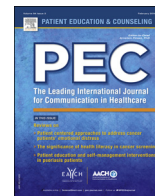




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## Review article

# Preparing patients for medical interventions: A systematic review of the psychometric qualities of published instruments

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### ABSTRACT

**Objective:** Preparing patients for medical interventions improves patient outcomes and is an ethical and legal imperative. This review examines the characteristics and psychometric properties of published instruments which assess patients' preparation for medical interventions.

**Methods:** Medline, CINAHL, EMBASE and PsycINFO electronic databases were searched from the date of their inception to November 2015. Data-based publications describing the development or validation of a self-report instrument designed to assess the quality of adult patients' perceived preparation for a medical intervention were included.

**Results:** Nine publications described the development or validation of seven instruments which met inclusion criteria. The psychometric qualities of the instruments varied. None met all of the accepted criteria for psychometric rigour. Although the Satisfaction with Cancer Information Profile met the highest number ( $n = 5$ ) of the defined psychometric properties, the study sample size was less than 100. Overall, content validity of the included instruments was the most frequently assessed criteria.

**Conclusion:** Few instruments have been specifically developed to assess patients' self-reported preparation for medical interventions. Of the available instruments, none demonstrated adequate rigour across essential psychometric properties.

**Practice Implications:** The need to develop instruments examining patient preparation for medical interventions is apparent given the limitations of the instruments reviewed.

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**1. Introduction**

*1.1. Medical interventions are common and associated with a high degree of burden*

'Medical intervention' is a broad term used to refer to all forms of diagnostic procedures, tests, and treatment [1]. Most people, over their lifetime, will experience a number of medical interventions. In Australia alone, about 11.9 million procedures were reported for admitted hospital patients in 2012–2013 [2]. Whilst in the USA, 51.4 million procedures were reported for inpatients from non-Federal short-stay hospitals in 2010 [3]. Despite being common, medical interventions are often associated with a range of adverse physical and psychosocial impacts. Many patients experience fear and anxiety [4–8]; while during and following the intervention many patients experience an array of side effects, such as fatigue [9], pain [10] and distress [11].

*1.2. Preparing patients for medical intervention improves outcomes*

Informing patients about the nature, benefits, risks, alternatives and consequences of the intervention [12] is an ethical and legal requirement [13]. This process is commonly undertaken verbally by the healthcare provider, and may be supplemented with written, video or web-based information [14]. It is recommended that the following content is covered during patient preparation: procedural information (e.g. the sequence of events, the equipment used); sensory information (e.g. sensations that may be felt by the patient before, during or after intervention) [15]; behavioural instruction (e.g. the patients' expected role and what they can do to facilitate the medical intervention or their recovery) [16]; and psychosocial aspects; for example, relaxation training (e.g. breathing exercises or hypnosis); cognitive coping strategies (e.g. coping statements); and emotion-focussed interventions (e.g.

discussion of the patient's emotions) [16,17]. Systematic reviews indicate that preparing patients for medical interventions is related to improved physical and psychological outcomes, and increased patient satisfaction and knowledge [18–22]. A meta-analysis revealed that procedural information and behavioural instruction were the most effective preparatory approaches for surgery in relation to outcomes including pain, negative affect, length of stay, behavioural recovery, clinical recovery, physiological indices and satisfaction [23]. Despite the existence of such evidence-based recommendations, some patients report suboptimal preparation for medical interventions [24,25].

*1.3. Patient self-report is the most appropriate approach for assessing patients' preparation for medical interventions*

Assessing the quality of patient preparation allows for monitoring and improving the delivery of healthcare [26,27]. A variety of approaches including patient feedback surveys [28], audits of medical records administrative systems, and self-report by health care providers have been used to assess quality of care [29]. There are limitations to each of these approaches. For example, aspects of patient preparation are often poorly recorded in the medical record [30], and provider self-report may not align well with patients' perceptions of care [31]. Given the subjective nature of "feeling prepared", patient self-report is the most appropriate method for assessing a patient's level of preparation for a medical intervention. Patients' views about whether care was received and helpful, is an essential component of assessing quality of care [32].

*1.4. Psychometrically robust instruments assessing patients' preparation for medical interventions are needed*

A standardised instrument must be valid, reliable, brief, clinically relevant and easy to administer and interpret [33]. To

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