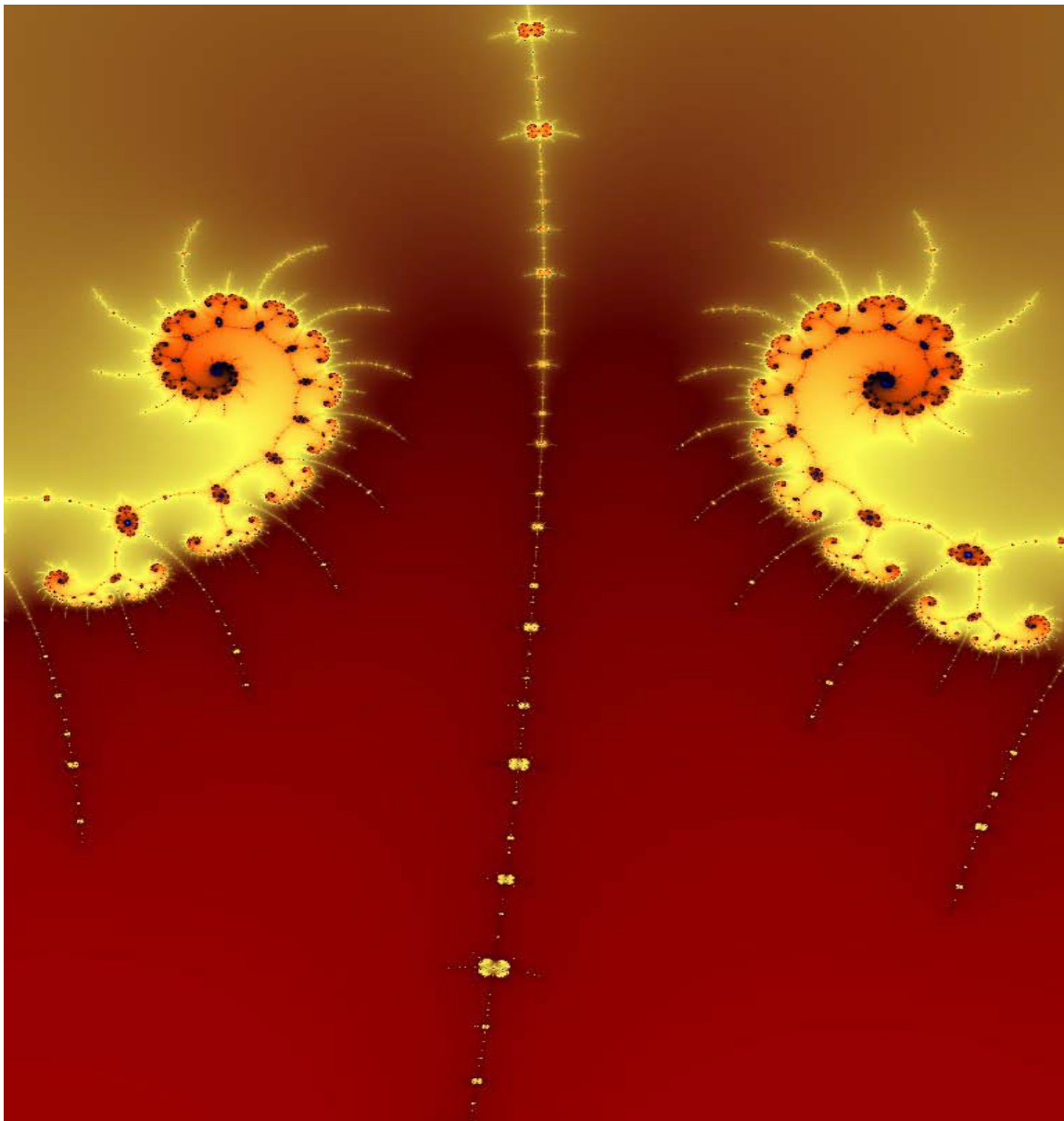


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## **Presentation**

As the title suggests, *Psychomed* is an online scientific journal with a cognitive and behavioural approach to the area between medicine and behavioural sciences. Therefore, it gathers contributions in psychosocial and behavioural medicine, psychotherapy, health prevention and psychosocial interventions.

One of the Journal's main goals is to provide an easy-to-use tool for scientific updating; furthermore, it is intended as a forum for discussions for those who work or study in this area and is meant to become a "workout tool" for colleagues engaged in clinical work and experimental research.

In accordance with these aims, the journal publishes short articles, often summarising current literature on a specific fields interfacing medicine and psychology, or new research studies, which have not yet published elsewhere, but in a short format, more often by members of the supporting societies. Extending this concept, a rather bold decision was taken by the editors to publish in one of the journal's issues selected papers from a broad international audience, presented at international conferences in the form of posters, and publish them directly in the form they are displayed as posters.

We expected that the idea to publish their posters would have been welcomed by the authors, as it would not have required to write down an article, with all the attention to the "instructions to the authors" it usually requires, as the poster is ready to be displayed. Besides, due to the online nature of *Psychomed*, we are not limited in the quantity of material we can publish, unlike printed journals which usually restrict themselves to articles. A large number of posters is usually displayed in international conferences, which have the same (and often higher) quality as the papers presented at symposia or oral sessions.

The occasion to test our expectations was given by the **6<sup>th</sup> International Congress of Cognitive Psychotherapy** which took place in Rome on 19<sup>th</sup>-22<sup>nd</sup> June 2008. Therefore, it was proposed – with the help of the Conference organisers - to all presenters to publish their posters on *Psychomed*, with no charge, provided the poster content was relevant to the interests of the journal, and the poster well readable, with a balance between graphic and alphanumeric information, and not published elsewhere.

We received a favourable response and the result is the current issue. Several colleagues responded with enthusiasm and contributed with their posters - in the same format as they used to print the poster itself - to produce this publication, which is, as far as we know, unique in its kind.

As the creation of this issue has been without precedence some difficulties were encountered regarding the size and format of the PDF files sent by authors. After careful consideration however, we decided not to modify them and they remain in the original form, so to preserve the best readability.

All the work that has been submitted to us has been carefully evaluated. Our selection process has been grounded basically on the scientific quality and interest of the contribution, even when the formal properties (graphics/readability) could have been improved. With these criteria, no more than one proposal has been rejected. Finally, we are proud to be able to include contributions from many different countries, including Portugal, United Kingdom, Germany, Italy, United States, Serbia, Croatia, Greece, whom we would like to thank for their interest in *Psychomed*.

We regret for any shortcoming the new format could bring, and would be grateful if readers would give us a feedback about this initiative.

The Editors

Dimitra Kakaraki

Lucio Sibilia



# Sleep Quality and Psychological Well-Being in Healthy Undergraduates

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## Introduction

Sleep disturbed populations usually complaint of daytime impairments (cf. ICSD, 2005). Less is known about daytime correlates of sleep quality in non clinical samples of young adults. It has been suggested that health professionals and researchers should consider sleep quality to better understand well-being in non-sleep-disturbed populations (Pilcher et al., 1997; Pilcher & Ott, 1998). As part of a larger study on sleep patterns, academic performance and well-being of university students (Gomes, 2005), the aim of the present work was to examine, in real life circumstances, the associations between self-reported overall sleep quality and measures of well-being in allegedly healthy undergraduates.

## Methods

**SAMPLE:** n = 1654 'full-time' undergraduates  
 • 55% female, 45% male  
 • 17-25 yr old (M = 19.98 ± 1.65)  
 • 1st -3rd curricular years  
 • ~ 50% undergraduate courses (University of Aveiro, Portugal)

**INSTRUMENT:** Self-response questionnaire, developed for a larger study (cf. Gomes, 2005), asking for the "typical" sleep-wake habits "over the last month". For the present work, 27 items (rated on 5-point scale, from 0 to 4, or 4-0) were used to calculate:

**"Sleep Quality Index" (SQI)**, 7 items,  $\alpha = .73$   
 - sleep quality - depth of sleep  
 - sleep latency - sleep-onset difficulty  
 - night awakenings - early awakenings  
 - whether awakenings are a problem

Well-being measures:

- **Vigour** (6 items,  $\alpha = .77$ : active, energetic, efficient, alert, happy, relaxed)
- **Mood Symptoms** (4 items,  $\alpha = .74$ : tired, irritable, depressed, nervous)
- **Cognitive Functioning** (4 items,  $\alpha = .73$ : productive, attentive, motivated, concentrated)
- **Somnolence** (5 items adapt. Manber et al. 1996 + 1 item somnolence during classes,  $\alpha = .84$ )

**PROCEDURE:** Study approved by the Dep. of Sciences of Education and the Univ. of Aveiro Scientific Committees.

- Data collected at the middle of the semesters, excluding events that could potentially influence sleep-wake patterns (e.g., holidays, student festivities)
  - With their consent and Professors approval, students answered questionnaires at the end of class sessions. Voluntary participation and confidentiality were both guaranteed
- Response rate: 90.1% (questionnaires distributed - returned)  
 Statistical analyses was done using SPSS

## Results

**Table I: results for each sleep quality item**

	Median responses	Cut-off points	%
<b>Time to fall asleep</b>	"15-30 min"	> 30 min	16.1
<b>Difficulty falling asleep</b>	"rarely"	≥ 3 nights / week	7.5
<b>Nocturnal awakenings</b>	"1 / night"	≥ 2 / night	17.6
<b>Early morning awakenings</b>	"rarely"	≥ 3 nights / week	12.9
<b>Awakening (night/early) is a problem</b>	"a bit"	much / very much	10.4
<b>Sleep depth</b>	"fairly deep"	light / very light	18.8
<b>Sleep quality</b>	"good"	poor / very poor	4.5

♀ experienced more often difficulty falling asleep and early morning awakenings, Md's: "sometimes" (U = 295481.50, p = .000; U = 296911.50, p = .000)  
 ♂ had less night awakenings, Md: "none" (U = 286136.50, p = .000)  
 but no gender differences on whether nocturnal or early awakening were perceived as a problem.

Based on overall SQI quartiles values (P25 = 6; P50 = 8; P75 = 12), four Sleep Quality (SQ) groups were formed. Means on well-being measures for each group were compared using Anovas, followed by post-hoc tests – cf. Table II.

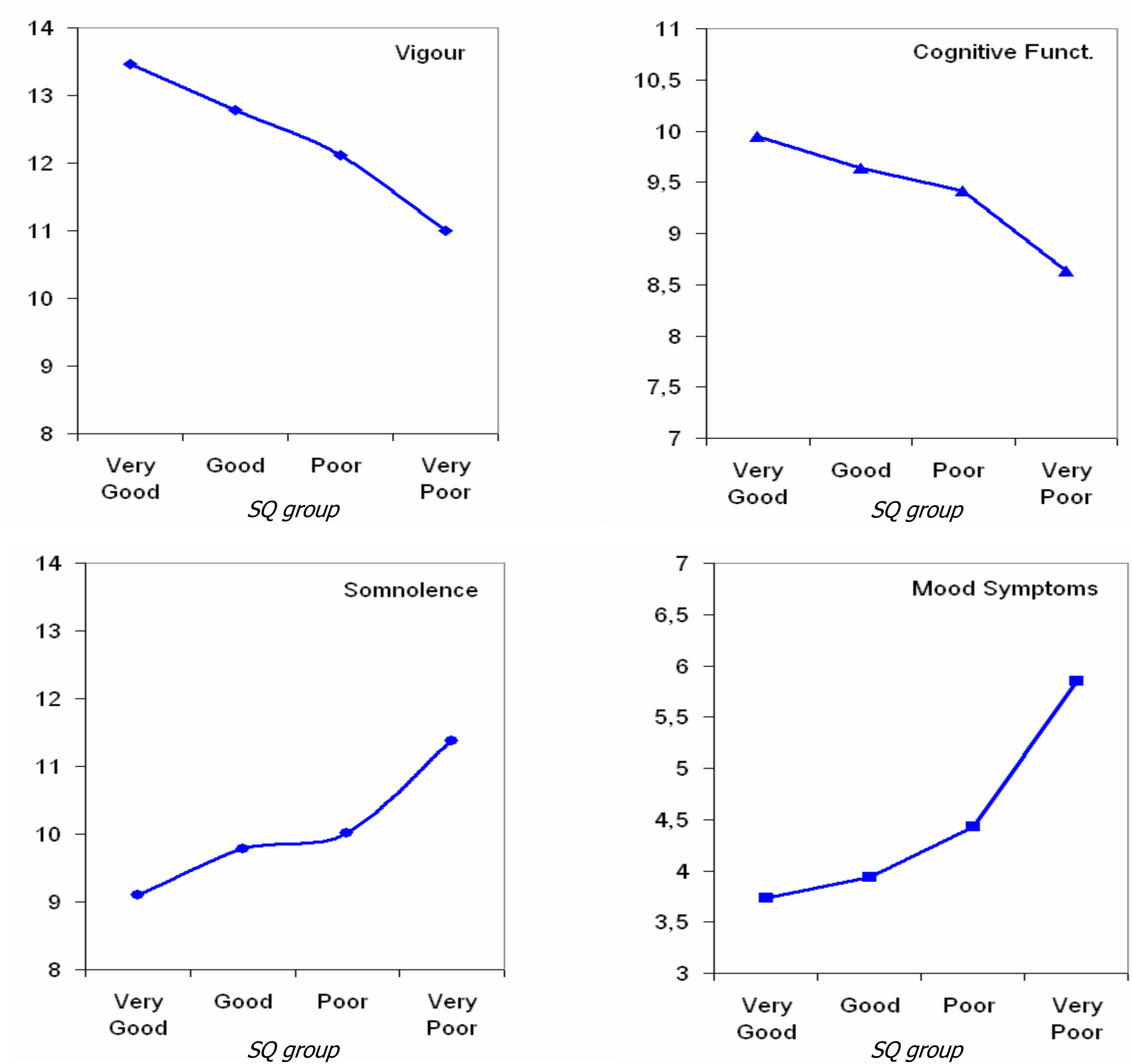
**Table II: Means (± SD) on well-being measures, by Sleep Quality group, compared through Anovas**

	Very Good	Good	Poor	Very Poor	F (3, 1643)	Post-hoc results
	n = 502	n = 359	n = 412	n = 378		
<b>Vigour</b>	13.47 (± 3.13)	12.78 (± 2.92)	12.11 (± 3.03)	11.00 (± 3.20)	46.32 ***	VG > G > P > VP <sup>a</sup>
<b>Somnolence</b>	9.10 (± 3.54)	9.78 (± 3.31)	10.02 (± 3.47)	11.38 (± 3.79)	29.83 ***	VG < G < P, VP <sup>a</sup>
<b>Mood Symptoms</b>	3.73 (± 2.63)	3.94 (± 2.49)	4.43 (± 2.74)	5.85 (± 3.05)	44.05 ***	VG, G, P < VP <sup>b</sup> VG < P
<b>Cognitive Funct.</b>	9.95 (± 2.50)	9.64 (± 2.41)	9.42 (± 2.37)	8.63 (± 2.61)	24.30 ***	VG, G, P > VP <sup>a</sup> VG > P

\*\*\* p < .001. Interactive effects gender\*SQ group were non significant, and differences by gender are secondary for the present work, thus we only show the main effects of interest.  
 Post hoc tests: <sup>a</sup> Tukey HSD; <sup>b</sup> Tamhane. Only significant results are shown (p < .05). Sleep quality groups: VG = Very Good; G = Good; P = Poor; VP = Very Poor.

Significant differences were found for all variables studied. Mean scores along SQ groups may be visualized in Fig 1.

↓ Sleep Quality => ↑ Mood Symptoms ↑ Somnolence  
 ↓ Vigour ↓ Cognitive Functioning



**Fig. 1: Means scores on Vigour, Somnolence, Cognitive Functioning and Mood Symptoms, along Sleep Quality (SQ) groups**

## Conclusion

- Poor sleep quality in our student sample of young adults was associated with greater perceived somnolence and with mood, cognitive, and vigour impairments.
- Our results are in agreement with previous studies in undergraduates. For instance, Means et al. (2000) found higher somnolence, fatigue and «worry» in students with (vs. without) insomnia. Alapin et al. (2000) reported higher concentration difficulties, fatigue and somnolence in "poor sleepers" meeting criteria for insomnia, compared to "good sleepers". Pilcher and colleagues have found increased feelings of depression, tension and fatigue to be associated to poorer sleep quality (Pilcher et al., 1997; Pilcher & Ott, 1998).
- ▶ Sleep education, sleep hygiene and specific cognitive-behavioural techniques (e.g., stimulus control) might be useful to promote sleep quality in undergraduates, and to prevent the development of sleep disturbances.

## Acknowledgement

The present work is part of a PhD project concluded at the University of Aveiro, Portugal. Thanks to Drs. João Murta, Otília Pestana, Sara Sousa, Dayse Neri, Teresa Fernandes, Ana Seco, and Ana Paula Cabral, for their assistance in data collection, and to Mr. Mário Rui Dias, for his help on data input in the database. We are grateful to the students who participated in the study, as well as their lecturers.  
 Supported by Centro de Investigação em Educação e Ciências do Comportamento (CIECC) – Unidade de I&D, FCT, Portugal

## References

- ISDC (2005) – *International Classification of Sleep Disorders, 2<sup>nd</sup> ed.: Diagnostic and coding manual*. Westchester, Illinois: American Academy of Sleep Medicine.  
 Alapin, I., Fichten, C. S., Libman, E., Creti, L., Bailes, S., & Wright, J. (2000). How is good and poor sleep in older adults and college students related to daytime sleepiness, fatigue, and ability to concentrate? *Journal of Psychosomatic Research, 49*(5), 381-390.  
 Gomes, A. C. A. (2005). *Sono, sucesso académico e bem-estar em estudantes universitários [Sleep, academic success and well-being in undergraduates]*. PhD Dissertation. University of Aveiro, Aveiro, Portugal.  
 Manber, R., Bootzin, R. R., Acebo, C., & Carskadon, M. (1996). The effects of regularizing sleep-wake schedules on daytime sleepiness. *Sleep, 19*(5), 432-441.  
 Means, M. K., Lichstein K. L., Epperson M. T., & Johnson, C. T. (2000). Relaxation therapy for insomnia: night time and day time effects. *Behavior Research Therapy, 38*(7), 665-678.  
 Pilcher, J.J., Ginter, D.R., Sadowsky, B. (1997). Sleep quality versus sleep quantity: relationships between sleep and measures of health, well-being and sleepiness in college students. *Journal of Psychosomatic Research, 42*(6), 583-596  
 Pilcher, J. J., & Ott, E. S. (1998). The relationships between sleep and measures of health and well-being in college students: a repeated measures approach. *Behavioral Medicine, 23*(4), 170-178.



# THE MEDIATING ROLE OF SELF-ESTEEM IN THE RELATIONSHIP BETWEEN TRAUMATIC LIFE EXPERIENCES AND DEPRESSIVE SYMPTOMS



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## INTRODUCTION

- Traumatic life events predict state and trait depression (Cole, Nolen-Hoeksema, Girgus & Paul, 2006).
- Low self-esteem mediates the relationship between negative life events (i.e., childhood trauma) and depression (Turner & Butler, 2003).
- Two subtypes of depression are observed in student samples: "Cognitive affective" and "Somatic". More severe "Cognitive-affective" symptoms are found for depressed individuals with negative life events compared to depressed individuals without negative life events (Monroe, Harkness, Simons & Thase, 2001).

## RESEARCH AIMS

1. Explore the link between trauma and depression and the mediating role of low self-esteem.
2. Account for "Cognitive-affective" and "Somatic" subtypes of depression.

## METHODS

### Population

- 132 university students
- 16 males, 116 females
- Age 20-37 years ( $M=24.85$ ,  $SD=7.09$ )

### Measures

- Trauma (PDS Pt. 1)
- Depression (BDI-II)
- Self-esteem (RSE)

## RESULTS

Table 1: Correlations between trauma, self-esteem and depression

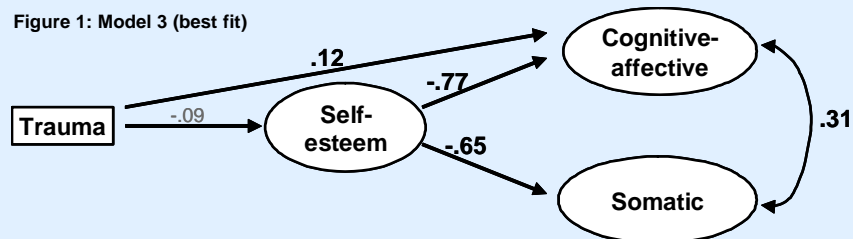
	1	2	3	4
1. Traumatic events	-			
2. Self-esteem	-.13	-		
3. "Cognitive-affective" depression	.23**	-.67***	-	
4. "Somatic" depression	.18*	-.55***	.70***	-
5. BDI-II	.23**	-.68***	.98***	.84***

Note. \*  $p < .05$   
 \*\*  $p < .01$   
 \*\*\*  $p < .001$

Table 2: Fit indices for 3 structural equation models

Models	$\chi^2$	df	RMSEA
1. Self-esteem mediation	828.16*	461	.078
2. Self-esteem mediation + direct links to depression subtypes	822.87*	459	.077
3. Self-esteem mediation + one direct link to "Cognitive-affective"	823.63*	460	.077

Note. \*  $p < .001$ .  
 RMSEA: Root Mean Square Error of Approximation.



## DISCUSSION

- Trauma and depressive symptoms: unmediated by low self-esteem.
  - High self-esteem buffer may be limited in the face of severe trauma.
  - Trauma-related factors may impact self-esteem (i.e., cognitive appraisal).
  - Specific characteristics of trauma may impact self-esteem (i.e., trauma type, repetitive or discrete occurrence).
- Trauma and "Somatic" symptoms: nonsignificant relationship.
  - "Somatic" symptoms represent a more severe profile which may not characterize the student sample.
- Trauma and "Cognitive-affective" symptoms: significant relationship.
  - Trauma is more closely related to symptoms of sadness, self-dislike, loss of interest and feelings of worthlessness.
  - Depressive symptoms and PTSD share common underlying vulnerabilities.

## CONCLUSIONS

- Self-esteem mediation may not be systematically present.
- Depressive subtypes are differentially related to trauma.
- Future research to control for event appraisal and trauma characteristics.

## REFERENCES

- Cole, D. A., Nolen-Hoeksema, S., Girgus, J. & Paul, G. (2006). Stress exposure and stress generation in child and adolescent depression: A latent trait-state-error approach to longitudinal analysis. *Journal of Abnormal Psychology*, 115, 40-51.
- Monroe, S. M., Harkness, K., Simons, A. D., & Thase, M. E. (2001). Life stress and the symptoms of major depression. *Journal of Nervous and Mental Disease*, 189, 168-175.
- Turner, H. A. & Butler, M. J. (2003). Direct and indirect effects of childhood adversity on depressive symptoms in young adults. *Journal of Youth and Adolescence*, 32, 89-103.

# EVALUATION OF WORRY AND METACOGNITION ASPECTS IN EATING DISORDERS

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## INTRODUCTION

According to recent theorizing, metacognition is an important factor in the development and maintenance of psychological disorders (Wells, 2000). Individuals have positive and negative beliefs about thinking that influences appraisals (e.g. "I must worry in order to be prepared", "I cannot control my thoughts"). They also have implicit procedural metacognition which are involved to form plans or programs for guiding cognition and action. Despite the presence in Eating Disorders of high levels of anxiety, including obsessive compulsive symptoms (Halmi et al., 2005), the metacognition has rarely been investigated. Recent data providing preliminary investigation in Anorexia Nervosa, pointed out higher scores on metacognition; indicating higher levels of uncontrollability and danger of worry; cognitive confidence; need for control; and cognitive self-consciousness, but not higher levels of positive beliefs (Cooper, 2007) than control groups. Sassaroli (2005) suggests that worry is an important factor for the understanding of Eating Disorders. However, to our knowledge, no data are published about the change in worry after Cognitive Behavioral Treatment (CBT).

## AIM

The aim of this pilot study was to evaluate in a Eating Disorder (ED) group the effects of an initial motivational treatment on worry and metacognition aspects. The treatment integrated 10 CBT sessions with 10 Nutritional Rehabilitation Program (NRP) sessions.

## METHODS

39 women with ED (age:29±12; BMI:25±10) were included in the study (fig.1). The 10 CBT sessions consisted of standardized therapeutic modules concerning motivational enhancement, cognitive restructuring, self-esteem improvement, emotional management. The 10 NRP sessions included management of specific medical and nutritional issues, psycho-education about dysfunctional thoughts regarding food, weight and body. The treatment is well specified in the figure below (fig. 2)

Fig. 1

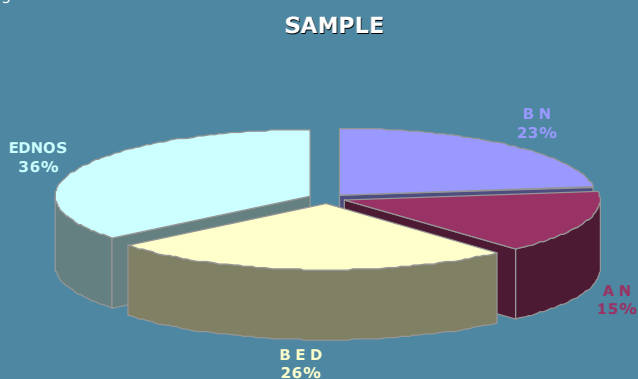


Fig. 2



Patients were assessed at T0 (first diagnostic session) and at T1 (after 10+10 sessions). A specific questionnaire, Metacognition Questionnaire (MCQ: Cartwright-Hatton & Wells, 1997), measuring beliefs about worry and intrusive thoughts, was administered.

The MCQ is based on Wells' definitions of metacognition and it has good psychometric properties. The five subscales reflect the following constructs: worry as a useful or helpful coping strategy (positive beliefs); worry as a dangerous or uncontrollable activity (uncontrollability and danger); lack of trust or confidence in memory (cognitive confidence); belief that it is very important to control one's thoughts, particularly worrying thoughts (need for control); heightened awareness of one's thoughts and thinking processes (cognitive self-consciousness). High scores on each subscale represent increased presence of each type of coping strategy.

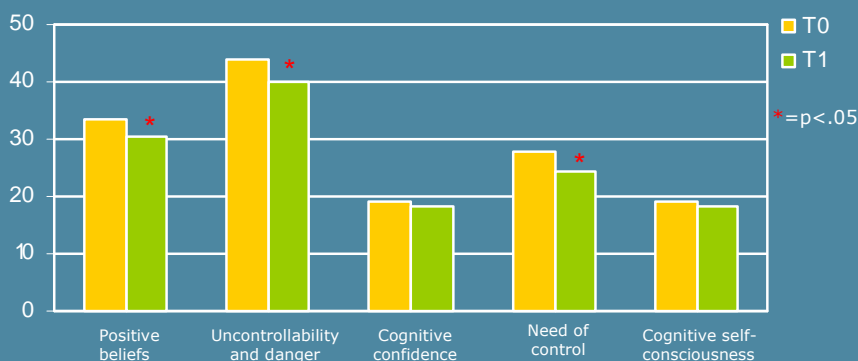
## RESULTS

At pre treatment ED group scores were higher than normative in all subscales except for Positive beliefs about thinking (fig. 3). After the treatment, paired T-Test showed significant differences between T0 and T1 in three subscales: Positive beliefs about worry, Uncontrollability and danger and Need for control. The remaining subscales also showed a tendency to improve (score reduction) but this reduction was not statistically significant (Fig. 4).

Fig. 3

Metacognition Score				
	Clinical Group			Normative Score
	Pre treatment	Post treatment	P Value	
Positive beliefs	33,51	30,31	p<.05	35,80
Uncontrollability and danger	43,82	39,87	p<.05	32,10
Cognitive confidence	19,33	18,08	n.s.	17,90
Need of control	27,62	24,28	p<.05	21,80
Cognitive self-consciousness	19,18	18,13	n.s.	18,20

Fig. 4



## CONCLUSIONS

At pre-treatment the worrying symptomatology was clinically high in this group, in particular for worry's uncontrollability and danger. Score in Positive beliefs about worry were not higher than normative score. These results are similar to Cooper's study (2007), who found low levels in positive beliefs in AN group.

The integrated intervention CBT+NRP seems to be sufficient to produce significant improvements in dysfunctional worries after 10 sessions. The decrease was statistically significant for the subscales which analyze general beliefs about worry. We hypothesize that these results can be due to cognitive restructuring. This therapeutic strategy identifies and discusses with patients their core dysfunctional beliefs. Although the reduction of worry's uncontrollability and danger was statistically significant, ED group values do not get normative score. These data rise to following conclusion: 10 CBT+NRP sessions reduce beliefs about worry, however in order to reduce meta worry, more CBT sessions are needed. It could be useful to evaluate worry aspects also after a wider number of sessions. Moreover, possible correlations between other psychopathological factors and worry should be assessed.

## REFERENCES

- Cartwright-Hatton S, Wells A, (1997). Beliefs about worry and intrusions: the Metacognition Questionnaire and its correlates. *Journal of Anxiety Disorders* Vol.11, n.3, pp.279-296.
- Cooper MJ, Grocutt E, Deepak K, Bailey E, (2007). Metacognition in anorexia nervosa, dieting and non-dieting controls: a preliminary investigation. *British Journal of Clinical Psychology*; Mar;46(1):113-7.
- Halmi KA, (2000). Obsessive-compulsive personality disorder and eating disorders. *Eating Disorders*, Jan-Feb;13(1):85-92.
- Sassaroli S, Bertelli S, Decoppi M, Crosina M, Milos G, Ruggiero GM, (2005). Worry and eating disorders: a psychopathological association. *Eating Behaviour*;6(4):301-7.
- Wells A, (2002). *Disturbi emozionali e metacognizione: nuove strategie di psicoterapia cognitiva*. Erickson, Trento.



# EFFECTIVENESS OF A GROUP-BASED COGNITIVE BEHAVIOURAL PARENT TRAINING PROGRAM IN GREECE

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**INTRODUCTION:** Parenting is probably the most important public health issue facing our society. It is the single largest variable implicated in childhood illnesses and accidents; teenage pregnancy and substance misuse; truancy, school disruption, and underachievement; child abuse; unemployment; juvenile crime; and mental illness. This is why governments are giving parenting high priority (Hoghugh M., 1998). Maternal depression, parental psychopathology, SES, father involvement, the level of social support and the quality of parents' relationship are some of the variables that affect parent behaviour and parent – child interaction (Shriver M. D., 1998).

Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of every day life. The nature and definition of life skills are likely to differ across cultures and settings. However, analysis of the life skills field suggests that there is a core set of skills that are at the heart of skills-based initiatives for the promotion of the health and the well-being of children and adolescents. These are listed as: decision-making, problem solving, creative thinking, critical thinking, and effective communication, interpersonal relationship skills, self-awareness, empathy, coping with emotions and stress (Weisen R. B., Orley J., Evans V., Lee J., Sprunger B. & Pellaux D. 1997).

Parenting skills programs are life skills programs developed in all over the world in the field of the promotion of mental health (Konstadinidis L., Goga P., Pavlidis T., Tagali E., Goga D. & Mavreas V. 2005). Parenting programs are short-term interventions aimed at helping parents improve the relationship with their child, and preventing or treating a range of problems. The use of groups to train parents began in the 1970s (Barlow J., Parsons J., 2004). Group-based cognitive behavioural parenting programs, delivered by well-trained and supervised staff, can be effective in a community voluntary-sector setting, for reducing conduct problems

and enhancing parenting skills (Gardner F., Burton J., Klimes I., 2006).

**PURPOSE:** From 1997 till now, we've managed to structure and apply a Group-based Psycho-educational Cognitive Behavioural Parenting Program. Aim of the present study was to investigate the short-term effectiveness of this program in improving parental psychosocial health.

**METHOD:** Participants were 180 parents (most of them mothers) with 3-12-years-old children. 60 parents participated and completed the Group-based Psycho-educational Cognitive Behavioural

Parenting Program (experimental group) while 120 parents didn't participate (control group). All parents had completed SCL-90-R one week before and one week after the program. The two groups of parents were compared using the scores of the questionnaires' subscales. Mann-Whitney test was used.

**Table 1.** Pre-training week

SCL-90-R subscales	Experimental group N = 60			Control group N=120			P
	Median	Min	Max	Median	Min	Max	
Interpersonal Sensitivity	5 SD=6.23	0	25	4 SD=6.23	0	27	0.019
Depression	8.5 SD=6.23	0	43	6.5 SD=7.09	0	28	0.018
Anxiety	5 SD=7.43	0	34	3 SD=5.11	0	32	0.034
Anger – Hostility	4.5 SD=5.58	0	23	3 SD=4.09	0	20	0.004
Psychoticism	4 SD=6.55	0	28	1 SD=4.66	0	27	0.003

**NS:** Somatization, Obsessive – Compulsive, Phobic Anxiety, Paranoia

**Table 2.** Post-training week

SCL-90-R subscales	Experimental group N = 52			Control group N=69			P
	Median	Min	Max	Median	Min	Max	
Interpersonal Sensitivity	3 SD=4.41	0	22	2 SD=4.81	0	20	NS
Depression	4 SD=7.32	0	36	5 SD=8.46	0	39	NS
Anxiety	2 SD=5.02	0	26	3 SD=5.78	0	36	NS
Anger – Hostility	2 SD=3.38	0	13	2 SD=3.88	0	16	NS
Psychoticism	2 SD=5.26	0	27	1 SD=4.79	0	24	NS

**RESULTS:** From the SCL-90-R subscales, five subscales could discriminate between experimental and control group. Experimental group had significantly higher mean values in the pre-training week in the following SCL-90-R subscales (Table 1):

1. Interpersonal Sensitivity (P=0.019)
2. Depression (P= P=0.018)
3. Anxiety (P=0.034)
4. Anger – Hostility (P=0.004)
5. Psychoticism (P=0.003)

In the post-training week there where no statistically significant differences between the two groups of parents (Table 2).

**CONCLUSIONS – DISCUSSION:** The findings provide some support for the use of the specific training program to improve parental psychosocial health. Further research is required for the long-term effectiveness.

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## References:

- Barlow J. & Parsons J. (2004). Group-based parent-training programmes for improving emotional and behavioural adjustment in 0-3 year old children (Cochrane Review). In: The Cochrane Library, Issue 2, 2004. Chichester, UK: John Wiley & Sons Ltd.
- Gardner F., Burton J., Klimes I. (2006). Randomized controlled trial of a parenting intervention in voluntary sector for reducing child conduct problems: outcomes and mechanisms of change. *Child Psychology and Psychiatry*, 47: 1123-1132.
- Hoghugh M. (1998). The importance of parenting in child health. *BMJ*, 316: 1545-1550.
- Konstadinidis L., Goga P., Pavlidis T., Tagali E., Goga D. & Mavreas V. (2005). Parent Schools: A Brief Psycho-educational Cognitive Behavioural Training Program. Poster presentation in the 35th Annual Congress of European Association for Behavioural and Cognitive Therapies. Thessaloniki, Greece, 21 – 24 September.
- Shriver, M. D. (1998) Teaching Parenting Skills. In Watson, T. S. & Gresham, F. M. (edr) Handbook of Child Behavior Therapy. New York: Plenum Press.
- Weisen R. B., Orley J., Evans V., Lee J., Sprunger B. & Pellaux D. (1997). Life Skills Education for Children and Adolescents In Schools: introduction and guidelines to facilitate the development and implementation of life skills programmes. WHO/MNH/PSF/93.7A.Rev.2

# THE PORTUGUESE MULTIDIMENSIONAL PERFECTIONISM SCALE FACTOR STRUCTURE IN PREGNANT WOMEN

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## ABSTRACT

**Aim:** Explore the factor structure of the Portuguese Multidimensional Perfectionism Scale (MPS) in pregnant women.

**Methods:** The sample comprises 421 women (M=29.8, SD=4.48; Range=19-44 years) in their last trimester of pregnancy (M=32.6, SD=3.39, Range=25-41 weeks of gestation); 64.4% were nulliparous. To assess perfectionism the Portuguese version of the MPS (Hewitt & Flett, 1991; Soares, Gomes, Macedo, Santos & Azevedo, 2003), 32-item self-report scale was used. A factor analysis was performed using the principal components solution with varimax rotation.

**Results:** Based on the scree test of Cattell two factor structures were considered. The first structure was composed by 2 factors explaining 37.4% of the total variance. Factor 1 - Self-Oriented Perfectionism (SOP), included items such as "I am perfectionist in setting my goals". Factor 2 - Socially Prescribed Perfectionism (SPP), included items such as "My family expects me to be perfect". The second structure revealed 3 factors. Factor 1, SOP, was very similar to the one obtained in the two factors solution. However, SPP was divided in two factors, with distinct types of self-beliefs: Factor 2 - Others' High Standards, which reflects the belief that others hold high standards or expectations for the self and Factor 3 - Conditional Acceptance, which reflects the belief that being loved and accepted by others is contingent on high achievement. The 3 factors explained 42.9% of the total variance.

**Conclusion:** In Portuguese pregnant women the SOP factor of the MPS is robust. However, we believe that to assess the negative consequences of SPP a 3 factor solution of the MPS seems more appropriate, in the sense that "Conditional Acceptance" may be the SPP component more strongly associated with several psychopathological outcomes (Campbell & DiPaula, 2002).

## INTRODUCTION

The question whether or not perfectionism leads to difficulties for the individual is a topic of hot debate.

One of the main aspects that distinguish adaptive from maladaptive perfectionists is motivational. The former set high standards/objectives based in an intrinsic motivation of self-improvement and achievement, whereas the later is driven by the fear of failure which in turn is related with an extrinsic motivation in the form of a great desire to please others.

This view is akin with the concept of "Conditional Acceptance" defined as the self-belief that others will only accept the subject if him/her is a perfect person/have a perfect performance (Campbell & DiPaula, 2002).

In the present study our aim is to explore the factor structure of the Portuguese Multidimensional Perfectionism Scale in pregnant women in order to contribute to a clarification of the delimitation of the positive vs. negative aspects of perfectionism.

## METHODS

Study approved by the Ethical committee of the Faculty of Medicine, Coimbra. Written informed consent was obtained from all participants.

### SAMPLE

421 women (M=29.8, SD=4.48; Range=19-44) in their last trimester of pregnancy (M=32.6, SD=3.39, Range=25-41 weeks of gestation); 64.4% were nulliparous.

### MEASURES

Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991; Soares et al. 2003). The Self-Oriented Perfectionism (SOP) and the Socially Prescribed Perfectionism (SPP) subscales of the MPS were completed by all participants.

### STATISTICAL ANALYSIS

The scree test of Cattell was plotted in order to identify the number of factors to be extracted. Factor analyses using the principal components solution with varimax rotation were performed. Only items with loadings >.35 were retained.

## RESULTS

The scree test is shown in Figure 1. Tables 1 and 2 shows the 2-factor and 3-factor structures of the MPS, respectively.

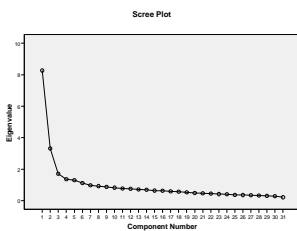


Figure 1

Table1: 2-Factor Structure of the MPS

Factors	Loadings	
	Factor 1	Factor 2
<b>Self-Oriented Perfectionism (SOP)</b>		
21. I am perfectionistic in setting my goals.	.789	-.006
3. One of my goals is to be perfect in everything I do.	.754	-.125
11. It is very important that I am perfect in everything I attempt.	.752	.103
19. If I ask someone to do something I expect it to be done flawlessly.	.705	.230
10. I strive to be as perfect as I can be.	.702	-.009
13. I strive to be the best at everything I do.	.694	.201
4. Everything that others do must be of top-notch quality.	.653	.170
8. I seldom feel the need to be perfect.	.592	-.061
32. I must always be successful at school or work.	.588	.093
14. The people around me expect me to succeed at everything I do.	.561	.208
24. I must work to my full potential at all times.	.551	.099
30. I set very high standards for myself.	.536	.358
1. When I am working on something, I cannot relax until it is perfect.	.508	.072
17. It makes me uneasy to see an error in my work.	.455	.188
5. I never aim for perfection in my work.	.443	-.161
20. I cannot stand to see people close to me make mistakes.	.432	.389
<b>Socially Prescribed Perfectionism (SPP)</b>		
31. People expect more for me than I am capable of giving.	.123	.702
22. Others think I am okay, even when I do not succeed.	-.127	.640
25. Although they may not show it, other people get very upset with me when I slip up.	.243	.631
23. I feel that people are too demanding of me.	-.138	.604
16. Others will like me even if I don't excel at everything.	-.005	.588
29. People expect nothing less than perfection from me.	.412	.558
9. Anything I do that is less than excellent will be seen as poor work by those around me.	.261	.542
2. I find it difficult to meet other's expectations of me.	-.046	.521
17. It makes me uneasy to see an error in my work.	.373	.509
18. Success means I must work even harder to please others.	.278	.481
6. Those around me readily accept that I can make mistakes too.	-.032	.442
33. People around me think I am still competent even if I make a mistake.	-.190	.433
26. I do not have to be the best at whatever I am doing.	.272	.413

Table2: 3-Factor Structure of the MPS

Factors	Loadings		
	Factor 1	Factor 2	Factor 3
<b>Self-Oriented Perfectionism (SOP)</b>			
21. I am perfectionistic in setting my goals.	.772	.214	-.038
3. One of my goals is to be perfect in everything I do.	.738	.250	.093
11. It is very important that I am perfect in everything I attempt.	.736	.242	.071
10. I strive to be as perfect as I can be.	.721	.129	.010
8. I seldom feel the need to be perfect.	.690	-.051	.070
13. I strive to be the best at everything I do.	.604	.391	.066
5. I never aim for perfection in my work.	.597	-.220	.052
19. If I ask someone to do something I expect it to be done flawlessly.	.554	.509	.008
4. Everything that others do must be of top-notch quality.	.553	.387	.022
1. When I am working on something, I cannot relax until it is perfect.	.538	.093	.108
32. I must always be successful at school or work.	.480	.361	-.066
24. I must work to my full potential at all times.	.461	.321	-.034
30. I set very high standards for myself.	.441	.418	.215
<b>SPP - Others' High Standards</b>			
27. My family expects me to be perfect.	.150	.656	.185
29. People expect nothing less than perfection from me.	.220	.628	.278
25. Although they may not show it, other people get very upset with me when I slip up.	.051	.614	.352
14. The people around me expect me to succeed at everything I do.	-.341	.589	-.109
18. Success means I must work even harder to please others.	.096	.554	.216
7. The better I do, the better I am expected to do.	.152	.550	-.161
31. People expect more for me than I am capable of giving.	-.023	.531	.486
20. I cannot stand to see people close to me make mistakes.	.283	.498	.171
23. I feel that people are too demanding of me.	.007	.475	.410
<b>SPP - Conditional Acceptance</b>			
22. Others think I am okay, even when I do not succeed.	-.068	.093	.715
16. Others will like me even if I don't excel at everything.	.070	.077	.685
33. People around me think I am still competent even if I make a mistake.	-.017	-.191	.670
2. I find it difficult to meet other's expectations of me.	-.049	.179	.511
6. Those around me readily accept that I can make mistakes too.	.008	.080	.492
9. Anything I do that is less than excellent will be seen as poor work by those around me.	.199	.362	.444
26. I do not have to be the best at whatever I am doing.	.278	.199	.413

### 2-FACTORS SOLUTION (Table 1)

The 2-factor solution explained 37.4% of the total variance. Factor 1 (SOP) explained 22.8% of the variance. Factor 2 (SPP) explained 14.6% of the variance. The correlation between factors was  $r = -.44$  and the internal consistency of the scale was high (Cronbach alpha=.90) as well as within each factor (Factor 1,  $\alpha = .89$ ; Factor 2,  $\alpha = .82$ ).

The 2-factors obtained were almost identical to the SOP and SPP subscales of the Portuguese MPS, except for the two following items: «I cannot stand to see people close to me make mistakes» (which belonged to the original SPP factor and was now part of the SOP factor) and «I do not have to be the best at whatever I am doing» (originally loaded on SOP, and in the present structure loaded on SPP).

### 3-FACTORS SOLUTION (Table 2)

The 3-factor solution explained 42.9% of the total variance. Factor 1 (SOP) explained 18.2% of the variance, Factor 2 (Others' High Standards) explained 14.5% and Factor 3 (Conditional Acceptance) explained 10.2%. The internal consistency of each factor was high: F1,  $\alpha = .89$ ; F2,  $\alpha = .82$ ; F3,  $\alpha = .69$ . Correlations between factors were:  $r = .51$  between F1 and F2;  $r = .46$  between F2 and F3 and  $r = .17$  between F1 and F3.

The SOP factor of the 3-factor solution was very similar to SOP of the 2-factor solution. The item "I cannot stand to see people close to me make mistakes" which loaded on the SOP factor in the above 2-factor solution was now part of the Others' High Standards factor. This solution diverged from the original not only because SPP was divided in Others' High Standards and Conditional Acceptance factors, but also because a few discrepancies were observed with the following items: «The people around me expect me to succeed at everything I do» and «I do not have to be the best at whatever I am doing» which originally were from the SOP factor and now in the present 3-factor structure loaded on Others' High Standards (F2) and in Conditional Acceptance (F3), respectively.

## CONCLUSION

In Portuguese pregnant women the SOP factor of the MPS is robust. However, to assess the negative consequences of SPP the 3-factors solution of the MPS seems more appropriate, in the sense that "Conditional Acceptance" may be the SPP component most strongly associated with several psychopathological outcomes as suggested by Campbell & DiPaula (2002).

## ACKNOWLEDGMENTS

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## REFERENCES

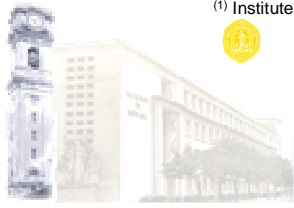
- Campbell, J. & Di Paula, A. (2002). Perfectionistic Self-Beliefs: their relation to personality and goal pursuit. In *Perfectionism. Theory, Research, and Practice*, Flett G. & Hewitt P. (Eds.), American Psychological Association, Washington DC.
- Hewitt, P. & Flett, G. (1991). Perfectionism in the Self and Social Contexts: Conceptualization, Assessment, and Association With Psychopathology. *Journal of Personality and Social Psychology*, 60, 456-470.
- Soares, M., Gomes, A., Macedo, A., Santos, V. & Azevedo, M.H. (2003). Escala Multidimensional de Perfeccionismo: Adaptação à População Portuguesa. *Revista Portuguesa de Psicossomática*, 5(1), 46-55.



# CAN WE TALK ABOUT *PREMEDICAL SYNDROME* AMONG PORTUGUESE MEDICAL STUDENTS?

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## ABSTRACT

In Portugal, the Medical school selection process relies exclusively on past academic results, involving the most stringent criteria of all courses, with no attention given to the personality traits of the students. In a competitive context, perfectionism dimensions may be relevant to consider. Socially Prescribed Perfectionism (SPP) has been correlated with Neuroticism, while Self-Oriented Perfectionism (SOP) is strongly associated with Conscientiousness. These domains of personality have been linked (lower levels of Neuroticism and higher levels of Conscientiousness) to academic and professional success in Medicine. The *premedical syndrome* describes premedical students as *overachieving, excessively competitive, cynical, dehumanized, overspecialized and narrow*. AIM: To compare SPP and SOP levels between Medical and Humanities students, as they may be possible indicators of the *premedical syndrome* among Portuguese medical students. METHODS: The Portuguese version of the *Multidimensional Perfectionism Scale* was administered to 908 undergraduate students from Medicine and Humanities courses of Coimbra University. The sample covered students from the 1st to the 5th year of the courses but most of the students were from the 1st year (n = 436). RESULTS: With respect to SPP, significant statistical differences were found, with Medicine students showing lower levels (mean 48.60 ± 11.02; p=.023) than Humanities students (mean 50.00 ± 9.56). No significant differences were found in SOP. CONCLUSION: Our results are reassuring, suggesting the lack of a negative impact of the medical school selection process in the personality traits of the students and the probable absence of the *premedical syndrome*.

## INTRODUCTION

It has been recognized the need to base the Medical School selection process on ample criteria (as personality traits) and not only on previous academic results (Hughes, 2002). In Portugal, this process is based exclusively on these results (in excess of 18 in a scale of 20).

Given the high competitive context surrounding the students wishing to become doctors, it is possible to hypothesize that it might have a negative effect on student's personality traits.

Perfectionism dimensions may, then, be relevant to consider. Socially Prescribed Perfectionism has been correlated with Neuroticism, while Self-Oriented Perfectionism is strongly associated with Conscientiousness.

In Medicine, after IQ, Conscientiousness and lower scores of Neuroticism have revealed to be the better predictors of academic and professional success (Ferguson et al., 2003).

The thesis that Medical Schools tend to select students that are so obsessed with entering Medical School that lack the breath of interest and the social experience necessary for the development of a socially sensitive and emotionally mature personality has been studied (Coombs & Paulson, 1990; Hackman et al., 1979). This characterization has been called *premedical syndrome* describing these students as *overachieving, excessively competitive, cynical, dehumanized, overspecialized and narrow* (Ahrens & Akins, 1981).

Our aim was to analyse possible differences in perfectionism dimensions between Medical students and students from other courses that might reflect a negative impact of the selection process in our *premedical* students personality and the presence of the *premedical syndrome* among them.

## METHODS

Study approved by the relevant ethical committees.

## SAMPLE

908 students from Medicine (n= 617, 68%) and Humanities (n=291, 32%) courses of Coimbra University, from the 1st to the 5th year (most were from the first year, n= 436). Sixty six percent (n=595) were females and 34% (n=311) were males, with a mean age of 19.58 (SD=1.6) years, range (17-25). The majority was single (n= 894, 99.3%).

## MEASURE

### MULTIDIMENSIONAL PERFECTIONISM SCALE (MPS; Hewitt & Flett, 1991)

The MPS - H & F (1991) is a self-report questionnaire designed to measure three dimensions of perfectionism (Self-Oriented Perfectionism - SOP, Socially Prescribed Perfectionism - SPP and Other Oriented Perfectionism - OOP). SOP is an intrapersonal component involving the setting of excessive personal standards and a stringent self-evaluation (e.g. "I set very high standards for myself"). SPP and OOP are interpersonal dimensions. SPP involves a perception that others significant hold excessively high standards and expectations of perfection for oneself (e.g. "people expect nothing less than perfection from me") and OOP involves expectations of perfection that one has for others (e.g. "I have high expectations for the people who are important to me").

The scale has 45 items and respondents indicate to what extent they agree or disagree with statements concerning personal characteristics on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on each scale represent greater levels of perfectionism. Total scale can range from 45 to 315.

The Portuguese version of the MPS - H & F (1991) has shown to have good psychometric properties (EMP; Soares et al., 2003).

## PROCEDURE

After explaining the voluntary nature and general format of the research to the Faculty Professors and obtaining the participation agreement, the EMP was completed by all students present in the practical and theoretical classes. Confidentiality was ensured.

## RESULTS

Tables 1 and 2 show the means and standard deviations on perfectionism dimensions considered in our analysis (SOP e SPP), by course and gender.

A two-way analysis of variance (2x2 ANOVA) was conducted to evaluate if the scores on EMP dimensions varied as a function of course and gender and if there was an interactive effect between gender and course.

Regarding SOP, no significant interaction between course and gender [F (1, 860) = 1.519, p = .218] and no main effects for course [F (1, 860) = 3.024, p = .082] and gender [F (1, 860) = .094, p = .759] were obtained.

For SPP, a significant main effect was obtained for course [F (1, 864) = 5.172, p = .023]. Medicine students showed lower scores on SPP dimension (M=48.60) than Humanities students (M = 50.00). There was also a significant main effect for gender [F (1, 864) = 4.938, p = .027], indicating that men (M= 49.87) showed higher scores on SPP dimension than women (M=48.58). No significant interaction between course and gender [F (1, 864) = .954, p = .329] was found (Table 2 and 3).

Table 1 – Means and standard deviations on perfectionism by course †

	Medicine N=617 (68%)	Humanities N=291 (32%)
SOP (M ± SD)	48.60 ± 16.39	50.00 ± 9.56*
SPP (M ± SD)	48.60 ± 11.02*	50.00 ± 9.56*

SOP - Self-oriented perfectionism; SPP - Socially prescribed perfectionism; M=Mean; SD=Standard deviation. \*p<0.05; † two-way analysis of variance (2x2 ANOVA).

Table 2 – Means and standard deviations on perfectionism by gender †

	Males N=311 (34.3%)	Females N=595 (65.5%)
SOP (M ± SD)	48.63 ± 16.67	48.58 ± 10.73*
SPP (M ± SD)	49.87 ± 10.32*	48.58 ± 10.73*

SOP - Self-oriented perfectionism; SPP - Socially prescribed perfectionism; M=Mean; SD=Standard deviation. \*p<0.05; † two-way analysis of variance (2x2 ANOVA).

## DISCUSSION AND CONCLUSION

Results reveal that our Medicine students have a "balanced" perfectionism profile, distinct from that of the Humanities students, particularly in respect to SPP.

SPP is seen as a maladaptive component of perfectionism and significant correlations have been found between maladaptive perfectionism (in which SPP is included) and measures of *Distress*, like Depression and Neuroticism (Hill et al, 1997; Enns et al, 2001).

As others analysing SPP and Neuroticism levels in Medicine students, in comparison with students from other courses, we showed that Medicine students have significantly lower levels in these personality traits (Gaspar et al, 2007; Enns et al, 2001), revealing not to be "study machines", but calm and secure people, satisfied with themselves and capable of facing stress periods (Gaspar et al, 2007).

SOP is a more adaptive component of perfectionism, showing high correlations with Conscientiousness (Hill et al, 1997). These two traits are associated with self-determination, self-discipline and scrupulosity, all three related to higher levels of emotional adjustment/academic performance (Cox et al, 2002; Miquelon et al, 2005). However, high levels of SOP are not completely free of emotional suffering, when someone with high standards lack the flexibility to relax (Costa & McCrae, 1992).

In line with other studies analysing SOP and Conscientiousness, our study shows that our Medical students do not differentiate from other groups in these traits (Enns et al, 2001; Gaspar et al, 2007). It is then possible to affirm that they have the same levels of dedication to work, motivation, persistence, self-discipline and ambition than other students predicting, at least, their academic success and permitting to hypothesize that they do not suffer from the negative effects that can be associated with the presence of high levels in these traits.

In conclusion, these results suggest that the Medical School selection process in Portugal does not have a pernicious effect on our *premeds* personality and does not seem to cause the *premedical syndrome*.

## AKNOWLEDGMENTS

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## REFERENCES

- Ahrens E.H. & Akins C.M. (1981). Report to the Alumni Council on the need to consider modifications in the premedical education and selection of applicants to the Harvard Medical School. Harvard Medical Alumni Bulletin, Fall, 21-6.
- Coombs, R.H. & Paulson, M.J. (1990). Is Premedical education dehumanizing? A literature review. J Med Human, 11(1):13-22.
- Costa P. & McCrae, R. (1992). Revised NEO personality inventory: professional manual. Odessa, FL: Psychological Assessment Resources.
- Cox, B.J., Enns, M.W. & Clara, I.P. (2002). The Multidimensional Structure of Perfectionism in Clinically Distressed and College Student Samples. Psychol Assess, 14:365-373.
- Enns, M.W., Cox, B.J., Sarren, J. & Freeman, P. (2001). Adaptive and maladaptive perfectionism in medical students: a longitudinal investigation. Med Educ, 35: 1034-1042.
- Ferguson, E., James, D., O'Hehir, F. & Sanders, A. (2003). Pilot study of the roles of personality, references and personal statements in relation to performance over the five years of a medical degree. Br Med J, 326: 429-431.
- Gaspar, M.F., Mota Pinto, A., Carrilho, E. & Pereira da Silva, J.A. (2007). Médicos do futuro: a seleção dos alunos de Medicina em Portugal e os desafios do médico do séc. XXI. Rev Ordem Médicos, Julho-Agosto, 40-47.
- Hackman, J.D., Low-Beer, J.R., Wugmeister, S., Wilhelm, R.C. & Rosenbaum, J.E. (1979). The premed stereotype. J Med Educ, 54(4): 308-313.
- Hewitt P.L. & Flett, G.L. (1991). Perfectionism in the Self and Social Contexts: Conceptualization, Assessment and Association with Psychopathology. J Personality Soc Psychol, 60 (3): 456-470.
- Hill, R., McIntire, K. & Bacharach V.: Perfectionism and the big five factors. J Soc Beh Personality 1997; 12: 257-270.
- Hughes, P. (2002). Can we improve on how we select medical students? J Royal Soc Med, 95: 18-22.
- Miquelon P., Vallierand, R.J., Grouzet, F.M.E. & Cardinal, G. (2005). Perfectionism, academic motivation, and psychological adjustment: an integrative model. Personality and Soc Psychol Bull, 31 (7):913-924.
- Soares, M.J., Gomes, A.A., Macedo, A.F., Santos, V., Azevedo, M.H.P. (2003). Escala Multidimensional do Perfeccionismo: adaptação à população portuguesa. Rev Port de Psicossom, 5 (1): 46-55.



# ILLNESS PERCEPTION AND SMOKING IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

## BACKGROUND

✓ **Chronic Obstructive Pulmonary Disease (COPD)** is a leading cause of morbidity and mortality worldwide [1].

✓ **Smoking** is one of the most significant risk factors for the development and outcome of COPD [2].

✓ **Illness Perceptions** are the themes that beliefs about the illness cluster around [3]:

- Identity - number of symptoms attributed to the illness
- Timeline (acute/chronic)- duration of the condition
- Consequences - negative consequences of the illness
- Personal Control - personal controllability of the illness
- Treatment Control - therapeutic controllability of the illness
- Illness Coherence - personal understanding of the condition
- Timeline Cyclical - cyclical nature of the condition
- Emotional Representations - emotional relations to the condition

✓ In COPD patients the perception of the illness is dominantly negative [4].

✓ There is controversial evidence whether smoking ceasing is related to the perceived health risks [5-9].

## AIM

✓ Aim of the study was to investigate the relationship between the illness perception in COPD patients and their smoking habit.

## METHOD

**Subjects** were 44 consecutive inpatients at the Clinic for Lung Disease and TB, Clinical Center of Nis, Serbia, all in the stadium of unstable exacerbated COPD.

The sociodemographic profile of the sample was:

- 58% males, 42% females;
- mean age 42.83±11.80 yrs,
- the socioeconomic status was dominantly mid/low.

**Instruments** used in the study were as follows:

**The General Questionnaire**, that assessed:

- the sociodemographic data
- the smoking status (smoker, ex smoker, non-smoker),
- the self-perceived smoking reduction after COPD diagnose
- the current smoking quantity in cigarettes per day.

**The Illness Perception Questionnaire (IPQ)** that assessed:

- the Illness Perceptions (dichotomous and 5-point scale);
- the belief in smoking as a cause of COPD (dichotomous scale).

## RESULTS

**Table 1&2.** One way ANOVA of Illness Perceptions Among Smokers, Ex smokers and Non-smokers. Multiple comparisons (LSD).

	F
Identity	3.564*
Timeline	6.062**
Concequences	0.899
Personal Control	0.989
Treatment Control	0.443
Coherence	0.359
Timeline Cyclical	0.266
Emotional Representations	0.952

	x	y	Mean Difference (x-y)
Identity	Smokers	Non-smokers	5.1111*
Timeline	Ex smokers	Non-smokers	4.9658**
		Smokers	4.8042**

\* - p<0.05; \*\* - p<0.01

Smokers had stronger illness identity than non-smokers.  
Ex-smokers perceived their illness as more chronic comparing to both smokers and non-smokers.

**Table 3.** Spearman's correlations among Illness Perceptions with self-perceived smoking reduction and smoking quantity \*\* - p<0.01

	Self-perceived smoking reduction r	Smoking quantity r
Identity	-0.164	0.323
Timeline	0.652**	-0.299
Concequences	0.220	-0.154
Personal Control	-0.245	0.254
Therapeutic Control	0.032	0.065
Coherence	0.043	-0.004
Timeline cyclical	0.099	0.061
Emotional Representations	0.222	-0.189

Self-perceived smoking reduction showed positive correlation to the perceived illness chronicity.

**Table 4.** Relation of smoking as a believed COPD cause with the smoking quantity, the self-perceived smoking reduction and the smoking status (Man Whithney U test, X2 test)

	U
Smoking quantity	93.500
Self-perceived smoking reduction	46.000
Smoking status	$\chi^2 = 12.238^*$
Smokers who believed smoking causes COPD	81.8%
Ex smokers who believed smoking causes COPD	38.5%

Believing in smoking as a cause of COPD was unrelated to both smoking quantity and the self-perceived smoking reduction. It was more frequent in smokers than in ex-smokers.

## DISCUSSION & CONCLUSIONS

✓ **COPD patients who smoke are more aware of their symptoms than the non-smokers.** This may be due to the symptoms being chronically more frequent and more severe in smokers than in non-smokers [2].

✓ **Both smoking reduction and cessation are related to the strong perception of the chronic course of COPD.** The potential chronicity of the illness may serve as a leading motivator in the motivational interview related to treatment compliance for the patients who smoke.

✓ **Smoking cessation and reduction are not related to the perceived COPD risks of smoking.** This is in accord with the findings in patients who suffer from coronary disease [5], and those with genetical burden of serious smoking related diseases [6]. Controversely, the relationship was significant in cancer patients [7], asthma patients [8], and healthy individuals [9]. Research controlling for more variables (such as personality traits, anxiety, depression) is needed to explore this relationship.

✓ **Those who ceased smoking after being diagnosed with COPD believe less that smoking causes their illness than those who still smoke;** this may be due to the failed expectations that after smoking ceased, the illness would cease as well.

## REFERENCES

- Cell BR, Nee MC. Standards for the diagnosis and treatment of patients with COPD: a summary of the ATD/ERS position paper. Eur Respir J 2004; 23:932-46.
- Jimenez Ruiz CA, Masa F, Miravilles M, Gabriel R, Viejo JL, Villasante C, Sobradillo V, IBERPOC Study investigators. Smoking characteristics – differences in attitudes and dependance between healthy smokers and smokers with COPD. Chest. 2001; 119:1365-70
- Leventhal H, Leventhal EA, Contrada RJ. Self-regulation, health, and behaviour: a perceptual–cognitive approach. Psychol Health 1998; 13:717–33.
- Mitkovic M, Ristic L, Zikic O, Milosevic V, Grbesa G. Illness perception in chronic obstructive pulmonary disease. Medicinski Pregled (LISTED IN MEDLINE), In press.
- Khalid Y, Malina O, Rofiah A, Latinah M, Thahirahtul AZ, Zaridah MS, Tan MH. Disease and risk factor perception among patients with coronary artery disease in Kuala Terengganu. Med J Malaysia. 1994;49(3):205-8.
- Goksel T, Ozol D, Bayindir U, Guzelant A. Smoking habit among the relatives of patients with serious smoking-related disorders. Eur Addict Res. 2002 Jun;8(3):118-21.
- Hay JL, Ostroff J, Burkhalter J, Li Y, Quiles Z, Moadel A. Changes in cancer-related risk perception and smoking across time in newly-diagnosed cancer patients. J Behav Med. 2007;30(2):131-42.
- Massasso DH, Salome CM, King GG, Seale JP, Woolcock AJ. Do subjects with asthma have greater perception of acute bronchoconstriction than smokers with airflow limitation? Respirology. 1999; 4(4):393-9.
- Ma GX, Fang CY, Tan Y, Feeley RM. Perceptions of risks of smoking among Asian Americans. Prev Med. 2003 Oct;37(4):349-55.



# Familiarità e stili educativi genitoriali nel disturbo ossessivo-compulsivo: pensiero magico e metacognizione

# Familiarity and parental educational styles in the obsessive-compulsive disorder: magical thinking and meta-cognition

**Ipotesi**

1. Soggetti con un tratto ossessivo, che legami presentano un pensiero magico e metacognitivo?
2. Soggetti con funzioni metacognitive compromesse, che stile educativo evidenziano?
3. Soggetti che presentano un tratto ossessivo, che stile educativo evidenziano?
4. Soggetti che hanno evidenziato alti punteggi alla misura del costrutto della fusione pensiero-azione, che deficit hanno presentato dal punto di vista metacognitivo?

**Strumenti usati**

I test che abbiamo utilizzato per effettuare la seguente ricerca sono molteplici, di tipo sia quantitativo che qualitativo:

- Scala 9 CBA (Cognitive Behavioural Assessment) 20 Scale primarie – "Maudsley Obsessive – Compulsive Questionnaire"
- TAF - R (Thought – Action Fusion)
- MCQ (Metacognition Questionnaire)
- TCQ (Thought Control Questionnaire)
- AntiT (Anxiety Thought Inventory)
- Intervista sugli stili educativi genitoriali

**Descrizione del campione sperimentale**

Il campione sperimentale è composto da nuclei familiari formati dai genitori, e da almeno un figlio. Per alcuni nuclei familiari sono presenti anche due o più figli. Il campione è composto da 179 soggetti.

Non vi sono coppie gay, né figli adottivi e nemmeno gemelli.

**Metodologia**

1. Correlazioni lineari di Pearson;
2. Test del Chi Quadrato (livello di significatività stabilito:  $\alpha = 0,01$ );

## Resultati e discussione

**Ipotesi I: risultati evidenziano tra tratto ossessivo e metacognizione (oggetto della preoccupazione)**

Possiamo notare che quanto più un soggetto presenta un tratto ossessivo, che può manifestarsi in una dimensione di cui si compone il disturbo (checking, cleaning and doubling), tanto più alti risulteranno i punteggi che possono riguardare la preoccupazione sociale (pausa di non piacere o essere simpatico agli altri), la preoccupazione per la salute, (pausa di poter morire o potersi gravemente ammalare) e la metapreoccupazione (pausa di non saper controllare preoccupazioni e pensieri intrusivi).

**Ipotesi I: risultati evidenziano tra tratto ossessivo e metacognizione (strategia di controllo del pensiero intrusivo)**

L'analisi correlazionale mostra che le strategie di controllo del pensiero intrusivo maggiormente utilizzate, in presenza di un soggetto con un tratto ossessivo, sono la rievocazione e la metapreoccupazione. L'analisi del chi quadro mostra anche che in presenza di un tratto ossessivo che si manifesta soprattutto nella dimensione della "lungaggine" e del rituale ossessivo (cleaning), la strategia per il controllo del pensiero intrusivo potrebbe risultare la distrazione.

**Ipotesi II: risultati evidenziano tra stile educativo genitoriale e metacognizione**

I risultati evidenziano il consenso di ipotizzare che quanto più alta è la problematicità dello stile educativo, ossia il fatto che i genitori siano autoritari, trascuranti, demotivanti e permissivi, tanto più il soggetto utilizzi come strategie metacognitive le convinzioni negative generali (non essere in grado di controllare i propri pensieri è considerato, ad esempio, come un segno di debolezza), le convinzioni positive circa la preoccupazione (la preoccupazione aiuta a tenere testa agli eventi problematici) e le convinzioni circa l'incontrollabilità ed il pericolo (quando la preoccupazione comincia ad incrinare, non si riesce più a fermarla).

**Ipotesi II: risultati evidenziano tra stile educativo genitoriale e metacognizione (strategia di controllo del pensiero intrusivo)**

Vediamo che una relazione problematica genitore – figlio, ossia un comportamento particolarmente autoritario, trascurante, esigente e all'opposto troppo permissivo, aumenta la probabilità che il soggetto utilizzi come strategia per il controllo del pensiero intrusivo la rievocazione, ossia la riformulazione del pensiero in una forma diversa da quella originaria; la preoccupazione, ossia il continuo pensare a quel pensiero intrusivo e la punizione, ossia punirsi fisicamente o attraverso delle cose morali per aver avuto quel pensiero.

**Ipotesi III: risultati evidenziano tra tratto ossessivo e stili educativi genitoriali**

Tra stili educativi genitoriali e disturbo ossessivo-compulsivo si risulterà un legame di dipendenza se lo stile educativo è problematico, allora è possibile che il soggetto possa maggiormente incorrere nello sviluppo di una patologia ossessivo-compulsiva. Una differenza da sottolineare sta nel fatto che mentre l'analisi correlazionale evidenzia che uno stile educativo problematico può influenzare la formazione del controllo (checking) e della metapreoccupazione (pausa di non saper controllare), l'analisi del chi quadro, in modo significativo, evidenzia che lo stile educativo influenza anche l'insorgenza del dubbio ossessivo (doubling), elemento che non emerge dalle correlazioni.

**Ipotesi IV: risultati evidenziano tra pensiero magico e disturbo ossessivo-compulsivo**

Possiamo evidenziare che la misura del disturbo ossessivo-compulsivo presenta un legame di dipendenza con le dimensioni di cui si compone il pensiero magico. Infatti, tanto più un soggetto presenterà un tratto ossessivo, maggiore sarà la presenza di pensieri che avranno contenuti che riguardano la moralità, la probabilità e la possibilità di provare, con il suo pensiero, conseguenze negative su di sé e sugli altri.

**Ipotesi IV: risultati evidenziano tra pensiero magico e metacognizione**

Dalle analisi statistiche effettuate sono emersi risultati differenti. L'analisi delle correlazioni mostra che la presenza di convinzioni negative generali (ad esempio, pensare di essere deboli se non si è in grado di fare determinate cose), la tendenza all'aumentare della moralità che riguardano la moralità, le conseguenze negative su di sé, le conseguenze negative sugli altri. Inoltre, osserviamo che le conseguenze negative su di sé risultano maggiormente anche in presenza di convinzioni positive circa la preoccupazione e convinzioni circa l'incontrollabilità ed il pericolo.

**Ipotesi IV: risultati evidenziano tra pensiero magico e metacognizione (oggetto della preoccupazione)**

I risultati delle analisi mostrano risultati analoghi: il pensiero magico ha un legame di dipendenza con la misura della preoccupazione; quanto più il soggetto ha pensieri che hanno come contenuto la moralità o la possibilità di provocare conseguenze negative su di sé con il proprio pensiero, tanto più il contenuto di questi pensieri potrebbe riguardare la preoccupazione sociale, la preoccupazione per la salute e la metapreoccupazione. In modo specifico, le correlazioni mostrano anche che pensieri che riguardano la moralità possono avere come contenuto la preoccupazione sociale e la preoccupazione per la salute; pensieri che riguardano la probabilità che accadano determinati eventi per il solo fatto di averli pensati, possono avere come contenuto la preoccupazione sociale e la metapreoccupazione.

**Ipotesi IV: risultati evidenziano tra pensiero magico e metacognizione (strategia di controllo del pensiero intrusivo)**

Il pensiero magico influenza la strategia utilizzata dal soggetto per controllare il pensiero intrusivo: in presenza di pensieri che riguardano delle conseguenze negative su di sé, questi saranno controllati dalla rievocazione e dalla preoccupazione. All'opposto, se consideriamo pensieri che hanno come oggetto delle conseguenze negative sugli altri, saranno maggiormente controllati mediante le strategie della distrazione e della punizione.

**Ipotesi IV: risultati evidenziano tra pensiero magico e metacognizione**

Observando la dimensione della moralità, possiamo vedere come vi sia una dipendenza sia con le convinzioni positive circa la preoccupazione e sia con le convinzioni negative generali; ciò significa che a bassi punteggi circa le convinzioni di moralità corrispondono bassi punteggi anche per quanto riguarda le convinzioni positive circa la preoccupazione, quali, ad esempio, "preoccuparsi mi aiuta a tenere sotto controllo gli eventi" e quelle che riguardano le convinzioni negative generali, quali preoccupazioni circa il fatto che non avere determinati pensieri equivale a non essere brave persone.

**Conclusioni**

Con questo lavoro abbiamo voluto verificare una possibile relazione tra cinque argomenti di nostro interesse, quali: ciclo vitale familiare, metacognizione, disturbo ossessivo-compulsivo, stili educativi genitoriali e pensiero magico.

Le ipotesi formulate, sono state verificate con risultati altamente significativi. Abbiamo evidenziato, in particolare, che:

- Lo stile educativo genitoriale potrebbe rappresentare un fattore predittivo dell'insorgenza della patologia ossessivo-compulsiva;
- In presenza di stili educativi problematici i soggetti utilizzano delle strategie metacognitive particolari per tenere sotto controllo i propri pensieri;
- La fusione pensiero-azione pervade il quadro ossessivo-compulsivo;
- È stato evidenziato un legame di dipendenza tra pensiero magico e metacognizione, in quanto avere la convinzione che "pensare equivale a fare", determina l'utilizzo di particolari strategie metacognitive e può compromettere il funzionamento metacognitivo sano.
- Questa ricerca rappresenta una novità; infatti, una ricerca con questi strumenti non era stata mai effettuata prima d'ora. In effetti, essendo l'intervista uno strumento non ancora standardizzato, non era mai stata verificata una possibile relazione né col disturbo ossessivo, ma nemmeno con la metacognizione ed il pensiero magico. Potrebbe essere utile sviluppare una prospettiva in tal senso: approfondendo gli studi e le ricerche sul ruolo parentale nell'insorgenza e nel mantenimento dei disturbi di personalità e sul possibile ruolo che un comportamento educativo potrebbe assumere nello sviluppo della comprensione della mente propria ed altrui.
- Le informazioni sperimentali, si collocano sulla scia dell'affermazione e dell'innovazione rispetto a quanto già esiste in letteratura. Cercando di metterli insieme e di evidenziare una possibile dipendenza, abbiamo voluto dare un'impulso nuovo a tutti questi concetti.
- Nella novità della ricerca, nella novità degli strumenti utilizzati e nel fatto che questo sia il primo studio a misurare una dipendenza tra questi costrutti, risiedono gli elementi che rendono originale questo lavoro.

**Hypothesis**

1. The subjects characterized by an obsessive feature: which links do they have with magical thinking and meta-cognition?
2. The subjects characterized by compromised meta-cognitive functions: which educational style do they show?
3. The subjects characterized by an obsessive feature: which educational style do they show?
4. Subjects characterized by high percentages in the testing of the thought action fusion form, what deficiency do they show from a meta-cognitive point of view?

**Tools**

The tests we used for our research are different from a qualitative and quantitative point of view:

- CBA 9 Scale (Cognitive Behavioural Assessment) 20 Primary scales – "Maudsley Obsessive – Compulsive Questionnaire"
- TAF - R (Thought – Action Fusion)
- MCQ (Metacognition Questionnaire)
- TCQ (Thought Control Questionnaire)
- AntiT (Anxiety Thought Inventory)
- Educational parental styles interview

**Experimental sample description**

The experimental sample is made up of families with a mother, a father and a son at least. In some families we have two or more sons. The sample is made up of 179 subjects divided in the following way: There are no gay couples, no adopted sons, no twins.

**Methodology**

1. Pearson's Linear Correlations;
2. Chi-square test (Significance level:  $\alpha = 0,01$ );

## Results and discussion

**Hypothesis I: results betw obsessive feature and meta cognition (worry subject)**

We can notice how an higher obsessive feature (characterizing a subject and revealed in every dimension of the disease (checking, clearing and doubling)) will determine higher beliefs about: the social worry (worry about not to please everyone or not to be kind to everyone), the health worry (worry about dying or about serious illness) and metaworry (worry about not controlling worries and intrusive thoughts).

**Hypothesis I: results between obsessive feature and metacognition (intrusive thought control strategy)**

The correlational analysis shows that the reappraisal and worry are the most used intrusive thought control strategies in the presence of a subject with an obsessive feature. The chi-square analysis shows also that in presence of an obsessive feature revealed by the dimension of the slowness and obsessive ritual (cleaning), the intrusive thought control strategy could be the abstraction.

**Hypothesis II: results between the parental educational style and the meta-cognition**

Concerning the results, we can suppose that an higher rate in the educational style complexity, represented by the fact that the parent is more authoritarian, neglecting, demotivating and permissive, will determine the subject using meta-cognitive strategies such as general negative belief (not to be able to control his own thoughts is considered as a weak signal), positive beliefs about worries (worry helps to face problems) and beliefs about uncontrollability and danger (when the worry starts you can stop it anymore).

**Hypothesis II: results between the parental educational style and the meta-cognition (intrusive thought control strategy)**

We see how a problematic situation between a parent and a son, as to say a strongly authoritarian, neglecting, rejecting behaviour at one side or a too permissive one at the other side, can arise the probability that the subject is going to use the reappraisal (the reformulation of the thought in a form which is different from the original one), the worry (the constant thinking of that intrusive thought) and the punishment (punishing him/herself physically or through moral censures because of that thought), as undesirable thought control strategies.

**Hypothesis III: results between obsessive feature and parental educational styles**

Between parental educational styles and obsessive-compulsive disorder, we can underline that the educational style is problematic it's possible that the subject could incur more probably the development of an obsessive-compulsive disorder. An important difference is that the correlational analysis underlines that an educational style can affect the control forming (checking) and the obsessive cleaning ritual forming (clearing) while the chi-square analysis underlines significantly that the educational style affects also the beginning of the obsessive doubt (doubling), an element which we don't find in the correlations.

**Hypothesis IV: results between magical thinking and obsessive-compulsive disorder**

We can underline that the obsessive-compulsive disorder depends on the standards the magical thinking is made up of, in fact a subject with a wider obsessive feature we will find more thoughts regarding the morality, the probability and the possibility of causing negative consequences upon one's self and the others just using the thinking. We can see particularly how thoughts regarding morality and negative consequences upon others will be more present in the "checkers" subjects, how thoughts regarding negative consequences upon one's self are more present in the "washers" subjects, how thoughts regarding the possibility of causing negative consequences upon the others will be present in the "doubters" subjects.

**Hypothesis IV: results between magical thinking and meta-cognition**

Through the statistical analysis we had different results. The correlational analysis shows that the presence of general negative beliefs (e.g. thinking of being weak if you are not able to do particular things), is higher if the subject thinks more of morality, negative consequences upon one's self, negative consequences upon the others. Moreover we can see how the negative consequences upon one's self are greater also in the presence of positive beliefs on worry and beliefs on uncontrollability and danger. The chi-square analysis shows that morality more than being strictly connected to the positive beliefs on worry, depends also on the positive beliefs on worry (e.g. thinking that being worried about something helps to get under control negative events). The element we don't find in the correlations is that about the negative consequences upon one's self: the chi-square analysis shows that the feature depends on the positive beliefs on worry, on the beliefs on one's own cognitive competence and on the general negative beliefs. Finally the negative consequences upon the others depend on the general negative consequences.

**Hypothesis IV: results between the magical thinking and meta-cognition (worry subject)**

The two analysis results show the same results. The magical thinking depends on the worry standard: if a subject thinks more about morality and the possibility to cause negative consequences upon one's self through one's own thinking, the content of the thinking regards the social worry, the health worry and the metaworry. The correlations show particularly that the thoughts about morality can regard the social worry and the health worry while thoughts about the possibility that some events are going to happen just because of thinking of them, can regard the social worry and the metaworry.

**Hypothesis IV: results between the magical thinking and meta-cognition (intrusive thought control strategy)**

The magical thinking affects the strategy the subject uses to control the intrusive thought: in the presence of thoughts regarding the negative consequences upon one's self, these will be controlled by reappraisal and worry. On the other side, if we consider thoughts regarding negative consequences upon other people, these thoughts will be controlled by abstraction and punishment strategies. Only the thoughts with a morality content will be controlled through the reappraisal.

**Hypothesis IV: results between the magical thinking and meta-cognition**

Looking at the morality standard we can see how this depends on the positive beliefs about worry and on the general negative beliefs. This means that at a low morality standard there will be a low standard in the positive beliefs about worry (e.g. "worrying about something helps me to get the events under control") and a low standard in the general negative beliefs such as those concerning the fact that not having certain thoughts means being good people.

**Conclusions**

Through this research we wanted to verify a possible connection among five subjects we found very interesting: the family vital cycle, the meta-cognition, the obsessive-compulsive disorder, parental educational styles and magical thinking.

The hypothesis we advanced have been verified with highly significant results. We underlined particularly that:

- The parental educational style could be a predictive factor for the onset of the obsessive-compulsive pathology;
- In the presence of difficult educational styles the subjects use particular meta-cognitive strategies to get one's own thoughts under control;
- The thought-action fusion permeates the obsessive-compulsive description;
- We have underlined an interdependence between the magical thinking and the meta-cognition because believing that "thinking is doing" determines the use of particular meta-cognitive strategies and it can compromise the meta-cognitive sound functioning.
- This research could be a novelty because the tools we used had never been used before. Because of the interview is not yet a standardized tool, it had never been verified a connection neither with the obsessive disorder nor with the meta-cognition and the magical thinking. Developing a prospect in this subject could be useful: studying in detail the researches about the parent role in the onset and the developing of the personality disorders and the probable role of an educational behaviour in the development of one's own and the others' mind.
- The experimental information follows the analysis and the innovation we can already find in the literature. Putting them together and underlining them we wanted to give a new vision of these subjects.
- The new research, the new used tools and the point that this is the first study evaluating connections among these standards are the original feature of this work.



# THE BDI-II FACTOR STRUCTURE IN PREGNANCY AND POSTPARTUM: TWO OR THREE FACTORS?

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## ABSTRACT

The purpose of the present study was to investigate the factor structure of the Beck Depression Inventory II (BDI-II) in pregnancy and postpartum. 331 pregnant women with a mean age of 29.7 years (SD=4.6; Range=19-42 years) who were in their last trimester of pregnancy (M=32.7, SD=3.4, Range=26-41 weeks of gestation) answered the BDI-II. Most women, 65.6%, were nulliparas. At approximately 3 months after partum 354 mothers aged 30.6 years (SD=4.6; Range=18-44 years), mostly primiparas (57.4%), also filled in the BDI-II. Data were analysed using factor analyses with principal components solution and *varimax* rotation. Based on the scree test of Cattell a 2-factor solution and a 3-factor solution were explored in pregnancy and postpartum. The 2-factor solution was identical in pregnancy and postpartum. The items loading in the Cognitive-affective factor and in the Somatic-anxiety factor were the same. An exception was the «indecisiveness» item which loaded on the Cognitive-affective dimension in pregnancy whereas in postpartum loaded in the Somatic-anxiety factor. Another difference was that the Cognitive-affective factor was the factor explaining more of the BDI-II total variance in pregnancy whereas in postpartum was the Somatic-anxiety factor. The 3 factor solution of the BDI-II in pregnancy and postpartum slightly diverged. Besides the Cognitive-affective and the Somatic-anxiety factors, a third factor, Fatigue, was obtained in pregnancy while Guilt was the third factor identified in postpartum. This study reveals that the 3-factor solution of the BDI-II in pregnancy and postpartum might be more appropriate to assess depressive symptomatology in these specific periods of time.

## INTRODUCTION

To our knowledge, the factor structure of the BDI-II (Beck et al., 1996) has not yet been explored in pregnancy. In a study carried out by Salamero et al (1994) with a large sample of non-psychiatric pregnant women the authors used the original BDI. These authors identified two factors: F1-Cognitive-affective and F2-Somatic and Inhibition. After partum, Mahmud et al (2004) explored the factor analysis of the BDI-II and identified 3 factors: F1-Affective, F2-Somatic and F3-Cognitive.

The aim of the present study was to explore the BDI-II factor structure in a large sample of pregnant and postpartum women, in order to a better understanding of the depressive symptomatology experienced by mothers-to-be or recently mothers.

## METHODS

Study approved by the Ethical Committee of the Faculty of Medicine, Coimbra.

### PARTICIPANTS

• 331 women in their last trimester of pregnancy; mean age=29.7 (SD=4.6; Range=19-42 years); (M=32.7, SD=3.4, Range=26-41 weeks of gestation); 65.6% nulliparous.

• 354 three months post-partum women (170 women from the above sample and other new 184 mothers); mean age=30.6 (SD=4.6, Range= 18-44 years); 57.4% primiparous.

### PROCEDURE

Pregnant/postpartum women who were waiting for their prenatal/postnatal medical appointment at their Local Health Medical Centers were invited to participate. After their approval and written consent women were asked to complete the Portuguese version of the BDI-II (Martins et al., 2000; Coelho et al., 2002).

### STATISTICAL ANALYSES

Factor analyses using the principal components solution with *varimax* rotation were performed. The scree test of Cattell was plotted in order to identify the number of factors to be extracted.

## RESULTS

Based on the scree test of Cattell, two factor structures were considered (Figures 1 and 2): one with a 2-factor solution and the other with a 3-factor solution.

Figure 1: Scree Test of the BDI-II in Pregnancy

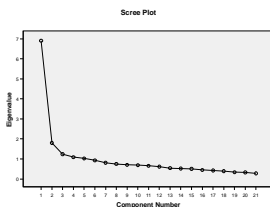
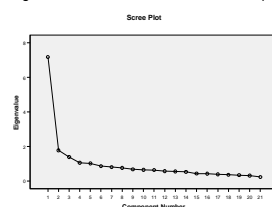


Figure 2: Scree Test of the BDI-II in Post-partum



## 2 FACTOR SOLUTION

### Pregnancy

Total variance explained (TVE) = 42.1%;  
Chronbach Alpha ( $\alpha$ ) = .875

Factors/Symptoms	Factor 1	Factor 2
<b>Cognitive-affective</b>		
TVE=26.5; $\alpha$ =.885		
Punishment Feelings	.744	
Past Failure	.707	
Pessimism	.706	
Self-Criticalness	.701	
Sadness	.664	
Loss of Interest	.659	
Indecisiveness	.657	
Worthlessness	.641	
Loss of Pleasure	.623	
Self-Dislike	.569	
Guilty Feeling	.543	
Suicidal Thoughts	.493	
<b>Somatic-anxiety</b>		
TVE=15.5%; $\alpha$ = .747		
Tiredness or Fatigue		.717
Loss of Energy		.661
Irritability		.613
Changes in Sleeping		.593
Agitation		.539
Changes in Appetite		.460
Crying		.436
Concentration Difficulty		.432
Loss of Interest in Sex		.409
<b>Correlation between factors</b>		
Factor 1	1.00	
Factor 2	.56	1.00

### Post-partum

Total variance explained (TVE)= 42.7%;  
 $\alpha$  = .889

Factors/Symptoms	Factor 1	Factor 2
<b>Somatic-anxiety</b>		
TVE= 34.2%; $\alpha$ =.842		
Tiredness or Fatigue	.757	
Loss of Energy	.723	
Concentration Difficulty	.685	
Irritability	.678	
Changes in Sleeping	.638	
Agitation	.590	
Indecisiveness	.511	
Changes in Appetite	.509	
Crying	.485	
Loss of Interest in Sex	.483	
<b>Cognitive-affective</b>		
TVE= 8.5%; $\alpha$ =.842		
Loss of Pleasure		.686
Worthlessness		.682
Loss of Interest		.661
Guilty Feelings		.657
Pessimism		.656
Sadness		.653
Past Failure		.635
Self-Dislike		.589
Self-Criticalness		.455
Punishment Feelings		.354
Suicidal Thoughts		.342
<b>Correlation between factors</b>		
Factor 1	1.00	
Factor 2	.51	1.00

## 3 FACTOR SOLUTION

Pregnancy  
TVE = 47.9%

Post-partum  
TVE = 49.3%

Table 1: Factor Matrix and item loadings of the BDI-II in pregnancy, 3 factors

Factors/Symptoms	Factor 1	Factor 2	Factor 3
<b>Cognitive-affective</b>			
TVE=25.8; $\alpha$ =.885			
Punishment Feelings	.737		
Past Failure	.701		
Pessimism	.700		
Self-Criticalness	.696		
Indecisiveness	.652		
Loss of Pleasure	.648		
Sadness	.646		
Worthlessness	.641		
Loss of Interest	.623		
Guilty Feeling	.559		
Self-Dislike	.536		
Suicidal Thoughts	.493		
<b>Anxiety</b>			
TVE=11.2%; $\alpha$ = .667			
Crying		.720	
Agitation		.649	
Irritability		.617	
Changes in Appetite		.527	
Changes in Sleeping		.440	
<b>Fatigue</b>			
TVE=10.9%; $\alpha$ = .645			
Tiredness or Fatigue			.672
Loss of Energy			.643
Loss of Interest in Sex			.607
Concentration Difficulty			.564
<b>Correlation between factors</b>			
Factor 1	1.00	.47	.51
Factor 2	.47	1.00	.47
Factor 3	.51	.47	1.00

Table 2: Factor Matrix and item loadings of the BDI-II in post-partum, 3 factors

Factors/Symptoms	Factor 1	Factor 2	Factor 3
<b>Cognitive-affective</b>			
TVE=20.6; $\alpha$ =.837			
Sadness	.730		
Loss of Interest	.724		
Loss of Pleasure	.698		
Worthlessness	.673		
Pessimism	.667		
Self-Dislike	.593		
Self-Criticalness	.500		
Suicidal Thoughts	.454		
<b>Somatic-anxiety</b>			
TVE=19.8%; $\alpha$ =.842			
Tiredness or Fatigue			.746
Loss of Energy			.702
Concentration Difficulty			.671
Changes in Sleeping			.655
Irritability			.630
Changes in Appetite			.555
Agitation			.552
Indecisiveness			.507
Loss of Interest in Sex			.485
Crying			.464
<b>Guilt</b>			
TVE=9.0%; $\alpha$ =.666			
Punishment Feelings			.832
Past Failure			.706
Guilty Feeling			.524
<b>Correlation between factors</b>			
Factor 1	1.00	.56	.30
Factor 2	.56	1.00	.20
Factor 3	.30	.20	1.00

## DISCUSSION AND CONCLUSIONS

1 - The 2-factor solutions obtained in pregnancy and postpartum were similar. However, while in pregnancy the Cognitive-affective factor (F1) explained more variance than the Somatic-anxiety factor (F2) after partum it was contrariwise. This 2-factor solution order is similar to the one observed in psychiatric patients (Beck et al., 1996; Steer et al., 1999), which may suggest that in postpartum the Somatic-anxiety symptoms which are often disregarded or underestimate and considered «normal» after delivery might be worth of further exploration by health practitioners to evaluate their clinical significance or, alternatively, it could be argued that the use of the BDI-II in postpartum is controversial because of the overlap between postpartum symptoms and depression (Beck and Gable, 2001).

2 - As expected in pregnancy and postpartum the BDI-II factor structure with a 2-factor solution is similar to those obtained with non-clinical samples (Whisman et al., 2000; Storch et al. 2004). This structure is also similar to the one obtained by Salamero et al (1994).

3 - The 3-factor solutions of the BDI-II are new and seems to provide an interesting framework to study depressive symptomatology in pregnancy and postpartum. In Pregnancy symptoms such as tiredness or fatigue are common and the emergence of these symptoms as a separate factor (Fatigue) reveals its importance. In postpartum the 3-factors structure was not similar to the one obtained by Mahmud et al (2004), as a new third factor (Guilt) emerged, which could eventually be related to the specificity of depressive symptomatology content in postpartum. Future studies with the 3-factor solution of the BDI-II in postpartum would help clarifying this view.

## AKNOWLEDGMENTS

We are deeply grateful to all pregnant and post-partum women who participated in the present study. To doctors, nurses and administrative personnel we would equally like to thank their collaboration. Data for this study were drawn from a research project on *Postpartum Depression and Sleep* funded by FCT (POCI/FEDER/SAU-ESP/57068/2004).

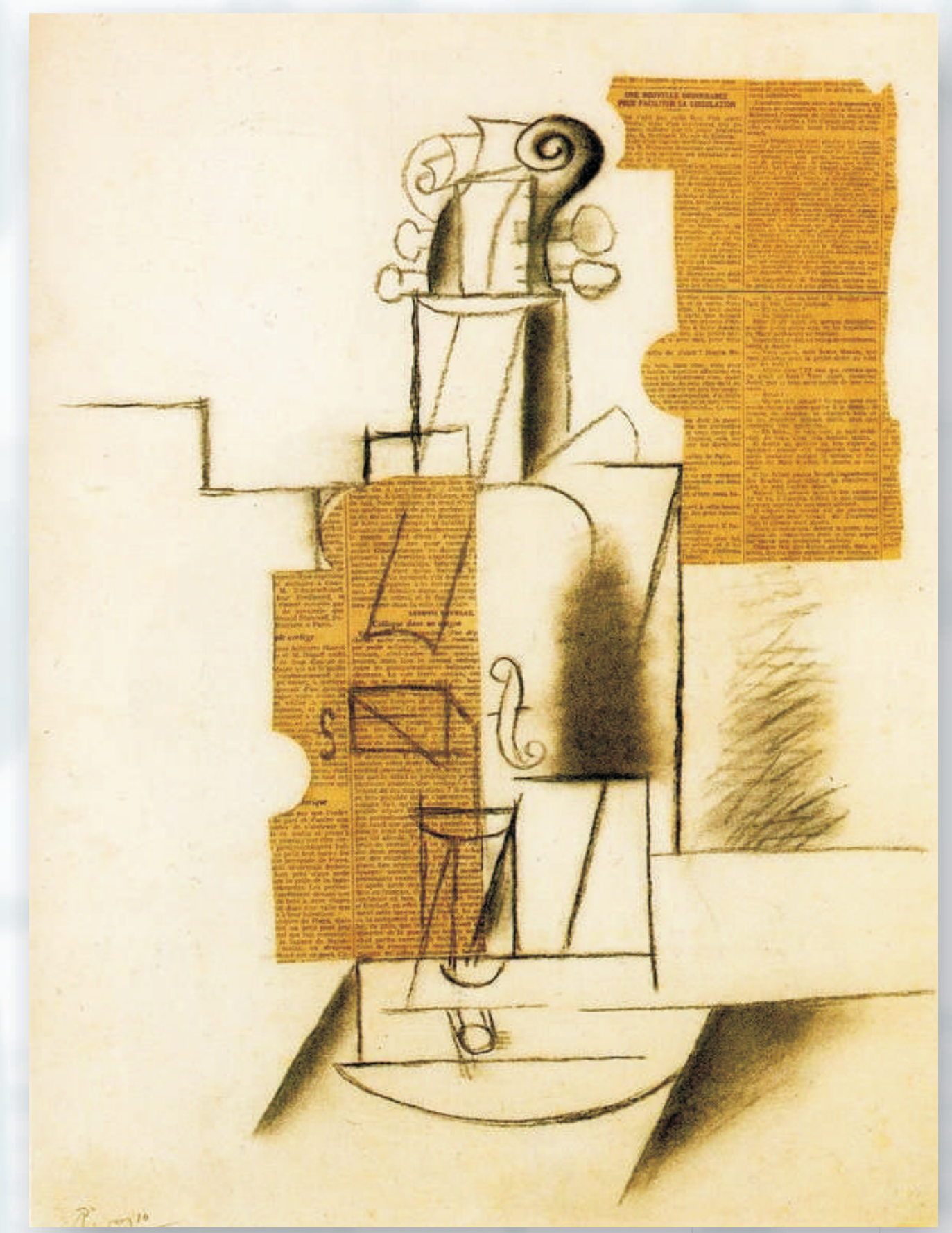
## REFERENCES

- Beck CT, Gable RK (2001). Comparative analysis of the performance of postpartum depression screening scale with two other depression instruments. *Nursing Research*, 50(4): 242-250.
- Beck AT, Steer RA, Brown GK. (1996). BDI-II Manual for the Beck Depression Inventory-II. San Antonio, The Psychological Corporation.
- Coelho R, Martins A., Barros H. (2002). Clinical profiles relating gender and depressive symptoms among adolescents ascertain by the Beck Depression Inventory II. *European Psychiatry*, 17: 222-226.
- Martins A, Coelho R, Ramos E, Barros H (2000). Administração do BDI-II a adolescentes portuguesas: Resultados Preliminares. *Revista Portuguesa de Psicossomatica*, 2(1): 123-132.
- Mahmud W, Awang A, Herman I, Mohamed M (2004). Analysis of the psychometric properties of the Malay version of Beck Depression Inventory II (BDI-II) among postpartum women in Kedah, North West of Peninsular Malaysia. *Malaysian Journal of Medical Sciences*, 11, 2: 19-25.
- Salamero M, Marcos T, Gutiérrez F, Rebull E (1994). Factorial study of the BDI in pregnant women. *Psychological Medicine*, 24: 1031-1035.
- Steer RA, Ball R, Ranieri WF. Beck AT (1999) Dimensions of the Beck Depression Inventory-II in clinical depressed outpatients. *Journal of Clinical Psychology*, 55: 117-128.
- Storch EA, Roberti JW, Roth DA. (2004). Factor Structure, concurrent validity and internal consistency of the Beck Depression Inventory-Second Edition in a sample of college students. *Depression and Anxiety*, 19: 187-189.
- Whisman MA, Perez JE, Ramel W. (2000). Factor Structure of the Beck Depression Inventory- Second Edition (BDI-II) in a student sample. *Journal of Clinical Psychology*, 56(4): 545-551.



# MUSIC PERFORMANCE ANXIETY IN CROATIAN STUDENTS

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Picasso: Guitar

## Introduction

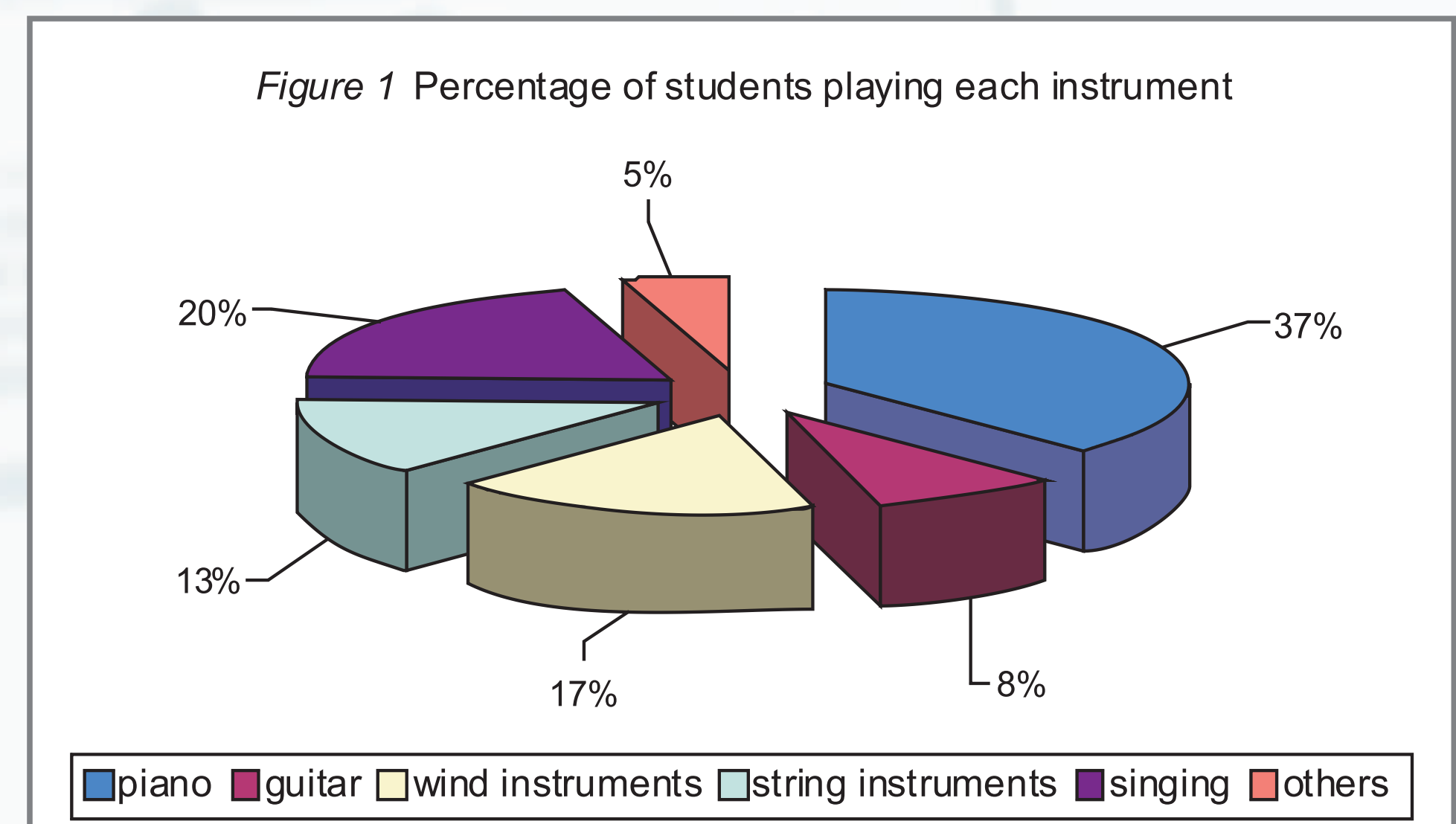
Performance anxiety is a frequent and very distressing experience for professional musicians and music students. As the professional development starts early among musicians, younger samples are of special interest. The present study presents findings of an initial study into psychometric properties of the Music Performance Anxiety Inventory for Adolescents (MPAI-A; Osborne & Kenny, 2005).

## Method Measure

Music Performance Anxiety Inventory for Adolescents (MPAI-A) is 15 item self-report measure designed to assess somatic, cognitive and behavioural components of performance anxiety. We have used Croatian version of this instrument. Participants answered on a seven-point Likert scale ranging from "0 – not at all" to "6 – all of the time". Factor analysis identified one reliable factor accounted for 36% of the variance (Cronbach's alpha 0.89).

## Participants

86 students (44 females and 42 males), mean age 21 years (range 16–28), attending Croatian music school in Rijeka and Zagreb.



## Results

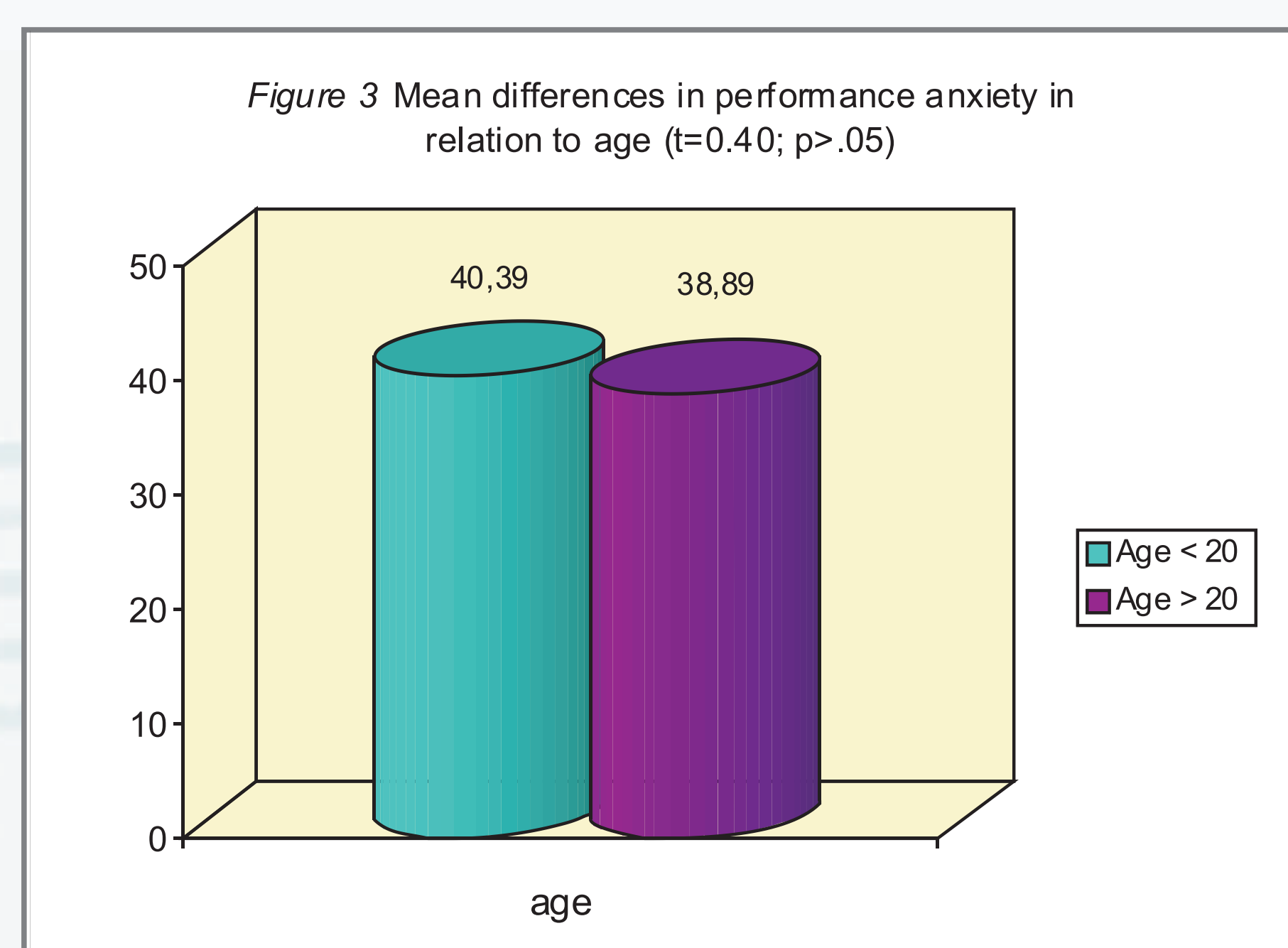
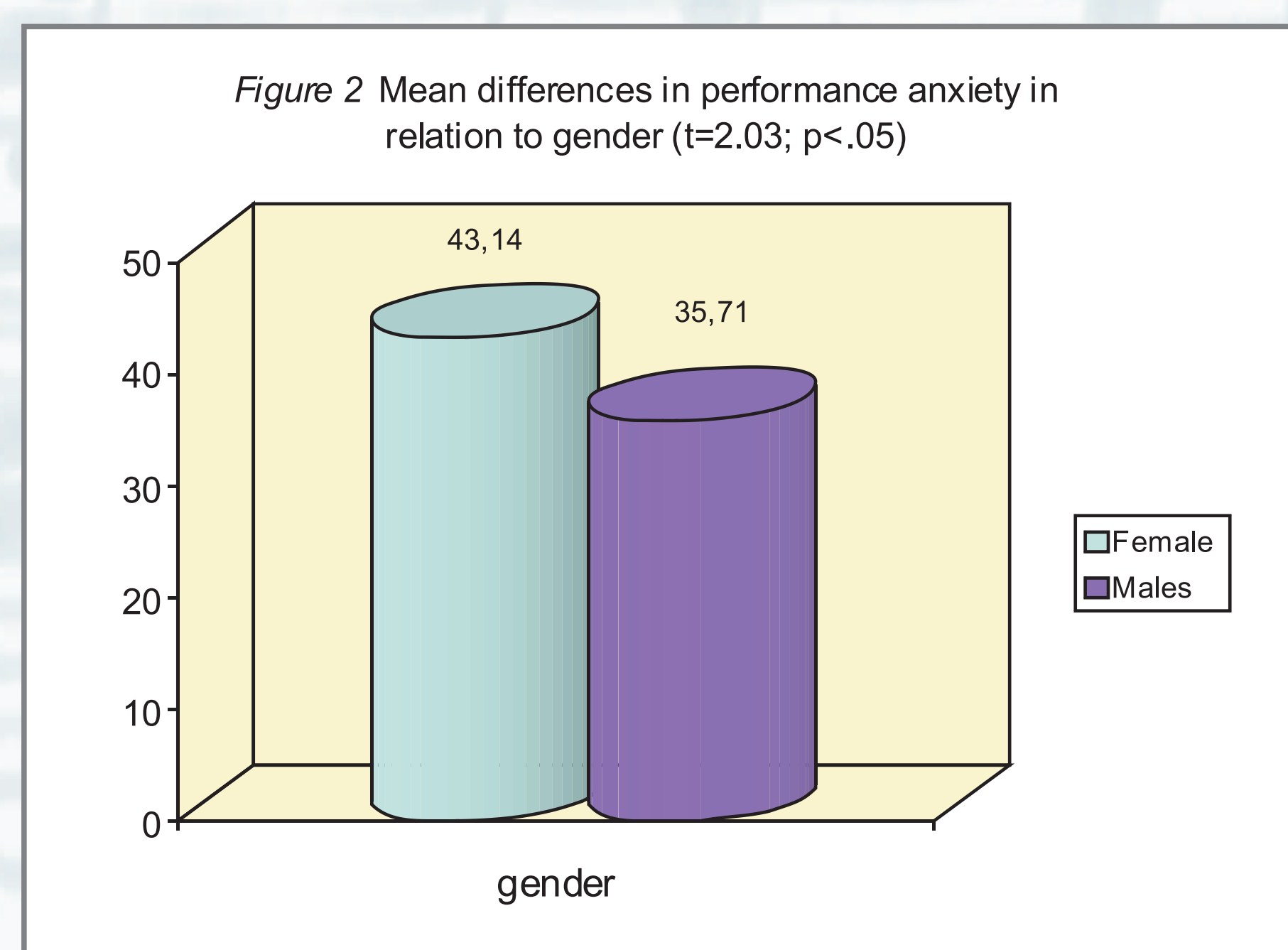


Table 1

Mean differences in performance anxiety in relation to performance likeability, musician in the family and medication use

Variables	N	M	SD	t
I like to perform	60	34.12	14.64	5.46***
I do not like to perform	24	53.83	15.68	
I have a musician in the family	41	35.95	15.94	1.96 <sup>a</sup>
I have no musician in the family	44	43.16	17.87	
I do not use anxiolytics	69	36.55	16.37	3.73***
I use anxiolytics	16	53.19	14.57	

<sup>a</sup>  $p = .054$ ; \*\*\*  $p < .0001$

Table 2

Correlation among variables

	2	3	4	5
1. Performance anxiety	-.02	.15	-.01	-.26*
2. Age		.56*	-.22*	.07
3. Age of first performance			-.17	-.23*
4. Daily hours of exercise				-.07
5. Frequency of performance per year				-

\*  $p < .05$ ; \*\*  $p < .001$

## Discussion

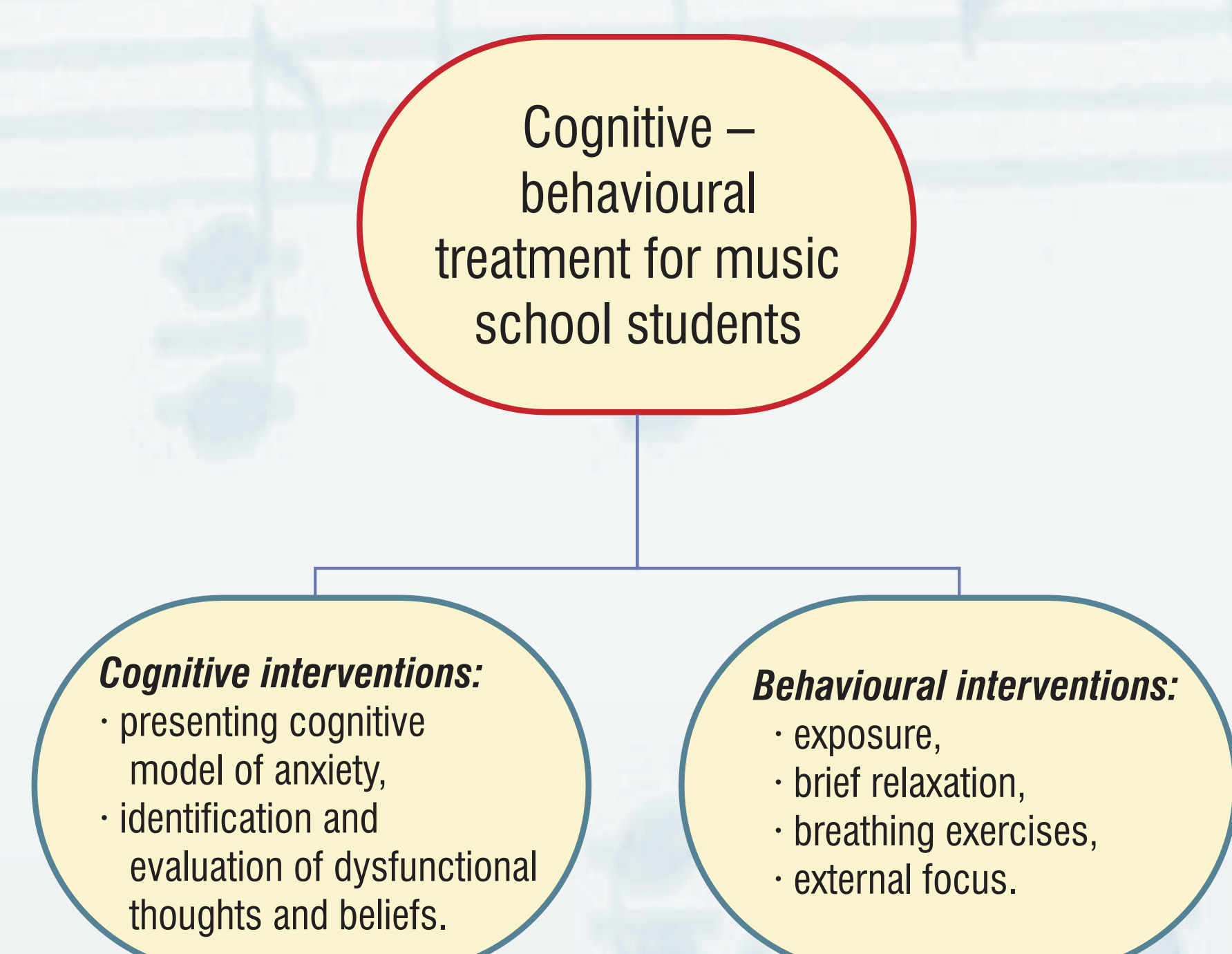
The new scale of music performance anxiety (MPA) for use with adolescent and young adults' musicians can be used as a reliable and valid measure with Croatian students. Women have higher level of music performance anxiety than men do. There is no age difference and no difference between students playing various musical instruments.

Young musicians who like to perform in public and who already have musicians in their family are less anxious comparing to students who do not like to perform in public and who have no musicians in the family.

Students with higher performance anxiety tend to use anxiolytics more often. As using pills is not considered as the best way to cope with anxiety, we suggest a brief cognitive-behavioural intervention as a better way to prepare young musicians for public performance.

CBT is well recognized as an effective treatment for different anxiety problems. We have found that students who perform more often have lower performance anxiety, supporting the idea of exposure exercises as the most efficient way of coping with anxiety.

Figure 4 Cognitive-behavioural treatment





# WORRY, PERFECTIONISM AND SOCIAL INSECURITY IN EATING DISORDERS

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## INTRODUCTION

According to recent theorizing, metacognition is an important factor in the development and maintenance of psychological disorders (Wells, 2000). Individuals have positive and negative beliefs about thinking that influence appraisals (e.g. "I must worry in order to be prepared", "I cannot control my thoughts") and they also have implicit procedural metacognition that form plans or programs for guiding cognition and action.

Preliminary investigation pointed out the presence of higher scores of metacognition in patients with Anorexia Nervosa than general population. Particularly, AN showed higher levels of uncontrollability and danger; cognitive confidence; need of control; and cognitive self-consciousness, but low levels of positive beliefs (Cooper, 2007).

A large body of literature highlighted the relationship between eating disorders, perfectionism, low self esteem and related social insecurity. Sassaroli et al. (2005) evaluated the role of stress in the association between low self-esteem, perfectionism, and worry, in eating disorders. They found that low self-esteem, worry and parental criticism (a dimension of perfectionism) were associated with eating disorder measures only during stressful situation. However, these results came from non clinical sample.

## AIM

The aim of this pilot study was to correlate beliefs about worry and intrusive thoughts, perfectionism and social insecurity issues in a clinical sample of Eating Disorder patients (ED).

## METHODS

70 women with ED (age:29,67±11.18; BMI: 24,06±8.4) were assessed by using psychometric questionnaire regarding ED (Eating Disorder Inventory, EDI-2), a specific questionnaire measuring beliefs about worry and intrusive thoughts (Metacognition Questionnaire, MCQ) and an inventory about social insecurity (IS, in validation). Diagnostic sub groups are well specified in fig.1. The MCQ 5 subscales are: Positive Beliefs About Worry (MCQ1), Negative Beliefs About the Controllability of Thoughts and Corresponding Danger (MCQ2), Cognitive Confidence (MCQ3), Negative Beliefs about Thoughts in General (MCQ4), Meta-Cognitive processes-Cognitive Self-Consciousness (MCQ5). IS Questionnaire consists of 6 subscales: fear of being criticized (FE), anxiety in social relationship (KO), "to make request " skills (FO), difficulty in "say no" (NN), amount of social guilt feelings (S), Social Rules Compliance (A).

Correlations between each subscale of these instruments were analyzed. Concerning to EDI instrument, we analyzed only the subscale: Perfectionism. Coefficients of linear regression analysis were calculated to evaluate the association between the measures of perfectionism, worry and social insecurity.

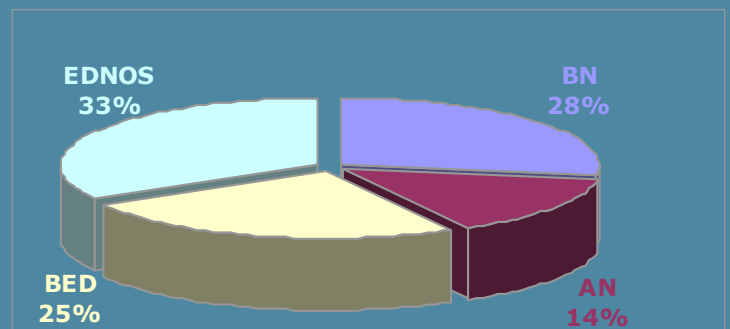


Fig. 1

## RESULTS

Coefficients of linear regression are presented in fig. 2.

Analysis showed significant positive correlations between IS and MCQ subscales: Positive correlations were found between:

-Fear of being criticized and Uncontrollability and danger of worry and Cognitive confidence.

-Anxiety in social relationship and Need for control, namely Negative beliefs about thoughts

-Social Rules Compliance and Positive beliefs about worry

Concerning EDI subscale "Perfectionism", positive correlation were found between:

-Perfectionism and Need for control thinking processes

-Perfectionism and Cognitive self consciousness

	Fear of being criticized	Anxiety in social relationship	"To make request " skills	Difficulty in "say no"	Amount of social guilt feelings	Social Rules Compliance	Perfectionism
Positive beliefs	.394	.560	.843	.247	.693	<i>p&lt;.05</i>	.923
Uncontrollability and danger	<i>p&lt;.05</i>	.618	.456	.621	.554	.416	.112
Cognitive confidence	<i>p&lt;.05</i>	.774	.284	.721	.177	.621	.550
Need of control	.523	<i>p&lt;.05</i>	.696	.104	.562	.513	<i>p&lt;.05</i>
Cognitive self-consciousness	.171	.631	.096	.862	.442	.500	<i>p&lt;.05</i>

Fig. 2

## CONCLUSIONS

Our data showed correlations between worry and fear of being criticized, in particular with low confidence in personal cognitive skills. An hypothesis can be done about what connects these two variables: low levels of self-esteem. If this assumption would be true, we could explain also the correlation with uncontrollability and danger of worry, where the need for control thoughts for patients is an useful coping strategy.

The association between social rules compliance and positive beliefs about worry can be due to the need to adapt own self to others' requests (eg. "I must worry in order to be prepared").

Perfectionism is related to need of control and cognitive self-consciousness. These data confirm the relationship between worry and perfectionism (Sassaroli, 2005) also in a clinical eating disorder sample.

We consider these results important for clinical practice. The correlation between worry, fear of being criticized and perfectionism gives us information especially for the assessment, such as including specific instruments measuring these aspects. This could be also important in the treatment project.

However, further controlled studies are needed.

## REFERENCES

- Cartwright-Hatton S, Wells A(1997). Beliefs about worry and intrusions: the Metacognition Questionnaire and its correlates. *Journal of Anxiety Disorders* Vol.11, n.3, pp.279-296.
- Cooper MJ, Grocutt E, Deepak K, Bailey E(2007). Metacognition in anorexia nervosa, dieting and non-dieting controls: a preliminary investigation. *British Journal of Clinical Psychology*; Mar;46(1):113-7.
- Halmi (2000). Obsessive-compulsive personality disorder and eating disorders. *Eating Disorders*, Jan-Feb;13(1):85-92.
- Sassaroli S, Ruggiero GM. (2005)The role of stress in the association between low self-esteem, perfectionism and worry, in *Eating Disorders. International Journal of Eating Disorders*; 37(2),135-141.
- Sassaroli S, Bertelli S, Decoppi M, Crosina M, Milos G, Ruggiero GM.(2005). Worry and eating disorders: a psychopathological association. *Eating Behaviour*;6(4):301-7.
- Wells A. : *Disturbi emozionali e metacognizione: nuove strategie di psicoterapia cognitiva*. Erickson, Trento, 2002.



# THE EFFECT OF MEDITATION ON PHYSIOLOGICAL RELAXATION AND ON THE STARTLE REFLEX AS AN INDICATOR OF SYMPATHETIC ACTIVATION A RESEARCH THROUGH BIOFEEDBACK

Elisabetta Carlotti Roberto Anchisi Gianluca Amato Nicola Maffini

## Introduction

The main aim of this study is to test the hypothesis that meditation increases the capacity of standing emotions or bad feelings, and decreases the intensity and negativity of emotional responses to psychological distress (Kabat-Zinn, 1992).

## Participants and Methods:

- 40 undergraduates with no meditation or yoga experience were recruited from the university of Parma, (23,5 years old, 23 female and 17 male).

- The participants were randomly divided into two groups. The first group was trained in sitting meditation through a brief two hour course held by a Buddhist psychologist. The second group participated in a theoretical lesson about stress, anxiety and coping strategies. The next week all the participants took part in the experimental session in the laboratory of physiology at the University of Parma.

- A brief interview and some personality tests (Stay-x; TPQ, SPSRQ) were administered to make sure that there were no significant differences between the members of the two groups, in particular that there were no differences in the "harm avoidance" dimension, a tendency to respond intensely to aversive stimuli.

- All the participants were invited to sit in comfortable armchairs and while the first group was invited to do the sitting meditation, the second one was asked to relax themselves as they usually do.

- During the whole experiment physiological measures of autonomic nervous system activation were taken through the byolab system. In particular through SPR index which is an electrodermal measure of sudomotor nerve function. (Anchisi R, 1996) (Fig. 1). After 20 minutes of meditation and standard relaxation, a brief acoustic noise was presented to elicit the startle reflex. This type of reflex is reliably modified by both cognitive and emotional processes; moreover it is potentiated by anxiety and negative moods. After the elicitation of the reflex 5 minutes of physiological index measures were taken to test the recovery.

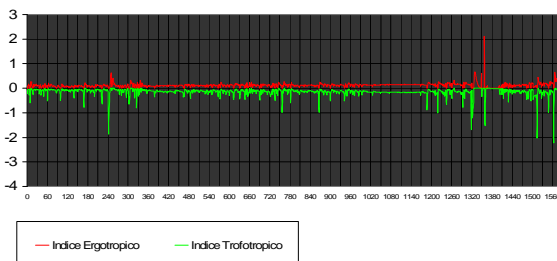


Fig.1 Example of SPR registration

## Results

Anova testing showed that the magnitude of startlement was larger in the "Relaxation group" and their recovery time was longer than the meditation group's one. Moreover the meditation group showed a lowered activation during the whole experiment, as is shown in the graphic.

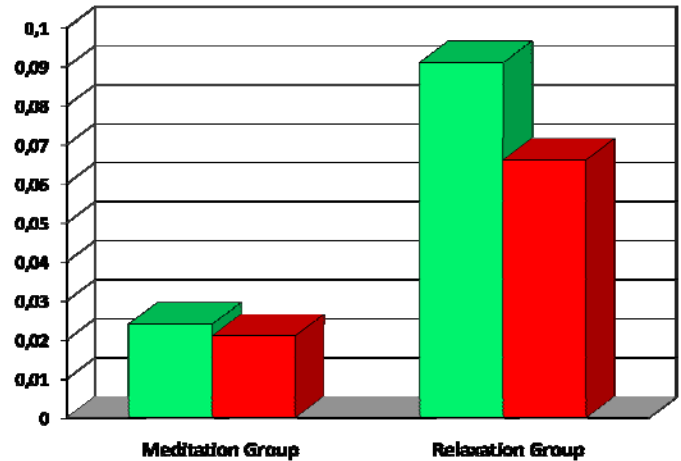


Fig.2 Physiological activation during the whole experiment.

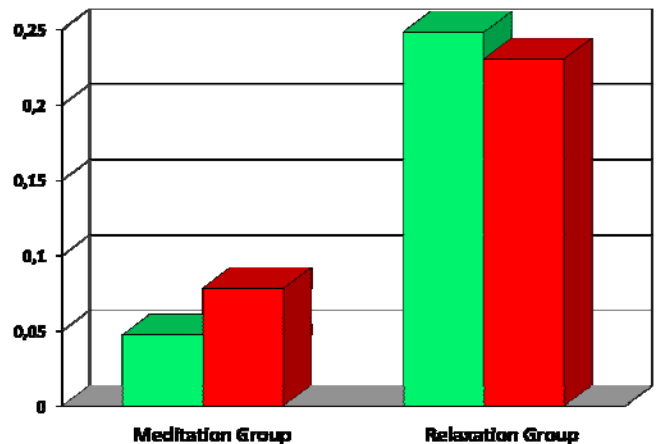


Fig.3 Physiological activation during the 5 minutes after the startle reflex

## Conclusion

These findings suggest that meditation may theoretically permit the individual to understand the current situation in a more effective way, thereby gaining a more objective perception of the level of personal threat, rather than reacting to it in an excessively anxious manner.

## Bibliography

Kabat-Zinn, J. et al. (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *American Journal of Psychiatry*, 149, 936-943.

Costa, M. Ricci Bitti, P. (1998). Utilizzo del riflesso di startle per lo studio delle attività cognitive ed emozionali. *Giornale italiano di psicologia* / a.XXV, n.1, marzo 1998 29

Anchisi R., & Gambotto Dessy M. (1996) *Manuale di biofeedback, psicologia e medicina comportamentale*, Ed Libreria Cortina: Torino.



# relationship.com

## A COGNITIVE-INTERPERSONAL GROUP PROGRAM FOR PRISONS' STAFF SKILLS DEVELOPMENT

### Authors:

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### ABSTRACT

Prison relational environments are typically characterized by a high rate of interpersonal conflicts (horizontal conflicts between offenders and vertical conflicts between offenders by one hand and correctional officers, technicians and wardens by the other). Many authors point out that prison tends to replicate and reinforce the offender's dysfunctional relational styles. Recurrently, tacit coalitions between offenders and authorities tend to maintain dysfunctional visions of the other and subsequently of the self. These relational dysfunctions will certainly account for major difficulties in relationships and social reintegration after release. This poster presents the Relationship.com, a cognitive-interpersonal group based program, which tries to overcome relational skills deficits of every rehabilitation agents working with prisoners/socially excluded individuals. The Program contents include the cooperation between different professionals working with the same individual, dysfunctional beliefs and myths about prisoners, about motivational interventions and about the interventions' power to produce change, resistance to change and beliefs about the self, cognitive-interpersonal dysfunctional cycles, emotions control and interpersonal behaviour with disturbed people.

### KEY CONCEPTS

- Cooperation between different professionals in prison
- Staff – prisoners relationships
- Dysfunctional beliefs and myths of/about prisoners;
- Early mal-adaptive schemas
- Cognitive-interpersonal dysfunctional cycles



### THE NEED FOR A NEW APPROACH

- High prevalence of psychopathological disorders in prisons as showed in the diagnosis study developed within the FREE Project
- Critical analysis of good practices within EQUAL's FREE Project
- Theoretical review of Portuguese and international bibliography about rehabilitation in prisons

### GOALS

1. To promote prison staff knowledge regarding the relational/interpersonal variables and their potential role in the change and motivational process;
2. To promote the coordination between the various levels and types of interventions;
3. To promote the development of technical and interpersonal skills of the rehabilitation professionals;
4. To introduce relational/interpersonal variables in the prison's culture as Rehabilitation ingredients.

**Relationship.com** is a cognitive-interpersonal group program, which tries to overcome relational skills deficits of every rehabilitation agents working with prisoners. Promoting the personal and professional development and enrichment, empowers them in order to well manage relational and interpersonal skills, introducing a new pathway in the psychosocial rehabilitation of the prisoner.

#### Target population

Teachers, health technicians, social workers, wardens, correctional officers, tutors, psychologists, prison technicians... All the professionals, from different areas of intervention, who develop their action with prisoners.

#### Methodological aspects

Program's length: 12 weekly sessions  
 Session's duration: 90 minutes each  
 Implementation: two member's coach team  
 Methodological strategy: active strategies with several group dynamics supported by cognitive-interpersonal strategies

#### Session's Structure:

- Plenary exercise
- Introduction to session's theme
- Debate/discussion
- Synthesis exercise
- Application/training exercise
- Final reflection
- Ending

#### Sessions Contents

- 1) Participants, trainers and program presentation
- 2) Professional's myths and beliefs and its demystification; core beliefs linked to the prisoners; promotion of a coherent intervention between all the rehabilitation agents
- 3) Communication skills
- 4) Interpersonal relationships, bounds management and assertiveness skills
- 5) Core and dysfunctional beliefs and common maladaptive coping responses of prisoners
- 6) Analysis of the core beliefs of the prison staff itself
- 7) The relationship as a possible instrument for the rehabilitation process in the prisons culture
- 8) Social and psychological withdrawal, overvigilance and inhibition behaviour of the prisoners and good strategies to cope with them
- 9) Cope with entitlement/grandiosity dysfunctional beliefs;
- 10) Defiant and oppositional behaviour coping styles of the prisoner and training of assertiveness interventional strategies
- 11) Manipulation and exploitation behaviours of prisoners and assertiveness relational strategies to cope with them
- 12) Program's finalization and reinforcement of its purposes

### FREE PROJECT

Product of the FREE Project, EQUAL Initiative (European Social Fund)  
 Transnational Partnership Belgium-Italy-Portugal (BIP).  
 Project being held in the regional prison context of the Azores Islands, Portugal

#### Development Partnership:

- Kairós
- Instituto de Acção Social dos Açores
- Direcção Geral de Reinserção Social
- Cáritas da Ilha Terceira
- Cáritas dos Açores
- Cresaçor
- Associação de Promoção de Públicos Jovens – APPJ
- Associação Regional de Reabilitação e Integração Sociocultural dos Açores – ARRISCA



### Opening to new contexts

Prisoners → Other people at risk of social exclusion

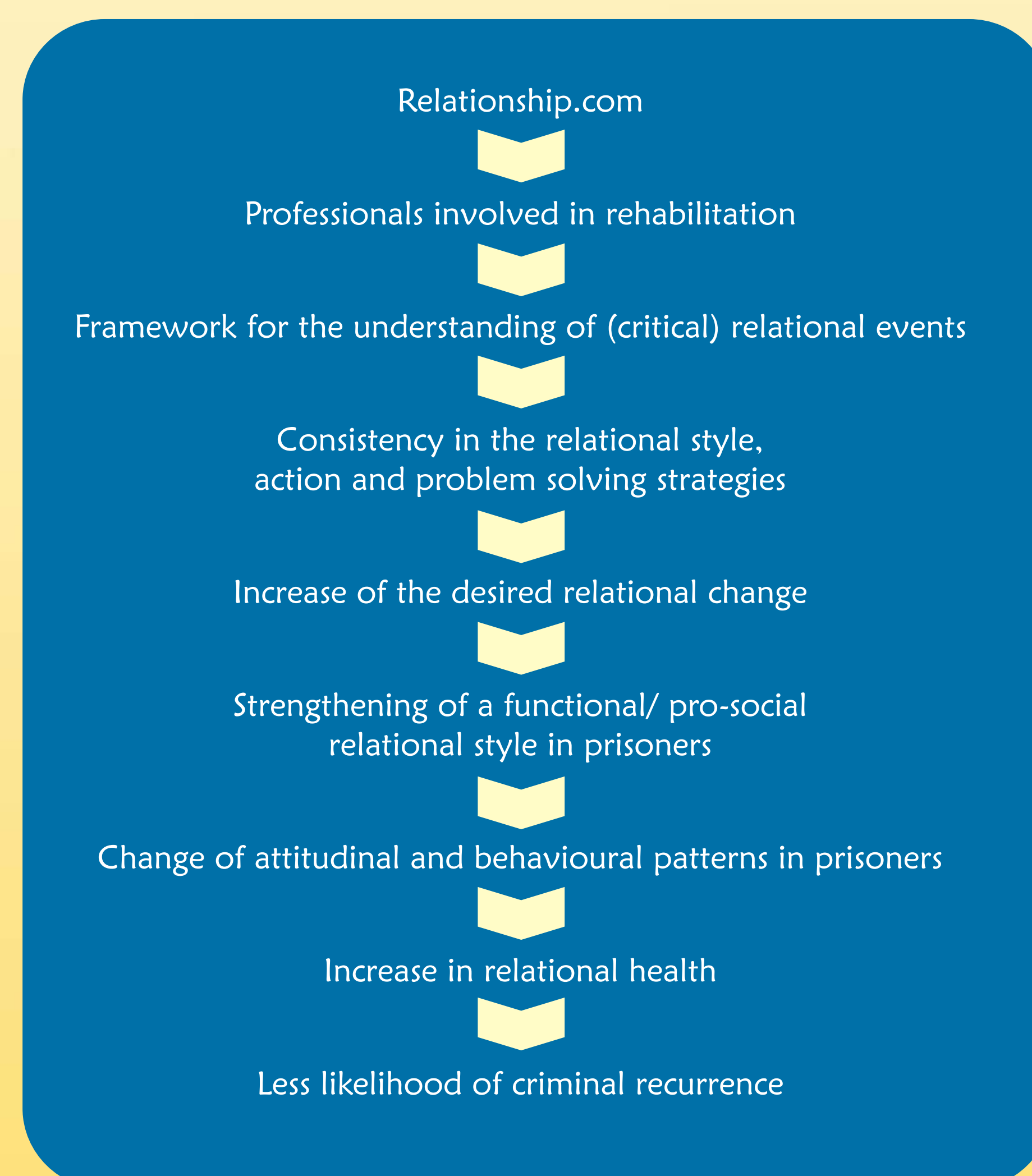
Users of the prisional system → users of other systems

Advantages for intervention in the prisional system also expected for interventions in other contexts

#### What other contexts?

- Educational Centres;
- Centres for Youth Development and Inclusion (Azores Islands);
- Therapeutic communities;
- Halfway institutions;
- Structures of education and training.

### RELATIONSHIP.COM AND SOME OF ITS EXPECTED BENEFITS



### EXPECTED OUTCOMES

- Mainstreaming of the Relationship.com in the Portuguese prison system
- Development of a second version of the Relationship.com designed for other rehabilitation contexts than the prison system
- Several mainstreaming actions in the EQUAL's Action 3 in different contexts
- Study/research of the effects of the Relationship.com in the psychosocial rehabilitation area



# SYMPTOMS OF PTSD, MDD, AND GAD IN THE NYC METROPOLITAN AREA:

## THREE YEARS AFTER SEPTEMBER 11, 2001

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### Background

#### Impact of Trauma: Resilience, Anxiety, & Depression

- Although PTSD is believed to be the most common reaction to trauma, research suggests that the majority of people who experience a traumatic event do not subsequently develop PTSD, and that resilience is the most likely outcome of trauma<sup>1</sup>.
- There has been increasing concern that PTSD may be a social, culture-bound construct<sup>2-6</sup> and others suggest that the PTSD diagnosis may need to be reformulated<sup>5,7</sup>.
- A growing number of researchers have proposed that pathological traumatic reactions may be better captured and explained by combining already-existing diagnoses<sup>3,5</sup>, circumventing the need for the PTSD construct. General Anxiety Disorder (GAD), Panic Disorder (PD), and Major Depression (MDD) have all been documented as outcomes of trauma exposure<sup>8,9</sup>.

#### September 11, 2001

- Greater risk for PTSD is observed in disasters caused by humans with mass intent to harm/kill that may result in widespread property damage, financial distress, extensive injuries, life threat and death, and severe and persistent psychological distress.
- The attack on the World Trade Center, an unprecedented act of terrorism in the United States, met all of these conditions.
- The combined effect of magnitude, scope and staggered timing of the events of 9/11 resulted in perhaps the most comprehensive and widespread exposure to a traumatic event in recorded time.

#### September 11, 2001: Acute Effects

- Consequently, extremely high levels of pathological psychological distress (especially PTSD) were predicted in the wake of 9/11.
- Research conducted immediately following the attack demonstrated that 44% of individuals were bothered by at least one of five symptoms of PTSD<sup>10</sup>.
- Research conducted two months after 9/11 demonstrated minimal levels of PTSD<sup>11,12</sup>.
- Follow-up data collected six months following the attack showed a striking decline in probable PTSD rates to 0.6%<sup>11</sup>.

#### Purpose of the Current Study

Given the dire predictions made in the aftermath of the terrorist attacks, we were interested in long-term effects, namely the prevalence and duration of this purported distress, as well as possible maintaining factors associated with continued symptoms.

### Hypotheses

- Minimal levels of PTSD, MDD and GAD would be observed among New Yorkers three years after 9/11.
- It was expected that symptoms of PTSD, MDD and GAD would be highly correlated in the sample.
- Negative coping and cognitive styles would be associated with continued symptoms.

### Method

#### Participants

Participants were 50 adult Manhattan residents (30 female, 20 male) with a mean age of 43.42 (SD = 13.95). The racial makeup of the sample was 76 percent Caucasian, 6 percent African American, 6 percent Asian, 6 percent Hispanic, and 6 percent other. Ten percent of the participants reported high school as the highest level of education, 8 percent reported some college, 53 percent reported college education, and 30 percent reported post-college education.

#### Procedure

Subjects chosen from the phone book through systematic sampling were sent letters to introduce the study and its purpose. Telephone interviews were conducted to administer questionnaires. Four measures were administered to all participants. Four additional measures were administered to subjects who: (a) were in the World Trade Center or immediate radius and had to evacuate work or home, (b) knew a friend or family member who was killed or injured during the attack, and/or (c) experienced a trauma on or after 9/11/01.

#### Measures

##### Measures – All Subjects

Demographics questionnaire  
 Posttraumatic Diagnostic Scale (PDS)<sup>13</sup>  
 Penn State Worry Questionnaire (PSWQ)<sup>14</sup>  
 Beck Depression Inventory – Second Edition (BDI-II)<sup>15</sup>  
 Anxiety Control Questionnaire (ACQ)<sup>16</sup>

##### Measures – Subjects with Trauma

Interpretation of PTSD Symptoms<sup>17</sup>  
 Social Support Following Assault<sup>17</sup>  
 Posttraumatic Cognitions Inventory<sup>18</sup>  
 Behavior After Assault Questionnaire<sup>19</sup>

### Results

*Hypothesis 1: Minimal levels of PTSD, MDD and GAD were observed in New Yorkers three years after 9/11*

- The mean score for PTSD (PDS) was 5.72, SD = 8.69
- The mean score on the PDS for patients with PTSD is 33.59.

- The mean score for depression (BDI) was 8.74, SD = 8.74
- The mean score on the BDI for patients with MDD is 24.94.

- The mean score for worry (PSWQ) was 44.1, SD = 12.56
- The mean score on the PSWQ for patients with GAD is 67.66.

*Hypothesis 2: Symptom measures were significantly correlated in the sample.*

*Hypothesis 3: Negative coping and cognitive styles were associated*

	PTSD	MDD	GAD
PTSD	1.00	0.57 (p<0.01)	0.20
MDD	0.57 (p<0.01)	1.00	0.30 (p<0.05)
GAD	0.20	0.30 (p<0.05)	1.00

Cognitive Variables	PTSD	MDD	GAD
Thoughts/Self	0.78 (p<.01)	0.71 (p<.01)	0.13
Thoughts/World	0.35	0.30	0.06
Thoughts/Future	0.76 (p<.01)	0.71 (p<.01)	0.15
Thoughts/Symptoms	-0.66 (p<.001)	-0.52 (p<.001)	-0.17
Thoughts/Other People	-0.29	-0.10	0.11
Perception of Control	-0.39 (p<.01)	-0.40 (p<.01)	-0.25
Mental Defeat	0.65 (p<.01)	0.71 (p<.01)	0.15

Coping Variables	PTSD	MDD	GAD
Self-Distraction	0.18	0.30 (p<.05)	0.25 (p<.10)
Denial	0.34 (p<.01)	0.52 (p<.001)	0.25 (p<.10)
Behavioral Distancing	0.26 (p<.05)	0.59 (p<.001)	0.17

### Discussion

- PTSD was not the only psychological outcome of 9/11.
- PTSD symptom levels were similar to levels of GAD and MDD in the total sample.
- On average, participants reported mild to minimal symptom severity of posttraumatic stress, depression and general anxiety three years after 9/11.
- Contrary to the dire psychological predictions made in the wake of 9/11, these results suggest that the long-term impact on New Yorkers three years after 9/11 is minimal.
- Commensurate with prior research, a high degree of overlap was observed between symptom measures.
- Increased symptomatology was associated with negative cognitive and coping styles, especially for PTSD and MDD.
- Higher PTSD scores were associated with (1) more negative appraisals of the self, the future, and their own symptoms, (2) lower perception of control, (3) mental defeat, and (4) coping styles characterized by denial and behavioral distancing.
- Higher symptoms of MDD were also significantly related to (1) negative appraisals about the self, the future, and their own symptoms, (2) lower perception of control, (3) mental defeat, and (4) coping styles characterized by self-distraction, denial and behavioral distance.
- Perception of control, self-distraction and denial coping approached significance for GAD.
- The perception of current threat and assessment of oneself as permanently affected may result in the use of maladaptive coping strategies, which also maintain PTSD symptoms by preventing experiences that would disconfirm the negative appraisals.
- Given that prevalence rates of post-traumatic stress symptoms were similar to levels of general anxiety and depression in the total sample and given the high degree of overlap observed between measures, the present study raises questions about the specificity and utility of the PTSD diagnosis.

### Limitations

- Results may only generalize to those people who would participate in such a study
- The sample size was small.
- The sample was rather homogenous: a high percentage of individuals had a friend or family member who had been injured or died in the attacks, had higher than average SES, and had lower than average amount of drug use.
- Self-report measures were administered to subjects.
- Study cannot assume causality.
- Generalizability is limited to a non-clinical population.



# COGNITIVE VULNERABILITY TO PTSD: THREE YEARS AFTER 9/11

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## Background

•The terrorist attacks on the World Trade Center in New York City and the Pentagon in Washington D.C. on September 11, 2001 (9/11) represent a unique tragedy in United States history.

•Posttraumatic stress disorder (PTSD) has emerged as one of the most frequently cited psychological sequelae of 9/11 (Laugharne, Janca, & Widiger, 2007), and a body of research has begun to explore the psychological factors that contributed to PTSD developed in the aftermath of the terrorist attacks.

•Cognitive vulnerability, or the idea that different types and stages of mental processes have mediating properties that contribute to maladaptive outcomes (Ingram, Miranda, & Segal, 1998), has become a significant component in current conceptualizations of anxiety disorders such as PTSD.

•Specifically, the work of Ehlers and Clark (2000) has emerged at the forefront of such literature, positing that PTSD can persist under certain cognitive conditions.

•Ehlers and Clark (2000) propose that two specific types of cognitive appraisal mechanisms are likely implicated in both the onset and maintenance of persistent PTSD: (1) individual differences in appraisals of the trauma event occurring after the trauma, and (2) individual differences in the appraisals of subsequent trauma sequelae.

•There is strong evidence for the positive relationship between negative appraisals about the self, the world, other people, and the future and PTSD severity (e.g. Agar, Kennedy, & King, 2006; Fikretoglu et al., 2007; Ginzburg 2004; Jeavons, Greenwood, & Horne, 2000; Marmar et al., 2006) and for the positive relationship between negative appraisals about trauma symptomatology and PTSD severity (e.g. Federoff, Taylor, Asmundson & Koch, 2000; Steil & Ehlers, 2000).

•Perception of control, or the degree to which individuals attribute a sense of control over an event and its sequelae, is inherent to the cognitive appraisal mechanisms underlying PTSD pathology because individuals who attribute a trauma event and/or trauma sequelae to uncontrollable circumstances are hypothetically more likely to maintain a current sense of threat and therefore exhibit more PTSD (Ehlers & Clark, 2000).

•There is conflicting evidence for the posited inverse relationship between perception of control and PTSD severity. Some studies have demonstrated that traumatized individuals who endorse less perception of control are more likely to exhibit a greater degree of PTSD severity (Bolstad & Zinbarg, 1997; Dunmore, Clark & Ehlers, 1999; Dunmore, Clark & Ehlers, 2001; Kushner, Riggs, Foa, & Miller, 1992) while other studies have not found this effect (e.g. Casella & Motta, 1990; Regehr, Hill & Glancy, 2000; Solomon, Mikulincer & Benbenishty, 1989; Solomon & Mikulincer, 1990).

•Ehlers and Clark (2000) propose further that mental defeat, or the “perceived loss of all psychological autonomy, accompanied by the sense of not being human any longer” (p. 331) is likely to influence cognitive appraisal mechanisms in PTSD.

•Prior research has demonstrated a significant positive relationship between mental defeat and PTSD (e.g. Dunmore, Clark & Ehlers, 1997; Dunmore, Clark & Ehlers, 1999).

## 9/11, Cognitive Vulnerability, and PTSD

•A small body of research has begun to explore the relationship between maladaptive cognitive mechanisms and PTSD after the events of 9/11.

•Grieger et al. (2004) demonstrated that thirteen months after 9/11, individuals who were directly exposed to the Pentagon attacks were more likely to have PTSD and endorsed significantly more beliefs about the dangerousness of the world than were subjects without PTSD.

•Similarly, eight months after 9/11 rates of PTSD in a Bronx high school were significantly higher than those rates found before 9/11, and those students who endorsed feelings of vulnerability and felt the world was unsafe were four times more likely to have PTSD than those students who did not endorse such beliefs (Calderoni et al., 2006).

•Piotrkowski & Brannen (2002) found that levels of negative appraisals concerning self-efficacy and safety of the world twenty-five weeks after the World Trade Center attacks was significantly and positively correlated with PTSD symptomatology in a sample of workers in the five boroughs of New York City.

•More robust evidence comes from the results of a prospective study demonstrating that having negative appraisals about the self one year after 9/11 significantly predicted PTSD symptomatology one year later (Adams & Boscarino, 2006).

## Aims & Objectives

Given the perceived significant and ongoing impact of the terrorist attacks, it is important for research to further assess cognitive vulnerability to PTSD several years after 9/11. Specifically, it is necessary to explore the relationships between appraisal style, perception of control and persistent PTSD after a significant amount of time has elapsed. Lastly, the concept of mental defeat has not been adequately addressed within the 9/11-related PTSD literature, necessitating further research. The current study therefore sought to identify the relationship between certain cognitive vulnerabilities and severity of PTSD in a sample of New York City metropolitan area residents three years after the events of 9/11.

## Hypotheses

•It was posited overall that individuals who endorsed a current perception of threat three years after 9/11 would exhibit significantly higher rates of PTSD symptomatology. More specifically, it was hypothesized that:

- (1) Negative appraisals of the self, the world, other people, the future, and PTSD symptomatology three years after 9/11 would be positively and significantly correlated with PTSD severity.
- (2) Perception of control three years after 9/11 would be inversely related to PTSD severity.
- (3) Mental defeat three years after 9/11 will be positively and significantly correlated with PTSD severity.

## Method

### Participants

Participants were 50 adult Manhattan residents (30 female, 20 male) with a mean age of 43.42 (SD = 13.95), selected from the New York City phone directory through systematic sampling. The racial makeup of the sample was 76 percent Caucasian, 6 percent African American, 6 percent Asian, 6 percent Hispanic, and 6 percent other. Ten percent of the participants reported high school as the highest level of education, 8 percent reported some college, 53 percent reported college education, and 30 percent reported post-college education.

### Procedure

Data for the current study was drawn from telephone-interview data collected previously for a study on PTSD, depression, and worry in the New York City metropolitan area three years after the events of September 11, 2001 (McGinn & Massey, 2004). In this prior study, subjects chosen through systematic sampling were sent letters to introduce the study and its purpose. Telephone interviews were then conducted to administer questionnaires. A general demographics questionnaire and four measures were administered to all participants, while four additional measures were administered to subjects who (1) knew someone who was injured or killed during the attacks, (2) were in the World Trade Center or its immediate vicinity and had to evacuate work or home, and/or (3) experienced a traumatic event on or after September 11, 2001.

### Measures – All Subjects

Demographics questionnaire.\*  
Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox and Perry, 1997).\*  
Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger and Borkovec, 1990).  
Beck Depression Inventory – Second Edition (BDI-II; Beck, Steer and Brown, 1996).  
Anxiety Control Questionnaire (ACQ; Rapee et al., 1996).\*

### Measures – Subjects with Trauma

Interpretation of PTSD Symptoms Scale (Dunmore, Clark & Ehlers, 1999).\*  
Social Support Following Assault (Dunmore et al., 1999).\*  
Posttraumatic Cognitions Inventory (Foa, Ehlers, Clark, Tolin & Orsillo, 1999).\*  
Behaviour After Assault (Dunmore et al., 2001)

\* Used in the current study

## Results

•52% of the sample reported some PTSD symptomatology.

•Negative thoughts about the self ( $r = 0.78$ ,  $p < .01$ ), the future ( $r = 0.76$ ,  $p < 0.01$ ), and traumatic sequelae ( $r = 0.66$ ,  $p < 0.001$ ), were significantly correlated with increased PTSD symptomatology.

•Increased mental defeat was significantly correlated with increased PTSD symptomatology ( $r = 0.65$ ,  $p < .01$ ).

•Perception of control was inversely related to PTSD symptomatology ( $r = -0.39$ ,  $p < .01$ ).



# Peer-Labeling and Perceived Devaluation: A Cognitive Vulnerability for Depression and Anxiety in the Developing Adolescent

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## INTRODUCTION:

- Despite the central role accorded to schemas in cognitive conceptualizations of anxiety and depression, few studies have examined the relationship between schema and psychopathology, or the mediating effects of schema in the relationship between negative peer-labels and psychopathology.
- From a socio-cognitive vantage, the present study examines the impact of peer-labels on the development of both anxiety and depression along with the mediating effects of cognitive styles.

## COGNITIVE VULNERABILITY AS A MEDIATOR BETWEEN PEER-GROUP MEMBERSHIP & PSYCHOPATHOLOGY:

Etiological models emphasizing how labels become integrated into one's self-view and lead to the development of psychopathology are crucial in understanding the mechanism through which early experiences lead to the development of psychopathology.

### Diathesis Stress Model

Cognitive Vulnerability + Environmental Triggers = Dysfunction

**Cognitive Vulnerability Models** posit that the relationship between early environmental factors such as negative peer experiences and the development of anxiety and depression is mediated by the development of cognitive self-schemas such as negative attributional styles (Alloy, 2001; Alloy et al., 2001; Alloy, Kelly, Mineka, & Clements, 1990; and low degree of perceived control over events (Barlow, 2002).

- Cognitive models of anxiety suggest that perceptions of control over the environment may be a cognitive style that plays a role in the development of anxiety
- Cognitive models of depression suggest that key early environmental events characterized by deprivation and lack of warmth may lead to the development of negative attributional styles (Abramson, Metalsky & Alloy, 1989; Alloy, 2001; Alloy et al., 2001; Alloy et al., 1990; Ingram et al. 1998; Segal, 1988).
- Some initial findings suggest that verbal peer victimization partially predicts cognitive vulnerability for depression (Gibb, Abramson, & Alloy, 2004).
- However, studies have yet to demonstrate such a link between peer labeling and the development of clinical symptoms. Further, the bulk of vulnerability studies have largely employed cross-sectional designs, thereby permitting only correlational relationships between variables. Hence, longitudinal data are needed in order to assess the causal relationships between peer labeling and the development of psychopathology. Additionally, longitudinal studies are critical in increasing our understanding of the etiological mechanisms through which such early environmental influences lead to the development of psychopathology.

## PRESENT STUDY:

Using a prospective design, the present study attempts to fill some of the gaps in both social and cognitive research by examining the impact of peer-labels on the development of depression and anxiety, and examines the impact of cognitive styles on mediating this relationship. The present study follows adolescents through adulthood and investigates the posited causal link between peer labels, the development of cognitive styles such as negative attributional styles and low perceived control, and the ultimate development of anxiety and depressive symptoms.

### HYPOTHESIS I: Effects of Self-Labeling & Perceived Labeling by Others on Affective Variables

- Negative peer-labeling will be associated with higher depression and anxiety.
- Subjective perceptions of being labeled negatively by one's peers (i.e. peer devaluation by others) will outweigh the influence of self-imposed negative labeling as determined by higher scores on indices of depression and anxiety.

### HYPOTHESIS II: A History of Devaluation?

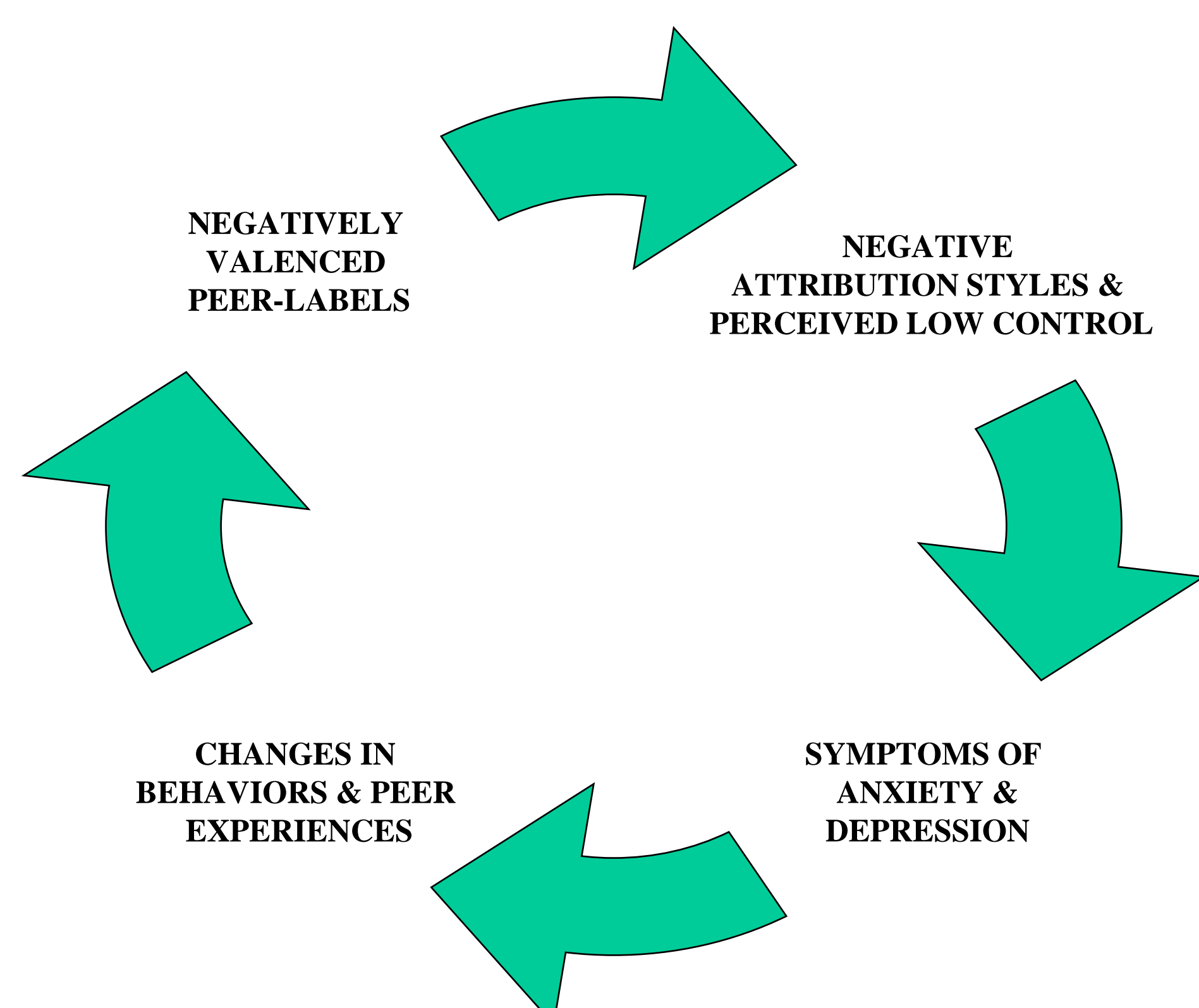
A history of negative labeling by others (i.e. a perception of sustained peer-devaluation) will predict pathology.

### HYPOTHESIS III: Undeniable Devaluation? A Moderating Role of Importance?

Given the research on category importance, (Lemay & Ashmore, 2006; Leary et al, 2003) we predicted that the relationship between negative peer-labeling and the affective measures (BDI-II, RCMAS, PANAS) will be significant irrespective of attempts to minimize or deny label importance.

### HYPOTHESIS IV: The Development of Negative Attributional Styles

In a test of the cognitive vulnerability model of anxiety and depression, the study hypothesizes that negative peer labeling will lead to the development of negative attributional styles and a low degree of perceived control. The present study also proposes that these cognitive styles will mediate the link between negative peer experiences and symptoms of depression and anxiety over time.



## STUDY DESIGN:

**Participants:** A total of 86 freshman (those repeating 9th grade/ freshman year excluded) were recruited from an inner city public school in New Jersey. This sample comprised of 36 male, 48 female, and 2 gender-undisclosed participants ranging between 13.87-17.88 years of age ( $M=15.3$  years). These participants identified with the following ethnic/racial groups: African American (70%;  $N=60$ ), Latino/a (21%;  $N=18$ ), Asian (0.05%;  $N=4$ ), Caucasian (0.02%;  $N=2$ ), Pacific Islander (0.01%;  $N=1$ ), "multi-racial" (0.05%;  $N=4$ ).

### Procedures:

Pretest: An initial subset of 28 subjects from the total sample ( $N = 86$ ) were randomly selected to complete a pretest survey which prompted them to list peer-labels that were germane to their high school setting. Using a 5-point Likert scale, subjects were then asked to rate the valence of each label. All responses to these pretests were then compiled so as to generate master lists of unique labels for each of the following categories: *Academic* ( $x = 54$  unique labels), *Athletic/Physical* ( $x = 84$ ), *Social* ( $x = 77$ ), *Rule-Abiding/Alternative* ( $x = 71$ ). Frequencies of these labels were then analyzed so as to identify the 22 most popular responses. Recognizing the high prevalence of racially-based labels (RBL) generated on pretest surveys and given the need for more racially/ethnically sensitive studies on this subject matter, we then decided to include an additional 7 RBL in our Time 1 survey packets.

**Administration:** Participants were asked to complete self-report measures of peer-group labels, affect, cognitive styles, and perceived control at Time 1 (freshman year; 1st year). All participants will be re-administered these measures at Time 2 (sophomore; 2nd year), Time 3 (junior; 3rd year) and Time 4 (senior year; 4th year).

## MEASURES:

The Anxiety Control Questionnaire for Children (ACQ-C)

The Revised Children's Manifest Anxiety Scale (RCMAS)

The Beck Depression Inventory (BDI-II)

The Children's Cognitive Style Questionnaire (CCSQ)

The Positive and Negative Affect Schedule (PANAS)

The Reflected Categorization Scales (RCS)\*

\*Adapted from Lemay & Ashmore, 2004.

## DATA ANALYSIS & RESULTS:

As demonstrated in Table 1, bivariate correlations were used to analyze the relationship between cognitive styles (CCSQ & ACQ-C) and symptom measures (PANAS, BDI-II, RCMAS).

	Positive Affect (PANAS)	Negative Affect (PANAS)	ACQ-C	RCMAS	CCSQ-Consequences	CCSQ-Self	BDI-II
Positive Affect (PANAS)	--						
Negative Affect (PANAS)	-.01	--					
ACQ-C	-.18	-.06	--				
RCMAS	-.08	.33**	.29*	--			
CCSQ-Consequences	.10	.13	.08	.29**	--		
CCSQ-Self	.03	.14	.17	.30**	.52**	--	
BDI-II	-.12	.48**	.13	.60**	.35**	.36**	--

## HYPOTHESIS I RESULTS:

### Effects of Self-Labeling & Perceived Labeling by Others on Affective Variables

- Pearson correlations demonstrated a significant relationship between negative self-labeling and anxiety ( $r = .23, p < .05$ ).
- However, Pearson correlations did not substantiate a significant relationship between negative self labeling and depression ( $r = .12, p = .26$ ) or between negative self-labeling and negative affect, ( $r = .10, p = .39$ ).
- Perceived negative labeling by others was significantly correlated with anxiety ( $r = .30, p < .01$ ) and depression ( $r = .24, p < .05$ ), but not with negative affect, ( $r = .16, p = .14$ ).
- Additionally, negative self-labeling and perceived labeling by others were strongly correlated ( $r = .74, p < .001$ ).
- According to multiple regression analyses, perceived negative labeling by others uniquely and marginally predicted anxiety ( $\beta = .29, p = .07$ ), whereas negative self-labeling did not ( $\beta = .02, p = .88$ ). Likewise, perceived labeling by others uniquely predicted depression ( $\beta = .33, p < .05$ ), whereas negative self-labeling did not ( $\beta = -.11, p = .48$ ). Neither self-labeling ( $\beta = -.04, p = .83$ ), nor perceived labeling by others ( $\beta = .19, p = .25$ ), uniquely predicted negative affect.

## HYPOTHESIS II RESULTS:

### A History of Devaluation?

- As expected, a history of peer devaluation was correlated with depression ( $r = .35, p < .01$ ) and with anxiety ( $r = .24, p < .05$ ).
- Contrary to expectations, a history of peer devaluation was not correlated with negative affect ( $r = .16, p = .16$ ).
- A history of peer devaluation was correlated with recent peer devaluation ( $r = .65, p < .001$ ).
- As expected, a history of peer devaluation predicted depression ( $\beta = .34, p < .05$ ), whereas recent peer devaluation no longer predicted depression ( $\beta = .03, p = .85$ ).
- Interestingly, recent devaluation by others predicted anxiety ( $\beta = .26, p = .065$ ), whereas history of negative devaluation by others did not ( $\beta = .07, p = .63$ ).
- Hence, a history of negative devaluation predicted depression, whereas recent perceptions of being negatively categorized, rather than an accumulated history of such negative peer-labeling, appeared most relevant for anxiety.

## HYPOTHESIS III RESULTS:

### Undeniable Devaluation? A Moderating Role of Importance

- Consistent with our hypotheses, the interaction of importance and perceived negative labeling by others did not predict depression, ( $\beta = -.46, p = .27$ ) or anxiety ( $\beta = -.01, p = .98$ ).
- In other words, the predictive effects of perceived negative labeling by others on depression and anxiety exist regardless of whether individuals deem the labels important.
- Similarly, the interaction of a history of devaluation by others and the importance of negative peer-labeling was not a significant predictor of depression ( $\beta = -.44, p = .30$ ) or anxiety ( $\beta = -.70, p = .12$ ).
- Hence, these results further support predictions that perceived negative labeling by others predicts depression and anxiety regardless of whether individuals attempt to deny the importance of being given socially devalued labels.

## HYPOTHESIS IV RESULTS:

### The Development of Negative Attributional Styles

- As expected, there was a significant association between negative attributional style (CCSQ, CCSQ-S) and depression (BDI-II) as well as between negative attributional style (CCSQ, CCSQ-S) and anxiety (RCMAS).
- Participants demonstrating a greater tendency to offer global consequences for negative events demonstrated higher levels of depression ( $r = .35, p < .01$ ) and anxiety ( $r = .29, p < .01$ ).
- Similarly, subjects displaying a greater tendency to view themselves as flawed or deficient following negative events also demonstrated higher levels of depression ( $r = .36, p < .01$ ) and anxiety ( $r = .30, p < .01$ ).
- Additionally, there was a significant association between low perceived control (ACQ-C) and anxiety (RCMAS) ( $r = .29, p < .01$ ).
- None of the Pearson correlations examining relationships of self-labeling and perceived labeling by others with the cognitive variables (i.e., perceived control and attributional styles) were significant,  $ps > .09$ . Hence, regression analyses to determine whether significant correlations were due to overlap among the self-labeling and perceived labeling by others predictors were not relevant.

## TIME 1 CONCLUSIONS:

- The impact of How Other See Me on subjective measures of anxiety and depression outweigh the influence of How I See Myself on the same measures of anxiety and depression. In other words, perceived negative labeling by others (i.e. peer devaluation) is a better predictor of depression and anxiety than self-labeling (i.e. self-devaluation).
- Findings from our study are consistent with those that emphasize the impact of peer relations on self-esteem and psychopathology. Moreover, a sense of repeated devaluation (i.e. a history of being negatively labeled by one's peers) predicts depression. This suggests that repeated social devaluation may result in negative self-views which are both stable and global. Conversely, current threats such as being recently/newly labeled by others in a negative manner predict anxiety.
- The adverse affects of social devaluation (i.e. being labeled negatively by peers) are undeniable. Thus, participants who denied/underestimated the importance of belonging in socially devalued categories, nonetheless, exhibited higher scores on measures of depression and anxiety when labeled negatively by peers.
- Consistent with the cognitive vulnerability model of anxiety and depression, cognitive styles such as low perceived control and a negative attributional style were associated with symptoms of anxiety and/or depression.
- Longitudinal data will determine if negative peer labeling leads to the development of negative attributional styles and a low degree of perceived control and if these cognitive styles mediate the link between negative peer experiences and symptoms of depression and anxiety.

## FUTURE DIRECTIONS:

- The present study is part of an ongoing prospective study (following freshmen through their senior year of high school) designed to examine the cognitive mechanisms and etiological impact of peer-labels on the development of depression and anxiety among low-income, ethnic adolescents in a public high school setting. Time 2 data is currently being collected.
- Prospective data is necessary to assess changes in labeling, mood, perceived control, and attributional styles.
- Successive trials/longitudinal data would obviate our reliance on retrospective measures.
- For more information, please feel free to contact Nava Solomon, PsyD at [navabenshalom@yahoo.com](mailto:navabenshalom@yahoo.com) or Lata K. McGinn, PhD at [lmcginn@aecom.yu.edu](mailto:lmcginn@aecom.yu.edu).



# TELEPHONE SUPPORT FOR PREVENTING RELAPSE INTO ADDICTIVE BEHAVIOUR

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## Background

Periodical telephone contacts of health service staff with patients have been used in several studies for reducing relapse into addiction by consumers of both licit and illicit drugs. To measure the size of this effect, two randomized controlled studies are here presented where telephone support was used after intensive cognitive-behavioural treatments in order to improve or maintain at long term behavioral self-control skills in abstaining from alcohol abuse (Study 1, AGATA) and from cigarette smoking (Study 2, Respiro Libero).

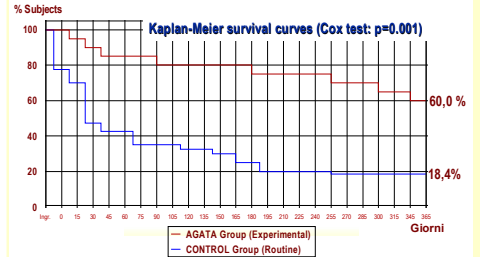
## The AGATA Study (1)

In a selected sample of consecutive alcohol abusers, a cognitive-behavioral program was implemented in a Day Hospital during the first two weeks after detoxification. The program aimed at teaching self-monitoring skills, to be adopted by patients after discharge. Monthly telephone contacts were arranged with patients, to maintain motivation, provide support and counseling throughout the following year, while control group patients underwent usual medical routine.

## Goals and hypotheses

AGATA was a randomised case-control study aiming at increasing days of abstinence or moderate drinking with a secondary goal to improve general adaptation, and increase self-efficacy. Main hypothesis of the Study was that these goals can be achieved by increasing perceived self-control, as deriving from practicing self-observation. Patients were given the choice between abstinence and moderate drinking.

## Results: dropout



## Results: abstinence (ANCOVA)

Target variable:	Groups:		F(*), p(F)
	Control (n=40)	AGATA (n=21)	
*Cumulative treatment days (CTD)	118	283	19.7 <.0001
*Cumulative abstinence days(CAD)	100	235	15.2 <.0003

(\*) Covariates: Age, gender

## Dropout analysis (%)

	Dropout	Non dropout
AGATA	8 (40)	12 (60)
Control	31 (81,6)	7 (18,4)

Chi-square = 10.28; p = 0.0013

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## Results (Study 1)

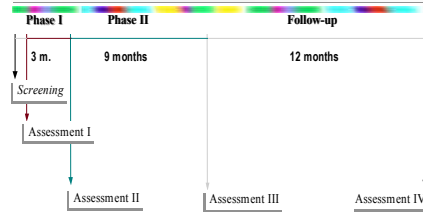
The contact of patients of the experimental group with staff along the year of study resulted significantly higher than of those in the control group (60% vs. 18,4%) and so was the number of days free from alcohol abuse (235 vs. 100).

Albeit these results cannot be attributed to the monthly phone contacts alone, these comprise the only intervention after discharge of patients in the experimental group.

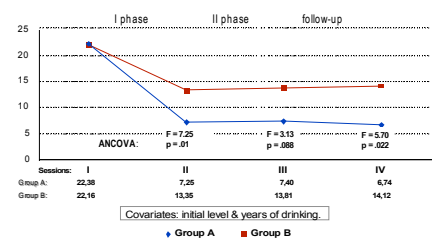
## The RESPIRO LIBERO Study (2)

In the first phase of the Study (phase I), a selected sample of cigarette smokers volunteering to quit were either offered a three months' group Course for smoking cessation using cognitive-behavioural methods (Group A), or just provided with the same manual (control group participants, Group B), on a random basis. Monthly telephone contacts were arranged for the 9 months after the end of the Course (phase II) with both groups with the same procedure and aims as in Study 1.

## Chronogram of the "Respiro Libero" Project



## Results - Cigarettes/day



## Results - Abstinence rates

I Phase							
	Group A: Course RL + Manual RL	Group B: Only Manual RL	X <sup>2</sup>	p	O.R.	R.A.R.	N.D.T.
All*:	18,5%	5,4%	4,57	.032	3,43	13,1%	8
Participants:	25,8%	4,3%	4,78	.036	6,00	21,5%	5

\* (intention to treat)

## Results - Abstinence rates

II Phase							
	Group A: Phone support	Group B: Phone support	X <sup>2</sup>	p	O.R.	R.A.R.	N.D.T.
All SS*:	14,3%	5,3%	2,62	.106	2,70	9%	11
Participants:	43,1%	22,1%	1,24	.266	1,90	21%	5

\* (intention to treat)

## Results: abstinence rates

### Follow-up (1 year after end of program, 2 years since start)

	Group A:	Group B:	X <sup>2</sup>	p	O.R.	R.A.R.	N.D.T.
All*:	17,9%	5,3%	4,40	.036	3,38	12,6%	8
Participants:	34,5%	13,3%	2,23	.135	2,59	21,2%	5

\* (intention to treat)

## Results (Study 2)

Telephone support did not improve the short term results (cessation rate and n. of cigarettes smoked) at the end of the experimental period, but allowed to maintain the outcomes obtained in both groups. It also reduced at short term to a non significant level the differences in outcomes obtained with the two treatments.

## Conclusions

Periodical short structured phone contacts for providing support and behavioural counseling have demonstrated to be significantly effective in helping people addict to both tobacco smoke and alcohol to maintain the main results in their efforts to control the relevant problem behaviors.

## References

Sibilia L., Ceccanti M., Deiana L., Di Girolamo E. (2000) Il progetto Agata: psicologia cognitivo-comportamentale per la prevenzione secondaria dell'abuso alcolico. *Psicoterapia Cognitiva e Comportamentale*, vol. 6, 2 (123-137)

Sibilia L., Ceccanti M., Deiana L., Coriale G., Picozzi R. (2001) Maintenance of abstinence from alcohol. [lettera] *The Lancet*, Vol 358, September 29, 2001

Sibilia L. & Borgo S. (2006) First results of a multiple-method cognitive-behavioural smoking cessation program. *Int. J. Behav. Med.*, vol. 13 suppl., p.199.

## SEX, ADICTIONS AND IRRATIONAL BELIEFS

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**INTRODUCTION:** Sexual addiction is a term used to describe the behavior of a person who has an unusually intense sex drive or obsession and addiction with sex (Carnes, 1983). The idea that people can suffer from sexual addiction has been a quite debated one. Goodman (1992) stated that any behavior that is used to produce gratification and to escape internal discomfort can be engaged in compulsively and can constitute an addictive disorder. In the present study, we made use of the *Sex Addicts Anonymous's* (SAA) definition of sexual addiction, i.e. a progressive experience of (a) powerlessness over a compulsive behavior, (b) tremendous shame and pain, (d) relapse when trying stopping it, (e) social consequences, (f) sexual preoccupation, and (g) acting out sexual behavior. Interestingly, it has been repeatedly found that sexual addiction co-occur (i.e., dual diagnosis) with addiction to drugs and alcohol or other substances. In the present study, it was assumed that drug addicts population is particularly incline to develop sex addiction. Similarly to the vulnerability model of drug addictions (Robert, 1993), we hypothesized a vulnerability model of sex addiction in which certain *psychological factors* can either prevent or promote the development of a sex addiction disorder.

**PURPOSES:** The main goal of this study was to explore whether certain psychological factors that have been demonstrated to make people vulnerable to substance addictions are also associated with the sexual addiction disorder. Specifically, (a) self-esteem (Keegan, 1987) and (b) self-efficacy (Marlatt & Gordon, 1985) have been found to be negatively associated with substances addiction, whereas (c) irrational thinking (Ellis, McInerney, DiGiuseppe & Yeager, 1988), (d) trait anxiety (Sanders, 1983), and (e) alexithymia (Taylor, Parker, Bagby & 1990) have been found to be positively associated with substances addictions. A secondary goal of this research was to test Ellis' (1994) notion that demandingness (i.e., absolutistic thinking) is the fundamental irrational belief, which is the main cause of many other psychological malfunctions, especially addictions.

**METHOD:** 64 drug addicts doing a community treatment were asked to fill in several measures. The mean age for women ( $N = 16$ ) was 36 ( $SD = 10$ ) and for men ( $N = 43$ ) was 33 ( $SD = 7$ ).

**RESULTS:** As can be seen in Table 1, all psychological measures were internally coherent and correlated with the SSA sexual addiction scale alike any other substance addiction.

Table 1

Measure	Cronbach's $\alpha$	$r$ (SSA)
1. Self-esteem scale	.88	-.33*
2. Self-efficacy scale	.87	-.30*
3. Attitude and Belief scale:		
- Irrational "Demandingness"	.77	.48**
4. Trait Anxiety scale	.78	.40**
5. Toronto Alexithymia scale	.83	.38*
6. Sexual addiction scale (SSA)	.82	1.00

Note. \* =  $p < .01$ , \*\* =  $p < .001$

In order to test the demandigness hypothesis, a linear regression model was computed in which the sexual addiction scale was the criterion and all the other measures were the predictors. The model was found to be significant,  $R$  change  $F(3, 60) = 6.32, p < .001$ . Moreover, demandingness was found to be the best predictor of sexual addiction,  $\beta = .40, t(60) = 3.56, p < .001$ . Noticeably, when controlled for demandigness, all other measures but alexithymia ( $\beta = .26, t(60) = 1.86, p = .07$ ) did not predict sexual addiction.

**CONCLUSIONS:** In line with those viewpoints that state that excess in sexual behaviour may develop into an addiction, present findings showed that sexual addiction tend to be coherently associated with the same psychological factors of substance addictions. Finally, results provided also evidence for the demandigness hypothesis. However, as for the relationship between demandigness and the other variables, further research with larger samples is needed in order to reduce possible misinterpretation due to multicollinearity (O'Brien, 2007).

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### Main References:

- Ellis, A., McInerney, J.F., DiGiuseppe, R., & Yeager, R.J. (1988), *Rationa-emotive therapy with alcoholics and substance abusers*. New York: Pergamon.
- Carnes, P. (1983) *Out of the Shadows: Understanding Sexual Addiction*: CompCare Publications.
- O'Brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality and Quantity*, 41 (5) 673-690.

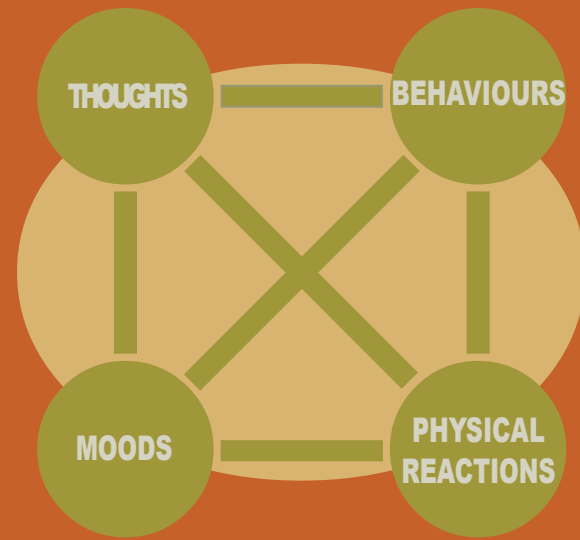
# Can Mindfulness be Contained within a Behaviourist Framework ?

**ABSTRACT:** This paper proposes that third-wave mindfulness and acceptance-based psychotherapies may be undermined in the process of being absorbed into second-wave frameworks, not because they are ineffective, but because the buddhist perspective of mindfulness cannot be contained within a behaviourist perspective. The author relates the behaviourist and buddhist perspectives by showing that Padesky and Mooney's cognitive model (Padesky 1990) can be extended to produce a model based on the buddhist teaching of the four foundations of mindfulness (the four satipatthanas). This model can then be used to explain the mechanics of processes relevant to third wave therapies, such as acceptance and non-judgemental awareness.

When an individual seeks advice and they make contact with a professional in order to get help with a psychological problem, the point at which they approach a professional is the point at which they are offered guidance, and that often includes a set of techniques. In some ways professionalism has taken the place of religion; people have a faith in it similar to what they used to have in religions. But there is a growing recognition amongst some professionals that they need something more than simply techniques in order to offer people real help. Mindfulness is something that a number of professionals believe can be helpful to people - these make up the 'third-wave' of behavioural psychotherapy. I am a practising buddhist. As well as discussing and talking about mindfulness, I am also a practitioner. I continue to study and reflect upon what the buddhist tradition has to say about mindfulness, in addition to meditating, which is the primary way a state of mindfulness can be attained according to the buddhist tradition. And I am bringing all of this to the argument about the application of mindfulness within professional practice.

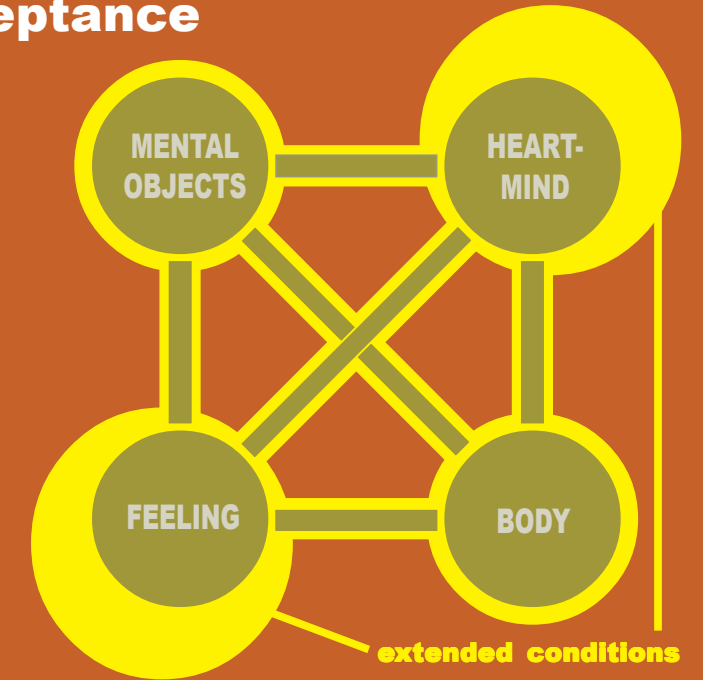
Mindfulness in buddhism has a whole philosophy behind it to do with conditions, which includes creating the conditions supportive to helping people feel human. Included among them are the development of ethical sensitivity, participation in positive social networks that encourage a human approach, and an intelligent approach to goal-setting. Buddhism is not only about practicing a set of techniques, but it is necessarily about paying attention to the broader conditions that help a person feel human. Kabat-Zinn (2000) has begun to address this theme through his emphasis on participatory medicine. Even for those professionals who are using mindfulness as part of their professional practice, it is not yet clear to me whether they include all of the factors that buddhism deems necessary in order for an individual to attain a full realisation of mindfulness. This paper hopes to say more about this from a buddhist point of view, and my hope is that it will contribute something productive towards those professionals who are using mindfulness in their practice. It introduces an intellectual framework it is hoped will help mindfulness grow and develop within professional practice - a framework based on a central buddhist teaching on mindfulness, the four foundations of mindfulness (four satipatthanas). I hope that in considering this framework when teaching or practicing mindfulness, people will not only be helped in solving their problems by becoming more mindful, but will also be helped, in considering the broader conditions that buddhism values, to feel more human.

**Mindfulness in buddhism has a whole philosophy behind it to do with conditions (called Conditioned Coproduction or Conditionality). A buddhist model based on the teaching of the Four Foundations of Mindfulness (Four Satipatthanas) contains a broader range of conditions than the cognitive model. This can explain third wave processes such as mindfulness and acceptance**



second wave model - Padesky and Mooney's Cognitive Model

+ need to incorporate mindfulness and acceptance =



third wave model - based on Four Foundations of Mindfulness

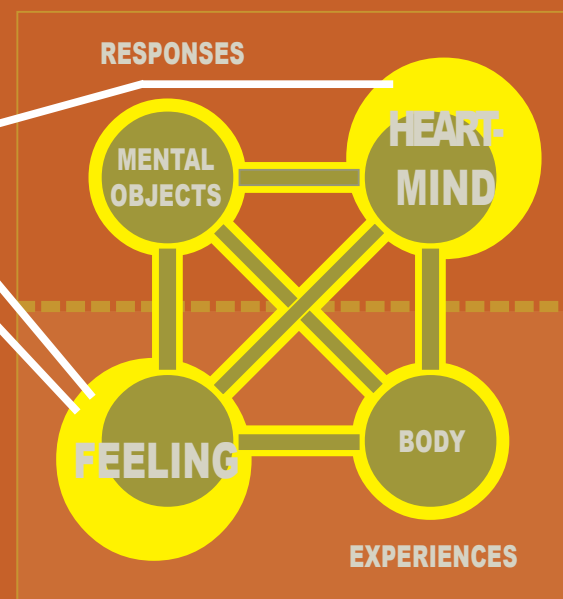
## Details of Satipatthana Model

The buddhist model broadens the conditions of the cognitive model in the areas of mood and behaviour:

- in addition to external behaviour that can be observed it incorporates internal behaviour - (active mental and emotional states such as MINDFULNESS and ACCEPTANCE)
- in addition to mood it incorporates two other kinds of feeling - PHYSICAL FEELING and FEELING conditioned by ones STATE OF MIND (including states such as ethical conscience)

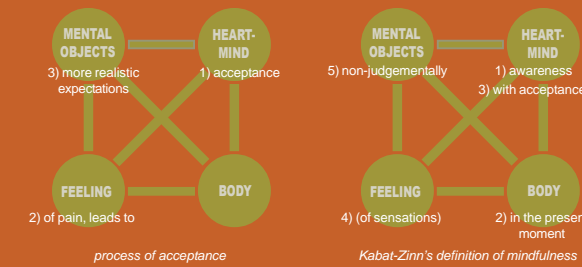
It is necessary to understand the distinction buddhism makes between experience and response to experience: because we need to understand when we are choosing a condition and when we don't have a choice. The conditions *Heart-mind* and *mental objects* are choices a person makes. On the other hand, the conditions *body* and *feeling* are not choices. They are given in experience. This clarifies a common confusion around 'feelings'. *Feeling* in buddhism is always a resultant: it is a state - like *mood, sensation, or conscience* - that a person 'arrives' into. As such it is distinct from *emotion* because that is an *action*: namely how the *Heart-mind* 'moves' under the influence of *feeling*.

The first discrepancy between the two models is explained by constraints placed on the assessment of internal states in a behaviourist framework. When behaviours take place internally - as in the 'Heart-mind', one cannot present them within a behaviourist framework because they cannot be verified by third parties. This is why it is difficult to contain mindfulness within a behaviourist framework.



There also can be difficulties when we talk about ethics in a secular society, because this is seen largely as a matter for the individual. But ethics is a supportive condition for mindfulness in buddhism. If we ignore it we ignore an important condition. But despite its usefulness and that it is 'bottom up' (experientially-based) rather than 'top down' (morality-based), as a supportive condition it may not be easily adopted.

## Third Wave Processes



Experiences and responses interact in the satipatthana model. A primary condition, say the body, impacts on a secondary condition, such as feeling, causing an associated process. For example physical sensation is the feeling that arises through having a body; another example is that under the influence of mental contents (mental objects), the heart-mind is shaped into thinking; or, the effect of feeling on the body gives rise to expression, laughing or crying. It is worth noting that where experience conditions a response there is always a choice to be made. A person implementing Kabat-Zinn's definition of mindfulness - 'awareness in the present moment, with acceptance, and non-judgementally' tries to choose mindfulness, acceptance, positive emotion and insight over their opposites - distraction, resistance, negative emotion, and ignorance. They choose to allow their views to be changed by accepting difficult experiences, a process aided by not allowing their heart-mind to narrow down in unproductive judgements. They work against the habitual tendency to follow the experience of chronic pain with a 'chronic' state of mind, or a heavy mood of depression with a heavy heart-mind, choosing instead a response of compassion or mindfulness.

Primary Condition	Secondary Condition	PROCESS
Experience co-arising with experience Body Feeling	Feeling Body	SENSATION 1 EXPRESSION 2
Response co-arising with response Mental Objects Heart-mind	Heart-mind Mental Objects	THOUGHT 3 REFLECTION 4
Experience conditioning response Body Feeling	Heart-mind Mental Objects Heart-mind Mental Objects	AWARENESS 5 IDENTITY 6 EMOTION 7 ACCEPTANCE 8
Response conditioning experience Heart-mind Heart-mind Mental Objects Mental Objects	Body Feeling Body Feeling	MANIFESTATION 9 ETHICAL SENSITIVITY 10 PRACTICAL WISDOM 11 MOOD 12

Examples: 1 chronic pain 2 crying 3 mind shaped into thinking by ideas 4 views moulded by state of mind 5 attention on body stabilises awareness 6 views arising from experiences 7 feelings mould Heart-mind 8 acceptance of painful sensations forces a change in ones view what to expect from life 9 angry state of mind manifests in tension in the body 10 ethical state of mind conditions a painful conscience 11 mode of thinking influences the body, as in Alexander Technique 'directions' or guided relaxation 12 thoughts condition moods as in the cognitive model of Padesky and Mooney

## Conclusion

This poster has been an introduction to an intellectual framework that begins to explain third wave therapies. This framework incorporates active mental states - including emotion - and feelings like physical sensations, that are not included in the cognitive model. It is therefore able to demonstrate third-wave processes.

Glenn Burton  
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Padesky, C.A. & Mooney, K.A. (1990). Presenting the cognitive model to clients. *International Cognitive Therapy Newsletter*, 6, 13-14.

Kabat-Zinn, J. (2000). Participatory Medicine. *Journal of the European Academy of Dermatology and Venereology*, 14, 239-240



# EFFECT OF MENTAL IMAGERY ON IMPLICIT AND EXPLICIT ANXIETY

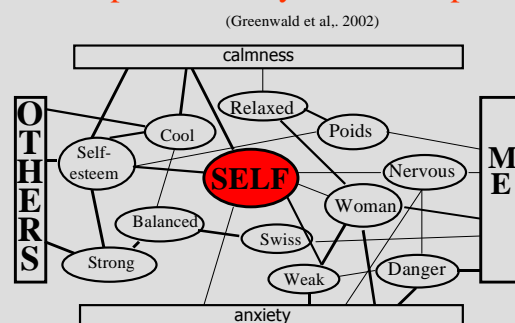
Grazia Ceschi (1), Rainer Banse (2), and Martial Van der Linden (1)

(1) University of Geneva, Switzerland, (2) University of Bonn, Germany

## Background

The current study investigates the impact of three self-focused mental imageries (*i.e.* anxious, calm, neutral) on explicit (self-report) and implicit self-concepts of anxiety. Implicit anxiety is assessed with an anxiety version of the Implicit Association Test (IAT-anxiety; Greenwald et al., 1998).

## Implicit anxiety self-concept



## Method

### Population

60 women (age :  $M=22.07$ ;  $SD=1.80$ ).

### Procedure

Between-subjects design.

Sequence: Mental Imagery → IAT-anxiety → Explicit measures.

### Self-focused mental imagery

- Remember a [anxious, calm, neutral] situation that you experienced recently (last year).
- Describe it.
- Create and hold in mind a vivid mental image of the situation.

### Measures

Implicit (IAT-Anxiety;  $\alpha=.74$ )

	Block 1	Block 2	Block 3	Block 4	Block 5
Description	Target discrimination	Attribute discrimination	Initial combined task	Reversed target discrimination	Reversed combined task
Labels	ME OTHERS	Anxiety Calmness	ME Anxiety OTHERS Calmness	ME OTHERS	ME Calmness OTHERS Anxiety
Items	SELF MY THEY YOUR	afraid nervous relaxed balanced	SELF MY THEY YOUR	SELF MY THEY YOUR	SELF relaxed THEY nervous
Trials	40	40	80	40	80

Figure 1: IAT-anxiety (IAT D scores).

### Explicit (verbal self-report)

- Anxiety self-report (ASR;  $\alpha=.96$ )
- State Anx. Invent. (STAI-S;  $\alpha=.96$ )
- Trait Anx. Invent. (STAI-T;  $\alpha=.84$ )

## Results

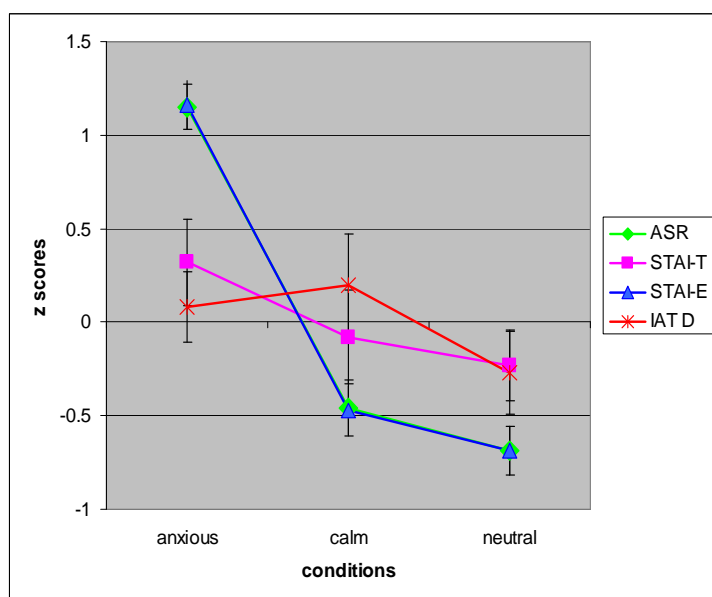


Figure 2: Explicit and implicit anxiety self-concepts per condition (Mean; SE). Note: Condition effect: ASR and STAI-E:  $p<.05$   
STAI-T and IAT D: ns

Table 1 : Pearson's correlations between measures.

	1	2	3
1. ASR	----		
2. STAI-T	0.22*	----	
3. STAI-E	0.90**	0.24*	----
4. IAT-D	0.01	0.09	-0.04

Note: \*\* $p < .01$ ; \* $p < .05$ .  $N = 60$

## Conclusions

1. The explicit self-concept of anxiety, but not its implicit counterpart, can be altered following short-lasting self-focused mental imageries of past situations.
2. Explicit and implicit self-concepts of anxiety are independent of each other.
3. More frequent, long-lasting mental imagery practice is expected to modify general dispositions (like affective traits or personality dimensions), as well as automatic and implicit facets of the affective self-concept (like those captured by the IAT-anxiety).



## **COGNITIVE-BEHAVIORAL APPROACH IN TREATMENT OF COCAINE ABUSE/ADDICTION**

**Conversano C., Giorgi G., Lensi E., Granchi F., Cecchi L., Della Vista O., Tridenti C., Testi C.,  
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Azienda Ospedaliero-Universitaria Pisana (A.O.U.P.)

### **Introduction**

From a cognitive-behavioral point of view the abuse of drugs is a consequence of cognitive and emotional distortions that prevent the patient from interpreting his/her own experience correctly. The procuring, seeking and assumption of drugs become learned behaviors because their aim is to achieve gratifying effects that come from substance use and then to avoid abstinence syndrome. Cocaine, in particular, is a very effective substance for the stimulation regarding gratification sites in the limbic system. The cognitive-behavioral approach (CBT) in the treatment of cocaine abuse/addiction aims at the acquisition of abilities and skills that permit to cope with risk situations using more adaptive strategies.

### **Aim**

The goal of this work is to review the researches regarding CBT efficacy of drug addiction treatment in the last ten years.

### **Methods**

A *Medline* of the papers edited from 1997 up to 2007 was conducted. The eleven studies selected were subdivided according to the typology of the subjects. Some significant characteristics were assessed which were considered to be indicative of the efficacy of the treatment: retention rate during treatment, retention rate during follow-up and the results of the study.

### **Results**

Currently, it is difficult to compare the researches on efficacy of CBT in treatment of cocaine addiction because of the absence of a common methodology. Many of these researches do not have accurate efficacy criteria, evaluation of subjects in follow-up, retention rate of each treatment (during the research and the follow-up) and drop-out percentage.

### **Final Considerations**

Currently, there is an absence of common methodology in studies regarding CBT treatment of cocaine addiction.

For a proper assessment of treatment efficacy, in future studies we suggest the indication of accurate efficacy criteria, evaluation of subjects in follow-up, drop-out percentage and indexes as retention rate during treatment and retention rate during follow-up.

**Vith International Congress of Cognitive Psychotherapy  
Rome (Italy), 19th-22nd June 2008**





## **COGNITIVE-BEHAVIOURAL THERAPY OF CHRONIC LUMBAR PAIN** **Conversano C., Lensi E., Arpone F., Della Vista O., Tridenti C., Scarselli R.**

Azienda Ospedaliero-Universitaria Pisana (A.O.U.P.)

### **Aim**

The aim of this project is to create and maintain a higher level of functionality and enhance the adjustment and recovery skills with regard to anxiety and depression correlated to chronic lumbar pain.

### **Methods**

The intervention is articulated in three phases.

1. *PSYCHOEDUCATIVE PHASE*. The phase is developed in didactic sessions and self-monitoring techniques. Moreover, it is necessary to set down and monitor a programme of physical exercises, including the goals to reach.
2. *SKILLS RESTRUCTURATION PHASE*. In this phase the stress-control techniques, cognitive restructuring, problem-solving and the development of planning with specific goals are all involved. The training involves also gradual muscular relaxation, imaging techniques, self-hypnosis, autogenic training and the biofeedback.
3. *APPLICATION PHASE*. At this point, patients are shown how to apply the skills learned before in everyday life.

### **Results**

1. *PSYCHOEDUCATIVE PHASE*. Through the psychoeducative phase the patient develops and understands the suffering which may help him/her to identify the thoughts that make the subjective experience of pain intense. So the patient works on concerns, anxiety and feelings of helplessness that are part of the pathology, to adjust preconceptions and to become aware of his/her own inappropriate behaviours.
2. *SKILLS RESTRUCTURATION PHASE*. The skills restructuring phase enables the patient to recognize his/her negative ideas and substitute them with positive, constructive and stable ideas. The relaxation training permits a decreasing of the level of activation of physiological mechanisms of stress. The biofeedback allows the patient to monitor his/her achievement of an effective state of relaxation.
3. *APPLICATION PHASE*. In the application phase the patient learns to consolidate and generalize new skills, behaviours and strategies to manage his/her pain.

### **Final Considerations**

As well as leading to the acquisition of useful tools, cognitive-behavioural therapy also involves appraisal of a new mental pattern designed specifically for the patient to adjust successfully to the onset of chronic pain.



## **CBT IN PATIENTS WITH BURN: DESCRIPTION OF AN EXPERIENCE**

**Conversano C., Cecchi L., Lensi E., Testi C., Della Vista O., Tridenti C., Scarselli R.**

Azienda Ospedaliero-Universitaria Pisana (A.O.U.P)

### **Aim**

The aim of this work is to illustrate the experience, currently in a trial stage, carried out in a psychological unit in the U.O. of the *Centro Ustioni of the Azienda Ospedaliero-Universitaria Pisana*. The aim of the service is to take the patient with burns through an exploration of the traumatic experience and encourage him/her to elaborate it.

The focus is on those who show Post-Traumatic Stress Disorder (PTSD) or Acute Stress Disorder (ASD) symptoms. In the first case, the intervention is orientated to contain the PTSD symptoms, in the second one, the intervention is directed at preventing the onset of the symptoms, given that ASD is often predictive of PTSD.

### **Methods**

The techniques used are image exposure and *in vivo* exposure. Following this, relaxation techniques are applied, followed by cognitive reprocessing and problem-solving training. These methods are employed with patients who show appropriate psycho-physical conditions.

### **Results**

The first step for the elaboration of traumatic experience is coming into contact with it. Through image exposure and *in vivo* exposure the patients can gradually come into contact with the elements of traumatic experience which generate anxiety for them.

The relaxation techniques, used throughout the entire course of therapy, allow the patient to manage his/her emotional strain which can arise during the reconstruction of the event. This promotes a feeling of control.

Following this, cognitive restructuring allows the cognitive reprocessing of the event and the problem-solving training consents the learning of more adaptive responses.

### **Final Considerations**

The service offers, on one hand, the opportunity to lead the patient through the memories of traumatic experience, using his/her psychological resources to cope with those memories and manage the strong emotions that may emerge. The aim is to enable the patient to totally reconstruct the trauma.

On the other hand, the service offers the opportunity to handle stress disorder symptoms and the possibility to understand the collocation of the traumatic event in the patient's life.

**With International Congress of Cognitive Psychotherapy  
Rome (Italy), 19th-22nd June 2008**



# INDIVIDUAL DIFFERENCES IN THE INTEGRATION OF EMOTION AND COGNITIVE CONTROL: A TASK-SWITCHING STUDY



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## Introduction and Aims

Everyday experiences, as well as many studies, highlight that emotion and cognition are closely related. For example, it is well known that when we are happy, we are more likely to remember happy events (*mood-congruent memory effect*). Recently, several studies have focused on our capability to regulate emotions, and on the effects that affective states have on executive control processes (Gray, 2004). Most of these studies have shown that positive and negative laboratory-induced moods have different effects on cognitive tasks that involve executive control; for example, positive affect improves performance in priming tasks; differently, negative affect impairs performance on tasks requiring set shifting processes (Mitchell & Phillips, 2007; Dreisbach & Goschke, 2004); however, there has been little evidence related to the effects of specific emotions, as anger or joy, on such processes (Barrett, 2007). That being so, first aim of the study was to investigate if particular negative emotional states, disgust and sadness, differently affect task-set reconfiguration and inhibitory control processes involved in switching rapidly between two simple tasks (task-switching paradigm; Monsell et al., 2000). Consistently with the psychophysiological characteristics of disgust and sadness, it is hypothesized that the former should be associated with higher switch costs than the latter (Bradley et al., 2001). Moreover, it is assumed that such effects vary depending on individual's personality characteristics. In fact, several studies have investigated the roles that mood states and personality traits play in the processing of emotional information across different cognitive tasks (Rusting, 1998). For example, the Rusting's mediation approach (1998) suggests that personality traits predispose individuals to certain mood states, which then influence emotional processing. Research findings indicate that some cognitive processes and dysfunctional attitudes are both influenced by current mood state, and predispose vulnerable individuals to specific emotions (Miranda & Persons, 1988). For example, some authors observed a clear relationship between obsessive disposition and disgust sensitivity (Tolin et al., 2006). Moreover, obsessive-compulsive patients often show lower levels of attentional inhibitory control than controls (Kuelz, Hohagenb & Voderholzer, 2004). Instead, studies on depressed individuals have shown changes in perception, attention, memory and executive functions (Chepenik et al., 2007); moreover, subjects with previous episodes of depression report more dysfunctional attitudes only when were in a negative mood state (Miranda & Persons, 1988). Then, the other scope of this study was to investigate if individual's psychological characteristics may selectively bias emotion-executive control interactions. In particular, we hypothesized that obsessive individuals have a propensity to show an impaired executive control (higher switch costs) when they feel disgust, while people inclined to depression show an impaired executive control just when they feel sadness.

## EXPERIMENT

### Method

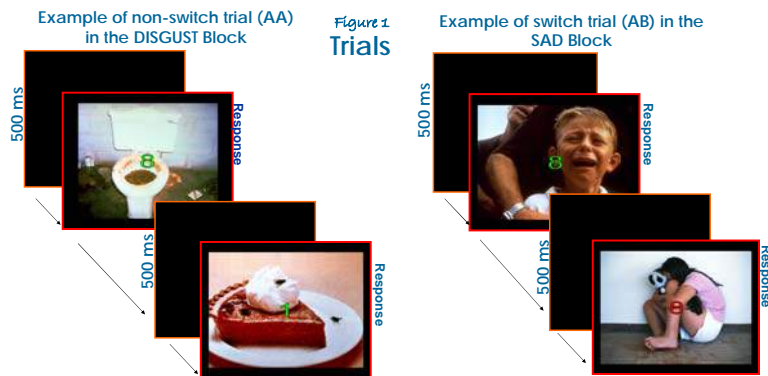
To assess the role of emotional states on executive control processes an affective task-switching experiment (Trincas et al., 2007) was administered to 36 undergraduate students (26 female, 10 male). This new experimental paradigm allows to evaluate how particular emotions, induced by presenting pictures selected from the International Affective Picture System (IAPS; Lang, Bradley & Cuthbert, 1998), may influence task-set reconfiguration and inhibitory control involved in rapidly switching between two discrimination tasks. In the present experiment, participants were seated in front of a computer monitor in a quiet and dimly illuminated room. The experiment consisted of 3 couples of blocks of 64 trials each one, and it lasted about one hour. At the end of blocks 2 and 4 subjects had two rest for 5 minutes. In each trial, participants had to perform one of the following tasks, randomly selected: A) classifying a digit as even or odd; B) classifying a digit as lower or higher than 5. Participants were required to respond as fast as possible by pressing "g" (for even, and low-than-5 digits), and "h" (for odd, and higher-than-5 digits) on the computer keyboard. To indicate to participants which task they had to carry out, digits were presented either in red (for the task B) or in green (task A) colour. Stimuli were the numbers 1, 2, 3, 4, 6, 7, 8, and 9; they were presented at the centre of the display. In the first two blocks stimuli were presented on a black background; these blocks allowed participants to learn the tasks. In the remaining blocks, digits were superimposed to a large picture, selected from a sample of 64 IAPS photos that were previously associated either to disgust or sadness, and that were equalized for valence and arousal. Therefore, after a practice session, two consecutive blocks of trials, in which disgust pictures were presented, and two consecutive blocks, in which sadness pictures were presented, were administered. To control for order effects, half of the subjects were presented first the disgust trials blocks; while, remaining subjects were administered first the sadness trials blocks. To assess the effects of individual's personality characteristics on the emotion-executive control interaction, two questionnaires were administered at the beginning of the experiment to assess personal disposition to obsessive-compulsive (Padua Inventory; Sanavio, 1988), and depressive symptoms (CDQ, Ipat Depression Scale; Krug & Laughlin, 1979). Moreover, to control for changes in mood and arousal states caused by presenting IAPS pictures, subjects were administered the Self-Assessment Manikin Questionnaire (SAM; Lang, Bradley e Cuthbert, 1998) (Fig.2) before the first block of trials, after the second block, after the fourth block, and at the end of the experiment.

### Results

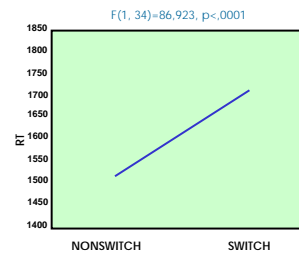
First, an univariate repeated measure ANOVA computed on mean reaction times (RTs) as function of TRIAL TYPE (nonswitch trials vs switch trials) revealed significant switch costs ( $F(1,34) = 86,923, p < 0.0001$ ); for which performance was better when subjects had to execute the same task as the preceding trial than they had to change (Plot 1). Then, mean RTs were analyzed by a 2 (PICTURE VALENCE: disgust vs sadness) x 2 (MEAN RTs: nonswitch trials vs switch trials) repeated measure ANOVA. Only the PICTURE VALENCE main effect was significant ( $F(1,34) = 31,894, p < 0.0001$ ), showing that RTs were slower on disgust trials, than on sad trials (Plot 2). Successively, mean RTs were analyzed by a 2 (PICTURE VALENCE: disgust vs sadness) x 3 (OBSESSIVE SYMPTOMS: low vs intermediate vs high) factorial mixed-design ANOVA; similarly, mean RTs were analyzed by a 2 (PICTURE VALENCE: disgust vs sadness) x 3 (DEPRESSIVE SYMPTOMS: low, intermediate, high) factorial mixed-design ANOVA. For both analyses, the main effects, as well as the interaction effects, were not significant. Finally, SAM scores for valence and arousal were analyzed by means of 2 (BLOCKS ORDER: Disgust/Sadness vs Sadness/Disgust) x 3 (ADMINISTRATION TIME: after fourth block vs after sixth block) factorial mixed-design ANOVA. As far as valence is concerned, the main effect of BLOCKS ORDER was significant ( $F(3, 102) = 23,589, p < 0.0001$ ), showing that emotional subjective states became more and more negative in function of the administration time. Differently, analysis on subjective arousal levels showed a significant interaction effect AROUSAL x BLOCKS ORDER ( $F(1,34) = 7,0256, p < 0.01$ ) (Plot 3).

### Discussion

The first analysis highlights that our task-switching paradigm is suitable to investigate executive control processes (Monsell et al., 2000), as RTs on switch trials were slower than on non-switch trials. Moreover, disgust and sadness induced by IAPS pictures presentation seem to differently affect performance: RTs were slower with disgust than with sadness pictures. Such a result is consistent with the analysis on subjective levels of arousal, that shows that disgust pictures were related to higher emotional activation than sadness pictures. However, we failed to observe a modulation of the switch cost as function of the induced emotional state (disgust or sadness); therefore, the effect of disgust and sadness on executive processes involved in task-switching seems to be unspecific. Moreover, individual differences in obsessive and depressive symptoms do not have significant effects on switch cost as function of disgust and sad emotional states. This result does not support the hypothesis that emotional states mediate the influence of personality traits on cognitive processes (Rusting, 1998). Finally, analyses on SAM scales confirmed that IAPS pictures are suitable to induce affective negative states consistent with disgust and sadness. In summary, our results show a specific effect of disgust and sadness on tasks performance, but not on control processes, as involved in task-switching. In particular, disgust seems to be associated to higher levels of arousal, that in turn interfere with performance. Moreover, the personality factors investigated do not influence the hypothesized emotion-cognition interaction.



Plot 1  
Effect of switch cost



Plot 2  
Interaction effect of reaction times (non-switch vs switch) x affective pictures (disgust/sadness)

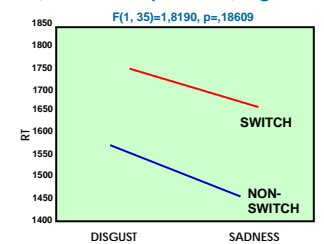
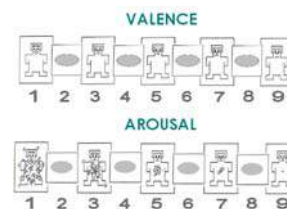
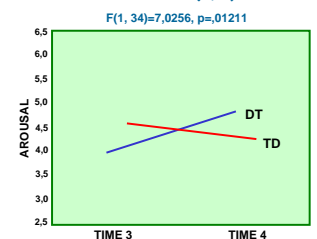


Figure 2. SAM



Plot 3  
Interaction effect of blocks order (DT/TD) x administration time (3, 4) on Arousal



### References

- Barrett, L.F., Ochsner, K.N. & Gross, J.J. (2007). On the automaticity of emotion. In J. Bargh (Ed.), *Social psychology and the unconscious: The automaticity of higher mental processes*. New York: Psychology Press.
- Bradley, M.M., Codispoti, M., Cuthbert, B.N., & Lang, P.J. (2001). Emotion and motivation I: Defensive and appetitive reactions in picture processing. *Emotion, 1*, 276-298.
- Chepenik, L.G., Comew, L.A. e Farah, M.J. (2007). The influence of sad mood on cognition. *Emotion, 7*, 802-811.
- Dreisbach, G., & Goschke, T. (2004). How positive affect modulates cognitive control: Reduced perseveration at the cost of increased distractibility. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 30*, 343-353.
- Gray, J.R. (2004). Integration of emotion and cognitive control. *Current direction in psychological science, 13*, 46-48.
- Jouvent, R., Dubal, S., & Fossati, P. (2006). The cost of pleasure: Effort and cognition in anhedonia and depression. In (Eds.) Sebanz, N., & Prinz, W. *Disorder of Volition*. Cambridge UK: MIT Press.
- Kuelz, A.K., Hohagenb, F., & Voderholzer, U. (2004). Neuropsychological performance in obsessive-compulsive disorder: a clinical review. *Biological Psychology, 65*, 185-236.
- Lang, P.J., Bradley, M.M., & Cuthbert, B.N. (2005). *International affective picture system (IAPS): Affective ratings of pictures and instruction manual*. University of Florida: Gainesville.
- Miranda, J. e Persons, J.B. (1988). Dysfunctional attitudes are mood-state dependent. *Journal of Abnormal Psychology, 97*, 76-79.
- Mitchell, R.L.C e Phillips L.H. (2007). The psychological, neurochemical and functional neuroanatomical mediators of the effects of positive and negative mood on executive functions. *Neuropsychologia, 45*, 617-629.
- Monsell, S., Yeung, N., & Azuma, R. (2000). Reconfiguration of task-set: Is it easier to switch to the weaker task? *Psychological Research, 63*, 250-264.
- Phillips, L.H., Bull, R., Adams, E., & Fraser, L. (2002). Positive mood and executive function: evidence from Stroop and fluency tasks. *Emotion, 2*, 12-22.
- Rusting, C.L. (1998). Personality, mood and cognitive processing of emotional information: Three conceptual frameworks. *Psychological Bulletin, 2*, 165-196.
- Tolin, D.F., Woods, C.M., Abramowitz, J.S. (2006). Disgust sensitivity and obsessive-compulsive symptoms in a non-clinical sample. *Journal of Behavior Therapy and Experimental Psychiatry, 37*, 30-40.
- Whitmer, A.J., & Banich, M.T. (2007). Inhibition versus switching deficits in different forms of rumination. *Psychological science, 18*, 546-553.

## EFFECTS OF BEHAVIORAL INHIBITION, ATTACHMENT STYLES, PARENTING STYLES AND SOCIAL COMPARISON ON SOCIAL ANXIETY IN ADOLESCENCE

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### INTRODUCTION

The prevalence and possible negative consequences of high levels of social anxiety during adolescence are already known and it is crucial to increase research about development and maintenance factors of this disorder in order to promote early intervention programmes and efficient therapeutic programmes for adolescents.

### GOALS

The present study was designed to investigate the combined action and possible mediator effects of behavioural inhibition, attachment quality, parenting styles and social comparison in social anxiety through the use of a structural equation model. The model presented in Figure 1 assumes a joint action of temperamental variables (behavioural inhibition), family variables (educational parental styles and quality of parents' attachment) and variables related with peers (attachment with friends). The effect of each variable on social anxiety can be direct or mediated by social comparison, that is, by the way the adolescents compare themselves with others of the same age.

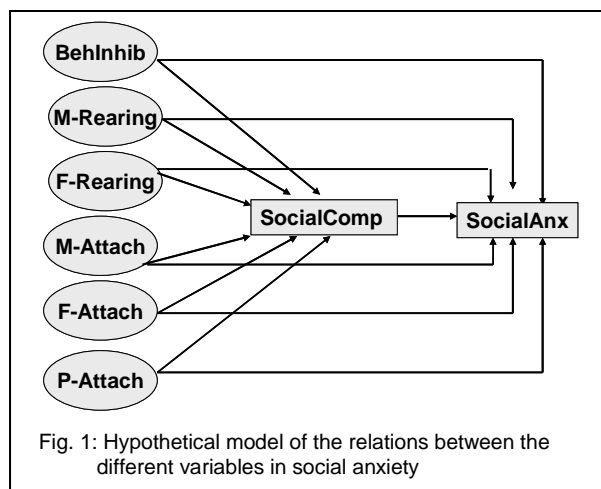


Fig. 1: Hypothetical model of the relations between the different variables in social anxiety

### METHOD

#### SUBJECTS

The sample included 301 adolescents, 143 boys and 158 girls, with ages between 12 and 18 years old ( $M = 14.39$ ;  $SD = 1.91$ ) and educational level between the 7th and 12th grades ( $M = 9.07$ ;  $SD = 1.72$ ), from public and private schools located in both rural and urban areas. Male and female participants didn't differentiate regarding age ( $t = -1.77$ ;  $p > .050$ ), but significant differences were found at the educational level, where girls presented a higher level ( $t = -2.71$ ;  $p = .007$ ). No significant differences were found for the socio-economic level ( $\chi^2 = 745$ ;  $p = .689$ ).

#### INSTRUMENTS

The **Social Anxiety Scale for Adolescents (SAS-A)** (La Greca & Lopes, 1998) evaluates the experiences of social anxiety of adolescents in the context of the relationships between peers.

The **Social Anxiety and Avoidance Scale for Adolescents (SAASA)** (Cunha, Pinto-Gouveia & Salvador, 2004) is composed of 34 social situations that evaluate the level of anxiety and avoidance they cause.

The **Retrospective Self-Report of Inhibition (RSRI)** (Reznick, et al., 1992) is composed of 30 questions which evaluate, retrospectively, individual's behavioural inhibition during childhood (up to the sixth grade).

The **Inventory of Parent and Peer Attachment (IPPA)** (Armsden and Greenberg 1987b) is a 75-item questionnaire which evaluates the attachment quality of the adolescents to their mother, father and friends.

The **Social Comparison Scale (SCS)** (Alan & Gilbert, 1995) evaluates the way in which the individuals compare themselves in their relationship/interaction with others.

The **Inventory for Assessing Memories of Parental Rearing Behaviour (EMBU -Arrindell et al., 1983)** evaluates the occurrence frequency of certain rearing practices concerning the father and mother, separately.

#### PROCEDURE

Participants filled in the questionnaire in the context of the classroom, and their presentation order was balanced. The parents' and adolescents' informed consent to participate in this study was previously asked.

The adolescents were selected from a representative sample of the district of Coimbra ( $N = 2190$ ) which participated in a broader research project about social anxiety in adolescence. Based on the Social Anxiety Inventory results, the subjects whose results located in every percentile of this measure of social anxiety were randomly selected.



## RESULTS

After considering the modification indicators supplied by LISREL (Jöreskog, Sörbom, D., 1988) and eliminating the non significant paths, the achieved model showed an excellent adjustment index  $\chi^2(19) = 15.98$ ,  $p = .66$ ,  $RMR = .016$ ;  $RMSEA = 0.0$ ,  $GFI = .99$ ,  $AGFI = .97$ ,  $NFI = .98$ . The obtained results are represented in the Fig. 2. In summary:

- Behavioural inhibition was the variable that showed the strongest effect on social anxiety measured by SAS-A. This effect was exerted directly (.50) and indirectly through social comparison (-.5 x -.11 = .04).
- The quality of attachment with a friend showed a direct effect (-.19) on social anxiety and a mediated influence through social comparison (.24 x -.11 = .03).
- The social comparison showed to be a mediator variable of the inhibition effect and of the global measure of attachment to friends. It also exerts a direct effect on social anxiety.
- The absence of any significant effect of parental rearing styles and quality of parental attachment.

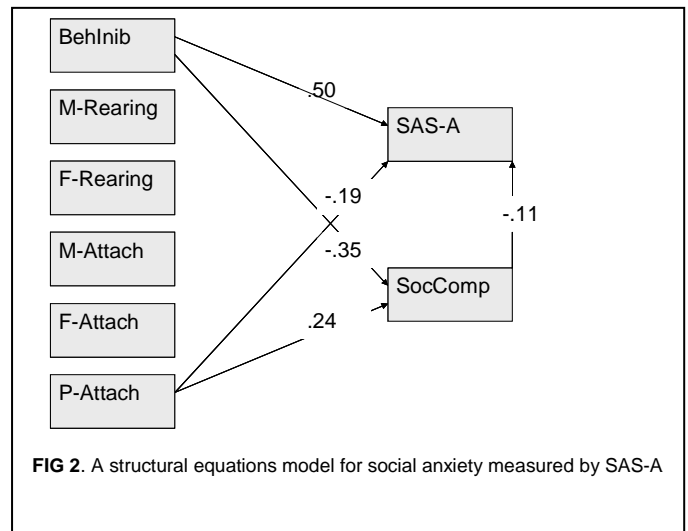


FIG 2. A structural equations model for social anxiety measured by SAS-A

## DISCUSSION

The main results indicate a combined action of behavioural inhibition, social comparison and attachment quality with friends in the prediction of social anxiety, as well as a mediator role of social comparison in the effect of other variables. High scores of behavioural inhibition and a negative perception of attachment experiences with friends contribute to high social anxiety scores, this effect being exerted directly or through social comparison. High scores of behavioural inhibition contribute to a more negative comparison with peers, which lead to high scores of social anxiety. The more negative the perception of the relationship with others (based on lack of confidence, communication, comprehension and non-acceptance), the more negatively the way youths compare themselves with peers, and the more social fears/social anxiety they will have.

Clinical implications:

- The fact that behavioural inhibition has consistently played a relevant role and because this develops early in the life cycle, this could be a warning indicator for a need for vigilance and possible early intervention with these children.
- The relevance of the perception of the quality of the relationships with friends and the way they compare themselves with others showed the importance of the peer context in the comprehension of adolescents' difficulties. Attachment to friends seems to increase the adolescents' self-esteem, by way of a more positive comparison with others and a diminished feeling of social anxiety.
- Nevertheless the family variables (rearing and attachment styles) were not significant in this specific analyse, that does not allow us to conclude that they don't play any role at the level of difficulties maintenance, especially in childhood and adolescence, periods when the family system plays an essential function.

Limitations:

- The use of a transversal methodology that does not allow an interpretation of the results in terms of the causal relations between the variables in study.
- The use of a retrospective measure for the assessment of behavioural inhibition during childhood which can suffer the interference of selective processes and memory bias.
- Additional research is necessary for a better understanding of developmental trajectories of social phobia, especially the study of factors like traumatic experiences with peers, which weren't explored in our study.

## REFERENCES

- Alan, S., & Gilbert, P. (1995). A Social Comparison Scale: Psychometric Properties and Relationship to Psychopathology. *Personal and Individual Differences*, 19, 293-299.
- Armsden, G. C., & Greenberg, M. T. (1987). *The Inventory of Parent and Peer Attachment: Mother, father, and peer attachment (revised edition)*. Department of Psychology: University of Washington.
- Arrindell, W. A., Emmelkamp, P. M., Monsma, A., & Brillman, E. (1983). The role of perceived parental rearing practices in the aetiology of phobic disorders: a controlled study. *British Journal of Psychiatry*, 143, 183-187.
- Cunha, M., Pinto-Gouveia, J., Alegre, S., & Salvador, M. C. (2004). Avaliação da ansiedade na adolescência: A versão portuguesa da SAS-A. *Psychologica*, 35, 249-263.
- Cunha, M., Pinto-Gouveia, J., & Salvador, M. C. (in press). Social fears in adolescence: The Social Anxiety and Avoidance Scale for Adolescents (SAASA). *European Psychologist*.
- Cunha, M., Pinto-Gouveia, J., Salvador, M. C., & Alegre, S. (2004). Medos Sociais na Adolescência: a Escala de Ansiedade e Evitamento de Situações Sociais para Adolescentes (EAESSA). *Psychologica*, 36, 195-217
- La Greca, A. M. (1999). *Manual and instructions for the SASC, SASC-R, SAS-A (Adolescents), and parent versions of the scales*. University of Miami, Coral Gables, Florida.
- Reznick, J. S., Hegeman, I. M., Kaufman, E. R., Woods, S. W., & Jacobs, M. (1992). Retrospective and concurrent self-report of behavioral inhibition and their relation to adult mental health. *Developmental Psychology*, 4, 301-321.