

# Using action research to develop a real-time measure of job satisfaction in the operating room setting

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**Abstract** This paper outlines how action research was used to develop a real-time job satisfaction measurement tool for the operating room (OR) setting. It offers insight into how collaborative action research can be used in a complex interprofessional setting to create a practical, valid and relevant tool. The study was conducted within one New Zealand hospital OR department during the period of March 2018 – June 2019. Using action research cycles, researchers and hospital personnel collaboratively created an innovative one-minute daily job satisfaction measure called the Morale-o-Meter. Complexities relating to its development and acceptability are explored and reflected upon, in order to draw insight for other researchers who are looking to use this methodology in a similar setting.

**Keywords:** Action research; instrument development; job satisfaction; operating theatre; collaborative research

## Usando la investigación-acción para desarrollar una medida en tiempo real de la satisfacción laboral en el ambiente de la sala de operaciones

**Resumen** Este artículo describe cómo se utilizó la investigación-acción para desarrollar una herramienta de medición de la satisfacción laboral en tiempo real para el ambiente de la sala de operaciones. Ofrece información sobre cómo se puede utilizar la investigación-acción colaborativa en un ambiente interprofesional complejo para crear una herramienta práctica, válida y relevante. El estudio se realizó en el departamento de la sala de operaciones de un hospital de Nueva Zelanda durante el período de marzo de 2018 a junio de 2019. Utilizando ciclos de investigación-acción, los investigadores y el personal del hospital crearon en colaboración una medida innovadora de satisfacción en el día a día laboral, llamada Medidor de Moral. Las complejidades relacionadas con su desarrollo y aceptabilidad son exploradas y reflejadas con el fin de obtener información para otros investigadores que buscan utilizar esta metodología en un ambiente similar.

**Palabras clave:** Investigación-acción; desarrollo de instrumentos; satisfacción laboral; quirófano; investigación colaborativa

## Introduction

The hospital setting is a complex organisational system, influenced by multiple stakeholders, numerous job roles and the large populations that it serves (Braithwaite, Clay-Williams,

Nugus, 2013; Montgomery, Doulougeri, & Panagopoulou, 2015). The operating room (OR) team is commonly made up of a combination of surgeons, anaesthetists, nurses and technicians (Gillespie, Chaboyer, Longbottom, & Wallis, 2010). Team members work closely, in intense conditions, often for long periods of time. Under tight schedules, each role is heavily dependent on the other roles, to achieve the overall outcome (Gillespie et al., 2010). The foundations of the organisational system are embedded within strong hierarchical structures, robust policies and strict procedural guidelines designed to reduce the risk for errors and meet performance targets (Arakelian, Gunningberg, & Larsson, 2008; Tsai, Sanford, Black, Boggs, & Urman, 2017). While the organisational structure of the OR may appear linear on paper, closer analyses reveal that the actual environment is somewhat non-linear and often unpredictable; its multiple stakeholders, complex communication pathways, and dynamic team and social relationships are key contributors to this unpredictability (Braithwaite, Clay-Williams, & Nugus, 2013; Tsai et al., 2017). Consequently, any research methodology underpinning an intervention in the OR needs to be clearly assessed for its utility in this complex system.

The flexible and participatory nature of action research provides a sound platform for the complexity of the hospital setting, as it allows researchers to work with and become a part of the dynamic system (Montgomery et al., 2015; Phelps & Hase, 2002). Action research is an increasingly popular alternative to traditional research inquiry methods across the healthcare sector (Costello, 2003; Kjellström & Mitchell, 2019). Specifically, action research can be defined as “an orientation to knowledge creation that arises in a context of practice and requires researchers to work *with* practitioners” (Huang, 2010, p. 93). Consequently, it embraces a pragmatic and collaborative approach to problem solving, aiming to increase understanding and generate and evaluate change in a ‘real world’ setting (Costello, 2003; Williamson, Bellman, & Webster, 2012). The core principles of action research are centred around a respect for diversity, drawing on the strengths of communities, and reflecting on cultural identities, with a focus on power-sharing and co-learning (Minkler, 2000). Promoting these values, however, is not always easy, and can be particularly challenging in institutions (such as the OR department in a hospital) that are highly complex and heavily hierarchical (Brydon-Miller, Greenwood, & Maguire, 2003).

Action research is primarily focused on generating knowledge and empowering stakeholders (Huang, 2010). This involves researchers working together with healthcare practitioners as partners in the design and/or application of the research (Huang, 2010; Williamson et al., 2012). This act alone can begin a process of transformation within the workplace environment (Huang, 2010). The practical focus of action research, and the need to design studies that are effective in a particular environment, often calls for a “what works” approach (Ivankova & Wingo, 2018). This involves utilising action research cycles most commonly consisting of one or many repetitions of *problem identification, planning, implementing* and *reflecting* to reach the desired outcomes (Montgomery et al., 2015).

Employers of staff working in OR are becoming increasingly aware of the associations of job satisfaction with burnout, organisational commitment, staff turnover, absenteeism, and intention to leave (Coomber & Louise Barriball, 2007; Lee, MacPhee, & Dahinten, 2020; Lu, While, & Louise Barriball, 2005; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Rama-Maceiras, Parente, & Kranke, 2012; Shanafelt et al., 2009; Tsigilis, Koustelios, & Togia, 2004; Yin & Yang, 2002). Innovative research that aims to enhance the way that job satisfaction is measured and managed in the OR setting is therefore of high importance.