

Personality and Eating Disorders: A Longitudinal Study on a Non-Clinical Sample of Adolescents

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Abstract

The present longitudinal study is aimed at analyzing how adolescents change their dysfunctional attitudes towards their body and eating behaviors in relation to personality characteristics across a six-month time span. Via multiple regression analyses we investigated whether MMPI-A Obsessiveness, Low Self-Esteem, Depression, Family Problems and Concern for health are temporal antecedents of EDI-2 eating disorders, and vice versa. Our main findings revealed a bidirectional relationship between eating attitudes and personality. In fact, Obsessiveness, Low self-esteem, Depression, and Family problems significantly predicted changes in different dysfunctional eating attitudes, but also EDI-Interpersonal distrust and Ineffectiveness predicted changes in different MMPI-A scale scores. All together, findings suggest that personality development in adolescence is sensitive to attitudes towards eating and body appearance, and vice versa.

Keywords: eating disorders; personality traits.

Introduction

Many perspectives propose that personality characteristics may represent vulnerability factors for the development of personality disorders. In fact, studies have demonstrated that younger as well as adult patients with a diagnosis of anorexia nervosa or bulimia nervosa or still other unspecified eating disorders have some personality characteristics in common (Cumella, Wall, & Kerr-Almeira, 1999, 2000; Extertake, Bakker-Brehm, & de Jong, 2007). MMPI profiles with elevations on scales 2, 3, and 7 (2/7) characterize the majority of patients; multiple impulse control problems are especially severe among bulimic patients (Cumella, et al., 2000). Women with eating disorders generally show limited capacities for introspection, lack of awareness of their own problems, feelings, and needs, along with an excessive concern for their health, body, and physical appearance.

Klump, Strober, Bulik, Thornton, Johnson, et al. (2004) compared profiles among women who were acutely ill, women recovered for eating disorders, and women with no eating or other severe psychological problems. Results showed that acutely ill women did not differ substantially from women who were in treatment, thus suggesting that some personality characteristics (i.e., higher harm avoidance, lower self-directedness and cooperativeness) may represent risk factors for eating disorders.

As to age, puberty and adolescence represent an especially critical period for the development of eating disorders (Klump, 2013). In fact, both anorexia nervosa and bulimia nervosa increase from puberty to late adolescence,

and even further on for anorexia nervosa (Slane, Klump, McGue, & Iacono, 2014).

Our study was aimed at exploring how personality characteristics and eating disorders are associated across time in a sample of non-clinical adolescents. We administered our sample of male and female students some MMPI-A scales and EDI-2 twice, with a 7-month interval between the two measurement occasions. Via cross-lagged pattern of associations across time we examined whether personality predicts changes in eating disorders levels, but also whether eating disorders predict changes in personality. Specifically, in agreement with literature, we expected Depression and Obsessiveness to be predictors of EDI-2 variables (Cumella, et al., 2000), and vice versa, though this latter direction has not been explored systematically yet.

Method

Participants

Participants who took part at both measurement occasions were 142 adolescents (76 males and 66 females), with a mean age of 15.6 (range 13 to 18), who were attending a high school in Molfetta (Bari). 7 participants suspected to fall into a clinical range because of their BMI were discarded.

Measures and Procedure

Participants were administered two questionnaires, MMPI-A and EDI-2. They completed these two instruments twice, with a 7-month interval between the two measurement occasions. Questionnaires were administered in classroom and completed during class hours.

EDI-2 (Garner, 1991) is a self-report questionnaire, commonly used for the assessment of psychological characteristics as well as cognitive and behavioral symptoms associated with eating disorders especially Anorexia Nervosa (AN) and bulimia Nervosa (BN). EDI-2 is a screening instrument, useful for a preliminary assessment of symptoms (if any), and psychological traits relevant to eating disorders EDI-2 presents 92 items and assess 11 domains, with 3 scales being directly associated with eating disorders (Stimulation of the Thinness, Bulimia, Body Dissatisfaction) and the remaining 8 assessing personality variables generally associated with the eating disorder. For the present sample, test-retest correlations ranged from .58 (Interpersonal Distrust) to .72 (Ineffectiveness).

MMPI-Adolescents (Starke & McKlinley, 1992) is a screening tool, in the form of a self-report questionnaire,

aimed at preliminary assessing clinical disorders via profile elevations. For the present study, we selected the following scales relevant to eating disorders: Obsessiveness, Depression, Low Self Esteem, Family Problems, Social Disease, Health Concern. For the present sample test-retest correlations ranged from 0.50 (Health Concern) to 0.70 (Social Disease). BMI was calculated for each participant as well.

Results

In order to investigate associations across time, we regressed a given T2 EDI-2 variable onto a given T1 MMPI-A personality scale together with the matching T1 EDI-2 eating disorder scale, so as to control for concurrent correlation between T1 EDI-2 and T1 MMPI-A scales. Part correlation is therefore a quantitative index of the impact of personality antecedents on changes, from T1 to T2, in behaviors and attitudes towards eating. Data show that MMPI-A Obsessiveness, Depression, Family problems and Low self-esteem predicted changes in EDI-2 Social Insecurity; MMPI-A significantly ($p < 0.05$) predicted changes in EDI-2 Ineffectiveness, that is, higher levels of Depression at T1 ($sr = 0.27$) predicted increased levels of Ineffectiveness at T2. MMPI-A Obsession, Low Self-esteem, and Family problems predicted small portions of change in EDI-2 Interoceptive Awareness, with part correlations ranging from .18 to .22; BMI at T1 ($sr = 0.21$) significantly estimated changes in Asceticism, that is, the higher the BMI value, the higher the increase in this EDI-2 variable.

When we examined the hypothesis that attitudes towards body and eating behaviors might have an impact on personality development and changes across time, results showed that higher scores on Interoceptive Awareness predicted a further increase in Low Self-esteem levels ($sr = 0.21$) 7-months later; Interpersonal Distrust predicted changes in the MMPI-A Depression ($sr = 0.20$) and Self-esteem ($sr = 0.18$), scales.

The present findings thus revealed that some associations were bi-directional across time (for example, Low Self-esteem and Interoceptive Awareness), but others were not. This is the case, for example, for Obsession predicting Interoceptive Awareness, but not vice versa, as well as for Low self-esteem predicting Ineffectiveness, but not vice versa.

Discussion

Results here presented show that personality variables and psychological attitudes relevant to eating disorders are linked to each other across time, though association levels are small.

In line with findings from cross-sectional studies, we found that Obsession predict a score increase, 7 months later, on those scales that directly assess attitudes towards body and food as well as on those scales of psychological relevance for eating disorders (Serpell, Hirani, Willoughby, Neiderman & Laskl, 2006; Jimenez-Murcia, Fernandez-

Aranda, Raich, Alonso et al., 2007). Depression is a significant temporal antecedent as well, being associated with both intrapersonal and interpersonal emotional dysregulation scales; we however did not find support for a correlation across time between EDI-2 Bulimia and Depression (Cumella et al., 2000; Racine, Sisk, Burt, Boker, Keel, et al., 2013).

Our longitudinal study revealed bi-directional associations across time. In other words, it is not only that personality predicts changes in eating attitudes, but vice versa is possible as well. In fact, lower Self-esteem levels anticipated an increase in Interoceptive Awareness and Body dissatisfaction (Mäkinen, Puukko-Vietromies, Lindberg, Siimes & Aalberg, 2012), but also Interoceptive Awareness predicted changes in Self-esteem levels. In general, this finding supports the complex interplay among different levels of personality (McAdams & Pals, 2006). Specifically, they suggest that an accurate recognition as well as an adequate organization of physiological stimuli depend on and are relevant for an adaptive development in terms of self-worth (Harter, 1998).

As to BMI, our results indicate that changes across time in self-perception and attitudes towards food and physical appearance are sensitive to psychological variables rather than to objective changes in body shape (Klump, et al., 2004).

In brief, our findings support the idea that eating disorders can no longer be circumscribed to eating behaviors dysregulation, but involve states of distress and disorganization related to underlying psychological functioning. Mostly, our findings evidence that personality and self-perceptions related to domains salient for eating disorders interplay across adolescence, that is personality may represent a risk factor for the development of dysfunctional attitudes towards body and food, but also such dysfunctional attitudes have an impact on personality development in young boys and girls. A longitudinal study with 3 or more assessment occasions would better reveal transactions between personality and eating disorders.

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