SCIENTIFIC ARTICLE

Assessment of the educational needs in patients with knee Osteoarthritis in a Latin American cohort

Evaluación de las necesidades educativas en pacientes con Osteoartritis de rodilla en una cohorte Latinoamericana

Avaliação das necessidades educacionais em pacientes com osteoartrite de joelho em uma coorte latino-americana

Authors

Adriana Denisse García Coello
Rheumatologist
Hospital General de Agudos Dr. I. Pirovano;
Buenos Aires, Argentina
adryden23@hotmail.com
ORCID:
https://orcid.org/0000-0002-7044-1894

Oscar Rillo
Rheumatologist
Hospital General de Agudos Dr. I. Pirovano;
Buenos Aires, Argentina
rillo.oscar@gmail.com
ORCID:
https://orcid.org/0000-0003-0469-7813

Maritza Quintero
Rheumatologist
Instituto Autónomo Hospital Universitario de
Los Andes, Universidad de Los Andes,
Venezuela
maritzaquintero@gmail.com
ORCID:
https://orcid.org/0000-0002-8459-2902

Alejandro Brigante
Rheumatologist
Hospital General de Agudos Dr. I. Pirovano;
Buenos Aires, Argentina
alebrigante672@gmail.com
ORCID:
https://orcid.org/0000-0002-5900-9507

Rosa Sciortino
Magister Scientiae
Universidad de Los Andes, Venezuela
mayasciortino@gmail.com
ORCID:
https://orcid.org/0000-0003-1613-8074

Rolando Espinosa Morales

Rheumatologist
Instituto Nacional de Rehabilitación, Luis
Guillermo Ibarra; Ciudad de México, México
rolespi@yahoo.com
ORCID:
https://orcid.org/0000-0001-9949-962X

Martha Herrero
Rheumatologist
Universidad Europea de Madrid
martaherreroba@gmail.com
ORCID:
https://orcid.org/0000-0002-0150-8266

Yessica Ponce
Rheumatologist
Hospital General de Agudos Dr. I. Pirovano;
Buenos Aires, Argentina
yessicadhm@hotmail.com
ORCID:
https://orcid.org/0000-0002-9157-6069

Verónica Lencina
Rheumatologist
Hospital Señor del Milagro de Salta, Argentina
mvlencina@yahoo.com.ar
ORCID:
https://orcid.org/0000-0001-5095-285X

Paula Kohan
Rheumatologist
Hospital General de Agudos Dr. E. Tornú,
Buenos Aires, Argentina
mpaulakohan@gmail.com
ORCID:
https://orcid.org/0000-0002-2924-8072

Silvia Papasidero
Rheumatologist
Hospital General de Agudos Dr. E. Tornú,
Buenos Aires, Argentina

sbpapasidero@yahoo.com.ar
ORCID:
https://orcid.org/0000-0001-5438-2962

Vanesa Cosentino
Rheumatologist
Hospital General de Agudos Dr. JM. Ramos Mejía ; Buenos Aires, Argentina
vanesaco@gmail.com
ORCID:
https://orcid.org/0000-0002-4739-4698

Dora Pereira
Rheumatologist
Hospital Dr. R. Gutiérrez, La Plata; Buenos Aires, Argentina
dorapereira13@hotmail.com
ORCID:
https://orcid.org/0000-0003-0545-8478

Gisela Pendón
Rheumatologist
Hospital Dr. R. Gutiérrez, La Plata; Buenos Aires, Argentina
giselapendon@yahoo.com.ar
ORCID:
https://orcid.org/0000-0002-6339-1251

Augusto Riopedre
Rheumatologist
Hospital General de Agudos Dr. C. Argerich; Buenos Aires, Argentina
augustom.riopedre@hotmail.com
ORCID:
https://orcid.org/0000-0003-3473-1234

Blanca Herrera Velazco
Rheumatologist
Centro Médico de Reumatología; Sucre, Bolivia
blasis2001@yahoo.es
ORCID:
https://orcid.org/0000-0002-6365-2627

Ana Sapag
Rheumatologist
Centro Hvj; Santa Cruz, Bolivia
maritasapag@hotmail.com

ORCID:
https://orcid.org/0000-0002-5928-1500

Pedro Santos Moreno
Rheumatologist
Centro BIOMAB; Bogotá- Colombia
pedrosantosmoreno@hotmail.com
ORCID:
https://orcid.org/0000-0001-7802-0317

José Salas Siado
Rheumatologist
Grupo de Reumatólogos del Caribe; Barranquilla, Colombia
pepesalas50@hotmail.com
ORCID:
https://orcid.org/0000-0002-1559-1259

Carlo V Caballero Uribe
Rheumatologist
Universidad del Norte; Barranquilla, Colombia
carvica@gmail.com
ORCID:
https://orcid.org/0000-0002-9845-8620

Araceli Chico
Rheumatologist
Servicio de Reumatología, Hospital Hermanos Ameijeiras and Servicio de Reumatología del Hospital Clínico Quirúrgico Hermanos Ameijeiras; La Habana, Cuba
aracelica@infomed.sld.cu
ORCID:
https://orcid.org/0000-0002-7826-5848

Ingrid Möller
Rheumatologist
Universidad de Barcelona, Instituto Poal; Barcelona, Spain
ingrid.moller@ipoal.com
ORCID:
https://orcid.org/0000-0002-3461-7709

Jorge Esquivel
Rheumatologist
Hospital Español de México; Ciudad de México, México

jesquivel2001@hotmail.com
ORCID:
https://orcid.org/0000-0002-3124-0395

Carlos Pineda
Rheumatologist. División de Enfermedades Musculoesqueléticas y Reumáticas, Instituto Nacional de Rehabilitación. Mexico
carpineda@yahoo.com
ORCID:
https://orcid.org/0000-0003-0544-7461

Vianna Khoury
Rheumatologist
Clínica Unión Medica del Norte/Hospital Regional Universitario Presidente Estrella Ureña; Santiago, Republica Dominicana
viannakhoury@gmail.com
ORCID:
https://orcid.org/0000-0002-4438-3651

Renee Souto
Rheumatologist
Cátedra de Reumatología de la Facultad de Medicina de la Universidad de la Republica; Montevideo, Uruguay
reneesouto@gmail.com
ORCID:
https://orcid.org/0000-0003-2505-2344

Cesar Rossi
Rheumatologist
Cátedra de Reumatología de la Facultad de Medicina de la Universidad de la Republica; Montevideo, Uruguay
crossiw@gmail.com
ORCID:
https://orcid.org/0000- 0002- 5203-875

Anthony Reginato
Rheumatologist
Division of Rheumatology, The Warren Alpert School of Medicine; Providence, RI,USA
anthonyreginato@yahoo.com
ORCID:
https://orcid.org/0000-0003-4658-4163

https://orcid.org/0000-0003-4658-4163

Oriana Nava Quintero
Rheumatologist
Instituto Autónomo Hospital Universitario de Los Andes, Universidad de Los Andes, Venezuela
mail@mail.com
ORCID:
https://orcid.org/0000-0001-6067-4777

Humberto Riera
Rheumatologist
Instituto Autónomo Hospital Universitario de Los Andes, Universidad de Los Andes, Venezuela
Humberto.Riera@gmail.com
ORCID:
https://orcid.org/0000-0001-7406-1170

Carlota Acosta
Rheumatologist
Hospital Universitario "Ruiz y Páez, Unidad de Reumatología " Ciudad Bolívar", Venezuela
carlota.acosta@gmail.com
ORCID:
https://orcid.org/0000-0002-6589-4637

Félix Fernández
Rheumatologist
Clínica Razetti; Barquisimeto, Venezuela, Pontificia Universidad Católica del Ecuador; Quito, Ecuador
felixfernandezc@gmail.com
ORCID:
https://orcid.org/0000-0001-9679-9205

Rodolfo del Carmen Arapé
Rheumatologist
Centro Clínico La Isabelica, Centro Médico Docente Prevaler; Valencia, Venezuela
fitrudolf72@gmail.com
ORCID:
https://orcid.org/0000-0001-8897-5897

Margarita González
Rheumatologist

22Servicio de Reumatología, Hospital San Ramón; Santa Rita, Paraguay
marga_urizar@hotmail.com
ORCID:
https://orcid.org/0000-0002-4654-6354

Julia Sosa
Rheumatologist
7Hospital General de Agudos Dr. E. Tornú, Buenos Aires, Argentina
drajsosa@gmail.com
ORCID:
https://orcid.org/0000-0002-3194-3795

Dafne Capelusnik
Rheumatologist
Instituto de Rehabilitación Psicofísica; Buenos Aires, Argentina
capelusnikdafne@gmail.com
ORCID:
https://orcid.org/0000-0001-9336-0416

Vicente Juárez
Rheumatologist
Hospital Señor del Milagro de Salta, Argentina
vtejuarez@gmail.com
ORCID:
https://orcid.org/ 0000-0003-3865-087X

Correspondence

Oscar Rillo
Rheumatologist
rillo.oscar@gmail.com
Section of Rheumatology, Hospital General de Agudos Dr. I. Pirovano; Buenos Aires, Argentina.

SCIENTIFIC ARTICLE

Assessment Of The Educational Needs In Patients With Knee Osteoarthritis In A Latin American Cohort

GLOBAL RHEUMATOLOGY
BY PANLAR

Abstracts
In English

Background/Purpose

The Spanish version of the Educational Needs Assessment Tool (SpENAT), is a self-completed questionnaire that assesses the educational needs (ENs) in osteoarthritis (OA) patients, with the purpose of providing tailored and patient-centered information. This study established the sources of information that patients use and to evaluate the ENs of patients with knee osteoarthritis (KOA) using the SpENAT.

Material and Method

An international multicenter, prospective cross-sectional study in patients with KOA was performed in 9 Latin American countries. Demographic data, educational level, clinics, VAS, RAPID3 and sources of information were recorded. SpENAT Questionnaire consists of 39 questions grouped into 7 domains [Managing pain, movement, feelings, arthritis process (OA), medical treatments, self-help measures and support systems]. It was used to evaluate patient's attitudes toward OA (score of ENs 0 to 156).

Results:

1341 patients with KOA (78.9% women) from 9 Latin American countries were included in this study. Mean age was 63.99 years. Work disability was found in 1.8%. SpENAT median scores for patients with KOA were 116 (IQR 101–134). The scores for each domain were as follows: mean for pain domain 17.42, mobility 15.44, feelings 12.95, medical treatments 20.64, personal treatment 17.41 and support system 11.7.

Information on KOA was obtained from Rheumatologist 74.9%, Traumatologist 16.8%, internet 14.3%, primary care physician 10%, other health professionals 9.9%, written press 3.6%, radio 1.9%, television 0.9%, family and friends 10.7%.

Conclusion

The majority of patients show considerable educational needs (high SpENAT) and a greater interest in knowing about KOA and its treatment. Most patients presented high SpENAT and had a greater interest in knowing about KOA and its treatment. The greatest value of SpENAT was associated with resorting to a rheumatologist for better information. We consider it important recognizing both the ENs and sources of information that our patients with KOA use as an important starting point to develop better therapeutic decisions and strategies.

Keywords

Spenat, Osteoartritis, Fuente De Información, Rapid3

GLOBAL
RHEUMATOLOGY
BY PANLAR

Abstracts
In Spanish

Introducción

El Educational Needs Assessment Tool-versión española (SpENAT) es un cuestionario que evalúa las necesidades educativas (NE) de pacientes. Este estudio estableció las fuentes de información que los pacientes utilizan y evalúa las NE de pacientes con OA de rodilla utilizando el SpENAT.

Material y método

Se realizó un estudio transversal, prospectivo, multicéntrico en pacientes con OA de rodilla en 9 países de Latinoamérica. Se registraron datos demográficos, nivel educativo, EVA, RAPID3 y fuentes de información. El SpENAT consta de 39 preguntas agrupadas en 7 dominios (dolor, movimiento, sentimientos, OA, tratamientos médicos, autoayuda y sistema de apoyo).

Resultados

Se incluyeron 1341 pacientes con OA de rodilla (78,9% mujeres). Edad mediana: 63,99 años. La discapacidad laboral: 1.8%. Las puntuaciones medias de SpENAT : 116 (RIC 101-134); dominio del dolor 17,42 (RIC 14-20), movilidad 15,44 (RIC 12-18), sentimientos 12,95 (RIC 10-16), OA 21,52 (RIC 18-25), tratamientos médicos 20,52 (RIC 16-24), autoayuda 17.41 (RIC14-20) y sistema de apoyo 12 (RIC 8-14). Para obtener información los pacientes acuden a reumatólogos 74,9%, cirujano ortopédico 16,8%, internet 14,3%, médico de atención primaria 10%, otros profesionales de la salud 9,9%, prensa escrita 3,6%, radio 1,9%, televisión 0,9%, familiares y amigos 10,7%.

Conclusión

La mayoría de los pacientes mostró una alta SpENAT y gran interés en conocer más sobre la OA. El mayor valor de SpENAT se asoció con consultar a un reumatólogo para obtener información. Consideramos importante reconocer tanto las NE como las fuentes de información que utilizan los pacientes con OA para desarrollar mejores decisiones terapéuticas.

Palabras clave

Spenat, Osteoarthritis, Source Of Information, Rapid3

Abstracts
In Portuguese

Introdução

A Ferramenta de Avaliação das Necessidades Educacionais - versão em espanhol (SpENAT) é um questionário que avalia as necessidades educacionais (NE) dos pacientes. Este estudo estabeleceu as fontes de informação que os pacientes utilizam e avalia a NE de pacientes com OA de joelho por meio do SpENAT.

Material y método

Estudo transversal, prospetivo e multicêntrico foi realizado em pacientes com OA de joelho em 9 países latino-americanos. Dados demográficos, escolaridade, VAS, RAPID3 e fontes de informação foram registrados. O SpENAT é composto por 39 questões agrupadas em 7 domínios (dor, movimento, sentimentos, OA, tratamentos médicos, autoajuda e sistema de apoio).

Resultados

1.341 pacientes com OA de joelho foram incluídos (78,9% mulheres). Idade média: 63,99 anos. Incapacidade para o trabalho: 1,8%. Pontuações médias no SpENAT: 116 (IQR 101-134); domínio da dor 17,42 (IQR 14-20), mobilidade 15,44 (IQR 12-18), sentimentos 12,95 (IQR 10-16), OA 21,52 (IQR 18-25), tratamentos médicos 20, 52 (RIC 16-24), autoajuda 17.41 (RIC14-20) e sistema de apoio 12 (RIC 8-14). Para obter informações, os pacientes vão a reumatologistas 74,9%, cirurgião ortopédico 16,8%, internet 14,3%, médico de atenção primária 10%, outros profissionais de saúde 9,9%, imprensa 3,6%, rádio 1,9%, televisão 0,9%, família e amigos 10,7%.

Conclusão

A maioria dos pacientes apresentou SpENAT alto e grande interesse em aprender mais sobre OA. O valor mais alto de SpENAT foi associado à consulta com reumatologista para obter informações. Consideramos importante reconhecer tanto a NE quanto as fontes de informação usadas pelos pacientes com OA para desenvolver melhores decisões de tratamento.

Keywords

Spenat, Osteoartritis, Fuente De Información, Rapid3

Introduction

Osteoarthritis, Arthrosis or Osteoarthrosis (OA) represents one of the most common joint pathology and the main cause of musculoskeletal pain, disability in the aging population around the world (1–2). It is a degenerative disease, with varying degrees of swelling. It has been defined as a heterogeneous group of conditions that lead to symptoms and joint signs that are associated with cartilage integrity defects and changes in the subchondral bone. New definitions describe the whole joint in OA "that compromises any joint tissues and structure; the cartilage degenerates and demonstrates fibrillation lesions, with fissures and ulcerations that cause the total loss of the thickness of the articular surface" (3).

Patient's knowledge about the OA is one of the most important limitations in the treatment and in their recovery process. In addition, it is essential to implement or improve personal care, daily activities and decision-making. The educational process has been evaluated in patients with inflammatory arthritis, especially in patients with rheumatoid arthritis (RA), psoriatic arthritis (PsA) and few European patients with hand OA (4–6). It is an important part as it may lead to an active participation of patients in the therapeutic decision process and provide new strategies that may be more suitable for them.

Our health system does not offer routine structures and time that to facilitate the education of patients, a task that is conducted informally and depends largely on the goodwill of the health professional. For this reason, doctors need a tool that assesses the ENs of patients. The ENAT (Educational Needs Assessment Tool) is a self-administered questionnaire that was originally developed in the United Kingdom and has been translated into several languages. The Spanish version of this questionnaire is the SpENAT (7,8). It comprises 39 questions grouped into 7 domains: pain management (6 questions), movement (5 questions), feelings (4 questions), arthritis process (7 questions), treatments (7 questions), self-help measures (6 questions) and support systems (4 questions). Each of them has 5 categories of rating according to the Likert scale from 0 to 4 and these include: Not at all important (0) A little important (1) Fairly important (2) Very important (3) Extremely important (4). The result is a total score of educational needs that varies from 0 to 156.

It is important to have a better understanding of the educational needs of our patients with OA to provide a personalized treatment plan. This study evaluated the educational needs of patients with knee OA using the SpENAT and the relationship between the educational needs and gender, age, the clinical characteristics of the disease and functional capacity. Additionally, as a specific objective, this study also aimed at establishing which are the main

sources of information the patients use and to which SpENAT values it corresponds.

Material and methods

An International multicenter, prospective cross-sectional study with the participation of 9 countries in which patients ≥ 50 years with a diagnosis of KOA (Primary and Secondary) according to the Altman R. classification criteria 1986 were included (9,10). Patients with other rheumatic diseases, (RA, PsA, and crystal induced arthritis), the inability to read and/or write, or understand the questionnaire were excluded from this study.

Demographic data, educational level, and clinics and sources of information consulted were recorded. The total SpENAT score was calculated by summing the domain scores (range 0–156), with higher scores representing higher ENs.

A comparison of the ENs was also performed according to gender, level of education, the time of evolution, use of SYSADOA (Symptomatics Slow-acting Drugs for Osteoarthritis) and functional capacity with the Anova test and the Bonferroni method. Analysis of variables according to the type and distribution was performed and VAS, RAPID3.

All patients that completed the SpENAT questionnaire were also asked to answer the following question: To whom or where do you go to get information about your illness? Being the options a) Rheumatologist, b) Primary care physician, c) Traumatologist, d) Other health care professionals (physical therapist, nurse, nurse practitioner, and other.), e) Family member or friends, and f) Internet, radio and/or television.

Results

We included 1341 patients from 9 countries (Argentina, Bolivia, Colombia, Cuba, Mexico, Paraguay, Dominican Republic, Uruguay and Venezuela). The mean age of the patients with KOA was 63.99 years (SD + 11.85 - C.I 95%: 63.35-64.62) and 78.9% of the participants were women. Ethnic distribution8 of our cohort was mostly 44.8% mestizo followed by white 38.1%, LA / Africans 7% and Amerindian 3%. With 79.7% urban residence and rural 20.3%. The mean time of education was 9.72 years (+/- 4.43 IC95% 9.49-9.63). Occupation: homemaker 42.1%; trade 10%, administrative 2.2%, teachers 3%, professionals 4%, unemployed 6,4%, retired 14%, students 0.2%; work disability 1.8%. The BMI of participants was normal 22%, overweight 45.9%, obese 31% and morbid obesity 2%. Primary OA was found in 78.1%, with a mean evolution time in months of 43.59 months (+/- 39.39 IC95% 41.4-45.7). Comorbidities at 82.70% (hypertension 45%, DM 16%, Osteoporosis 6%, hypothyroidism 4%, dyslipidemias 4%, gastrointestinal 1.2%, other 6%). In our cohort, the mean VAS pain was 42.64 mm (+/-33.7 IC95% 40.8-44.4), patient

VAS was 43.02mm (32.36 IC95% 41.2-44-7), and physician VAS was 36.61mm (30.4 IC95% 34.9-38.9), respectively (Table 1).

The median RAPID3 (11,12) in our cohort was (17) (IQR 12-22) meaning that they are defined as moderate severity (MS) and high severity (HS). Patients with KOA were treated with NSAIDs 58.61%, paracetamol 50.56%, opioids 3.5%, PPI 29.8% and SYSADOAs (Symptomatic Slow Action Drugs for Osteoarthritis) 68.43%, of which 15.1% Glucosamine, SG + CS 43%. Intra-articular treatment: 26.17% (3,1% with Hyaluronic Acid) and their SpENAT median was 121 (IQR 106-136). It is shown in (Figure 1), patients have more demands for the resource for the domains of OA and treatments health professionals. The ENs of patients with KOA according to SpENAT domains are shown in (Table 2).

SpENAT median scores for KOA was116 (IQR 101-134). The mean for the different SpENAT domains obtained from our cohort of patients with OA were as follows: pain was 17.42 (+/- 4.75 IC95 17.1-17.6), mobility 15.44 (+/- 4.61 IC95 15.1-15.6), feelings 12.95 (+/- 4.73 IC9512.6-13.2), medical treatments was 20.64 (+/- 6 IC95 20.3-20.9), personal treatments 17.41 (+/- 5.9 IC95 17-17.7), and support system 11.7 (+/- 26.9 IC95 11.5-11.8).

More educational needs were observed in the domains of movement, feelings and OA (Table 2). Patients with a higher educational level (> 10 years) reported an average of 118.4, higher than the educational level under 10 years that reported 115.5.

The correlations between the demographic variables and the SpENAT domains were summarized in the (Table 3).

The ENs according to age and pain management were statistically significant (p<0.05), domain of mobility and feeling was related to the educational level at disease progression in months. Correlation between RAPID3 and SpENAT Rho 0.30 p = 0.001, even though RAPID3 could be affected by patient's educational status, when we compared, there was a low correlation. The support domain is associated with all demographic variables with a Rho 0.635 and p-value <0.05. All SpeNAT domains showed a positive correlation with each other, the most important being movement, feeling, OA, medical treatment and other therapies such as exercise. The ENs related to the length of the disease were the same. That is, patients have a similar interest in learning at the beginning of the disease as well as those having more than 5 years with OA.

The primary sources of information for our cohort were obtained from Rheumatologist 74.9%, Traumatologist 16.8%, internet 14.3%, clinical 10%, other health professionals 9.9%, written press 3.6%, radio 1.9 %, television 0.9%, family and friends 10.7% (Figure 2). Internet consultation was found primarily in the younger age group (18-40 years old), p = 0.035.

VAS was 43.02mm (32.36 IC95% 41.2-44-7), and physician VAS was 36.61mm (30.4 IC95% 34.9-38.9), respectively (Table 1).

The median RAPID3 (11,12) in our cohort was (17) (IQR 12-22) meaning that they are defined as moderate severity (MS) and high severity (HS). Patients with KOA were treated with NSAIDs 58.61%, paracetamol 50.56%, opioids 3.5%, PPI 29.8% and SYSADOAs (Symptomatic Slow Action Drugs for Osteoarthritis) 68.43%, of which 15.1% Glucosamine, SG + CS 43%. Intra-articular treatment: 26.17% (3,1% with Hyaluronic Acid) and their SpENAT median was 121 (IQR 106-136). It is shown in (Figure 1), patients have more demands for the resource for the domains of OA and treatments health professionals. The ENs of patients with KOA according to SpENAT domains are shown in (Table 2).

SpENAT median scores for KOA was116 (IQR 101-134). The mean for the different SpENAT domains obtained from our cohort of patients with OA were as follows: pain was 17.42 (+/- 4.75 IC95 17.1-17.6), mobility 15.44 (+/- 4.61 IC95 15.1-15.6), feelings 12.95 (+/- 4.73 IC9512.6-13.2), medical treatments was 20.64 (+/- 6 IC95 20.3-20.9), personal treatments 17.41 (+/- 5.9 IC95 17-17.7), and support system 11.7 (+/- 26.9 IC95 11.5-11.8).

More educational needs were observed in the domains of movement, feelings and OA (Table 2). Patients with a higher educational level (> 10 years) reported an average of 118.4, higher than the educational level under 10 years that reported 115.5.

The correlations between the demographic variables and the SpENAT domains were summarized in the (Table 3).

The ENs according to age and pain management were statistically significant (p<0.05), domain of mobility and feeling was related to the educational level at disease progression in months. Correlation between RAPID3 and SpENAT Rho 0.30 p = 0.001, even though RAPID3 could be affected by patient's educational status, when we compared, there was a low correlation. The support domain is associated with all demographic variables with a Rho 0.635 and p-value <0.05. All SpeNAT domains showed a positive correlation with each other, the most important being movement, feeling, OA, medical treatment and other therapies such as exercise. The ENs related to the length of the disease were the same. That is, patients have a similar interest in learning at the beginning of the disease as well as those having more than 5 years with OA.

The primary sources of information for our cohort were obtained from Rheumatologist 74.9%, Traumatologist 16.8%, internet 14.3%, clinical 10%, other health professionals 9.9%, written press 3.6%, radio 1.9 %, television 0.9%, family and friends 10.7% (Figure 2). Internet consultation was found primarily in the younger age group (18-40 years old), p = 0.035.

Discussion

This study assessed the source of information patients with KOA use to learn more about their disease. Approximately, 0.2 to 1% of the general population is affected by OA (1,2). OA affects patients' quality of life in different ways; when a patient has been diagnosed with OA, he or she could have a different response, develop anxiety and depression, develop a negative impact, and fear; therefore, it is necessary for patients with OA to obtain proper information about their condition.

Clinical practice guidelines have been established for patients with OA and education is a key component of its treatment6. However, there is a lot of information that comes from different sources and there may be a risk of misinformation and/or information overload if patients do not know where to go or know the basic aspects of their diseases (13). Part of the non-pharmacological treatment of OA relates to the proper access of patient information in a patient-friendly, plain-language, and clear information about the disease (14).

Not many studies have assessed patients' education needs in those affected with OA, and there is not much literature about the use of the SpENAT to assess the source to which patients get their information. Moreover, several studies have shown that standard education has limited results in the long-term treatment of inflammatory diseases, suggesting that there is

a need for more patient-centered education, that could cover the specific ENs of the affected individual (15-17). Our study shows that patients with KOA are interested in learning more about their treatment options. The main source for patients to get information was the rheumatologist, which is consistent with the results obtained from another Latin America study (4); however, previously described, there may be an inherent bias as the questionnaire was conducted by only rheumatologists. We also found that, after rheumatologist, the internet was the most often used source of information among patients with KOA in our cohort.

Since technology has become more accessible every day, there is an obvious increase in the use of internet (14). The quality of information available online has been previously discussed (14-16) and although it seems to have increased in quality during the last few years, there are still many inconsistencies regarding the information that is available to users and or not specifically targeted to patients with KOA, especially in certified websites such as foundations or national rheumatology societies, which should be the ones that provide this type of information.

Recent studies have evaluated the effects of a patient-centered ENs assessment and how gender and educational level can influence patient needs (16-19). In accordance with our results, there were significant differences for women and their educational level. Ndosi et al20 found that differences are related to

patient knowledge that can affect aspects of their health, such as pain, stiffness and sleep. Our results are consistent with their findings. Our results highlight a need for an integrated approach, as others have previously noted, rheumatologists have to focus on a personalized treatment approach and pay more attention to the ENs of their patients as this may help their independence and reinforce treatment compliance (20-23).

A weakness of this work could be that we did not measure the knowledge prior to the administration of SpENAT in our patients and therefore this knowledge could modify the individual NEs. We highlight as a study strength having had the participation of several centers belonging to 9 LA countries, including then regions with great social, economic and cultural differences.

Conclusions

Most patients presented with high SpENAT and a greater interest in knowing about KOA and its treatment. Patients with KOA were very interested in knowing about their disease. There is a low correlation between SpENAT and RAPID3. A higher SpENAT value was associated with going to a rheumatologist for better information. Finally, we consider knowing the educational requirements and the sources of information of our patients relevant because these constitute a valid set of tools that allow us to reinforce key points on therapeutic handling and helps us avoid

misinformation and lack of knowledge, and by doing so it strengthens therapeutic adherence.

Acknowledgments

Lozada C. University of Miami Miller School of Medicine, Miami, Florida USA.

Radrigan F. Departamento de Reumatología, Universidad Católica de Chile; Santiago, Chile;

Rodríguez AJ. Hospital Central de Maracay, Unidad de Reumatología; Maracay, Venezuela.

Rodríguez F. Centro BIOMAB; Bogotá- Colombia Albanese M. CASMU Hospital Evangelico; Montevideo-Uruguay.

Verges J. OAFI, Barcelona, España.

GLOBAL
RHEUMATOLOGY
BY PANLAR

Table 1. Demographic of Latin American cohort with knee osteoarthritis (KOA)

	MEAN	SD+/-	C.I. 95%
Age	63.99	11.85	63.35 - 64.62
Education (years)	9.72	4.43	9.49 - 9.63
Length of OA Month	43.59	39.39	41.48 - 45.70
PAIN VAS (mm)	44.64	33.74	40.83 - 44.45
Patient VAS (mm)	43.02	32.36	41.29 - 44.76
Physician VAS (mm)	36.61	30.40	34.99 - 98.95

Table 2. Educational Needs of Patients with knee OA according to SpENAT domains (N=1341).

SpENAT Domains	MEAN	SD	C.I. 95%
Pain	17.42	4.75	17.1 - 17.6
Mobility	15.44	4.61	15.1 - 15.6
Feeling	12.95	4.73	12.6 - 13.2
Medical Treatment	20.64	6.0	20.3 -20.9
Personal Treatment	17.41	5.97	17 - 17.7
Support System	11.71	26.98	11.5 - 11.8

C.I.: confidence interval; SD: standard deviation.

Table 3. Anova SpENAT domains and demographic variables

SpENAT	Age	Gender	Urban Residency	Education	Evolution
Pain (0-24)	0.000	0.272	0.629	0.32	0.35
Mobility (0-20)	0.29	0.134	0.154	0.000	0.000
Feeling (0-16)	0.16	0.26	0.23	0.000	0.000
OA (0-28)	0.000	0.531	0.397	0.007	0.000
Medical Treatment (0-24)	0.000	0.228	0.08	0.053	0.2
Personal Treatment (0-24)	0.000	0.184	0.138	0.000	0.000
Other support (0-16)	0.000	0.044	0.002	0.000	0.000

Figure 1. Results from SpENAT domains
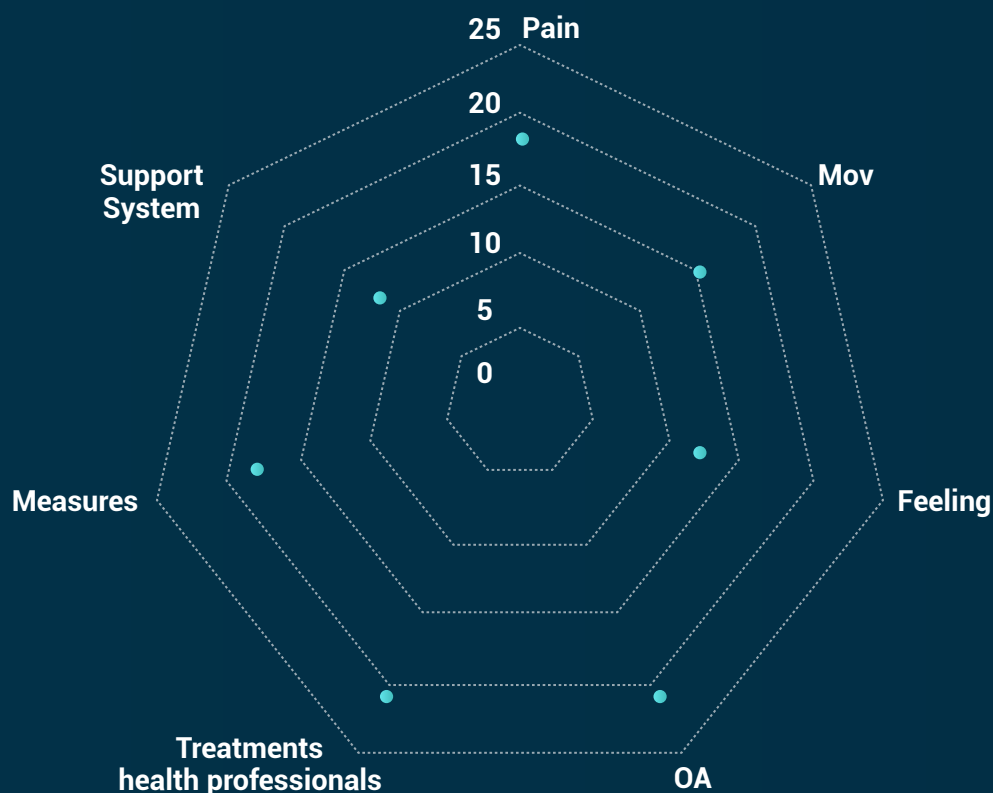
Figure 2. Source(s) of information utilized by patients with knee OA in our Latin American cohort.

GLOBAL RHEUMATOLOGY
BY PANLAR
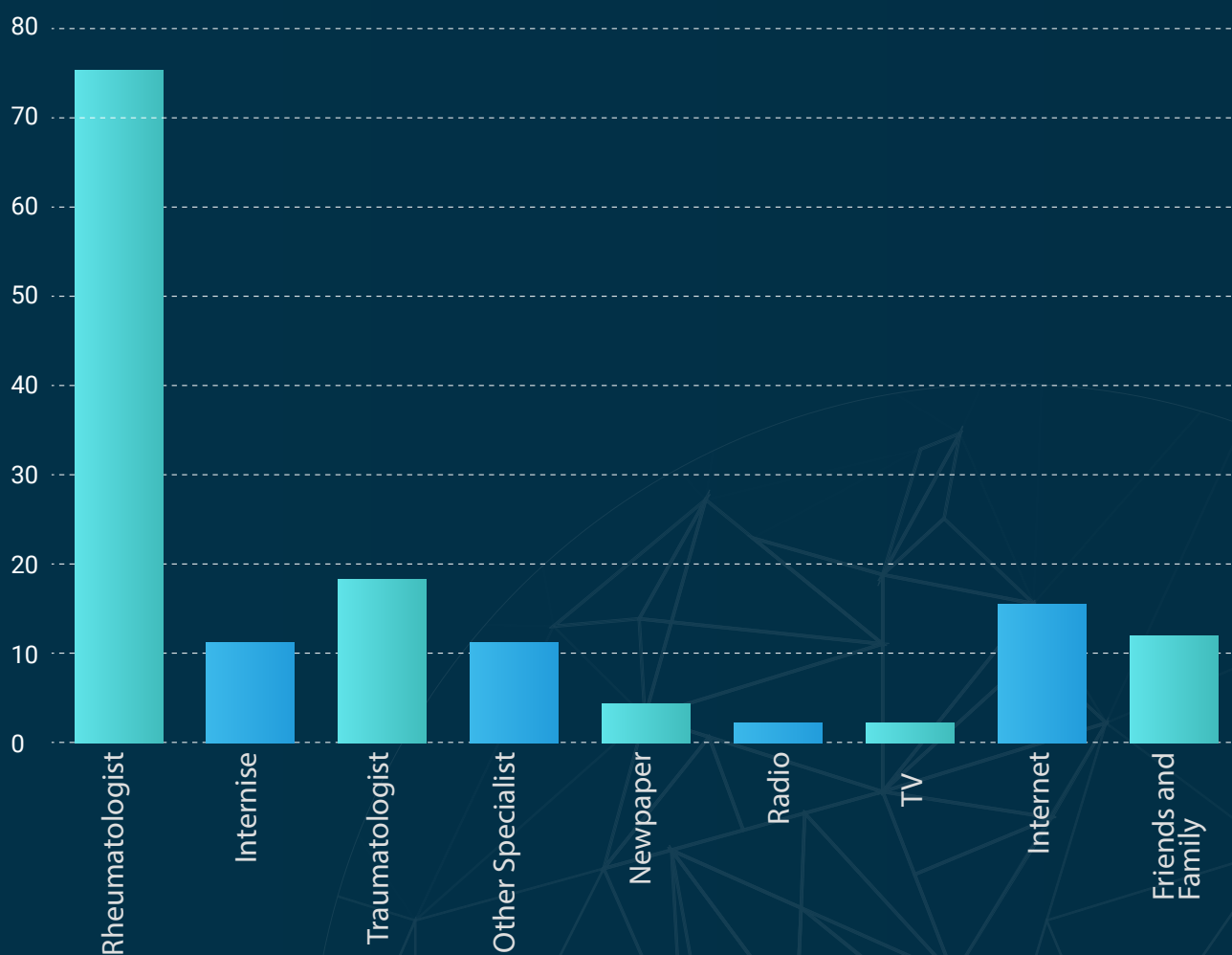
References

1. Neogi T.The Epidemiology and Impact of Pain in Osteoarthritis.Osteoarthritis Cartilage 2013; Sep 21(9):1145-53.

2. Primeras guías argentinas de práctica clínica para el diagnóstico y tratamiento de la osteoartritis (OA) de caderas, rodillas y manos. Sociedad Argentina de Reumatología; Edición 2010.

3. Brandt KD, Radin EL, Dieppe PA, van de Putte L. Yet more evidencethat osteoarthritis isnot a cartilagedisease. Ann RheumDis. 2006 Oct;65(10):1261-4. doi: 10.1136/ard.2006.058347. PMID: 16973787; PMCID: PMC1798332.

4. Pérez S, Santa Cruz M, Sosa J, Kohan P, Medina M, Klajn D, Papasidero S, Caracciolo J, Pendón G, Giordano F, Pereira D. Evaluación de las necesidades educacionales de los pacientes con artritis reumatoide mediante el cuestionario SpENAT. Reumatología Clínica. 2020 Sep 1;16(5):386-90.

5. Drăgoi RG, Ndosi M, Sadlonova M, Hill J, Duer M, Graninger W, Smolen J, Stamm TA. Patient education, disease activity and physical function: can we be more targeted? A cross sectional study among people with rheumatoid arthritis, psoriatic arthritis and hand osteoarthritis.Arthritis Res Ther. 2013 Oct;15(5):1-8.

6. Maloney S, Ilic D, Green S. Accessibility, nature and quality of health information on the internet: a survey on osteoarthritis. Rheumatology (Oxford) 2005; 44:382–5.

7. Meesters JJ, Vliet Vlieland TP, Hill J, Ndosi ME. Measuring educational needs among patients with rheumatoid arthritis using the Dutch version of the Educational Needs Assessment Tool (DENAT). Clin Rheumatol. 2009 Sep;28(9):1073-7. doi: 10.1007/s10067-009-1190-3. Epub 2009 May 16. Erratum in: Clin Rheumatol. 2009 Nov;28(11):1357. PMID: 19449083; PMCID: PMC2721136.

8. Pons-Estel B, Catoggio L, Cardiel M, Soriano E, Gentiletti S, Villa A, Abadi I, Caeiro F, Alvarellos A, Alarcón-Segovia D. The GLADEL Multinational Latin American Prospective Inception Cohort of 1,214 Patients With Systemic Lupus Erythematosus. Ethnic and Disease Heterogeneity Among "Hispanics". Medicine 2004;83:1–17

9. Altman R, Asch E, Bloch D, Bole G, Borenstein D, Brandt K, Christy W, Cooke TD, Greenwald R, Hochberg M, Howell D. Development of criteria for the classification and reporting of osteoarthritis: classification of osteoarthritis of the knee. Arthritis Rheum: 1986 Aug;29(8):1039-49.

10. Kellgreen JH, Lawrence JS. Radiographic assessment of osteoarthritis. Ann Rheum Dis. 1957; 16:494-502.

11. Pincus T. A Multidimensional Health Assessment Questionnaire (MDHAQ) for All Patients with Rheumatic Diseases to Complete at All

Visits in Standard Clinical Care. Bull NYU HospJt Dis 2007;65(2):150-60.

12. Castrejón I, Bergman M, Pincus T. MDHAQ/RAPID3 to Recognize Improvement Over 2 Months in Usual Care of Patients with Osteoarthritis, Systemic Lupus Erythematosus, Spondyloarthropathy, and Gout, as Well as Rheumatoid Arthritis. J Clin Rheumatol 2013;19: 169-74.

13. Ansani NT, Vogt M, Henderson BA, Mckaveney TP, Weber RJ, Smith RB, Burda M, Kwoh CK, Osial TA, Starz T. Quality of arthritis information on the Internet. Am J Health Syst Pharm 2005 Jun 1;62(11): 1184-9.doi: 10.1093/ajhp/62.11.1184

14. Charnock D. The DISCERN handbook. Quality criteria for consumer health information on treatment choices. Radcliffe: University of Oxford and The British Library; 1998.

15. Barrow A, Palmer S, Thomas S, Guy S, Brotherton J, Dear L, Pearson J. Quality of web-based information for osteoarthritis: a cross-sectional study. Physiotherapy. 2018 Sep 1;104(3):318-26.

16. Gagliardi A, Jadad A. Examination of instruments used to rate quality of health information on the internet: chronicle of a voyage with an unclear destination. BMJ 2002; 324:569–73.

17. Kim P, Eng TR, Deering MJ, Maxfield A. Pubished criteria for evaluating health related web sites: review. BMJ 1999; Mar 6 318(7184):647-9. doi:10.1136/bmj.318.7184.647.

18. Meesters JJ, Vliet Vlieland TP, Hill J, Ndosi ME. Measuring educational needs among patients with rheumatoid arthritis using the Dutch version of the Educational Needs Assessment Tool (DENAT). Clin Rheumatol. 2009 Sep;28(9):1073-7. doi:

10.1007/s10067-009-1190-3. Epub 2009 May 16. Erratum in: Clin Rheumatol. 2009 Nov;28(11):1357. PMID: 19449083; PMCID: PMC2721136.

19. Ndosi M, Johnson D, Young T, Hardware B, Hill J, Hale C, Maxwell J, Roussou E, Adebajo A. Effects of needs-based patient education on self-efficacy and health outcomes in people with rheumatoid arthritis: a multicentre, single blind, randomised controlled trial. Ann Rheum Dis. 2016 Jun 1;75(6):1126-32.

20. Ndosi M, Tennant A, Bergsten U, Kukkurainen ML, Machado P, de la Torre-Aboki J, Vlieland TP, Zangi HA, Hill J. Cross-cultural validation of the Educational Needs Assessment Tool in RA in 7 European countries. BMC musculoskeletdisord. 2011 Dec;12(1):1-9. https://doi.org/10.1186/1471-2474-12-110

21. Nelson AE, Allen KD, Golightly YM, Goode AP, Jordan JM. A systematic review of recommendations and guidelines for the management of osteoarthritis: the c h r o n i c osteoarthritis management initiative of the US bone and joint initiative. Semin Arthritis Rheumatism 2014 Jun; 43 (6): 701-12).

22. Brand CA, Harrison C, Tropea J, Hinman RS, Britt H, Bennell K. Management of osteoarthritis in general practice in Australia. Arthritis Care Res (Hoboken). 2014 Apr;66(4):551-8. doi: 10.1002/acr.22197. PMID: 24127305.

23. Cheraghi-Sohi S, Bower P, Kennedy A, Morden A, Rogers A, Richardson J, Sanders T, Stevenson F, Ong BN. Patient priorities in osteoarthritis and comorbid conditions: a secondary analysis of qualitative data. Arthritis Care Res (Hoboken). 2013 Jun;65(6):920-7. doi: 10.1002/acr.21897. PMID: 23203840.

GLOBAL
RHEUMATOLOGY
BY PANLAR