

Thomas Griffiths

Mr Howard Griffiths is a clinical practice tutor at the School of Health Science, Swansea University. He is involved with moving and handling training of pre-registered nursing students within the School since May 2001. His academic career began whilst undertaking a Masters in Nursing 1995. His current project began as a registered student MPhil/PhD with Swansea University. He was involved with moving and handling training within a local NHS trust for three years. He is a registered nurse tutor whose clinical link areas include orthopaedics and trauma, general surgery and HDU. Currently he has responsibility for being a Year 1 Leader of the new Paramedic Science Diploma course within the School and is a module leader for the post-registration orthopaedics and trauma course run by the School of Health Science. His clinical career as a nurse was mainly in orthopaedics and trauma for five years where his interest in moving and handling developed. A variety of publications centred upon clinical practice has been taken over the last few years within higher education, some of which have been associated with back care – Positioning the critically ill patient in hospital (Nursing Standard, 19.42,2005) and Manual handling risk management: critical care beds and support systems (Nursing Standard 20.32.2006).



The Reliability and Validity of Direct Instrument Nursing Observation [DINO]

Background: Does good or poor manual handling work techniques have any impact upon patient's outcomes?

Aim: To test the direct instrument nursing observation (DINO) tool of Johnsson et al. (2004) for its validity and reliability in U.K.

Design:

- Videos of simulated patient manual handling were scored on DINO by NHS backcare experts on two separate occasions and test/retest reliability was calculated.
- Postal questionnaires and experts pinions were used to assess the content and face validity of DINO.

Research setting: Welsh University Nursing Department, and four manual handling departments within NHS Wales, between October 2007 and July 2008.

Participants: Fifteen NHS back care advisers were recruited as observers to test the reliability of DINO. Two groups of respondents were recruited to assess the validity of DINO: 21 Welsh NHS back care advisers/experts, and 21 university key trainers in manual handling.

Methods: Observers viewed 8-9 different randomly sequenced video film clips of simulated patient handling and scored the manual handling work technique using DINO. At the retest, the viewing order was changed and the clips were rescored.

Main outcome measures: The main outcome measures used were:

- Proportion of agreement for DINO test/retest, as measured by Cohen's kappa. The focus of the reliability testing was consistency of DINO rather than its precision. Consistency was also measured by its stability and equivalence.
- Content validity index of DINO

Data analysis: Statistical analysis of Cohen's kappa, cross tabulation, bivariate correlation, test of concordance and test of proportions.

Findings: DINO is fairly stable (6 out of 12 had fair to excellent agreement, $\kappa = >0.4$). The indicators for equivalence is fair. The validity of DINO showed excellent face/content validity, defined by the average scalar content validity index score of 0.91.

Implications for research, practice and education: DINO has the potential to be used for a variety of purposes in practice and education. These include: a pedagogical assessment tool of manual handling training, an audit tool for monitoring clinical indicator of quality of care, and a research tool that could be used in clinical settings.