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THE IMPORTANCE OF HYPNOTHERAPY IN PAIN, QUALITY OF LIFE AND DEPRESSION DURING THE COVID-19 PANDEMIC

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Abstract: The present study has the goal to assess how Hypnotherapy can be an interventional element in the control of Chronic Pain (CD) and in the presence of the limitations imposed by the Covid-19 pandemic, which cause a succession of situations for the chronically ill, which compromises their appearance, not only physical but psychological, with personal, family and social repercussions. In this sense, we sought to (1) verify whether there are differences in the perception of CD and QOL in subjects who started Hypnotherapy before the Covid-19 pandemic compared to subjects who started Hypnotherapy during the Covid-19 pandemic, (2) verify the existence of differences in pain perception in subjects who did not develop or developed depression during the Covid-19 pandemic and (3) to verify the existence of differences in quality of life (QOL) according to the diagnosis of depression or its absence during the Covid-19 pandemic. 19.

Keywords: Hypnotherapy, Covid-19, Pain Perception, Quality of life, depression.

INTRODUCTION

The COVID-19 disease caused significant changes in social and individual terms with severe repercussions on the mental health of patients exposed to the disease, as it promotes changes in the feeling of psychological well-being, which can lead to anxiety, depression, post-traumatic stress disorder, traumatic or *burnout*. These factors arise from personal, family and social changes and, consequently, in the quality of life, promoting prolonged psychological suffering (Brooks et al., 2020; Rogers et al., 2020), as well as an exponential increase in the mortality rate (Dutheil et al., 2020).

Some studies demonstrate the impact of the COVID-19 disease on the general population, with 53.8% rated the psychological impact of

the disease as moderate or severe, of which 28.8%, 16.5% and 8.1% reported moderate or severe symptoms of anxiety, depression and stress, respectively (Cai et al., 2020; Liu et al., 2020; Moccia et al., 2020; Wang et al., 2020).

In this sense, it appears that studies show that, in the current pandemic context and consequent exposure to the COVID-19 disease, patients in isolation, hospitalization or recovered from the disease are more vulnerable to potential emotional impacts (Lai et al., 2020; Zang et al., 2020). Furthermore, the factors that may contribute are the scarce scientific data related to the characteristics of the virus and the form of contagion, the quarantine rules themselves, as well as the prevalence of fear and uncertainty in the population (Dutheil et al., 2020; Röhr et al., 2020).

Furthermore, according to Lam (2009), people clinically recovered from SARS CoV 1 were diagnosed with post-traumatic stress disorder (54.5%), depression (39%), pain (36.4%), panic (32.5%) and obsessive compulsive disorder (15.6%) at 31 to 50 months post-infection. In this sense, Nascimento et al. (2020) also mention that without evidence, the role of the virus itself and the immune response of the host to the infection may lead to changes in the human central nervous system (CNS) and to neuropsychiatric alterations, making urgent the need for ongoing monitoring and documentation of symptoms related to SARS CoV 2/ COVID 19 infection.

Relatively frequent changes in the control of chronic pain and the perception of quality of life are seen, which in themselves drive significant disbelief phenomena that promote an increase in the painful phenomenon and a reduction in the perception of quality of life (Lai et al., 2020; Nascimento et al., 2020).

Given the pandemic impact on emotional structures, the use of psychotherapy becomes

a fundamental tool. Within psychotherapies, we have witnessed a real boost in the use of hypnosis over the last decades, which has been a therapeutic tool widely used in Psychology and in different areas of Medicine (Stewart, 2005), having been valued by several professionals of health, including doctors and psychologists (Nash & Barnier, 2008), becoming an active and dynamic research area (Schnur & Montgomery, 2004). In this sense, many professionals use hypnotherapy to intervene in areas as diverse as dermatology, neurology, oncology, surgery and rheumatology (Stewart, 2005), the immune system (Solloway, 2005), weight loss (Kirsch, 1996), and weight loss (Kirsch, 1996). psychosomatic disorders (Flammer & Alladin, 2007), asthma, bleeding disorders, nausea, surgeries and gynecology (Pinnell & Covino, 2000), chronic pain (Elkins et al., 2007), depression, anxiety, tension and stress (Schoenberger, 2000), sleep disturbances (Graci & Hardie, 2007), obstetrics and childbirth (Brown & Hammond, 2007), pain management (Montgomery et al., 2000a; Milling et al., 2007) and cessation smoking (Green & Lynn, 2000).

The studies carried out in the areas mentioned above, have allowed an increase in relevant works demonstrating that hypnosis promotes very positive effects for treatments in these specific areas (Kirsch et al., 1995; Lynn et al. 2000; Shoenberger, 2000), there being some investigations that demonstrate the effectiveness of hypnosis in the treatment of depression and other mental and/or physical disorders such as pain control (Yapko 1992, 2001a, 2001b, 2001c; Alladin, & Aibhai, 2007).

Thus, hypnotherapy is assumed as a tool or even a model that aims to provide important help at this stage, promoting hope, motivation, a feeling of competence and creating a perspective of the future. Some meta-analyses show that associating

hypnosis with psychological treatments improves their effectiveness and efficiency (Kirsch et al., 1995; Smith et al., 1980; Agostinho, 2012). A possible advantage of using the hypnotherapeutic procedure would be to reduce the treatment itself (Barata, 2021). Directly affecting motivation and the feeling of competence, change is accelerated (Ludeña & Pires, 2009). The benefit of the hypnotherapeutic procedure may be that it makes patients more willing to cooperate without feeling vulnerable (Montgomery & Schnur, 2005).

Increasingly, research has sought to support the fact that using hypnosis in the treatment of depression, anxiety, pain management contributes significantly to the positive results of treatment directly and indirectly promoting an increasingly sustained quality of life (Forster-Miller, 2017; Kempton et al., 2018; Crawford & Barabasz, 1993; Montgomery et al., 2000; Schoenberger et al., 1997; Yapko, 1992, 2001, 2006, 2008, 2009).

GOALS

In view of the above, it is postulated that this study aims to evaluate how hypnotherapy can be an interventional element in the control of Chronic Pain (CD) and in the presence of the limitations imposed by the Covid-19 pandemic, which cause a succession of situations for the patient. patient with CD, which compromises their appearance, not only physical but also psychological, with personal, family and social repercussions and, in general, on Quality of Life (QOL).

In this sense, more specifically:

- To verify if there are differences in the perception of CD and QOL in subjects who started hypnotherapy before or during the Covid-19 pandemic.

- To verify the existence of relationships between the perception of pain in subjects

who did not develop or developed depression during the Covid-19 pandemic.

- To verify the existence of relationships between the perception of QOL according to the diagnosis of depression or its absence during the Covid-19 pandemic.

That said, the following hypotheses and predictions are made:

H1. That the hypnotherapy time factor promotes differences in the perception of pain and in the perception of QOL, as well as a negative relationship with the perception of pain and a positive relationship with the perception of QOL.

According to this hypothesis, the following predictions are made:

P1. There are differences between the perception of pain and the perception of QOL of the patient and the time of hypnotherapy, so that patients who are in pre-pandemic treatment have better results in the perception of pain and QOL.

P2. There is a positive relationship between the patient's perception of pain and the duration of hypnotherapy. Thus, the patient's pain is expected to be higher the shorter the hypnotherapy time.

P3. There is a positive relationship between the duration of hypnotherapy and the perception of QOL. Thus, it is expected that the longer the hypnotherapy time, the greater the perception of QOL.

H2. The presence of psychological symptoms is positively related to the perception of pain and negatively to the perception of QOL.

According to this hypothesis, the following predictions are made:

P1. There is a positive relationship between psychological symptoms and pain perception.

P2. There is a negative relationship between psychological symptoms and the perception of QOL.

METHOD

METHODOLOGY

The present study sought to assess the importance of hypnotherapy in pain perception, quality of life and depression in the COVID-19 pandemic. Therefore, the present quantitative cross-sectional study is descriptive, exploratory and correlational in nature with the aim of acquiring a greater understanding of the importance of the hypnotherapeutic procedure in pain control and in a better QOL.

SAMPLE

The sample consists of 125 participants. Of these, 94 were undergoing hypnotherapy before the Covid-19 pandemic began and 31 began the hypnotherapy process during the Covid-19 pandemic. We found that the sample in terms of gender is quite uniform. Participants were selected from the hypnotherapeutic follow-up that they were already developing or developed during the Covid-19 pandemic (TABLES 1 and 2).

It must be noted, from now on, that the sample is non-probabilistic, being of the type of sampling by rational selection, since it refers to convenience samples (or incidental or voluntary) and raises a fundamental problem that lies in the impossibility of estimating sampling errors, so that inferences for the population are largely impaired. The independent variable of the present study is the therapeutic intervention model, operationalized through the creation of two groups - H1 and H2 - which were subject to hypnotherapeutic follow-up for 6 months with sessions every two weeks lasting approximately 1 hour and 30 minutes. Group H1 was already in the process of hypnotherapy one month before the COVID-19 pandemic and group H2 started this same process during the COVID-19 pandemic. The dependent variable

Demographic variables	Values obtained (N=125; %)
Gender	
Female	64 (51,2%)
Male	61 (48,8%)
Age (average)	51,00
<i>Amplitude</i>	24-87
<i>DP</i>	15,60
Hypnotherapeutic intervention group	
H ₁	94 (75,2%)
H ₂	31 (24,8%)

Note. N = number of subjects; % = percentage of subjects; DP = Standard Deviation; H1 = Group that started hypnotherapy before the COVID-19 pandemic; H2 = Group that started hypnotherapy during the COVID-19 pandemic; * = significance at p<.01; ** = significance at p<.05

TABLE 1. Sample description in demographic terms

is the perception of Pain, operationalized through the evaluation by the Numerical Pain Scale, the QOL operationalized through the Quality of Life instrument of the World Health Organization – WHOQOL-Bref – and depression operationalized through the Beck Depression Inventory (BDI), with the independent variable being the hypnotherapeutic intervention model.

MATERIAL

To assess the presence of pain, the Numerical Pain Scale was used, which consists of a ruler divided into eleven equal parts, numbered successively from 0 to 10. This ruler can be presented to the patient horizontally or vertically. It is intended that the patient makes the equivalence between the intensity of his Pain and a numerical classification, with 0 corresponding to the classification “No Pain” and 10 the classification “Maximum Pain” (Pain of maximum imaginable intensity). The numerical rating indicated by the patient will be marked on the record sheet.

To assess QOL, the WHOQOL-Bref instrument was used, which consists of 26 questions: two on global QOL and health

and the others representing each of the 24 facets that make up the WHOQOL-100 (Pain and Discomfort; Energy and Fatigue; Sleep and Rest; Mobility; Activities of daily living; Dependence on medication or treatments; Ability to work; Positive feelings; Thinking, Learning, Memory and Concentration; Self-esteem; Body image and Appearance; Negative feelings; Spirituality/Religion/Personal beliefs; Relationships personal; Social support; Sexual activity; Physical safety and protection; Home environment; Financial resources; Health and social care: Availability and Quality; Opportunities to acquire new information and skills; Participation in recreation/leisure opportunities; Physical environment (pollution /noise/traffic/weather); Transport). All these items can be grouped into four domains: Domain 1 – Physical domain (items 1, 2, 3, 9, 10, 11 and 12); Domain 2 – Psychological domain (items 4, 5, 6, 7, 8 and 24); Domain 3 – Social relationships (items 13, 14 and 15); Domain 4 – Environment (16, 17, 18, 19, 20, 21, 22 and 23). The abbreviated version such as the WHOQOL-100 (long version) presents a Likert-type response scale, in which the total values range from 0 to 100,

with higher values being synonymous with QOL (Canavarro et al., 2005; Pereira et al., 2005).

To assess depression, the Beck Depression Inventory (BDI) was used. This instrument aims to differentiate between depressive and non-depressive individuals, as well as measuring the severity of symptoms of depression (Araújo et al., 2005; Arigmon et al., 2010). It is a self-response questionnaire, consisting of 21 items, whose scores are grouped into three factors (a) Cognitive Factor (n=8), (b) Affective Factor (n=6) and (c) Somatic Factor (n=7). Each category is composed of a series of 4 statements (with the exception of items 16 and 18, in which there are 7 response alternatives) from which the subject is asked to, on a four-point Likert scale, arranged in order of severity progressive (e.g. sadness, 0= I don't feel sad; 3= I am so sad or unhappy that I can't take it anymore), select the one that best describes how you have been feeling during the "last two weeks, including today" (Araújo, 2005; Arnau et al., 2001; Bos et al., 2008; Coelho et al, 2002; Martins, 2000). The sum of all items allows obtaining a final score that varies between 0 and 63, directly related to the intensity of depressive symptoms (Arigmon et al., 2010; Pinto, 2010). More specifically, scores less than or equal to 13 indicate minimal symptomatology; between 14 and 19 mild depression; 20 to 28 moderate depression; and 29 to 63 severe depression (Beck et al., 1996).

PROCEDURE

The selection of participants was made by first proceeding with observation and interview with subsequent analysis of the symptoms (through individual consultations), with the selection of participants with a diagnosis of chronic pain. Before proceeding with the application of the instruments, the participants were told that all data collected

would be confidential. The purpose of the study was made known and the free, written and informed consent of the participants was obtained. The inventory was read by all the subjects and they were asked to interpret each statement, thus safeguarding a possible misinterpretation of the subjects. The intervention was carried out between April 2020 and October 2020, with 12 hypnotherapeutic intervention sessions being carried out for both groups during the pandemic phase, and the H1 group was already in hypnotherapeutic intervention having carried out two sessions, according to the distribution of patients, and each session lasted 1 hour and 30 minutes. In order to guarantee the feasibility and reliability of the intervention, the therapist was always the same throughout the therapeutic process.

STATISTICAL ANALYSIS

After quoting the instruments, intra- and inter-group analysis of the results obtained by the participants was carried out and the Statistical Package for the Social Sciences (SPSS) version 26.0 was used to perform the statistical treatment of the data, using for the effect:

- Descriptive analyzes (study of means and standard deviations in the two groups and in the two temporal moments).

- Differential analyzes [Student t test for independent samples (H1 vs H2), which allow assessing whether there is a significant difference between the means of two samples and the presence of a quantitative variable between two independent groups.

- Correlation analysis (Pearson's Correlation) to assess the degree of correlation between two metric variables.

The significance level $p \leq 05$ was considered as indicative of the existence of statistically significant differences between the means of the two evaluation moments.

Furthermore, participants were randomly allocated to the intervention (ratio 1: 1), with the different randomization steps being carried out independently by the investigator. The randomization sequence was computer-generated and masked until the patient's official enrollment, after consenting to participate and performing the initial assessment.

RESULTS

For an easier reading of the results, we chose to present them according to the study's hypotheses, as well as according to its predictions.

1. *H1. That the hypnotherapy time factor promotes differences in the perception of pain and in the perception of QOL, as well as a negative relationship with the perception of pain and a positive relationship with the perception of QOL.*

The hypothesis described above contemplates some predictions as we have verified and exposed previously.

P1. There are differences between the perception of pain and the perception of QOL of the patient and the time of hypnotherapy, so that patients who are in pre-pandemic treatment have better results in the perception of pain and QOL.

The results of the present investigation, supported by the means, standard deviations,

significance values obtained from the differences between the patients - Student's t test - and correlations between metric variables - Pearson's Correlation - that make up the investigation allow us to verify that the participants of the group H1 have an average pain score of 6 points (SD = 1.10), while in the participants of the H2 group, the average pain score is 9 points (SD = 1.55). Therefore, we must bear in mind that the Numerical Pain Scale (END) is coded so that higher values correspond to greater severity of pain perception (TABLE 3).

The results related to the prediction described above, demonstrate, and in an analysis of the END, an important relationship between the END and the time of therapy verified through the two evaluation groups H1 and H2. Therefore, the results allow us to highlight the dependence of both variables, since one is always a predictor of the other. In this sense, the results obtained through the t Student test suggest the existence of statistically significant differences, suggesting the existence of a relationship between the evaluated variables (TABLE 3).

Regarding the QDV and the instrument used for its assessment, we found that there were no missing data in the Whoqol-Bref. In TABLE 4, the mean values, standard deviations, as well as the significance value obtained from

Numerical pain scale (END) (0-10 points)	Hypnotherapeutic intervention group	N	M	DP	p
END	H ₁	94	6,00	1,10	,000**
	H ₂	31	9,00	1,55	

Note. N = number of subjects; M = Mean pain perception obtained through the Numerical Pain Scale; DP = Standard Deviation; p = significance value of Student's t test; END: Numerical Pain Scale; H1 = Group that started hypnotherapy before the COVID-19 pandemic; H2 = Group that started hypnotherapy during the COVID-19 pandemic; * = significance at p<.01; ** = significance at p<.05

TABLE 3. Values obtained on the Numerical Scale according to the hypnotherapeutic intervention group (intervention time).

the differences between subjects in H1 and H2 are expressed. It must be noted that the Whoqol-Bref scales are coded so that higher values always correspond to better QOL. As can be seen from the analysis of TABLE 4, we found statistically significant differences in the various domains of the Whoqol-Bref, with subjects undergoing hypnotherapy for a longer time (H1) always obtaining higher values than subjects undergoing hypnotherapy treatment for less time (H2).

P2. There is a positive relationship between the patient's perception of pain and the duration of hypnotherapy. Thus, the patient's pain is expected to be higher the shorter the hypnotherapy time.

Strong relationships exist between pain perception and the therapeutic intervention group, which are negative and statistically significant (TABLE 5). Therefore, in the present sample we can suggest that the longer the intervention time, the lower the possibility for individuals to perceive more pain.

P3. There is a positive relationship between the duration of hypnotherapy and the perception of QOL. Thus, it is expected that the longer the hypnotherapy time, the greater the perception of QOL.

In TABLE 6, the correlations between the various Domains of the Whoqol-Bref and the time of hypnotherapeutic intervention are presented, verifying that there are statistically significant correlations in the General Health, Psychological and Social Relations Domains, namely:

- The General health domain shows a negative and statistically significant correlation with the time of hypnotherapy intervention ($r(125)=-.598$; $p=.048$).

- The Psychological domain presents a negative and statistically significant correlation with the time of hypnotherapy intervention ($r(125)=-.926$; $p=.008$).

- The Social relationships domain presents a negative and statistically significant correlation with the time of hypnotherapy

Whoqol-Bref	Hypnotherapeutic intervention group	N	M	DP	p
General health domain	H ₁	94	40,85	14,07	.000**
	H ₂	31	54,87	14,31	
Physical domain	H ₁	94	43,69	13,89	.000**
	H ₂	31	61,65	12,65	
Psychological domain	H ₁	94	45,96	12,21	.000**
	H ₂	31	56,06	11,39	
Domain in social relationships	H ₁	94	48,87	12,76	.001**
	H ₂	31	57,81	11,25	
Domain in the environment	H ₁	94	45,23	12,16	.000**
	H ₂	31	60,58	15,58	

Note. N = number of subjects; M = Average of the Quality of Life perception obtained through the Whoqol-Bref; DP = Standard Deviation; p = significance value of Student's t test; H1 = Group that started hypnotherapy before the COVID-19 pandemic; H2 = Group that started hypnotherapy during the COVID-19 pandemic; * = significance at $p<.01$; ** = significance at $p<.05$

TABLE 4. Values obtained in the Whoqol-Bref instrument according to the hypnotherapeutic intervention group (intervention time).

Numerical Pain Scale (END) (0-10 points)	Hypnotherapeutic intervention group	
	Sig.	,000**
END (M=7,50; SD=2,35)	N	125
	Pearson's Correlation	-,217

Note. N = number of subjects; Sig. = Pearson's Correlation significance value; END: Numerical Pain Scale; * = significance at $p < .01$; ** = significance at $p < .05$

Table 5. Correlation between pain perception and the hypnotherapeutic intervention group (intervention time).

Whoqol-Bref	Hypnotherapeutic intervention group	
	Pearson's Correlation	-,598
General health domain	Sig.	,048*
	N	125
	Pearson's Correlation	-,346
Physical domain	Sig.	,085
	N	125
	Pearson's Correlation	-,926
Psychological domain	Sig.	,008**
	N	125
	Pearson's Correlation	-,966
Domain in social relationships	Sig.	,004**
	N	125
	Pearson's Correlation	-,335
Domain in the environment	Sig.	,087
	N	125

Note. N = number of subjects; Sig. = Pearson's Correlation significance value; * = significance at $p < .01$; ** = significance at $p < .05$

Table 6. Correlation between QOL and the hypnotherapeutic intervention group (intervention time).

intervention ($r(125)=.966; p=.004$).

The presence of positive correlations is highlighted, that is, the longer the hypnotherapeutic intervention, the better the perception of QOL, as demonstrated in the various domains of the Whoqol-Bref.

two.

H2. The presence of psychological symptoms is positively related to the perception of pain and negatively to the perception of QOL.

According to this hypothesis, the following predictions are made:

P1. There is a positive relationship between psychological symptoms and pain perception.

The presence of correlations between psychological symptoms and the perception of associated pain is observed (TABLE 7). From its analysis, the existence of positive and statistically significant relationships stands out, which allows us to verify that the greater the perception of pain, the greater the presence of psychological symptoms.

P2. There is a negative relationship between psychological symptoms and the perception of QOL.

In relation to the present prediction, Pearson's Correlation was used, which reveals the existence of negative and statistically significant relationships between the different domains of QOL and the presence of psychological symptoms, meaning that higher values of psychological symptoms correspond to a lower perception of QOL (TABLE 8).

DISCUSSION

This study reports a pilot randomized controlled trial aimed at evaluating the feasibility, acceptability and efficacy of a hypnotherapeutic intervention among people diagnosed with pain. The results revealed the specific benefits of hypnosis in the reduction of symptoms associated with pain and its impact on QOL and the presence of psychological

symptoms. Regarding the gender variable, there was a balanced percentage of men and women, which allowed for greater uniformity and distribution of the sample, as well as a better comparison between groups.

The present study demonstrates a greater commitment in terms of pain perception and QOL in subjects who started hypnotherapy before the COVID-19 pandemic when compared to subjects who started hypnotherapy during the COVID-19 pandemic, which is in line with the literature. which evokes that psychotherapeutic intervention promotes adjustment mechanisms in the face of situations that drive disruption by themselves and imply a process of readaptation (Forester-Miller, 2017; Jensen & Patterson, 2014; Jensen & Patterson, 2006; Kempton et al., 2018; ; Paredes et al., 2019; Tan et al., 2010). This fact may be due to the commitment that the pandemic situation entails, since, during that period, new behaviors are adopted, which are closely dependent on the hypnotherapeutic intervention (Barata, 2021; Dutheil et al., 2020; Faro et al., 2020). ; Mengin et al., 2020; Nascimento et al., 2020; Röhr et al., 2020; Paredes, 2019). In this sense, the increase in painful phenomena is evidence in subjects who suffer from chronic pain, and this commitment is greater in the group that started the hypnotherapeutic intervention during the pandemic situation (Mengin, 2020; Röhr et al., 2020). There is also a greater impairment in the perception of QOL, mainly found in the General, Physical and Psychological Health Domains, with these results in the sense of other investigations, which report in their studies subjects with marked sadness, frustration, depression and anger at their situation, the impairment of some physical, social and emotional aspects is evident (Paredes et al., 2019; Swirky-Sacchetti, & Margollis, 1986). Therefore, the duration of hypnotherapy is a clinical condition with a

Beck's Depression Inventory (BDI)	Numerical Pain Scale (END)	
	Pearson's Correlation	,282
Negative Humor	Sig.	,001**
	N	125

Note. BDI: Beck Depression Inventory; END: Numerical Pain Scale; Sig. = Pearson's Correlation significance value; * = significance at $p < .01$; ** = significance at $p < .05$

Table 7. Correlation between psychological symptoms and pain perception.

Whoqol-Bref	Beck's Depression Inventory	
	Pearson's Correlation	-,448
General health domain	Sig.	,000**
	N	125
	Pearson's Correlation	-,529
Physical domain	Sig.	,000**
	N	125
	Pearson's Correlation	-,370
Psychological domain	Sig.	,000**
	N	125
	Pearson's Correlation	-,337
Domain in the environment	Sig.	,001**
	N	125
	Pearson's Correlation	-,449
Domain of social relationships	Sig.	,000**
	N	125

Note. BDI: Beck Depression Inventory; END: Numerical Pain Scale; Sig. = significance value of Pearson's Correlation; * = significância a $p < .01$; ** = significance for $p < .05$

Table 8. Correlation between QOL and psychological symptomatology.

great impact on the patient's perception of pain and QOL in which emotional and physical conditions are typically affected (Dutheil et al., 2020; Faro et al., 2020; Paredes et al., 2020; Paredes et al., 2020; al., 2019; Swirky-Sacchetti, & Margollis, 1986).

Regarding the presence of psychological symptoms in the studied sample, that is, depression, the data indicate that its presence is an indicator of worse perception of pain and QOL, which is in line with the results observed in other investigations (Forester -Miller, 2017; Jensen & Patterson, 2014; Jensen & Patterson, 2006; Kempton et al., 2018; Paredes et al., 2019; Tan et al., 2010).

The use of hypnotherapy allowed the subject not only to focus not only on cognitive aspects, but also on the reciprocal relationships between affect, behavior and cognition, producing a change in these three areas (Barata, 2021).

The observable changes allowed participants to become aware of the «flow of thought» and the parade of images that influence their feelings and behavior.

In short, we must emphasize the importance of hypnotherapy in pain control and QOL perception and also allow the adoption of strategies and refinement of intra and interpersonal skills, which drive greater emotional control in socially decompensating situations, as is the case of a pandemic crisis.

Therefore, we must analyze in detail the massive concern about the pandemic in association with previous symptoms of anxiety and depression.

The present investigation has its limitations, since the results observed are not representative of the Portuguese population, given the small size of the sample. This situation can lead to the introduction of biases in the results obtained or to overestimate them. Another limitation is related to the cross-sectional nature of the study, which may

inhibit the elaboration of statements related to directionality and causality. Therefore, it would be important to carry out longitudinal studies, which would allow the inference of a causal relationship between the variables studied.

Furthermore, considering the variables studied and the inclusion criteria for participation, the main challenge in implementing an intervention procedure would be the recruitment of a large enough sample to guarantee statistical power. In this case, implementing a multicenter test could be a potential solution in replicating and scaling up the present study. However, the significant effect sizes obtained indicate the importance of hypnotherapy and cannot be ruled out as a promising research direction.

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