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ORIGINAL RESEARCH

Global social media use among rheumatology professionals: the EULAR SoMeR Study Group survey

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ABSTRACT

Background/purpose Social media (SM) has become an indispensable tool in healthcare, providing platforms for networking and education. However, its use presents challenges including misinformation, professional boundaries and platform-specific limitations. Building on the EULAR EMEUNET survey, we aimed to characterise SM utilisation within rheumatology globally.

Methods The EULAR study group on social media (SoMeR) designed a 30-item survey, which was validated, translated into six languages and distributed via mailing lists and SM channels of EMEUNET, PANLAR Joven, AFLAR and APLAR Young Rheumatology. Analysis employed Human Development Index (HDI) and Internet Freedom Index (IFI) to assess digital divides.

Results Among 597 respondents from 59 countries (42.2% female), 92.3% used SM professionally. Female professionals demonstrated significantly higher SM use (94.4% vs 88.8%, p=0.02). Knowledge acquisition was the primary driver (73.0%), with 67.2% using SM for academic research updates. SM adoption varied regionally (Europe 97.3% vs Asia-Pacific 88.6%). Lower HDI regions reported more connectivity issues (28.1% vs 16.7%), while higher HDI cited legal restrictions (24.4%). Countries with restricted internet freedom paradoxically reported higher positive SM impact (4.04/5 vs 3.86/5, p<0.01). Cross-cohort analysis (2015–2023) revealed trends toward professional applications and away from networking functions. Over half (56.9%) reported feeling overwhelmed by SM content, particularly in South America and Africa (73.3%/70.3%, p<0.01). Interest in digital communication was high (83.3%), with webinars being the preferred format (41.1%).

Conclusions This survey demonstrates SM's integral role in rheumatology with significant regional variations, calling for targeted interventions addressing connectivity and legal concerns while maintaining professionalism and scientific integrity.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Social media has become an indispensable tool in healthcare, offering valuable opportunities for networking, education and professional engagement. Despite its rapid growth within the field of rheumatology, there remains a lack of comprehensive frameworks to optimise its full educational potential, raising concerns about misinformation and professional boundaries.

WHAT THIS STUDY ADDS

⇒ This global survey provides the first comprehensive analysis of social media usage patterns, barriers and perceived impact among rheumatology professionals, highlighting significant regional differences and emerging digital divides.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ These findings can inform tailored strategies and policy frameworks for optimising social media use in rheumatology education and professional development, while addressing misinformation and access disparities.

INTRODUCTION

Social media (SM) has fundamentally transformed how healthcare professionals communicate, collaborate and engage in continuing education. In rheumatology, a specialty characterised by complex, evolving evidence and therapeutic approaches, SM platforms have emerged as powerful tools for knowledge dissemination and professional networking.[1] However, despite its widespread adoption, significant gaps remain in our understanding of how these platforms are used across different regions, professional demographics and development contexts.[2]

The exponential growth of SM engagement in rheumatology has been remarkable. Platforms such as X (formerly Twitter), Instagram,[3] LinkedIn and specialty-specific forums

have witnessed increasing participation from clinicians, researchers, patients and advocacy groups.[4–6] This growth has occurred against a backdrop of accelerating medical knowledge, where traditional mechanisms of information dissemination often struggle to keep pace with rapidly evolving evidence. The COVID-19 pandemic catalysed unprecedented SM engagement among rheumatologists, with over 70% of surveyed professionals reporting increased reliance on SM for professional updates, while simultaneously highlighting significant challenges with misinformation.[7 8]

SM has also transformed academic impact and post-publication promotion.[9] Articles with coordinated SM promotion receive 2.7-fold more citations within the first year than comparable papers without such promotion.[10] This 'amplification effect' has profound implications for how research reaches its intended audience, potentially democratising influence beyond traditional academic hierarchies. Initiatives like RheumMadness exemplify how digital platforms can create spaces that simultaneously advance scientific discourse and nurture professional well-being.[11] The 'digital mentorship' phenomenon further illustrates how early-career rheumatologists increasingly navigate professional development through relationships formed primarily through SM interactions.[12]

Despite these transformative developments, several critical knowledge gaps persist. Comprehensive data on global patterns of SM utilisation among rheumatology professionals remain limited, with most studies focusing on single regions or platforms.[1] The impact of digital divides—differences in internet access, infrastructure and regulatory environments—on professional SM engagement has not been systematically characterised. Factors influencing SM adoption, platform preferences and perceived professional impact across diverse demographic and geographic groups remain poorly understood. Additionally, barriers to effective SM utilisation and their variation across development contexts have not been comprehensively mapped, while changes in utilisation patterns and perceptions over time have not been systematically evaluated.

Understanding this complex landscape represents an essential first step towards developing cohesive approaches to SM integration across the European Alliance of Associations for Rheumatology's (EULAR) diverse constituency and beyond.[13] Unlike other specialties such as gastroenterology, which has pioneered formal recognition for structured SM learning,[14] rheumatology lacks standardised approaches to integrating these platforms into professional development pathways.

This study aims to address these knowledge gaps by: (1) characterising global patterns of SM adoption, platform preferences and user goals among rheumatology professionals; (2) examining demographic, professional and regional factors that influence SM usage patterns and perceived professional impact; (3) identifying reasons for SM use and barriers to utilisation across regions with different levels of development and internet freedom; (4) evaluating changes in SM utilisation patterns through cross-cohort comparison with previous survey data and (5) assessing training needs for professional development in digital communication tools. By systematically addressing these objectives, this study will provide the evidence base needed to develop targeted, region-appropriate strategies for optimising SM integration in rheumatology education, research dissemination and professional networking.

METHODOLOGY

Study design

This cross-sectional survey study was designed to comprehensively assess SM utilisation patterns among rheumatology professionals globally. The study builds on the original EULAR-EMEUNET survey reported by Nikiphorou *et al*,[1] enabling cross-cohort comparisons with 2015 data. The EULAR Study Group on Social Media (SoMeR) adapted and expanded the original survey instrument to address contemporary digital communication patterns and global variations in SM access and utilisation.

A structured 30-item questionnaire was developed incorporating multiple-choice questions, open-ended responses and Likert scales (online supplemental table 1). The survey instrument gathered data across five primary domains: demographic and professional characteristics, SM platform usage patterns and frequency, motivations for SM engagement and professional applications, barriers to SM utilisation and platform-specific challenges, and self-assessed SM knowledge and perceived professional impact. The questionnaire was validated through expert review by the SoMeR study group members and translated into six languages to ensure global accessibility. Content validity was established through review by rheumatology professionals with diverse geographic representation and SM expertise.

Participants were recruited between June 2023 and October 2024 using convenience sampling through multiple channels including direct email invitations to members of EMEUNET, AFLAR, PANLAR Joven and APLAR Young Rheumatology databases, SM promotion through official channels of participating organisations, and snowball sampling through professional networks. Healthcare professionals involved in rheumatology practice, research or education globally were eligible for inclusion, while incomplete survey responses and non-rheumatology healthcare professionals were excluded from analysis. The survey was hosted on the SurveyMonkey platform and followed CHERRIES guidelines[15] for reporting internet survey results.

Scoring survey variables

Based on our research objectives, we prespecified five primary outcomes: SM adoption (binary: use vs non-use of SM platform for professional purposes), daily professional SM usage (ordinal: categorised as low less than

1 hour per day, average 1–3 hours per day or high greater than 3 hours per day),[16] SM understanding score (continuous: self-rated platform understanding on 5-point Likert scale from 1 equals very limited to 5 equals very good), perceived professional impact (continuous: SM impact on professional life from negative 2 equals highly negative to positive 2 equals highly positive), and digital overwhelm (binary: self-reported feeling overwhelmed by SM content). Platform usage frequency was classified as regular (at least weekly), not regular (less than weekly) or never (no usage).[17]

Regional classifications included geographic regions based on rheumatology league affiliations (Asia-Pacific, Europe, South America, Africa, North America, Human Development Index (HDI) with countries classified as very high (UK, Australia), high (Mexico, Kazakhstan), medium (Nepal, Ghana) or low (Ethiopia, Pakistan) based on United Nations Development Programme (UNDP) classifications,[18] and Internet Freedom Index (IFI) with countries classified as free (Canada, USA), partly free (India, Brazil), or not free (Saudi Arabia, China) based on Freedom House assessments.[19 20] Demographic variables included age (continuous), gender (categorical: male, female, other or prefer not to say), professional role, years of experience (continuous), academic role (binary) and platform usage patterns (categorical: regular, irregular, never for each platform).

Statistical analysis

Survey data were analysed using SPSS and JASP V.0.19.2. Respondents with incomplete demographic data were excluded from all analyses. Prespecified subgroup analyses were conducted based on HDI classification (very high and high vs medium and low), IFI status (free vs partly free vs not free), gender (male vs female) and professional role (clinician vs academic or researcher). Associations between respondent characteristics and SM usage patterns, platform preferences, perceptions, barriers and training preferences were examined using χ^2 tests and analysis of variance across regions and subgroups. Daily SM usage, SM understanding and digital overwhelm were examined using ordinal, linear and logistic multivariable regression, respectively, with age, gender (male/female), academic role and regional variation included as predictors in the models. Regional variation was accounted for using HDI in the first two analyses (daily SM usage and SM understanding) and IFI classification for digital overwhelm. Respondents from countries not classified by HDI or IFI, as well as those reporting other or prefer not to say for gender, were excluded from the respective analyses. Statistical significance was set at p<0.05. Benjamini-Hochberg false discovery rate correction was applied to adjust p values for multiple comparisons within each conceptual domain. Temporal trends in SM use were examined using European data from the current survey and the 2015 EULAR-EMEUNET survey.[1] Ethical approval was obtained from Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow, India[21], and informed consent was obtained electronically from all participants prior to survey completion. Participation was voluntary, anonymous, and no incentives were provided.

RESULTS

The study included 597 respondents (figure 1A,B) (42.2% female), aged 40.4±10.0 years with 12.0±9.7 years of experience. Respondents were primarily practising rheumatologists (64.8%), engaged in clinical work (85.8%) or research (57.5%) (table 1).

Use of SM among rheumatology workforce

SM adoption among rheumatology professionals varied globally, with Europe showing the highest rate (97.3%) and Asia Pacific the lowest (88.6%), with daily use for <1 hour/day consistent across regions and genders.

Female healthcare professionals demonstrated significantly higher SM use (94.4% vs 88.8%, p=0.02) and more often used platforms for professional development, clinical updates and networking compared with men. Females showed greater engagement across multiple domains, including skill development (46.2% vs 34.7%, p=0.03), building professional profiles (36.4% vs 22.8%, p=0.03) and maintained stricter separation between personal and professional profiles (p=0.02) (online supplemental table 2).

After adjusting for age, gender and academic role, respondents from countries with low and medium HDI showed significantly higher daily SM usage compared with those from high and very high HDI countries (β=−0.78, p<0.01, 95% CI −1.30 to −0.27) (online supplemental table 6).

Professional analysis suggested that while clinicians and non-clinicians had similar use tendencies, clinicians relied more heavily on SM for clinical guideline updates (p<0.01) and knowledge acquisition (p<0.01), though they expressed greater security concerns and were more likely to consider taking breaks from SM (p=0.01) (online supplemental table 2). Primary reasons for non-use included privacy concerns (15.4%), time constraints (12.8%), perceived unsuitability (12.1%) and misinformation risks (9.4%) (figure 1C). These findings suggest regional and demographic factors significantly influence SM adoption in rheumatology

SMP use and sites followed

The top five platforms used by respondents were YouTube, Facebook, X (formerly Twitter), Instagram and LinkedIn (figure 2B).

Professional bodies were followed most in Europe (97.2%) and North America (91.7%), compared with Asia-Pacific (66.3%, p<0.01). Likewise, patient-led organisations saw higher engagement in Europe (60.6%) and North America (52.8%) vs Asia-Pacific (17.8%, p<0.01) (online supplemental table 3).

Platform preferences varied: X (formerly Twitter) was regularly used in Europe (66.1%) and North America

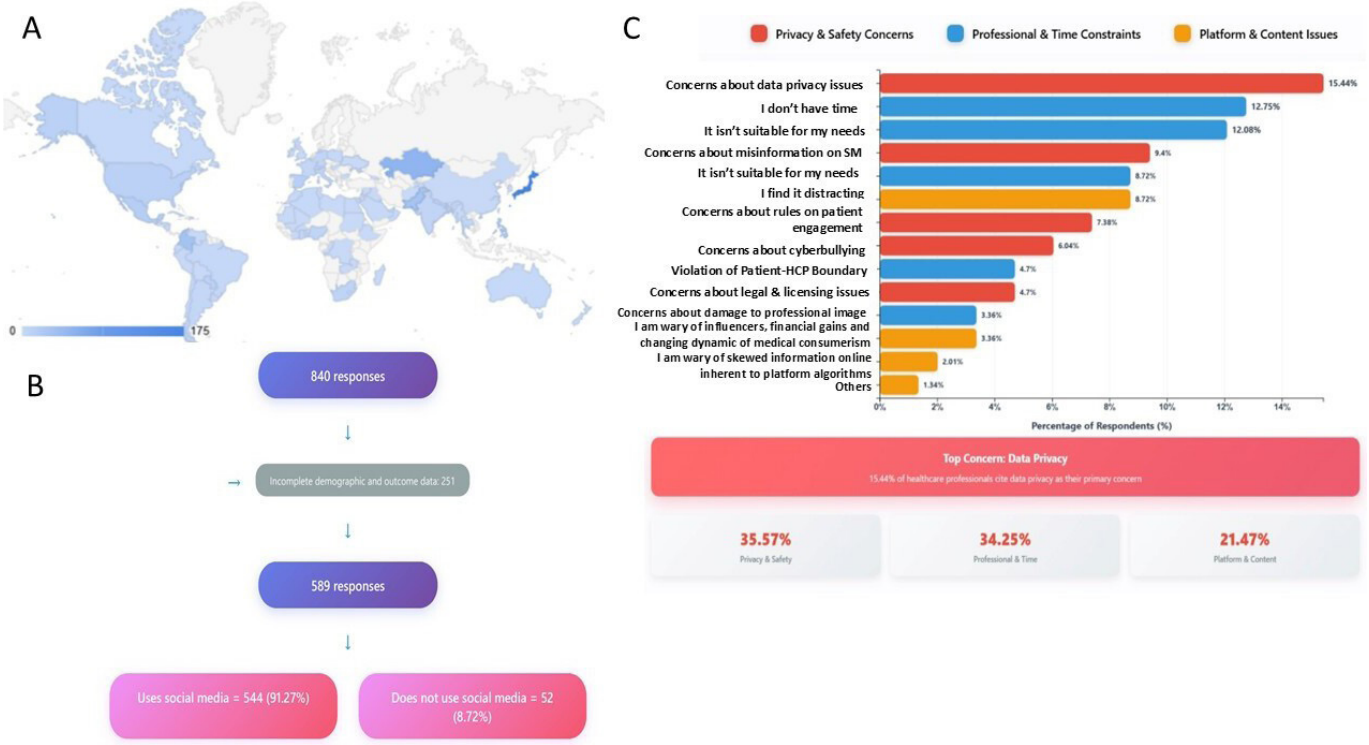

Figure 1 (A) Workflow diagram, (B) Worldwide distribution of respondents, (C) Reasons for not using SM among rheumatology healthcare professionals (HCPs). SM, social media.

(75.0%) but low in Asia-Pacific (45.5%, p<0.01). LinkedIn use was low in Asia-Pacific (64.4% never used) vs Europe (22.9%, p<0.01). YouTube was popular in Asia-Pacific (79.9%) and South America (73.3%) but less so in Europe (44.0%) and North America (44.4%, p<0.01) (online supplemental table 3), suggesting distinct regional patterns in professional networking among rheumatologists.

Reasons for using SM

The most frequently reported reasons for using SM were acquiring knowledge (73.0%), connecting with family and friends (62.8%) and personal entertainment (60.4%) (table 2). Among professional applications, connecting with professional peers and potential academic collaborators was reported by 55.4% of respondents.

Work-related applications included rheumatology academic research updates (67.2%), with significantly higher engagement in Europe (81.7%, p<0.01) and clinical guideline updates (66.2%) (table 2). Regional variations were notable: African professionals demonstrated higher engagement in learning new skills (56.8%) compared with North America (30.6%, p=0.06) and clinical practice applications including telemedicine (35.1%). European respondents led in research dissemination (57.8%) and professional networking (77.1%). North American professionals prioritised health information distribution (47.2%), while South American respondents frequently used SM for telemedicine (31.7%). Asia-Pacific demonstrated the lowest professional networking (42.6%) but the highest curiosity-driven use (31.7%, p=0.02). These findings suggest remarkable regional differences in SM utilisation, potentially influenced by local healthcare needs and digital infrastructure.

Platform choice and user goals

Across platforms, acquiring knowledge was the primary motivation (74.2% on LinkedIn to 80.8% on X), while learning new skills peaked on TikTok (50.0%). LinkedIn and X dominated research conduct and dissemination, with LinkedIn excelling in professional connections (80.8%), clinical guidelines (80.8%) and job-seeking (30%) while X was key for academic research updates (79.5%) and professional networking (63.0%). Facebook and Instagram led personal connections (65.1% and 64.6%). National/international rheumatology bodies were most followed on LinkedIn (93.3%), whereas YouTube (83.7%) and Facebook (82.5%) served as primary information sources. Detailed platform-specific usage patterns are provided in online supplemental table 4.

Perception and understanding of SM

Changes in perception regarding SM utility showed North America and South America demonstrating the greatest increase in positive perception (86.1% and 81.7%, respectively), while Europe showed the greatest increase in negative perception (11.9%) (table 3).

The likelihood of maintaining separate personal and professional SM profiles was highest in North America (3.6±1.3) and lowest in Africa (2.6±1.3, p<0.01). Feeling overwhelmed by SM was most prevalent in South America

Table 1 Respondent characteristics

Respondent characteristics	Mean (SD) or n (%)
Age	40.4 (10.1)
Gender* F:M	42.2% female
Region† (%)	
Asia Pacific	342 (57.3)
Europe	112 (18.8)
South America	65 (10.9)
Africa	39 (6.5)
North America	39 (6.5)
HDI‡, n (%)	
Very high	391 (65.6)
High	114 (19.1)
Medium	46 (7.7)
Low	45 (7.6)
Professional title, n (%)§	
Student	37 (6.8)
Practising physician rheumatologist	387 (64.8)
Non-clinical academic/researcher	32 (5.4)
Clinical academic/researcher	210 (35.2)
Rheumatology healthcare professional	122 (20.4)
Administrator	25 (4.2)
Registered nurse practitioner	5 (0.8)
Physiotherapist	7 (1.2)
Occupational health therapist	3 (0.5)
Others	27 (4.5)
Years of experience	11.97 (9.7)
Job setting§	
Clinical work	512 (85.8)
Teaching	260 (43.6)
Research	343 (57.5)
Laboratory work	14 (2.6)
Others	10 (1.7)
In academic role	370 (66.0)

n=597 for all, except gender (n=589), HDI (n=596), years of experience (n=545), in academic role (n=561).
*A small subset of respondents (8, 1.34%) identified as other genders or preferred not to disclose their genders.
†Regions grouped according to country affiliations with respective rheumatology leagues.
‡One respondent excluded as belonging from Taiwan region.
§Multiple answers.
F, female; HDI, Human Development Index; M, male.

and Africa (73.3% and 70.3%) compared with Asia Pacific (51.8%, p<0.01). Contemplation of SM breaks varied by region (p=0.10), with Africa and North America showing the highest rates (75.7% and 72.2%, respectively); however, actual implementation showed no regional differences (p=0.30). The impact of SM on professional working life was consistently high across all regions (mean 4.0±0.7, p=0.17) (table 3). Countries with restricted internet freedom paradoxically reported higher perceived impact of SM on professional life. Over the past 5 years, SM perceptions shifted positively across all regions, though this change was least pronounced in free countries (62.8%), likely reflecting a ceiling effect. Respondents from partly free and not free countries reported higher rates of feeling overwhelmed by SM and contemplating breaks (p=0.03 and p=0.08, respectively) (online supplemental table 5). Multivariable analysis adjusting for age, gender and academic role confirmed higher odds of digital overwhelm in partly free (OR=2.33, p<0.01, 95% CI 1.40 to 3.88) and not free countries (OR=1.83, p=0.02, 95% CI 1.08 to 3.10) compared with free countries (online supplemental table 7). Surprisingly, respondents from not free countries were more likely to consider SM a safe communication method than those in partly free and free countries (53.8% vs 46.5% and 33.3%).

To examine factors associated with SM platform understanding, multivariable linear regression analyses were conducted. Older age was associated with significantly lower SM understanding (β = −0.10, p=0.02, 95% CI 0.003 to 0.39), whereas having an academic role was associated with higher SM understanding (β=0.20, p=0.05, 95% CI 0.003 to 0.39). Gender and HDI were without significant association (online supplemental table 8).

Barriers to the use of SM

Barriers to SM usage were reported by nearly half of respondents (48.4%), with highest prevalence in Asia-Pacific (56.8%) and Africa (34.9%). Primary barriers included legal restrictions (24.4%), connectivity issues (18.7%) and lack of hardware (4.8%). Regional variations were notable, with connectivity issues most prevalent in Africa and legal restrictions in Asia-Pacific (figure 2C).

Notably, SM use varied significantly by internet freedom status, with lowest use in countries with high internet freedom and highest in countries with restricted internet access (85.9% vs 95.4%, p<0.01) (figure 2A). Respondents from high internet freedom countries reported more legal restrictions (33.3%) and countries with restricted access faced greater connectivity issues (26.0%). HDI-based patterns showed similar variations in usage and barriers across development levels potentially from similar countries being classified into the various groups (online supplemental table 2).

Changing patterns of SM use among rheumatology professionals: Europe 2015–2023

This Europe-to-Europe comparison reveals significant shifts in SM usage among rheumatology professionals (figure 3A). Information sourcing remained consistently high (~80%) across both periods. Professional activities increased substantially: clinical guideline usage rose from 50% to 63% and research updates from 48% to 81%.

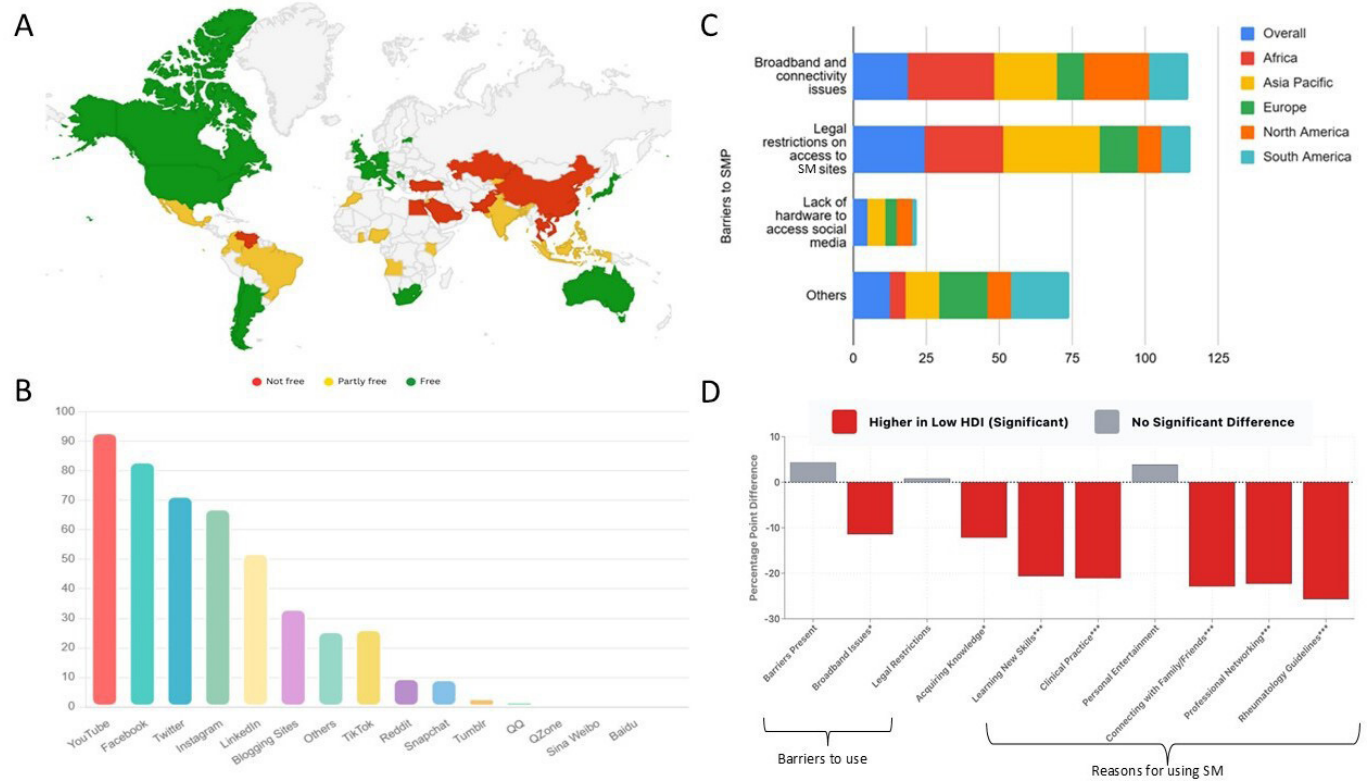

Figure 2 (A) Distribution of countries by IFI*, (B) Choice of social media (SM) platform by respondents, (C) Regional barriers to use of SM, (D) SM use by HDI. *Does not comment on geopolitical borders. HDI, Human Development Index; IFI, Internet Freedom Index.

Conversely, social networking declined markedly. Communication with friends/colleagues dropped from 79% to 61%, while professional network expansion decreased from 76% to 75%. The largest decline was in perceiving SM as safe communication (68%–53%). Online presence establishment remained stable at 46%.

Entertainment value declined modestly (70%–60%) and learning new skills decreased slightly (47%–39%). These findings indicate rheumatology professionals increasingly use SM for specialised professional/educational purposes rather than broader social networking functions.

Perceived need for training in communication tools with focus on SM

SM training varied significantly across regions (p<0.01), with 24.6% reporting having some background training in communication tools. Interest in future accredited training was high (83.3%), particularly in Africa and South America (p=0.01). Online learning was preferred (57.9%), with webinars being the most popular format (41.1%), followed by infographics (24.0%) and digital courses (12.8%), with significant variation across regions (p<0.01) (figure 3B). Asia Pacific showed the greatest preference for online training formats (59.5%), whereas South America most favoured face-to-face learning (55.4%). These findings suggest a growing recognition of SM's importance in rheumatology and highlight regional differences in training needs and preferences.

DISCUSSION

This analysis of a global survey provides a detailed portrait of SM utilisation among rheumatology professionals across diverse geographic regions, development contexts and demographic groups. Our findings reveal both promising opportunities and significant challenges in optimising SM's potential for advancing rheumatology education, research dissemination and professional networking.

Perhaps most striking is the pronounced regional heterogeneity in SM adoption and utilisation patterns. While overall use was high across all regions (88.6%–97.3%), the purposes, platforms and perceived value demonstrated significant regional differences. European and North American respondents showed greater engagement in professional networking and research dissemination, while respondents from lower resource settings prioritised clinical applications and skill development. These variations may reflect broader differences in digital infrastructure, professional resources and healthcare priorities.[22] However, the relatively low number of respondents from regions such as Africa and North America, potentially due to limited connectivity and access, may have impacted the interpretation of regional trends.

The digital divide was particularly evident when analysing barriers to SM use by HDI. Professionals

Table 2 Reasons for using SM

	Overall (%)	Africa (%)	Asia Pacific (%)	Europe (%)	North America (%)	South America (%)	P value* †	Adjusted p value*
Reason for using SM								
Acquiring knowledge	73.0	81.1	72.6	67.0	83.3	75.0	0.26	0.29
Learning new skills	41.3	56.8	43.6	32.1	30.6	43.3	0.04*	0.06
Clinical practice, for example, teleconsultations	21.7	35.1	22.1	11.0	19.4	31.7	<0.01*	0.01*
Conducting academic research	29.0	48.6	26.4	28.4	33.3	28.3	0.08	0.10
Disseminating my research	30.6	37.8	21.1	57.8	25.0	28.3	<0.01*	0.01*
Distribution of credible health information to my patients	26.8	40.5	18.8	23.9	47.2	51.7	<0.01*	0.01*
Counterbalancing misinformation related to my line of work.	16.0	24.3	13.9	11.0	27.8	23.3	0.03*	0.05*
Discover jobs	17.8	21.6	14.9	28.4	16.7	11.7	0.02*	0.04*
For curiosity only	25.1	8.1	31.7	22.9	19.4	10.0	<0.01*	0.02*
Track metrics	8.3	8.1	6.3	11.9	8.3	11.7	0.35	0.37
Follow discussions	36.9	56.8	27.4	55.0	33.3	41.7	<0.01*	0.02*
To promote an organisation	19.3	27.0	15.2	28.4	13.89	21.7	0.02*	0.04*
Personal entertainment	60.4	56.8	58.7	62.4	66.7	63.3	0.82	0.82
Connecting with family and friends	62.8	78.4	61.7	61.5	52.8	66.7	0.20	0.24
Connecting with professional peers and potential academic collaborators	55.4	62.2	42.6	77.1	66.7	70.0	<0.01*	0.02*
Building my professional online profile	28.8	45.9	19.1	46.8	44.4	25.0	<0.01*	0.02*
Joining conversations about my topic of expertise	28.3	32.4	23.1	32.1	38.9	38.3	0.04*	0.06
Others	2.0	0.0	1.0	4.6	5.6	1.7	0.07	0.29
Work related purposes SM used for								
Rheumatology clinical guidelines updates	66.2	70.3	63.4	63.3	77.8	76.7	0.14	–
Rheumatology academic research updates	67.2	67.6	61.4	81.7	69.4	68.3	<0.01*	–
Job updates	20.7	18.9	19.5	25.7	25.0	16.7	0.56	–
Work related events updates	58.2	59.5	52.8	66.1	61.1	68.3	0.06	–
Others	8.3	5.4	7.3	12.8	11.1	5.0	0.36	–
Use of SM in work-related manner								
Source of information	81.3	81.1	80.9	78.9	80.6	88.3	0.66	–
A source of new resources	49.9	64.9	47.2	48.6	50.0	56.7	0.25	–
Learning new skills	39.8	67.6	34.7	39.5	47.2	45.0	<0.0*	–
To expand my professional network	51.4	64.9	39.6	75.2	63.9	51.7	<0.01*	–
To pass time	17.1	24.3	18.2	9.2	16.7	21.7	0.12	–
Others	2.0	2.7	0.7	5.5	2.8	1.7	0.04*	–

Sample size: Asia-Pacific (n=342), Europe (n=112), South America (n=65), Africa (n=39), North America (n=39).
*p values are significant (p<0.05).
†ANOVA .
ANOVA, analysis of variance; SM, social media.

from lower HDI regions reported significantly more challenges with connectivity and hardware limitations, while those from higher HDI regions more frequently cited legal restrictions and privacy concerns. These findings suggest that 'one-size-fits-all' approaches to SM integration in global rheumatology may be inadequate; targeted strategies addressing region-specific barriers and needs are essential.

Table 3 Perception of SM

	Overall	Africa	Asia Pacific	Europe	North America	South America	P value*	Adjusted p value*
Impact SM has on professional working life, mean (SD)	4.0 (0.7)	4.2 (0.6)	3.9 (0.7)	4.0 (0.7)	4.0 (0.8)	4.0 (0.8)	0.17	–
Likelihood of separate personal and professional SM presences, mean (SD)	2.9 (1.5)	2.6 (1.3)	2.7 (1.5)	3.2 (1.5)	3.6 (1.3)	3.2 (1.5)	<0.01*	–
Change in perception regarding utility of SM, n (%)								
Yes, become more positive	73.6	78.4	73.6	63.3	86.1	81.7	0.06	0.08
Yes, become more negative	6.4	2.7	5.3	11.9	2.8	6.7		
No, nothing has changed	20.0	8.9	21.1	24.8	11.1	11.7		
Felt overwhelmed by SM, n (%)	56.9	70.3	51.8	54.1	66.7	73.3	<0.01*	<0.01*
Contemplated taking a break from SM, n (%)	60.0	75.7	57.8	53.2	72.2	66.7	0.04*	0.10
Taken a break from SM, n (%)	32.7	43.2	31.4	28.4	30.6	41.7	0.26	0.30
Acquired knowledge of educational or professional value relating to life sciences/medicine on SM, n (%)	84.8	89.2	82.5	86.2	94.4	85.0	0.34	0.34
Consider SM to be a secure way (private, safe from cyber-bullying) of communicating with other people, n (%)	42.8	27.0	38.0	53.2	50.0	53.3	0.01*	0.03*

Sample size: Asia-Pacific (n=342), Europe (n=112), South America (n=65), Africa (n=39), North America (n=39).
*P values highlighted are significant (p<0.05).
SM, social media.

The data reveal a significant evolution in how rheumatology professionals use SM between 2015 and 2023. While information-seeking remained consistently high, there's been a clear shift towards specialised professional applications, with clinical guideline and research update usage both increasing substantially (to two-thirds of respondents). Simultaneously, social and networking functions declined notably, with professional networking dropping by a quarter. The sharp decrease in perceived safety of SM suggests growing concerns about digital risks. These changes indicate a maturing relationship with SM in rheumatology, moving from broad engagement toward more targeted, professional utilisation as the specialty develops a more nuanced understanding of these platforms' benefits and limitations in clinical practice.

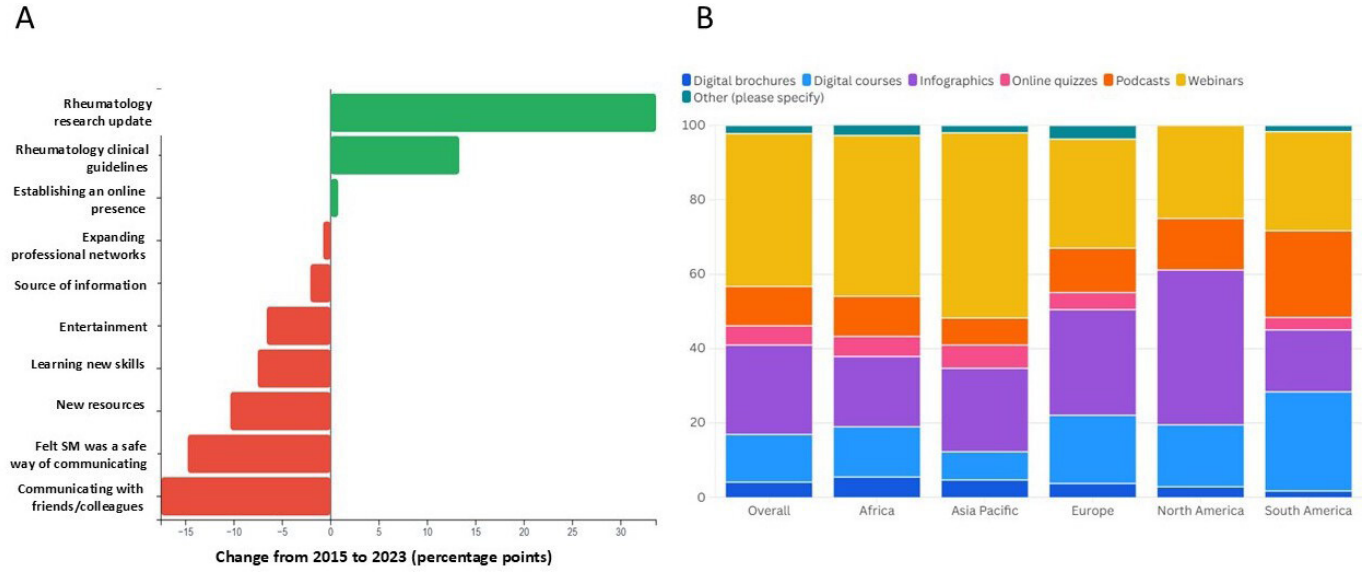

Figure 3 (A) Analysis of social media (SM) usage in rheumatology professionals over time*, (B) Format for course on SM learning event in medicine. *Values taken from- Nikiphorou *et al.*[1]

Our findings reveal important gender-specific patterns in SM engagement that merit attention. Female rheumatology professionals demonstrated significantly higher overall SM usage and more frequently used these platforms for skill development, professional profile building and connecting with peers. They also maintained stricter separation between personal and professional SM presences. These patterns may suggest different professional networking strategies between genders and raise the possibility that SM could serve as a platform for professional advancement.[23] The higher engagement of female professionals in skill development and peer networking through SM may represent one approach to addressing traditional barriers to career advancement, such as limited access to informal professional networks. These findings suggest that structured mentorship programmes could leverage women's demonstrated preference for digital professional development by incorporating SM-based mentorship components and peer learning networks.

The negative correlation between age/experience and SM understanding suggests a generational divide in digital literacy within the rheumatology workforce. Younger professionals demonstrated greater facility with multiple platforms and reported higher perceived value from SM engagement. This divide presents both challenges and opportunities for the profession. While experienced clinicians bring invaluable expertise, they may benefit from targeted support in leveraging digital tools effectively. Conversely, early-career professionals' digital fluency could be harnessed to enhance knowledge dissemination across the specialty.[24]

Our findings confirm SM's substantial educational value in rheumatology, with over four-fifths of respondents reporting acquisition of professionally valuable knowledge through these platforms. While professional SM use was reported as less than 1 hour daily across all demographic groups, this does not preclude additional SM engagement for personal purposes. The consistently high rating of SM's impact on professional working life across all regions underscores its growing importance in contemporary rheumatology practice. The prioritisation of knowledge acquisition and clinical guideline updates suggests that SM serves as an important complement to traditional continuing education, particularly in settings where access to conferences and formal training may be limited.[25]

However, this educational potential comes with notable challenges. Nearly two-thirds of respondents reported feeling overwhelmed by SM and contemplating breaks from these platforms. These findings suggest that information overload and digital fatigue represent significant concerns that must be addressed to optimise SM's educational value.

The marked regional variations in platform preferences—with X (formerly Twitter) predominant in Europe and North America, YouTube in Asia-Pacific and South America, and limited LinkedIn usage in Asia-Pacific—highlight the need for platform-specific strategies in global rheumatology communication. Similarly, the differential engagement with professional bodies, journals and patient organisations across regions suggests that key stakeholders may need to diversify their digital presence to effectively reach global audiences.

The strong interest in formal SM training among four in five respondents highlights an important gap in professional development. The preference for online learning formats, particularly webinars and infographics, provides practical guidance for developing such programmes. Notably, interest was highest in regions with the greatest reported barriers to use, suggesting that targeted training may help address existing disparities in digital engagement.

The findings from this global survey have substantial implications for rheumatology societies, educational institutions and individual professionals. First, rheumatology organisations should develop region-specific digital strategies that account for local infrastructure, platform preferences and professional needs rather than adopting universal approaches. For instance, YouTube-focused educational content may potentially reach broader audiences in Asia-Pacific and South America, while X (formerly Twitter) campaigns may be more effective in Europe and North America. Second, addressing the identified digital divides requires targeted interventions—connectivity solutions for lower-resource settings and privacy/legal guidance for higher-resource regions. Third, the strong interest in formal SM training presents an opportunity for professional societies to develop accredited programmes, particularly using the preferred webinar and infographic formats. Frameworks such as the EULAR Declaration on the Use of Social Media for Rheumatology Professionals[26] provide foundational guidance that professional societies could adapt and incorporate into these training programmes. Fourth, the gender differences in SM utilisation suggest that digital platforms could potentially serve as equalising spaces for professional advancement if properly leveraged.[23] Fifth, the overwhelming majority of respondents reporting acquisition of valuable professional knowledge through SM underscores the need to integrate these platforms into formal continuing education frameworks, similar to innovations in gastroenterology.[25] Finally, the high prevalence of digital fatigue indicates that strategies for effective content curation and boundary-setting should be incorporated into professional development initiatives. Collectively, these implications suggest that a thoughtful, evidence-based approach to SM integration could substantially enhance knowledge dissemination, professional networking and ultimately patient care in global rheumatology.

Several limitations should be considered when interpreting these findings. Sampling bias represents a primary concern, as recruitment through SM platforms may have enriched our sample for professionals already engaged with these technologies, potentially overestimating overall usage rates and engagement levels. Our

convenience-sampling approach led to uneven regional representation despite extensive recruitment efforts, with notable under-representation of certain regions, particularly Africa and North America. This geographic imbalance may limit the generalisability of our findings across different healthcare systems and cultural contexts. Self-report accuracy poses another limitation, as participants reported SM behaviours may not accurately reflect their actual usage patterns, engagement frequency or time spent on platforms. Regarding our cross-cohort comparison between European respondents in 2015 and 2023, we cannot exclude the possibility of overlapping participants between survey periods; however, even with potential respondent overlap, the observed differences demonstrate a meaningful shift in professional perspectives and SM adoption patterns over time. Finally, the rapidly evolving SM landscape creates temporal constraints on our findings; we administered the survey prior to the emergence of platforms such as BlueSky that have since gained traction among rheumatology professionals, and the cross-sectional design precludes analysis of how individual usage patterns evolve throughout careers. Further qualitative research could provide deeper insights into the motivations and perceived barriers that shape SM engagement among rheumatology professionals.

This global survey demonstrates that SM has become an integral component of rheumatology practice, education and networking worldwide, although with significant variations in adoption, utilisation and perceived value across regions and demographic groups. The findings highlight both the substantial potential of these platforms to enhance global knowledge exchange and professional development in rheumatology, as well as the persistent challenges of digital divides, information overload and training gaps that must be addressed. By understanding these complex patterns, the rheumatology community can develop more effective, equitable and sustainable approaches to leveraging SM for the advancement of the specialty and, ultimately, patient care.

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