

Chronic idiopathic urticaria and anxiety symptoms

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Abstract

Chronic idiopathic urticaria (CIU) is a frequently disabling disease with a negative influence on the quality of life, and can cause psychopathological symptoms, such as anxiety. Our aim is to study further anxiety symptoms on CIU patients. Both CIU patients and the control group were studied by means of validated scales for psychopathology symptoms, psychological variables and quality of life. In this study, we reported high levels of anxiety symptoms. We found statistically significant correlations between anxiety symptoms, some personality dimensions, insecure attachment styles, alexithymia and with some quality of life dimensions. CIU patients exhibit high levels of psychological distress that could potentiate difficulties at several domains, namely social, emotional, general health perception and interpersonal relationships.

Keywords

anxiety, chronic disease, chronic idiopathic urticaria, emotion regulation, personality, quality of life

Introduction

Urticaria is a common dermatological condition that is characterized by the rapid appearance of wheals (Zuberbier, 2003). Chronic urticaria is defined as the occurrence of daily or frequent wheals and itching for at least six weeks for which no obvious cause has been identified. These can last for years, with the average being three to five years (Greaves, 2000). Forty percent of urticarias lasting more than six months are still present 10 years later and 20 per cent are still present after 20 years (Zuberbier, 2003).

Possible causes such as physical causes, infections, drugs, foods or vasculitic diseases cannot be identified in three-fourths of patients with CU, and these cases are diagnosed as chronic idiopathic urticaria (CIU) (Kulthanan et al., 2007). The diagnosis of CIU excludes other causes of urticaria such as allergies,

autoimmune urticaria and physical urticaria (Kulthanan et al., 2007).

The etiology of CIU remains unclear; there is no trigger or cause found which is responsible for the urticaria. Some authors hypothesize that one of the possible causative factors is psychological distress (Uguz et al., 2008; Weldon, 2006).

Some dermatological conditions, namely psoriasis, atopic dermatitis, urticaria and generalized pruritus, have often been found to be associated

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with psychopathological symptoms such as anxiety (Lyketsos et al., 1985; Uguz et al., 2008; Weldon, 2006). Some studies have reported higher anxiety among patients with dermatological conditions compared with controls (Polenghi et al., 1994), others have been unable to find such differences (Sheehan-Dare et al., 1990).

For patients with CIU, several studies have reported psychiatric co-morbidity, such as depression and anxiety (Hashiro and Okumura, 1994; Staubach et al., 2006; Uguz et al., 2008). Some studies reported an association between psychiatric co-morbidity and quality of life impairment (Staubach et al., 2006; Uguz et al., 2008).

Also, personality traits have been shown to be associated with dermatological conditions. For example, patients with urticaria, psoriasis or alopecia were more hostile and neurotic than people with other dermatological conditions (Chung et al., 2010; Lyketsos et al., 1985), other authors reported more hysteric, interpersonal sensitivity and suspicious personality traits in CIU patients (Pasaoglu et al., 2006).

Psychological disorders involving mood and anxiety symptoms exhibit systematic association with 'negative affectivity' (NA; Clark and Watson, 1991; Watson, 2005), personality traits such as neuroticism (Ormel et al., 2004) and with quality of life (Balcells et al., 2010).

We hypothesize that anxiety symptoms are relatively high in this clinical population, and they could be secondary to: (1) the clinical manifestations of the disease; (2) treatment adaptation; (3) insecure attachment style; (4) emotion regulation deficit and alexithymia; (5) personality traits, as neuroticism.

This study aims to: (1) assess the prevalence of anxiety symptoms in CU patients and, in a second purpose, (2) search for possible associations to anxiety symptomatology, as personality dimensions, attachment style and alexithymia. Finally, (3) we study quality of life in order to understand the incidence of anxiety symptoms and confirm the ecological validity of psychological distress.

Method

Sample

A total of 55 CIU patients were screened and selected consecutively in a specialized Dermatology consultation of a university hospital (Centro Hospitalar Lisboa Norte), during a period of eight months. The data collection started in November 2006 and finished in June 2007.

Only 10 patients refused to participate in the study. Five of these patients present difficulty missing work, and the other five patients lived in a village or city far away and did not have the opportunity to participate. Also, we excluded six patients that presented a long history of psychiatric illness.

Patients were excluded if they had dermatological disorders that were not specified in the inclusion criteria, had a history of long-term psychiatric illness, had marked cognitive impairment and were unwilling or unable to give consent.

We chose a healthy volunteer control group ($N = 31$), from the Portuguese population (from different settings, such as a law firm, a university and a textile firm), who were willing to participate in the study. This group was not representative of the general population. We tried to match with the CIU group; however, we found differences in some socio-demographic variables as described in the results.

The exclusion criteria for the control group were: organic pathology present; chronic illness; an incapacitating illness at the physical level; and current or past psychiatric condition.

Procedure

First, CIU patients were approached by the dermatologists, who assessed if they were willing to participate, and if there was any condition that could compromise their inclusion in this study. Second, the study was explained to the CIU patients. If the patient was willing to participate he had to sign a consent form and then was asked to complete a socio-demographic

questionnaire (sex, age, marital status, ethnicity, occupation, educational level).

Third, the dermatologist referred the patients to the psychiatrist, who proceed with the clinical interview that assessed present and past psychiatric and medical history. Afterwards, the patients filled in the self-report questionnaires in the presence of a psychologist available for help and clarification of questions if required. Sometimes, individuals with low education levels face difficulties in understanding some self-reported questionnaires, so it is important to clarify them.

Participants of the healthy volunteer control group were collected in the Portuguese population. First, they were interviewed by a psychiatrist, and then they were asked to fill in the same self-report questionnaires as the CIU group.

CIU patients were clinically evaluated (how long ago they started noticing the appearance of their first CIU, or most recent allergy and other illnesses) at the same moment (in that week) by the dermatologist, before the psychiatric and psychological evaluation.

The study was approved by the local research ethics committee.

Measures

Hospital Anxiety and Depression Scale (HADS). HADS (Zigmond and Snaith, 1983) is a 14-item self-administered rating scale designed to measure anxiety and depression in physically ill individuals. For each subscale the maximum score is 21. Scores of ≥ 8 represent possible depression or anxiety. The Portuguese version of HADS has been validated by Pais-Ribeiro et al. (2007).

Toronto Alexithymia Scale. Alexithymia was measured with the Toronto Alexithymia Scale (TAS-20) (Taylor and Doody, 1985). This instrument differentiates disordered from healthy people, predicts performance on emotion tasks and correlates with clinician ratings of alexithymia. TAS-20 is a self-measuring questionnaire constituted by 20 items. Total scores ≥ 61

are typically categorized as alexithymic; scores < 51 are nonalexithymic. In addition to the total score, the TAS-20 yields scores for three factor scales: difficulty identifying feelings (DIF), difficulty describing feelings (DDF) and externally oriented thinking (EOT). This scale was adapted and validated for the Portuguese population (Verissimo, 2001).

NEO Five-Factor Inventory. The NEO Five-Factor inventory (NEO-FFI) (Costa and McCrae, 1992), which is the 60-item short form of the NEO Personality Inventory, was used to measure the five-factor model of personality (i.e. neuroticism, extraversion, openness, agreeableness and conscientiousness). Respondents indicate the degree to which they agree or disagree with each statement using a five-point Likert-type scale. The Portuguese version of the questionnaire was developed and validated by Barros (1998).

AAS-R. The Adult Attachment Scale (Collins and Read, 1990) is an 18-item scored on a five-point Likert-type scale, that measures three factors: comfort with closeness; comfort with depending on others; and anxious concern about being abandoned or unloved. Examination of the questionnaire components that had contributed to each of these factors indicated that the dependence and closeness factors contained items drawn from the secure and avoidant attachment style descriptions while the anxious factor contained items drawn from the secure and anxious/ambivalent descriptions. To investigate the dimensional perspective, Collins and Read (1990) used a discriminant analysis technique and identified two significant discriminant functions. The first distinguished the avoidant from the secure and anxious styles and the second distinguished the anxious from the secure and avoidant styles. This scale was translated and validated for the Portuguese population by Canavarro et al. (2006).

Short Form-36 Health Survey. The Short Form-36 Health Survey (SF-36) (Ware et al., 1993) is

the most widely used instrument to assess health-related quality of life. It consists of eight domains (physical function, role function physical, role function emotional, social function, mental health, general health, vitality and pain). The domain scores are rated (range 0–100) so that higher values indicate better health. The SF-36 was validated for the Portuguese population by Ferreira (2000).

Statistical analysis

In a first step we began with univariate statistics to describe the participants' socio-demographic and clinical characteristics, as well anxiety and depressive symptoms. Several bivariate analyses (chi-square, Student's *t*) were conducted for comparison between CIU and control group. First, we checked for differences between CIU patients with moderate anxiety symptoms versus individuals with high anxiety symptoms, using the Mann-Whitney test.

Next, we examined direct associations between anxiety symptoms, socio-demographic variables (age) and psychological and clinical variables with Pearson correlation coefficients.

We also conducted chi-square tests to compare between CIU patients with anxiety symptoms versus CIU patients without anxiety symptoms, with socio-demographic variables (gender, marital status, occupation, educational level). Multiple regression analyses were used to explore which psychological variables (namely, personality traits, attachment style and alexithymia) were more associated with anxiety symptoms.

In this study, we should take in consideration that the small sample size raises concerns with respect to statistical power and type-2 error. Five per cent was chosen as the level of statistical significance. All statistical analyses were conducted using SPSS version 17.

Results

Sample characteristics

Table 1 shows the socio-demographic characterization. For the CIU group the mean age of

the population was 45.25 years old ($SD = 16.12$), half of the patients were employed (50.9%), more than half of the patients were married (63.6%) and level of education was low (47.3 per cent had less than four years of education, and 30.9 per cent had secondary school education).

On average, patients with CIU first noticed their CIU approximately four years ago (mean, 50.26 months; $SD = 78.61$).

We observe homogeneity of both samples in the following variables: age ($t = -1.778$; NS), race ($\chi^2 = .593$; NS), gender ($\chi^2 = 2.029$; NS) and marital status ($\chi^2 = 3.058$; NS). However, we found significant statistical differences between the two groups in: occupation ($\chi^2 = 14.410$; $p < .006$), residence ($\chi^2 = 7.849$; $p < .020$) and education level ($\chi^2 = 23.171$; $p < .000$). In the healthy control group we observe a high percentage of working people, while in CIU patients there is 25.5 per cent who are retired. And, for the education level, the CIU group exhibits lower education.

Anxiety symptoms

In this study, we report a high prevalence of anxiety symptomatology, as presented in Table 1. Almost half of the CIU patients (47.3%) reported severe anxiety symptoms (≥ 11), and 29.1 per cent reported moderate anxiety symptoms (8–10).

We found a significant statistical difference between CIU patients and the control group for anxiety symptoms ($t = 5.574$; $p < .000$) and also with chi-squared analyses ($\chi^2 = 4.966$; $p < .026$).

We also compared CIU patients with moderate anxiety symptoms (8–10) and high anxiety symptoms (≥ 11), and we did find significant statistical differences for TAS-20 total score ($z = -3.685$; $p < .000$); personality dimensions, such as neuroticism ($z = -3.556$; $p < .000$), extroversion ($z = 2.701$; $p < .007$); insecure attachment style, namely, anxious ($z = -2.739$; $p < .006$) and avoidant ($z = -2.689$; $p < .007$); depressive symptoms ($z = -2.855$; $p < .004$); and quality of life dimensions, as

Table 1. Socio-demographic and clinical variables, anxiety and depression symptoms

	Control (N = 31)	CIU (N = 55)	
Age			
Mean $\pm$ SD	39.50 $\pm$ 10.988	45.25 $\pm$ 16.124	$t = -1.778; p < .079$ NS
Limits	23–58	18–79	
Race (%)			
Caucasian	96.8	92.7	$\chi^2 = .593$; NS
Black	3.2	7.3	
Gender (%)			
Male	9.7	21.8	$\chi^2 = 2.029$; NS
Female	90.3	78.2	
Marital status (%)			
Single	29.0	25.5	$\chi^2 = 3.058$; NS
Married	54.8	63.6	
Widowed		3.6	
Divorced	9.7	3.6	
Living together	6.5	3.6	
General state (%)			
Working	83.9	50.9	$\chi^2 = 14.410; p < .006$
Unemployed	3.2	7.3	
Sick leave		7.3	
Retired		25.5	
Other	12.9	9.1	
Residence (%)			
Village	22.6	50.9	$\chi^2 = 7.849; p < .020$
City	77.4	49.1	
Education (%)			
Fewer than 4 years	3.2	47.3	$\chi^2 = 23.171; p < .000$
High school	29.0	30.9	
University	67.7	21.8	
Length of disease (yrs)			
Mean $\pm$ SD		3.84 $\pm$ 3.039	
Limits		1–14	
Anxiety symptoms			
Mean $\pm$ SD	6.03 $\pm$ 2.785	10.38 $\pm$ 3.822	$\chi^2 = 21.374; p < .000$
< 7	71.0	23.6	
8–10	29.0	29.1	
> 11		47.3	
Depressive symptoms			
Mean $\pm$ SD	2.73 $\pm$ 2.271	6.60 $\pm$ 3.933	$\chi^2 = 10.455; p < .005$
< 7	93.4	61.8	
8–10	6.6	27.3	
> 11		10.9	

physical functioning ($z = 2.585; p < .010$), vitality ($z = 2.083; p < .037$), social functioning ($z = -2.064; p < .039$), mental health ($z = -2.918; p < .004$) and general health perception ($z = 2.267; p < .023$).

We used a chi-square test to compare CIU patients without (HADS anxiety score < 7) and

with high anxiety symptoms (HADS anxiety score ≥ 11), and we found no statistical differences for: gender ($\chi^2 = .435; p < .933$); marital status ($\chi^2 = 10.581; p < .565$) and occupation ($\chi^2 = 15.079; p < .237$). But we did find significantly statistical differences for educational level ($\chi^2 = 15.468; p < .017$).

Correlations between anxiety symptoms, psychological variables and quality of life dimensions

Within the CIU group, anxiety symptoms were significantly correlated with alexithymia total score ($r = .642$; $p < .000$), and with TAS-20 DIF ($r = .632$; $p < .000$), DDF ($r = .472$; $p < .000$) and EOT ($r = .443$; $p < .001$).

We also noticed significant statistical correlations with personality dimensions, namely neuroticism ($r = .744$; $p < .000$), extroversion ($r = -.572$; $p < .000$) and openness ($r = -.377$; $p < .005$); as well with insecure attachment styles, as anxious ($r = .498$; $p < .000$) and avoidant ($r = .369$; $p < .006$).

Furthermore, we reported negative statistical correlations between anxiety symptoms and quality of life dimensions, specifically physical functioning ($r = -.555$; $p < .000$), social functioning ($r = -.468$; $p < .000$), role physical ($r = -.423$; $p < .001$), role emotional ($r = -.490$; $p < .000$), mental health ($r = -.744$; $p < .000$), bodily pain ($r = -.395$; $p < .003$), vitality ($r = -.544$; $p < .000$) and general health perception ($r = -.600$; $p < .000$).

However, we did not find a significant statistical correlation with length of disease ($r = .079$; NS).

Multiple regression analysis

Multiple regression analysis was performed; anxiety symptoms served as the dependent variable, and depressive symptoms, some personality dimensions, alexithymia and insecure attachment style were entered as independent variables. As observed in Table 2, we found neuroticism was the only variable that predicted anxiety symptoms. The other variables were removed from the multiple regression.

Discussion

We found a high prevalence of anxiety symptoms in CIU patients, as expected by the reports of other studies (Lyketsos et al., 1985; Polenghi

Table 2. Multiple regression analysis

Model	Beta	T	$p <$	Adjusted R square	Durbin-Watson
Anxiety symptoms Neuroticism (NEO-FFI)	.560	3.915	.000	.556	1.754

et al., 1994; Weldon, 2006). We reported a high prevalence of severe anxiety symptoms (47.3%), but also a significant percentage (29.1%) of moderate anxiety symptoms. This result underscores the psychological suffering experienced by CIU patients.

In our study, we observe that CIU patients with severe anxiety symptoms have lower education levels than patients without anxiety symptoms. Also, the CIU group presented a low education level (47.3 per cent, less than four years of education). Another important finding in relation to these results is the heterogeneity of both samples in the social-demographic variable education, with the healthy volunteer control group presenting a higher education level (3.2 per cent, less than four years of education). So, education can have an important role in anxiety symptoms in CIU patients.

Another important feature of the CIU group is that 50.9 per cent of these patients live in rural areas. As some CIU patients may present some difficulties in understanding the disease, and finding adequate coping skills to deal with it, this increases the emergence of anxiety symptoms, because the patient feels unable to cope. We hypothesize that CIU patients that are better informed, and that have a good comprehension of CIU, report less anxiety symptoms. However, we should deepen our knowledge, studying the relationship between information and comprehension of CIU and coping with the disease.

Why this high prevalence of anxiety symptoms? We observe several significant associations that may give some insight about this, and can elect some reasons why CIU patients are anxious to a pathological level, particularly: difficulties in coping with the disease; impact of

the disease and treatment in their life; difficulties in interpersonal relationships (either with a partner, family or circle of close friends); difficulty in management and regulation of emotions; occurrence of psychiatric disturbances or syndromes (such as depression or anxiety); and characteristics of the person like personality traits.

We report a negative significant association between anxiety symptoms and the dimensions of quality of life. This result could be interpreted from several perspectives: on a first approach, the occurrence of anxiety symptoms potentiates worse coping, acceptance and living with CIU, leading to quality of life impairment. A patient with anxiety could understand and face the disease, treatment and physical symptoms with great amounts of distress and anguish, as showed by worse results in the dimensions of quality of life, as observed in several studies (Balcells et al., 2010; Staubach et al., 2006; Uguz et al., 2008; Weldon, 2006), and also justified by the high levels of anxiety symptoms. A further important result is that CIU patients who exhibit more anxiety symptoms (> 11), report worse scores on some dimensions of quality of life, particularly physical, emotional and general health perception.

Another hypothesis is that quality of life impairment, imposed by the disease and its treatment, may lead to a higher prevalence of anxiety symptoms, due to the concern about health, and the worsening of symptoms and clinical evolution. As we know poor quality of life in CIU patients leads to psychological distress (Staubach et al., 2006; Weldon, 2006; Zachariae et al., 2004), and to a restriction on several levels, including physical, psychological, social and spiritual, as observed in this study.

The experience of physical discomfort, may lead to a constant concern in the present, and for the future. The occurrence and recurrence of physical symptoms (e.g. itching) may lead to a heightened state of emotional tension, enhancing anxiety symptoms, in which an individual feels constantly under threat, and often, the fact that there is no reduction in symptoms, can lead to a boost in feelings of distress and anxiety

(Weldon, 2006). In our study, the correlation between role physical and anxiety symptoms underlines that the limitations experienced in the physical domain potentiate anxiety.

In CIU there are several physical symptoms that can be inducers of stress, or enhance anxiety symptoms, including: itching, depending on the intensity and frequency of the symptomatology; the occurrence of wheals, can cause an alteration in body image, especially if it is on visible body parts; fatigue, often due to antihistamines leads to a limitation of the everyday life activities (Goetz et al., 1989); and pain syndromes and insomnia, increasing psychiatric symptoms such as depression and anxiety (Weldon, 2006). In this study, we reported negative correlations between bodily pain and vitality with anxiety symptoms, underlining the association between physical symptoms and anxiety symptomatology.

Zachariae et al. (2004), state that it is not the disease itself, but its impact on daily activities and social relationships that is associated with increased psychiatric comorbidity. As can be seen in Table 1, our population is young and is in an active phase, so these physical symptoms may influence their professional life, and subsequently their emotional well-being, as observed in the correlation between the social and physical domain of quality of life (physical functioning and role physical) and anxiety symptoms.

We have found significant positive statistical associations between anxiety symptoms and both insecure attachment styles, anxious and avoidant. So, in our sample of CIU patients, insecure attachment style potentiates the occurrence of anxiety symptoms. This result underlines how these patients are related to the people around them, including the partner, close family bonds and close friends, as well as with the dermatologist.

Several authors have addressed the often decisive impact of the disease or its symptoms in the social domain of CIU patients, which can lead to serious difficulties and thus leverage psychological distress (O'Donnell et al., 1997;

Zachariae et al., 2004). In our study, we found a significant statistical correlation between social functioning and anxiety symptoms, reinforcing the results of the studies mentioned above. An insecure attachment style may reinforce the difficulties in the social area, coupled with impaired physical symptoms; CIU patients can greatly become seriously compromised at a psychological and emotional level, without having social coping strategies to overcome the problems they face.

Social support is an important variable in patients facing a chronic disease (Rutter and Quine, 1996) such as CIU. When the symptoms that compromise their physical condition erupt many patients seek out care for social support, such as from close family members or friends, but also from the dermatologist, other physicians and nurses. The attachment style they adopt can prove to be crucial to realize the dynamics of the relationships of these patients, particularly with the dermatologist, and can provide relevant information about how these patients relate to the social network. Thus, we can provide more appropriate and better decisions on their complaints and concerns and understand their motivations and forms of expression.

The correlation found between anxiety symptoms and alexithymia, is described in several studies (Galderisi et al., 2008; Marchesi et al., 2005). Alexithymia refers to a constellation of related affective and cognitive characteristics, including difficulty identifying feelings and distinguishing them from bodily sensations, difficulty describing feelings and a preference for externally oriented thinking rather than psychological introspection (Taylor and Bagby, 1988). For patients with CIU, we believe that the greatest difficulty is the description and expression of emotions and may lead to an accumulation of tension that is not mentalized and may enhance the occurrence of anxiety symptoms.

One aspect that may be related to the previous result is the relationship between dimensions of personality and anxiety symptoms, particularly the relationship with neuroticism. The experience of negative emotions can

intensify (Samuel and Widiger, 2008) the occurrence of anxiety symptoms. Moreover, in the definition of the neuroticism scale from the questionnaire NEO-FFI, anxiety is referred to as part of a set of emotions experienced (Samuel and Widiger, 2008). The relevance of neuroticism is evident, and expresses in the model of multiple linear regression, as the only variable that predicts anxiety symptoms.

The results of multiple linear regressions reflect the impact of personality traits, which are maintained over time, and that often are crucial in how we live and adapt to new situations, as is the case of a chronic disease.

This study has several limitations, which may be decisive in the interpretation and extrapolation of results, in particular, the failure to have used a specific instrument for assessing anxiety, such as the STAI. The election of HADS was due to the fact that, although patients are not admitted, we continue to work in a hospital, and we have used the HADS in various chronic diseases and psychiatric disorders, with good results. Another limitation is the small sample size and the failure to evaluate these patients along and see the development of anxiety symptoms, especially with the occurrence of new crises of urticaria.

A limitation concerns the way we assess anxiety symptoms through self-report questionnaires. We suggest the importance of using other forms of assessment, for example, through clinical interviews that allow us to access the experience of anxiety symptoms and enrich study.

Most psychopathological symptoms dimensions tend to be significantly inter-correlated with each other, and it constitutes a limitation of the interpretation of our results, because it is difficult to assess anxiety symptoms without interference of other variables, and this should be taken into consideration when interpreting the results.

Another relevant limitation was the cross-sectional design, because one of our aims was to identify predictors of psychiatric symptoms. A longitudinal design would have yielded more

interesting results, and in future research, we will pursue this objective.

Another limitation is the heterogeneity of samples regarding socio-demographic variables, namely, occupation, residence and education level, that could interfere with the interpretation of the results.

In this study we observed a significant prevalence of anxiety symptoms in patients with CIU, more than depressive symptoms. From the comprehensive study of anxiety symptoms, we observed significant associations with dimensions of personality, insecure attachment styles, alexithymia, as well as with quality of life dimensions. These results underscore the importance of accessing psychosocial variables to understand better CIU patients.

In the clinical contact with a CIU patient presenting anxiety symptoms, we should take into consideration: which are the prominent personality traits (neuroticism, extroversion); how they relate to their social network (partner, family members, close friends), how do they seek social support, and how do they ask for help; and how do they deal with the emotions and how they express them to others, and particularly to the physician.

The results of this study are relevant to the clinical management of these patients, and stress the importance of psychotherapeutic intervention and a comprehensive, multidisciplinary approach to these patients, in order to provide a stable and consistent support, to minimize anxiety symptoms or their relationship difficulties.

Competing Interests

None declared.

References

- Balcells E, Geal J, Ferrer J, et al. (2010) Factors affecting the relationship between psychological status and quality of life in COPD patients. *Health and Quality of Life Outcomes* 8:108.
- Barros AM (1998) Os valores e o modelo dos cinco factores da personalidade: aplicação de dois instrumentos de medida a uma amostra de adultos trabalhadores. Tese de Mestrado em Psicologia, Universidade de Lisboa, Lisboa.
- Canavarro MC, Dias P and Lima V (2006) A Avaliação da Vinculação do Adulto: Uma Revisão Crítica a Propósito da Aplicação da Adult Attachment Scale-R (AAS-R) na População Portuguesa. *Psicologia XX* (1): 11–36.
- Chung MC, Symons C, Gilliam J and Kaminski ER (2010) The relationship between posttraumatic stress disorder, psychiatric comorbidity, and personality traits among patients with chronic idiopathic urticaria. *Comprehensive Psychiatry* 51(1): 55–63.
- Clark LA and Watson D (1991) Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology* 100(3): 316–336.
- Collins NL and Read SJ (1990) Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology* 58: 633–644.
- Costa PT and McCrae RR (1992) *NEO PI-R: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Ferreira PL (2000) Criação da versão portuguesa do MOS SF-36. Parte I – Adaptação Cultural e Linguística. *Acta Médica Portuguesa* 13: 55–66.
- Galderisi S, Mancuso F, Mucci A, Garramone S, Zamboli R and Maj M (2008) Alexithymia and cognitive dysfunctions in patients with panic disorder. *Psychotherapy and Psychosomatics* 77(3): 182–188.
- Goetz D, Jacobson JM, Murnane JE, Reid MJ, Repperger DW and Goodyear C (1989) Prolongation of simple and choice reaction times in a double-blind comparison of twice-daily hydroxyzine versus terfenadine. *Journal of Allergy and Clinical Immunology* 84: 316–322.
- Greaves M (2000) Chronic urticaria. *Journal of Allergy and Clinical Immunology* 105(4): 664–672.
- Hashiro M and Okumura M (1994) Anxiety, depression, psychosomatic symptoms and autonomic nervous function in patients with chronic urticaria. *Journal of Dermatological Science* 8(2): 129–135.
- Kulthanan K, Jiamton S, Thumpimukvatana N and Pinkaew S (2007) Chronic idiopathic urticaria: Prevalence and clinical course. *Journal of Dermatology* 34: 294–301.
- Lyketsos GC, Stratigos GC, Tawil G, Psaras M and Lyketsos CG (1985) Hostile personality characteristics, dysthymic states and neurotic symptoms in urticaria, psoriasis and alopecia. *Psychotherapy and Psychosomatics* 44: 122–131.

- Marchesi C, Fonto S, Balista C, Cimmino C and Maggini C (2005) Relationship between alexithymia and panic disorder: A longitudinal study to answer an open question. *Psychotherapy and Psychosomatics* 74(1): 56–60.
- O'Donnell BF, Lawlor F, Simpson J, Morgan M and Greaves MW (1997) The impact of chronic urticaria on the quality of life. *British Journal of Dermatology* 136(2): 197–201.
- Ormel J, Rosmalen J and Farmer A (2004) Neuroticism: A non-informative marker of vulnerability to psychopathology. *Social Psychiatry and Psychiatric Epidemiology* 39(11): 906–912.
- Pais-Ribeiro J, Silva AM, Meneses RF and Falco C (2007) Validation of a Portuguese version of the Hospital Anxiety and Depression Scale. *Psychology, Health & Medicine* 12(2): 225–237.
- Pasaoglu G, Bavbek S, Tugcu H, Abadoglu O and Misirliligil Z (2006) Psychological status of patients with chronic urticaria. *Journal of Dermatology* 33(11): 765–771.
- Polenghi MM, Molinari E, Gala C, Guzzi R, Garutti C and Finzi AF (1994) Experience with psoriasis in a psychosomatic dermatology clinic. *Acta Dermato-Venereologica, Supplementum* 186(Suppl.): 65–66.
- Rutter D and Quine L (1996) Social psychological mediators of the relationship between demographic factors and health outcomes: A theoretical model and some preliminary data. *Psychology and Health* 11(1): 5–22.
- Samuel DB and Widiger TA (2008) A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review* 28(8): 1326–1342.
- Sheehan-Dare RA, Henderson MJ and Cotterill JA (1990) Anxiety and depression in patients with chronic urticaria and generalized pruritus. *British Journal of Dermatology* 123(6): 769–774.
- Staubach PG, Eckhardt-Henn A, Dachene M, et al. (2006) Quality of life in patients with chronic urticaria is differentially impaired and determined by psychiatric comorbidity. *British Journal of Dermatology* 154(2): 294–298.
- Taylor GJ and Bagby B (1988) Measurement of alexithymia: Recommendations for clinical practice and future research. *Psychiatric Clinics of North America* 11(3): 351–366.
- Taylor GJ and Doody K (1985) Verbal measures of alexithymia: What do they measure. *Psychotherapy and Psychosomatics* 43(1): 32–37.
- Uguz F, Engin B and Yilmaz E (2008) Axis I and Axis II diagnoses in patients with chronic idiopathic urticaria. *Journal of Psychosomatic Research* 64(2): 225–229.
- Verissimo R (2001) Versão portuguesa da Escala de Alexitimia de Toronto de 20 itens – I. *Acta Médica Portuguesa* 14: 529–536.
- Ware JE, Snow KK, Kosinski M and Gandek B (1993) *SF-36 Health Survey Manual and Interpretation Guide*. Boston, MA: The Health Institute, New England Medical Center.
- Watson D (2005) Rethinking the mood and anxiety disorders: A quantitative hierarchical model for DSM-V. *Journal of Abnormal Psychology* 114(4): 522–536.
- Weldon D (2006) Quality of life in patients with urticaria. *Allergy & Asthma Proceedings* 27(2): 96–99.
- Zachariae R, Zachariae C, Ibsen HH, Mortesen JT and Wulf HC (2004) Psychological symptoms and quality of life of dermatology outpatients and hospitalized dermatology patients. *Acta Dermato-Venereologica* 84(3): 205–212.
- Zigmond AP and Snaith RP (1983) The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica* 67(6): 361–370.
- Zuberbier T (2003) Urticaria. *Allergy* 58(12): 1224–1234.