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## Research letter: Impact of pruritus on quality of life—A systematic review

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### To the Editor

Pruritus is a common manifestation of many dermatologic conditions. Previous research demonstrated that pruritus negatively impacts quality of life. However, the impact of pruritus is often underappreciated in dermatology and nondermatology settings, alike. We hypothesized that many of the harmful effects of pruritus that are most concerning to patients are not sufficiently addressed in the review literature read by clinicians who treat pruritus. We sought to characterize the most common patient-reported concerns related to pruritus and determine whether there was concordance with clinical review articles.

This systematic review was designed to identify all review articles and qualitative or mixed methods studies pertaining to the impact of pruritus on quality of life. We searched MEDLINE, Embase, and Cochrane Library from its beginning to February 1, 2015, for a combination of “prurit\*” and “itch\*” (\*wildcard character) and “quality of life,” “QOL,” “patient burden,” “patient reported outcome,” “patient report,” “patient perspective,” and “patient centered.” Studies were excluded based on the title, abstract, or both if there was no indication they investigated or discussed pruritus, its impact on quality of life, or both. Therapeutic trials, animal studies, and foreign-language articles were excluded.

Two reviewers, P. D. and R. K., performed data extraction and any differences were resolved by discussion. Articles were classified as original research studies if they used qualitative or mixed methods to assess primary, patient-reported data. Thematic analysis was performed in NVivo 10 (QSR International, Burlington, MA). Items were ranked based on frequency of use as a measure of how often they were addressed.

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Conflicts of interest: None declared.

The literature search yielded 1889 articles, of which 1641 did not meet inclusion criteria. In total, 248 articles were included; 224 were review articles and 24 were original research studies (Supplemental Fig 1; available at <http://www.jaad.org>). There were 366 and 1669 distinct items extracted from original studies (Supplemental Table I; available at <http://www.jaad.org>) and review articles (Supplemental Table II; available at <http://www.jaad.org>), respectively. There was only partial concordance with respect to how frequently different items were reported in original studies compared with review articles (Table I). There were similarities for the emotional effects of itch and sleep impairment. However, functional limitations and relationship/social effects related to itch were the second and third most commonly reported concerns by patients and only the sixth and eighth most commonly reported concerns in review articles. Other concerns reported considerably less commonly in review articles than in original research studies included self-consciousness and embarrassment, self-esteem, effects of itch on clothing choices, and food choices. Physical manifestations ranked number 1 in review articles by a wide margin, but was the fifth most commonly reported concern in original research studies.

Qualitative methods are ideal for patient-centered research because they can assess essential aspects of patients' preferences, rather than test preconceived hypotheses by investigators.<sup>1</sup> The lack of concordance between qualitative studies and review articles suggests there are practice gaps with how pruritus is evaluated and managed. Although some of these categories may seem less amenable to intervention by dermatologists, they are important indicators of the patient burden of pruritus and should be factored into clinical decision-making. The decision to step up treatment might be based on a patient's inability to go out to dinner with friends or play sports. If clinicians base their treatment decisions on the top 3 concerns in review articles, they would miss 2 of the 3 most important patient concerns.

It may not be feasible for clinicians to assess all these domains in a brief office visit. However, it is possible to incorporate existing patient-reported outcomes (PRO) instruments into clinical practice. Multiple PRO instruments were shown to be good assessments of itch, including the Dermatology Life Quality Index,<sup>2</sup> ItchyQOL,<sup>3</sup> and Skindex.<sup>4</sup> Each has strengths and weaknesses, and the decision about which to use can be based on personal preference by the clinician. These can be completed in the waiting or examination room before seeing the clinician. We believe that incorporation of these into clinical practice will improve decision-making and patient satisfaction.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

## Acknowledgments

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**Table I**  
**Comparison of patient concerns related to itch between original research studies and review articles**

Item	Original research studies		Review articles	
	Frequency	Rank	Frequency	Rank
Emotional effects of itch	76	1	247	2
Functional limitations	45	2	102	6
Relationship-social effects	41	3	44	8
Sleep impairment	35	4	127	5
Physical manifestations of itch	33	5	569	1
Exacerbating factors	21	6	156	3
Self-conscious/embarrassed	20	7	24	11
Timing	18	8	144	4
Treatment	14	9	31	10
Fatigue	10	10	32	9
Clothing choices affected	8	11	3	20
Miscellaneous	8	11	63	7
Sexual effects	7	12	23	12
Concentration impairment	6	13	14	14
Food choices affected	6	13	1	22
Self-esteem/self-confidence affected	5	14	3	20
Moderate	2	15	2	21
Pleasant-pleasurable	2	15	0	–
Avoidance behavior increased	1	16	3	20
Appetite effects	1	16	8	16
Irritation-irritated	0	–	20	13
Concentration impairment	0	–	14	14
Skin barrier function altered	0	–	10	15
Inconvenience	0	–	6	17
Growth-development affected	0	–	5	18
Physical well-being affected	0	–	4	19
Behavioral changes	0	–	3	20
Restlessness	0	–	3	20
Bathing routine affected	0	–	2	21
Provoked	0	–	2	21
Weight loss	0	–	2	21