REVISTA DE ENFERMAGEM REFERÊNCIA

homepage: https://rr.esenfc.pt/rr/

ISSNe: 2182.2883



RESEARCH ARTICLE (ORIGINAL)

Translation, cross-cultural adaptation, and validation of the Meaning in Suffering Test for European Portuguese

Tradução, adaptação cultural e validação do Meaning in Suffering Test para português europeu

Traducción, adaptación cultural y validación del Meaning in Suffering Test al portugués europeo

Teresa Kraus 1, 3, 4

https://orcid.org/0000-0002-3756-3478

Susana Capela²

https://orcid.org/0000-0002-0649-772X

Manuel Alves Rodrigues 4

https://orcid.org/0000-0003-4506-0421

Maria dos Anjos Dixe 1



- ¹ Polytechnic Institute of Leiria, School of Health Sciences of Leiria, Center for Innovative Care and Health Technology (ciTechCare), Leiria, Portugal
- ² Rheumatology Department, Hospital de Santa Maria, Centro Hospitalar Universitário Lisboa Norte, Portugal; Rheumatology Research Unit, Instituto de Medicina Molecular João Lobo Antunes, Faculdade de Medicina, Universidade de Lisboa, Portugal; Academic Medical Centre. Lisbon, Portugal
- ³ CINTESIS Center for Health Technology and Services Research (CINTE-SIS), Nursing School of Porto (ESEP), Porto, Portugal
- ⁴ Health Sciences Research Unit: Nursing (UICISA: E), Nursing School of Coimbra (ESEnfC), Coimbra, Portugal

Corresponding Author

Teresa Kraus

E-mail: teresa.kraus@ipleiria.pt

Received: 19.05.20 Accepted: 26.10.20

Abstract

Background: The paradoxical differences identified between the way people experience pain, regardless of its intensity, and the suffering associated with it relate to value and belief systems.

Objective: To validate the Meaning in Suffering Test (MIST) for the Portuguese population and determine its psychometric characteristics.

Methodology: This study presents the process of cross-cultural adaptation, carried out on a sample of 187 people with rheumatic and musculoskeletal diseases (RMDs), using a sociodemographic and clinical data questionnaire and the Teste de Sentido no Sofrimento (Portuguese version of the MIST - MIST-P). **Results:** The sample was mostly composed of women, with a mean age of 49.9 ± 12.1 years. The MIST-P obtained a Cronbach's Alpha of 0.833, meaning a good reliability. The factorial analysis organized the 12 items into two factors: Meaning and responses to suffering and Subjective characteristics in the face of suffering. The scale shows stability over time (r = 0.844).

Conclusion: The MIST-P is a valid and reliable tool for the Portuguese population with RMDs and can be applied in research and clinical practices aimed at the prevention, control, and integration of inevitable suffering.

Keywords: chronic pain; suffering; meaning of life; scale and validation

Resumo

Enquadramento: As diferenças paradoxais identificadas entre a forma como as pessoas experienciam a dor, independente da sua intensidade, e o sofrimento a ela associado, relacionam-se com os sistemas de crenças e valores.

Objetivos: Validar o *Meaning in Suffering Test* (MIST) para a população portuguesa e determinar as suas características psicométricas.

Metodologia: Este estudo apresenta o processo de adaptação transcultural, realizado numa amostra de 187 pessoas com doença reumática músculo-esquelética (DRM), com recurso a questionário sociodemográfico, clínico e o MIST-P.

Resultados: A amostra, maioritariamente do sexo feminino, tinha 49,9 \pm 12,1 anos. O MIST-P apresenta bons valores de fidelidade (alfa de Cronbach de 0,833). A análise fatorial determinou a organização dos 12 itens em 2 fatores: Sentido e respostas face ao sofrimento e Características subjetivas face ao sofrimento. A escala é estável no tempo (r = 0.844).

Conclusão: O MIST-P é válido e fiável para a população portuguesa com DRM, tendo potencial para ser aplicado na investigação e na prática clínica de prevenção, controlo e integração do sofrimento inevitável.

Palavras-chave: dor crónica; sofrimento; sentido de vida; escala e validação

Resumer

Marco contextual: Las paradójicas diferencias identificadas entre la forma en que las personas experimentan el dolor, independientemente de su intensidad, y el sufrimiento asociado a este se relacionan con los sistemas de creencias y valores.

Objetivos: Validar el Meaning in Suffering Test (MIST) para la población portuguesa y determinar sus características psicométricas.

Metodología: Este estudio presenta el proceso de adaptación intercultural, llevado a cabo en una muestra de 187 personas con enfermedad reumática musculoesquelética (ERM), para lo cual se utilizó un cuestionario sociodemográfico, clínico y el MIST-P.

Resultados: La muestra, mayoritariamente del sexo femenino, tenía $49,9\pm12,1$ años. El MIST-P presenta buenos valores de fiabilidad (alfa de Cronbach de 0,833). El análisis factorial determinó la organización de los 12 ítems en 2 factores: Sentido y respuestas al sufrimiento y Características subjetivas ante el sufrimiento. La escala es estable a lo largo del tiempo (r=0,844).

Conclusión: El MIST-P es válido y fiable para la población portuguesa con ERM, y tiene el potencial de ser aplicado en la investigación y la práctica clínica para la prevención, el control y la integración del sufrimiento inevitable.

Palabras clave: dolor crónico; sufrimiento; sentido de la vida; escala y validación







How to cite this article: Kraus, T., Capela, S., Rodrigues, M. A., & Dixe, M. A. (2021). Translation, cross-cultural adaptation, and validation of the Meaning in Suffering Test for European Portuguese. *Revista de Enfermagem Referência*, 5(5), e20069. https://doi.org/10.12707/RV20069





Introduction

In recent years, the European adult population has experienced a progressive increase in chronic pain prevalence (above 30%), existing no prediction for its control (Antunes, 2019).

Chronic pain has a high prevalence in Portugal, particularly in people with rheumatic and musculoskeletal diseases (RMDs). In addition to pain, feelings of anxiety, depression, and suffering are also associated with RMDs (Antunes, 2019; Direção-Geral da Saúde, 2018; Harth & Nielson, 2019). It is particularly important to early identify this suffering and establish a significant therapeutic relationship when approaching the person whose suffering increases as he/she becomes increasingly aware of his/her fragility and finitude (Branco et al., 2016; Harth & Nielson, 2019; Kraus, 2014). This existential, or inevitable, suffering reinforces the absolute subjectivity of the experience of pain, overpowering the psychophysical, social, and spiritual dimensions (noetic; Kraus, 2014). Given that this suffering is resistant to pharmacological therapy but responsive to humanized care, the philosophy of care for meaning, in line with the logotherapeutic approach, presents the Competence for Proactive Unconditional Care (CoCIP).

Particularly in tragic contexts, such as the experience of suffering, it is essential to find the purpose (ontological meaning) of the experience to adapt the intervention with a view to integrating suffering into a meaningful everyday life. This approach considers the importance of value and belief systems, strongly associated with self-awareness and motivation (Kraus, 2014). Therefore, this study aims to validate the Meaning in Suffering Test (MIST) for the Portuguese population and determine its psychometric characteristics.

Background

The high prevalence of RMDs has a severe socioeconomic impact in the Portuguese population, including pain, suffering, deformity, functional disability, dependence, loss of quality of life, and premature mortality.

The loss of quality of life in people with RMDs is mostly caused by chronic pain (90%), followed by anxiety (63%) and depression (47.5%; Branco et al., 2015). Another study concluded that 69% of primary health care users with chronic pain identify the anxiety and depression resulting from it as the main reason for their decreased quality of life (Antunes, 2019). Consequently, there is an increasing consumption of anxiolytics and antidepressants (Direção-Geral da Saúde, 2018).

Although in recent years the negative impact of RMDs may have been mitigated and controlled by the developments in diagnosis and early implementation of treatment, the efficacy of this therapeutic approach remains a challenge to public health (Branco et al., 2015). Thus, to care for the person in inevitable suffering, that is, resistant to RMD-associated pharmacological therapy, the health professional requires special skills and specialized instruments (Geenen et al., 2018).

According to the paradigm of humanized care, the CoPIC was proposed to respond to this challenge, together with specialized instruments, including the Portuguese adaptation of Starck's *Meaning in Suffering Test* (MIST-P) (1985; Kraus et al., 2014).

When one experiences intense suffering and pain, there is a high risk of falling into the *lack of meaning* and apathy. Suffering occupies one's entire soul and consciousness, often imposing an escape strategy, due to the incapability of finding within oneself the room to ask about the meaning of life and the purpose of the experience being lived. To attribute meaning to life, particularly during suffering, expands one's self-limits and promotes self-transcendence, which is highly therapeutic (Frankl, 1999; Kraus, 2014; Starck, 2008). It is not suffering by itself that destroys the human being, but the suffering without meaning. Thus, the discovery of meaning during suffering is the most profound way of achieving meaning in life. It is accomplished by valuing gratitude, commitment, and persistence and transforms the waiting time into hope. Although clinical conditions such as depression and suffering have different causes, both can originate despair or existential void, which is an emotional state that Frankl (1999) translates into the equation D=S-M, in which "D" means despair, "S" stands for suffering and "M" for meaning of life.

Therefore, the meaning in suffering is a variable of an existential, spiritual, or noetic nature that, when it comes from firm (divine) values, provides the ability to transform the waiting time into hope and create patience. The therapeutic effect, that is, the health gain from promoting meaning in suffering will be resilience in adversity or crisis (Kraus, 2014).

Even if suffering itself has no meaning, the ability to identify the *purpose* of a boundary situation can bring to consciousness meanings of life never valued before and point out strategies to better live the present and look to the future with hope (Kraus et al., 2014; Starck, 2008). Based on his own experience as a survivor of Nazi concentration camps, Viktor Frankl, the founder of logotherapy, presents, in his book Man's Search for Meaning, strategies for self-transcendence in contexts of suffering or crisis (Frankl, 1999).

The studies developed by Frankl and his collaborators elevated concepts within the noetic dimension, such as the meaning of life, meaning in suffering, and self-transcendence, among others, to the status of objective variables and developed the science of more humanized and culturally sensitive care.

Studies on the construct *meaning of life* in people with RMDs have shown a positive correlation with self-efficacy for pain control, with the discovery of meaning in suffering and self-transcendence, and a negative correlation with the indexes of suffering, anxiety, depression, and disease activity (Kraus, 2014). A philosophy of care for meaning emerged from these studies, establishing the CoCIP as a non-pharmacological therapeutic approach, which monitors the discovery of meaning during inevitable suffering and facilitates integration.

This care is *unconditional* because the health professional's motivation is based on a dialogical attitude and not on circumstances. According to Husserl's phenomenology, the

Gottebenbildlichkeit des Menschen or Imago Dei, inscribed in the spiritual genotype of the human being, provides one with an unconditional dignity inherent to being a person. It has a proactive nature because the dialogical attitude allows the anticipation of psychospiritual care, sometimes unintentional, but highly conditioning (Kraus et al., 2014).

In implementing the CoCIP, the *Meaning in Suffering Test* (MIST) is a specialized instrument that uses spirituality and guidance for the discovery of meaning in suffering associated with the pain of people with RMDs (Kraus et al., 2014).

Research Question

Is the MIST valid for Portuguese people with RMDs?

Methodology

Given the research question, this study aimed to validate the MIST for the Portuguese population and determine its psychometric properties.

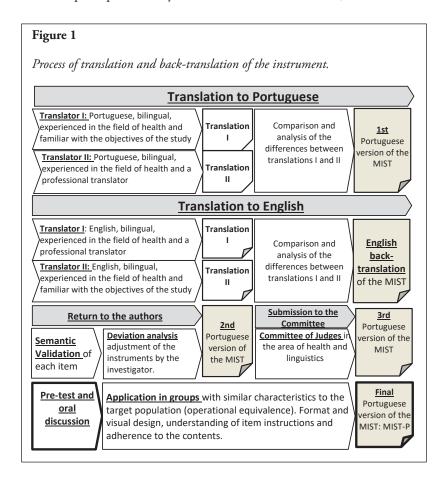
Data were collected between January 2010 and November 2011 in a convenience sample mostly composed of patients of outpatient rheumatology consultations and the rheumatology day hospital of the University Hospital Center of Northern Lisbon. The sample consisted of 187 participants, mostly women

(116; 62.0%), aged between 19 and 76 years (49.9 ±12.1). The sample was then grouped into four sub-samples according to the RMD: one group with rheumatoid arthritis (gRA), one group with ankylosing spondylitis (gAS), one group with fibromyalgia (gFM), and one group with psoriatic arthritis (gPsA).

Data collection was conducted through a sociodemographic and clinical questionnaire and Starck's MIST (1985). The MIST is one of the instruments that facilitates the development of the CoCIP. Part of the Test Directory of Logotherapy, the MIST is based on the middle range *Theory of Meaning* and measures the extent or frequency of meaning found in inevitable suffering (Starck, 2008). The MIST has two parts, a quantitative part (A) consisting of a one-dimensional 20-item questionnaire with Likert-type responses ranging from *never* (1) to *constantly* (7), and a qualitative part (B) composed of 17 open-ended questions. Part B is better fitted to guide interventions but not to evaluate the frequency or extent of meaning in suffering, hence its use in this study.

Translation and adaptation of the MIST for European Portuguese

Authorization for using the MIST was requested to the author, and the international recommendations were respected for the translation and cross-cultural adaptation of the MIST for European Portuguese, thus resulting in the "Escala de Sentido no Sofrimento" (Portuguese version of MIST - MIST-P), as described in Figure 1.



Quantitative and qualitative methods were used to evaluate content validity. Experts with clinical experience and researchers in the field of pain and construction of measurement instruments performed the instrument's qualitative analysis and calculated the percentage of agreement (99%).

The project received the favorable opinion (Ref. 12/2009) of the Healthcare Ethics Committee of the University Hospital Center of Northern Lisbon and authorization from its Board of Directors (Ref. DIRCLN-04. JAN.2010-0001) for the study. All the World Medical Association's Declaration of Helsinki guidelines were respected, and all participants signed a free and informed consent.

Collected data were processed using the IBM SPSS Statistics statistical analysis software, version 17. For the descriptive analysis, absolute and relative frequencies, central tendency (arithmetic means and medians), and statistical dispersion and variability (standard deviation and coefficient of variation) were measured. Descriptive measures were used to assess the psychometric properties, and Pearson correlation coefficients for each item with the total (if item is eliminated), and the Cronbach's Alpha were calculated to measure internal consistency.

An exploratory factor analysis (EFA), with principal component analysis and varimax orthogonal rotation, was carried out to assess validity. Eigenvalues higher than 1 and the scree plot were considered for factor retention. Scores equal or higher than 0.20 were considered as criterion for item saturation (Marôco, 2014).

Results

Although 49.7% of the sample pointed out other comorbidities such as anxiety (118; 63%) and depression (89; 47.5%), 90% of the participants reported rheumatic pain as the main factor affecting their quality of life, with 99% of them taking medication to control that pain.

Psychometric characteristics of MIST-P

The psychometric study began by determining each item's statistics and subsequently analyzing internal consistency. Table 1 shows positive correlations between each item with the total score, when the item itself is eliminated, with weak to moderate values (0.377 and 0.639). All correlation scores are well above 0.20, which respects the defined criteria (Dancey & Reidy, cited by Filho & Júnior, 2009).

Eight items were eliminated (4; 5; 7; 10; 12; 15; 18; and 20) because they presented corrected Pearson correlation coefficients below the acceptable score (r < 0.20). Their elimination also improved the Cronbach's Alpha score of the total scale. Internal consistency is good, with a Cronbach's Alpha above 0.800 in all items, ranging from 0.809 to 0.830, and 0.833 in the total scale.

Table 1

Descriptive statistics, Pearson correlation, and Cronbach's alpha of the MIST-P items with the total scale if the item is eliminated

Itens		DP	Corrected	Cronbach's α
	X		r	sem o item
1. I believe I have the spiritual help (not necessarily religious) to overcome the burdens of my suffering.	3.88	2.07	0.453	0.825
2. I believe suffering causes a person to find new and more worthwhile life goals.	4.00	1.77	0.482	0.822
3. I believe 1 understand life better because of the suffering 1 have experienced.	4.62	1.73	0.522	0.819
4. I believe everyone has a purpose in life; a reason for being on earth.	5.56	1.56	0.416	0.826
5. I believe there is always hope in suffering.	4.57	1.67	0.484	0.822
6. I believe suffering can teach valuable lessons about life.	5.10	1.53	0.447	0.825
7. I believe my suffering experience has given me a chance to complete my mission in life.	2.96	1.87	0.639	0.809
8. I believe some good things have occurred as a result of my suffering.	3.03	1.89	0.498	0.821
9. I believe my suffering is part of a grand design even though I may not always understand it.	3.55	2.03	0.554	0.816
10. I believe people are not given more suffering than they can bear.	3.65	2.07	0.489	0.822
11. I believe my suffering has given my loved ones a chance to become more fulfilled.	2.46	1.89	0.562	0.815
12. I believe suffering is part of the human condition and comes to everyone sooner or later.	4.52	1.92	0.377	0.830

Note. MIST-P = Portuguese version of the Meaning in Suffering Test; SD = standard deviation. Cronbach's Alpha of the total scale= 0.833.

The scale displays stability over time, with positive and good correlation coefficients (0.777 to 0.844) between the 1st and 2nd application (with an interval of 3 weeks) (Pestana & Gageiro, 2014). An EFA was carried out

with principal component analysis (Hair et al., 1998) to assess the construct's validity. A R-mode factor analysis was used to analyze the items of the EFA. The Kaiser criterion or eigenvalue technique was used for factor

retention. The technique of percentage of variance explained considered adequate by the researcher was also used, grouping the items in two and not three factors, as in the original study.

Finally, a varimax rotation was used to maximize the factor loadings (Corrar et al., 2011). After back-to-back analyses and according to the statistical and interpretability criteria of the Kaiser rule (eigenvalues equal to or higher than 1; Corrar et al., 2011), the results of the EFA show a factorial structure of two main components (Table 2): F1 - Meaning and responses to suffering and F2 - Subjective characteristics in the face of suffering. Despite the elimination of the items and the redefinition/

renaming of the factors, which can be due to several factors including the sample's specificity, the whole process was validated by the scale's author.

The values of the Kaiser-Meyer-Olkin test (KMO = 0.822) and Bartlett's test for sphericity ($X^2 = 635.965$; p = 0.000) indicate that the EFA is admissible and that there is a *good* relationship between factors and variables (Corrar et al., 2011; Pestana & Gageiro, 2014).

The communalities (proportion of each initial variable's variance explained by the extracted factors) vary between 0.308 and 0.607. The percentage of variance explained by factor was 24.943 for F1 and 22.631 for F2, and the percentage for the total variance explained was 47.574.

 Table 2

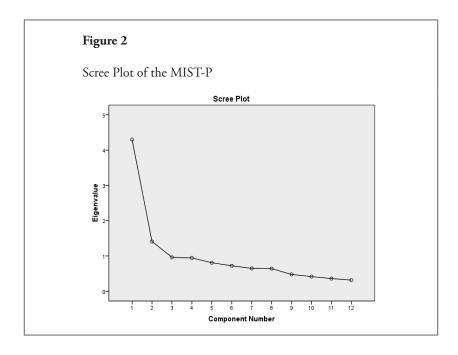
 Factor analysis of the MIST-P

Itens	h^2	F1	F2
1. I believe I have the spiritual help (not necessarily religious) to overcome the burdens of my suffering.	0.308	0.434	
2. I believe suffering causes a person to find new and more worthwhile life goals.	0.554	0.741	
3. I believe 1 understand life better because of the suffering 1 have experienced.	0.530	0.712	
4. I believe everyone has a purpose in life; a reason for being on earth.	0.313	0.524	
5. I believe there is always hope in suffering.	0.476	0.675	
6. I believe suffering can teach valuable lessons about life.	0.445	0.661	
7. I believe my suffering experience has given me a chance to complete my mission in life.	0.561	0.455	0.595
8. I believe some good things have occurred as a result of my suffering.	0.381	0.512	0.345
9. I believe my suffering is part of a grand design even though I may not always understand it.	0.583		0.734
10. I believe people are not given more suffering than they can bear.	0.607		0.775
11. I believe my suffering has given my loved ones a chance to become more fulfilled.	0.562		0.709
12. I believe suffering is part of the human condition and comes to everyone sooner or later.	0.389		0.621

Note. MIST-P = Portuguese version of the Meaning in Suffering Test; F1 = Factor 1 (Meaning and responses to suffering); F2 = Factor 2 (Subjective characteristics in the face of suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 2$ (Subjective characteristics in the face of suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 2$ (Subjective characteristics in the face of suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 2$ (Subjective characteristics in the face of suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Subjective characteristics in the face of suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and responses to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and response to suffering); $h^2 = Factor 1$ (Meaning and Response to suffering); $h^2 = Factor 1$ (Meaning and Response to suffering); $h^2 = Factor 1$ (Meaning and Response to suffering); $h^2 = Factor 1$ (Meaning and Response to

The scree test conducted to the MIST-P (Figure 2) confirms an adequate factorial design regarding the data analyzed. The downward curve shows two components:

the value corresponding to a greater distance between the eigenvalues (Pestana & Gageiro, 2014).



The item discriminant validity was also assessed, observing that the scale's items correlate more with the factor to which they belong than with the factor to which they do not belong. The correlation scores (Table 3) between the factors and

between the factors and the total scale range from moderate to high, with a remarkably high statistical significance, meaning that they tend to measure the same construct, thus allowing one-dimensional interpretations.

 Table 3

 Pearson correlation matrix between MIST-P factors

	F1	F2	TOTAL
F1	1	0.529**	0.925
F2	0.529**	1	0.812**
TOTAL	0.925**	0.812**	1

Note. MIST-P = Portuguese version of the *Meaning in Suffering Test*; F1 = Factor 1 (Meaning and responses to suffering); F2 = Factor 2 (Subjective characteristics in the face of suffering). **Significant correlation at 0.01 (2-tailed).

The Cronbach's Alpha of each of the MIST-P factors was also calculated, with 0.792 for F1 and 0.731 for F2.

Table 4 shows that the subsample of participants with rheumatoid arthritis (gRA) has a mean higher score not only in the factors but also in the total scale.

It should be noted that whole MIST-P measures the extent or frequency with which the person finds mean-

ing in inevitable suffering, presenting a score between 12 and 84. F1 measures the frequency with which the person finds meaning (ontological meaning) in inevitable suffering and manages to give personal responses in the face of this suffering, presenting a score between 8 and 56. F2 measures the frequency with which the person experiences hope and resilience in inevitable suffering, presenting scores between 4 and 28.

 Table 4

 Description of the participants' subsamples regarding the meaning in suffering

	gAR (<i>n</i> = 63)		gEA (<i>n</i> = 50)		gAP (<i>n</i> = 31)		gFM (<i>n</i> = 43)	
	\overline{X}	DP	\overline{X}	DP	\overline{X}	DP	\overline{X}	DP
F1	35.4	8.8	31.6	10.0	33.9	8.0	33.7	8.8
F2	16.3	6.1	10.8	5.1	14.1	5.6	15.1	4.9
Total	51.8	13.3	42.4	13.7	48.0	11.5	48.8	11.7

Note. F1 = Factor 1 (Meaning and responses to suffering); F2 = Factor 2 (Subjective characteristics in the face of suffering); *SD* = Standard Deviation; Sample's subgroups = gRA with rheumatoid arthritis; gAS with ankylosing spondylitis; gFM with fibromyalgia; and gPsA with psoriatic arthritis.

Discussion

Regardless of the intensity of chronic pain, the paradoxical differences found in the way people experience and deal with the inevitable suffering associated with it can be partially explained by the different value and belief systems. This suffering, sometimes misunderstood and unconscious, often lacks effective therapeutic approaches. The burden of the suffering associated with the pain of people with RMDs remains one of the most feared causes of anxiety, depression, and despair, severely affecting the patients' quality of life. Thus, the therapeutic approach to suffering is a current challenge for public health (Branco et al., 2016; Harth & Nielson, 2019; Kraus et al., 2014). Starck's MIST (1985) was chosen as one of the CoCIP specialized instruments to objectively respond to and explore the issues of relief, control, and integration of the inevitable suffering associated with the pain of people with RMDs. Although RMDs affect people of both genders and all age groups and tend to increase with age (Antunes, 2019), the results of this study corroborate the data found by Branco et al. (2015), that is, these diseases affect mostly women (116; 62.0%) and adults (X = 49.9 years; SD = 10012.1 years). This difference can be justified by women's higher average life expectancy that together with specific biological factors contribute to increased comorbidities, such as musculoskeletal diseases and mental health disorders (Pache et al., 2015).

Analyzing the group of patients with RMDs taking biological medication and registered in the Reuma platform in 2012, it was observed that the gRA was the most numerous group (898; 58.65%), followed by the gAS (404; 26.38%) and finally by the gPsA (123; 8.03%; Canhão et al., 2012). These national data are close to the sample composition of this study, in which the largest group is the gRA (63; 43.75%), followed by the gAS (50; 34.72%), and finally by the gPsA (31; 21.52%).

The EFA of the MIST applied to the Portuguese population with chronic rheumatic pain validates the solution of the two retained factors and 12 items, which originated the MIST-P. The factors Meaning and responses to suffering (Factor 1) and Subjective characteristics in the face of suffering (Factor 2) describe the measures of the construct Meaning in Suffering, indicating its validity.

When comparing the three factors of the MIST with the two factors of the MIST-P, the Factor 1 of the MIST-P - Meaning and responses to suffering - is the synthesis of Factors 2 and 3 of the original scale, and Factor 2 - Subjective characteristics in the face of suffering - refers to the Factor 1 of the original scale (MIST). In turn, item 17 "I believe my suffering has given my loved ones a chance to become more fulfilled." belongs to Factor 2 of the MIST-P, although it is part of Factor 3 in the original scale (MIST).

It was found that the scale's total score (0.833) is higher than the Cronbach's Alpha of Kuuppelomäki and Lauri's study (1998) and that of the original scale (0.810).

These differences between the MIST-P and MIST are due to the different characteristics between this study's sample and the one from the original scale, particularly regarding the variable *pain*. It is recommended that future studies apply the scale with all items to confirm its structure.

Although one item was integrated into another factor, the agreement between the new factorial structure and the reasoning that supports the attribution of meaning or ontological meaning to inevitable suffering agrees with the new factor structure, corroborating the MIST-P's construct validity.

The EFA demonstrates the validity of the MIST-P structure in two dimensions: Meaning and responses to suffering (F1), consisting of eight items, and Subjective characteristics in the face of suffering (F2), consisting of four items.

The MIST-P or "Escala de Sentido no Sofrimento" (ESS) shows good internal consistency, with a Cronbach's alpha of 0.833 (Marôco & Garcia-Marques, 2013; Pestana & Gageiro, 2014) and good stability over time (Pestana & Stutterer, 2014). These results confirm the relevance of using this scale in Portugal.

Conclusion

Using logotherapy principles as a reference, the CoCIP is a non-pharmacological approach emerging in the monitoring of the person in inevitable suffering, associated with chronic pain, during the search for meaning in life and the integration of this suffering into a meaningful life. It was necessary to fit specialized instruments, such as Starck's MIST (1998), to implement this competence. The MIST-P or "Escala de Sentido no Sofrimento" (ESS) allows objectively assessing the extent or frequency with which the person finds meaning in inevitable suffering (existential, spiritual, or noetic dimensions) associated with the chronic pain of people with RMDs. This assessment will allow nurses to define and implement spiritual care, promoting well-being, dialogical attitude, and hope, regardless of the person's clinical condition.

The MIST-P is an instrument with good reliability, displaying good internal consistency and good stability over time. This study was conducted in the hospital center with the highest influx of patients with RMDs from all over the country. However, the fact that it was implemented in a single institution constitutes a limitation to this study. Multicenter studies should be conducted with the MIST-P to consider context diversity and the influence of environment and culture on the experience of pain and suffering.

The MIST-P or "Escala de Sentido no Sofrimento" (ESS) is, therefore, appropriate for application in the Portuguese population with chronic pain, it can be used in research and clinical practice to promote humanized care, namely in the implementation of the CoCIP. Health gains will be translated in the control and integration of inevitable suffering into life with meaning, through the promotion of hope, despite adversity. Future studies should apply all items of the scale to confirm its structure.

Author contributions

Conceptualization: Kraus, T., Dixe, M. A., Rodrigues, M. A.

Data curation: Kraus, T., Dixe, M. A.

Methodology: Kraus, T., Dixe, M. A., Rodrigues, M. A. Writing – original draft: Kraus, T., Dixe, M. A., Rodrigues, M. A., Capela, S.

Writing – review & editing: Kraus, T., Dixe, M. A., Rodrigues, M. A., Capela, S.

References

- Antunes, F. (2019, May 21). Chronic pain care: Prevalência e caraterização da dor crónica nos Cuidados de Saúde Primários. *News Farma*. https://www.newsfarma.pt/noticias/7944-dor-cr%C3%B3nicaafeta-mais-de-30-dos-doentes-nos-cuidados-de-sa%C3%BAdeprim%C3%A1rios,-revela-estudo.html
- Branco, J. C., Faustino, A., Carvalho, B., Araújo, F., Canhão, H., Brito, I., Silva, J. A., Costa, J. A., Costa, L., Maurício, L., & Costa, M. M., (2015). Rede Nacional de Especialidade Hospitalar e de Referenciação de Reumatologia. https://www.sns.gov.pt/wp-content/uploads/2016/05/rede-referencia%C3%A7%C3%A3o-hospitalar-reumatologia.pdf
- Branco, J. C., Rodrigues, A. M., Gouveia, N., Eusébio, M., Ramiro,
 S., Machado, P. M., Costa, L. P., Mourão, A. F., Silva, I., Laires,
 P., Sepriano, A., Gonçalves, S., Coelho, P. S., Tavares, V., Cero, J.,
 Mendes, J. M., Carmona, L., & Canhão, H., (2016). Prevalence
 of rheumatic and musculoskeletal diseases and their impact on

- health-related quality of life, physical function and mental health in Portugal: Results from EpiReumaPt a national health survey. *RMD Open: Rheumatic & Muskuloskeletal Diseases*, 2(11). https://doi.org/10.1136/rmdopen-2015-000166
- Canhão, H., Faustino, A. & Fonseca, J. E. (2012). *Registo nacional de doentes reumáticos*. https://reuma.pt/docs/ONDOR_reumapt.pdf
- Corrar, L. J., Paulo, E., & Filho, J. M. (2011). Análise multivariada para o Curso de Administração, Ciências Contáveis e Economia. Atlas.
- Direção-Geral da Saúde. (2018). *Retrato da saúde, Portugal*. https://www.sns.gov.pt/wp-content/uploads/2018/04/RETRATO-DA--SAUDE_2018_compressed.pdf
- Filho, D. B., & Júnior, J. A. (2009). Desvendando os mistérios do coeficiente de correlação de Pearson (r). Revista Política Hoje, 18(1), 115-146. https://periodicos.ufpe.br/revistas/politicahoje/ article/viewFile/3852/3156
- Frankl, V. E. (1999). El hombre en busca del sentido último. Ediciones
- Geenen R., Overman, C. L., Christensen, R., Åsenlöf, P., Capela, S., Huisinga, K. L., Husebo, M. E., Köke, A. J., Paskins, Z., Pitsillidou, I. A., Savel, C., Austin, J., Hassett, A. L., Severijns, G., Marx, M. S., Vlaeyen, J. W., Fernández-de-las-Peñas, C., R., Ryan, S. J., & Bergman, S. (2018). EULAR recommendations for the health professional's approach to pain management in inflammatory arthritis and osteoarthritis. *Annals of the Rheumatic Diseases*, 77(6), 797-807. https://doi.org/10.1136/annrheumdis-2017-212662
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis (5th ed.). Prentice Hall.
- Harth, M., & Nielson, W. R. (2019). Pain and affective distress in arthritis: Relationship to immunity and inflammation. Expert Review of Clinical Immunology, 15(5), 541-552. https://doi.org/10.1080/1744666X.2019.1573675
- Kraus, T. (2014). Sentido de vida da pessoa com dor crónica [Tese de doutoramento, Universidade Católica Portuguesa]. Veritati: Repositório Institucional da Universidade Católica Portuguesa. https://repositorio.ucp.pt/handle/10400.14/16164
- Kraus, T., Dixe, M., & Rodrigues, M. (2014). Dor, sofrimento e sentido de vida: Desafio para a ciência, a teologia e a filosofia. In
 O. L. Oliveros, &. P. Krueff (Eds.), Finitude e Sentido da Vida: Logoterapia no embate com a tríade trágica (pp. 193-237). Evangraf.
- Kuuppelomäki, M., & Lauri,S. (1998). Cancer patients' reported experiences of suffering. *Cancer Nursing*, 21(5), 364-369. https://doi.org/10.1097/00002820-199810000-00008
- Marôco, J. P. (2014). Análise de equações estruturais: Fundamentos teóricos, software & aplicações (2.ª ed.). ReportNumber.
- Marôco, J., & Garcia-Marques, T. (2013). Qual a fiabilidade do alfa de Cronbach? Questões antigas e soluções modernas? *Laboratório* de Psicologia, 4(1), 65-90.
- Pache, B., Vollenweider, P., Waeber, G., & Marques-Vidal, P. (2015).
 Prevalence of measured and reported multimorbidity in a representative sample of the Swiss population disease epidemiology:
 Chronic. BMC Public Health, 15(164), 1-8. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-1515-x
- Pestana, M. H., & Gageiro, J. (2014). Análise de dados para ciências sociais: A complementaridade do SPSS (6ª ed.). Sílabo.
- Starck, P. L. (1985). *Guidelines: The meaning in suffering test.* Institute of Logotherapy Press.
- Starck, P. L. (2008). The human spirit: The search for meaning and purpose through suffering. *Humane Medicine*, 8(2), 132-137.