



Validity, reliability and utility of the Irish Nursing Minimum Data Set for General Nursing in investigating the effectiveness of nursing interventions in a general nursing setting: A repeated measures design



Roisin Morris ^{a,*}, Anne Matthews ^b, Anne P. Scott ^b

^a Health Service Executive, Dr Steevens Hospital, Dublin 8, Ireland

^b School of Nursing and Human Sciences, Dublin City University, Glasnevin, Dublin 9, Ireland

ARTICLE INFO

Article history:

Received 16 April 2012

Received in revised form 26 July 2013

Accepted 27 July 2013

Keywords:

Nursing effectiveness
Nursing Minimum Data Set
Path analysis
Patient outcomes
Reliability
Validity

ABSTRACT

Background: Internationally, nursing professionals are coming under increasing pressure to highlight the contribution they make to health care and patient outcomes. Despite this, difficulties exist in the provision of quality information aimed at describing nursing work in sufficient detail. The Irish Minimum Data Set for General Nursing is a new nursing data collection system aimed at highlighting the contribution of nursing to patient care.

Objectives: The objectives of this study were to investigate the construct validity and internal reliability of the Irish Nursing Minimum Data Set for General Nursing and to assess its usefulness in measuring the mediating effects of nursing interventions on patient well-being for a group of short stay medical and surgical patients.

Design: This was a quantitative study using a repeated measures design.

Setting: Participants sampled came from both general surgery and general medicine wards in 6 hospitals throughout the Republic of Ireland.

Participants: Nurses took on the role of data collectors. Nurses participating in the study were qualified, registered nurses engaged in direct patient care. Because the unit of analysis for this study was the patient day, patient numbers were considered in estimations of sample size requirements. A total of 337 usable Nursing Minimum Data Set booklets were collected.

Methods: The construct validity of the tool was established using exploratory factor analysis with a Promax rotation and Maximum Likelihood extraction. Internal reliability was established using the Cronbach's Alpha coefficient. Path analysis was used to assess the mediating effects of nursing interventions on patient well-being.

Results: The results of the exploratory factor analysis and path analysis met the criteria for an appropriate model fit. All Cronbach Alpha scores were above .7.

Conclusion: The overall findings of the study inferred that the Irish Nursing Minimum Data Set for General Nursing possessed construct validity and internal reliability. The study results also inferred the potential of the tool in the investigation of the impact of nursing on patient well-being. As such, this new tool demonstrated potential to be used in the provision of quality information to inform policy in relation to the organisation of nursing care. More research is needed to further establish its use in the assessment of patient outcomes.

© 2013 Elsevier Ltd. All rights reserved.

* Corresponding author at: Health Service Executive, Dr Steevens Hospital, Dublin 8, Ireland. Tel.: +353 872889923.

E-mail address: roisin0212@gmail.com (R. Morris).

What is already known about the topic?

- Internationally, nurses are increasingly being put under pressure to highlight the contribution they make to health care delivery.
- Valid and reliable data are required to provide good quality information to describe nursing care in sufficient detail.
- The impact of nursing on patient outcomes has been demonstrated using hospital discharge data bases and cross sectional research design.

What this paper adds

- This paper establishes the validity and reliability of a new data collection tool for the General Nursing profession.
- Unlike previous studies which tend to use large generic, hospital discharge data bases and cross sectional research design, this study highlights the potential of a nursing specific research tool and repeated measures data to demonstrate the impact of nursing on patient outcomes.
- This paper highlights the potential of the Irish Nursing Minimum Data Set for General Nursing and similar tools in the assessment of nursing effectiveness and patient outcomes.

1. Background

1.1. The need to describe nursing care in sufficient detail

Nursing is central to health care and represents a costly resource that should be managed and used in an organised and efficient manner. Internationally, registered nurses are coming under increasing pressure to highlight the important and specific contribution they make to health care and patients outcomes, particularly within the context of changing models of care delivery. For example, in Ireland there is currently a move towards increased community based health care delivery, thereby decreasing reliance on the acute inpatient care system (HSE, 2009). Nurses working in more integrated community based health care teams consisting GPs, social worker, psychologists, occupational therapists and nurses, among other professionals, will need to make more visible their contribution to patient care. In addition to changes to models of health care delivery, potential task-shifting and the introduction of lower skilled employees to carry out elements of the nursing role is likely to challenge the traditional roles of health care workers, including nurses.

In the literature and in practice, difficulties exist in articulating and describing nursing work in sufficient detail and shortcomings exist in the provision of quality nursing information (Clark and Lang, 1992; Scott et al., 2006; MacNeela et al., 2006; Maben, 2008; Morris et al., 2010). To highlight the unique contribution that nurses make to patient care and indeed to most effectively manage nursing work, it is essential that information regarding the main tenets of the nursing role be made available to key decision-makers. Until very recently, little scientific evidence existed to identify the central

components of nursing care in Ireland. This lack of nursing evidence is a problem reflected in international health care settings.

1.2. The Nursing Minimum Data Set

The Nursing Minimum Data Set is a minimum set of elements of information with uniform definitions and categories concerning the specific dimensions of nursing, which meets the information needs of multiple data users in the health care system (Werley and Lang, 1988). To date, Nursing Minimum Data Sets have been developed in many countries. While taking different forms internationally, the basic aim of the NMDS is to determine what nurses do and to what effect (Werley and Lang, 1988; Gliddon, 1998; Sermeus et al., 1996, 2005; Goossen et al., 2000; Volrathongchai et al., 2003; MacNeela et al., 2006). A valid and reliable NMDS can have many uses. For example, it can be used to describe the nursing care of individuals, families and communities; to demonstrate or project trends regarding nursing care provided; to allocate nursing resources to patients; and to stimulate research (MacNeela et al., 2006). Finally a valid and reliable NMDS can be used to provide data and information about nursing care to influence practice, administrative and health policy decision making (Werley and Lang, 1988).

1.3. Nursing effectiveness

With increased emphasis on integrated health care, the need to illustrate the effectiveness of the nursing input into the multidisciplinary team is very relevant today. One way of establishing the effectiveness of the nursing role is through the measurement of nursing sensitive patient outcomes. Nursing sensitive patient outcomes are defined as measurable changes in a patient's state of health or condition as a result of nursing interventions and for which nurses are responsible (Maas et al., 1996; Van der Bruggen and Groen, 1999). There are two predominant perspectives on the investigation of nursing sensitive patient outcomes that have been investigated in the literature. The first involves the investigation of outcomes according to a process model of care whereby outcomes are affected not only by the care provided but also by the factors related to the patient, to the interpersonal aspects of care and to the setting or environment in which care is provided (Irvine et al., 1998, p. 58). The second perspective encompasses nursing sensitive patient outcomes which include the unintended effects of inadequate nursing care such as medication errors, patient falls and nosocomial infections, on patient outcomes (McGillis-Hall, 2004). These patient outcomes are frequently examined according to their relationship to varying levels of nursing education and skill mix as well as the nursing environment (e.g. Needleman et al., 2002; Aiken et al., 2008, 2010, 2012; Rafferty et al., 2007). Lankshear et al. (2005) criticised the cross-sectional nature of nursing outcomes research, stating that longitudinal design would serve to reduce error by virtue of the time factors involved. It seems that much of the more contemporary research into nursing related patient outcomes, carried out since the publication of Lankhshear's

Download English Version:

<https://daneshyari.com/en/article/1076276>

Download Persian Version:

<https://daneshyari.com/article/1076276>

[Daneshyari.com](https://daneshyari.com)