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Self-reported competencies and educational needs of rheumatology nurses: results of a national survey.

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Manuscript 498

Rheumatology nurses (RN) play an important role in the management of rheumatic and musculoskeletal diseases (RMDs) particularly inflammatory arthritis (IA) [1-5]. However differences exist between European countries regarding RNs' activities and qualifications [6] and there is no insight about French RN. The objective of this study was to investigate the competencies and educational needs of French RN.

A cross-sectional survey was conducted from December 2014 to May 2015 through 3 successive on-line rounds completed by 64-104 RN per round: 93% were female, 69% working full time in a University hospital. The lists of competencies comprising 70-78 items were elaborated by a multidisciplinary group of 27 participants including patients. Cognitive skills and know-how were assessed concerning a wide range of RMDs (table 1,2) and generic skills (table 2). For each item of the list, RN indicated if they believed they had acquired the skill and if they considered it of importance. Statistics were computed using Stata (version 12, StataCorp, College Station, USA). The difference rate between knowledge and know-how was calculated; the educational needs were the difference between the reported skills and those considered very or rather important by the nurses.

For RA and SpA, median reported competency levels were high on symptomatic treatments (90%), good on DMARDs (79%) and investigations/imaging (59%). Lesser skills were declared on disease activity and psychosocial assessment (31%, 28%), comorbidities (43%) and non-

pharmacological treatments (53%) (table1). The gap between knowledge and know-how was small for DMARDs (12%), biologics (6-12%), comorbidities (13-18%) and symptomatic treatments (2-5%). Conversely the gap was high concerning the psychological assessment (60-71%) and disease activity assessment (43%). In these last domains the educational needs were the highest.

Competencies were lower on other RMDs (Table 2). For osteoporosis, a median competency score of 50-60 % was obtained in disease knowledge and medications, practical skills on pharmacological and non-pharmacological treatments. In low back pain a median score > 50% was only found on pharmacological treatment (56%). Osteoarthritis and other RMDs were the least known and educational needs were high. Although generic skills were high (table 2), some educational needs emerged such as assessment of medication adherence or motivational interviewing.

Our results are concordant with a survey in the UK [7] among 162 nurses and HPs, showing that 71% of respondents had the knowledge and skills to manage the care of person with RA. The responding French nurses had better skills in pain management and similar skills in non-pharmacological management than in others studies [7,8], although musculoskeletal courses have for long existed for nurses on some European countries [7-9].

Although the number of responding nurses may seems rather low, the response rate was is similar to the other studies [7-10]. We found that French nurses have a more comprehensive approach of their role in rheumatology, not limited to RA and SpA.

In conclusion, this study provides an insight on RN competencies in France. This study will be useful in developing post graduate curriculum, advanced practice degrees and improve the comprehensive treatment of RMDs.

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Table 1 Competencies in RA, SpA and CTDs described by 106 RN

Competencies	“Very much or rather acquired” competencies %		Competencies rated “rather important or essential “(%)	
	Cognitive*	Know how*	Cognitive*	Know how *
RA-SpA	56 [8-94]*	44 [6-94]	96 [57-100]*	91 [48-100]
-Disease process, diagnosis , etc..	53 [36-81]		96 [92-100]	
-Disease activity assessment	31 [8-50]	25 [11-29]	72 [57-84]	62 [48-62]
-Comprehensive assessment (psychosocial)	28 [13-59]	19 [6-28]	85 [70-98]	86 [57-89]
-Investigations/imaging	58 [36-81]	51 [49-59]	83 [70-98]	72 [66-93]
-DMARDs	79 [57-83]	72 [50-76]	100 [93-100]	100 [86-100]
-Symptomatic treatments**	90 [87-94]	87 [85-94]	100 [100 – 100]	100 [100-100]
-Non pharmacological treatments	53 [28-64]	41[31-45]	97[9-98]	95 [89-100]
-Co morbidities	43 [36-50]	37 [31-43]	98 [98 – 98]	91 [90-93]
CTDs***	28 [21-40]		90 [86-98]	

*median, extreme values

**analgesics and non-steroidal anti-inflammatory drugs (NSAIDs)

*** Sjögren Syndrome, systemic lupus erythematosus

Table 2 Competencies in other RMDs and generic skills described by 71 and 64 RN respectively.

Competencies	“Very much or rather acquired” competencies %		Competencies rated “rather important or essential “(%)	
	Cognitive*	Know how*	Cognitive*	Know how *

Osteoporosis	54 [19-83]*	27 [6-68]	97 [67-99]	90 [68-99]
Disease process, diagnosis	61 [61-61]		98 [98-99]	
Assessment, imaging	46 [21-83]	23 [18-27]	96 [67-99]	70 [68-82]
Comprehensive assessment	42 [20-64]	10 [6-14]	93 [89-97]	78 [68-89]
Pharmacological treatments	56 [54-57]	56 [49-63]	99 [99-99]	98 [97-99]
Non pharmacological treatments	35 [19-50]	53 [17-68]	93 [92-94]	96 [90-97]
Low back pain	30 [3-72]	19 [3-54]	87[65-96]	84 [62-95]
Disease process, imaging	44 [34-55]		88 [81-95]	
Comprehensive assessment	12 [3-26]	3 [3-3]	75 [65-86]	64 [62-67]
Treatments	56 [18-72]	34 [9-54]	91 [87-96]	91 [79-95]
Osteoarthritis	31 [5-47]	18 [3-47]	87 [62-97]	86 [58-99]
Disease process, imaging	28 [5-40]	3 [3-3]	87 [62-96]	58 [58-58]
Comprehensive assessment	36 [36-36]	17 [17-17]	86 [86-86]	86 [86-86]
Treatments	32 [8-47]	23 [18-47]	89 [80-97]	97 [79-99]
Other IA**/ other RMDs***	34 [18-52]		93 [88-97]	
Pain management	63 [25-81]	39 [17-87]	98 [75-100]	98 [72-100]
Physiopathology, investigations	54 [54-54]		98 [98-98]	
Comprehensive assessment (psychosocial)	71 [63-80]	87 [87-87]	98 [98-98]	100 [100-100]
Pharmacological and non-pharmacological treatment	64 [25-81]	26 [17-70]	98 [75-100]	89 [72-95]
Patient-nurse communication	64[29-84]	54 [7-80]	98 [90-100]	98 [77-100]
Patient education	63 [25-78]	55 [32-68]	96 [85-99]	95 [85-99]
Research	28 [10-35]	26 [9-35]	69 [52-82]	66 [35-82]

*median, extreme values

**polymyalgia rheumatica, Horton disease, chondrocalcinosis and gout

***fibromyalgia, infections, onco-rheumatology