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Background: Health literacy (HL) is the ability to access, understand, appraise, and apply health information [1]. A low level of HL is associated with worse pain problems, poorer self-care, and an obstacle for health-promoting interventions among individuals with chronic pain and radiographic knee osteoarthritis (rKOA). **Objectives:** To examine 1) the level of HL and associations with chronic pain, rKOA, lifestyle habits and health status, and 2) to explore the individuals' experiences of HL. **Methods:** The study has a convergent parallel mixed-method design, including 221 individuals with knee pain (148 women, mean age 56±8 years). A purposeful sample of 19 individuals (11 women, 8 men) was selected for interviews. Quantitative data were general HL (GHL) assessed by HLS-EU-Q16, electronic HL (eHL) by eHEALS, pain distribution by a pain figure, rKOA by x-rays, lifestyle habits, and health status via SF-36. GHL and eHL were merged into one variable, "HL" where sufficient HL was defined as having a sufficient level of GHL or eHL. Statistical analyses were Chi² test, Mann-Whitney U-test, univariate and multivariate logistic regressions. Qualitative data consisted of individual semi-structured interviews that were analysed using manifest qualitative content analysis with an abductive approach based on the HLS-EU health literacy matrix [2].

Results: Of the 221 participants, 29% reported limited HL. Those with limited HL reported lower education, less usability and importance of the internet for accessing health information and making informed health-related decisions, and lower general health (GH) compared to the group with sufficient HL (data not shown). Higher education, CRP, a healthier diet, and minor alcohol consumption were associated with sufficient HL (Table 1). Only higher education and GH remained associated when adding GH to the multivariate analysis. Individuals' experiences of HL were described as 1) Searching for information influences the decision-making process by being an active searcher or passive receiver; 2) Processing of information influences the decision-making process by having light, moderate or high processing of the information; and 3) Taking a stand on the information influences the decision-making process based on trust and/or motivation (Figure 1).

Conclusion: Limited HL was found in one-third of the individuals with knee pain. CRP and healthy lifestyle habits were associated with sufficient HL, but higher education and health status had the strongest association. The search, level of process and standpoint on the health information influenced the decision on action. More research on HL is needed to gain knowledge of how to develop health promotion to prevent worsening pain problems in individuals with knee pain.

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Table 1. Two models with multivariate logistic regression analysis of associations with sufficient HL.

	n	Sufficient health literacy			
		Model 1		Model 2	
		OR (95% CI)	p-value	OR (95% CI)	p-value
Age	221	0.99 (0.95-1.04)	0.778	0.99 (0.95-1.04)	0.749
Education	221	1	0.002	1	<0.001
Compulsory school		4.39 (1.75–10.99)	0.001	4.85 (1.90-12.40)	<0.001
Secondary		4.65 (1.83–11.84)		5.41 (2.06-14.22)	
University					
Pain distribution	220	1	0.022	1	0.213
CWP		2.81 (1.16–6.80)	0.269	1.85 (0.70–4.87)	0.875
CRP		1.81 (0.63–5.15)		0.91 (0.27–3.02)	
NCP					
rKOA	216	1	0.371	1	0.417
Yes		1.37 (0.69–2.74)		1.35 (0.66–2.76)	
No					
Diet	221	1	0.035	1	0.091
Less healthy diet		2.53 (1.07–5.98)		2.14 (0.89–5.15)	
Healthy diet					
Alcohol intake	219	1	0.131	1	0.263
≥5 units/week		1.94 (0.82–4.59)	0.049	1.66 (0.68–4.05)	0.058
1-4 units/week		2.51 (1.00–6.29)		2.48 (0.97–6.34)	
<1 unit/week					
General health	216			1.02 (1.00–1.04)	0.019

(scoring 0–100, worst–best)

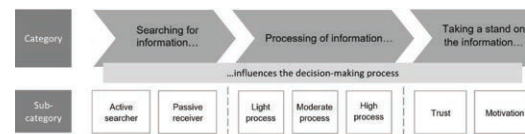


Figure 1. Overview of the results exploring the experiences of HL in individuals with knee pain.

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POS0598-HPR WHAT DO USERS OF RHEUMATOID ARTHRITIS ONLINE FORUMS TALK ABOUT? APPLYING A DEEP LEARNING APPROACH TO UNCOVER COMMON THEMES

Keywords: Rheumatoid arthritis, Artificial intelligence, Descriptive Studies

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Background: Social media platforms have become a vital resource for individuals seeking information and support regarding health issues, including rheumatoid arthritis (RA). As such, the content generated on these platforms represents a valuable source of data for gaining insight into patients' perspectives on RA. However, previous research in this area has primarily relied on qualitative analyses of small sample sizes, limiting the ability to extract meaningful insights from social media content related to RA. With the advancement of machine learning techniques, it is now possible to analyze and extract insights from large volumes of social media posts related to RA.

Objectives: The purpose of this study was to identify the most common topics discussed in a large dataset of submissions about RA on Reddit, one of the world's largest online forums.

Methods: The data for this study was collected from the two largest Reddit forums ("subreddits") dedicated to RA, r/rheumatoid arthritis and r/rheumatoid, which have 18.9k and 7.6k members respectively. We retrieved all submissions but excluded responses in our analyses. All deleted or duplicate submissions and those with fewer than 10 words were removed, retaining 11,094 submissions from over 5,000 users for the analysis. To identify common themes, we applied topic modeling, a technique in natural language processing that identifies underlying themes or topics in a collection of documents. We used the Bertopic Python package (Grootendorst, 2022), which employs deep learning techniques to perform the topic modeling.

Results: The data indicates a significant increase in submissions to the two subreddits, rising from 113 in 2014 to 2892 in 2021 and 1928 in the first 8 months of 2022. Upon analysis, 65 topics were identified, with 4162 submissions (37.5%) remaining unclassified. A topic specifically dedicated to requests to participate in surveys was removed as it did not pertain to the experiences of forum users. Among the remaining topics, the top 10 accounted for 44.90% of all submissions. To better understand each topic, a sample of 10 submissions with the highest probability for that topic were examined (Table 1).

Table 1. Top 10 most frequent topics

Topic	n of submissions	Share of total*
Side effects of methotrexate	526	8.02%
COVID & vaccines	462	7.04%
Mental health	438	6.68%
RF and anti CCP test results	331	5.04%
RA of friends, partners, and close relatives	262	3.99%
Complaints about rheumatologist	212	3.23%
Questions about Humira	188	2.87%
Questions about prednisone	182	2.77%
Diets and RA	175	2.67%
Early symptoms of possible RA	170	2.59%
Exercise and RA	168	2.56%

* After excluding unclassified topics

Three of the ten topics pertained to specific medications - methotrexate, Humira, and prednisone, accounting for 12.71% of the total. The most prevalent topic, at 8.02%, focused on the side effects of methotrexate, with many submissions inquiring about symptoms such as nausea. The second most common topic, at 7.04%, primarily revolved around COVID-19 and related issues, with some

pre-COVID vaccine discussions also included. In 2021, COVID-related discussions were the most prevalent topic. The third most frequent topic (6.68% of total), dealt with mental health and the emotional struggles faced by those living with RA.

Conclusion: The surge in submissions on Reddit demonstrates its growing popularity as an online forum for discussing topics related to RA. Utilizing deep learning-based topic modeling has proven to be an effective method for extracting meaningful topics from the questions and experiences shared by users. The vast amount of data generated by Reddit, in combination with advanced machine learning techniques, enables both an overview of the various topics discussed and a detailed examination of specific topics. This makes the use of social media data a valuable source of insight into the concerns of RA platform users.

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POS0599-HPR QUALITY OF REPORTING OF HARMS IN CLINICAL TRIALS ON EXERCISE THERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS OR AXIAL SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW

Keywords: Safety, Inflammatory arthritides, Systematic review

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Background: Exercise therapy has proven effective for people with rheumatic and musculoskeletal diseases (RMDs), including those with inflammatory arthritis such as rheumatoid arthritis (RA) or axial spondyloarthritis (axSpA) [1-2]. Exercise therapy is generally considered safe for people with RMDs, although the evidence is scarce. A few reviews reported on the nature and risk of harms of exercise therapy in RMDs, but none of them specifically addressed the quality of reporting of harms of exercise therapy in studies including people with inflammatory arthritis.

Objectives: This study aimed to describe the quality of reporting of harms in clinical studies on the effectiveness of exercise therapy in people with RA or axSpA.

Methods: RCTs with at least one treatment arm consisting of supervised exercise therapy in people with RA or axSpA were included. Eight electronic databases were searched up to November 2021. Two researchers independently selected studies for inclusion and extracted data and in case of disagreement a third researcher was consulted. Data extraction included study characteristics and fulfillment of a set of quality aspects derived from the Consolidated Standards of Reporting Trials (CONSORT) Extension for Reporting Harms Outcomes [3], predefined on the basis of consensus among authors (Table 1). Harms outcomes were defined as adverse events reported on individual level irrespective of causality or negative effects on group level (only if explicitly designated as measurement of potential harm). We considered the reporting on harms outcomes of sufficient quality if the authors reported at least 1) the methodology for active surveillance of harms outcomes (item 2a); and 2) the observed number and the nature of harms (items 3b and 3c).

Results: The search yielded 5921 records, of which 64 studies (n= 41 RA, n=23 axSpA; described in 83 papers) were included. Of those studies in RA and axSpA, 34 (83%) and 15 (65%) included any information on harms, with 12 (29%) and 3 (13%) reporting active surveillance and 22 (54%) and 5 (22%) reporting on harms outcomes in the results section, respectively (see Table 1). In total, 10 of the 41 (24%) RA studies and 2 of the 23 (9%) axSpA studies fulfilled the predefined criteria for sufficient quality of reporting.

Conclusion: The quality of reporting on harms outcomes is insufficient in the majority of RCTs on exercise therapy in people with RA or axSpA, with overall poorer quality in studies on axSpA which impedes substantiated conclusions about harms of exercise therapy. Our findings stress the need for consensus on the definition, classification, assessment and reporting of harms outcomes in trials on the effects of exercise therapy.

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 [2] Regel et al. *RMD Open* 2017;3(1):e000397.
 [3] Ioannidis et al. *Ann Intern Med* 2004;141(10):781-8.

Table 1. Quality of reporting of harms in in RA and axSpA; 9 Items based on CONSORT Extension for Reporting Harms Outcomes [3]

	RA (N=41) N (%)	axSpA (N=23) N (%)
Any information on harms (1 and/or 2 and/or 3 and/or 4)	34 (83)	15 (65)
Studies meeting sufficient quality of reporting of harms (2a & 3b & 3c)	10 (24)	2 (9)
1. Harms-related information in title, abstract or introduction section(s) (1-2)	25 (68)	9 (39)
2. Harms-related information in methods section (3-5)	16 (39)	4 (17)
a Data collection on harms on the basis of active surveillance (4)	12 (29)	3 (13)
3. Harms-related information in results section (6-8)	28 (68)	9 (39)
a Withdrawals due to AEs or health-related reasons (6)	22 (54)	9 (39)
b Number of participants with AEs and number of AEs (7)	15 (37)	6 (26)
c Nature of observed harms (8)	22 (54)	5 (22)
d Details on observed AEs: severity, timing and/or duration (8)	8 (20)	2 (9)
e The results section reports on what the method section promises (8)	6 (15)	1 (4)
4. Harms-related information in discussion section (10)	23 (56)	8 (35)

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POS0600-HPR WHAT TRADE-OFFS ARE ACCEPTABLE TO RHEUMATOID ARTHRITIS PATIENTS DURING TREATMENT SELECTION?

Keywords: Rheumatoid arthritis, Disease-modifying drugs (DMARDs)

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Background: The rheumatoid arthritis (RA) treatment landscape is diverse, with multiple therapies available that differ in several attributes such as mode of administration and benefit-risk profile. Patients and prescribers face challenging trade-offs during treatment selection to accommodate patients' circumstances in order to ensure comprehensive disease management. EULAR recommendations for RA management emphasize the need to recognize patient preferences in shared decision-making (SDM). Therefore, it is essential to understand how preferences differ in the RA patient population.

Objectives: This study elicited trade-offs that RA patients were willing to make during treatment selection while accounting for preference heterogeneity.

Methods: An online discrete choice experiment (DCE) was conducted from September to October 2021 in which RA patients were required to elicit their preferences for attributes of treatments for RA (Figure 1) and make trade-offs between them. Attributes were selected and defined based on literature review and