

NURSES' ATTITUDES TOWARD ELDERLY PEOPLE AND KNOWLEDGE OF GERONTIC CARE IN A MULT-PURPOSE HEALTH SERVICE (MPHS)

Prue Mellor, RN, MN, Managing Director, Age Concern Pty Ltd, Ormond, Victoria, Australia.

info@ageconcern.com.au,

Daniel Chew, RN, Dip Ed, Grad Cert (Diabetes Education), B Ed, M Ed, PhD, Senior Lecturer, Director of Post Graduate Programs, Faculty of Health, Engineering and Sciences, School of Nursing and Midwifery, Victoria University, Melbourne, Victoria, Australia.

Jennene Greenhill, RN, RPN, BA, MSPD, PhD, Director of Research, Flinders University Rural Clinical School, Renmark, South Australia, Australia.

Accepted for publication December 2006

Key words: multi-purpose health service (MPHS), attitude, elderly, gerontic, care

ABSTRACT

Objective:

The purpose of this study was to explore the attitudes of nurses working in a multi-purpose health service (MPHS) toward elderly people and their understanding of gerontic care. As there are no previous studies in this area of nursing it is anticipated that this study will provide the basis for further exploration.

Design:

A descriptive, non-experimental quantitative research design using a self-report questionnaire was used for this study.

Setting:

This study was conducted at a rural MPHS in Northern Queensland, Australia.

Subjects:

A sample group of thirty-one staff members from a single MPHS were the participants of this study.

Main Outcome Measure:

Multiple outcome measures were used. Nurses' attitudes were assessed using Kogan's Old People's Scale (KOPS). Nurses' knowledge was measured using Palmore's Facts of Ageing Quiz (PFAQ) and a second instrument, the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ), which was developed by the authors of this study.

Results:

The key findings indicated that even though nurses in this MPHS have strongly positive attitudes toward

elderly people, they have knowledge deficits in key clinical areas of both gerontic nursing and socio-economic understanding of the ageing population in Australia.

Conclusions:

This study is the first of its kind to investigate attitudes and knowledge of nurses working in an MPHS towards the elderly residents in their care. Due to the small sample size, these findings are not generalisable; nevertheless, these results assist with the identification of knowledge gaps and highlight areas for improved education which is essential in the delivery of high-quality, effective care.

INTRODUCTION

To meet the needs of an increasing population over the age of 65, many small, rural, acute care hospitals have converted to a multi-purpose health service (MPHS) system of funding that includes the provision for residential aged care beds. This change in need requires acute care nurses to expand their roles of practice to include gerontic nursing. This may leave nurses feeling coerced into working in an area that is considered either undesirable (Happell and Brooker 2001; Giardina-Roche and Black 1990), or outside their current educational and practical knowledge (Timms and Ford 1995).

Currently there is no research that investigates either the attitudes of nurses working in an MPHS toward elderly people, or potential knowledge gaps that these nurses may have in gerontic care and management. An indication of the attitudes and knowledge that nurses working in an MPHS may experience toward the elderly can be extrapolated from studies of acute care nurses who work in similar

settings. Such studies are relevant because nurses working in an MPHS remain essentially, acute care nurses.

The literature suggests that nurses in acute care hospitals have overall, slightly positive attitudes toward elderly people. Hope (1994) compared the attitudes of nurses working in acute care in general medical units to nurses working in acute care in aged care units using Kogan's Old People Scale (KOPS) (Kogan 1961). These findings indicated that nurses in both units had positive attitudes toward elderly people. A similar result was found in a study of orthopaedic nurses from four different hospitals (Tierney et al 1998). Further studies confirmed this trend and found that nurses' age, years of nursing experience, and qualification level had no bearing on their attitudes toward older people (Myers et al 2001; Wilkes et al 1998; Helmuth 1995).

Hope's study suggested that a lower knowledge level of gerontic care may indicate a more negative attitude toward older people (Hope 1994). However using Palmore's Facts of Ageing Quiz (PFAQ) (Palmore 1977) as an outcome measure, this association was not statistically significant.

Lack of knowledge of the ageing process may not affect attitudes toward older people however poor knowledge of gerontic care may result in nurses being unable to modify care accordingly, potentially placing elderly patients at risk. Investigations of the knowledge base of acute care nurses in terms of gerontic understanding have been undertaken. Wilkes et al (1998) indicated significant gaps in understanding were present in the areas of age-related sensory loss, age-related lung function changes, and age-related learning abilities. In the study by Tierney and colleagues, the error rates for questions on age-related changes to sensory loss and age-related changes to learning abilities were equivalent to or higher than those of the Wilkes study (Tierney et al 1998). Knowledge deficits did not correlate with age, years of experience, qualification level or attitude toward older people in either study.

Researchers who have used PFAQ to measure nurses' knowledge levels have criticised it for its lack of nursing focus and its generalist approach (Tierney et al 1998; Lusk et al 1995; Hope 1994). In an attempt to address such criticisms in research design, this study incorporates not only the KOPS and PFAQ to assess nurses' attitudes and knowledge, but also a third instrument, the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ), developed by the authors of this study. This tool aims to further assess knowledge by adding a specific gerontic nursing focus to the outcome measures.

Overall, the literature suggests that acute care nurses have slightly positive attitudes toward older people but have significant knowledge deficits in ageing and the ageing process.

AIM

This study investigated whether these trends are apparent in a MPHS setting. The MPHS investigated in this study is generally representative of other MPHS services in terms of staff numbers, skill mix, and nursing education levels. All staff are required to work in the residential care area on a rotating roster basis. Because the MPHS model that has been adopted by many small rural hospitals incorporates residential aged care, it is important that the educational needs of nursing staff are identified and addressed to ensure best practice in the delivery of care to older residents.

METHOD

A descriptive, non- experimental quantitative design using a self-report questionnaire was used for this study.

Sample

All nursing staff of the MPHS were invited to participate in the study. The inclusion criteria were current nursing registration either as a registered nurse or an enrolled nurse. A 100% response rate was achieved resulting in a sample of thirty-one (n=31).

Data Collection

Data were collected using a self-report questionnaire. Researchers were onsite to supervise the completion of the questionnaire at convenient times for the participants over a four week period.

Measurements

The data collection instrument was a four-part questionnaire:

Section 1 – Demographic information including age, gender, years of experience and postgraduate qualifications.

Section 2 – Kogan's Old Person's Scale (KOPS) (Kogan 1961).

Section 3 – Palmore's Facts of Aging Quiz (PFAQ). The modified version of this quiz (Palmore 1988; Courtenay and Wiedman 1985), which includes a 'don't know' option for each statement, was used in this study.

Section 4 – The Nurses Knowledge of Elderly Patients Quiz (NKEPQ) consists of twenty factual statements requiring a 'yes', 'no' or 'don't know' response (table 1.). This instrument was developed by one of the authors to compliment the PFAQ by adding a gerontic nursing focus.

Reliability and Validity of Measurements

Both the KOPS and PFAQ are fully validated instruments (Kogan 1961; Palmore 1977). Statements for the NKEPQ were developed following an extensive literature review and input from a geriatrician. A panel of expert gerontic nurses was invited to review and assess the instrument for face validity.

Data Analysis

The KOPS was scored as outlined in the original methodology (Kogan 1961). The minimum possible sum is 34 and the maximum sum is 238. The neutral value is 136. Both the PFAQ and NKEPQ were coded identically: +1 for a correct answer, -1 for an incorrect answer and 0 for a response of 'don't know'. The PFAQ had a range of -25 to +25 and the NKEPQ had a range of -20 to +20. Both had a midpoint of 0 that was equal to 50% of responses answered correctly. Using a sample t-test, demographic profiles of each participant were cross-correlated with scores for each instrument to identify relationships.

Table 1:

Statements of the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ)

Statements
1. In patients over 65 years old the half life of many medications is shorter than in younger patients.
2. Anti-psychotic medication is nearly always effective in the management of most 'behavioural problems' associated with dementia.
3. The adverse reactions to timolol (Timotol) eye drops include depression, schizophrenic symptoms and postural hypotension.
4. Sedatives usually have a longer half-life in patients over 65 years old.
5. Digoxin may cause delirium in elderly patients.
6. Anaesthetics are known to cause Alzheimer's disease in elderly patients.
7. Alzheimer's disease causes symptoms of dementia.
8. Repeating instructions three or four times is a slow but very effective technique to improve compliance in patients with a severe dementia.
9. The Mini Mental State Exam is the most widely used tool for diagnosing Alzheimer's disease.
10. Depression in an elderly patient may have similar features to Alzheimer's disease.
11. Psychomotor hypo-activity is a common symptom of delirium.
12. Delirium is the new term for dementia in elderly people.
13. Dehydration and constipation may cause a delirium.
14. Elderly people may have a delirium superimposed on a dementia and or a depression.
15. An elderly patient who has an episode of delirium has an increased risk of dying within the following two years.
16. The recording of blood pressure lying, standing and 2 minutes after standing is an out dated assessment procedure in elderly patients who fall.
17. The most common hearing impairment in elderly patients results in them not being able to hear when there is background noise.
18. Macular degeneration may contribute to falls in elderly patients.
19. Patients with glaucoma may have 'tunnel vision'.
20. A full range arm movement is one of the few functions rarely affected by the ageing process.

FINDINGS

Demographic characteristics of the sample

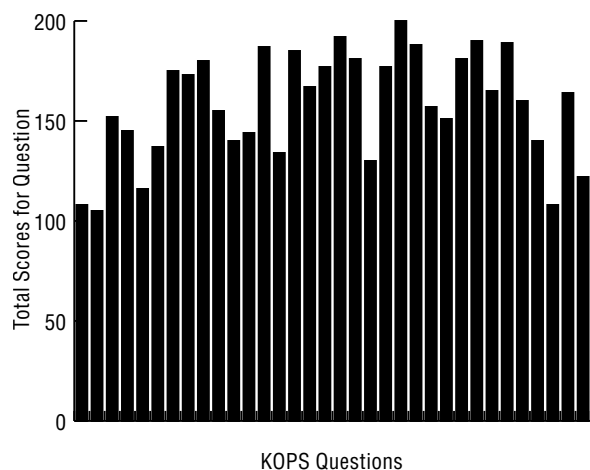
Of the 31 participants who responded only one was male. Seventy-one percent (n=22) were registered nurses (RN); 26% (n=8) were enrolled nurses (EN); and one participant completed the questionnaire who was later found to be neither an RN or EN. As the data was de-identified it was not possible to extract this response. The ages of participants were as follows: 3.2% (n=1) was below the age of 29 years; 22.6% (n=7) were 30-39 years of age; 32% (n=10) were 40-49 years of age; 29% (n=9) were between 50-59 years; with the remaining 12.9% (n=4) above 60 years of age. All participants had completed their nursing education at either the hospital certificate level, degree level or both. One person had a Masters degree; 19.3% (n=6) had either a postgraduate certificate or diploma; but only 10% (n=3) of the postgraduate qualifications were in gerontic nursing. Fifty-one percent (n=16) of the participants had never worked in either a nursing home or hostel for older people.

Analysis of MPHS nurses' attitudes to older people

The KOPS analysis revealed there was a significantly positive attitude toward older people ($t(30)=10.86$, $p<0.001$) yielding a 95% confidence interval of 30.35 - 44.42. The mean value of the sample was 173.4 (SD = 19.18). The minimum score of the sample was 136; the maximum score was 227 and the range was 91. Graph 1 outlines the mean values of the sample for each question on the KOPS.

Graph 1:

Attitude scores for each question on Kogan's Old People's Scale (KOPS)



Attitude scores for each question of Kogan's Old People's Scale (KOPS). This graph displays the mean scores of the sample for each individual statement within the KOPS attitude test. The neutral value indicated by the black horizontal line.

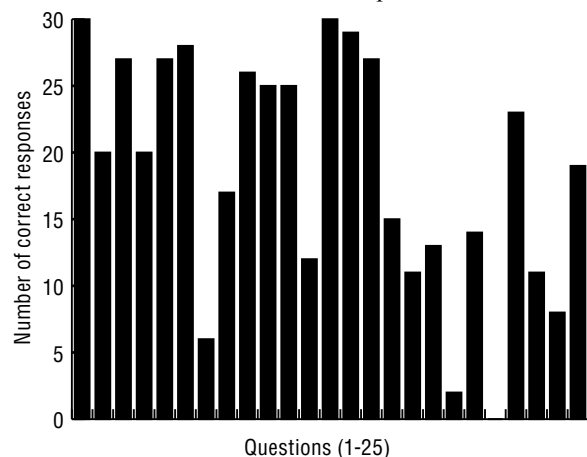
Analysis of MPHS nurses' knowledge of gerontic care

Analysis of the PFAQ responses of the sample showed a mean score of 9.35 (SD = 4.25) which correlates to an average of 68.7% of correct responses. Despite the positive

mean of the sample, areas of concern were identified (graph 2). Graph 2 indicates that the majority of the participants answered just over 50% of the questions correctly. No individual answered Question 21 correctly. Questions 7, 19 and 24 were answered very poorly and questions 12, 16, 17, 18, 20, and 23 were answered incorrectly or as a 'don't know' by more than half of the participants.

Graph 2:

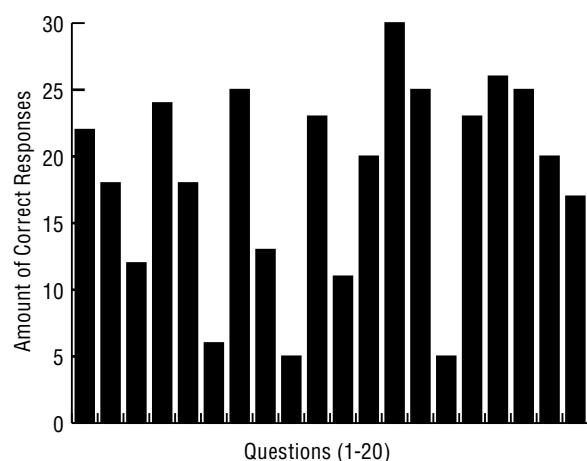
Responses of the sample to Palmore's Facts of Aging Quiz (PFAQ). This graph shows the number of correct responses within the sample to each question on the PFAQ. The maximum number of correct responses is 31.



The NKEPQ (graph 3) yielded a mean score of 9.10 (SD = 3.25) which translates to 68.2% correct responses. The lowest score was 55% (n=2) and the highest, 85% (n=14).

Graph 3:

Scores for the Nurse's Knowledge of Elderly Patients Quiz (NKEPQ).



Graph 3: Responses of the sample to the Nurse's Knowledge of Elderly Patients Quiz (NKEPQ). This graph shows the number of correct responses within the sample to each question on the NKEPQ. The maximum number of correct responses is 31.

The gaps in knowledge identified by the PFAQ were also seen using this instrument. Three questions were

answered very poorly: questions 6 (n=6), 9 (n=5), and 15 (n=5). In addition, questions 3, 8, and 11 were answered correctly by less than half of the participants. Based on the responses to the PFAQ, nurses in the sample presented with fundamental knowledge deficits about the ageing process. In particular areas related to changes in sensory input, lung capacity, and learning ability had the lowest knowledge base. The NKEPQ confirmed these deficits and also highlighted a lack of knowledge base about the normal processes of ageing, as well as common diseases faced by older people, altered symptom presentation in older people, and adverse drug reactions associated with older patients.

CORRELATES

RNs scored a significantly more positive attitude toward the elderly than ENs according to the KOPS ($t(30)=1.845$, $p<0.1$). The difference between the two means was 14.1 which was equivalent to a response that was almost one standard deviation more positive than ENs. There was also a significant correlation between the attitudes of the participants and PFAQ scores ($r=0.596$; $p<0.001$) showing that the more positive the attitude the higher the score on PFAQ.

Limitations

The potential limitations of this study are three-fold: (i) systematic error in data collection related to the issue of social desirability: responding with the socially acceptable answer even though it is not a true reflection of the respondents' views (Brink and Woods 1999); (ii) the small sample size of this initial investigation which means that the findings are not generalisable; (iii) the NKEPQ has yet to be fully validated; and (iv) the tools used for this study have not been specifically designed for nurses from the MPHS setting.

DISCUSSION

This study was conducted to generate initial knowledge of the attitudes of nurses working in MPHS toward elderly people and their knowledge of gerontic care. With the movement toward the MPHS model in many rural settings, consideration should be given to the knowledge of staff members who are asked to expand their scope of practice into new areas, in this instance, residential aged care.

No research currently exists to determine the attitudes of nurses working in MPHS toward the older residents in their care. In contrast to studies of nurses working in acute-care in similar settings that found only mildly positive attitudes (Tierney et al 1998; Hope 1994), the attitude score in this study was strongly positive. The fact that RN's showed a much more positive attitude to older people than ENs may suggest education as a predictor of attitude. In addition, a positive attitude toward the elderly correlated with a higher score on the PFAQ indicating the importance of attitude in learning and knowledge.

In assessing the knowledge of the sample, this study shows a much lower mean score for the PFAQ compared to scores achieved in a similar study (Wilkes et al 1998). With the exception of questions 19 and 21, the Wilkes' study confirms more than a 25% error rate for the same questions, therefore identifying similar knowledge gaps. The number of incorrect answers to what should be regarded as fundamental nursing knowledge about age related sensory changes, age related changes to lung capacity, and age related changes to learning, is of major concern. The proportion of correct answers should be much higher amongst nurses who work in any health organisation that regularly provides services to patients over the age of 65.

The NKEPQ was designed to further assess nurses' knowledge by investigating a specific gerontic focus. There were only five questions in this quiz for which the error rate was less than twenty percent. This supports the PFAQ results indicating that nurses in this MPHS require education and training in gerontic nursing including the aetiology of diseases, assessment processes and tools, common adverse drug reactions in older people, and the implications of dementia syndromes in relation to nursing care.

This study has identified a lack of fundamental nursing knowledge in relation to the normal physiological changes of ageing. Failure to modify care delivery to compensate for normal age related changes might place older patients at risk. Abilities in hearing, reading or understanding complex treatment regimes may be overestimated. The risk of falls could increase and even the therapeutic effect of medication, particularly those administered via nebulisers, may be reduced. With the changes to nursing education in professional development programs seeing the incorporation of nursing knowledge across the life span (Adam et al 2001) and nursing competencies (ANMC 2006), such deficits should be a feature of the past.

Hope (1994) suggests that nurses working in acute care have not been privy to the same level of knowledge as nurses who have specialised in gerontics. Nevertheless, care of older patients with health deficits is no longer the sole domain of specialist aged care nurses. This study identified significant knowledge gaps that indicate an urgent need for the development of education and training in the contemporary knowledge, practices, and skills of gerontic nursing. In addition, there was a significant knowledge gap relating to socio-economic factors of older people in Australia.

CONCLUSION

This study is the first of its kind to investigate the attitudes and knowledge of nurses working in a MPHS. The key findings show that even though nurses have positive attitudes toward elderly people, they have significant knowledge deficits in essential clinical practice issues, the socio-economics of ageing, and specialist care of older patients. This study assists with the identification of these knowledge gaps and highlights areas for improving education. Whilst the findings are not generalisable to other MPHSs, or residential aged care facilities, this study contributes to nursing knowledge

and informs the management of MPHSs. Quality, tailored education and training will benefit the organisation, improve job satisfaction and may contribute to the retention of skilled staff (Van Haaren and Williams 2000). Improved care outcomes for the clients will be an obvious, significant benefit.

RECOMMENDATIONS:

Three general recommendations arise from this study:

1. Further research should be conducted using a qualitative design with in-depth interviews of selected participants from the same MPHS to seek further clarification and views about nursing permanent stay elderly patients;
2. Consistent and frequent education programs need to be implemented addressing knowledge gaps in contemporary gerontic nursing as well as the socio economic factors relating to ageing in Australia; and
3. Future research should be directed into the development of a questionnaire that will address specific, in depth issues relating to gerontic nursing knowledge and practice.

REFERENCES

- Adam, M.H., Sherrod, R.A., Packa, D.R., Forte, L., Lammon, C.A.B., Stover, L.M., Morrisson, R.S. and Barrett, J. 2001. Levels of prevention: restructuring a curriculum to meet future health care needs. *Nurse Educator*, 26(1):6-8.
- Australian Nursing and Midwifery Council Inc. 2006. *Competency standards for the registered nurse (4th ed)*. Available from: http://www.anmc.org.au/docs/competency_standards_RN.pdf.
- Brink, P.J. and Wood, M.J. 1999. *Basic steps in planning nursing research: from question to proposal* (5th ed.). Massachusetts: Jones and Bartlett Publishers
- Giardina-Roche, C. and Black, M.E. 1990. Attitudes of diploma student nurses toward adult clients. *Journal of Nursing Education*, 29(5):208-214.
- Happell, B. and Brooker, J. 2001. Who will look after my grandmother? *Journal of Gerontological Nursing*, 27(12):12-17.
- Courtenay, B.C. and Weidman, C. 1985. The effects of a 'don't know' response on Palmore's Facts on Aging Quizzes. *Gerontologist*, 25(2):177-81.
- Helmuth, A. 1995. Nurses' attitudes toward older persons on their use of physical restraint. *Orthopaedic Nursing*, 14(2):43-51.
- Hope, K.W. 1994. Nurses' attitudes toward older people: a comparison between nurses working in acute medical and acute care of the elderly patient setting. *Journal of Advanced Nursing*, 20(4):605-612.
- Kogan, N. 1961. Attitudes toward old people: the development of a scale and examination of correlates. *Journal of Abnormal and Social Psychology*, 62(1):44-54.
- Lusk, S.L., Williams, R.A. and Hsuing, S. 1995. Evaluation of the Facts on Aging Quizzes I and II. *Journal of Nursing Education*, 34(7):317-24.
- Myers, H., Nikolett, S. and Hill, A. 2001. Nurses' use of restraints and their attitudes toward restraint use and the elderly in an acute care setting. *Nursing and Health Sciences*, 3(1):29-34.
- Palmore, E.B. 1977. Facts on aging: a short quiz. *The Gerontologist*, 17(4):315-320.
- Palmore, E.B. 1988. *The facts on aging quiz: a handbook on uses and results*. New York: Springer Publishing Company Inc.
- Tierney, A.J., Lewis, S.J. and Vallis, J. 1998. Nurses' knowledge and attitudes toward older patients admitted to acute orthopaedic wards. *Journal of Orthopaedic Nursing*, 2(2):67-75.
- Timms, J. and Ford, P. 1995. Registered nurses' perceptions of gerontological continuing education needs in the United Kingdom and in the USA. *Journal of Advanced Nursing*, 22(2):300-307.
- Van Haaren, M. and Williams, G. 2000. Central Australian Nurse Management Model (CAN Model): a strategic approach to the recruitment and retention of remote area nurses. *Australian Journal of Rural Health*, 8(1):1-5.
- Wilkes, L., Lemiere, J. and Walker, E. 1998. Nurses in acute care setting: attitudes and knowledge of older people. *Geriatrics*, 16(1):9-16.