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Title: A New Zealand PHODA: A measure for identifying the perceived harmfulness of activities
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Introduction:
Pain-related fear and avoidance of activity can influence the occurrence and maintenance of low back pain and strongly predicts activity limitation and functional disability. The Photographs of Daily Activities (PHODA) is a series of photographs of daily activities developed to establish the perceived harmfulness of different physical activities and movements in people with low back pain. The original instrument was developed in the Netherlands and a subsequent version (PHODA-SeV) also used photographs depicting activities and contexts within a Dutch context.

This measure is used in two ways in clinical practice: the first is to establish and measure the range of Activities of Daily Living (ADL) an individual currently fears and/or avoids and can be used at initial assessment and as a follow-up measure to determine changes in disability associated with low back pain; the second is as part of clinical intervention where patients are asked to generate a hierarchy of feared ADL which are then used as part of a graded exposure approach to returning to activity. Treatment using this approach has shown utility and effectiveness, particularly in those patients reporting high levels of avoidance because of fear.

Unfamiliar or irrelevant contexts may limit the utility of the PHODA or PHODA-SeV in clinical practice. Unique contextual features of movements or activities are an essential element in developing a hierarchy of feared activities or when rating perceived harmfulness. New Zealand conditions differ considerably from the environments and activities depicted in the original PHODA. For example, the Dutch PHODA depicts a person scraping ice from an exterior house window, while a cyclist is depicted riding over a cobble-stoned road. There are no images involving walking over sports fields, grocery shopping in a busy supermarket, or carrying out “DIY” activities, all of which are common activities undertaken in New Zealand. In addition, the original PHODA activities were selected on the basis of biomechanical movements, but do not necessarily reflect the activities or contexts of most concern to individuals with back pain. Finally, the images of individuals used in the PHODA and PHODA-SeV only depict people of European background and do not represent the New Zealand multicultural society, risking lack of validity for this tool in the New Zealand context.

Aims:
This project aims to develop a New Zealand version of the PHODA ready for further psychometric testing.

Methods:
Stage 1 - Systematic search of the low back pain disability literature (disability assessment) was conducted to identify the common ADL disability outcome instruments for chronic low back pain and whether they reflect patient’s needs and relevant activity contexts.
Stage 2 – Semi-structured, qualitative interviews were conducted with six rehabilitative care clinicians from private and public practices across New Zealand to identify most relevant contexts in which photographs should be taken. Findings were evaluated by thematic analysis until data saturation was achieved.
Stage 3 – Individuals from a variety of demographic backgrounds were photographed performing activities often avoided by people experiencing back pain.
Stage 4 – Images were pilot tested with clinicians to establish perceptions of clinical relevance and to ensure photographs cover the range of activities and contexts considered important to people with

low back pain in New Zealand, from least demanding to most demanding from clinicians' perspectives.

Results:
Stage 1 – Common ADL disability outcome instruments typically included the activity domains of "mobility", "self-care", "domestic life" and interpersonal interactions", but not "community" and "social life". The context-specific nature of activities has not been demonstrated from the disability assessment.
Stage 2 – The contextual factors influencing fear and avoidance of daily activities were varied and complex, but there was a clear consensus among clinicians that patients tended to rank bending-type activities and activities involving a period of inactivity, heavy load, repetitive movements and spontaneity of task to be the most harmful to their backs. Less harmful activities involved personal care, less bending and lighter load.
Stage 3 – A database of pictures (94 images) were compiled depicting images of people from a variety of demographic backgrounds performing the activities often avoided by people experiencing low back pain. Pictures were categorised into key movement categories with relevant contexts.
Stage 4 – Images were validated by clinicians to cover a majority of the activities and contexts relevant to people with back pain in New Zealand.

Conclusion:
Graded exposure is a treatment with known effectiveness for reducing disability associated with back pain, and effective assessment is a foundation for this treatment. A pilot version of the New Zealand PHODA has been developed. A future project will address pilot testing the images with individuals living with back pain to ensure validity from a user perspective is addressed, along with determining reliability of the measure.