Eating disordered behaviour as personality pathology: a dimensional approach.

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Abstract

Eating disordered behaviour as personality pathology: a dimensional approach.

Eating disorders are known as symptom-and clinical disorders with a persistent and severe nature. Often personality disorders are found as comorbid disorders besides the eating disorder. For over the last years, many studies have been conducted to examine the associations between eating disorders and personality traits, features, and disorders. Several researchers concluded personality to be of significant importance in eating disordered behaviour. Dimensionally approached, eating disorders fit better the field of personality pathology and are thereby linked to personality disorders. This literature study will outline several reasons why eating disordered behaviour is a personality problem rather than solely a clinical disorder and hopefully will increase the chance for a new insight in eating disorders.

Introduction:

Eating disorders (ED) are known as symptom- and clinical disorders characterized by persistency and severity, uncertain pathogenesis, high resistance to treatment, high comorbidity and high prevalence. More arguments rise in the discussion that eating disorders are no longer just symptom disorders but that they are associated with underlying personality pathology. Over the last years, the number of studies researching the involvement of personality traits and dimensions in eating disorders has increased (Bollen & Wojciechowski, 2004; Cassin & Von Ranson, 2005; Cloninger, Przybeck, & Svrakic, 1991; Fassino et al., 2004; Fassino et al., 2001; Fernández-Aranda et al., 2004; Kleifield et al., 1994; Lilenfeld et al., 2006; Rousset et al., 2004; Serpell et al., 2006; Skodol, 2005; Speranza et al., 2005; Vervaet, Heeringen, & Audenaert, 2004; Vitousek & Manke, 1994; Wonderlich & Mitchell, 1994). The question rises if clinicians should merely focus on the symptoms displayed in the categorical systems, certainly now the dimensional models are growing, broadening and are gaining interest in the field of psychopathology. The question if it is better to view at eating disorders as a disordered or problematic personality seems to become more evident and there seems to exist high correlations and associations between personality pathology and disordered eating. One could ask which personality characteristics are important and are to be emphasized when diagnosing, treating and evaluating an eating disorder. This article will consider those questions.

Methods:

The idea that eating disorders could be associated with personality pathology came to mind at the European Congress of Psychiatry, during a course about the management of eating disorders. For over half a year there has been extensive thoughts

and discussions with students and colleagues of our faculty about the possible influence of personality factors- and traits in eating disorders. In June 2008 the decision was made to write an article about the subject. To answer the above questions a comprehensive search of the PsycInfo and PubMed electronic databases was conducted in June 2007 for studies of personality and EDs. Keywords used were; eating disorder, anorexia, anorexia nervosa, personality disorder, dimensional, traits, personality inventory, and temperament. Important criteria for the used articles was that they identified or discussed associations between eating disorders and personality. When reading the literature it became clear that some clinical features are to be associated with disordered eating instantly. Among that features are; obsessive-compulsive traits; alexithymie and perfectionism. Studies exploring personality and EDs have examined the contribution of personality using different methods. Self report measures of specific (dimensional) personality traits were of great relevance in selecting an article for this review.

Results:

Models of explain personality in eating disorders

For the field of personality disorders there has been general acceptance that these are displayed better in a dimensional classification system rather than in a categorical classification system and that the dimensional approach contains superior validity (Livesley, 2007; Verheul, 2007). Today, clinicians are able to choose from a widespread amount of dimensional models to diagnose and these models give the possibility to give a broad representation of personality. According to Verheul (2007) there are four groups of dimensional models; 1) dimensional versions of existing categories; 2) dimensional reorganizations of symptoms and personality disorders; 3) clinical spectra-models; and 4) dimensional models of general functioning. Particularly

the last group seems to be interesting for eating disorders, the Five-Factor Model (NEO Personality Inventory-Revised) and seven-factor model of Cloninger (Temperament and Character Inventory-Revised) are used intensively in studies assessing personality (see Bollen & Wojciechowski, 2004; Cassin & Von Ranson, 2005; Fassino et al., 2004; Fassino et al., 2001; Fernández-Aranda et al., 2004; Klump et al., 2004; Lilenfeld et al., 2006; Vervaet, Heeringen, & Audenaert, 2004). One of the difficulties in examining the influence of personality features in EDs is that it cannot be know with absolute certainty whether personality characteristics observed in ED-patients antedate the onset of their illness or are merely correlates of the disease process itself (Klump et al., 2004). Another difficulty is that a lot of studies are retrospective and some traits seen in eating disordered behaviour are not traditional personality traits like drive for thinness, sensation seeking and impulsivity.

An increasing number of studies involving personality dimensions have been conducted and most of them are consistent in reporting the complex relation between personality characteristics and eating disorders (Cassin & Von Ranson, 2005). Personality is frequently displayed in personality traits. Several tests are proven to be useful in assessing personality features and variables, among them are the Five-Factor Model (NEO Personality Inventory-Revised) and the Temperament and Character Inventory of Cloninger. The Five Factory Model is the most accepted model of personality and measures five broad dimensions of personality; 1) Extraversion; 2) Agreeableness; 3) Conscientiousness; 4) Neuroticism and; 5) Openness to Experience (Eysenk, Eysenk, & Barratt, 1985). The seven factor model measures personality on seven dimensions. Four of them are related to temperament; 1) Harm Avoidance; 2) Novelty Seeking; 3) Reward Dependence; 4) Persistence. The other three dimensions

are related to character; 5) Self-directedness; 6) Cooperativeness and; 7) Self-transcendence (Cloninger, Przybeck & Svrakic, 1991). The relation between personality characteristics can be explained from three different models; the predisposition, scar, and common models. The predisposition model supposes that a person is vulnerable for developing an eating disorder by the mere existence of specific personality characteristics in the personality of the person. The scar-model emphasizes that some personality characteristics are reinforced by the presence of an eating disorder. In the common-model eating disorders lack a relation with a problematic personality but are caused by a third variable that enlarges the risk for an eating disorder (Bloks, 2004).

Those studies that have examined the association between personality characteristics and disturbed eating behaviour show consistent patterns and results (Cassin & Von Ranson, 2005). In those studies examining ED-patients, the patients are divided into different subgroups according to pathology related to the diagnosis of the Diagnostic and Statistical Manual of mental disorders (DSM-IV). The most common subgroups in studies involving eating disorders are; anorexia nervosa restricting type (ANR); anorexia nervosa binge eating/purging type (ANB); bulimia nervosa (BN) and; binge eating disorder (BED). It is suggested that the subgroups have their own disturbed underlying constructs of personality.

Personality traits in eating disorders

Neuroticism is characterized by a predisposition towards emotionality, hypersensitivity, anxiety, worry, moodiness, and depression. Individuals with EDs score higher on neuroticism and openness to experience but lower on agreeableness than

healthy controls (Bloks, 2004; Bollen & Wojciechowski, 2004; Cassin & Von Ranson, 2005). The few studies that have examined the association of conscientiousness suggest that patient with an eating disorder of the restrictive type (ANR) score higher on conscientiousness than patients with a bulimic pathology and healthy control groups (Bollen & Wojciechowski, 2004; Cassin & Von Ranson, 2005). The same pattern is displayed in the dimension impulsivity, where ANR-patients show less impulsivity than not-psychiatric control groups. In opposite, bulimia nervosa patients show higher levels of impulsivity (Claes, Vandereycken, & Vertommen, 2002). A possible explanation could be the emotional instability associated with bulimic pathology. Impulsivity in eating disorders is also associated with anger and frustration, these forms of negative emotionality and neuroticism are often seen in eating disordered behaviour and seem to be good predictors for the development of an eating disorder (Bloks, 2006; Fassino et al., 2001; Klump et al., 2004; Leon et al., 1993; Leon et al., 1999; Lilenfeld et al., 2006). Patients with an anorexic eating disorder show, in contrast to bulimic patients, a high tolerance and less frustration, supposedly because they have pathologically less tendency to engage in conflicts. They also turn their anger and frustration towards themselves in stead of the environment. Binge eating and overeating are associated with a lack of skills to manage and control emotions (Fassino et al., 2004).

In personality assessment tests, bulimic patients rather than anorexic patients score higher on novelty seeking indicating a possible predisposition to manifest feelings of anger, impulsivity and intolerance (Cassin & Von Ranson, 2005; Fassino et al., 2001; Kleifield et al., 1994). Patients with an eating disorder tend to score higher on the dimension; sensation seeking, especially patients with a bulimic pathology (ANB, BN, BED). Although ANR-patients score significantly lower on sensation seeking compared

to bulimic patients, they have similar levels of sensation seeking than control groups with a psychiatric pathology. In a study of Kleifield and colleagues (1994) all ED-groups scored significantly higher on harm avoidance than the controls, the ANR-patients scored lower than the ANB- and BN-patients. Another important personality feature involved in eating pathology is the drive for thinness, although this is not yet considered a traditional personality dimension, few studies empathize the association between drive for thinness and eating disorders (Jiménez-Murcia et al., 2007; Lilenfeld et al., 2006; Vervaet, Van Heeringen, & Audenaert, 2004). A low drive for thinness is associated with less eat-related pathology and less severe psychopathology, especially in patients with restrictive anorexia nervosa (Jiménez-Murcia et al., 2007; Vervaet, Van Heeringen & Audenaert, 2004). Drive for thinness and dissatisfaction with the own body is seen as an important predictor for the development of an eating disorder over time (Lilenfeld et al., 2006). One of the limiting factors in research involving personality dimensions in eating disorders is the relative instability of the diagnosis of anorexia nervosa and its subtypes over time. A significant percentage of restrictive anorexia nervosa patients will eventually evolve into anorexia nervosa from the purging type, and the transcendence from anorexia nervosa to bulimia nervosa is also far from rare (Bollen & Wojciechowski, 2004; Speranza et al., 2005). Table 1 contains a schematic survey of the different personality dimensions associated with the different subgroups of eating disordered patients.

INSERT TABLE 1 HERE

Clustercomorbidity

A serious problem in eating disorders is the presence of a personality disorder together with the eating disorder, referred to as clustercomorbidity. The presence of a personality disorder increases the vulnerability for the development of an eating disorder (Fernández-Aranda et al., 2004). Besides that, each subgroup of eating pathology seems to have it's own specific associations with personality disordered behaviour. Personality disorders of the dramatic cluster, especially the borderline personality disorder, are often found in patients with bulimia nervosa (Klump, 2004; Skodol, 2005; Torres Pérez, Del Río Sánchez, & Borda Mas, 2008; Zanarini et al., 1998) which could significantly decrease the efficiency of the treatment (Bloks 2004; Cassin & Von Ranson, 2005; Klump 2004). In a follow-up study conducted five years ago, researchers found that the presence of a borderline personality disorder next to an eating disorder could have a negative influence on the treatment outcome (Wonderlich & Mitchell, 1994). Personality disorders of the fear/anxiety cluster (obsessive-compulsive; dependent; avoidant) appear most in patients with an eating disorder, even after remission (Cassin & Von Ranson, 2005; Lilenfeld, 2006; Skodol, 2005). In almost 45% of the patients with anorexia nervosa a personality disorder of het anxiety cluster is diagnosed as a comorbid disorder (Bloks, 2004). Personality disorders of the dramatic cluster (borderline; narcissistic; histrionic; antisocial), or symptoms of those personality disorders, are not rarely found in patients with, or recovered from, an eating disorder with bulimic pathology (Lilenfeld, 2006; Skodol, 2005). Patients with bulimia nervosa, display a comorbid cluster C or B personality disorder in 44% of the cases (Bloks, 2004). Like the contradictive conclusions in studies examining personality dimensions in eating disorders, studies examining clustercomorbidity in eating disorders are just as unambiguous. Recent prospective research involving bulimia nervosa patients and

patients diagnosed with an eating disorder not otherwise specified (NOS) shows that nor the presence nor the intensity of a personality disorder is of importance in the natural cause of an eating disorder (Grilo et al., 2003). Patients with an eating disorder who besides the mere diagnostic features also suffer from symptoms of cluster-B personality disorders, can exhibit a high level of narcissistic behaviour in their social interaction. Narcissism is a pervasive pattern of grandiosity, need for admiration, and lack of empathy (A.P.A., 2000; Hengeveld & Van Balkom, 2005) and can be interpreted as a personality pathology that involves the physical appearance and representation with need for external validation by the social peers and environment. In narcissistic pathology, intense interpersonal sensitivity is considered a key element (Cassin & Von Ranson, 2005), which conforms the behaviour displayed by patients with an eating disorder of the bulimic type. Furthermore, narcissistic behaviour, or elements of that pathology, can remain even after remission of bulimia nervosa.

Egodystonic features and ambivalence

Another view in the approach of eating pathology as personality pathology forces us to focus on the egodystonic behaviour that often appears in patients with anorexia nervosa. The DSM-IV-TR (Diagnostic and Statistical Manual of mental disorders/Text-Revision) mentions in his diagnostic features that; “the individual is often brought to professional attention by family members after marked weight loss (or failure to make expected weight gains) has occurred. If individuals seek help on their own, it is usually because of their subjective distress over the somatic and psychological sequelae of starvation. It is rare for an individual with Anorexia Nervosa to complain of weight loss per se. Individuals with Anorexia Nervosa frequently lack insight into, or

have considerable denial of, the problem and may be unreliable historians" (American Psychiatric Association, 2000, p. 584). The substantial denial, or lack of insight into the problem of disease can be considered a serious problem in anorexia nervosa. Feelings that are not in full harmony with the ego or 'self' (ego-dystonic feelings) are feelings that are often found in personality disordered patients and are repeatedly found in patients with an eating disorder (Serpell et al., 2004). Not seeking for help, malformed perception, and the disturbed insight in the disorder or disease all are features that enforce the proposition that eating disorders have a disturbed ego-basis. This makes an underlying problematic personality more credible. A number of authors have highlighted the egosyntonic nature of anorexia nervosa as perceived by sufferers (Serpell et al., 2004). Together with the lack of insight and malformed perception, anorexic patients often lack the motivation to seek help. An other possible explanation for the lack of motivation could be the present ambivalence in the pathology. On the one hand, denial of the disorder is enforced by the functionality of the weight loss and "improved" body shape. On the other hand, there are the negative consequences for the patient (Bloks, 2006). Motivation seems a good indicator for treatment response; motivation correlates positive with weight increase in the first 8 weeks of hospitalisation amongst adolescents and adults with anorexia nervosa (Rieger & Touyz, 2006). The same researchers found that problems in the motivation can be pervasive in different symptoms of anorexia nervosa, possible due to the present ambivalence, ego-syntonic features, and anxiety about weight and body-shape.

Perfectionism

Perfectionism as a personality characteristic or feature is not directly mentioned in the chapters describing eating disorders in the DSM-IV-TR of ICD-10 (International Classification of Diseases). However, perfectionism is a central feature in eating disorders (Halmi et al., 2005), and is often associated with eating disorders (Cassin & Von Ranson, 2005). Perfectionism is characterized by the tendency to maintain and keep high and unrealistic standards, in spite of the existence of opposite consequences. Eating disordered patients keep unrealistic personal standards for themselves and believe that peers judge them rigid and sour. Since 1990 a multidimensional conceptualization replaced the unidimensional view of perfectionism (Cassin & Von Ranson, 2005). One of those multidimensional perspectives involves the (mal)adaptive aspects of perfectionism. Patients with an eating disorder have significant higher levels of neurotic perfectionism (anxiety about performance) and normal perfectionism (high personal standards) in compared to university controls and patients with an obsessive compulsive disorder (Cassin & Von Ranson, 2005; Lilenfeld et al., 2006; Jiménez-Murcia et al., 2007). Perfectionism is more associated with features of an obsessive-compulsive personality than features of a clinical obsessive compulsive disorder (OCD). The combination of perfectionism with an obsessive-compulsive personality disorder (OCPD) could be a relevant behavioural characteristic which can lay at the basis of the vulnerability for eating disordered pathology (Halmi et al., 2005). Although several studies report that there is an association between perfectionism and eating disorders, there is no absolute certainty that perfectionism could be associated specifically with disturbed eating or with maladapted behaviour in general.

Obsessive and compulsive traits

The association between eating disorders and obsessive-compulsive behaviour, of traits of that behaviour, has been investigated in several studies. Both obsessive and compulsive traits (including; doubting; controlling; checking; need for symmetry and exactness; memorizing calories in food-products) are associated with disturbed eating in university and clinical samples (Cassin & Von Ranson, 2005; Jiménez-murcia et al., 2007). The rising question in this matter is not limited to the hypotheses questioning the existence of associations between obsessive and compulsive behaviour and eating disorders but also to the matter of comorbidity or a more specific, not yet categorically described, pathology. Otherwise defined; "is compulsive and obsessive behaviour a separate disorder beside the eating disorder? Or is it an important element of an eating disorder on itself?" Family disorders show high prevalence of OCD and OCPD in family members of eating disordered individuals (Halmi et al., 2005; Jiménez-murcia et al., 2007). In patients suffering from anorexia nervosa that had a basis in early adolescence, higher levels were found of obsessive-compulsive personality disorders and avoidant personality disorder (Lilenfeld et al., 2006). Even after full-remission of their eating disorder. Anorexia nervosa of the restrictive type is more associated with compulsive traits, and bulimia nervosa is more associated with impulsivity. Probably due to the emotional instability that patients with bulimia nervosa display. In contrast; patients with anorexia nervosa show lower levels of impulsivity than not-psychiatrically controls (Cassin & Von Ranson, 2005). As a comorbid disorder OCD occurs in 10-60 percent of the cases in anorexia nervosa and is found with bulimia nervosa in 0-40 percent of the cases (Halmi et al., 2005).

Important personality traits and features for the diagnosis of an obsessive-compulsive personality disorder are less common in eating disorders. One in five

patients displays the traits of an obsessive compulsive personality disorder traits in the Serpell and colleagues (2006) study. Comorbid OCD in an eating disorders is associated with more higher eating severity, greater psychopathology, longer duration of the disorder, and worse prognosis (Jiménez-murcia et al., 2007). If the symptoms displayed by a patient with anorexia nervosa are severe, the obsessive and compulsive symptoms and the symptoms that belong to an OCPD are severe as well (Serpell et al., 2006). Patients that are diagnosed with an obsessive-compulsive disorder have a higher obsessive symptomatology than patients with an eating disorder. While eating disordered patients with obsessive symptoms lack differences with OCD-patients, both in their obsessive behaviour (need for order and symmetry) and somatic obsessions (Halmi et al., 2003). The association between obsessive-compulsive behaviour and disturbed eating pathology has a predictive value as well; obsessive and compulsive traits in early childhood seem to be relevant indicators for the development of a later eating disorder (Cassin & Von Ranson, 2005; Jiménez-murcia et al., 2007). Both obsessive as compulsive behaviour can worse the prognosis, and decrease the effectiveness of treatment, in eating disordered patients and that behaviour deserves a serious approach in the diagnosis and treatment of an eating disorder.

Alexithymia

Alexithymia is a personality trait characterized by a difficulty in identifying and describing feelings and emotions, a diminution of fantasy, and concrete and poorly introspective thinking (Bloks, 2006: Fassino et al., 2004; Speranza et al., 2005). Alexithymia frequently occurs in patients with an eating disorder. Patients with alexithymia are impaired in their expressing of emotions and are overwhelmed with sensation they can not control. Eating disorders are associated with a lack of skills to

regulate en control emotions and the maladaptive self-stimulating behaviour corresponds with the eating disordered pathology (Fassino et al., 2004; Speranza et al., 2005). In the Speranza study all groups of eating disordered patients (ANR, BN, ANB) scored higher on alexithymia than the healthy controls. In the first two factors of the Toronto Alexithymia Scale (TAS) highest significance was found. These two factors measure difficulty describing feelings and difficulty identifying feelings (Speranza et al., 2005). The difficulty in expression of feelings and emotions in anorexic patients can be related to more stable traits in the (dys)functioning of personality, like the schizotypal personality disorder, the avoidant personality disorder and the dependent personality disorder (Speranza et al., 2005).

Discussion:

Several studies emphasize the role of personality in eating disorders, but balance and shade their conclusions about the role of the dimensions mentioned above in the disturbed eating pathology. Results still remain unambiguous in defining the relationship between eating disorders and disorders with disturbed underlying personality features. Besides that, no single longitudinal study has examined the role of personality characteristics as a predictor for anorexia nervosa or bulimia nervosa and most studies examining that connection are retrospective. To clarify the exact relation between personality features and eating pathology more research is needed, especially to change the direction of diagnosis and treatment. One of the difficulties is that there are continuous new diagnostic categories proposed for eating disorders. Categories that would distinguish themselves from the categories already known. An example of those new categories is athletica nervosa for fanatic athletics that are obsessed with looking fit

and muscular, or orthorexia nervosa which directs to the obsession for the consumption of healthy food (Bloks 2006). Other scientists plea for the uptake of obese in the DSM-V, while it seems hard to differentiate non-purging bulimia patients and patients with a binge eating disorder (BED). Patients with a binge eating disorder can be extremely obese of heavy-weighted (Fassino et al., 2004). Furthermore some scientists would like to see the addition of several traits to classic personality dimensions, like the need for thinness, quality of life, self-concealment, and perfectionism. Which are not traditional personality traits yet, but probably will be seen as such in the near future (Lilenfeld et al., 2006; Vervaet et al., 2004). At the introduction of this article there was mentioned that dimensional models can give a better representation of personality pathology and personality disorders than the current categorical models. The discussion; categorical versus dimensional is a discussion that has been conducted in several organics and institutions. Much ink has been spoiled in the discussion whether the dimensional models will replace the categorical models. On the one hand the categorical approach is traditional and fits properly with Western thinking (in polarities), where boundaries are clearly marked and defined. On the other hand the dimensional approach contains more validity and seems to fit the pathology better. For eating disorders, there is considerable evidence associating eating disordered behaviour with personality pathology. Strengthening the proposition that eating disorders, when dimensionally approached, fit better the personality pathology spectrum. More specifically; when we commence diagnosing eating disorders with dimensional models, rather than the categorical models, we might consider the eating disordered behaviour as a personality problem. Or as a mental disease with an underlying disturbed personality. When we would classify eating disorders as a more pervasive pattern of psychopathology (eg. personality

pathology), instead of merely a clinical disorder, we would come to a better understanding, and probably; treatment, of the psychopathology currently classified as an eating disorder. Given the high correlations between eating disorders and a deeper and pervasive pattern of disordered personality structures it is could be considered preferably to approach and treat eating disorders as such. When the diagnoses of eating disorders are broadened with dimensional models, a new challenge might be possible; the treatment of eating disorders as psychopathology with disordered underlying personality characteristics. Creating a broader and dimensionally based view, and enhancing the possibilities for future therapies.

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Table 1: Schematic overview of the personality dimensions correlation with the EDpatient-subgroups

Personalit	Eating Disorder subtypes				Used Tests	Retrieved data from study:
	ANR	ANP	BN	BED		
1. Perfectionism						
self-	high		high	high	(MPS)	Cassin & Von Ranson, 2005; Fernández-Arar
other-oriented					(MPS)	Cassin & Von Ranson, 2005; Fernández-Arar
soci	high		high	high	(MPS)	Cassin & Von Ranson, 2005; Fernández-Arar
2. Obsessi	high**		high**			Cassin & Von Ranson, 2005; Halmi et al., 20
3. Impulsiv	low*, **		high*, **			Bloks, 2004; Cassin & Von Ranson, 2005; Fa
4. Sensatio	low	high*	high*	high*		Cassin & Von Ranson, 2005.
5. Narcissi	high*		high**			Cassin & Von Ranson, 2005.
6. Neurotic	high*	high*	high*	high*	NEO-FFI	Bollen & Wojciechowski, 2004; Cassin & Von
7. Agreeab	low*	low*	low*	low*	NEO-FFI	Bloks, 2004; Bollen & Wojciechowski, 2004; C
8. Extraver	no association with ED-symptoms				NEO-FFI	Cassin & Von Ranson, 2005.
9. Conscie	high*	low*	low*	low*	NEO-FFI	Bollen & Wojciechowski, 2004; Cassin & Von
10. Openn	high*	high*	high*	high*	NEO-FFI	Bloks, 2004; Bollen & Wojciechowski, 2004; C
11. Psycho	no association with ED-symptomatology*					Cassin & Von Ranson, 2005.
12. Novelty	low	high	very high	high	(TCI) tempe	Bloks, 2004; Fassino et al., 2004; Fassino et
13. Harm-a	high	high*	high	high	(TCI) tempe	Fassino et al., 2001; Cassin & Von Ranson, 2
14. Self-dir	low*	low*	low*	low*	(TCI)-chara	Fassino et al., 2001; Cassin & Von Ranson, 2
15.Cooper	low*	low*	low*	low*	(TCI)-chara	Fassino et al., 2001; Cassin & Von Ranson, 2
16. Persist	high*	high*	high*	high*	(TCI) tempe	Cassin & Von Ranson, 2005; Klump et al., 20
17. Self-tra	low*	low*	low*		(TCI)-chara	Cassin & Von Ranson, 2005; Klump et al., 20
18. Reward-dependence					(TCI) tempe	Cassin & Von Ranson, 2005; Klump et al., 20
19. Self-co	low*	low*	low*	low*		Bloks, 2004.
20. Alexithymia						
Identifying feelings	high*	high*	high*		Toronto Al	Speranza et al., 2005.