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Perfectionism and Sense of Coherence among Patients with Eating Disorders

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Abstract

Several studies have been made on eating disorders and perfectionism, and on eating disorders and the sense of coherence, SOC, but studies regarding all three subjects are sparse. The present study aimed to describe the relationship between Antonovsky's SOC and perfectionism as operationalized in the Eating Disorder Inventory-2. The results of the self-measuring instruments from 95 eating disorder outpatients were analyzed with descriptive and inferential statistics. Perfectionism was seen to be negatively correlated to SOC. The strongest correlation was between socially prescribed perfectionism and SOC. The results also showed that the lower degree on the SOC-scale, the higher degree of perfectionism. Our suggestion is that perfectionism may be a compensative strategy for a low SOC. Taking this view, working with enhancement of SOC in young eating disordered patients could be a therapeutic intervention to consider.

Introduction

Eating disorders are severe psychiatric problems, associated with impaired psychosocial functioning and untimely death (Emborg, 1999; Fairburn & Harrison, 2003; Huas et al. 2011; Swenne, 2000). In the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) the eating disorders are divided into three diagnoses; Anorexia Nervosa (AN) characterized by an intense fear of gaining weight in combination with a significant underweight and amenorrhea, Bulimia Nervosa (BN) characterized by binge eating and compensatory behaviour such as purging or excessive training and Eating Disorders Not Otherwise Specified (EDNOS) including variants of AN and BN and Binge Eating Disorder. In all cases an exaggerated interest in weight and body appearance serves as a means to self-esteem (American Psychiatric Association, 1994).

Sense of coherence and eating disorders

When the medical sociologist Aaron Antonovsky presented his theory of the salutogenetic perspective on health in 1979, he stated that stressors and diseases exist everywhere and are natural conditions in the life of organisms (Antonovsky, 1979). In medicine the reigning perspective is pathogenesis exploration of diseases, identifying stressors and mechanisms that make people ill. The salutogenetic question is rather the opposite whereby it asks which factors *protect* the organism from noxious threats in the environment (Antonovsky, 1987). Protecting factors are referred to as General Resistance Resources (GRRs) that help the individual to understand and provide a structure and meaningfulness to the events in life. GRRs are biological, material, and psychological factors that aid the individual in handling natural stressors (Lindström & Eriksson, 2006). Antonovsky developed the concept of “Sense of Coherence”, SOC (Antonovsky, 1987). SOC is described as solid attitudes or a Weltanschauung rather than personal traits (Antonovsky, 1987, Antonovsky, 1993). SOC consists of three components: comprehensibility, manageability and meaningfulness. According to Antonovsky a person with good comprehensibility expects stimuli to be predictable. Unforeseeable events are explainable and manageable. Manageability is the experience of having resources to rely upon, while meaningfulness is the motivational component of SOC and cued to the importance of involvement as a participant in the process of forming one’s destiny. SOC is assumed to be relatively stable after the age of 30 (Antonovsky, 1987). Women with an eating disorder are known to have a weaker SOC than the general population (Hansson & Cederblad, 1995; Keller, 1997; Tagay, 2009).

Perfectionism and eating disorders

Perfectionism is considered a central aspect of several psychiatric problems. Egan (2011) considers perfectionism a transdiagnostic process which contributes to the aetiology and maintenance of a number of psychiatric disorders. Perfectionism is by some researchers considered one of the main risk factors for developing eating disorders, and eating disorders are also seen as an expression of perfectionism related to body control (Shafran, Cooper &

Fairburn, 2002; Fairburn, 2008; Cassin & von Ranson, 2005; Saboonchi, 2000; Terry-Short et al, 1995). Perfectionistic people with an eating disorder tend to practice perfectionism on body appearance, weight and control of food intake and body shaping (Fairburn, 2008). The pubertal transition is a vulnerable period, particularly for girls. Body image is an important part of the pubertal girl's global self-esteem. A significant number of girls in that phase are discontented with their bodies and susceptible to perceived evaluation (Levine & Smolak, 2002; Smolak, 2002). There are however, contradictory results in the area of perfectionism and eating disorders; some studies find no significant differences regarding perfectionism when comparing different eating disorder diagnoses, or when comparing eating disorders to other psychiatric conditions, or even when comparing with healthy controls (Goldner et al., 2002). Since perfectionism seems to be a rather complex and perhaps multifaceted construct, the studies measure different aspects of perfectionism. Relations between perfectionism and other eating disorder-related concerns seem to be crucial. Thurfjell et al. (2004) for example, consider perfectionism to be significant for developing eating disorders when it occurs along with restricted eating behaviour and weight control. For prepubertal children peer victimization (e.g. bullying) has a negative effect on body esteem and the girls experience that their bodies are negatively valued by others (Lunde, Frisén & Hwang, 2005). Perfectionistic self-presentation and a high degree of body dissatisfaction seem to predict symptoms of eating disorders among women. (Mc Gee, et al., 2005). Flett et al. (2011) investigated bulimic and perfectionistic automatic thoughts in a non-clinical material and suggest that there seems to be “a weight-related self-schema that incorporates an emphasis on perfectionism” (p. 200).

It has been debated whether perfectionism is a continuum from healthy to pathological perfectionism or if there are different constructs (Parker, 2002). Perfectionism is often associated with psychopathology but some researchers also describe a healthy kind of

perfectionism that is related to success and well-being (Hamacheck, 1978; Lundh, Saboonchi & Wångby, 2008; Owens & Slade, 1987; Terry-Short et al., 1995). Terry-Short et al. (1995) compared the results from a group of patients having an eating disorder with groups of athletes, depressed persons and a healthy control group. The depressed group scored higher for the negative perfectionism and lower for the positive ditto. The athletes scored the reverse while the distinguishing pattern of the eating disorder group was high scores on both positive and negative perfectionism (Terry-Short et al., 1995). The term “positive perfectionism” is however contentious. Flett and Hewitt (2006) suggest that terms such as positive, healthy or adaptive perfectionism should be avoided and that there is confusion between achievement striving or conscientiousness and so-called positive perfectionism. Since a construct of perfectionism can be considered multifaceted, a large number of studies have been made to operationalize and explain the components of the phenomenon (Flett & Hewitt, Eds., 2002; Lundh, 2004; Saboonchi, 2000). According to a cognitive behavioural theory, the core beliefs of the clinical perfectionist are based on an exaggerated self-evaluation in terms of achievement, and the rules that stem from those core beliefs are dichotomously and conditionally demanding: when there is a flaw you *are* a failure and this experience is extremely anxiety provoking (Brown & Beck, 2002; Shafran, Cooper & Fairburn, 2002). Perfectionism also gives structure and a sense of control, and is an aid in avoiding feared situations in other areas. The perfectionistic striving (and achieving) also intermittently holds back feelings of worthlessness, shame and failure (Shafran, Cooper & Fairburn, 2002).

The multidimensional construct of perfectionism consists of some aspects that seem to be more trait-determined and some aspects that seem to be more subject to circumstantial conditions (Saboonchi & Lundh, 1999). One of the predominantly multidimensional models of perfectionism is described by Hewitt & Flett (1991). The construct is measured with the

Multidimensional Perfectionism Scale (MPS-H) (Hewitt & Flett, 1991). The MPS-H is constructed as a three-dimensional scale measuring self-oriented perfectionism (SOP), socially prescribed perfectionism (SPP) and other-oriented perfectionism (OOP) (Hewitt & Flett, 1991). The SOP-scale measures the degree of perfectionistic demands on oneself while the SPP-scale measures the experience of conditional perfectionistic demands from significant others. The OOP-scale measures the person's demands on others to perform perfectly and is considered unrelated to eating behaviour (Hewitt & Flett, 1991; Hewitt, Flett & Ediger, 1995). SOP is found to be reinforced both negatively (relief from expected annoyance after a completed challenge) and positively (positive feelings following the challenge) (Flett & Hewitt, 2006). The *Perfectionism* subscale in the Eating Disorder Inventory-2 (EDI-2) includes the SOP and the SPP perspectives with three items each, although this is not considered an exact proxy for the MPS-H (Bardone-Cone, 2006; Garner, 1991). Lethbridge et al. (2011) suggest that it is self-oriented perfectionism rather than socially prescribed perfectionism that is associated with eating disorders. In other psychiatric patient groups it has been suggested as the opposite (Egan, 2011). However, Flett et al. (2011) found inter-correlations between bulimic automatic thoughts and SOP as well as SPP in a non-clinical sample.

Sense of coherence and perfectionism

Antonovsky (1987) suggests that a higher degree of SOC seems to act as a buffer against stress and enhance adaptive coping behaviour. This has been confirmed in clinical studies of, for example, depression and chronic heart failure (Erim, 2010; Nahlén and Saboonchi, 2009). Saboonchi & Lundh (2003) suggest that demands following perfectionism may intensify the pressure on the person. Perfectionistic standards per se are stress inducing, which increases vulnerability to negative life events such as disease and similar obstacles. These experiences are intolerable and unacceptable according to the perfectionistic standards, especially if these

standards and demands are thought to originate from others (Saboonchi & Lundh, 2003). At the same time, perfectionism provides a sense of control (Shafran, Cooper & Fairburn, 2001), which might serve as a compensative strategy when having a low degree of SOC. A low sense of coherence makes the therapeutic process and treatment compliance more difficult for the patient (Cederfjäll et al. 2002), in a way similar to perfectionism that is considered an obstacle to psychotherapy (Ellis, 2002).

Over the years a considerable amount of scientific articles on eating disorders, perfectionism and SOC respectively have been produced. When combining the subjects, research on eating disorders *and* SOC is sparse, and to the best of our knowledge, internationally published research on perfectionism *and* SOC seem to be nonexistent.

The aim of the present paper was to describe perfectionism (as operationalized by Garner 1991) and sense of coherence (as described by Antonovsky 1987) in patients with eating disorders. When correlating the two constructs, our hypothesis was that the lower the degree of SOC the higher degree of perfectionism, measured by the EDI-2 Perfectionism scale (EDI-P). We also took advantage of the data collected and tested the two instruments and their components for internal consistency reliability.

Methods

Setting

The present study was conducted at a youth – adult integrated psychiatric outpatient clinic, specializing in the treatment of eating disorders in southeastern Sweden. It serves a population of about 130 000 people. The clinic receives approximately 150-175 new patients yearly. The diagnostic procedure is clinical according to the DSM IV criteria. To guide treatment focus,

the patients fill in self-evaluation forms at the clinic. Two of these standard instruments; the Eating Disorder Inventory- 2 (EDI-2) (Garner, 1991; Norring & Garner, 1984) and the Sense of Coherence Scale-29 (SOC-29) (Antonovsky, 1987) have been used in this study.

Participants and data collection

Participants were recruited consecutively in the clinical context. Patient inclusion was during a 15-month period. When diagnosed with an eating disorder, patients were asked to participate in the study. Data was collected parallel to material for a study evaluating the reliability and the clinical utility of the EDI-2 for which we concluded that 100 participants sufficed (Spector, 1992). A total of 144 patients were diagnosed with an eating disorder during this period. Seven refused participation. Eleven did not show up for the evaluation sessions to complete questionnaires. Treatment was initiated in 26 cases without patients having been asked to participate in the study, due to oversight when the on-duty staff neglected to formally ask the patients (mostly during the understaffed summer and Christmas holidays). Five participants did not fill in the SOC-29 form completely and were therefore excluded from the study. The sample comprised one man and 94 women. Ages ranged from 14-53 (M=22.3, sd. 7.2). BMI ranged from 14.4 - 44.8 (M=21.1, sd. 4.4). The DSM-IV diagnoses were divided into AN, 14% (N=13); BN, 18% (N=17) and EDNOS, 68% (N=65) respectively. The sample is representative for the patient clientele of the studied clinic. Fairburn and Bohn (2005) found that more than 60% of patients diagnosed with eating disorder diagnoses are in the EDNOS-cluster.

Procedure

The patients completed the Swedish version of the EDI-2 and the Swedish version of the SOC-29 during a session in the initial evaluation phase. The first author then transferred the patients' individual scores, item by item, into an Excel database together with socio-demographic, diagnostic and health data.

Instruments

EDI-2, Swedish version

The Eating Disorder Inventory-2 (EDI-2) is a self-report questionnaire designed to measure attitudes, personality features, and eating disorder symptoms. The instrument is internationally acknowledged and often used in the research and assessment of eating disorders (Castro et al., 2004; Norring & Garner, 1984, 1990; Norring & Sohlberg, 1988; Waller et al., 2002; Woodside et al., 2001). The subscales have demonstrated high internal consistency reliability as well as test-retest reliability (Garner, 1991; Nevenon et al., 2006). The first version of EDI-2 was presented and translated into Swedish by Norring in 1983. It consists of eleven subscales; (1) *Drive for thinness*, (2) *Bulimia*, (3) *Body Dissatisfaction*, (4) *Ineffectiveness*, (5) *Perfectionism*, (6) *Interpersonal Distrust*, (7) *Interceptive Awareness*, (8) *Maturity Fears*, (9) *Asceticism*, (10) *Impulse Regulation* and (11) *Social Insecurity*. The EDI-2 includes EDI Symptom Checklist (EDI-SC), a structured self-report form in order to solicit background data and a 91-item self-report questionnaire with a possible range of 0-3 points. Respondents were asked to rate each item on a 6-point scale, ranging from “never” to “always”. The scoring-system was hidden from the respondent (Norrning & Garner, 1984). The *Perfectionism*-subscale can be divided into two separate sub scales with three items each: Items No 36, 52 and 63 are related to self-oriented perfectionism according to MPS-H (EDI-SOP), while items No 13, 29 and 43 are related to socially prescribed perfectionism (EDI-SPP) according to the same scale (Bardone-Cone, 2006; Fletcher, 2008). The third and latest version of the instrument, the EDI-3, is now published. The *Perfectionism*-subscale has not been changed in the new edition (Garner, 2004).

The Sense of Coherence scale, Swedish version

In order to measure SOC, Antonovsky created a 29-item self-report questionnaire with 7-point Likert-scales for each item. The scale is used as an outcome measurement for

psychiatric or psychotherapeutic interventions (Söderhamn & Holmgren, 2004). It has been suggested for use in the identification of the patients in need of greater support (Cederfjäll, 2002). The total score ranges from 29-203. The SOC scale has high test-retest reliability and internal consistency (Gassne, 2008). Langius et al. found that the Swedish non-clinical mean score of the SOC scale is approximately 152 (+/-10) (in Hansson & Cederblad, 1995). This result has been confirmed in other studies (Gassne, 2008, Hansson & Cederblad, 1995). Non-clinical school children generally have lower scores (146 +/-10) (Hansson & Cederblad, 1995). The SOC-scale consists of three components: comprehensibility (10 items), manageability (10 items) and meaningfulness (8 items), plus one item that is a part of the total score but not a part of any of the components (Antonovsky, 1987).

Data analysis

Data was analysed by descriptive and inferential statistics. In order to evaluate the extent to which scales and subscales met the criteria for internal consistency reliability inter item correlations as well as Cronbach's α were calculated. T-test for dependent groups was used, comparing means between the EDI-SPP and the EDI-SOP and means between the "very low" versus the "low" SOC-score groups. For correlation tests Spearman's rank correlation was used. The statistical analysis was performed using Statistica, version 10.

Ethical considerations

During the clinical assessment participants were provided written information about the study and written consent was obtained. They were told that they could withdraw from the study at any time and such a decision would not affect their future treatment. Participants were reassured that the data would remain confidential. The study was approved by the management of the psychiatric clinic, and by the board of the county council, responsible for

patient data. The study was also approved by the regional ethical review board of Linköping, Sweden, No: M145-08.

Results

The patients in the present study scored consistently with other Swedish eating disorder samples (Nevonen et al., 2006) on the EDI-P ($M=6.0$, $sd=4.4$), which is significantly lower than the scores of the North American norm group ($M=8.9$, $sd=6.2$) (Garner, 1991).

Table 1 should be inserted here

The EDI-P reached the reliability criterion with $\alpha=.80$ for the total scale (Table 1). When dividing EDI-P into two subscales according to, for example, Bardone-Cone (2006), the internal consistency was $\alpha=.74$ for the EDI-SPP and $\alpha=.78$ for the EDI-SOP, which supports earlier research claiming that the EDI-P can be seen as two subscales. The inter item correlation for the EDI-P and its subscales ranged between .43 and .55. The patients scored significantly higher on the EDI-SOP than on the EDI-SPP.

The results on the SOC-scale in our material were low ($M=106.5$) compared to a young, non clinical sample ($M=146$) (Hansson & Cederblad, 1995). SOC scores in earlier studies of Swedish eating disorder patient groups ranged from $M=103.6$ to $M=122.3$ (Hansson & Cederblad, 1995). The SOC-scores in the present study was within that range. The internal consistency the SOC scale showed an α –level of .89 which is acceptable according to Spector (1992). Further, the SOC-scale showed a mean inter-item correlation of .22. When dividing the scale into the three components “comprehensibility”, “manageability” and “meaningfulness” (Antonovsky, 1987) the mean inter-item correlations ranged from .19 to .45 (see Table 1).

Table 2 should be inserted here

The EDI-SPP showed a .45 correlation with the EDI-SOP, supporting the split into two internal subscales (Table 2). When correlating the SOC components with each other there were significant correlations at $p < .001$ (ranging from .44-.61). Also, the total SOC-scale correlated significantly with the SOC components. Correlations ranged from .78 for comprehensibility to .87 for manageability (see Table 2). Further, the SOC-scale and the EDI-P were significantly negatively correlated to each other ($p < .05$). Significant negative correlations at $p < .05$ were also the case when relating the SOC components to the EDI-P and the EDI-SPP. The strongest relation between the scales was between the SOC component “meaningfulness” and the EDI-SPP ($p < .001$) and between “manageability” and the EDI-SPP ($p < .01$). The EDI-SOP deviated from this pattern and was only negatively correlated to manageability ($p < .05$). The weakest correlations were between the SOC-component comprehensibility, and the EDI-SOP, EDI-P and EDI-SPP (see Table 2).

Figure 1 should be inserted here

Our hypothesis was that a low degree of sense of coherence should be negatively related to the results on the EDI-P. To test the hypothesis further, the SOC-results were divided into two groups according to the median of the sample, one with scores from 43-106 (“very low”) and one with scores from 107-156 (“low”) and compared them to the EDI-P results. The group that comprised the lowest SOC-scores had significantly higher scores on the EDI-P (see Figure 1).

Discussion

The EDI-P reached the criterion for internal consistency reliability (Cronbach's $\alpha=.70$ according to Spector 1992), both as one scale ($\alpha=.80$), and when divided into an EDI-SPP-subscale and an EDI-SOP-subscale ($\alpha=.74$ respectively $\alpha=.78$). It is remarkable that scales with so few items can be so coherent, and that this capacity remains when six items are divided into two scales with three items each. All this points towards EDI-P as being psychometrically sound. The results of the present study support earlier research claiming that the EDI-P covers two aspects of perfectionism in two subscales (Bardone-Cone, 2006). The patients scored significantly higher on the EDI-SOP than on the EDI-SPP, which is consistent with earlier findings of eating disorders as related more to self-oriented perfectionism (Lethbridge et al., 2011).

The validity of the SOC-scale has been questioned and what the instrument measures is subject to debate (Jakobsson, 2008). The Cronbach's α reliability for the three components of SOC has been found strong enough for group level comparisons in earlier studies (Söderhamn & Holmgren, 2004). The Cronbach's α values for the three SOC-components in our study were satisfactory, while the mean inter-item correlations were satisfactory only for the meaningfulness component. Thus, the mean inter-item correlations of the total SOC-scale were even lower than for the "meaningfulness" component. It has been debated whether the SOC-scale can be divided into the three components which Antonovsky claims to embrace the construct of SOC: comprehensibility, manageability and meaningfulness (Antonovsky, 1987; Hansson & Cederblad, 1995). The components and the procedure of putting items together into these components are described in Antonovsky's book from 1987. Despite that, Antonovsky claims that dividing the SOC scale into the components is incorrect; since the scale should be considered to be a global measurement of one factor, and that it has not been possible to distinguish the three theoretical components in the SOC scale (Antonovsky, 1987;

Gassne, 2008). Although there has been strong resistance toward dividing the SOC-scale, the present study found some support for doing so. However, the mean inter-item correlation appears not to be very robust, which could be added to the criticism of the construct (Jakobsson, 2008). One part of the scale, the meaningfulness component, seems to be more coherent than the rest. The mean inter-item correlation as well as the internal consistency for this component is better than for the undivided scale. This result is congruent with other studies on the measure of meaningfulness, showing that this is the purest factor in the SOC construct (Hansson & Cederblad, 1995).

Studies on non-clinical populations have found that SOC scores of 152 (+/-10) points or more for adults (and 146 +/- 10 points or more for young people) is a cut off-level predicting a reasonable degree of sense of coherence (Hansson & Cederblad, 1995). The scores on the SOC-scale in our study were lower than the scores in the general population, which was expected. Research in the field of eating disorders and SOC is sparse but there is an agreement that women with eating disorders have a weaker SOC than the general population (Hansson & Cederblad, 1995; Keller, 1997; Tagay, 2009). Hansson & Cederblad (1995) compared samples, albeit small, of eating disorder patients from southern Sweden to other clinical conditions and healthy controls. The eating disorder patients in their study scored relatively similar to other clinical groups but significantly lower than the controls (means ranging from 103.6 to 122.3). The SOC-scores in our study were within that range (M=106.7, SD 20.8). Only six out of 95 of the patients scored 136 points or more. In Gassne's (2008) doctoral thesis on SOC and social workers, the SOC-scores were divided into three grades: weak (≤ 122), moderate (123-162) and strong (≥ 163) sense of coherence. Sixteen out of the 95 participants in our sample scored 123 or more, implying that 79 of 95 had a weak sense of coherence. As a consequence of this we divided the SOC-scale by the median score into a

“very low” group and one “low” group and compared these results to the EDI-P results. The group with the lowest degree of SOC showed a significantly higher degree of perfectionism according to the EDI-P, which supports the hypothesis that the lower sense of coherence a person with eating disorder has the greater the tendencies towards perfectionism.

SOC is considered to develop in relation to significant others and life-situations from birth going on through the lifespan with less (and when so, more of a negative) change for adults than for younger persons (Antonovsky, 1987) Nahlén and Saboonchi (2009) found that SOC was negatively related to the degree of self-blame. Goodsitt (1997) suggests that eating disordered patients have “a failure to integrate bodily, cognitive, and affective experience into an organized core self” (Goodsitt, 1997, p.211), which could be comparable to the definition of a low SOC. As a parallel self-blame is related to socially prescribed perfectionism and may function as a defensive attributional strategy: it may feel safer to blame oneself than to be criticized by others (Gilbert et al., 2006). How these measures in the present study are related to each other is debateable: is one of the two measures dependent on the other, or is there another component that links SOC and perfectionism together? However, if viewing SOC as the independent variable, perfectionism could serve as a compensative strategy when the sense of coherence is low. Many theoretical perspectives share the view that perfectionism has a compensatory function to for problems with the regulation of inner processes such as feelings and bodily signals (Bruch, 1973; Fairburn, 2008; Goodsitt, 1997; Nordboe, 2006). This is concordant with a cognitive perspective, were perfectionism could be viewed as a compensatory strategy when the world is unpredictable and anxiety-ridden (Saboonchi, 2000). The causal direction is, however, yet to be further explored.

The strongest relation was between EDI-SPP and SOC. EDI-SOP is considered more related to eating disorders while it is the opposite for other psychiatric groups (Egan, 2011; Lethbridge et al. 2011). EDI-SPP was especially related to the meaningfulness component. A low degree of meaningfulness and sense of coherence may lead to beliefs that approval and love from other persons are conditioned. The present study has not regarded comorbidity with other psychiatric diagnoses howsoever this is common in eating disorders (Fletcher et al., 2008; Milos, Spindler & Schnyder, 2004). Eating disorder diagnoses were well-defined in the health records but other psychiatric diagnoses were inconsequently reported in the material for this study. Perhaps some of the results on the SOC and the perfectionism scales are rather related to other psychiatric symptoms than to the eating disorders? This should be further investigated in future studies.

According to our knowledge there are no earlier published studies on perfectionism and sense of coherence in eating disordered patients. However, there are some weaknesses in the study. The material originates from one clinic alone in a limited geographical area of Sweden, and is therefore difficult to generalize. Dividing the SOC scale into components despite dissuasion from Antonovsky could, of course, be debated. When comparing different measurements some cohesion is apparent, but it is difficult to know what was first, the perfectionism or the sense of coherence. Still, the results on the SOC scales and on EDI-P are consistent with other studies on eating disordered patients, which may support the generalizability of our results. The measures used showed fairly good overall internal consistency reliability and are found to be consistent with other studies (Garner, 1991; Gassne, 2008; Sherry et al., 2004), which can also be seen as supportive for the generalizability of our results.

SOC scores tend to stabilize around the age of 30 (Antonovsky, 1987). Thus, before then it would probably be easier to influence the development of SOC. When deliberating the relation between SOC and perfectionism, the clinician could consider working with enhancing of the sense of coherence, and by helping the eating disordered patients to increase their levels of comprehensibility, manageability and their meaningfulness in particular, thus making it possible for patients to lower their levels of perfectionism.

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Tables

Table 1. Displaying results and internal consistency reliability for SOC and the Perfectionism subscale in the EDI-2, as well as their postulated components.

SOC and EDI-2 perfectionism (number of items)	Sample, present study (n=95)			
	M	sd	Inter-item corr	Cronbach's α
SOC Comprehensibility (10)	32.0	7.2	.19	.70
SOC Manageability (10)	37.8	8.3	.22	.73
SOC Meaningfulness (8)	32.3	8.1	.45	.85
SOC total (29*)	106.4	20.8	.22	.89
EDI-2 Perfectionism, total (6)	6.0	4.4	.43	.80
EDI-2 Perfectionism-SPP (3)	2.2	2.3	.55	.74
EDI-2 Perfectionism-SOP (3)	3.8	2.8	.55	.78

* = SOC total contain one additional item that is not included in the component scales (Antonovsky, 2005)

Table 2. Correlation matrix of SOC results and results on the EDI-2 Perfectionism scale as well as their postulated components.

	EDI-2 Pfectionism, total	EDI-2 Perfectionism, socially prescribed	EDI-2 Perfectionism, self-oriented	SOC total	SOC Compreh en-- sibility	SOC Manage- ability	SOC Meaning- fulness
EDI-2 Perfectionism, total	1.00	.78†††	.90†††	-.33††	-.20†	-.29††	-.28††
EDI-2 Perfectionism socially prescribed	.78†††	1.00	.45†††	-.38†††	-.22†	-.31††	-.35†††
EDI-2 Perfectionism self-oriented	.90†††	.45†††	1.00	-.23†	-.15	-.23†	-.17
SOC total	-.33††	-.38†††	-.23†	1.00	.78†††	.87†††	.82†††
SOC Comprehensibility	-.20†	-.22†	-.15	.78†††	1.00	.61†††	.44†††
SOC Manageability	-.29††	-.31††	-.23†	.87†††	.61†††	1.00	.58†††
SOC Meaningfulness	-.28††	-.35†††	-.17	.82†††	.45†††	.58†††	1.00

†= p<.05

††= p<.01

†††= p<.001

Fig.1. Box plot displaying comparisons between EDI-P and SOC-subgroups; “very low” (SOC ≤ 107) and “low” (SOC > 107) scores, $t = 2.78$, $p = .0067$.

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