A BRIEF ACCEPTANCE AND COMMITMENT THERAPY GROUP INTERVENTION ON SYSTEMIC LUPUS ERYTHEMATOSUS

UNA INTERVENCIÓN GRUPAL BREVE DE TERAPIA DE ACEPTACIÓN Y COMPROMISO EN LUPUS ERITEMATOSO SISTÉMICO

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Author's note

Abstract

Systemic lupus erythematosus (SLE) is a systemic autoimmune rheumatic disease of unknown etiology that mainly affects women of reproductive age. SLE causes a series of physical and psychological symptoms that, due to its chronic course, lead to a diminished quality of life. Acceptance and Commitment Therapy (ACT) is accumulating evidence supporting its usefulness in improving the psychological problems associated with SLE although research remains scarce. The aim of this study was to study the efficacy of a 10-hour brief ACT intervention protocol in group format in 15 patients with SLE from Navarra. Nine belonged to the experimental group (n1 = 9) and six to the control group (n2 = 6). Measures related to psychological flexibility processes and quality of life were taken before the intervention (pre), at the end (post), at one month and after three months (follow-up). The participants in the experimental group showed a substantial improvement in the degree of acceptance of pain and in variables focused on quality of life with respect to the control group. The improvements tended to be sustained over time. These results suggest that brief, group-based ACT interventions show promise for intervention in patients with SLE.

Keywords: *systemic lupus erythematosus, acceptance and commitment therapy, third-generation therapies, functional contextualism, psychological intervention*

Resumen

El lupus eritematoso sistémico (LES) es una enfermedad reumática autoinmune sistémica de etiología desconocida que afecta principalmente a mujeres en edad reproductiva. El LES provoca una serie de síntomas físicos y psíquicos que, debido a su evolución crónica, provocan una disminución de la calidad de vida. La Terapia de Aceptación y Compromiso (ACT) está acumulando evidencia que avala su utilidad en la mejora de los problemas psicológicos asociados al LES aunque la investigación sigue siendo escasa. El objetivo de este estudio fue estudiar la eficacia de un protocolo de intervención breve de 10 horas de ACT en formato grupal a 15 pacientes navarras con LES. Nueve pertenecieron al grupo experimental (n_1 = 9) y seis al grupo control (n_2 = 6). Se tomaron medidas relacionadas con procesos de flexibilidad psicologica y calidad de vida antes de la intervención (pre), al final (post), al primer mes y después de tres meses (seguimientos). Las participantes del grupo experimental mostraron una mejora sustancial en el grado de aceptación del dolor y en variables centradas en la calidad de vida respecto al grupo control. Las mejoras tendieron a mantenerse en el tiempo. Estos resultados sugieren que intervenciones breves y grupales de ACT son prometedoras para la intervención en pacientes con LES.

Palabras clave: *lupus eritematoso sistémico, terapia de aceptación y compromiso, terapias de tercera generación, contextualismo funcional, intervención psicológica*

Systemic lupus erythematosus (SLE) is a chronic autoimmune disorder affecting numerous organ systems and therefore life threatening. This disease is difficult to diagnose as it does not have a clear etiology, and because damage to connective tissues, blood system and serosal membrane converge. However, some studies recognize the involvement of genetic and environmental factors in production of antibodies and development of clinical symptoms. SLE is mostly diagnosed among females, with the female to male ratio of 8:1 and are mostly 16-55 years old.

In addition to the difficulties presented by the course of symptoms, the disease involves experiencing psychological difficulties such as stress, anxiety, depression and numerous negative thoughts laden with discomfort. The way in which patients cope with these difficulties will result in more or less damage and impact on life. Patients could issue successive and systematic responses aimed at reducing psychological distress, prioritizing them over vital goals. This way of functioning, also called psychological inflexibility (Hayes et al., 2004), would end up undermining life.

In this decade there has been a movement towards the incorporation of strategies based on psychological flexibility in psychological interventions aimed at improving the quality of life of patients, both in public and private institutions. Acceptance and commitment therapy (ACT; Hayes et al., 2004; Wilson & Luciano, 2002) is the one that champion this type of strategies within what is known as contextual or 3rd generation therapies. ACT is a model of psychological intervention designed for the treatment of different psychological disorders that under the functional conception are defined as patterns of psychological inflexibility (Hayes et al., 2006; Luciano et al., 2021; Törneke et al., 2016). From this approach, the focus is not placed on modifying or altering the content of the symptoms, which can even exacerbate stress, anxiety or negative thoughts suffered by this type of patients (Morrison et al., 1995), in addition to increasing cognitive fusion and very limiting self-targeting (Bach & Hayes, 2002). On the contrary, the focus is on altering its discriminative function of inflexibility, that is, the relationship with problematic thoughts and sensations (with the symptoms), while altering the following of rigid rules that they continue to demand. Instead, a repertoire of vital functioning will be fostered and enhanced in which flexible rules are followed, oriented and motivated by what has meaning and a sense of personal worth for the patient.

The effectivness of this approach on treatmenting some psychological problems and increasing mental health is confirmed by the literature (Öst, 2014). In addition, the literature demonstrates its effectiveness in problems related to chronic diseases. For example, Trompetter et al. (2015) assessed the effect of acceptance-based psychological interventions on the burden of chronic pain in 238 cases (higher level of improvement perceived disconfort and psychological inflexibility, was observed in intervention group compared to the control group).

In relation to SLE patients, studies investigating the effectiveness of ACT on the psychological effects of SLE are scarce. Quirosa (2011) analyzed the efficacy of a brief 11-hour protocol, consisting of 6 sessions (2 individual and 4 group ses-

sions), in improving the quality of life and personal functioning of patients with SLE. The results showed that the ACT protocol produced clinically and statistically significant post-treatment improvements in all variables except medical parameters and in the reduction of medication consumption in patients who followed the ACT protocol compared to patients in the control group. Furthermore, they found that these improvements were maintained over time. In short, ACT promoted psychological flexibility. More recently, Saheberi et al. (2019), published an ACT intervention aimed at SLE, obtaining as a result the enhancement of psychological flexibility.

The aim of the present study is to add further evidence of ACT interventions in patients with SLE. Specifically, given the characteristics of the hospital settings where these patients are found, we propose to analyze the efficacy of shorter protocols than those offered in previous literature and mainly group-based.

Method

Participants

The sample was made up entirely of women, all of them members of the Lupus Association of Navarra (ADELUNA). Altogether, 15 women participated, nine of them were assigned to the experimental group (EG) and six to the control group (CG). They all satisfied the inclusion and exclusion criteria of the study (Table 1). The average age of the EG was 46.89 years (SD = 11.94), while that of the CG was 49.83 (SD = 8.33). The average years of evolution of the disease in the EG was 14.44 (SD = 12.59) and in the CG was 15.4 (SD = 11.06). The 11.11% of the participants in the EG had primary studies, the 44.44% had FP studies, and the other 44.44% had university studies. In the CG, half (50%) had university studies and the other half, in equal parts, had primary studies (16.67%), baccalaureate studies (16.67%) and FP studies (16.67 %).

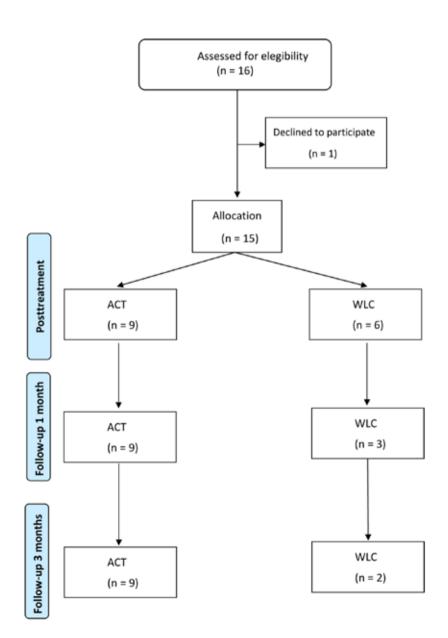Table 1
The Inclusion and Exclusion Criteria of the Study

Inclusion Criteria	Exclusion Criteria
• To have a diagnosis of Systemic Lupus Erythematosus (at least 4 of the 11 criteria in the ACR classification). • To be over 18 years old. • To be willing to attend assessment and treatment sessions. • To be willing to complete the questionnaires. • To be in clinical remission.	• Being hospitalized. • To be participating in another study. • To be illiterate. • To be receiving currently another psychological intervention. • To have neuropsychiatric symptoms (hallucinations, delusions, seizures).

There was no dropout in the experimental group, however, the experimental mortality in the control group in the post phase was 6.25%. In the one-month follow-up phase, experimental mortality in this group increased 23.53%. Finally,

in the follow-up phase at three months, the experimental mortality rose to 71.43%. These women did not differ significantly from the rest in the pre measures. Figure 1 shows the flow of the participants in the study.

Figure 1
Participants Flow Throughout the Study

Measures and Instruments

- **Quality of Life.** Measure with the Medical Outcome Study Short Form 36, (MOS-36, McHorney et al., 1992). It is the most used and recommended measure of quality of life associated with health and is considered the instrument of choice to measure it in SLE (v.g. Alarcón et al., 2004; Doria et al., 2004; Freire et al., 2007; Greco et al., 2004; Jolly, 2005; Moore et al., 2000; Navarrete et al., 2010; Rinaldi et al., 2006; Thumboo & Strand, 2007; Yelin et al., 2009). The scores obtained in each subscale (0-100) follow a gradient of "higher score, better state of health". It is made up of 36 items and 8 subscales. For this study, only three subscales were used (spanish validation: Vilagut et al., 2005): Social Function (ability to carry out normal social activities without interference from physical or emotional problems); Vitality (feeling of enthusiasm and energy presented by the patient) and Mental Health (feeling of peace, happiness and tranquility). The full scale has shown a reliability higher than 0.7. In this sample of SLE patients, the complete instrument showed a reliability of .947. The subscales used the following reliability: Mental Health (.902), Vitality (.853), and Social Function (.815).

- **Anxiety.** Measure with the Hospital Anxiety and Depression Scale (HADS, Zigmond, & Snaith, 1983). The complete questionnaire is made up of 14 items, seven of which measure anxiety and seven, depression. The response format is a four-point Likert-type scale where the person must rate the frequency or intensity with which certain responses defined as anxiety occur (e.g. *"I have a feeling of fear, as if something terrible were to happen to me"*) or depression (e.g. *"I have lost interest in my physical appearance"*). The instrument has good psychometric properties: internal consistency, external validity, construct validity and sensitivity (Johnston et al., 2000). The adaptation to Spanish was validated by Herrero et al. (2003) and it also has adequate psychometric properties: the full scale has a reliability (alpha) of 0.90; the anxiety subscale, an alpha of 0.85; and, the depression subscale, an alpha of 0.84. This instrument has been studied in samples of physical and chronic diseases and its use has been recommended by the Spanish Society of Rheumatology (Rivera et al., 2006; Terol-Cantero et al., 2015).

- **Depression.** Measure with HADS. The depression scale focuses primarily on anhedonia, leaving aside the somatic symptoms of the syndrome. In this sample, the full scale showed a reliability of .897, while the subscales: Anxiety (.843) and Depression (.814).

- **Degree of pain acceptance.** Measure with the Chronic Pain Acceptance Questionnaire (CPAQ, McCracken et al., 2004). It is made up of 20 items, which are grouped into two subscales: *involvement in activities*, which reflects the performance of activities even in the presence of pain (e.g. *"I*

am becoming more and more familiar with the idea of living regardless of the level of pain I have"); and, *willingness to experience pain*, which shows the lack of attempts to avoid or control pain (e.g. *"before making any plan, I have to get some control over my pain"*).The response format is a Likert scale from 0 (never true) to 6 (always true). The total score (sum of both subscales) was used to measure pain acceptance. The questionnaire was adapted and validated in the Spanish population with fibromyalgia patients, and has previously been used in the context of our country in SLE patients (Quirosa, 2011; Rodero et al., 2010). This instrument has consistently exhibited good psychometric properties: adequate test-retest reliability ($r = 0.83$), internal consistency reliability (Cronbach's α of 0.83) and construct validity (Vowles et al., 2008). In this sample the complete instrument showed a reliability of .794. The Subscale Involvement in Activities exhibited a reliability of .837; and the subscale Open to Pain, presented a reliability of .689.

- **Valuable Areas Affected.** Measure with the Values Questionnaire (VQ, Wilson et al., 2010: adapted to Spanish by Wilson & Luciano, 2002). It consists of two parts. In the first part, the person values the importance that ten domains have for him; in the second part, it values the consistency with which it carries out actions in the same ten domains. The response format is a likert scale ranging from 1 to 10. The domains are: family (different from husband or children); husband/partner/intimate relationships; child care; friendships and social life; job; education/training; leisure/fun; spirituality; citizenship/community life; and, physical care (diet, exercise, rest). By affected area is understood that area rated in importance with a six or more and in consistency with a six or less. In this sample the instrument exhibited a reliability of .782. The Consistency subscale showed a reliability of .677, while for Importance it was .808.

- **Percentage of consistency in the action to values.** Measure with VQ (Wilson & Luciano, 2002). Unlike the discrepancy proposed in the original questionnaire, following Quirosa (2011), a percentage measure was used, due to the advantage it provides by being able to compare the functioning of two or more people, regardless of the number of areas valuable and what areas are. The consistency percentage is calculated as follows: the proportion of the consistency summation with respect to the importance summation of those areas scored with a six or more. For example: a participant scores eight areas in importance with a six or more, the sum of importance gives a value of 71, while the sum of those same areas gives a value of 43; then, the proportion of consistency in the performance to values for that participant is 0.6056, giving a percentage of 60.56%.

Procedure

Initially, 16 ADELUNA's members answered the participation form. Nine women agreed to attend the sessions on the scheduled dates and agreed with the remaining seven who would form part of the CG, assuming the commitment to carry out the evaluations in the pre, post and follow-up sessions. One of the participants in the CG did not answer the questionnaires that were sent by email in the postest and it was not possible to contact her, so the control group was made up of six women. Finally, only three women in the CG answered the questionnaires at the follow-up one month after the end of the intervention, and only two did so at the three-month follow-up, despite the researcher's efforts to do so.

The intervention protocol was designed according to the ACT model (Wilson & Luciano, 2002) and consisted of nine sessions, five of which were intervention sessions and four, assessment sessions (see appendix). The periodicity of the sessions was weekly (one session a week), except for the last two follow-up sessions. The intervention sessions, pre, post assessment and the first follow-up session, were face-to-face; while the three-month follow-up session was conducted online. In the case of the control group, all assessments were carried out on-line. All face-to-face sessions were group and lasted two hours.

Ethical Approval-Informed Consent

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from all individual participants included in the study.

Research Design and Data Analysis

A quasi-experimental design was assumed, of two groups (experimental and control), with non-random allocation, of convenience (depending on the availability to attend the sessions). The total sample consisted of 15 women ($N = 15$). Nine belonged to the EG ($n_1 = 9$) and six, to the CG ($n_2 = 6$). In both groups, measures were taken before the intervention (pre), at the end (post) and after one and three months (follow-ups). Therefore, it was a longitudinal panel design, where intra and inter-subject comparisons were made.

Results

Sample Characteristics and Equivalence of Conditions at Pretreatment

There were no differences between groups in the variables analyzed at the pre-test.

Between-Group Differences Outcomes

Table 2 shows the results of the comparisons between both groups in the post-test. Both groups differed significantly in the Degree of Acceptance of Pain. The experimental group showed greater acceptance of pain than the control group. In the rest of the variables, no significant differences were found.

Table 2
Between-Group Differences Outcomes

	ACT	WLC	Between-group differences	
	M (SD)	*M (SD)*	*U*	*p*
SF-36 – Vitality	12.89 (3.26)	12.67 (3.93)	24	.78
SF-36 – Social Function	9.11 (1.83)	7.5 (2.07)	13.5	.11
SF-36 – Mental Health	20.89 (3.79)	18.67 (5.28)	19.5	.39
HADS – Anxiety	7.44 (4.25)	9.5 (3.73)	9	.39
HADS – Depression	4.44 (2.83)	5.83 (3.37)	20	.46
CPAQ	75 (10.43)	62.83 (6.82)	8	.03*
QV - Valuable Areas Affected	4(1.5)	3.17 (1.72)	18.5	.33
QV - Consistency in acting on values	75 (11.38)	82.86 (15.28)	17	.27

*Note. *$p \leq 0.05$.

Comparisons at follow-ups are not shown here given the high experimental mortality. However, in figure 2 the trend in the main variables of each experimental and control participant can be visually appreciated.
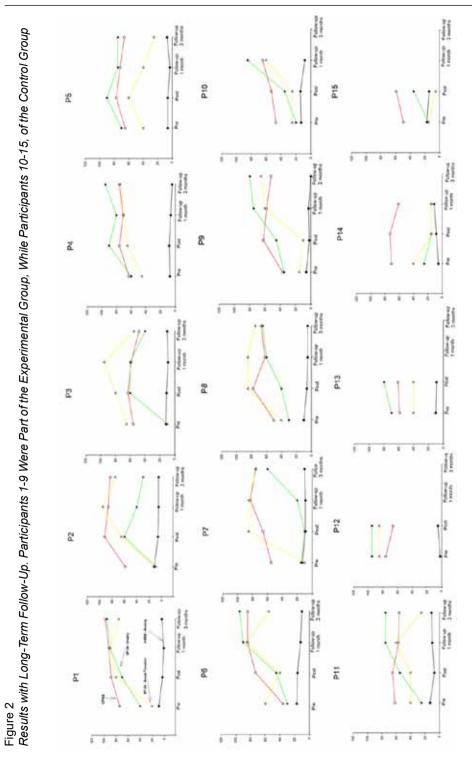
Figure 2
Results with Long-Term Follow-Up. Participants 1-9 Were Part of the Experimental Group, While Participants 10-15, of the Control Group

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The visual analysis by participant shows us a definite pattern in the participants who received the ACT protocol. In all of them, pain acceptance and at least one quality of life variable increases, while anxiety is experiencing a slight decline. In the control group participants, the pattern is very arbitrary, with no clear trends.

Intra-group Differences Outcomes

Table 3 shows the means for the experimental group through the four moments in which measurements were taken, while for the control group they are shown in Table 4. Significant differences were found in the experimental group in Social Function and Degree of Acceptance of Pain between pre and post-test, in both cases towards a better functioning in both dimensions. Between the post-test and the one-month follow-up, no significant difference was found, although the scores for all variables improved. However, when comparing the pre-test and the follow-up at one month, statistically significant differences were observed in Vitality, Social Function, Mental Health, Anxiety and Degree of Acceptance of Pain. No statistically significant difference was found in the variables between the one-month follow-up and the three-month follow-up. However, when comparing the time prior to treatment and the time of follow-up at three months, there were statistically significant differences in Vitality, Mental Health, Social Function, and Anxiety. Unlike the experimental group, in the control group no difference was found that was statistically significant when comparing the different moments.

Table 3
Wilcoxon Test of the ACT Group through the Four Moments

	Group's ACT Wilcoxon test									
	Pre-Post	p	Post-follow-up 1 month	p	Follow-up 1 month - Follow-up 3 months	p	Pre- Follow-up 1 month	p	Pre- Follow-up 3 months	p
SF-36 – Vitality	-1.68	.09	-.63	.53	-1.349	.177	-2.68	.01*	-2.561	.01*
SF-36 – Social Function	-2.24	.03*	-1.80	.07	-.774	.439	-2.69	.01*	-2.075	.038*
SF-36 – Mental Health	-1.07	.29	-.56	.57	-1.732	.083	-2.19	.03*	-2.677	.007*
HADS – Anxiety	-1.55	.12	-1.63	.10	-.06	.952	-1.96	.05*	-1.965	.049*
HADS – Depression	-.99	.32	-2.54	.79	-.211	.833	-1.71	.09	-1.304	.192
CPAQ	-2.24	.03*	-.06	.95	-.14	.889	-2.55	.01*	-1.897	.058
QV - Valuable Areas Affected	-.64	.53	-.67	.51	-1.194	.233	-.34	.73	-.318	.75
QV - Consistency in acting on values	-1.01	.31	-1.24	.21	-1.244	.214	-.18	.86	-.533	.594

Note. *$p \leq 0.05$, **$p \leq 0.01$

Table 4
Wilcoxon Test of the WLC Group through the Four Moments

	Group's WLC Wilcoxon test									
	Pre-Post	p	Post-follow-up 1 month	p	Follow-up 1 month - Follow-up 3 months	p	Pre- Follow-up 1 month	p	Pre-Follow-up 3 months	p
SF-36 – Vitality	-.67	.50	.00	1.00	-1	.317	.00	1.00	-1.342	.18
SF-36 – Social Function	-.18	.85	-1.73	.08	-1.342	.18	.00	1.00	-1.342	.18
SF-36 – Mental Health	-.74	.46	-1.60	.11	-.447	.655	.00	1.00	-1.414	.157
HADS – Anxiety	.00	1.00	-.54	.59	-1.414	.157	.00	1.00	-1.342	.18
HADS – Depression	-.94	.35	-.82	.41	-1.342	.18	.00	1.00	0	1
CPAQ	-.31	.75	.00	1.00	-.447	.655	.00	1.00	-.447	.655
QV - Valuable Areas Affected	-.54	.59	-1.07	.29	-1	.317	-1.07	.29	-1	.317
QV - Consistency in acting on values	-.94	.35	-1.07	.29	-.447	.655	-.48	.66	-1.342	.18

Longitudinal Study of the Experimental Group

The Friedman test was used and statistically significant differences were found in Vitality ($\chi2$ = 15.17, p = .002), Social Function ($\chi2$ = 17.63, p = .001), Mental Health ($\chi2$ = 8.898, p = .031) and in Degree of Acceptance of Chronic Pain ($\chi2$ = 8.59, p = .035). No significant differences were found for the rest of the variables: Anxiety ($\chi2$ = 5.79, p = .122), Depression ($\chi2$ = 2.82, p = .421), and Percentage of Consistency in Action at Values ($\chi2$ = 2.47, p = .481).

Clinical Significance

Quality of Health

Considering the criterion of clinical improvement, 7 participants of the ACT group showed improvement in the post-test compared to the pre-test; while 9 participants, all of them from the ACT group, exhibited clinically significant improvement in quality of life at the time of follow-up at one month compared to the pretest. That is: 88.89% of the participants in the ATC group improved in this measure. Of the participants in the control group, only participant 10 showed clinically significant improvement in quality of life at the time of one-month follow-up compared to the pretest.

At the 3-month follow-up, only participants 1 and 4 in the experimental group exhibited a clinically significant improvement over the 1-month follow-up. Regarding the pretest, at the three-month follow-up, 6 participants showed that they maintained clinical improvement. Again, no participant in the control group showed improvement; they had, in fact, gotten worse.

Anxiety and Depression

According to the clinical criteria, six women in the ACT group improved in Anxiety. The remaining three started with low anxiety and remained at the same level in the three-month follow-up. Therefore, all the women who could improve did so. In contrast, no women in the control group improved.

Regarding Depression, 44% of the participants in the ACT group started with a clinical score, compared to 50% in the control group. This percentage was reduced in both groups, but more in the ACT group. At the post and at the 1-month follow-up, 22% of the ACT group was within the clinical range, compared to 33% of the control group. At the last follow-up, 33% of the ACT group had a clinical score; none of the control group participants had it.

Degree of Acceptance of Chronic Pain

Eight of the nine women in the ACT group were below the clinical score before the intervention; four of the six women in the control group were also below. After the intervention, only two women in the ACT group were still below the clinical score, while the same four women in the control group were still below. At the

one-month follow-up, the number of women in the ACT group who were below the clinical score rose to three, while all the women in the control group did so below. Finally, in the three-month follow-up, two women from the experimental group were below the clinical criteria and one of the two women evaluated from the control group, too.

Percentage of Consistency in the Performance of Values
The ACT group started with 22% of the participants within the clinical range. This percentage was maintained in the post and in the follow-up at one month; in the last follow-up, it was reduced to 11%. No participants in the control group had a clinical score in the pre. In the post it was presented by 22% of the participants; and 33% in the follow-up per month. At the last follow-up, none of the participants scored clinically.

Valuable Areas Affected
Both groups started with a good starting level: only 32% of the ACT group had a clinical score, and only 25% of the control group. In the post-test there was and rebound in the ACT group (70%), while in the control group it occurred in the follow-up at one month (100%). In the end, both groups ended up with levels similar to those they had at the beginning (ACT group, 35%; and control group, 22%).

Discussion
The results showed that, in general, the intervention protocol was effective in increasing the quality of life of the participants in the experimental group. This improvement occurs in emotional (Anxiety and Depression) and regulation (Acceptance of Chronic Pain and in Quality of Life) variables. And they did it unlike the control group, in which no change was appreciated. In some participants in the control group, even a worsening was observed in certain measures. An improvement in pain acceptance impacts how patients view other symptoms and these results are consistent with those obtained by previous studies (Sahebari et al., 2019; Quirosa, 2011).

A pattern of results consistent with the previous literature was found, where the clinical significance of the results of the intervention was greater than statistical significance, and where more differences were found in intragroup comparisons than in intergroup comparison (Fangtham *et al.*, 2019; Greco et al., 2004; Quirosa, 2011; Rafie et al., 2020; Sahebari et al., 2019). The effects of the intervention tended to be maintained over time, even with the possible adverse effects that the health crisis caused by the coronavirus could cause. Due to the relationship between the acceptance of chronic pain (the most frequent and core symptom of SLE) and the acceptance of the disease, the improvements in this measure could have mediated improvements in quality of life and emotional variables; however, more research is required to clarify this mediating effect.

The clinical significance revealed the effect of the intervention more clearly. According to the data, it seems clear that the intervention produced an improvement in the quality of life at the end of the treatment, however, the subsequent rebound could be due to the fact that the effect of the treatment was diluted over time, that is, it was not maintained, or it can be explained by the health emergency situation generated by the coronavirus pandemic and the confinement. If we take into account the assumed clinical improvement criterion, the difference between the two groups is clearly seen in that seven women in the experimental group fulfilled it, compared to none in the control group. At the one-month follow-up, the nine participants in the experimental group improved and only one woman in the control group did. At the three-month follow-up, six women in the experimental group maintained the improvement compared to none in the control group, who not only had not improved, but had worsened. Take into account the influence that the health emergency situation, state of alarm and confinement caused by the coronavirus could produce on this variable. Even with this influence of extraordinary occurrence, the results agree with those of Quirosa (2011).

The experimental group clinically improved in emotional variables, but it did so especially in Anxiety. Both groups started with higher levels of anxiety and the improvement was also greater in this measure. This result obeys the biphasic pattern typical of SLE: the depressed mood is more typical of newly diagnosed patients, who have only recently learned that they suffer from a chronic disease and have to cope with the process of mourning for their lost health. On the other hand, anxiety is a normal emotion when the diagnosis already has a certain path, the disease is controlled but there is great uncertainty around possible outbreaks and complications that may arise (Galindo et al., 2017; Guide Working Group of Clinical Practice on Systemic Lupues Erythematosus, 2015; Pérez & Otero, 2014). However, what is important here is that there were large improvements in quality of life even with anxiety levels present throughout the intervention, in other words, just what is predicted when a pattern of psychological flexibility is present. In this line, the variable that most reflected the advantages obtained thanks to the intervention was the Degree of Acceptance of Pain. ACT is a treatment specifically aimed at promoting acceptance or psychological flexibility and its effect has been remarkable in this measure of acceptance. The benefits are considerable and are consistent with those reported by other authors (McCracken et al., 2004; Quirosa, 2011).

In addition, the different experimental mortality suffered in both groups should not be overlooked. While all participants in the experimental group completed the study, the control group suffered a high experimental mortality. Treatment favors adherence to the protocol techniques, which produces specific improvements. But in addition, such adherence also produces nonspecific benefits (social support, social identity, modeling ...) that should be studied in future research with more sample (their low number is the main limitation of this study).

Finally, contrary to expectations, no improvements were found in the varia-

bles related to the commitment to acting on values and the value areas affected. In this sense, it is interesting to note that numerous clinical experiences find a degree of discordance between the report of commitment to the valued action and the performance of the valued action itself. Thus, future studies should improve the sensitivity of this type of measurement.

Definitely, this work has provided evidence about how a short 10-hour protocol based on ACT can improve the functioning and quality of life of people with SLE; the conceptualization of psychological problems and the loss of quality of life suffered by patients with SLE as experiential avoidance problems is novel; the protocol studied is shorter than the ACT protocols that have been studied (Haupt et al., 2005; Navarrete et al., 2010) and is similar to those studied in the most recent period (Rafie et al., 2020; Sahebari et al., 2019), a fact that favors adherence to treatments and reduces interference in the daily life of the participants (Seawell & Danoff-Burg, 2004); has demonstrated the potentiality of application of the treatment in other chronic diseases, some of them frequent comorbilities of SLE; and, it has shown that it is not necessary for patients to be within clinical ranges in order to benefit from this protocol, as was the case in the study by Quirosa (2011). For all these reasons, we believe that this company has value for the health authorities insofar as its group format and its short duration reduce the necessary investment both in terms of money and time.

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APPENDIX

ACT-BASED INTERVENTION PROTOCOL USED IN THE STUDY

SESSION	OBJECTIVES	INTERVENTIONS

Pre Evaluation Session	√ Explain the objective of the investigation.
	√ Present the structure of the investigation.
	√ Present the structure of the intervention.
	√ Take measurements of the variables of interest.
		• Presentation of the therapist.
		• Presentation of the participants.
		• Information sheet delivery.
		• Informed consent signature.
		• Open questions:
		  - *How long ago was lupus detected?*
		  - *Do you remember how your life was before, during and after the first moments of your illness?*
		  - *Do you think it can benefit you to receive psychological therapy?*
		  - *What do you expect from this therapy?*
		• Instrument management (in this order):
		  - SF-36
		  - HADS
		  - CPAQ
		  - VQ
		• Delivery of the narrative form of values.
		• Presentation of the diagram "The compass of life".

Session 1	√ Discuss the possibility of ups and downs during therapy and the importance of commitment to therapeutic work. √ Determine the control agenda and demonstrate, via functional analysis, the barriers that arise when acting with its intentions. √ Show the importance of a life based on values and influence their clarification. √ Show the other side of the coin of living without pain. √ Introduce *creative hopelessness*. √ Begin to differentiate the *context I* from the *content I*. Defusion with aversive private events. √ Make commitments of your behavior towards your values for the next session.	• Metaphors "The dirty glass" and "The sick tooth". • Metaphor "The two climbers". • Functional analysis scheme, collecting symptoms and histories (reasons), tentative solutions (control behaviors or avoidance of discomfort) and costs, in the short and long term. • Diagram of "The compass" and metaphor "Caring for the garden". • Two choices: be without pain and life, or have pain and life. Metaphor "Keys and padlocks". • Difference between pulling weeds and gardening Metaphor "The rude guest". • Creative hopelessness: metaphors "Quicksand", "The man and the hole" and "The farmer and the donkey". • Experiential exposure exercise "Are you the owner of what you do or a slave to what your mind tells you?". • Homework: Commitment to Valuable Actions and Record.

SESSION	OBJECTIVES	INTERVENTIONS
Session 2	√ Promote knowledge among group members. √ Analyze the barriers and strategies used. √ Show them the value of self-realization as the opportunity that human beings have to show our resources, our greatness and potential.	• Welcome by the therapist and round of presentations by the group members. • Homework review. Introduction to the concept of *Stories* and *Buts*. • Nelson Mandela's speech and fable of the harrier. • Metaphor "La lora". • Exercise of physicalizing barriers. • Metaphors "The hamster in the wheel" and "The woman in the hole". • The compass. • Metaphor "The two horses". • Exposure exercise to your thoughts and feelings. • Homework: Commitment to Valuable Actions and Record.
Session 3	√ Analyze the barriers and strategies used. √ Raise: If the problem is control, then why not abandon it? √ Generate creative hopelessness and analyze the problem of control. √ Cognitive defusion and action towards what really matters to us. √ Practice accepting aversive events while doing what matters to each. √ Turn off aversive verbal functions. √ Make commitments of your behavior towards your values for the next session.	• Homework review: review actions to values and attempts to control. • Metaphors "The titi or the annoying guest" and "The dike with holes". • Metaphor "What is your secret?". A theater with two possible endings is performed. • Metaphors "The two scales" and "The burned hand." • See thoughts for what they are, not what they claim to be. • Exercise to take your mind for a walk. • Homework: Commitment to Valuable Actions and Record.

SESSION	OBJECTIVES	INTERVENTIONS
Session 4	√ Analyze the barriers and strategies used. √ Continue with clarification of values. √ Influence the importance of practice. √ Generate creative hopelessness and analyze the problem of controlling. √ The reasons are not the cause to stop doing what we care about. You are not your thoughts and feelings, rather you are the context in which they happen. √ Be open to psychological content as an alternative to control. √ Make commitments of your behavior towards your values for the next session.	• Homework review: review actions to values and attempts to control. • Examples are made with the "stories" of the group members as if they were passengers. Exercises "The funeral" and "The epitaph". • Exercise of writing with the other hand and the metaphor "Riding a bike in all circumstances". • Metaphors "The Tiger" and "Sided Train". • Metaphors "Making omelette and the blowflies" and "Crossing the pond". • Exercise of being attached to history and taking distance from it. • Exercise-metaphor "The bus". • Exercise of fighting the papers. • Homework: Commitment to Valuable Actions and Record.
Session 5	√ Analyze the barriers and strategies used. √ Values as the Guide to Therapy. √ Disabling aversive verbal functions and control as a problem. √ Show that we are not our thoughts and feelings, rather we are the context in which they happen. √ Undermine cognitive fusion with language. √ View relapses as a normal part of the therapy process. √ Distinguish the *context I* from the *content I*. √ Make commitments of your behavior towards your values for the next session.	• Homework review: review actions to values and attempts to control. • Metaphors "Chemotherapy" and "The garbage can". • Metaphors "The radio always on" and "The two computers". • Experiential Mindfulness Exercise ("The Observer"). • Lemon tasting exercise and the story of the two monks. • Example of "Assess vs. Describe", an exercise in engaging and taking thoughts and sensations with you. • Metaphor "The chess", "The lora" and "The passengers". • Homework: Commitment to Valuable Actions and Record. • Metaphor "You already know how to drive". • Hand in the commitment sheet and highlight the importance of practice (metaphor "Write with the other hand").

SESSION	OBJECTIVES	INTERVENTIONS

Post Evaluation Session	√ Review the commitment with valuable actions and reinforce where appropriate.
	√ Take measurements on the variables of interest.
	√ Prevent relapses.
		• Review of the fundamental concepts discussed during the intervention.
		• Reminder of the importance of practice.
		• Instrument management (in this order):
		  - SF-36
		  - HADS
		  - CPAQ
		  - VQ

Follow-up one month Evaluation Session	√ Review the commitment with valuable actions and reinforce where appropriate.
	√ Take measurements on the variables of interest.
	√ Prevent relapses.
		• Review of the fundamental concepts discussed during the intervention.
		• Reminder of the importance of practice.
		• Instrument management (in this order):
		  - SF-36
		  - HADS
		  - CPAQ
		  - VQ

Follow-up three months Evaluation Session	√ Review the commitment with valuable actions and reinforce where appropriate.
	√ Take measurements on the variables of interest.
	√ Prevent relapses.
		• Review of the fundamental concepts discussed during the intervention.
		• Reminder of the importance of practice.
		• Instrument management (in this order):
		  - SF-36
		  - HADS
		  - CPAQ
		  - VQ