Abstract: Patients with chronic leg ulcers usually live with a wide variety of disabilities, related both to the severity of their disease and to an array of seemingly nonrelated psychosocial factors. In an attempt to improve the quality of life of this patient population, Health Related Quality of Life has been extensively researched in patients with leg ulceration to isolate the factors that significantly influence it. This review examines the existing literature regarding the generic Nottingham Health Profile and the disease-specific Cardiff Wound Impact Schedule, and the use of these tools in patient assessment.

Key words: chronic leg ulcers, quality of life, psychosocial factors, Cardiff Wound Impact Schedule, Nottingham Health Profile
Methods

The following databases were searched: PubMed, Cochrane Library, and Ovid using the terms “quality of life” OR “health related quality of life” OR “chronic wound” OR “Nottingham Health Profile” OR “Cardiff Wound Impact Schedule.” The search was limited to publications with abstracts in the last 20 years and in English. In addition, citations within obtained papers were scrutinized to identify additional studies.

Results

Nottingham Health Profile is a generic tool for assessing QoL that has been evaluated for use for patients with chronic wounds. In a study by Franks and Moffatt of NHP results for patients with chronic venous leg ulcers, an acceptable internal consistency (IC) was demonstrated for most of the fields included in the NHP questionnaire (> 0.7), with only 2 variables (energy and social isolation) scoring lower (0.65 and 0.65). Their study has established the high construct validity of the NHP when compared to another well-accepted generic QoL assessment tool such as the Short Form-36 (SF-36). In their study, Franks and Moffat suggested that NHP might be more responsive to patients’ ulcer status when compared to SF-36. These results contradict the work of Brazier et al., who demonstrated an advantage of the SF-36 over the NHP in terms of the floor and ceiling effects. Franks and Moffatt concluded by recommending the use of NHP in the assessment of patients with chronic leg ulcers. Furtado et al. found the NHP to correlate with the Euroqol and visual analogue (VA) pain questionnaires only in the aspect of bodily pain when compared in chronic leg ulcers.

Hunt et al. as well as Simon et al., in a more contemporary study, demonstrated the high acceptability of the NHP among elderly people while pointing to an important limitation of the NHP—that it only investigates and measures negative aspects of health and neglects the positive ones. This has prompted Hunt et al. to later decree that the NHP cannot be used to assess positive feelings of well-being.

The Cardiff Wound Impact Schedule (CWIS) is a recently developed questionnaire that focuses on the impact of chronic wounds on HRQoL. Internal consistency was found to be above the acceptable 0.7 in all of the subscales. Reproducibility of results, calculated using a test-retest method, was significant at \( P < 0.001 \) for all items, and construct validity when compared to the SF-36 was also high (\( P < 0.001 \)). Upon examination, the ability of the CWIS to discriminate between different health states (healed wound vs nonhealed) indicates that it can isolate responses attributed to the wound from others related to concomitant disorders of old age. However, a pilot study on the effects of topical negative pressure on QoL, using the CWIS, failed to differentiate between healed wounds and healing states and revealed a large ceiling effect similar to the trends noted for the NHP3 that could reflect decreased responsiveness to small changes in QoL. Nevertheless, CWIS constitutes an appropriate tool for patients with chronic wounds and could be used alone or in concurrence with a generic tool. A summary of relevant studies is detailed in Table 1.

Discussion

This review of the literature further clarifies the advantages and drawbacks of different kinds of HRQoL assessment tools. Condition-specific tools have advantages over generic ones by investigating items that are more relevant to the specific patient group and detecting small changes that are important to caregivers as well as patients. On the other hand, generic HRQoL instruments might possess an advantage over disease-specific ones when it comes to assessing general variables that reflect QoL.

Conclusions

Several authors postulated that different chronic conditions have unique profiles of HRQoL while other authors stipulated opposite results and recommended the use of generic tools. Condition-specific tools focus directly on the symptoms of the disease but may be less sensitive than generic tools on aspects concerning a more general level of functioning. The choice between the 2 should depend on the research question, after it is clearly ascertained.

References

3. Franks PJ, Moffatt CJ. Health related quality of life in patients with venous ulceration: use of the Nottingham...
Table 1. Relevant studies characteristics and results.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Date of Publication</th>
<th>No. of Participants</th>
<th>Questionnaires evaluated</th>
<th>Results</th>
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</table>
| Anderson et al   | March 1997          | 255                 | SF-36, DCP               | DCP:  
• Has predictive validity regarding glycemic control.  
• Has the appropriate measure for assessing the impact of acute complications and/or regimen on quality of life.  
SF-36:  
• Does not have predictive validity regarding glycemic control.  
• Does not have the appropriate measure when examining relationships between the patient's experience of living with diabetes and quality of life and other chronic diseases.  
Both the DCP and SF-36:  
• Correlate with the number of complications for patients who have NIDDM treated with insulin.  
• Can be used to illuminate the experience and behavior of patients living with and caring for NIDDM. |
| Price et al      | April 2004          | 135                 | CWIS, SF-36              | CWIS:  
• Has high internal consistency.  
• Has the ability to discriminate between health states and good reproducibility.  
• Is a valid tool for studying the impact of chronic wounds of the lower leg on HRQoL.  
• Allows clinicians to identify items of patient concern, which can then be used to negotiate options of care most suited to individual patients.  
Strong correlations were noted between related items on CWIS and SF-36 |
| Iglesias et al   | September 2005      | 387                 | SF-12, EQ-5D, Hyland     | Hyland:  
• Has moderate ability to discriminate among individuals according to age, mobility, initial ulcer size, and ulcer duration, but only minor ulcer-related discomfort.  
SF-12 and EQ-5D:  
• Has good evaluative properties; responsive to changes in HRQoL after ulcer healing. |
| Furtado et al    | March 2008          | 98                  | NHP, Euroqol VA pain questionnaire | NHP correlates well with the Euroqol in the field of bodily pain. |
| Jakša et al      | December 2010       | 30                  | CWIS, World Health Organiza-  
|                  |                     |                     | tion generic quality-of-life questionnaire | CWIS has the ability of assessing HRQoL in a patient population with diabetic foot ulcers, and to differentiate between healed and nonhealed states. |
| Simon et al      | January 2013        | 145                 | NHP                     | NHP:  
• Is suitable for assessing the subjective quality of life in nursing home environments.  
• Should also be considered as a reliable, valid, and useful alternative to resident satisfaction surveys. |

CWIF-Cardiff Wound Impact Schedule; SF-Short Form; HRQoL-Health Related Quality of Life; DCP-Diabetes Care Profile; NHP-Nottingham Health Profile; NIDDM-noninsulin-dependent diabetes mellitus; VA-visual analogue


