Brief Methodological Report

Is the Life Space Assessment Applicable to a Palliative Care Population? Its Relationship to Measures of Performance and Quality of Life

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Abstract

Context. The spatial environments that palliative care patients frequent for business and leisure constrict as their disease progresses and their physical functioning deteriorates. Measuring a person's movement within his or her own environment is a clinically relevant and patient-centered outcome because it measures function in a way that reflects actual and not theoretical participation.

Objectives. This exploratory study set out to test whether the Life-Space Assessment (LSA) would correlate with other commonly used palliative care outcome measures of function and quality of life.

Methods. The baseline LSA, Australia-modified Karnofsky Performance Status Scale (AKPS), and the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 15-Palliative (EORTC QLQ-C15-PAL) scores from two large clinical trials were used to calculate correlation coefficients between the measures. Convergent validity analysis was undertaken by comparing LSA scores between participants with higher (≥ 70) and lower (≤ 60) AKPS scores.

Results. The LSA was correlated significantly and positively with the AKPS, with a moderate correlation coefficient of 0.54 ($P < 0.001$). There was a significant weak negative correlation between the LSA and the EORTC QLQ-C15-PAL, with a small coefficient of -0.22 ($P = 0.027$), but a strong correlation between the LSA and the EORTC QLQ-C15-PAL item related to independent activities of daily living ($r = -0.654$, $P < 0.01$). A significant difference in the LSA score between

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participants with higher (≥70) and lower (≤60) AKPS scores $t(97) = -4.35$, $P < 0.001$) was found.

Conclusion. The LSA appears applicable to palliative care populations given the convergent validity and capacity of this instrument to differentiate a person's ability to move through life-space zones by performance status. Further research is required to validate and apply the LSA within community palliative care populations. J Pain Symptom Manage 2014;47:1121–1127.

Key Words
Hospice, palliative care, activities of daily living, outcome measures, validation, performance status, mobility, quality of life

Introduction

Self-reported measures are increasingly used to detect changes in palliative care patients' clinical, functional, and performance statuses, which helps clinicians and families to plan care. These instruments also are used by organizations to measure palliative care service impact and as primary or secondary outcome measures in research.[1]

For most people requiring palliative care, maintaining independence for as long as possible within their setting of choice is the key goal.[2] However, the extent to which tailored palliative care interventions enable people to continue their daily life within their environment of choice is difficult to comprehensively measure because of the large number of physical, emotional, spiritual, occupational, and social functioning domains involved. Capturing this information within palliative care populations often requires the use of various performance and quality-of-life (QOL) measures.

The Australia-modified Karnofsky Performance Status Scale (AKPS) is often used to measure the patient's overall performance status or ability to perform their activities of daily living.[3] A single score between 100 (normal physical abilities with no evidence of disease) and 10 (decreasing numbers indicate reduced performance status) provides an indication of performance.[3] As this scale only measures performance, a QOL measure is also often indicated. The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 15-Palliative (EORTC QLQ-C15-PAL) is frequently used to measure QOL in palliative care populations.[4] This 15 item instrument is a short-form version of the widely used cancer-specific QOL measure (EORTC QLQ-C30) and was developed to reduce participant burden and optimize relevance for people at the advanced stages of disease.[4] The EORTC QLQ-C15-PAL comprises two multi-item functional scales (physical and emotional), two symptom scales (pain and fatigue), plus five single item symptom scales (nausea/vomiting, dyspnea, insomnia, appetite loss, and constipation), and a single global QOL question.[4] Patients are asked to score their functioning and symptoms on a numeric rating scale ranging from one (not at all) to four (very much), and their global QOL on a scale from one (very poor) to seven (excellent). On a scale zero to 100, a higher functional and QOL score is a positive outcome, whereas higher symptom scores are a poorer outcome reflecting greater symptom burden.[4]

Although the AKPS and the EORTC QLQ-C15-PAL are both excellent instruments and widely used in palliative care clinical and research settings, they describe what people *'can do' or 'need'* at a given point in time as opposed to what they actually do in their daily lives.[5] What is required is an instrument that measures a person's actual purposive movement around their own environment, the outer boundaries of this environment, and their level of participation within these life spaces as a proxy marker of performance status and QOL. The Life-Space Assessment (LSA) is one instrument that offers this possibility.[5]

The LSA captures the usual range of places in which a person engages in activities within a defined period.[6] It reflects physical ability and participation in society.[7] Life space is conceptualized as a series of concentric zones