBCL; Achenbach, 1991).

Clinical utility

In a narrative review, Verheul (2005) discussed the clinical utility of dimensional and categorical approaches to personality pathology. Verheul divided clinical utility into several components: coverage, consistency with etiology and prognosis, user acceptability and accuracy, professional communication, interrater reliability, subtlety, and clinical decision making. Based on

these components, Verheul (2005) provided a personal overview, combining common sense and empirical findings and arguments, of putative strengths and weaknesses of existing models. Purely dimensional models, such as the DAPP-BQ, the SNAP and the NEO, were compared with the categorical *DSM*-approach, and with hybrid models based on the *DSM* (e.g., dimensional profiling of categories). Overall, the purely dimensional models had the most evidence for clinical utility, according to Verheul (2005). The ratings for the components of clinical utility for the DAPP-BQ were either 'putative strength' or 'evident strength', with the exception of the rating for communication, of which the strength was deemed 'neutral or unknown'.

Empirical findings. The perceived superior clinical utility of dimensional models compared to the *DSM-IV* (APA, 2000) has also been supported by empirical research (Lowe & Widiger, 2009; Samuel & Widiger, 2006). Samuel and Widiger (2006) had clinicians describe three patients on both the Five Factor Model (FFM) facets and on *DSM-IV* PD descriptions. Despite the fact that clinicians were, on average, unfamiliar with the FFM facets and very familiar with the *DSM-IV*, they considered the FFM to have greater clinical utility in terms of global personality description, client communication, comprehensive of difficulties, and treatment planning. On only two aspects of clinical utility differences did not reach significance for all described patients: ease of application and professional communication. Lowe and Widiger (2009) extended this research by comparing a variety of dimensional models to the *DSM-IV*. Their findings replicated Samuel and Widiger's (2006) findings, and additionally showed that clinicians gave higher ratings on clinical utility for all dimensional models, except on, again, the ease of application. Although the DAPP-BQ-A was not included in these studies, many of the advantages of dimensional models in general also seem to apply to the DAPP-BQ-A (e.g., client communication, comprehensive of difficulties).

Professional communication. With regard to communication among mental health professionals, dimensional representations of personality pathology have to compete with the widespread familiarity of the *DSM*-categories. A potential advantage of the categorical *DSM*-approach is that it facilitates clinical communication. The terms 'Borderline PD' or 'Antisocial PD' usually lead to immediate understanding among the large majority of clinicians. However, such understanding may be deceiving, for it does not account for substantial heterogeneity within the *DSM* diagnoses. For example, there are 848 ways to qualify for the diagnosis Antisocial PD, yet only one diagnostic label is assigned to characterize all these cases. A dimensional approach offers a potential solution to the problem of substantial heterogeneity within categorical *DSM*-diagnostic categories. Instead of assigning a single *DSM*-defined label, dimensional instruments such as the DAPP-BQ-A capture the complexity of personality pathology by comprehensive dimensional profiles. Moreover, additional pathological dimensions that may require clinical attention, apart from the core features captured by the *DSM-IV* diagnostic label, can be identified. Hence, clinically important information is maintained. Also, clinicians do not treat diagnostic labels. They treat the underlying maladaptive traits. Chapter 3, which showed how the DAPP-BQ-A dimensions map onto the *DSM-IV* PD diagnoses, demonstrated that a dimensional assessment can provide clinicians with clear behavioral descriptions of personality pathology in

adolescents. From these specific dimensional descriptions clinicians can distil specific clues for selecting trait-oriented interventions.

Decision making. According to First and colleagues (2004), perhaps the most important determinant of clinical utility is the extent to which a taxonomy is able to guide clinical decision making. Some clinical decisions are categorical in nature (e.g., inpatient or outpatient treatment, medication or no medication). The categorical *DSM*-system may be more consistent with clinical decisions and hence, better equipped to direct such decisions. However, as argued by Clark (1993b), many clinical decisions require much more than a consideration of two alternatives. Instead, they require a careful consideration of the *degree* to which clinical interventions are necessary. Dimensional personality descriptions may provide more nuanced information necessary for true clinical decision making.

Multi-informants. One method to enhance the clinical utility of an instrument is to combine information from different sources by applying a multi-informant approach. As demonstrated in Chapter 5, the DAPP-BQ-A can be used in multi-informant assessment of personality pathology. Parent-reported information proved to be reliable. Moreover, information on adolescent personality pathology provided by both the adolescent and parent contributed to the understanding of its association with dysfunction. Gathering information from parents may provide a valuable contribution to understanding adolescent personality pathology and its associated dysfunction. Using information from multiple sources may extend the clinician's view on the adolescent's psychopathology and hence, improve decision making on diagnostic and intervention issues.

Normal traits. From a clinical perspective, it may be useful to include assessment of normal personality traits to enhance insight in the patient's strengths, beyond the pathological trait characteristics. As Livesley and Jang (2000) stated, 'a definition of personality disorder as a harmful dysfunction requires an understanding of the adaptive functions of personality and how these functions are impaired' (p. 143). The DAPP-BQ-A is confined to the pathological manifestations of personality. From an empirical point of view, a supplementary model to describe adolescent disordered personality including higher-order dimensions of normal and abnormal personality seems redundant. The findings reported in Chapter 4 showed that, at the higher-order level, adding dimensions of normal personality to those of abnormal personality offered little extra explanatory value to the model. However, at the more fine-grained level of the lower-order facets, combining information from models of normal and abnormal personality may improve diagnostic procedures as well as provide specific indications for treatment interventions. Research has demonstrated that analyses at the lower-order level provided substantial increase in specificity and discrimination between PDs as well as richer description of the PDs compared to analyses at the higher-order level (Bagby, Costa, Widiger, Ryder, & Marshall, 2005a; Reynolds & Clark, 2001). Further research may examine the incremental contribution of lower-order abnormal dimensions (e.g., using the DAPP-BQ-A) over lower-order normal dimensions (e.g., using the NEO-PI-R) in adolescent populations. Such research may provide a more definitive conclusion on the most appropriate and clinically informative dimensions to assess personality pathology in adolescents.

Dysfunction. Associated with the issue of clinical utility is the issue of relations to dysfunction discussed above. Statistical deviance from the normal range on a continuum (i.e., extremely high or low scores) is neither necessary nor sufficient to qualify for disordered personality. Therefore, a description of significant functional impairment secondary to the elevated trait scores should be included within a dimensional assessment of personality pathology. Preferably, such an evaluation of dysfunction includes assessment by well-informed informants, such as parents, clinicians, and/or teachers, on different domains of dysfunction relevant to personality pathology, such as interpersonal, intrapersonal, and school- or work-related problems. More research is necessary to develop age-appropriate criteria in order to provide a comprehensive evaluation of dysfunction associated with adolescent personality pathology. In doing so, attention should be paid to ensure independent assessment of impairment and traits.

In sum, with regard to clinical utility, the DAPP-BQ-A seems a promising instrument. A multi-informant approach may be relevant for diagnostic and intervention purposes. Some additional information may be valuable, such as insight into a patient's standing on normal personality traits, and insight into domains of dysfunction.

Sensitivity to gender differences

Although it has not been studied extensively, previous research has provided some evidence for gender differences in personality pathology. Jang, Livesley, and Vernon (1998) reviewed several studies in adult population on gender differences in the prevalence rates of categorical PDs and in the level of PD traits. The most frequently reported finding is higher prevalence rates in males compared to females for Antisocial and Schizoid PDs (Jang et al., 1998). Research in adolescent samples is limited. One study reported a significant gender effect on Dependent PD, indicating that boys were more likely than girls to receive this diagnosis (Bernstein, Cohen, Velez, Schwab-Stone, Siever, Shinsato, 1993). Another study showed that adolescent female psychiatric patients were more likely than males to meet the criteria of Borderline PD, whereas adolescent male psychiatric patients were more likely than females to meet the criteria of Narcissistic PD. Other PDs were unrelated to gender (Grilo et al., 1996). Grilo and colleagues (1996) suggested that Borderline and Narcissistic PDs may represent extreme manifestations of gender-associated values for females and males, respectively, with females placing greater value on the self-other relationship, and males on the self. It has also been suggested that gender influences the expression of PD traits (Kernberg, Hajal, & Normandin, 1998). For example, narcissistic girls may act more devaluing and aloof, whereas narcissistic boys may brag more. Similarly, borderline girls are likely to internalize their problems and are more dramatic in their emotions, whereas borderline boys show more externalizing and angry behaviours (Bradley, Zittel Conklin, & Westen, 2005).

As described in Chapter 2, many of the DAPP-BQ-A higher- and lower-order dimensions showed significant gender differences. Girls scored higher on almost all lower-order dimensions within the Emotional Dysregulation dimension and on Compulsivity, whereas boys scored higher on Intimacy Problems and on all four lower-order dimensions within the Dissocial Behavior

dimension. This latter finding is consistent with literature demonstrating that externalizing psychopathology is more prevalent in boys compared to girls (Bongers, Koot, Van der Ende, & Verhulst, 2003). Interestingly, gender effects have also been reported in research applying the DIPSI to assess personality pathology in children (De Clercq, 2006). De Clercq reported higher levels of externalizing traits for boys compared to girls (e.g., hyper-active traits, impulsivity, and risk taking), and higher levels of several internalizing traits for girls compared to boys (e.g., extreme order). When applying the DAPP-BQ-A in clinical settings for diagnostic purposes, clinicians may wish to account for gender differences by using separate norms for female and male adolescents, respectively.

Sensitivity to differences in clinical status

A taxonomy of personality pathology should be sensitive to differences in referral status. Moreover, it should be able to differentiate between referred adolescents that do and those that do not meet the criteria for a PD as defined by the *DSM-IV*. Chapter 2 reported on the analyses examining the sensitivity of the DAPP-BQ-A. The results showed that the DAPP-BQ-A scores on many higher- and lower-order dimensions were different for non-referred, referred non-PD, and referred PD adolescents. Effects were particularly strong for higher-order Emotional Dysregulation, and lower-order Identity Problems and Self Harm, with lowest scores for non-referred adolescents, and highest scores for referred PD adolescents. In addition, Receiver Operating Characteristic analyses showed that many higher- and lower-order dimensions demonstrated significant accuracy in the discrimination between non-referred, referred non-PD, and referred PD adolescents. Again, Emotional Dysregulation, Identity Problems, and Self Harm performed particularly well, indicating that these dimensions are especially sensitive to differences in clinical status.

The results reported in Chapter 2 also showed that none of the four dimensions within the higher-order domain Dissocial Behavior reached significance in the discrimination between non-referred and referred adolescents. However, in the distinction between referred non-PD and referred PD adolescents, three of the four showed significant accuracy. These findings seem to demonstrate that traits associated with dissocial behavior are especially indicative of personality pathology in adolescents with elevated levels of psychopathology (as indicated by their referral status), despite the fact that these traits do not discriminate between referred and non-referred adolescents.

Cross-cultural application

By translating an instrument originally developed for English-speaking respondents, it is assumed that the constructs assessed by the instrument transcend languages and cultures. Evidence on the cross-cultural generalizability of the factorial structure of the Five-Factor Model of personality across six languages (McCrae & Costa, 1997) seems to support this assumption. According to Allik (2005), several methods exist to establish the cross-cultural comparability of personality trait measures. First, it is needed to demonstrate that the scales are internally reliable. With respect to the DAPP-BQ-A, Chapter 2 illustrated that the internal consistency proved to be

satisfactory for all lower-order dimensions, with the exception of Intimacy Problems. Second, a high degree of factorial structure invariance should be demonstrated. The factorial structure of the DAPP-BQ-A was examined in Chapter 2 and proved to be a strong replication of the original structure. Moreover, research has shown that the factorial structure is highly similar in English Canadian (Livesley, Jang, & Vernon, 1998), French Canadian (Brezo, Paris, Tremblay, Vitaro, Turecki, 2008), North-American (Bagge & Trull, 2003), German (Pukrop, Gentil, Steinbring, & Steinmeyer, 2001), Dutch (Van Kampen, 2002, 2006), Japanese (Maruta, Yamata, Iimori, Kato, & Livesley, 2006), and Chinese (Wang, Du, Wang, Livesley, & Jang, 2004; Zheng et al., 2002) adult populations. With high internal reliability and invariant factorial structure across cultures, a next step could be to compare mean level scores across cultures. The DAPP-BQ-A version developed in the present thesis has not been tested in other languages or cultures. In fact, any version of the DAPP-BQ has been applied to adolescent populations only to a very limited extent. Krischer, Sevecke, Lehmkuhl, and Pukrop (2007) reported on a study applying the German version of the DAPP-BQ developed for adults (Pukrop et al., 2001) to 146 incarcerated youths (ages 14 to 19 years) and 98 nonincarcerated control students. A comparison of mean level scores between the present study and the Krischer et al. study would not be meaningful, given the different sample characteristics and instrument versions.

Sensitivity to stability and change

As described in the introductory chapter of this thesis, recent studies have suggested that some diagnostic PD criteria reflect fluctuating symptoms, whereas others represent more stable temperamental traits (Cohen, Crawford, Johnson, Kasen, 2005b; Skodol et al., 2005; Zanarini, Frankenburg, Hennen, Reich, & Silk, 2005). In applying *DSM-IV* PD categories, such nuances in the longitudinal stability are easily overlooked. Since the DAPP-BQ-A conceptualizes personality pathology as dimensions underlying the categories and places those dimensions on a continuum, it seems that this instrument is more compatible with the recent evidence on the differential stability of PD traits.

Predictive validity

The study described in the present thesis applied a cross-sectional design. Therefore, it was not possible to draw conclusions on the predictive validity of adolescent personality pathology dimensions as assessed using the DAPP-BQ-A. To our knowledge, longitudinal studies investigating long-term outcomes of personality pathology dimensions in adolescent patient samples have not been described in the literature. Some longitudinal evidence is available from the Children in the Community (CIC) Study. The findings from this epidemiological investigation, which followed a large sample of children into adulthood (Cohen et al., 2005b), have been described in more detail in the introductory chapter of this thesis. In addition, De Clercq (2006) examined the two-year prediction of internalizing and externalizing problem behavior from the DIPSI dimensions in children in a community sample. The findings demonstrated significant relations between maladaptive traits and internalizing and externalizing behavior two years later, even after controlling for the effects of general personality traits. It

would be highly interesting to complement the findings from these community studies with studies in adolescent patient samples on the longitudinal course of personality pathology and its impact on clinical outcomes.

Understanding adolescent personality pathology

The second aim of this thesis was to extend knowledge on personality pathology in adolescents when conceptualized using a dimensional model. With regard to the structure of personality pathology in adolescence, it can be concluded from Chapter 2 that the dimensions can be organized in a hierarchical structure. More importantly, when compared to previous literature, this structure seems to be stable across clinical and non-clinical samples, across cultures and across developmental stages. The structural continuity across childhood, adolescence and adulthood underscores the need for a developmental perspective on personality pathology.

Chapter 2 also examined the classification accuracy of lower-order DAPP-BQ-A dimensions to discriminate between non-referred adolescents, referred adolescents without a PD, and referred adolescents with a PD. Discriminating between the last two subgroups is especially hard due to subthreshold PD symptom levels in the group of referred adolescents without a full PD diagnosis. However, dimensions that are able to discriminate between these two groups are particularly informative as indicators of personality pathology independent of influences of referral status. The results showed that several higher- and lower-order dimensions seemed especially indicative of personality pathology in adolescents: Emotional Dysregulation, Suspiciousness, Self Harm, Dissocial Behavior, and Conduct Problems. Interestingly, although lower-order dimensions within Dissocial Behavior (Stimulus Seeking, Callousness, and Conduct Problems) did not differentiate referred and non-referred adolescents, they were able to discriminate between referred adolescents without and with a PD. This seems to suggest that to a certain extent dissocial behaviors may be normative for adolescents, and that elevated levels of dissocial behavior do not necessarily imply the presence of personality pathology. However, at a certain level these behaviors exceed normality and become possible indicators of personality pathology.

Dimensions of personality pathology were related to *DSM-IV* PD symptoms. The results described in Chapter 3 provide insight into the characteristic features of adolescent personality pathology when conceptualized using a dimensional model. The emerging relations between dimensions and PD categories are conceptually meaningful and may not be very surprising for those familiar with the *DSM-IV* categories. More interesting is the finding that a dimensional representation of these PD categories provides valid descriptions of adolescents' personality pathology. In addition, the dimensional manifestations offer clear behavioral descriptions of personality pathology in adolescents that may be used to identify specific indications for treatment interventions. For example, adolescents meeting Dependent PD criteria seem to rely heavily on other people for decision making and support, as well as for approval. They may be preoccupied with fears of being left alone and will seek proximity continuously. They seem to have difficulty in expressing disagreement with other people. Manifestations of adolescent

Borderline PD include problems of affect regulation and self-mutilation. Borderline adolescents tend to act impulsively, engage in risk-taking behaviors, and continuously seek new stimuli. They can be further characterized by perceptual-cognitive dysfunction and low trait anxiety. Similarly, dimensional manifestations of most other specific adolescent PDs were identified.

In terms of the underlying dimensions, adolescent PDs may to some extent be less crystallized than adult PDs. The results described in Chapter 4 demonstrate that the degrees of differentiation and specialization of adolescent disordered personality are even smaller than those of adult disordered personality. The more diffuse structure in adolescence may be inherent to the developmental stage, with personality characteristics not yet fully crystallized. Alternatively, the overlap may be caused by higher overall PD symptom levels during adolescence compared to adulthood, especially when assessed in a clinical sample. Chapter 4 also suggests that adolescent PDs are more than extreme, maladaptive variants of normal personality traits. Important characteristics of adolescent PDs above and beyond normal traits include identity problems, self-harmful behaviors, hypervigilance, submissive attitude, and cognitive dysfunction.

The results described in Chapters 5 and 6 can help to understand the dysfunctional nature of adolescent personality pathology dimensions. Clearly, the DAPP-BQ-A dimensions are related to dysfunction in domains relevant to personality pathology, including intrapersonal, interpersonal, and school- or work-related problems. Moreover, adolescent personality pathology accounts for additional explained variance in dysfunction over and above Axis I psychopathology. In addition, the DAPP-BQ-A dimensions may be differentially related to domains of dysfunction. Some dimensions were more frequently related to dysfunction than others. This seems to suggest that elevated levels of, for example, Social Avoidance, Stimulus Seeking, and Conduct Problems are dysfunctional across a wider range of domains than elevated levels of, for example, Narcissism, Restricted Expression, and Intimacy Problems. Similarly, some dimensions were more strongly related to dysfunction than others. The strongest relations with dysfunction were found for Self Harm, Social Avoidance, Identity Problems, and Conduct Problems. Third, elevated levels of some dimensions did not uniformly indicate dysfunction across domains. For example, high levels of Submissiveness appeared as a risk factor for dysfunction in the domain of Moods/emotions, whereas they were a protective factor against dysfunction at Home. Domain-specific associations with dysfunction were also found for Identity Problems, Anxiety, Social Avoidance, and Insecure Attachment. When applying a dimensional approach to conceptualize disordered personality, it seems important to simultaneously assess levels of dysfunction associated with trait elevations of personality psychopathology, to ascertain *disorder* of personality. Doing so, it may be critical to be aware of the possibility that similar trait elevations are not equally distressing across traits or across domains of functioning.

Adolescent personality pathology is related to a wide range of background factors. First, almost all dimensions are differentially related to gender (Chapter 2). Girls score higher on the dimensions Emotional Dysregulation (and on almost all its lower-order dimensions) and Compulsivity, whereas boys score higher on Dissocial Behavior (and all its lower-order dimensions) and Inhibitedness. Second, age was related to Dissocial Behavior (and three of its

lower-order dimensions), Oppositionality, and Narcissism, indicating that older adolescents scored higher on these dimensions. Chapter 6 explored associations between the four higher-order personality pathology dimensions and a variety of possible personal and ecological factors. Overall, the likelihood of personality pathology seems to be increased in those adolescents characterized by poor school functioning, past psychiatric treatment, drug use, experience of stressful life events, and poor social support.

Strengths and limitations

This thesis contributes to a better understanding of personality pathology in adolescents. To our knowledge, it is the first study that examines dimensions of personality pathology in a large sample of referred adolescents. This increased the likelihood of studying extreme levels of personality pathology when compared to investigations in general population samples.

A second strength is the inclusion of a large sample of non-referred adolescents. This offered the opportunity to study some general assumptions underlying the dimensional approach. If the dimensional approach is valid, its dimensions can be retrieved in both referred and non-referred samples, they show a similar factorial structure across samples, and they are associated in meaningful ways to correlates in both referred and non-referred samples. The results in Chapters 2 and 6, (partly) based on data from the general population sample, helped to underscore these assumptions. In addition, the inclusion of a large general population sample provided the necessary power for analyses on the psychometric properties of the DAPP-BQ-A as described in Chapter 2. Moreover, by demonstrating that the DAPP-BQ-A is also capable of reliable and valid assessment of personality pathology in general population adolescents, this thesis may stimulate earlier detection of pathology in those adolescents who may be at risk for developing full-blown pathology, but who have not applied for psychological treatment.

A methodological strength of the present thesis concerns the operationalization of *DSM-IV* PD traits through a structured clinical interview, the SCID-II (First, Spitzer, Gibbon, & Williams, 1997; Weertman, Arntz, Dreessen, Van Velzen, & Vertommen, 2003). The multi-method approach afforded the opportunity to compare interview-based data with self-report questionnaire data. In addition, the multi-informant design facilitated combining information from adolescents, parents, and clinicians. These study characteristics contributed positively to the thesis' impact.

Another contribution of this thesis concerns the different conceptualizations of dimensional models. Dimensions of both normal and pathological personality were assessed. Hence, both models could be evaluated in terms of their respective and incremental contributions in the description of PD symptoms in adolescents. The results offered valuable information on the dysfunctional characteristics of adolescent PDs.

This thesis should be considered in light of its limitations. One limitation refers to the cross-sectional design applied in the present study. Questions on stability or the predictive validity of personality pathology dimensions could not be answered due to the lack of longitudinal data.

Another limitation of this thesis concerns the criterion against which the value of the dimensional model of personality pathology, the DAPP-BQ-A, was tested. *DSM-IV*-based PD descriptions are increasingly criticized (Trull & Durrett, 2005). The prediction of *DSM*-defined PD symptoms should therefore not be the ultimate goal of dimensional models. However, no good alternatives are currently available. Also, the *DSM*-system still is the most widely used taxonomy in research and clinical practice.

General conclusions

The main conclusion that can be derived from this thesis is that personality pathology dimensions can be assessed in adolescents in a reliable and valid manner. A dimensional model, as operationalized with the DAPP-BQ-A, offers a valuable alternative to the categorical *DSM*-model. The findings thus underscore what has been asserted repeatedly in research with adults (Trull & Durrett, 2005). Assessment of personality pathology dimensions, using the DAPP-BQ-A, offers a potential answer to the problems of a categorical approach, such as high degrees of co-occurrence, substantial heterogeneity within PD categories, loss of information, and inadequate coverage. Also, from a clinical perspective, dimensional assessment may provide the clinician with clear behavioral descriptions of personality pathology in adolescents and thereby with specific, trait-oriented indications for treatment interventions.

From a dimensional perspective, adolescent PDs seem to be characterized by high Emotional Dysregulation/Neuroticism, high Dissocial Behavior/Disagreeableness, and high Inhibitedness/Introversion. These dimensions, common across many different PDs, may account for the co-occurrence between PD categories. Dimensions at the lower-order level seem necessary for a better differentiation and a fully comprehensive picture of adolescent personality pathology. Lower-order dimensions representing intrapersonal (e.g., Identity Problems) and interpersonal characteristics (e.g., Submissiveness), traits indicating disturbed prosocial behavior (e.g., Callousness), as well as dysfunctional behavioral traits (e.g., Cognitive Distortion) seem to capture unique maladaptive aspects of adolescent disordered personality. The lower-order dimension Self Harm possibly functions as a more common indicator of the severity of personality pathology.

From a developmental perspective, the present findings demonstrate striking parallels with studies in child and adult samples. First, a similar hierarchical structure of dimensional models can be found across childhood, adolescence, and adulthood. Second, relations of personality pathology dimensions with the *DSM-IV* PD categories were largely consistent with those reported for adults. In addition, the reported associations with normal personality dimensions allow for further research into the developmental trajectories of normal to abnormal and disordered personality.

Implications

The findings presented in this thesis have several implications for both clinical practice and future research activities. First and foremost, the findings call for changes in diagnostic procedures in clinical settings. With personality pathology dimensions identifiable as early as adolescence, their assessment should be included in standard diagnostic procedures in youth mental health centers. Early detection can result in significant reductions of personal distress and societal costs. Adolescent personality pathology should be assessed applying a dimensional approach. Its advantages over applying the *DSM-IV* PD categories are numerous. The DAPP-BQ-A seems a reliable and valid instrument for the assessment of personality pathology dimensions in adolescents. Furthermore, dimensional assessment of adolescent personality pathology may profit from a multi-informant approach. Valuable additional information can be obtained from well-informed others, such as parents or teachers. In addition, the assessment of adolescent personality pathology may be supplemented with assessment of normal personality traits to enhance insight in the adolescent's strengths, beyond the pathological trait characteristics. And finally, in order to obtain a fully comprehensive picture of adolescent personality pathology it may be necessary to include assessment of dysfunction independent of personality traits.

In terms of treatment interventions, an important implication of the present findings is the need to look beyond the more prominent Axis I psychopathology. Co-occurring personality pathology is likely to account for additional functional impairment. Interventions should include treatment of these problems in order to reduce dysfunction to the largest extent possible.

In terms of future research activities the implications of the present thesis are many. The findings underscore the need for investigations of personality pathology across a wider developmental span than currently common. The DAPP-BQ-A seems a valuable instrument for research (as well as clinical) purposes. It provides a highly detailed picture of personality pathology. In addition, research into the developmental trajectories of temperament, personality, and psychopathology may wish to incorporate dimensions of abnormal personality for a comprehensive view on the possible pathways into disordered personality.

A final implication concerns the construction of the future edition of the *DSM*. A developmental and dimensional perspective on the *DSM-V* seems inevitable.

Future directions

Future studies on adolescent personality pathology may wish to incorporate longitudinal designs. Building on initial conceptual investigations (Mervielde et al., 2005; Shiner, 2005; Shiner & Caspi, 2003), empirical research into the developmental trajectories of temperament and normal personality traits, via abnormal traits, into disordered personality seems warranted. Such research may also disclose possible relations of personality and psychopathology as proposed by Krueger and Tackett (2003).

Longitudinal studies using a dimensional approach may also wish to investigate the recently proposed differential stability of personality traits. Based on research examining *DSM-IV* defined PD traits (Cohen et al., 2005b; Skodol et al., 2005; Zanarini et al., 2005), it would be expected that certain dimensions represent fluctuating symptoms, whereas others reflect more stable personality traits. For example, the dimension of Self Harm may be fluctuating over time. This dimension may be an indicator of the acute severity of personality pathology. The dimension of Affective Instability may follow a more chronic course.

Another issue that can be examined by future longitudinal studies concerns the influence of maturation processes on mean-level changes in personality pathology dimensions. Research has suggested that personality pathology is highest in early adolescence and declines thereafter (Johnson et al., 2000a). Indeed, the majority of adolescents may show elevated scores on certain dimensions of personality pathology. However, some of them will continue to score highly on these dimensions as they grow older, whereas others will show expected declines due to increases in social competence or goal-related self-control (Cohen et al., 2005b). Possibly, the longitudinal course of the dimensions within Dissocial Behavior scores may illustrate this mechanism. The results described in Chapter 2 demonstrated that Dissocial Behavior dimensions seemed especially indicative of personality pathology, with significantly higher scores for referred adolescents with a PD compared to non-referred adolescents and referred adolescents without a PD. Whereas many adolescents will engage in risk-taking behaviors, it may be only those with personality pathology that continue to do so during the transition to adulthood.

Regardless of the adequate psychometric properties of the DAPP-BQ-A, it should be noted that several aspects of the instrument need further investigation. The lower-order dimension of Intimacy Problems needs further adaptations. As currently operationalized it may represent a diffuse construct. Also, from a textual point of view, many items within this dimension include negations, and may hence be more difficult to respond to (Nunnally & Bernstein, 1994). Second, the DAPP-BQ-A dimension of Compulsivity may represent an adaptive rather than a maladaptive construct. Further adaptations are necessary to ensure that maladaptive consequences of compulsive behavior are captured by the Compulsivity items.

To further examine the DAPP-BQ-A as a comprehensive conceptualization of adolescent personality pathology, future research can compare this instrument with an age-specific item pool of trait-related symptoms in childhood, the Dimensional Personality Symptom Item pool (DIPSI; De Clercq, De Fruyt, Van Leeuwen, & Mervielde, 2006). The DIPSI was developed specifically for use in childhood populations. Construction started from the full range of trait-related symptoms manifested in childhood using a bottom up strategy, and was supplemented by a top down approach by screening for additional descriptors in two instruments that assess adult personality pathology.

Although the DIPSI was designed to assess personality symptoms in children, it has also been applied in adolescent populations. The DAPP-BQ-A was constructed solely using a top down technique by departing from an adult conceptualization. Hence, it may be argued that the DAPP-BQ-A does not cover personality pathology traits that are especially applicable to adolescent populations. However, a conceptual comparison of the DIPSI and the adult DAPP-

BQ (De Clercq et al., 2006) showed strong correspondence between the lower-level structures of both instruments. This is remarkable, since it is relatively hard to find a common ground across dimensional models at the lower-order level (Widiger & Simonsen, 2005). Nevertheless, the DIPSI includes three facets resulting from the bottom up approach that, according to De Clercq and colleagues (2006), do not seem to be fully captured by the DAPP-BQ lower-order dimensions. These are Hyperactive traits (e.g., Can never sit still), Hyperexpressive traits (e.g., Exhibits his/her inner feelings at all occasions), and Inflexibility (e.g., Cannot adjust to sudden changes in plans). Although not yet supported by empirical evidence, it may be hypothesized that the DIPSI Hyperexpressive traits scale is negatively associated with the DAPP-BQ-A dimension of Restricted Expression (e.g., I do not often show my feelings). At the same time, the DAPP-BQ-A includes several lower-order dimensions not included in the DIPSI that seem highly relevant to personality pathology in adolescent populations (e.g., Identity Problems, Self Harm, Cognitive Distortion). Thus, it seems that approaches starting from childhood and adulthood yield strongly overlapping as well as somewhat discrepant dimensions of personality pathology. This seems to suggest that adolescence, the developmental period in between childhood and adulthood, could be regarded a period of transition in terms of personality pathology. An empirical joint investigation of the DAPP-BQ-A and the DIPSI in adolescent samples, which is in preparation, will have to shed a more definitive light on the most comprehensive conceptualization of personality pathology at young ages.

Finally, the DAPP-BQ-A in its current form includes 290 items. In terms of clinical utility as well as applicability in research designs, it should be concluded that the instrument is too long and thus, too time-consuming. Considering the promising characteristics of a short form of the DAPP-BQ for adults (Van Kampen, De Beurs, & Andrea, 2008), it may be interesting to examine an equivalent in adolescent samples. Future research will have to determine whether the adequate psychometric properties of the DAPP-BQ-A in its current form will be preserved when the number of items is reduced.