



Development and validation of the Cognitive Behavior Assessment Questionnaire (CBAQ) in Nonspecific Chronic Low Back Pain

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Introduction

- Nonspecific Chronic Low Back Pain (NSCLBP) is linked to a various factors including physical, behavioral, lifestyle, neuro-physiological, psychological/cognitive, and social involvement.
- For efficient treatment outcomes, it is crucial for healthcare professionals to recognize the cognitive issues that their patients are experiencing, this necessitate the pursuit of improved assessment methods.
- No valid assessment tool for measuring cognition in NSCLBP is currently available.
- Therefore, questionnaire has been developed to assess Cognitive Behavior in NSCLBP using the modified Delphi technique.

Purpose

- To develop Cognitive Behavior Assessment Questionnaire (CBAQ) in NSCLBP using modified Delphi Technique
- To establish content validity using Content Validity Ratio (CVR) and Content Validity Index (CVI) of CBAQ in NSCLBP

Methods and Statistical analysis

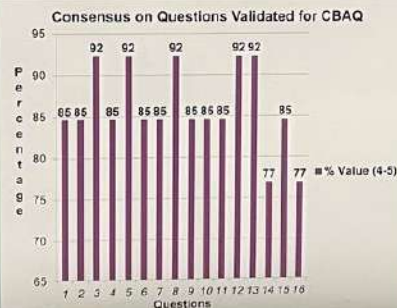
- Design: Cross sectional study-Two rounds of Modified Delphi Technique was used to reach the consensus.
- Participants: 13 experts were selected using purposive sampling method from multiple disciplines (Physiotherapy, Orthopaedics, General Medicine and Clinical Psychology) with minimum 5 year experience in management of NSCLBP.
- Questionnaire Development: The Questionnaire comprised of 35 items using comprehensive literature review. The experts assessed each of the proposed items and expressed their agreement using a five-point Likert scale ranging from 1 to 5 (1 = not at all important and 5 = extremely important).
- Consensus: Items that are rated 4 or more by respondents were considered and accepted.
- Data was analyzed using acceptable value of CVI (0.78) and cutoff value of CVR (0.54).

Results

Relative Content Validity (CVR) and Content Validity Index (CVI) of the CBAQ

Questions	CVR	I-CVI
1. Do you get tired easily due to Low Back Pain?	0.7	0.85
2. Do you get restless and unable to hold still in sitting, standing or lying more than 30 minutes due to Low Back Pain?	0.7	0.85
3. Do you still love things that you used to do before low back pain?	0.8	0.92
4. Does episode of Low Back Pain disturb the clarity of your thoughts?	0.7	0.85
5. Does episode of Low Back Pain increase feeling of your guilt or not effectively being able to participate in work most of the time?	0.8	0.92
6. Does an episode of Low Back Pain make you feel like crying at times?	0.7	0.92
7. Do you feel more depressed than usual because of Low Back Pain?	0.7	0.85
8. Does Low Back Pain affect your sleep?	0.8	0.92
9. Do you feel that your Low back pain will never end?	0.7	0.85
10. Are you afraid that the Low back pain may worsen with time?	0.7	0.85
11. Do you feel that you can't keep Low back pain out of your mind?	0.7	0.85
12. Do you feel that your Low back pain gets worse with physical activity?	0.8	0.92
13. Do you think that your Low back Pain was caused by your work?	0.8	0.92
14. Do you think you can ever go back to work with your Low Back Pain?	0.8	0.92
15. Do you think that your work may make your low back pain severe?	0.7	0.85
16. Do you think until your low back pain is treated, you cannot do your usual work?	0.5	0.77

Results



Results

- Questionnaire responses to rounds one and two were analyzed by calculating agreement percentages. Questions with less than 75% agreement were eliminated.
- After two rounds of modified Delphi Process, 16 items were retained out of 35 items.
- CVR(Critical) for a panel size (N) of 13 is 0.54 & for CBAQ is 0.70 which was considered as an indicator of good content validity.
- Overall CVI for CBAQ was 0.89 indicating excellent content validity.

Discussion

- Explicit criteria for expert selection & ensuring that these experts are appropriate for the study to validate the instrument, the modified Delphi technique was used to validate scales and questionnaires by expert opinion, avoiding bias.
- The I-CVIs of all items in the CBAQ ranged from 0.85 to 0.92 with only one item having an I-CVI less than 0.78. This supports that individual items were important and relevant to measuring the cognitive behaviors in NSCLBP.

Conclusion

- We have developed a tool for assessing cognitive behavior in patients with nonspecific chronic low back pain. This will provide a valid measure to examine the affected level of cognition in non-specific chronic low back pain patients in terms of psychological distress, catastrophizing, and fear avoidance belief.
- It is recommended to use a pilot sample in future study to assess the psychometric properties and establish the construct, criteria, and reliability validity.

Clinical Relevance

This tool has potential applications in both the research setting and in clinical practice for identifying cognitive issues in NSCLBP. Therefore, will help the clinicians to make clinical decisions to manage a patient with nonspecific CLBP once validity and responsiveness are established.

References

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