

Abstract

Time-dependent variation of PRO measurements in patients with chronic health conditions: A systematic scoping review

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Intra-individual variation of Patient Reported Outcome Measurements (PROMs) estimates have previously received little attention, as aggregate group-level estimates for PROMs are more routinely used over individual level estimates. In order to identify, explore and describe the literature on time-dependent variation of PRO scores for patients with chronic conditions, a scoping review was conducted. The search strategy was developed (using/adapting terms from existing systematic reviews through an iterative process), resulting in four main blocks (areas): PROs, instruments (types), time, and chronic conditions. Five databases were searched: PubMed, Embase, PsycINFO, PubMed and CINAHL. All types of documents were considered. Screening and data extraction was independently completed by two to three reviewers. A total of 3092 references resulted from the searches, and after screening the literature included in the final review related to research on time-dependent variation (diurnal, infradian and seasonal) in respiratory, musculoskeletal and mental health conditions using a variety of PROMs, with the Center for Epidemiologic Studies Depression Scale and Medical Outcomes Trust Short Form SF-36 being most prominent. Available evidence indicates that symptoms (e.g. pain, fatigue) have distinct temporal profiles that can be picked up by the variability of PRO scores in patients with different chronic conditions, including asthma, COPD, rheumatoid arthritis, osteoarthritis, and depression. Further research is needed to investigate explain time-dependent variation in PRO scores and potential implications of time-dependent variation when collecting and interpreting PROMs data in clinical settings.