Author's response to reviews

Title: Psychosomatic syndromes and Anorexia nervosa

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Author's response to reviews: see over
Dear Catherine Olino,

Please find attached our re-revised manuscript “Psychosomatic syndromes and Anorexia nervosa”; we amended our manuscript according to both reviewers helpful comments. See detailed comments below.

Thank you for your help to improve our manuscript.

Best regards,

Prof. Giovanni Abbate-Daga
We do thank both reviewers for their help in improving the paper. Please, see detailed responses below. Changes in the text are in bold whilst in tables – not to make confusions with statistical significances already in bold – we used the track change mode.

Reviewer #1 Alexandra Martin
The manuscript reports on psychosomatic syndromes in anorexia nervosa. It is of theoretical and practical interest to systematically assess these constructs in eating disorders.

We thank the reviewer for her positive comment.

However results rely on a single clinical interview (DCPR), and a well-founded appraisal of the study would at least require a more detailed report on the psychometric qualities of the DCPR (in general, and specifically in ED).

We detailed more the psychometric qualities of the DCPR in the method section but there are few data on ED samples.

The authors of the manuscript repeatedly use the label “psychosomatic diagnoses” – this appears a misleading description of the instrument. The DCPR scales consist of a mixture of clinical syndromes (e.g., health anxiety, thanatophobia, conversion) and of personality concepts often used in psychosomatic medicine and behavioural medicine (e.g., alexithymia, Type A behavior).

Please see Comment #2

Detailed comments:

Major compulsory revisions [and Minor revisions]:

Abstract

1. The term “psychosomatics” in the first sentence of the abstract (p.2) is too vague; be more precise.

We widened the concept as follows: “In spite of the role of some psychosomatic factors as alexithymia, mood intolerance, and somatization in both pathogenesis and maintenance of Anorexia nervosa”.
2. The authors speak of “psychosomatic diagnoses” or of “psychosomatic syndromes” when referring to the DCPR; this is confusing especially as they examined individuals with the psychiatric diagnosis of anorexia nervosa according to DSM-IV; it would be helpful to consistently speak of “psychosomatic syndromes” throughout the abstract and the manuscript; this would also be in line with previous research in this area (cf. Fabbri et al., 2007; Porcelli et al., 2009) and it is in accordance with the DCOR’s rationale: to translate psychosocial variables derived from psychosomatic research into operational tools.

We modified the paper as suggested substituting the term “psychosomatic diagnosis/es” with “psychosomatic syndrome/s”. We modified also the method section of the manuscript as follows: “The DCPR are a diagnostic and conceptual framework consisting of both clinical syndromes and personality concepts used to translate psychosocial variables derived from Psychosomatics into operational instruments able to identify individual patients in psychosomatic and behavioural medicine”.

3. “Demoralization” and “Duration of illness” are among the key words; why? These key words are not referred to in the abstract section and they do not appear to play a major role throughout the manuscript [Minor Revisions].

We eliminated them.

Background

4. Is frustration a somatic and anger an emotional perception? Please explain (p. 3) [Minor Revisions].

To get more clarity we changed the sentence as follows: “the inability of discerning the difference between somatic and emotional perception (i.e. feeling “fat” versus feeling angry).

5. Authors should state some of the main limits of DSM-IV to diagnose somatoform disorders; they should also explain why the DCPR has been found to be more suitable for the assessment of psychological distress especially in medical settings and refer to the main advantages of the DCPR (cf. p. 3).

We modified the paragraph as follows: “The DSM-IV chapter on somatoform disorders has been widely criticized [19]. In particular, its failure to adequately cover the clinical phenomena of somatisation and models of psychosomatic syndromes has been brought into question. Some authors [18,19] have acknowledged that the classification of somatoform disorders is not well supported in scientific literature and that it should be widely modified. The DSM-IV [15] shows the category of the psychological factors affecting medical condition trying to better specify the psychological aspects but it is used in a very unspecific way. This may depend on a difficulty of a categorical psychiatric instrument, as the DSM, to recognize the subthreshold aspects of psychological distress. The DCPR system offers an alternative to DSM-IV’s somatoform disorders but also allows the clinician to characterize a patient’s mode of perceiving, recognizing, labelling, and responding to a health status [20]. DCPR variables may occur in conjunction with any psychiatric disorder listed in the DSM–IV or with any medical disorder [19]”.

6. Authors referred to several studies that have utilized the DCPR; however the study by Fassino et al. (2007) that assessed psychosomatic syndromes in individuals with eating disorders (EDs) is only briefly mentioned (p.4); main results should be reported (e.g. did individuals with an ED in that study suffer from AN or BN? Which psychosomatic syndromes were assessed (obviously only 4 out of 12 – why?)? What was the most common syndrome in ED outpatients?
We amended the paragraph as follows: “Since it was a preliminary study, we considered only the four syndromes providing a better specification of the DSM IV rubric of psychological factors affecting medical condition, excluding the eight factors related to somatisation. Our previous paper investigated all ED diagnoses (AN restricting subtype [AN-R] and binge-purging subtype [AN-BP] Bulimia nervosa, Eating Disorder Not Otherwise Specified including Binge Eating Disorder) using the DCPR. Alexithymia was the most represented syndrome (52% of the sample), followed by demoralization (48%), irritable mood (40%), and type A behavior (27%) with the majority of the sample reporting at least one DCPR syndrome [13]. Among diagnostic categories, AN-R patients were found to show the highest frequency of psychosomatic syndromes according to the DCPR”.

7. The argumentation could also be strengthened by explicitly mentioning that the current study assessed psychosomatic syndromes in inpatients with an ED (as an extension to the study by Fassino et al. 2007, who examined outpatients with EDs) (p. 4) [Minor Revisions]
We specified “AN inpatients” in the aim section as we already specified “replicate and widen previous data”.

8. Theoretical and practical implications of assessing psychosomatic syndromes in AN patients should be stated.
Part of theoretical and practical implications are included in the first paragraph. However, we extended the theoretical implications part at the end of the introduction as follows: “The aforementioned paper by Fassino and Coworkers [13] provided preliminary data on the utility of assessing psychosomatic syndromes in ED using the DCPR. It confirmed the prevalence of alexithymia, demoralization, and anger not only assessed using psychometric measures [4,34] but also as full syndromes clinically evaluated. The clinical identification of psychosomatic syndromes confirms the theoretical psychosomatic model. The latter considers psychosomatic factors as key-aspects in the pathogenesis of ED given the central role of lived corporeality and alienation from one’s own’s body and one’s own’s emotion [35,36]”.
As regards practical issues we debated them widely in the discussion section according also to your comment #23.

Methods

9. Authors state that all patients were hospitalized (p. 4); How and by whom were patients approached?
We specified as follows: “Patients were approached by a researcher not actively participating in the clinical work”.

An exclusion criterion was ‘medical comorbidity’ (p. 5) – this should be more clearly defined as severe forms of AN are often associated with somatic conditions.
We excluded only those medical problems with an onset before AN, as stated in the text.

10. Was the DCPR part of standard diagnostic assessment or was it additionally used just for study purposes? (p. 5). [Minor Revisions]
We used it additionally only for research purposes.

11. Cronbach’s alpha in the current sample should be reported for all self-report questionnaires (p. 5 to 6) and - more important - psychometric properties (e.g., indicators of reliability, interrater reliability, validity) of the DCRP should be reported (p. 6).
We added the aforementioned psychometric properties in the text, method section, as
suggested.

How does it relate to DSM-IV diagnoses?

The DCPR and DSM-IV categories are not associated by a hierarchy. The psychosomatic syndromes are more prevalent than DSM-IV disorders (Fabbri et al., 2007).

12. Arguments against the use of Bonferroni correction in exploratory studies should be specified (p.7); what is meant by “data dredging was avoided by conducting only a pre-planned analysis” (p.7) – Overall, the rationale not to control for multiple testing does not appear convincing to me. **Given your comment, we decided to erase this paragraph and state this as a limitation.**

Results

13. Test statistics and p-values or confidence intervals for all sociodemographic and clinical variables need to be included either in Table 1 or in the manuscript (p.8). **We included these data in Table 1.**

14. Questionnaire measures (TCI, EDI-2, BSQ and BDI) should be included in Table 1. **We included these data in Table 1.**

15. It is stated that AN-R did not differ from AN-B concerning the number of psychosomatic syndromes (p.8); provide test statistics. **We followed your suggestion.**

16. Provide exact p-values for all Chi-square tests in table 2 [Minor revisions] **We did it.**

17. In the statistical analysis section it is stated that and alpha <.05 was used for all tests, consequently the difference between AN-R and AN-B regarding prevalence of irritable mood is not statistically significant, as p=.05 (cf. table 2); this should also be corrected in the abstract and the discussion section. **We followed your suggestion.**

18. Provide exact p values for all statistical tests in table 4; what is meant by “sign” in table 4? [Minor revisions] **We did it.**

19. Length of hospitalization: provide correct degrees of freedom for the ANOVA (p.10) **Minor revisions**

Discussion

20. Explicitly state what is meant by the psychosomatic vicious circle in AN (p. 10) and how it differs from psychosomatic aspects on the body? Eating disorders psychopathology has with physical effects; how do these relate to the assessed psychosomatic syndromes? **We made this sentence more easy-to-read as follows:** “Such a high frequency of psychosomatic syndromes can be due both to the exaggerated focusing on the body in AN [56,57] and to all those psychic alterations leading to somatic ones and vice versa.”
21. What is meant by concretized metaphors (p. 11)? Please explain. 
We specified as follows: “concretized metaphors describing a psychic equivalence between physical and psychic reality with concretized emotions as a result [35]. As Skårderud states “Concretized metaphors refer to instances where the metaphors are not experienced as indirect expressions showing something thus mediated, but they are experienced as direct and bodily revelations of a concrete reality. There is an immediate equivalence between bodily and emotional experience” [35].”

22. The rationale and possible benefits of deriving clusters based on the DCPR syndromes in ED still do not appear very comprehensible. 
We specified as follows, also following reviewer #2’s comments: “Compared with limited DSM-IV ED diagnoses, clusters allow a more clearly differentiated characterization of patients subgroups on a broad range of features. Previous researches considering clusters had a clinical utility [67,68]. In our study a cluster analysis allowed to identify specific association patterns between AN and psychosomatic syndromes. It is well-known that ED can also be subdivided according to personality features in different ways [69-71]. It is possible that different personality styles associated to ED can correspond to different psychosomatic clusters. In fact, AN patients who are characterized more by a perfectionistic and inhibited style are more represented by cluster 1 whilst AN-BP, more disinhibited and impulsive are more represented in cluster 2. Therefore, the use of psychosomatic clusters reinforces the idea of different personality styles and psychopathological variability in AN. From a clinical standpoint, to identify patients on the bases of their problems of somatization versus personality and alexithymia could mean to use different treatments as debated below”.

23. Authors stress that a more complex assessment approach (such as the DCPR) would be helpful – they should clearly discuss their findings with regard to theoretical and practical implications; do they suggest different treatment approaches for their three AN subtypes? What would be such a tailored treatment? 
“Still, the identification of clusters could have relevant therapeutic implications. It is well-known in literature that those patients who are highly alexithymic receive overall more treatments – and significantly more antidepressants rather than psychotherapy - than those without these traits [82]. The cluster showing higher alexithymia represents instead a caveat as regards undergoing psychotherapy. Moreover, somatization issues in ED – as reported in cluster 2 - represent a quite new research field as demonstrated by the current dearth of studies; lived corporeality [36] should be considered more in therapy of this subgroup. Given their common comorbidity with borderline personality traits – commonly highlighting themes of somatic preoccupation and somatization disorder [83] – AN-BP patients often report such features, which should be specifically considered in therapy.”

Reviewer #2 Angela Wagner
This is a timely and well-written article aiming to assess psychosomatic syndromes in patients with anorexia nervosa (AN) and to evaluate if psychosomatic diagnoses could identify subgroups of AN patients by using the Diagnostic Criteria for Psychosomatic Research (DCPR). Illness denial and alexithymia were most commonly diagnosed in the sample. Three subgroups were identified: a moderate psychosomatic group (49%), a somatization group (26%), and a severe psychosomatic group (25%). The authors argue that as psychosomatic diagnoses correlated differently with severity of eating symptomatology and duration of illness, DCPR could be effective to achieve tailored treatments in AN.
We thank the reviewer for her positive comment.

The manuscript is well organized and uses state of the art methods to address a topic of considerable clinical relevance in the field of eating disorders. However, some issues should be addressed.

We thank the reviewer for her positive comment.

1. A major limitation of the study is the lack of a control sample of any kind (healthy or other clinical sample). However, adding some information on existing literature could be helpful and could put findings into perspective. A study by Mangelli (Psychosomatics 2006) for example, found that 59% of subjects received at least one DCPR diagnosis in a community sample, naming alexithymia also among the most common.

Thank you for your suggestion we widened the paragraph of the introduction where we mentioned that paper: “whilst demoralization and persistent somatization were common in those medically ill and not in the general population [30]”. Following your suggestion, in the discussion we compared the sample of the aforementioned paper with our AN sample as follows: “Finally, a limitation of this study is the lack of a control group. However, comparing our data to the ones in literature on the general population [30], it should be noted that ED patients are more often affected by psychosomatic syndromes. When compared to depressed patients [81] the percentages of psychosomatic syndromes did not differ but illness denial and alexithymia were less represented in depressed patients that in AN, raising the hypothesis of different psychosomatic patterns among psychiatric diagnoses.”.

3. The study sample included more AN-R than AN-BP patients which should be mentioned in the limitations as authors state distributions of clusters which still seemed to be related to classical ED sub-types.

We added this issue in the limitation section.

4. In the eating disorder field a few studies have tried to identify personality trait-based clusters in eating disorders samples to distinguish from the classical subtypes of eating disorders (inhibited versus disinhibited/impulsive type). It would be of interest to get some information on how this would fit in the authors model of the three clusters, especially as they have collected TCI data on all subjects.

Thank you, we think this is a very interesting topic. We tried to speculate about inhibited/disinhibited as regards diagnosis. “It is well-known that ED can also be subdivided according to personality features in different ways [69-71]. It is possible that different personality styles associated to ED can correspond to different psychosomatic clusters. In fact, AN patients who are characterized more by a perfectionistic and inhibited style are more represented by cluster 1 whilst AN-BP, more disinhibited and impulsive are more represented in cluster 2. Therefore, the use of psychosomatic clusters allows to reinforce the idea of different personality styles and psychopathological variability in AN. From a clinical standpoint, to identify patients on the bases of their problems of somatization versus personality and alexithymia could mean to use different treatments as debated below”.

We further discussed this: “The TCI provided less data than expected as regards clusters mostly about temperament dimensions. However, it is of interest that the somatization group showed lower Self-Directedness (SD) than other groups. Since SD quantifies the extent to which an individual is responsible, reliable, resourceful, goal-oriented, and self-confident it is noteworthy that the group showing a more immature character expresses distress through corporeality. Maybe this group has less resources to verbalize problems; therefore, therapy should address
such an impairment: psychotherapy should consider the obstacle of poorer expressive tools of this subgroup”.

5. The authors do not clearly state how their findings could be translated into more effective clinical treatments, which should be described in more detail.

Thank you for your suggestion. We modified the discussion as follows: Still, the identification of clusters could have relevant therapeutic implications. It is well-known in literature that those patients who are highly alexithymic receive overall more treatments – and significantly more antidepressants rather than psychotherapy - than those without these traits [82]. The cluster showing higher alexithymia represents instead a caveat as regards undergoing psychotherapy. Moreover, somatization issues in ED – as reported in cluster 2 - represent a quite new research field as demonstrated by the current dearth of studies; lived corporeality [36] should be considered more in therapy of this subgroup. Given their common comorbidity with borderline personality traits – commonly highlighting themes of somatic preoccupation and somatization disorder [83] - , AN-BP patients often report such features, which should be specifically considered in therapy.

Best regards,

Prof. Giovanni Abbate-Daga