

Development of a Questionnaire to Evaluate Coping Strategies for Skin Problems

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The aim of this work was to develop an instrument (Coping Strategies for Skin Problems Questionnaire) suitable for identifying the coping strategies people use for general skin problems. We analyzed its psychometric properties when applied to a sample of 299 individuals. Factor analysis shows a 6-factor structure referring to the wish to change, problem-solving strategies, the search for information and asking for social support, the ability to distance oneself from the problem and to see the positive aspects of the situation. These factors explain 60.77% of the variance and show an internal consistency higher than 0.67. We analyse the validity of the questionnaire and identify different coping profiles depending on the degree of skin damage as assessed by the participants and their search for health services. According to the psychometric properties obtained, we conclude that our instrument is valid and reliable for use with people presenting skin problems.

Keywords: coping strategies, questionnaire, skin problems, validity

El objetivo de este trabajo es desarrollar un instrumento (Cuestionario de Estrategias de Afrontamiento ante problemas de la piel) para identificar las estrategias de afrontamiento que se utilizan frente a problemas dermatológicos. Se analiza sus propiedades psicométricas, aplicado a una muestra de 299 personas. El análisis factorial mostró una estructura en seis factores que hacen referencia a deseos de cambio, estrategias de solución del problema, búsqueda de apoyo social y de información, capacidad de distanciarse y de considerar los aspectos positivos de la situación. Estos factores explican el 60.77% de la varianza y muestran consistencias internas superiores a 0.67. Se analiza la validez del cuestionario, obteniendo perfiles de afrontamiento distintos en función del daño en la piel valorado por los participantes y la realización de consultas profesionales. Las propiedades psicométricas obtenidas permiten concluir que el instrumento evaluado es válido y fiable para personas que presentan alteraciones en la piel.

Palabras clave: estrategias de afrontamiento, cuestionario, problemas dermatológicos, validez

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Skin conditions have a strong influence on daily routines, self-esteem, and quality of life. Skin problems such as psoriasis, acne, baldness or onychomycosis give rise to serious functional and psychosocial problems that tend to persist (Badía, Mascaró & Lozano, 1999; Drake et al., 1999; Niemeier, Kupfer, Demmelbaueer-Ebner, Stangier, Effendy & Gieler, 1998). For some authors, the effects on quality of life are directly related to the severity and duration of the problem (Drake et al., 1999; Mazzotti, Picardi, Sampogna, Sera, Pasquín & Abeni, 2003). For others, however, the influence of dermatological diseases on well-being is modulated by the coping strategies people use to manage the stress produced by the pathology and its treatment (Miller & Cronan, 1998; Schmid-Ott et al., 2005). The aim of this work was to develop an instrument that would allow us to identify coping strategies used by people with dermatological problems in general.

Lazarus and Folkman (1986) defined coping as “constantly changing cognitive and behavioural efforts to manage, reduce or tolerate external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 164). Coping has been conceptualized as a trait or a personal style for dealing with stress, as well as a process. When coping is viewed as a trait it refers to those thinking patterns and actions an individual habitually uses to solve problems, and people are classified according to their own usual coping styles. Thus, coping style is understood as the personal disposition towards dealing with potentially stressful agents (Byrne, 1964; Kohlmann, 1993; Penley, Tomaka & Wieve, 2002). From this perspective, measurement procedures involve presenting subjects with a set of sentences that express the kind of thoughts and behaviour people use when facing problems, and then asking them about the extent to which they use these ways of coping.

However, coping, as a process, has had a greater impact. From this viewpoint, coping implies a permanent and ongoing effort to respond to the demands of a stressful situation (Roussi & Vassilaki, 2001). This process-oriented perspective argues that knowing how a person manages stress in general terms reveals very little about how such a person will face a specific stressful event. Measurement procedures used within this perspective involve asking subjects to focus on a stressful event within a given context (for example, an academic examination, a physical disease, a surgical operation or a problem at work) that has taken place at a certain time, normally during the previous week or month. They are later asked to answer some questions referring to this particular stressor.

In this sense, coping is understood as a dynamic process where different strategies are triggered depending on changes in the environment and in the perception of the situation (Rodríguez-Marín, Pastor & López-Roig, 1993). The coping strategies used by a person depend on factors related to the situation—especially variability and controllability—and on relevant individual factors such as self-esteem or perceived

resources (Folkman, 1982; Lazarus, 1993; Park, Armeli & Tennen, 2004).

Where coping with skin problems is concerned, research directly aimed at analysing the coping strategies used by such people is limited. It has mainly focused on psoriasis and has used a wide variety of measurement procedures frequently based on responses to items that are analyzed separately. Consequently, the data we currently have can hardly be compared or generalized.

By way of example, Rapp, Cottrell and Leary (2001) point out that social coping strategies are a determining factor regarding the impact of psoriasis on the quality of life. However, they do not obtain a factor structure that can be interpreted, which means that they analyse each one of the seven coping strategies separately. Neither are the results of Wahl et al. (1999) conclusive. These authors find that patients who use strategies centred on optimism and who try to lead a normal life present better mental health. On the other hand, they note that patients using emotional coping strategies present more health-related problems and decreased well-being. Analysing interviews with 50 bald patients, Schmidt et al. (2001) drew more specific conclusions, but at the expense of creating a taxonomy of coping patterns that included two adaptive and two non-adaptive patterns which, rather than coping strategies, refer to the psychological problems derived from this kind of disease. Furthermore, patients are always classified into just one of these four patterns, while the remaining three are unused. Scharloo et al. (2000) carried out a longitudinal study of 69 patients suffering from psoriasis using a methodology that aimed at testing the effect of time on the use of coping strategies. According to their observations, patients who developed coping strategies characterized by a greater expression of their emotions, the search for social support and entertainment, and a lower degree of passive adaptation, needed fewer therapy sessions, were less anxious and depressed, and presented better physical health after 1 year. Fortune et al. (2002) found that coping strategies modulated anxiety responses to psoriasis and were related to concern about the disease. However, they also found that coping had a negligible relationship with the evaluation of stress and the severity of the psoriasis. Schmid-Ott et al. (2005), on the other hand, used the QES (Questionnaire on Experience with Skin Complaints) to assess the level of adaptation to illness in patients with psoriasis over a 1-year period. This tool measured coping through six factors: “Interference of skin symptoms and self-esteem”, “Outward appearance and situation-caused retreat”, “Rejection and devaluation”, “Composure”, “Concealment”, and “Experienced refusal”. However, in their results, they refer to this measurement as an indicator of stigmatization or adaptation. At other times, general scales have been used and linked to patients’ quality of life (Kozora, Ellison, Waxmonsky, Wamboldt & Patterson, 2005; Finzi et al., 2007). These scales, however, measure generally coping with any situation, thereby obtaining a coping style rather than a process.

Despite the instrument's limitations and the ambiguous nature of the conclusions arrived at regarding disease-related coping strategies studies, it seems clear that the relationship between skin pathology and patients' general well-being is conditioned by the way they deal with their health problem. Given that skin issues play such a key role in the quality of life, researchers should study dermatological disorders via specific strategies and techniques to arrive at far more conclusive results. Scales should be validated within the specific domain researchers wish to measure. However, such domains should not be so specific as to prevent the comparison of results or different problems in a single area.

This is precisely the purpose of our research: to validate an instrument that will enable us to identify the multidimensional profile of coping in the face of different dermatological disorders, based on existing scales and in line with the proposal by Roussi and Vassilaki (2001) of contextualizing coping measures.

Method

Participants

Two hundred and ninety-nine people participated in this study with ages ranging from 17 to 82 years, with a mean age of 31.48 years ($SD = 14.42$); 65.4% were females and 34.6% males. University students represented 46.8% of the sample, 33.8% had a paid job, and the remaining 19.4% were unemployed, retired or housewives. 65.9% were single, 25.4% were married and 8.7% were divorced or widow/ers. 68% had no children and the rest had between 1 and 4 children.

Instruments

Two instruments were used, both of which form part of a research project to evaluate quality of life and coping strategies. The first is a scale to identify dermatological symptoms and behaviours related to these problems. The second is the core of this work and consists of a questionnaire dealing with the different aspects of the skin problems that most affected participants and their coping strategies.

Identification of skin symptoms scale

This scale consisted of 26 labels for dermatological problems (see Table 1 in Results) and a 6-point scale which participants used to describe to what extent they had suffered from each of the problems during the previous month. We selected the different skin problems that met the following requirements: a) they were fairly typical; b) the descriptions were simple and did not require previous dermatological knowledge to evaluate their presence; and c) they were not necessarily a serious pathology, but in their most aggressive manifestation could affect people's lifestyles. Subsequently,

participants had to choose the problem that would have the most effect on their lives and answer two questions. The first question referred to the level of skin damage produced by the disorder. Subjects assessed this using a 5-point scale. The second question aimed to discover whether or not they had sought medical care in order to solve the problem. Replies were used to validate the coping strategies instrument.

Studies on the reliability and validity of self-reported skin diseases have shown the suitability of this procedure as an instrument for diagnosis and research. Thus, SAPASI, a procedure for self-evaluating psoriasis using a drawing of a human outline and standard descriptions, has a widely tested level of reliability and validity (Feldman et al., 1996; Mazzoti et al., 2003; Rapp et al., 2001; Schmid-Ott et al., 2005). Similarly, patients' self-evaluation and subsequent clinical examinations were compared, yielding a high match regardless of the self-evaluation procedure, the type of disorder, or patients' characteristics (Löffler, Dickel, Kus, Diepgen & Effendy, 2001; Yeung, Teo, Xiang & Chan, 2002).

Coping strategies for skin problems questionnaire

While this instrument was being developed, we thought it advisable to include a large number of sentences that would describe all the thinking patterns and behaviours involved in facing skin disorders as exhaustively as possible. We collected 80 sentences that initially made up the questionnaire from three instruments that measure coping: Chorot and Sandín's Scale of Coping Strategies (published in Ojeda, Ramal, Calvo & Vallespín, 2001); the version of Ways of Coping Checklist developed in 1985 by Vitaliano et al. (1985) and adapted to Spanish (Rodríguez-Marín, Terol, López-Roig & Pastor, 1992); and Fleishman and Fogel's Scale (1994). The first scale was chosen because it evaluated coping with all stressful situations in the previous two years, and the second as it assessed coping with the most stressful event in the previous month. However, the third scale was chosen to measure coping with a specific problem: AIDS. Moreover, the first two scales are questionnaires in Spanish that are often used for research into coping. For the Fleishman and Fogel scale, the selected items were translated by the researchers. These instruments show a high degree of internal consistency and a suitable degree of content and discriminating validity.

Once the participants had chosen a problem from the Identification of Skin Symptoms Scale, they had to state to what extent they used the coping strategy described in each sentence. We used a 5-point scale that ranged from "Never" (1) to "Almost always/most of the time" (5).

Procedure

Psychology students were asked to fill in the questionnaires ($n=140$). They received no academic credits or financial recompense. In addition, 108 of these students

were trained to administer the questionnaires individually to an incidental sample of non-university participants, who were selected according to gender and age range quotas ($n=159$). These interviewers, however, did receive academic credits for their collaboration. No significant differences were found between both procedures, in the answers to the items of the questionnaire.

Statistical analyses

Given the high number of initial items in our questionnaire we performed a strict screening of the data in three steps: a study of the univariate outliers in relation to standard extreme scores; an analysis of normal distribution with the Kolmogorov-Smirnov test; and an exploration of the discriminative capacity of the items by calculating Pearson's correlation between the item and the whole scale (Tabachnick & Fidell, 1989). On the items fulfilling the previous criteria, we carried out a principal components factor analysis and Promax oblique rotation with kappa equal to 4 (Russel, 2002). The Promax oblique rotation was used because coping factors are generally moderately correlated. Moreover, it can be calculated more quickly than direct oblimin rotation, which makes it useful for large sets of data.

Finally, in order to validate the Coping Strategies for Skin Problems Questionnaire, we chose the known-group

validity procedure (Zeller & Carmines, 1980), segregating the groups according to responses to the questions about skin damage produced by the disorder and whether participants had sought medical care. We performed a profile analysis with repeated measures analysis of variance on these groups.

Results

The most frequently selected problems were the presence of "spots" and "black heads" on the face, scalp problems, skin sensitivity, and cellulite (Table 1). Cracked skin, scabies, and lice were never selected. We now describe the factor structure obtained and the internal consistency of each factor. We also show the results regarding the validity of the instrument.

Structure of the Coping Strategies for Skin Problems Questionnaire

We eliminated 23 items that were univariate outliers, following the criteria of not accepting typical scores higher than ± 3 (Tabachnick and Fidell, 1989). We also eliminated 21 items that had a discrimination index lower than 0.40, calculated using Pearson's correlation between the item and the rest of the scale. In the factor analysis, we obtained a coefficient of sampling adequacy (KMO) of 0.913 and $\chi^2(630)=5567.632$,

Table 1

Frequency and percentage of participants regarding the skin problems that most affect their life

Problem	Frequency	Percentage
Spots, blackheads, or cysts on the face	45	15.1
Skin sensitive to the sun	29	9.7
Cellulite	26	8.7
Losing hair or absence of hair from the scalp	23	7.7
Dry skin	22	7.4
Dandruff and/or greasy hair	21	7.0
Hairiness	18	6.0
Stretch marks	13	4.3
Excess sweating	12	4.0
Itchy skin	12	4.0
Scars or marks on the body	10	3.3
Varicose veins	10	3.3
Scars or other marks on the face	9	3.0
Herpes	7	2.3
Scaly red plaque	6	2.0
White spots	6	2.0
Dark spots	5	1.7
Warts	3	1.0
Skin sensitive to clothes and/or cosmetics	2	0.7
Moles	2	0.7
Freckles	2	0.7
Fungi	2	0.7
Others	14	4.7

Table 2

Factors, eigenvalues and loadings of the items, item-factor correlation, internal consistency of the factors, and internal consistency of the factors when items are eliminated

Factors and items	Loading	Item-factor correlation	Alfa without item
FACTOR 1: WISHFUL THINKING ev: 11.9; $\alpha = .87$			
12. I wish things had been different (h ² : .78)	.88	.73	.84
10. I wish I could change what has happened to me (h ² : .76)	.83	.76	.83
11. I wish I could change the way I feel (h ² : .75)	.81	.78	.83
9. I wish I was a stronger person (h ² : .61)	.70	.67	.85
49. I self-criticize or blame myself (h ² : .60)	.53	.52	.86
76. I have cried (h ² : .61)	.46	.55	.86
FACTOR 2: SOLUTIONS SEEKING ev: 3.1; $\alpha = .90$			
15. I have regular medical check-ups (h ² : .80)	.97	.73	.88
17. I have sought medical care (h ² : .86)	.95	.85	.85
77. I have followed medical treatment (h ² : .75)	.93	.77	.87
20. I have spoken to someone who can do something about the problem. (h ² : .72)	.62	.73	.88
18. I have created an action plan and have followed it (h ² : .67)	.45	.66	.89
FACTOR 3: SOCIAL SUPPORT SEEKING ev: 2.5; $\alpha = .82$			
74. I ask relatives and friends to help me to think about the problem (h ² : .69)	.87	.59	.82
7. I have spoken to someone about how I feel (h ² : .68)	.78	.69	.80
73. I have explained my problem to friends and family (h ² : .68)	.78	.68	.80
16. I have accepted empathy and support from someone (h ² : .67)	.57	.59	.82
5. I have asked for advice from someone I respect and have followed it (h ² : .69)	.45	.61	.82
FACTOR 4: INFORMATION SEEKING ev: 1.7; $\alpha = .83$			
55. I try to analyse the causes of the problem to understand it better (h ² : .66)	.73	.65	.79
35. I listen to the radio, watch television or read about the problem (h ² : .60)	.72	.61	.81
34. I have tried to gain more information on the problem (h ² : .74)	.68	.72	.75
80. I try to view the situation from different standpoints (h ² : .68)	.66	.65	.79
FACTOR 5: POSITIVE THINKING ev: 1.4; $\alpha = .76$			
45. I am sure something good will happen (h ² : .57)	.58	.47	.67
44. I tell myself things that make me feel better (h ² : .63)	.57	.53	.63
31. I have focused on the better things in my life (h ² : .57)	.57	.53	.64
69. I try to see the positive aspects of the situation (h ² : .58)	.54	.48	.67
46. I try to find someone to cheer me up when I feel down (h ² : .60)	.46	.54	.71
FACTOR 6: DISTANCING ev: 1.1; $\alpha = .67$			
70. I try to ensure that the problem does not interfere with other aspects of my life (h ² : .63)	.83	.49	.52
39. I try to keep calm (h ² : .56)	.58	.44	.59
72. I apply specific solutions to cope with the problem (h ² : .64)	.49	.46	.56
65. I try not to think about the problem (h ² : .66)	.51	.39	.65

$p \leq .001$ with Bartlett's test of sphericity. The anti-image correlation matrix showed MSA values higher than 0.70 for each variable, and 69.20% of the scores were lower than 0.1. We selected the factors with an eigenvalue higher than 1 and the items with a loading higher than 0.40. The solution obtained grouped the items into eight factors that explained 66.88% of variance. However, the last two factors were not considered as they had only two items each. Table 2 shows the final six factors, with the eigenvalues and the internal consistency of each, and the communality of each item.

The first factor, with an eigenvalue of 11.9, consists of 6 items expressing the wish that the situation had never arisen and/or its consequences had been different, as well as feelings of sadness and guilt. The internal consistency of this factor was 0.87, and it was called Wishful Thinking. The second factor consists of 5 items dealing with seeking medical care as a way of finding solutions to the problem and managing it. This factor, called Solutions Seeking, has an eigenvalue of 3.1 and a Cronbach alpha of 0.90.

The third factor, with an internal consistency of 0.82, was called Social Support Seeking and refers to ways of getting closer to other people in order to solve the problem or feel better. It consists of 5 items with an eigenvalue of 2.5. The fourth factor, called Information Seeking, is made up of 4 items dealing with strategies aiming at finding information and ways to understand the problem. This factor has an eigenvalue of 1.7 and an internal consistency of 0.83.

The fifth factor was called Positive Thinking, consisted of 5 items, and has an eigenvalue of 1.4. This refers to taking into consideration the positive aspects of the situation. Cronbach's alpha was 0.76. The sixth factor, Distancing, has an eigenvalue of 1.2 and consists of 4 items. It refers to strategies for relativizing the problem so that it does not interfere with other areas of life. Its internal consistency was 0.67. Table 3 shows the correlation matrix among all the factors (intercorrelation factors).

Validity of the Coping Strategies for Skin Problems Questionnaire

We created groups based on the responses given to the questions about skin damage and the search for medical care. These important questions aimed to evaluate skin conditions

from a physical (skin damage) and behavioural perspective (search for medical care). The relevance of these questions lies in the fact that people who consider their skin condition serious will experience the situation as more problematic and suffer greater stress than those people who think the condition has little effect on them (Fortune et al., 2002). A similar situation arises regarding whether or not participants have decided to seek medical care, as doing so means that they consider the condition requires specialist services. Taking all this into account, we expected people who consider their skin condition as severe, as well as those who visit health professionals, to make more use of coping strategies.

Two profile analyses were carried out with repeated measures analysis of variance. To this end, we first obtained the direct scores for each factor in the questionnaire. Participants were then grouped according to their responses.

Validity of the questionnaire for coping strategies in relation to skin damage

We created 3 groups based on responses to the skin damage question ("to what extent has the condition damaged your skin?") and excluded intermediate group participants from the analysis in order to compare to extreme groups. This yielded 191 cases. A repeated measures analysis of variance was applied to the intersubject variable Skin Damage, with 2 levels (Low versus High), and the intra-subject variable, Coping Profile, with 6 levels that matched the 6 coping factors. Box's M test was used to verify the multivariate homogeneity of variances and was non-significant ($F(21, 128930) = 1.423$, non-significant). The main effect obtained for the variable Skin Damage was ($F(1, 189) = 37.095$, $p \leq .001$, $\eta^2 = .16$) and for the intra-subject variable Coping Profile ($F(5, 185) = 19.074$, $p \leq .001$, $\eta^2 = .34$). However, these results should be interpreted bearing in mind that the interaction between the 2 variables is statistically significant ($F(5, 185) = 4.521$, $p \leq .001$, $\eta^2 = .11$). In this regard, although the a posteriori comparisons (undertaken using Sidak's adjustment for multiple comparisons), shown on the X-axis of Figure 1, revealed significant differences between the high and low perceived damage groups regarding the 6 coping strategies, these differences are greater in Solutions Seeking and Information Seeking, whereas the differences in the means are lower for Positive Thinking and Distancing.

Table 3
Intercorrelation factors matrix

Factor	1	2	3	4	5	6
1	1.0					
2	.34	1.0				
3	.39	.55	1.0			
4	.40	.48	.56	1.0		
5	.21	-.03	.01	.05	1.0	
6	.12	.38	.34	.21	.09	1.0

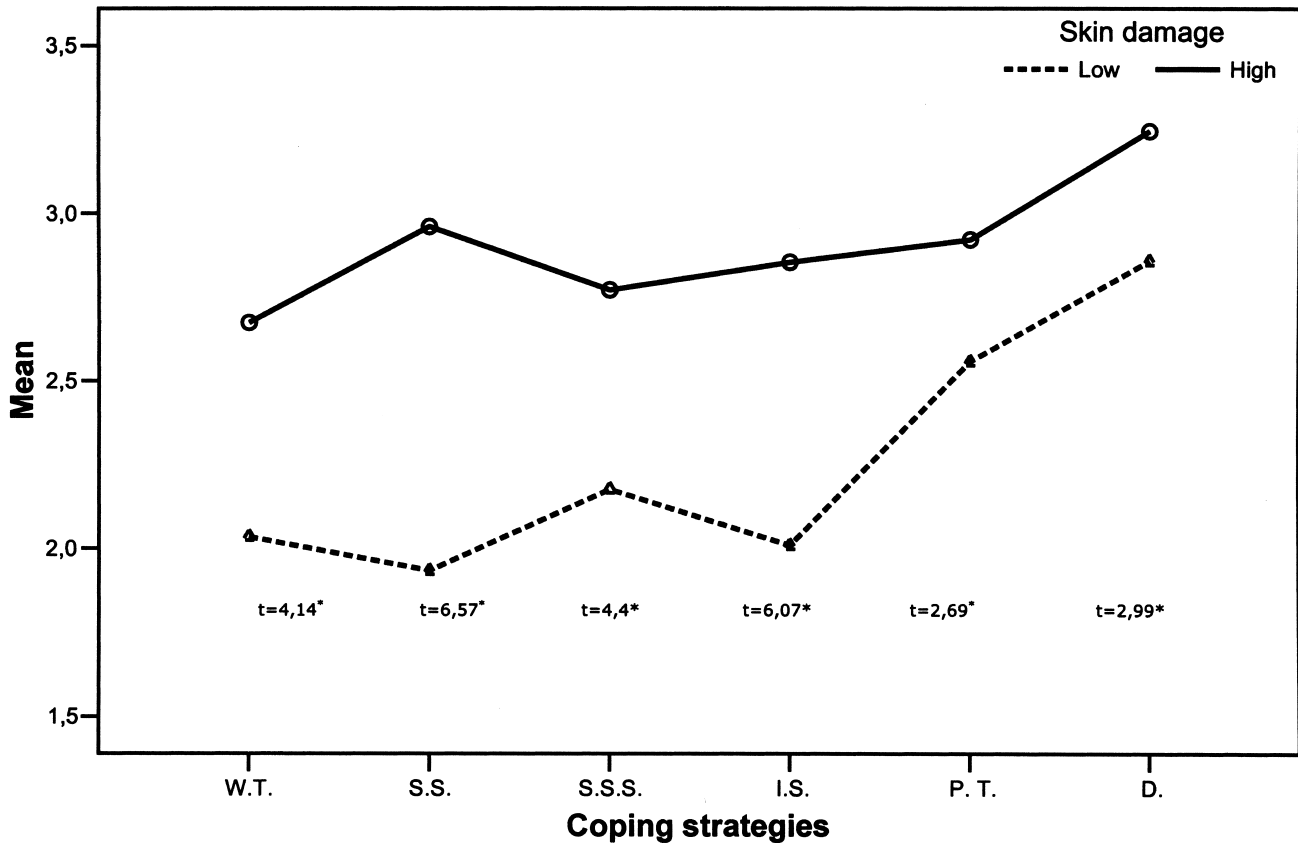


Figure 1. Coping profile in relation to skin damage (* $p \leq .05$. Sidak's adjustment for multiple comparisons)

W.T.= Wishful thinking; S.S.= Solutions seeking; S.S.S.= Social support seeking; I.S.= Information seeking; P.T.= Positive thinking; D.= Distancing

In addition, the profiles are different depending on the skin damage perceived. In more specific terms, based on Sidak's adjustment for multiple comparisons undertaken a posteriori, the high damage group reveals that the strategy with a significantly higher mean is Distancing, whereas the least used strategies are Wishful Thinking, Social Support Seeking, and Information Seeking ($p \leq .05$). In the low damage group, the strategies Distancing and Positive Thinking are the most widely used ($p \leq .05$). Thus, the interaction reveals that both groups have different profiles which deviate significantly from flatness, demonstrating the discriminative capacity of the instrument.

Validity of the coping strategies questionnaire in relation to the search for medical care

A repeated measures analysis of variance was carried out on the intersubject variable Medical Care ("Have you sought medical advice regarding this problem?") with 2 levels (Yes and No), and on the intra-subject variable Coping Profile, with 6 levels corresponding to the 6 coping factors. Two hundred and ninety-four cases were considered. Box's M test was significant ($F(21, 312498)=2.601, p \leq .001$), and

we used Pillai's criterion (Tabachnick & Fidell, 1989) accordingly. The variables Medical Care and Coping Profile yielded a main effect of $F(1, 292)=67.340, p \leq .001, \eta^2=.19$ and $F(5, 288)=28.262, p \leq .001, \eta^2=.33$, respectively, but these results should be interpreted bearing in mind the interaction between the 2 variables since it was significant ($F(5, 288)= 25.059, p \leq .001, \eta^2=.30$). In this regard, although the a posteriori comparisons (undertaken using Sidak's adjustment for multiple comparisons) (Figure 2) yielded significant differences between the 2 groups regarding the 6 coping strategies, these differences are greater for Solutions Seeking and Information Seeking, whereas the differences between the means are smaller for Positive Thinking and Distancing.

On the other hand, the nature of the interaction is revealed by the fact that the coping profiles in the group that requested medical care are different from those used in the group who did not. Based on the multiple comparisons undertaken a posteriori using Sidak's adjustment, the group that sought medical care reveals the most widely used strategies to be Solutions Seeking and Distancing compared to the other 4 strategies, whereas, in the group that did not seek medical care, Distancing is also widely used, but Solutions Seeking had the lowest mean ($p \leq .05$).

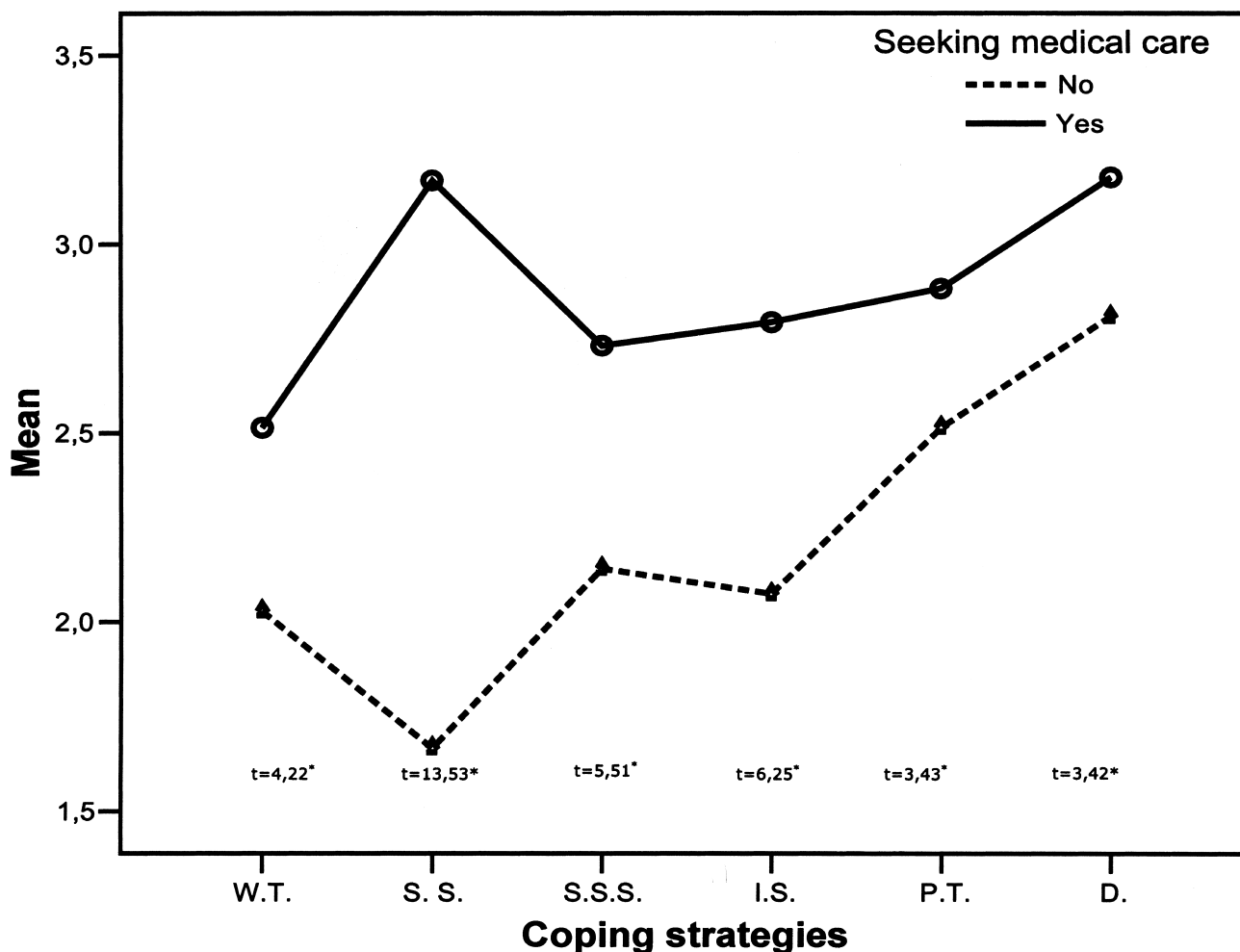


Figure 2. Coping profile in relation to seeking medical care. (* $p \leq .05$. Sidak's adjustment for multiple comparisons)
 W.T.= Wishful thinking; S.S.= Solutions seeking; S.S.S.= Social support seeking; I.S.= Information seeking; P.T.= Positive thinking; D.= Distancing

Discussion

The aim of this study was to create a Coping Strategies for Skin Problems Questionnaire and analyse its psychometric properties. Coping is a highly significant variable in the modulation of perceived quality of life and the response to illness (Drake et al., 1999; Mazzotti et al., 2003; Niemeier et al., 1998). The relevance of creating this instrument is based on the need for a measure to evaluate coping strategies and profiles for skin problems regardless of their specificity. Although it is assumed that each person may have a habitual coping style, many studies support the idea that different coping strategies are triggered by contextual and situational factors (Mearns & Cain, 2003; Roussi & Vassilaki, 2001). Therefore, we need to validate the general scales used to evaluate coping strategies in each domain under study.

The findings of this research show that coping with skin problems does not have a 1-dimensional pattern. On the

contrary, the analysis shows that coping with skin problems requires several strategies, which is revealed by the variety and nature of the factors extracted from our analysis: Wishful Thinking, Solutions Seeking, Social Support Seeking, Information Seeking, Positive Thinking, and Distancing.

Our results are in line with other research, as these factors have a background in the scientific literature. For example, Wishful Thinking, Positive Thinking, Information Seeking, Distancing, and Social Support Seeking were obtained by Folkman and Lazarus (1985) with the *Ways of Coping Checklist*. Furthermore, Vitaliano et al. (1985) analyzed the structure of the *Ways of Coping Checklist*, and found 5 factors, 3 of which—Wishful Thinking, Solutions Seeking, and Social Support Seeking—match those obtained in this work. Thus, the strategies obtained for coping with skin disorders are consistent with several others defined in previous works. However, other coping strategies, such as Resignation, Avoided, Religiousness, Blaming Oneself or Others, which are common in other situations, do not appear

in our study, which shows that coping with skin problems has its own particularities.

Another key conclusion from our study is derived from the statistical values found. The factor analysis statistics show suitable indexes (Tabachnick & Fidell, 1989). Specifically, the coefficient of sampling adequacy is high, the MSA value is suitable for each item, and the correlations of the anti-image matrix are low. Furthermore, the percentage of total explained variance is adequate and, according to Comrey's criterion (1973), 40% of the items have excellent factorial loadings, 33.33% are good or very good, and 26.67% are adequate. Out of the 6 factors, 5 present very good internal consistency and 1 has a reasonable Cronbach's alpha. Thus, the instrument offers us a suitable measurement of the coping strategies used in this type of health problem.

From the standpoint of validity the results of our study are sound, and the comparison of the coping profiles in the different groups demonstrates the validity of the instrument. Coping profiles are different when extreme groups are compared in relation to the perception of skin damage and seeking medical care. People who perceive greater physical damage to their skin, as well as those who seek medical advice, use the coping strategies identified in the questionnaire more frequently. Thus, those who perceive significant physical damage to their skin or have visited a health professional engage in more Wishful Thinking, use strategies aimed at searching for solutions, asking for social support, and searching for information, focus on the positive aspects of life, and try to distance themselves from the problem to a greater extent than those who perceive little skin damage or have not sought medical help. The differences in coping strategies between the groups exist regardless of how frequently the strategy is used. There are differences in strategies that are used often, such as Solutions Seeking or Distancing, and in those used less often, Wishful Thinking or Information Seeking.

Finally, another important aspect of the Coping Strategies for Skin Problems Questionnaire is its concision and parsimony, which makes it especially suitable for clinical practice. In this regard, the instrument could come into general use, not only from the viewpoint of measuring coping strategies, but also from the professional standpoint, insofar as coping profiles are related to patients' quality of life. In conclusion, our results show the goodness of fit of the instrument evaluated and the features special to coping profiles in the context of skin problems.

However, the analysis of the validity of this instrument should be completed. To this end, it would be interesting in future research to link the use of different coping strategies with the perception of quality of life, as well as to correlate the instrument analyzed with other scales and psychosocial processes. It would also be useful to contrast the results obtained with a sample of persons with serious levels of the pathologies studied, as well as to analyze the influence of age and gender on coping strategies.

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