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## Interpersonal psychotherapy for eating disorders with co-morbid depression: A pilot study

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### ABSTRACT

**Objective:** Patients with eating disorders (ED) often suffer from co-morbid depression, which may complicate the ED treatment. Previous studies have found that ED interventions seem to have limited capacity to reduce depressive symptoms. Several studies of interpersonal psychotherapy (IPT), have found that when patients have been treated for depression, co-morbid symptoms have diminished. As depression and EDs are commonly co-occurring conditions, this pilot study aimed to examine the effect of an IPT treatment for these conditions, with the focus on the depressive symptoms.

**Method:** In this multi-centre study, 16 patients with EDs and co-occurring major depression received 16 weeks of depression-focused IPT.

**Results:** Significant improvements with substantial effect sizes were found for both depression ( $d = 1.48$ ) and ED ( $d = .93$ ). Symptom reduction in the two syndromes were strongly correlated ( $r = .625$ ,  $p = .004$ ). Patients with a restrictive ED did not improve on either depression or ED symptoms.

**Conclusion:** These findings point to the usefulness of IPT for concurrent depression and ED with a bingeing/purging symptomatology. Working with negative affect and problem-solving related to current interpersonal problems may alleviate general psychological distress among these patients.

## Interpersonelle Psychotherapie für Essstörungen mit Ko-morbider Depression: eine Pilot-Studie, Malin.

**Objektive:** Patienten mit Essstörungen leiden oft an ko-morbider Depression, welche die Behandlung komplizieren könnte. Hervorgegangen Studien haben erwiesen, dass Essstörungbehandlungen eine begrenzte Kapazität haben die depressiven Symptome zu lindern.

Mehrere Studien der Interpersonellen Psychotherapie haben erwiesen, dass Patienten die für Depression behandelt wurden, geringere Depressionssymptome erwiesen, und die ko-morbiden Symptome gelindert wurden. Da Depression und Essstörungen miteinander wirkende Störungen sind, hat sich diese Studie vorgenommen den Ausmass von diesen Konditionen durch IPT Behandlungen zu erforschen, mit einer Konzentration an den Depressiven Symptomen.

**Methode:** In dieser Multizentralen Studie, haben 16 Patienten mit Essstörungen und gleichzeitig vorkommende Depression 16 Wochen an Depression konzentrierte Therapie empfangen (IPT).

**Ergebnisse:** erheblich wichtige Verbesserungen mit substantieller Ergebnisgrösse für beide Depression ( $d = 1.48$ ) und ED ( $d = .93$ ). Eine Symptomverminderung wurde gefunden in den beiden Symptomen die stark korrelieren ( $r = .652$ ,  $p = .004$ ). Patienten mit eingeschränkter ED haben sich weder bei der Depression noch bei den ED Symptomen.

**Konklusion:** Diese Funde erweisen die Nützlichkeit der Therapie für andauernde Depression, sowie Essstörungen mit su

## PSICOTERAPIA INTERPERSONAL EN TRASTORNOS DE LA ALIMENTACION CON DEPRESION CO-MORBIDA: un estudio piloto.

**Objetivo:** Los pacientes con trastornos de la alimentación (TA), frecuentemente sufren de depresión co-mórbida la cual puede complicar el tratamiento del TA. Estudios previos han encontrado que las intervenciones sobre el TA parecen tener una capacidad limitada para reducir los síntomas depresivos. Varios estudios de psicoterapia interpersonal (PI) han sugerido que cuando los pacientes han recibido tratamiento para la depresión, los síntomas co-mórbidos han disminuido. Como la depresión y el TA son condiciones que generalmente ocurren al mismo tiempo, este estudio piloto tiene como meta examinar el efecto de un tratamiento con PI en pacientes que presentan estas condiciones enfocándonos en el síntoma depresivo.

**Método:** En este estudio 16 pacientes con TA que presentaban síntomas depresivos al mismo tiempo, recibieron 16 semanas de tratamiento con PI enfocado hacia la depresión.

**Resultados:** Se encontró una mejoría significativa con efectos substanciales en ambos trastornos: depresión ( $d = 1.48$ ) y TA ( $d = .93$ ). Se encontró una fuerte correlación en la reducción de los síntomas en ambos síndromes ( $r = .625$ ,  $p = .004$ ). Los pacientes con TA restrictivo no mejoraron ni en su depresión ni en los síntomas de su TA.

**Conclusión:** Los resultados apuntan hacia la utilidad de la PI para la co-existencia de depresión y TA con sintomatología de ingestión/vómito/purgante. El trabajo con el afecto negativo y la solución de problemas en relación con dificultades interpersonales puede aliviar la angustia psicológica general en estos pacientes.

## Psicoterapia interpersonale per comorbidità tra disturbi alimentari e depressione: uno studio pilota

**Obiettivo:** I pazienti con disturbi alimentari (ED) spesso presentano comorbidità con la sintomatologia depressiva, il che può complicare il trattamento degli ED. Studi precedenti hanno dimostrato che i trattamenti per gli ED sembrano avere una limitata capacità di ridurre i sintomi depressivi. Diversamente studi relativi alla psicoterapia interpersonale (IPT) hanno evidenziato che quando i pazienti sono trattati per la depressione, diminuiscono anche i sintomi ad essa correlati. Poiché la depressione e gli ED sono generalmente co-occorrenti, il presente studio pilota ha inteso esaminare l'effetto di un trattamento IPT per queste situazioni di comorbidità, focalizzandosi sui sintomi depressivi.

**Metodo:** In questo studio multicentrico, 16 pazienti con ED e depressione maggiore sono stati sottoposti IPT focalizzata sulla depressione per 16 settimane.

**Risultati:** si sono riscontrati miglioramenti significativi con un sostanziale effetto sia per la depressione ( $d = 1,48$ ) che per gli ED ( $d = .93$ ). La riduzione dei sintomi per le due sindromi è fortemente correlata ( $r = .625$ ,  $p = .004$ ). Tuttavia, i pazienti con un ED restrittivo non presentano miglioramenti né per la depressione né per gli ED.

**Conclusioni:** Questi risultati indicano l'utilità dell'IPT per la depressione concorrente e la ED con una sintomatologia abbuffata/epurazione. Lavorare con i sentimenti negativi e le competenze di problem-solving attinenti problemi interpersonali attuali può alleviare la sofferenza psicologica di questi pazienti.

## Psychothérapie interpersonnelle dans les cas de troubles alimentaires avec dépression comorbide: une étude-pilote

**Objectif :** Les patients présentant des troubles alimentaires (ED) souffrent souvent de dépression comorbide ce qui peut compliquer le traitement des ED. Des études précédentes ont montré que les interventions ED semblent avoir une capacité limitée à réduire les symptômes dépressifs. Plusieurs études portant sur la psychothérapie interpersonnelle (IPT) ont montré que lorsque les patients sont traités pour dépression, les symptômes comorbides diminuent. Etant donné que la dépression et les troubles alimentaires sont des affections courantes, cette étude-pilote a pour objectif d'examiner l'effet d'un traitement IPT sur ces affections en se centrant sur les symptômes dépressifs.

**Méthode :** Dans cette étude multi-centres 16 patients souffrant d'ED et de dépression majeure ont reçu 16 semaines d'IPT pour dépression.

**Résultats :** Des améliorations significatives avec ampleur de l'effet substantielle ont été observées à la fois pour la dépression ( $d = 1.48$ ) et pour ED ( $d = .93$ ). La réduction du symptôme dans les deux syndromes était fortement corrélée ( $r = .625$ ,  $p = .004$ ).

**Conclusion :** Ces résultats indiquent que l'IPT est pertinente dans le cadre de la dépression et de l'ED avec une symptomatologie de gavage/purge. Travailler avec des affects négatifs et trouver des solutions aux problèmes interpersonnels actuels peut alléger les difficultés psychologiques générales de ces patients.

## Η διαπροσωπική ψυχοθεραπεία στις διαταραχές πρόσληψης τροφής με συννοσηρότητα κατάθλιψης: μια πιλοτική έρευνα

**Περίληψη:** Στόχος: Οι ασθενείς με διαταραχές πρόσληψης τροφής συχνά παρουσιάζουν συννοσηρότητα με κατάθλιψη, η οποία μπορεί να περιπλέκει τη θεραπεία των διαταραχών πρόσληψης τροφής. Προηγούμενες έρευνες έχουν δείξει ότι οι παρεμβάσεις που εφαρμόζονται για τις διαταραχές πρόσληψης τροφής έχουν περιορισμένη αποτελεσματικότητα στη μείωση των καταθλιπτικών συμπτωμάτων. Διάφορες έρευνες της Διαπροσωπική Ψυχοθεραπείας έχουν δείξει ότι, όταν εφαρμόζονται παρεμβάσεις για την κατάθλιψη, τα συμπτώματα μειώνονται. Με δεδομένο ότι η συχνά παρατηρείται συννοσηρότητα κατάθλιψης και διαταραχών πρόσληψης τροφής, αυτή η πιλοτική έρευνα στόχευσε στην εξέταση της αποτελεσματικότητας της Διαπροσωπικής Ψυχοθεραπείας σε αυτές τις καταστάσεις με εστίαση στα καταθλιπτικά συμπτώματα.

**Μεθοδολογία:** Σε αυτή την έρευνα που έγινε σε πολλαπλά κέντρα, 16 ασθενείς με διαταραχή πρόσληψης τροφής και μείζονα κατάθλιψη παρακολούθησαν Διαπροσωπική Θεραπεία 16 εβδομάδων εστιασμένη στην κατάθλιψη.

**Αποτελέσματα:** Σημαντική βελτίωση με σημαντικά μεγέθη αποτελεσματικότητας βρέθηκαν τόσο για την κατάθλιψη ( $d = 1.48$ ) όσο και για τις διαταραχές πρόσληψης τροφής ( $d = .93$ ). Η μείωση των συμπτωμάτων στις δύο διαταραχές παρουσίασαν σημαντική συσχέτιση ( $r = .625$ ,  $p = .004$ ). Οι ασθενείς με διαταραχή πρόσληψης τροφής περιοριστικού τύπου δεν έδειξαν βελτίωση ούτε στην κατάθλιψη, ούτε στα συμπτώματα της διαταραχής πρόσληψης τροφής. **Συμπέρασμα:** Αυτά τα αποτελέσματα αναδεικνύουν τη χρησιμότητα της Διαπροσωπικής Ψυχοθεραπείας στην αντιμετώπιση της κατάθλιψης που συνοδεύεται από διαταραχή πρόσληψης τροφής με συμπτωματολογία επεισοδιακής υπερφαγίας/κάθαρσης. Η επεξεργασία των αρνητικών συναισθημάτων και η επίλυση προβλήματος γύρω από πρόσφατα διαπροσωπικά προβλήματα μπορεί να ανακουφίσει τη γενική ψυχολογική δυσφορία που βιώνουν οι συγκεκριμένες ασθενείς.

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**PALABRAS CLAVE** PI; psicoterapia interpersonal; depresión; trastorno alimentario; co-morbilidad

**PAROLE CHIAVE** IPT; psicoterapia interpersonale; depressione; disturbi alimentari; co-morbilità

**MOTS-CLÉS** IPT; Psychothérapie interpersonnelle; dépression; troubles alimentaires; comorbidité

**ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ** IPT; διαπροσωπική θεραπεία; κατάθλιψη; διαταραχή πρόσληψης τροφής; συννοσηρότητα

## Introduction

Eating disorders (ED) include a spectrum of pathological eating behaviours ranging from Anorexia Nervosa (AN) with mainly restricting symptoms to Bulimia Nervosa (BN) and Binge Eating Disorder (BED), both characterised by recurrent episodes of uncontrollable binge eating. In BN a compensating behaviour follows these episodes, whereas in BED no compensating behaviour is used (American Psychiatric Association [APA], 2013).

Cognitive Behavioural Therapy (CBT) is the primary recommended psychological treatment for patients with full or subthreshold BN and BED. Interpersonal Psychotherapy (IPT) is another recommended treatment for these conditions (Kass, Kolko, & Wilfley, 2013). IPT has been found to be as effective as CBT for BN and BED, although behavioural changes seem slower than with CBT (Fairburn et al., 2015; Murphy, Straebl, Basden, Cooper, & Fairburn, 2012). For adults with a restrictive eating pathology, there is no clearly recommended psychological treatment. These patients have a poorer treatment outcome for IPT as well as for psychological treatment in general compared to patients with BN or BED (Carter et al., 2011; McIntosh et al., 2005).

IPT is a time-limited acute treatment that has been tested in treatments comprising 8 to 16 sessions. The treatment manual prescribes that the therapy should be delivered in three phases: the initial phase, treatment phase and termination phase (Weissman, Markowitz, & Klerman, 2007). In the early sessions, the therapist assesses the link between the current illness and the interpersonal context. Together the therapist and patient make an interpersonal case-formulation of the patient's current problems and choose one focal area as the target for the treatment (e.g. interpersonal dispute, role transition, complicated grief or interpersonal sensitivity/deficits). The focus that the therapist and the patient choose becomes the basis for the therapist's interventions, aiming at a deeper understanding of attachment needs in current relationships and the development of a better sense of agency, facilitating a process of change aimed at symptom reduction (Lipsitz & Markowitz, 2013; Markowitz & Weissman, 2004; Stuart & Robertson, 2012).

IPT was created for the treatment of depression. The method was developed in the early 1970s, in the context of a psychopharmacological trial (Klerman, Weissman, Rounsaville, & Chevron, 1984). It has been found to be an effective treatment for mood disorders (Cuijpers, van Straten, Andersson, & van Oppen, 2008; Cuijpers et al., 2011). Adaptations for other disorders have been examined, showing favourable results for some conditions and less favourable for others (Markowitz, Lipsitz, & Milrod, 2014).

The manual of IPT for ED has evolved over time (see Murphy et al., 2012 for an overview). In several ED studies, IPT has been used as a control treatment. In some of these trials, the link between ED symptoms and interpersonal events has not been emphasised to the extent that is usual in IPT (Fairburn, Jones, Peveler, Hope, & O'Connor, 1993; Wilfley et al., 2002). In Fairburn et al.'s studies for example, IPT therapists were not allowed to discuss ED symptoms, only interpersonal distress (Fairburn et al., 1993). Trials that have emphasised links between current interpersonal issues, current ED symptoms, and other current sources of distress, analogous to the manualized IPT depression treatment, have shown better results with faster effects on ED symptoms, than studies using the Fairburn manual. They have also shown continued improvement after therapy end (Arcelus, Whight, Brewin, & McGrain, 2012; Arcelus et al., 2009; Whight et al., 2011).

Despite considerable advances in both ED research and treatments, many patients do not improve (Brown & Keel, 2012). One explanation for the reduced

treatment response among ED patients could be co-morbid depression. Depression is a psychiatric condition distinguished by low mood, lack of interest, low self-esteem, diminished functioning and weariness of life. The prevalence of depression is high, especially among women (Kessler et al., 2003). Eating and mood disorders are commonly co-morbid: the lifetime prevalence of a co-morbid major depressive disorder in ED has been estimated at 40% for AN and 50% for BN, but such co-morbid conditions are often both underdiagnosed and undertreated (Hudson, Hiripi, Pope, & Kessler, 2007). Untreated depression may complicate the ED treatment (Berkman, Lohr, & Bulik, 2007).

A recent systematic review found that even interventions that demonstrated effectiveness in ED trials seem to have limited capacity to reduce depressive symptoms: 92% of the patients successfully reduced disordered eating, but only 42% were improved concerning both ED and depressive symptoms (Rodgers & Paxton, 2014). These authors suggest that interventions should be developed and studied that not only target the ED but also focus on depressive symptoms. Their review included no IPT interventions. IPT trials of BN with co-morbid depression have however shown significant depressive symptom reduction in addition to BN improvement (Arcelus et al., 2009; Nevenon & Broberg, 2006).

Several IPT studies have found that when treating patients for depression, a range of co-morbid symptoms have diminished. This has been found for anxiety (Young, Mufson, & Davies, 2006; Young et al., 2012), insomnia (Pigeon et al., 2009), chronic pain (Poleshuck et al., 2010, 2014), and alcohol abuse (Gamble et al., 2013; Markowitz, Kocsis, Christos, Bleiberg, & Carlin, 2008). A randomised study of IPT, CBT (Prolonged Exposure), and Relaxation Therapy for Post traumatic stress disorder, PTSD, found that in addition to effects on the PTSD symptoms, patients with co-morbid depression seemed to respond better to IPT and had a lower dropout rate compared to CBT (Markowitz et al., 2015).

Previous studies of IPT for ED patients with co-morbid depression have targeted the association between ED and interpersonal distress. No previous studies of ED patients with co-morbid depression have primarily addressed the depression. In this study, we examined the effect of an IPT intervention focusing on the depressive symptoms. Since patients with a restrictive eating pathology seem to respond differently to psychological treatment than patients with a bingeing/purging pathology (Carter et al., 2011; McIntosh et al., 2005) we assessed treatment effects for these patients separately.

## **Aim**

The aim of the present study was to examine whether ED patients with co-morbid depression would benefit from an IPT treatment focusing on depression.

Specific questions that we wanted to address were:

Does a 16-session IPT treatment following a manual for patients with depression reduce depressive symptoms and ED symptoms?

Does the treatment response differ between depression and ED symptoms?

Does the treatment response differ for patients with a bingeing/purging pathology compared to patients with a restricting pathology?

## Methods

Data in this multicentre study came from the first therapy in a training course in IPT conducted 2012–2013. Nineteen therapists took part in the course. Patients received depression-focused IPT with an explicit focus on the links between interpersonal issues and depressive symptoms (Weissman, Markowitz, & Klerman, 2000). The manual included psychoeducation about depression but not about ED. Symptoms of ED were discussed when appropriate but they were not the focus of the treatment. Therapists received internet-based group supervision by accredited IPT-supervisors. Therapy sessions were videotaped and the supervisor rated at least three sessions in every therapy for competence and adherence (Law, 2011).

## Therapists

The study was conducted at seven outpatient psychiatric services specialising in ED treatment in Sweden. All 19 therapists were experienced ED therapists before starting the IPT training, but this was their first IPT training therapy. One-third of the therapists had previous training in CBT; one-third had training in psychodynamic therapy and one-third had an integrative training. Ten therapists were psychologists, three were social workers, three were occupational therapists, two were nurses and one a nurse attendant. Therapists were between 30 and 60 years old and had between 1 and 15 years' experience of psychotherapeutic work.

## Patients

Patients were recruited at the outpatient services where the therapists worked. Inclusion criteria were age 16–50 years, and meeting DSM-IV criteria for a major depressive disorder and an ED (APA, 1994). Exclusion criteria were a body mass index (BMI) lower than 17.5, other ongoing psychological treatment and inpatient care, or a need for intense medical treatment. The reason for the BMI exclusion criterion was that patients with a lower BMI level need treatment that focuses on their eating patterns and low weight, and in this study the IPT treatment focused on the depression. Data from three therapies were not used: one therapist did not follow the protocol for data collection, and two patients did not fulfil the criteria for an ED diagnosis at treatment start. Thus, the study sample consisted of 16 patients.

## Procedure and instruments

The *Montgomery Åsberg Depression Rating Scale* (MADRS-S) is the self-rating version of MADRS, especially developed to be sensitive to changes in depression severity



(Svanborg & Åsberg, 1994). The MADRS-S consists of nine items corresponding to the nine DSM-IV major depression criteria. By MADRS-S standards, 13–19 points indicate mild depression, 20–34 moderate depression and more than 34 points severe depression (Hawley, Gale, Sivakumaran, & Hertfordshire Neuroscience Research Group, 2002; Svanborg & Ekselius, 2003). The instrument, which has good reliability and validity (Svanborg & Åsberg, 1994), was used to measure depression severity at baseline. It was administered at the first, the eighth and the last session.

The *Eating Disorder Inventory-3* (EDI-3) is an often used self-rating instrument for eating disorders with good validity and reliability (Garner, 2004). The 91 items are divided into 12 subscales. The Eating Disorder Risk scale (EDR) comprises three of the subscales, and the General Psychological Maladjustment scale (GPM) comprises the remaining nine subscales. This study reports baseline EDR and GPM. In a previous study, Swedish ED-patients had a mean of 57.8 (SD = 21.37) on EDR compared to 25.01 (SD = 18.52) in a non-clinical control group, and 38 was suggested as the cut-off for a clinical eating disorder (Nyman-Carlsson, Engström, Norring, & Nevonen, 2014). On the GPM the ED-group scored a mean 96.45 (SD = 33.14) compared to 51.48 (SD = 28.89) in a non-clinical group. For the GPM a value of 67 was the cut-off for a clinical eating disorder (Nyman-Carlsson et al., 2014). The EDI-3 was also completed at the first, the eighth and the last session.

The *Patient Health Questionnaire-9* (PHQ-9) consists of questions corresponding to the nine DSM-IV major depression criteria (Spitzer, Kroenke, & Williams, 1999). This study used the PHQ-9 to measure weekly symptom changes. The PHQ-9, a validated and reliable instrument, has proved suitable for screening as well as repeated measurements. The cut-off limits for symptom severity are: 0–4 none/minimal depression, 5–9 mild depression, 10–14 moderate depression, 15–19 intermediate depression and 20–27 severe depression (Kendel et al., 2010; Kroenke, Spitzer, & Williams, 2001; Löwe, Kroenke, Herzog, & Gräfe, 2004). A cut-off score of 10 points has been suggested for differentiating clinical from non-clinical individuals (Gyani, Shafran, Layard, & Clark, 2013; Manea, Gilbody, & McMillan, 2012). The PHQ-9 was completed before each session.

The *Repeated Evaluation of Eating Disorder Symptoms* (REDS), is a self-rating questionnaire, measures the most common ED-symptoms (Fallsdalen Riegler & Sundin, 2009). The 14 REDS items comprise thoughts and ideas about food, impulses, weight and body image. The patient gives responses on a five-point scale ranging from 'never' to 'very often' and indicates how often he/she has experienced each symptom during the past week. The REDS has demonstrated good reliability and validity in a Swedish study (Fallsdalen Riegler & Sundin, 2009). The cut-off between clinical and non-clinical populations is 22 points. In this study, REDS was used weekly to measure symptom changes. The REDS was completed before each session.

### Data analysis

Paired samples *t*-tests were used to compare the start and end values. Effect size was calculated as within-group Cohen's *d*, implying that the mean score after

treatment was subtracted from the mean score before treatment and then divided with the standard deviation of the scores before treatment. Pearson correlations were used to examine associations between outcome scores for depression (PHQ-9) and eating disorder (REDS). Reliable change was assessed using the Reliable Change Index (RCI; Jacobson & Truax, 1991). The RCI indicates whether the patient change exceeds measurement error. Jacobson and Truax's (1991) third definition was used to determine the RCI. The RCI was thus calculated with the formula  $1.96 \cdot SD(1-r)^{1/2}$  where  $r$  is the reliability estimate for the scale (Cronbach's alpha) and  $SD$  is the sample standard deviation (using the first rating for each patient). Five points on the REDS and seven points on the PHQ-9 were found to be RCI limits by this method. The cut-off for clinical significance (CS) was 10 on the PHQ-9 and 22 on the REDS. Patients who improved more than the RCI limits and also scored below the CS cut-off after treatment were considered to have attained a reliable, clinically significant change and were considered Remitted (Frank et al., 1991), while patients with reliable change who did not reach the CS level were classified as Improved. Patients whose symptoms increased more than the RCI limit were labelled Deteriorated, and the remainder was labelled Unchanged. When patients completed their treatment before the 16th session, last observation carried forward (LOCF) was used for the final PHQ-9 and REDS scores.

### **Ethical issues**

Therapists and patients received oral and written information about the study and gave signed consent to participate. The Ethics Review Board in Örebro/Uppsala approved the study 2012-12-05, registration number; 2012/471.

## **Results**

### **Descriptive data**

The patients, all women, ranged in age from 17 to 39, with a mean age of 25.0 ( $SD = 6.50$ ). All met the criteria for a DSM-IV Major Depressive Disorder and an ED at baseline. Seven patients (44%) had a diagnosis of BN, and the remaining had an ED not otherwise specified (EDNOS). One among these had a BED, two had a subthreshold BN; (EDNOS type 3) and two had a purging disorder (EDNOS type 4) according to the DSM-IV (APA, 1994). These were grouped together in the bingeing/purging (B/P) group. Four patients had a restrictive symptomatology (EDNOS type 1 or 2), and were grouped together as the restrictive group (RE).

Table 2 shows the distribution of bingeing/purging ED (B/P) and restrictive symptom presentation (RE). Ten patients had been in ED treatment before IPT started (for between 4 and 24 months) while six patients had not received any previous ED treatment. None of them had previously been treated for depression.

The mean MADRS-S score at treatment start was 25.7 ( $SD = 8.25$ ), range 13–39. The mean EDI-3 score was 66.07 ( $SD = 13.76$ ), range 47–92 on the EDR.

**Table 1.** Pre- and post-ratings on PHQ-9 and REDS separated between RE ( $n = 4$ ) and B/P ( $n = 12$ ) patients.

Measure PHQ-9	<i>M</i> pre	SD	<i>M</i> post	SD	<i>T</i> ( <i>p</i> )	Cohen's <i>d</i>
RE	12.75	2.06	10.25	6.70	.86 (ns)	–
B/P	17.25	4.49	7.25	6.27	6.13 (<.000)	1.86
All	16.13	4.49	8.19	6.27	5.05 (<.000)	1.48
REDS						
RE	27.00	3.27	29.50	6.45	–1.29 (ns)	–
B/P	31.33	6.67	19.92	11.26	3.74 (.004)	1.27
All	30.25	6.20	22.31	10.94	2.87 (.012)	.93

Note: RE = Restrictive, B/P = Binging and/or purging.

The GPM mean score was 110.87 ( $SD = 22.67$ ), range 71–149. Thus, all participants scored above the cut-offs for both the EDR and the GPM.

### Treatment outcome

All patients completed treatments that lasted between 12 and 16 sessions. Twelve therapies focused on interpersonal disputes, and four on role transitions. According to the adherence rating procedure (supervisor ratings), the therapists conducted IPT in an adherent and a competent way.

Both depressive and ED symptoms decreased significantly, with large effect sizes (Table 1). Change in depressive symptoms and ED symptoms were strongly correlated ( $r = .625, p = .004$ ).

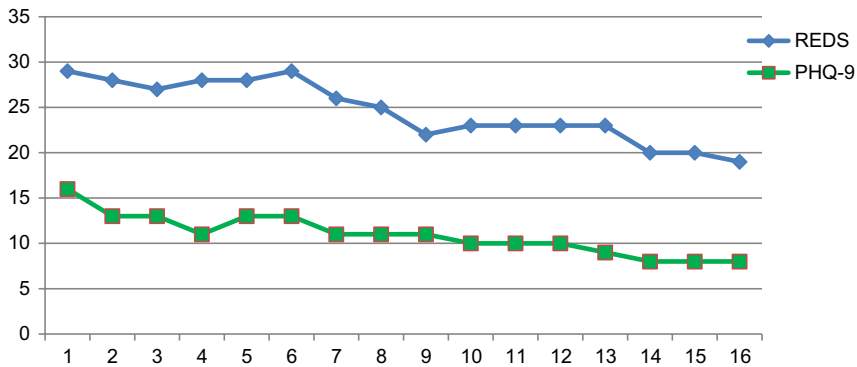
As shown in Table 2, 10 patients were remitted from depression and one was improved. Among the restrictive patients, one was remitted, whereas nine patients in the B/P were remitted and one was improved. When patients were categorised into two groups – deteriorated and unchanged versus improved and remitted – the difference between the restrictive and the B/P patients was significant ( $\chi^2 = 4.75, p = .03$ ).

Seven patients were remitted and two were improved with respect to ED. All these patients belonged to the B/P group. Among the restrictive patients, three were unchanged and one deteriorated. When the same distinction was made between deteriorated/unchanged and improved/remitted patients, the difference between the B/P and the restrictive groups was significant ( $\chi^2 = 6.86, p = .009$ ).

**Table 2.** Numbers of deteriorated, unchanged, improved and remitted patients in the B/P and RE groups.

	Deteriorated	Unchanged	Improved	Remitted
PHQ-9				
B/P	0	2	1	9
RE	1	2	0	1
Total	1	4	1	10
REDS				
B/P	0	3	2	7
RE	1	3	0	0
Total	1	6	2	7

Note: RE = Restrictive, B/P = Binging and/or purging.



**Figure 1.** Weekly measures of depressive symptoms (PHQ-9) and eating disorder symptoms (REDS)  $N = 16$ .

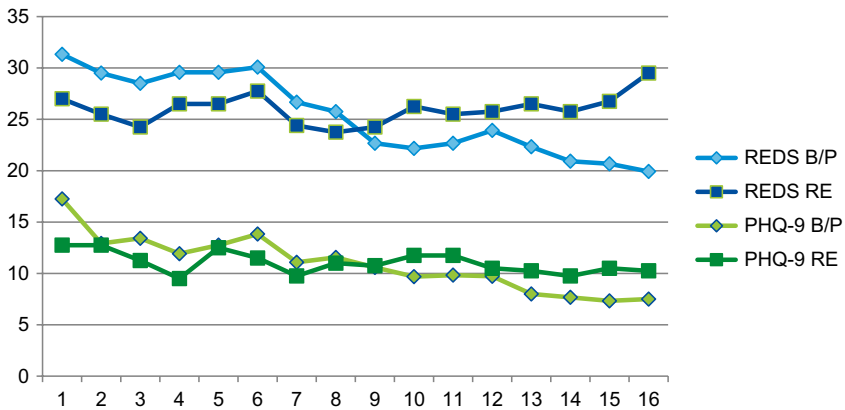
Inspection of mean symptom trajectories shows that both depressive symptoms and ED symptoms had started to decline by the second session. (It should be noted that no formal tests of trajectory slopes or differences between them were made as the number of patients was small.) The symptoms increased slightly around sessions 5–6, and then continued to decrease (Figure 1). Mean PHQ-9 scores reached the RCI level around session 8, while ED symptoms changed somewhat more slowly: mean REDS scores reached the RCI level around session 9, then increased again, and stabilised from session 14.

Comparing the 12 patients with bingeing/purging ED, with the 4 patients with restrictive ED (Figure 2), bingeing/purging patients showed a progressive linear decline in both depressive and ED symptoms whereas the restrictive patients showed a more irregular pattern with an increase in ED symptoms at the last session.

## Discussion

This pilot study showed that an IPT treatment focusing on depression was effective in reducing both depressive and ED symptoms in patients with co-morbid depression and bingeing/purging ED symptomatology. The effect was larger for depression than for ED symptoms and the depressive symptoms reached a reliable change earlier than the ED symptoms. Previous studies of IPT for BN or BED have shown good effects both using a manual linking relational issues with binge eating and with a manual that focused more broadly on interpersonal problems. The effects on binge eating, however, occurred more rapidly when the treatment also focused on the ED (Arcelus et al., 2009; Wilfley, Frank, Welch, Spurrell, & Rounsaville, 1998).

Nine of the patients (56%) were remitted (44%) or improved (12%) for both diagnoses, which is promising because depressive co-morbidity with ED is common, and may complicate the ED treatment. Our results differ from the conclusion by Rodgers and Paxton (2014) that even successful interventions among



**Figure 2.** Weekly measures of depressive symptoms (PHQ-9) and eating disorder symptoms (REDS) for patients with restrictive ED (RE,  $n = 4$ ) and patients with bingeing/purging ED (B/P,  $n = 12$ ).

ED patients seem to have a limited capacity to reduce depressive symptoms. Their review did not include any IPT studies.

Our study is the first to our knowledge in which IPT focused on the co-morbid depression rather than the ED symptoms in patients with ED pathology. It may be that the general focus on interpersonal problems in IPT influences both depressive and ED symptoms. Although IPT presents itself as a diagnosis-focused treatment, the therapeutic work on interpersonal problems may ameliorate symptoms in several domains. Several IPT studies have found that treating patients for depression has diminished co-morbid symptoms (Gamble et al., 2013; Markowitz et al., 2008; Pigeon et al., 2009; Poleshuck et al., 2010, 2014; Young et al., 2006, 2012).

IPT has often been described as a 'common-factor treatment'. This may also be a reason for its effects on co-occurring conditions other than the identified primary diagnosis (Lipsitz & Markowitz, 2013). This raises the question of mechanisms of change in IPT. Perhaps it should be regarded as a transdiagnostic treatment, targeting relevant factors in different psychiatric states such as affective problems, mentalization deficits, and failing communication skills. Lipsitz and Markowitz (2013) suggest that enhancing support from others, reducing interpersonal stress, facilitating emotional processing and improving interpersonal skills are potentially important mechanisms of change in IPT. As these general skills probably affect many other areas in life, IPT could address not only the primary diagnosis, but also various co-occurring difficulties where interpersonal difficulties are an important maintaining factor.

The promising results of this study may in fact raise the question whether treatment for depression using the IPT approach is enough to treat BN and BED with co-morbid depression. Given the limited access to specialised ED treatment,

it is of clinical interest if these conditions can be treated in general psychiatric units by therapists trained in IPT for depression.

None of the four restrictive patients improved on ED symptoms, and only one on depressive symptoms. Although disappointing, this finding accords with previous research (Murphy et al., 2012). The symptom reduction pattern for patients with a bingeing/purging diagnosis differed from patients with a more restrictive ED. The PHQ-9 scores of B/P patients continued to decline until they were in line with the normal population, while the scores of the restrictive patients showed irregular change patterns. On the REDS the B/P patients continued to improve throughout the therapy, while the restrictive patients improved initially, but midway through therapy their REDS scores increased again and at the last session they were higher than initially.

Apparently, these patients could not make use of this short-term treatment, and may need more time to engage in treatment in order to change in a stable way. Given that their scores on both the PHQ-9 and the REDS were initially lower than those of the B/P patients, it could also indicate that the interpersonal focus increased their awareness about their ED symptoms and how they affect their interpersonal relationships and quality of life. This might suggest that restrictive patients need a longer format of treatment (McIntosh et al., 2005).

It is also tempting to speculate whether symptom-focused measurements are the best way to evaluate the usefulness of psychotherapy for restrictive patients. It is well known that this population has a decreased affect-consciousness, insecure interpersonal patterns and general sensitivity for changes in their daily habits (Lech, Holmqvist & Andersson, 2012; Skårderud & Fonagy, 2012). Being anorectic and working to become more genuine, present and self-assertive towards self and others can be very demanding. Evaluation of awareness of feelings, reflective functioning, therapeutic alliance and experiences in close relationships may help us to understand more about the process of change for these patients.

As the treatments in this study focused on depression and not ED, no explicit links between ED symptoms, interpersonal distress and mood disorder were made in the treatments. Could this possibly partly explain the weak outcome for the restrictive patients? If the therapy does not focus on ED behaviour at all, the ED could be a safe place to seek security when therapeutic work with feelings and relationships are felt to be too challenging. Maybe these patients need not only a longer treatment but also a more distinct focus on ED symptoms and their link to affects, current life events and interpersonal relationships. These questions should be addressed in future trials, since it remains an important but challenging task to find effective treatment interventions for restrictive ED-pathology.

As this was a pilot study with no control group and no long-term follow-up, the results should be interpreted with caution. The results may not be generalisable from this small open trial with IPT therapists in training to other settings. These therapies were the first IPT training cases for the ED therapists. However,

it seems that they delivered the method in an effective way in a short period of time with long-distance supervision. According to the adherence assessments by the supervisors, they delivered IPT in a competent and adherent way. No formal assessment was made of their use of other methods and therefore we cannot know to what extent they used interventions that are not prescribed in IPT (Perepletchikova & Kazdin, 2005).

The therapists were trained to work with ED patients, although not with a depression focus. Therapists with no experience of ED patients might not have been as successful as the ones in this study. The findings for patients with restrictive pathology should be taken with great caution as there were so few of them. Despite these limitations, we believe that this study provides new knowledge about IPT for patients with ED and depression. Larger studies with a control group should be made in this field.

## Conclusions

This study suggests that a depression-focused IPT intervention can be an effective treatment for patients with BN, subthreshold BN, or BED and co-occurring major depression, yielding improvements in both depressive and ED symptoms. Considering how common co-morbidity with depression and EDs is, these are encouraging findings. Restrictive patients did not seem to benefit from this brief treatment. They may need a longer intervention, or may need a clearer focus on the associations between interpersonal problems and ED symptoms.

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## Disclosure statement

The authors declare that they have no competing interest.

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