



Exploring the Quality of Communication Between Patients with Psoriatic Arthritis and Physicians: Results of a Global Online Survey

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ABSTRACT

Introduction: Effective communication between patients with psoriatic arthritis (PsA) and their physicians is important for optimizing

treatment outcomes. We assessed the quality of patient–physician communication in terms of awareness and impact of PsA symptoms, their levels of satisfaction, and their perceptions of communications.

Methods: A global online survey was conducted by The Harris Poll in adult patients with PsA and physicians managing patients with PsA in eight countries. Participating physicians were either rheumatologists or dermatologists

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seeing ≥ 10 and ≥ 5 patients with PsA per month, respectively. Patient and physician groups were unmatched. Patient–physician communication was assessed with 35–60 questions regarding discussion topics during consultations, levels of satisfaction with communication, and specific communication issues.

Results: A total of 1286 patients with PsA (983 and 303 whose primary treating physician was a rheumatologist or dermatologist, respectively) and 1553 physicians (795 rheumatologists and 758 dermatologists) completed the survey. Regardless of whether they were primarily treated by a rheumatologist or dermatologist, most patients reported a social (84% and 81%, respectively) or work (81% and 80%, respectively) impact of PsA, and a major/moderate negative impact on their physical activity levels (79% and 74%, respectively) or emotional/mental wellbeing (69% and 68%, respectively). Physician responses were generally consistent with this; however, physicians often appeared to under-recognize the extent to which PsA affects patients. Most ($\geq 85\%$) patients and physicians were very/somewhat satisfied with their patient–physician communication, and most ($\geq 86\%$) patients were comfortable raising their concerns/fears with their physician. However, $> 40\%$ of patients were identified as being at risk of suboptimal communication. These patients were significantly less likely to report their PsA symptoms even when asked, were less comfortable discussing the impacts of PsA with their physician, and were more likely to experience major/moderate impacts of PsA on their health-related quality of life (HRQoL).

Conclusions: Physicians often underestimate the impacts of PsA, compared with patients, and some patients may be at risk of suboptimal communication with their attending physician, which may worsen the HRQoL impacts of PsA. These findings highlight a need for ways to

improve communication between patients with PsA and their healthcare providers.

PLAIN LANGUAGE SUMMARY

Psoriatic arthritis (PsA) is a disease that can cause swollen and painful joints, as well as skin psoriasis. To effectively treat PsA, it is important that doctors and patients communicate well. We used a survey to ask patients with PsA and doctors from around the world about their communications about PsA. We also asked how PsA affects patients' quality of life. In total, 1286 patients and 1553 doctors took the survey. Most patients said that PsA affected their social and work lives. Similarly, PsA had a negative impact on physical activity and on emotional and/or mental wellbeing in most patients who answered the survey. Doctors answered similarly, but they were generally less likely to recognize how severely PsA can impact patients, compared with patients themselves. Most patients and doctors were happy with their patient–doctor communication, and most patients felt comfortable talking about their worries and/or fears with their doctor. However, some patients (about four out of 10) felt that communication with their doctors was not good; these patients were less likely/comfortable to talk about their PsA symptoms and the impacts of PsA with their doctor. PsA was also more likely to negatively impact these patients' quality of life. This survey shows that it is important to find ways to improve communication between patients with PsA and their doctors.

Keywords: Communication; Health-related quality of life; Patients; Physicians; Psoriatic arthritis; Surveys and questionnaires

Key Summary Points

Why carry out this study?

Effective management of psoriatic arthritis (PsA) depends on shared decision-making between physicians and patients.

Therefore, communication between patients with PsA and their physician is critical in order to optimize patient care and for the success of treat-to-target strategies.

This study utilized a global online survey of patients with PsA ($N = 1286$), and rheumatologists ($N = 795$) and dermatologists ($N = 758$) managing patients with PsA to determine the impact of PsA on daily life from the perspective of patients and physicians.

What was learned from the study?

Most patients reported that PsA had a major or moderate impact on their work and social lives, physical activity level, and emotional wellbeing; physicians often underestimated the impact that PsA has on their patients.

Although communications between patients with PsA and physicians were generally good, those patients who had suboptimal communications with their treating physicians were less likely to discuss the impact of the PsA symptoms and more likely to experience their major negative impacts.

These findings highlight an unmet need for ways to help improve communication and facilitate shared decision-making between patients and their healthcare professional.

INTRODUCTION

Psoriatic arthritis (PsA) is a chronic, immune-mediated inflammatory disease with musculoskeletal (e.g., peripheral arthritis, dactylitis, enthesitis, and spondylitis) and dermatologic (e.g., skin and nail psoriasis) manifestations [1, 2]. Both the physical symptoms and psychologic effects of PsA can negatively impact patients' health-related quality of life (HRQoL) and work productivity [3]. As patients consider pain, fatigue, skin problems, and the ability to carry out work/leisure activities to be the most important domains affected by PsA [4], improving these domains is therefore a priority of treatment.

An overarching principle for the management of PsA is shared decision-making between physicians and patients [5]. Effective communication between patients with PsA and their physicians is therefore important for optimizing patient care and for the success of treat-to-target approaches [5]. For example, misalignment between patients and physicians with regards to their satisfaction with PsA control has been associated with increased disease activity and disability, with these patients reporting more swollen and tender joints, greater work impairment, and higher disease burden than patients where patient/physician satisfaction was aligned [6]. Improving patient–physician communication has been proposed as a solution to this misalignment by helping patients with PsA express their feelings about the impact of their symptoms on daily life [7].

A global online survey of patients with PsA, and rheumatologists and dermatologists managing patients with PsA, was conducted by The Harris Poll to determine the impact of PsA on daily life from the perspective of patients and physicians. The overall findings of the survey from the patient's perspective have been reported previously [8]. In this analysis, data from the survey were used to assess patient–physician communication in terms of: (1) PsA symptoms and impact according to patients and physicians; (2) patients' perceptions of their communication with their physicians; (3) communication from the physician's

perspective, investigating their awareness of the impact of PsA on their patients' HRQoL and their patients' concerns and fears; and (4) the impact of suboptimal patient–physician communication on HRQoL.

METHODS

Global Online Survey

Data were collected via online patient and physician surveys conducted by The Harris Poll in Australia, Brazil, Canada, France, Spain, Taiwan, the UK, and the USA. The patient survey was conducted from November 2, 2017 to March 12, 2018 and the physician survey was conducted from December 11, 2017 to June 18, 2018. The physicians were not necessarily caring for any of the patient respondents included in the analysis.

Patients were recruited from online market research panels. Prospective respondents completed an initial screening survey to confirm eligibility. Participating patients were aged ≥ 18 years, had a diagnosis of PsA, had been living with PsA for > 1 year prior to participation, had received (previously or currently) ≥ 1 disease-modifying antirheumatic drug (DMARD) for PsA, and had visited either a rheumatologist or dermatologist for PsA in the past 12 months. Participating physicians were licensed rheumatologists or dermatologists who had consultations with ≥ 10 or ≥ 5 patients with PsA per month, respectively. Physicians were recruited from online medical market research panels (panels vary by country). Medical specialty of prospective respondents was confirmed at the time of joining such panels. At least 50% of the patients treated by the rheumatologists and $\geq 35\%$ ($\geq 50\%$ in the USA) of the patients treated by the dermatologists must have been receiving DMARDs or biologic DMARDs (bDMARDs). All eligible participants were required to provide consent to continue to the core survey content.

The surveys considered patients' and physicians' perspectives on PsA, including questions relating to demographics, disease characteristics, PsA impact, HRQoL, patient–physician

communication, and treatment satisfaction. For each country, a custom set of demographic questions was followed by a dynamic number of core questions (approximately 35–60 questions in total), which varied depending on patient responses. No qualitative questions were included in the survey. Patients were recruited from online market research panels made up of members who agreed to participate in this type of research. Qualified respondents provided informed consent to complete the research. The surveys were non-interventional and were not conducted as a clinical study. All respondents agreed to participate but ethics approval was not required.

Analyses Exploring Patient and Physician Communication and Perspectives

Patient-reported patient–physician communication status was stratified based on their agreement or disagreement with each of the following two statements in the patient survey: Statement A: 'I worry that if I ask too many questions, my healthcare professional (HCP) will see me as a difficult patient and it will affect the quality of care I receive' and Statement B: 'I often tell my HCP I am fine when I am really experiencing symptoms'. These statements were identified by the steering committee for use as indicators of suboptimal communication. As such, patients who agreed with one or both statements were considered (and are hereafter referred to) as being at risk of suboptimal communication.

This analysis assessed patient and physician responses to the survey questions regarding demographics and disease characteristics, perceived impact of PsA on HRQoL, patient satisfaction with physician communication, perceived impact of suboptimal communication on patients' lives (including HRQoL), and their concerns and fears. All patient and physician survey questions included in this analysis are shown in Tables S1 and S2, respectively.

The impact of PsA on HRQoL was assessed by questions regarding the negative impacts of PsA, including social and work impacts, as described previously [8]. Patient–physician

communication was assessed by questions regarding topics discussed during consultations, satisfaction with patient–physician communication, and specific communication issues. Patients' concerns and fears were assessed by questions regarding the aspects of PsA that concerned them most and the reasons they were not comfortable raising these concerns with their physician.

Statistical Analyses

Data were summarized descriptively. Differences between responses in the patient and physician surveys were analyzed using two-tailed Chi-square tests for groups with ≥ 100 patients. A p value of < 0.05 was considered to indicate statistical significance.

The unweighted sample sizes reflected the total number of patients who completed the survey. As data were collected from eight countries in total, a post-weight was applied to adjust for the relative size of each individual country's adult population within the total adult population (i.e., the total from all countries surveyed) [9]. All percentages reported were calculated and analyzed based on the weighted global total, hereafter referred to as the weighted base (N_{wb}). For each question, data were selected for responders for whom either a rheumatologist or a dermatologist was mostly responsible for managing their PsA, with the aim being to capture patients who had, or were expecting to have, an enduring relationship with that particular specialty team. For statistical testing, the effective base was used, which takes into account the increased variability created by weighting and reduces the impact of weighting on the outcome of the statistical testing [9].

RESULTS

Patients

A total of 3405 patients received the survey. Of the 1286 patients who responded to the survey, 983 (76%) reported that a rheumatologist was

primarily responsible for managing their PsA, and 303 (24%) reported that a dermatologist was primarily responsible (Table 1). The corresponding unweighted bases comprised 960 and 326 patients, respectively.

The overall demographics and disease characteristics of the patients have been described previously [8]. The two individual patient groups primarily treated by a rheumatologist or dermatologist were similar with regard to most demographics and disease characteristics, the exceptions being mean age and the proportions of patients residing in Brazil or the USA, or whose overall health was good or fair (Table 1). Most rheumatologist- or dermatologist-treated patients reported moderate/severe PsA (85% and 80%, respectively) and a majority reported poor/fair overall health (68% and 58%, respectively).

There were no major differences in characteristics between those patients who agreed or disagreed with either Statement A or B. Mean age and mean age at diagnosis were slightly lower in those who agreed (mean age, 36–40 years; mean age at diagnosis, 28–31 years) vs. disagreed (mean age, 41–44 years, mean age at diagnosis, 31–35 years) with either statement. PsA medications and reported overall health were generally similar across those who agreed and disagreed with either statement; most patients reported poor/fair overall health (55–71% and 55–65% for those who agreed and disagreed with either statement, respectively). The percentage of female vs. male patients was consistent across groups.

Physicians

A total of 1890 physicians (930 rheumatologists; 960 dermatologists) received the survey. Of the 1553 physicians who completed the survey, 795 were rheumatologists and 758 were dermatologists. The mean number (standard deviation) of unique patients with PsA seen each month was 54 (70) for rheumatologists and 23 (24) for dermatologists. Few rheumatologists (1%) or dermatologists ($< 1\%$) described their patient population as pediatric.

Table 1 Patient demographics and disease characteristics, as reported by patients treated by a rheumatologist or dermatologist

	Total patients ($N_{wb} = 1286/N = 1286$)	Primary treating physician	
		Rheumatologist ($N_{wb} = 983/N = 960$)	Dermatologist ($N_{wb} = 303/N = 326$)
Country, n (%) ^a			
Australia	39 (3)	29 (3)	9 (3)
Brazil	319 (25)	218 (22)	101 (33 [*])
Canada	62 (5)	43 (4)	19 (6)
France	111 (9)	83 (8)	28 (9)
Spain	85 (7)	60 (6)	25 (8)
Taiwan	41 (3)	29 (3)	12 (4)
UK	109 (8)	78 (8)	32 (10)
USA	521 (40)	443 (45 [*])	78 (26)
Age, years, mean (SD)	41.2 (13.3)	41.9 [*] (12.8)	38.9 (14.6)
Female, n (%) ^a	674 (52)	532 (54)	142 (47)
Overall health, ^b n (%) ^a			
Excellent	57 (4)	38 (4)	19 (6)
Good	388 (30)	279 (28)	109 (36 [*])
Fair	674 (52)	540 (55 [*])	134 (44)
Poor	167 (13)	126 (13)	41 (13)
Time since diagnosis, years, mean (SD)	9.0 (8.6)	9.0 (8.6)	9.0 (8.7)
Current PsA disease severity, ^b n (%) ^a			
Mild	205 (16)	145 (15)	60 (20)
Moderate	849 (66)	648 (66)	202 (66)
Severe	232 (18)	190 (19)	42 (14)
Current PsA medication, n (%) ^a			
bDMARD only ^c	483 (38)	372 (38)	111 (37)
Oral DMARD only ^d	419 (33)	331 (34)	88 (29)
Oral DMARD + bDMARD	228 (18)	168 (17)	60 (20)
NSAIDs/steroids only	140 (11)	100 (10)	40 (13)
Not sure	6 (°)	4 (°)	2 (1)

Table 1 continued

	Total patients ($N_{wb} = 1286/N = 1286$)	Primary treating physician	
		Rheumatologist ($N_{wb} = 983/N = 960$)	Dermatologist ($N_{wb} = 303/N = 326$)
No prescription medication	10 (1)	7 (1)	2 (1)

bDMARD biologic DMARD, *DMARD* disease-modifying antirheumatic drug, *NSAID* non-steroidal anti-inflammatory drug, *N* unweighted sample size, i.e., total number of patients who responded to the question, N_{wb} weighted base, i.e., total number of adult patients adjusted for the size of each country's adult population, *n* number of patients with the characteristic, *PsA* psoriatic arthritis, *SD* standard deviation

^a Percentages were calculated based on the N_{wb} as the denominator

^b Current overall health and PsA disease severity were reported by patients

^c bDMARD therapy varied by individual country but could include abatacept, adalimumab, certolizumab pegol, etanercept, golimumab, infliximab, secukinumab, or ustekinumab (patient questionnaire used brand names, rather than generic drug names)

^d Oral DMARD therapy varied by individual country but could include apremilast, azathioprine, chloroquine, cyclosporine, hydroxychloroquine, leflunomide, methotrexate, or sulfasalazine

^e Indicates < 1% of patients

^{*} Indicates a statistically significant ($p < 0.05$) difference between the rheumatologist- and dermatologist-treated patients

Patient- and Physician-Reported Impact of PsA

Regardless of whether they were primarily treated by a rheumatologist or dermatologist, most patients reported social (84% and 81%, respectively) or work (81% and 80%, respectively) impacts of PsA, most commonly emotional distress (60% and 53%, respectively) and taking a sick day (52% and 40%, respectively) (Fig. S1a). The proportion of patients perceived by physicians to have experienced social or work impacts of PsA generally appeared to be lower in the physician survey than that reported in the patient survey (Fig. S1a).

Most patients reported that PsA had a major or moderate negative impact on their level of physical activity ($\geq 74\%$) and emotional/mental wellbeing ($\geq 68\%$) (Fig. S1b). Data from the physician survey were generally consistent with these findings, although the proportions of patients for whom the physicians considered that PsA had a major or moderate negative impact on these aspects of life were generally numerically higher than reported by patients (Fig. S1b).

Patient–Physician Communication

According to both patients and physicians, topics related to PsA treatment/management, overall health, impacts on physical and daily activities, and symptoms were generally the most commonly discussed of the predetermined consultation discussion topics listed in the patient and physician surveys, whereas the impacts on relationships and family, and romantic relationships and intimacy, were the least frequently discussed (Fig. S2).

Most patients primarily treated by a rheumatologist (89%) or a dermatologist (85%) were very (57% and 50%, respectively) or somewhat (33% and 35%, respectively) satisfied with the communication with their physician regarding PsA (Table 2). Similarly, 88% of rheumatologists and 85% of dermatologists were very (both 26%) or somewhat (61% and 60%, respectively) satisfied with their current communication with patients.

However, based on their responses to Statements A and B, > 40% of patients were deemed as being at risk of suboptimal patient–physician communication. Among the patients whose primary treating physician was a

Table 2 Patient satisfaction with physician communication, by physician type and communication status

	Primary treating physician ^a	
	Rheumatologist ($N_{wtb} = 983/N = 960$)	Dermatologist ($N_{wtb} = 303/N = 326$)
Patient satisfaction with physician communication, n (%)		
Very satisfied	557 (57)	152 (50)
Somewhat satisfied	322 (33)	106 (35)
Somewhat dissatisfied	54 (6)	18 (6)
Very dissatisfied	50 (5)	28 (9)
Statement A: 'I worry that if I ask too many questions, my HCP will see me as a difficult patient and it will affect the quality of care I receive'		
	Agree ($N_{wtb} = 441/N = 430$)	Disagree ($N_{wtb} = 542/N = 530$)
Patient satisfaction with physician communication, n (%) ^b		Disagree ($N_{wtb} = 166/N = 169$)
Very satisfied	198 (45)	359 (66)
Somewhat satisfied	186 (42)	135 (25)
Somewhat dissatisfied	34 (8)	20 (4)
Very dissatisfied	23 (5)	28 (5)
Statement B: 'I often tell my HCP I am fine when I am really experiencing symptoms'		
	Agree ($N_{wtb} = 447/N = 437$)	Disagree ($N_{wtb} = 536/N = 523$)
Patient satisfaction with physician communication, n (%) ^b		Disagree ($N_{wtb} = 139/N = 151$)
Very satisfied	226 (51)	331 (62)
Somewhat satisfied	177 (40)	145 (27)
Somewhat dissatisfied	27 (6)	28 (5)
Very dissatisfied	17 (4)	33 (6)

Percentages were calculated based on the N_{wtb} as the denominator. The proportions of patients who were very or somewhat satisfied/dissatisfied may not sum to 100% exactly due to rounding HCP healthcare professional, N unweighted sample size, i.e., total number of patients who responded to the question, N_{wtb} weighted base, i.e., total number of adult patients adjusted for the size of each country's adult population, n number of respondents within given category, PsA psoriatic arthritis

^a Data are for patients who reported that a rheumatologist or dermatologist was the HCP mostly responsible for managing their PsA. The base for the questions reported was patients who had seen a rheumatologist or dermatologist in the past 12 months. For patients who reported having seen a rheumatologist/dermatologist in the past 12 months, the N_{wtb} was 1172/939 and the N was 1156/894

^b The percentage of patients in the agree and disagree groups may not necessarily sum to 100% for any particular level of satisfaction, as the populations who agreed or disagreed with a statement are independent from each other with regard to their degree of satisfaction with physician communication, i.e., how the patients in the agreed group distributed across the four categories of satisfaction could differ from how the patients in the disagreed groups distributed across the same satisfaction categories

* Indicates a greater proportion ($p < 0.05$) for a particular level of response (e.g. very satisfied) between those who agreed vs. disagreed (i.e., rheumatologist-treated patients who agreed vs. disagreed, and dermatologist-treated patients who agreed vs. disagreed) with a particular statement (Statement A or Statement B)

rheumatologist, 45% agreed with Statement A ('I worry that if I ask too many questions, my HCP will see me as a difficult patient and it will affect the quality of care I receive'), 45% agreed with Statement B ('I often tell my HCP I am fine when I am really experiencing symptoms'), and 32% agreed with both statements. For those primarily treated by a dermatologist, 45% agreed with Statement A, 54% agreed with Statement B, and 32% agreed with both statements.

The proportions of patients who were 'very satisfied' with their current physician communication were generally significantly lower in patients categorized as at risk of suboptimal communication (i.e., those who agreed with Statement A or B) than in patients who disagreed with either statement. The one exception was among patients whose primary treating physician was a dermatologist, with the proportion of 'very satisfied' patients being numerically, but not significantly, lower in those who agreed with Statement B than in those who disagreed with Statement B (Table 2).

There were statistically significant differences ($p < 0.05$) between patients who agreed (i.e., were at risk of suboptimal communication) or disagreed with Statement A or Statement B in terms of specific areas of communication (Table 3). Compared with patients who disagreed with Statement A or Statement B, significantly greater proportions of patients who agreed with Statement A or Statement B also strongly or somewhat agreed that they wished they talked more about PsA and treatment goals with their physician, that they did not always proactively mention symptoms, and that they did not always mention symptoms even when asked. Compared with patients who disagreed with Statement A, significantly smaller proportions of patients who agreed with Statement A strongly or somewhat agreed that their physician was always willing to discuss medication concerns/alternative treatment plans, and that they were comfortable discussing impacts of PsA on daily living (Table 3).

In addition, among patients primarily treated by a rheumatologist, the proportion who strongly or somewhat agreed that they were comfortable raising their concerns and fears was

also significantly smaller in those who agreed vs. those who disagreed with Statement A. Compared with patients who disagreed with Statement B, a significantly smaller proportion of patients whose primary treating physician was a rheumatologist and who agreed with Statement B also strongly or somewhat agreed that they were comfortable discussing the impacts of PsA on daily living. Compared with patients who disagreed with Statement B, a significantly smaller proportion of patients whose primary treating physician was a dermatologist and who agreed with Statement B strongly or somewhat agreed that they were comfortable raising their concerns or fears (Table 3).

Statistically significant differences ($p < 0.05$) were also evident between patients who agreed (i.e., were at risk of suboptimal communication) and those who disagreed with Statement A or Statement B in terms of the impact they felt PsA had on aspects of their HRQoL (Fig. 1).

Among patients treated primarily by a rheumatologist, significantly greater proportions of those who agreed vs. those who disagreed with Statement A or Statement B reported PsA had a major/moderate impact on their emotional/mental wellbeing, work productivity, career path, romantic relationships/intimacy, relationship with friends/family, decision to start a family, and education (Fig. 1a). The proportion of patients who reported that PsA had a major/moderate impact on their level of physical activity and ability to perform certain activities was also significantly greater among patients who agreed vs. those who disagreed with Statement A. A broadly similar trend was observed among patients treated primarily by a dermatologist (Fig. 1b).

Patient Worries and Fears Due to PsA

The worries owing to PsA most commonly stated by patients were also amongst those most commonly noted as perceived patient worries by physicians (Fig. 2a); these included the effect of PsA on their ability to perform daily activities and/or live independently, concern that PsA symptoms would worsen, and fears of joint/

Table 3 Patients strongly/somewhat agreeing with statements relating to communication issues, by physician type and communication status

	Primary treating physician ^a	
	Rheumatologist (<i>N_{sub}</i> = 983/ <i>N</i> = 960)	Dermatologist (<i>N_{sub}</i> = 303/ <i>N</i> = 326)
Patients strongly/somewhat agreeing with the following statements, <i>n</i> (%) ^b		
I wish my HCP and I talked more about my PsA and treatment goals ^c	623 (63)	211 (70)
My HCP is always willing to discuss my concerns about medications or alternative treatment plans ^c	884 (90)	259 (85)
I feel comfortable discussing how PsA impacts my daily living (e.g., activities, work, relationships) with my HCP ^c	875 (89)	265 (87)
I feel comfortable raising concerns and fears with my HCP ^c	882 (90)	260 (86)
I do not always proactively mention symptoms that I am still experiencing with my HCP ^{d,e}	335 (34)	132 (44)
Even when my HCP asks, I do not always mention PsA symptoms that I am still experiencing ^{d,e}	347 (35)	144 (47)
Statement A: 'I worry that if I ask too many questions, my HCP will see me as a difficult patient and it will affect the quality of care I receive'		
Patients strongly/somewhat agreeing with the following statements, <i>n</i> (%) ^b		
I wish my HCP and I talked more about my PsA and treatment goals ^c	365 (83)	123 (90)
My HCP is always willing to discuss my concerns about medications or alternative treatment plans ^c	371 (84)	107 (78)
I feel comfortable discussing how PsA impacts my daily living (e.g., activities, work, relationships) with my HCP ^c	369 (84)	110 (80)
I feel comfortable raising concerns and fears with my HCP ^c	367 (83)	113 (82)
I do not always proactively mention symptoms that I am still experiencing with my HCP ^{d,e}	242 (55)	88 (64)
Even when my HCP asks, I do not always mention PsA symptoms that I am still experiencing ^{d,e}	264 (60)	93 (68)
	Disagree (<i>N_{sub}</i> = 542/ <i>N</i> = 530)	Disagree (<i>N_{sub}</i> = 166/ <i>N</i> = 169)
	Agree (<i>N_{sub}</i> = 441/ <i>N</i> = 430)	Agree (<i>N_{sub}</i> = 137/ <i>N</i> = 157)

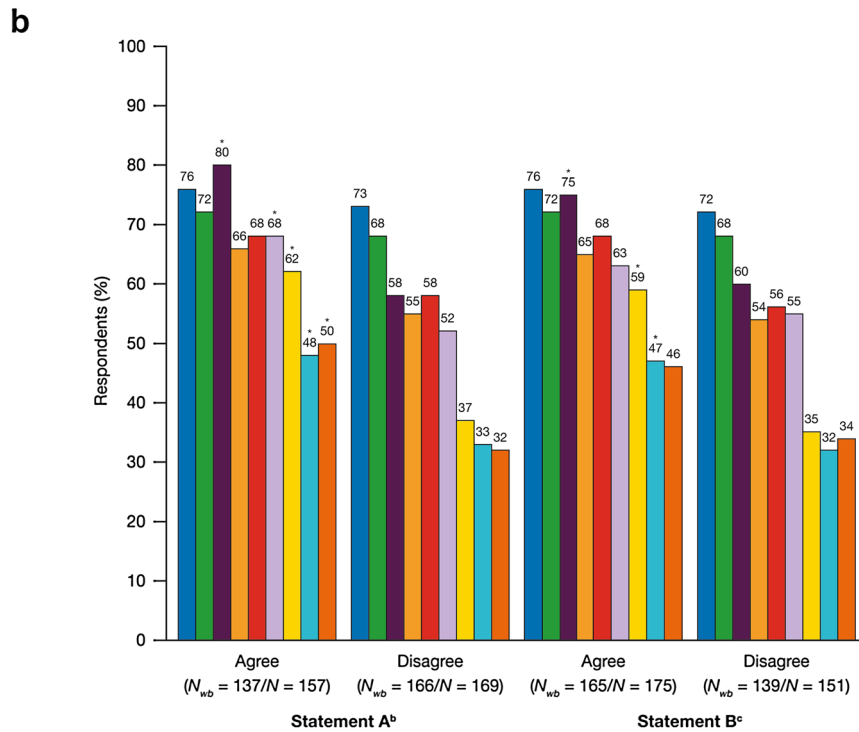
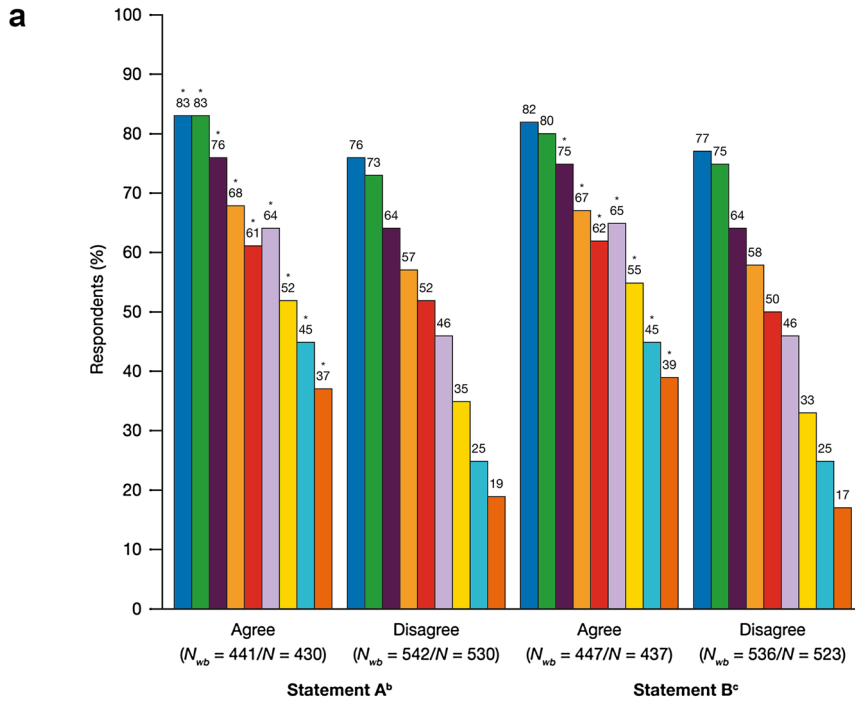
Table 3 continued

Statement B: 'I often tell my HCP I am fine when I am really experiencing symptoms'	Agree ($N_{ub} = 447/N = 437$)	Disagree ($N_{ub} = 536/N = 523$)	Agree ($N_{ub} = 165/N = 175$)	Disagree ($N_{ub} = 139/N = 151$)
Patients strongly/somewhat agreeing with the following statements, n (%) ^b				
I wish my HCP and I talked more about my PsA and treatment goals ^c	356 (80)	267 (50)	134 (81)	77 (56)
My HCP is always willing to discuss my concerns about medications or alternative treatment plans ^c	396 (89)	489 (91)	135 (82)	123 (89)
I feel comfortable discussing how PsA impacts my daily living (e.g., activities, work, relationships) with my HCP ^c	379 (85)	497 (93)	142 (86)	122 (88)
I feel comfortable raising concerns and fears with my HCP ^c	392 (88)	490 (91)	133 (81)	127 (92)
I do not always proactively mention symptoms that I am still experiencing with my HCP ^{d,e}	241 (54)	94 (18)	94 (57)	38 (27)
Even when my HCP asks, I do not always mention PsA symptoms that I am still experiencing ^{d,e}	266 (60)	81 (15)	106 (65)	38 (27)

Percentages were calculated based on the N_{ub} as the denominator. Patient responses could also include 'Somewhat disagree' and 'Strongly disagree' (data not shown) HCP healthcare professional, N unweighted sample size, i.e., total number of patients who responded to the question, N_{ub} weighted base, i.e., total number of adult patients adjusted for the size of each country's adult population, n number of respondents within given category, *PsA* psoriatic arthritis

^a Data are for patients who reported that a rheumatologist or dermatologist was the HCP mostly responsible for managing their PsA
^b Unless specified otherwise, the base for the questions reported was patients for whom a rheumatologist or dermatologist was mostly responsible for managing their PsA
^c Patients were asked the following: 'With respect to your communication with the HCP who is mostly responsible for managing your PsA, how much do you agree or disagree with each of the following statements?'
^d Patients were asked the following: 'How much do you agree or disagree with each of the following statements?'
^e The base for the question was all qualified respondents
^f Indicates a greater proportion ($p < 0.05$) for a particular level of response (e.g., strongly/somewhat agree) between those who agreed vs. disagreed (i.e., rheumatologist-treated patients who agreed vs. disagreed, and dermatologist-treated patients who agreed vs. disagreed) with a particular statement (Statement A or Statement B)

- Level of physical activity
- Ability to perform certain activities
- Emotional/mental wellbeing
- Work productivity
- Career path
- Romantic relationships/intimacy
- Relationship with friends/family
- Decision to start a family
- Education



◀**Fig. 1** Health-related quality of life impact^a of PsA by patient–physician communication status among patients treated by (a) a rheumatologist or (b) a dermatologist. Percentages were calculated based on the N_{wb} as the denominator. The base for the question was all qualified respondents. *HCP* healthcare professional, N unweighted sample size, i.e., total number of patients who responded to the question, N_{wb} weighted base, i.e., total number of adult patients adjusted for the size of each country's adult population, *PsA* psoriatic arthritis. ^aBased on patients indicating major or moderate impact in response to the following: 'How much of a negative impact, if any, has PsA had on each of the following aspects of your life?'. ^bStatement A: I worry that if I ask too many questions my HCP will see me as a difficult patient and it will affect the quality of care I receive. ^cStatement B: I often tell my HCP I am fine when I am really experiencing symptoms. *Indicates a greater response ($p < 0.05$) between those who agreed vs. disagreed with a particular statement (Statement A or Statement B)

spine damage. However, the proportions of physicians who recognized patient worries were generally numerically greater than the proportions of responders in the patient survey who reported these worries, except for 'children may develop PsA' (dermatologist data only), 'PsA medication will fail', 'exhaust all medication options for PsA', and 'PsA and/or other health conditions accompanying PsA may shorten life expectancy'.

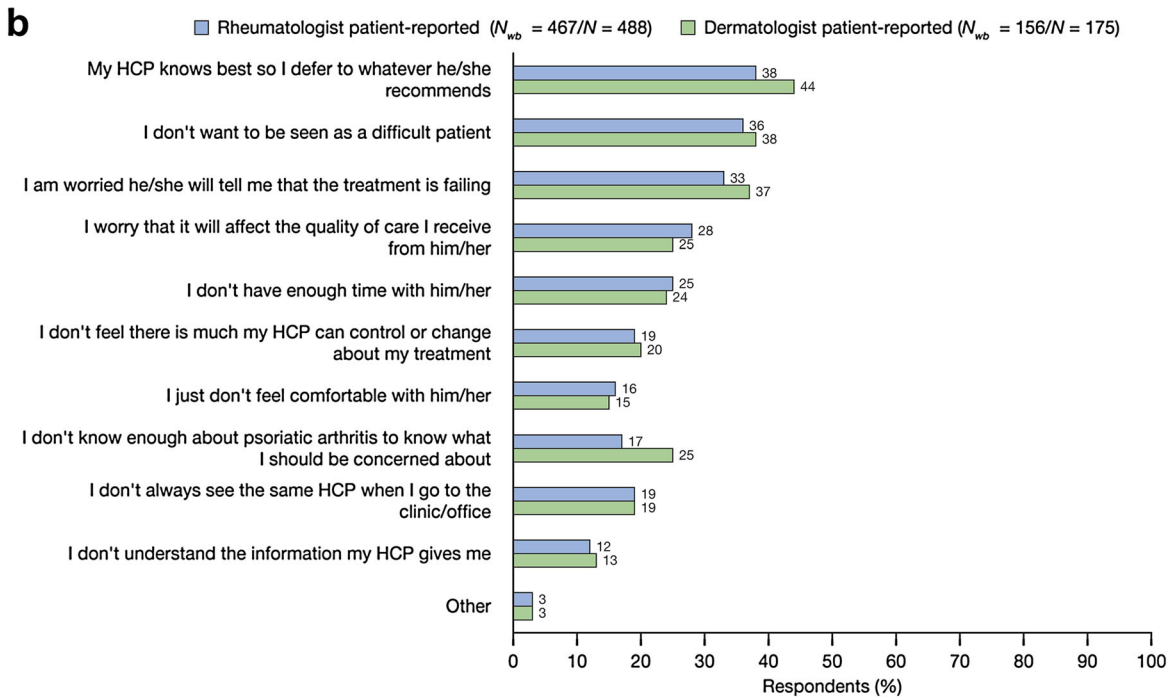
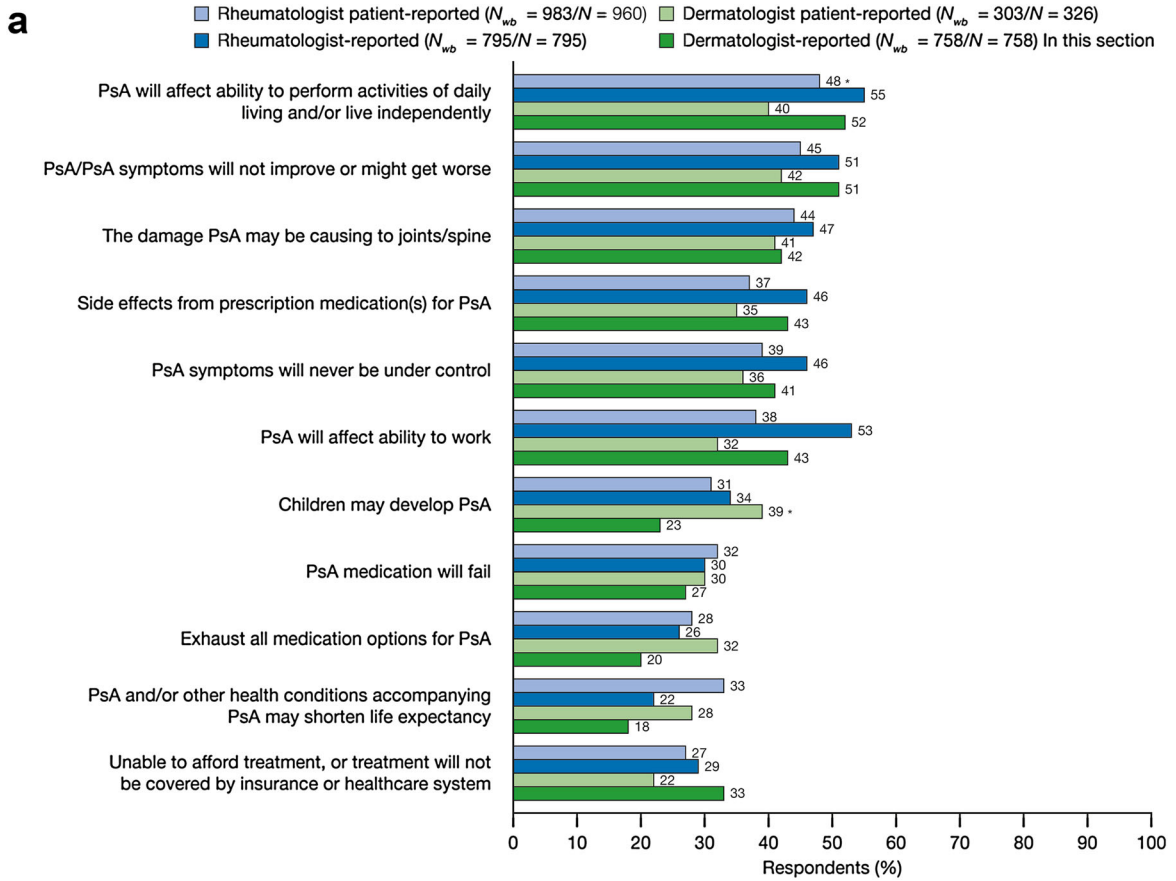
Most patients strongly or somewhat agreed that they were comfortable raising their concerns and fears with their physician. Among those who did not strongly agree ($N_{wb} = 467$ [48%] for patients primarily treated by a rheumatologist; $N_{wb} = 156$ [51%] for patients primarily treated by a dermatologist), the most common reasons cited were: the patient deferred to rheumatologist/dermatologist recommendations; the patient did not wish to be identified as being difficult; and worries that the rheumatologist/dermatologist would inform the patient that their treatment was failing (Fig. 2b).

DISCUSSION

The results of this global online survey highlight the breadth and depth of impact that PsA can have on wide-ranging aspects of patients' HRQoL and their perceptions of health. In general, there was agreement between responders to the patient and physician surveys about the impact of PsA, although physicians often appeared to under-recognize the frequency with which PsA affects patients in terms of social or work impact.

Consistent with the findings of a patient- and physician-based global survey conducted in the rheumatoid arthritis setting [10], our results showed that most patients with PsA and physicians who treat patients with PsA were generally satisfied with patient–physician communication. However, > 40% of patient respondents with PsA appeared to be at risk of suboptimal communication with their physician, which has been shown to be associated with greater work impairment and higher disease burden in patients whose satisfaction with PsA control was misaligned with that of their physician [6]. Indeed, the findings of our analysis indicate that patients at risk of suboptimal communication are more likely to experience greater impacts of PsA on their HRQoL than other patients, and may therefore have greater healthcare needs.

Under-reporting of symptoms by patients may impact the treatment strategy recommended by physicians due to lack of information and could also affect the shared decision-making process that is important for the treat-to-target approach. The need for continuous communication between patients and physicians to improve understanding and perceptions of disease severity and treatment goals/options has been emphasized by the results of a USA population-based survey, in which the unmet needs of patients with psoriasis and/or PsA (including diagnosis, disease severity, therapy satisfaction, and undertreatment) were assessed [11]. Furthermore, although the intent of this work was not to compare the practices of different specialties, these may have contributed to the under-reporting of symptoms.



◀ **Fig. 2** Communication of patient worries: **a** proportions of patients with worries, and physicians who reported their patients had these worries; and **b** patient-reported reasons for discomfort in raising concerns/fears with their physician.^a Percentages were calculated based on the N_{wb} as the denominator. The base for all questions was all qualified respondents. Patient data are for patients who reported that a rheumatologist/dermatologist was mostly responsible for managing their PsA. For the proportion of patients with worries, and proportions of physicians who reported their patients had these worries, the response items reported are those for which the response rate was > 30% in any group. *HCP* healthcare professional, N unweighted sample size, i.e., total number of patients who responded to the question, N_{wb} weighted base, i.e., total number of adult patients adjusted for the size of each country's adult population, *PsA* psoriatic arthritis. ^aAmong patients who did not strongly agree with the statement, 'I feel comfortable raising concerns and fears with my HCP' (rheumatologist-treated patients, $N_{wb} = 467$; dermatologist-treated patients, $N_{wb} = 156$); patients could provide more than one response. ^ΔIndicates a statistically significant ($p < 0.05$) difference between the rheumatologist- and dermatologist-treated patients

Rheumatologists and dermatologists will likely have focused on their respective areas of expertise, e.g., dermatologists may not routinely consider rheumatologic aspects of PsA; likewise, rheumatologists may not routinely consider dermatologic symptoms. Similarly, patients may not report symptoms that they consider irrelevant to that particular clinician.

It is possible that patients at risk of suboptimal communication relied on alternative sources of information and support regarding their disease, such as the Internet. We did not explore where these patients looked for information, but we propose that the Internet is a likely source. However, the Internet can be an inaccurate source of health information [12]; therefore, physicians should provide accurate information or help guide patients to accurate sources [13] that could aid the shared decision-making process.

A variety of other approaches may help to improve and maintain communication between patients with PsA and their physicians. For example, better educating patients about PsA

via tailored interactive learning (e.g., written/multimedia material, phone calls, and online or face-to-face interactions) could enable them to communicate their concerns and expectations more clearly with their HCP [14, 15]. Electronic tools, such as mobile apps, which enable patients to monitor disease activity using validated instrument measures, may make it easier for patients to share information and discuss their treatment progress with their physician [16–18]. Short appointment durations may also hinder communication [7]; patients should have access to specialist nurses trained in patient care and management, in line with European Alliance of Associations for Rheumatology (EULAR) guidelines [19]. Moreover, to enhance communication even during shorter appointments, tools could be developed to prepare patients ahead of consultations, as well as structured guidelines for consultations, including key questions for patients [7].

Limitations of this study included the separate administration of the survey to patients and to physicians who were not necessarily caring for any patient respondents included in the analysis. However, despite this lack of group matching (and consequently lack of a direct relationship between patient and physician data), the large sample sizes of the groups mean they can be considered representative. Also, the surveys relied upon the accurate recall of respondents, which was potentially more challenging for physicians than patients, given that patients were answering questions about themselves and were, therefore, more likely to have accurate recall vs. physicians, who were basing their responses on their own general impressions of the patients. Moreover, the proportion of physicians recognizing patient worries was often higher than patients reporting those worries; this discrepancy between patients and physicians' survey findings may reflect physicians making assumptions based on common patient worries, or may be a result of inaccurate physician recall.

Other limitations include the reliance of the surveys on accurate understanding of the questions, and that they did not include questions on comorbidities of PsA, such as fibromyalgia

and/or mental health diagnoses. The quality of physician–patient communication regarding comorbidities would have been of interest, as consideration of comorbid conditions is recommended when caring for patients with PsA [5, 20]. In addition, most patients reported their PsA severity as being moderate or severe, and almost two-thirds reported poor or fair overall health, potentially limiting the generalizability of the findings, as the degree to which patients communicate with their physician may be driven in part by the severity of their disease. This was recently demonstrated in a Scandinavian survey of patients with psoriasis and/or PsA in which the proportion of respondents who had discussed systemic treatments with a physician was shown to be greater among those who felt their symptoms were severe than among those who felt their symptoms were non-severe [21].

This analysis pooled data from eight countries, thus providing a global perspective. Evaluation of between-country differences was beyond the scope of this analysis, although it would be of interest, as cultural differences may influence the patient–physician relationship.

CONCLUSIONS

The results of this global survey suggest that some patients with PsA may be at risk of sub-optimal communication, which could affect reporting of symptoms and the HRQoL impacts of PsA. In addition, physicians often underestimate the impacts of PsA, compared with patients. These findings highlight a need for ways to help improve communication and facilitate shared decision-making between patients and their HCP.

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Compliance with Ethics Guidelines. Patients were recruited from online market research panels made up of members who agreed to participate in this type of research. Qualified respondents provided informed consent to complete the research. The surveys were non-interventional and were not conducted as a clinical study. All respondents agreed to participate but ethics approval was not required.

Data Availability. Upon request, and subject to certain criteria, conditions and exceptions (see <https://www.pfizer.com/science/clinical-trials/trial-data-and-results> for more information), Pfizer will provide access to individual de-identified participant data from Pfizer-sponsored global interventional clinical studies

conducted for medicines, vaccines, and medical devices (1) for indications that have been approved in the US and/or EU, or (2) in programs that have been terminated (i.e., development for all indications has been discontinued). Pfizer will also consider requests for the protocol, data dictionary, and statistical analysis plan. Data may be requested from Pfizer trials 24 months after study completion. The de-identified participant data will be made available to researchers whose proposals meet the research criteria and other conditions, and for which an exception does not apply, via a secure portal. To gain access, data requestors must enter into a data access agreement with Pfizer.

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