Responsiveness of patients with anxiety to psychophysiological self-regulation: is the DSM-IV diagnosis relevant?

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Introduction

Psychophysiological treatment of anxiety, mainly by way of relaxation (self-regulation of tension), has a long history and has proven to be effective (Manzoni,2010), for volunteers a well as for patients with psychological or somatic diagnoses. Effect size is on average a moderate-high score. In this study however we are interested in the responsiveness of the anxiety patients. How many of them become able, after treatment, to handle their complaints sufficiently and do not need further therapy? Conversely, for how many patients factors appear to be present that inhibit solution of the problems by self regulation of tension?

A multimodal approach is used to select techniques or treatment modalities for each individual subject that turn out to be feasible and successful. The therapist has a large repertoire of techniques and evaluates the process of the patient systematically. Thus, treatment content and duration is tailored to the individual.

Usually, indications for a treatment consist of specific diagnoses. However, within psychopathology, DSM-IV diagnoses can be seen as constructions of complaints and symptoms, which overlap between different diagnoses (network hypothesis, Borsboom, 2012). We studied the importance of the presence of a DSM-IV diagnosis for the responsiveness to psychophysiological self-regulation.

Subjects and methods

Patients classified within the category of 'anxiety complaint' were selected from an existing database, containing subjects who were referred for breathing and relaxation therapy from 2006-2011. They were 254 subjects, 204 did not have a DSM-IV diagnosis (147 women, 57 men) and 50 subjects (36 women, 14 men) did. Of the 204 patients without diagnosis 50 were classified in the anxiety category but did not mention anxiety as an explicit complaint; of the patients with diagnosis 5 had anxiety disorder as their diagnosis and 25 had high anxiety but also other psychopathology.

Measurements, at intake, at fourth and last session:

Specific complaints were noted at intake and change was rated as strongly improved, little improvement or unchanged, worsening. The individual complaints were classified into 14 categories

Nijmegen Questionnaire (NQ) and the General Function Questionnaire (GDQ) were completed. Scores were recoded as abnormal (NQ score >19; GFQ score > 27), normal or absent

Blocking stressors: stressful circumstances or factors, social, psychic or somatic, that sustain high tension and are beyond the reach of individual self regulation, rated by therapist at fourth and last session as 1. absent or not relevant, 2. initially present but improved and not blocking any more, 3. present and actually blocking a positive response, other treatment/ actions required. Subjects were divided into two groups, those with and without blocking stressors

Treatment is multimodal and tailored to the individual

1. **Techniques are chosen from a large repertoire (>50 options)**
2. **Mental (attentional) modalities, respiratory, muscle relaxation, posture and movement, manual techniques**
3. **Therapist selects a technique, evaluates successful application with the client and offers another**
4. **Client ends with a number of personally useful techniques**

Process evaluation

1. **Each session: successful application of technique at home**
2. **Fourth and last session: specific response in each complaint, presence of blocking stressors/ circumstances, global distress questionnaires**
3. **Reasons to stop treatment (non responsive or sufficient responsive) or to continue (responsive and motivated)**
4. **Length and content of treatment is tailored to the subject**

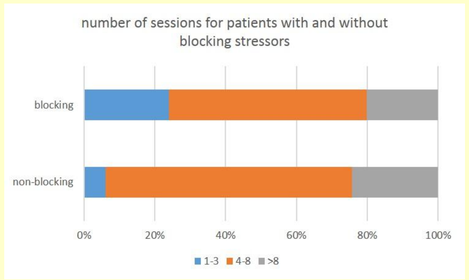

Table 1
Baseline characteristics of patients with and without apparent blocking stressors

Item	Blocking stressors absent n=135 (53%)	Blocking stressors present n=119 (47%)
	M (SD) / n (%)	M (SD) / n (%)
Age (years±sd)	38.5 (±13.3)	40.2 (±13.6)
Women (n) (%)	101 (74.8)	91 (76.5)
* DSM-IV diagnosis (n) (%)	18 (13.3)	32 (26.9)
* Works fulltime (n) (%)	51 (38)	24 (20)
referral (n)(%)		
psychologist	40 (29.6)	35 (29.4)
general practitioner	35 (25.9)	24 (20.2)
medical specialist	27 (20)	27 (23.7)
self referred	22 (16.3)	17 (14.3)
other	11 (8.1)	16 (13.4)
Number of complaints (mean±sd)	2.9 (1.4)	2.8 (1.5)
Complaint (n) (%)		
* anxiety	103 (76)	100 (84)
tension general	59 (44)	49 (41)
* breathing problems	63 (48)	37 (31)
physical complaints	56 (41.5)	40 (33.5)
fatigue	24 (18)	24 (20)
thoughts	25 (18.5)	22 (18.5)
restless	25 (18,5)	18 (15)
mood	14 (10)	21 (17.5)
sleeping problems	18 (13)	15 (13)
physical tension	16 (12)	11 (9)
GF# available (n) (%)	101 (75)	95 (80)
GF (mean ±sd)	36.2 (10.1)	41.3 (10.9)
GF>27 (n) (%)	83 (82)	82 (86)
NQ# available (n) (%)	121 (90)	115 (97)
NQ (mean ±sd)	28.5 (10.6)	33.6 (11.1)
* NQ>19 (n) (%)	93 (77)	103 (89.5)

Multivariate association, baseline only, R^2=0.20, * = selected variables

Item	Blocking stressors absent *n*=135 (53%)	Blocking stressors present *n*=119 (47%)
Number of sessions (*n*) (%)		
0-3	8 (6)	25 (21)
4-8	92 (70)	69 (58)
>8	32 (24)	25 (21)
Works fulltime (*n*) (%)	57 (42.2)	23 (19.3)
Complaint strongly improved (*n*) (%)		
# anxiety	81 /103 (79)	13 / 100 (13)
tension general	51 / 59 (86)	10 / 49 (20)
breathing problems	56 / 63 (90)	9 / 37 (24)
physical complaints	46 / 56 (87)	12 / 40 (31)
fatigue	15 / 24 (63)	3 / 24 (13)
thoughts	17 / 25 (71)	5 / 22 (23)
restless	20 / 25 (83)	8 / 18 (44)
mood	11 / 14 (79)	6 / 21 (29)
# sleeping problems	14 / 18 (78)	2 / 15 (13)
# physical tension	12 / 16 (75)	2 / 11 (18)
GF available (n) (%)	83 (61)	59 (50)
GF (mean ±sd)	22.4 (8.7)	35.2 (11)
GF>27 (n) (%)	29 (35)	46 (78)
NQ available (n) (%)	103 (76)	72 (61)
NQ (mean ±sd)	15 (7.4)	26.3 (11.3)
# NQ>19 (n) (%)	25 (24)	53 (74)

Multivariate association, baseline plus treatment process, R^2=0.75,
Baseline: presence of anxiety, all others lose significance
Process: # = selected variables

Results

More than half of the patients (53%) were classified by the therapist as responsive and appeared to be able to handle their complaints sufficiently after psychophysiological self-regulation. For the others (47%), stressors were present that sustained high tension and blocked a positive response to self-regulation and further treatment appeared to be indicated. A substantial number of them (21%) stopped within 3 sessions, but most continued treatment nevertheless. There were no differences in age or gender, but patients with blocking stressors had twice as often a DSM-IV diagnosis and fewer worked full-time. They scored higher on stress questionnaires, the majority had abnormal scores (75-90%), but fewer of them mentioned breathing problems than those with a positive response.

Process evaluation that blocking stressors were present corresponded with these baseline factors jointly in a logistic regression analysis to a moderate degree: R^2=0.20.

Treatment took on average 6-7 sessions after which complaints strongly improved in a high percentage (70-85) of responsive patients, with the best effect in breathing problems (90) and the least effect in fatigue (63). By contrast, strong improvement in complaints was present only in a small percentage of non responsive patients with the least success in anxiety, fatigue en sleeping problems (13%) and the best success in restlessness (44%) and physical complaints (31%). Three quarters still had abnormal questionnaire scores in patients with blocking stressors.

In a logistic regression analysis of both baseline and process variables, a very high correspondence was found with the presence of blocking stressors: R^2=0.70. The presence of a DSM-IV diagnosis lost its significance in this analysis.

Conclusions

It is relevant to evaluate treatment outcome as number (percentage) of patients for whom it was sufficient versus those where circumstances continue to be stressful, are beyond the reach of individual self-regulation and require further attention. Such information is particularly useful for those responsible to select treatment referral, when observational studies for outcome evaluation are ongoing and complements controlled studies od treatment effect.

For about half of anxiety patients psychophysiological self-regulation appears to enable them to solve their problem. Those with anxiety as an explicit complaint that did not strongly improve, with an abnormal NQ post-treatment and with persistent physical signs of tension and sleeping problems, needed other treatment or actions to deal with difficult circumstances, irrespective of DSM-IV diagnosis.

Evaluating responsiveness of participants requires an attitude of the therapist to screen for underlying contributing factors that deserve further attention, rather than achieving treatment success.

When treatment is not sufficient, it can soon be stopped or yet continued to either clarify a complex situation or provide small but welcome benefits.

References: Courtney, R., Dixhoorn, J. van, Cohen, M. (2008). "Evaluation of Breathing Pattern: Comparison of a Manual Assessment of Respiratory Motion (MARM) and Respiratory Induction Plethysmography." Applied Psychophysiology and Biofeedback 33: 91-100.