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Sleep quality in the elderly either living at home or in a nursing home

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KEY WORDS

elderly, nursing home, sleep quality, Pittsburgh Sleep Quality Index.

ABSTRACT

Objective
Changes in sleep duration, pattern, and quality occur with ageing. The aim of this study was to analyse the sleep quality and affecting factors in the elderly living either at home or in nursing homes.

Design
Descriptive and cross-sectional study

Setting
Sivas, a central Anatolian city in Turkey.

Subject
This study was carried out with 112 individuals; 52 were living in a nursing home and 60 at home.

Main outcome measures
A personal information form and Pittsburgh Sleep Quality Index (PSQI).

Results
There was no statistically significant difference between mean scores and sleep qualities of both groups ($p > 0.05$). The sleep quality of the individuals in both groups was not significantly influenced by personal variables such as age, gender, education, income, having children, and having a physical illness ($p > 0.05$). Individuals in both groups who reported their sleep as inadequate had sleep problems, and those who reported their sleep was affected for various reasons and who perceived their health as poor had significantly worse sleep quality ($p < 0.05$).

Conclusion
The sleep quality of the elderly living either at home or in a nursing home were at similar levels and more than half of individuals in both groups had poor sleep quality.

INTRODUCTION

Ageing is a physiological process that begins at birth. This biologically inevitable process has health-related, social, cultural, and economic dimensions. Although there are commonly used definitions of old age, there is no general agreement on the age at which a person becomes old. At the time of writing there is no United Nations (UN) standard numerical criterion, but the UN has agreed the cut-off is 60+ years to refer to the older population (World Health Organization 2012). In almost every country, the proportion of people aged over 60 years is growing faster than any other age group, as a result of both longer life expectancy and declining fertility rates. In Europe, older people constitute around 17.4% of the total population and it is expected that this will increase to 30% in 2060 (Eurostat 2012). According to data from the Turkish Institute of Statistics (TUIK) in 2012, 7.5% of the Turkish population was 65 and over. It is estimated that it will increase to 10.2% by 2023 (TUIK 2012).

Ageing is not an illness but the increasing number and severity of health problems and declining functional abilities are among the potentially life-changing problems of ageing. People experience many changes in physical, mental, and social aspects as they age. One of the physical changes in older individuals is in the characteristics of their sleep. Changes in sleep duration, pattern, and quality occur with ageing (Goktas and Ozkan 2006). The difficulty of falling asleep, maintaining sleep, sleep fragmentation, getting up too early in the morning, and more day sleeps are the other changes that occur in older people with ageing. Other symptoms include tiredness, tension, anxiety, headaches, poor memory performance, upset stomachs, anger, and lack of energy (Barthlen 2002).

The prevalence of sleep disturbances increases during old age: 50% of people over the age of 65 and 65% of those staying in nursing homes experience sleep disturbances (Fadiloglu et al 2006; Zeitlhofer et al 2000). Also, poor sleep quality becomes common with ageing (Ancoli-Israel 2004; Neubauer 1999). There are many factors affecting sleep quality in older adults, which include respiratory problems during sleep, restless leg syndrome, nocturia, pain, osteoarthritis, heart failure, incontinence, prostate hypertrophy, menopause-related problems, pruritus, allergies, Alzheimer’s, depression, dementia, social isolation, loneliness, being bedridden, experiences of loss, drug use, and living in nursing homes (e.g. inadequate lightning, keeping light on during the night, noises, etc.) (Akkus and Kapucu 2008; Eser et al 2007; Goktas and Ozkan 2006). Some of the consequences of poor sleep quality in the elderly include cognitive decline, increased risk of falls, daytime fatigue, and reduced physical and mental health and health-related quality of life status (Bilgili et al 2012).

Better quality of life in elderly people can be achieved by increasing sleep quality as well as promoting good sleep. In order to improve their quality of life and health status, the assessment of sleep characteristics by health-care providers, especially by nurses, is essential and is an important caring activity. Nurses play an important role in recognising the negative effects of sleep disturbances on well-being and the quality of life. In the assessment of the sleep characteristics of the elderly, taking a detailed history, sleep hygiene, sleep patterns, medical diseases, and drugs should all be evaluated (Ulusoy Kaymak et al 2010; Beck-Little and Weinrich 1998). Health-care professionals should be aware that the sleep problems of the elderly are an integral part of life. Close observation to detect signs of sleep problems and insomnia, listening carefully to what they say about sleep problems and their complaints about sleep, evaluating their sleeping habits and influencing factors, and implementing interventions for the problem are important (Chen et al 2010; Lai and Good 2005; Ancoli-Israel 2004). The aim of this study is to analyse the sleep quality and the factors affecting it in the elderly living at home or in nursing homes.

METHOD

Participants

This descriptive study was conducted from April to July 2012 in Sivas, a Central Anatolian city in Turkey. There were 60 elderly people living in a nursing home which was located in the city centre. As the aim was to include all of the old people living at the nursing home the sample selection was not applied. The sample for this study consisted of elderly people without communication difficulties or dementia who volunteered to participate. Eight of the older people living at the nursing home were excluded due to communication difficulties and hospitalisation during the study period. A total of 112 individuals were included, 52 of whom were living at the nursing home and 60 living at home. Elderly people living at home were selected from Sivas district. Both groups' socio-demographic characteristics were similar.

Data collection tools

Data were collected with a personal information form and the Pittsburgh Sleep Quality Index (PSQI).

Personal Information Form

This was prepared by the researchers based on the literature. It consisted of 27 questions about socio-demographic and sleep characteristics.

Pittsburgh Sleep Quality Index (PSQI)

This was developed by Buysse et al (1989) and is a self-rated questionnaire which assesses sleep quality and sleep disturbances over a 1-month time interval. The scale contains 19 self-rated questions from which seven component scores are calculated and summed into a global score. These components include subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction over the last month. The client self-rates each of the seven areas of sleep quality. The scoring of answers is based on a 0 to 3 scale, where 3 represents the negative extreme on the Likert Scale. Therefore, higher scores represent worse sleep quality: component scores range from 0 to 3 and global scores range from 0 to 21. A global sum of less than 5 indicates *good quality,* while 5 or greater indicates a *poor quality* sleeper.

Turkish translation and validation of the PSQI has been performed by Ağargün et al (1996) and Cronbach's alpha level was reported as 0.80. For this study Cronbach's alpha level was computed as 0.74.

The study was performed according to the Helsinki Declaration, and Cumhuriyet University's Clinical Research Ethics Board approved this study (project decision date: 28.03.2012). Data was collected by researchers via face-to-face interviews with elderly people after explaining the study aim and obtaining their consent. All interviews were undertaken at the day room or in the elderly people's rooms for those living in the nursing home, and by visiting researchers for the elderly living at home. Each interview lasted about 15–20 minutes.

Data Analyses

SPSS (SPSS, Version 14.0 for Windows 2000) was used for data entry and analysis. Chi-square, t test, Mann Whitney U, and Kruskall Wallis tests were applied for study variables (sleep quality, sleep features and demographics). For all analyses, $p < 0.05$ was considered significant.

RESULTS

The mean age of elders living at their own home was 73.95±5.85 and for the elderly living at the nursing home was 74.78±8.91. The majority of the elders living at home were in the 66–70 and 76–80 age groups, married (68.3%), male (75%), and primary school graduates (53.3%); their income met expenditure (75%), they had children (95%), they perceived their health status as unwell/poor (53.3 %), they were non-smokers

(98.3%), they did not need help at home (76.7%), and they lived together with their wives, children, and grandchildren (55%). Most of the elders living in the nursing home were between 76–80; they were widowed (80.8%), male (75%), literate (51.9%), had income which met expenditure (71.2%), had children (65.4%), perceived their health status as unwell/poor (53.8%), were non-smokers (86.5%), and lived in a double room in the nursing home (63.5%).

A comparison of the sleep qualities of the elders living at home and in the nursing home is presented in table 1. It was determined that 55.8% of the elderly living in the nursing home and 63.3% of those living in their own home had poor sleep quality. There was no statistically significant difference between general sleep score average and the sleep qualities of both groups (p > 0.05).

Table 1: Comparison of the Sleep Qualities of the Elderly Living in Nursing Homes and at Home

Sleep Quality	**Home**		**Nursing Home**		
	n	**%**	**n**	**%**	**Test**
Good sleep quality	22	36.7	23	44.2	*$\chi^2 = 0.663$* *$p = 0.415$*
Poor sleep quality	38	63.3	29	55.8	
Total	60	100.0	52	100.0	

The mean scores for the PSQI in general and for subgroups of the elders are provided in table 2. For elders living at home, the PSQI general score average is 7.28±3.97; subjective sleep quality, 1.10±0.87; sleep latency, 1.33±1.15; sleep duration, 1.13±1.21; habitual sleep efficiency, 1.30±1.22; sleep disturbances, 1.48±0.65; use of sleep medication, 0.26±0.82; and daytime dysfunction, 0.66±0.81. For the elders living in the nursing home the PSQI general score average is 7.44±4.40; subjective sleep quality, 1.15±1.05; sleep latency, 1.69±1.11; sleep duration, 1.17±1.23; habitual sleep efficiency, 1.19±1.35; sleep disturbances, 1.48±0.57; use of sleep medication, 0.21±0.72; and daytime dysfunction 0.53±0.89. There was no statistically significant difference between the general and subgroup average scores of both groups (p > 0.05).

Table 2: The Mean Scores of PSQI general and subgroups

Mean scores of PSQI general and subgroups	**Home (n = 60)**		**Nursing home (n = 52)**			
	$\bar{\chi}$	***SD***	$\bar{\chi}$	***SD***	***t***	***p***
PSQI General	7.28	3.97	7.44	4.40	0.201	0.841
Subjective sleep	1.10	0.87	1.15	1.05	0.295	0.769
Sleep latency	1.33	1.15	1.69	1.11	1.665	0.099
Sleep duration	1.13	1.21	1.17	1.23	0.172	0.864
Habitual sleep efficiency	1.30	1.22	1.19	1.35	−0.441	0.660
Sleep disturbances	1.48	0.65	1.48	0.57	−0.022	0.983
Use of sleep medication	0.26	0.82	0.21	0.72	−0.374	0.709
Daytime dysfunction	0.66	0.81	0.53	0.89	−0.792	0.430

In this study, the sleep quality of the individuals in both groups was not significantly influenced by demographic variables such as age, gender, education, income, having children, and having a physical illness (p > 0.05; table 3). Although it was not statistically significant, the elders in the 62–65 and 76–80 age groups who did not have a partner, were female, high school education level had PSQI mean scores that were higher than others groups living at home. Similarly, elders in the 76–80 age group, who did not have a partner, and had a primary school education level had PSQI mean scores that were higher than others groups living in the nursing home.

Table 3: Mean Scores of PSQI according to demographic variables of the elderly living in nursing homes or at home

Demographic variables	Home (n = 60)	Nursing Home (n = 52)
	$\overline{\chi}$ ±SD	$\overline{\chi}$ ±SD
Age		
62–65	9.20±4.08	5.37±3.50
66–70	6.75±4.90	7.71±5.46
71–75	6.33±3.19	7.00±3.74
76–80	8.43±4.24	8.81±4.81
81–88	6.62±2.06	7.16±4.21
	F = 0.967, p = 0.433	F = 0.860, p = 0.495
Marital status		
Married	6.70±3.91	-
Single	–	5.30±3.74
Divorced/widow	8.52±3.90	7.95±4.43
	MU = 137.500, p = 0.091	MU = 291.000, p = 0.116
Gender		
Female	8.93±3.67	7.61±5.15
Male	6.73±3.95	7.38±4.19
	MU = 226.000, p = 0.056	MU = 249.500, p = 0.932
Education		
Literate	8.08± 3.65	6.37±3.84
Primary	6.43±3.71	8.72±4.51
High school and over	9.66±8.02	7.66±7.37
	KW = 2.698, p = 0.259	KW = 2.542, p = 0.281
Income and expenditure		
Meets	6.93±3.81	7.35±4.19
Not meets	8.33±4.38	7.66±5.02
	MU = 276.000, p = 0.292	MU = 275.000, p = 0.960

Abbreviations: KW: Kruskall Wallis; MU: Mann Whitney U.

Individuals in both groups who reported their sleep to be inadequate had sleep problems, and those who reported that their sleep was affected for various reasons and who perceived their health to be bad had significantly worse sleep quality ($p < 0.05$). Also, old people with physical illness and in pain who were living at home as well as in the nursing home reported not feeling rested after waking up and had a significantly poor sleep quality ($p < 0.05$; table 4).

Table 4: Mean Scores of PSQI according to sleep features of the elderly living in nursing homes or at home

Sleep features	Home (n = 60)	Nursing Home (n = 52)
	$\bar{\chi}$ ±SD	***$\bar{\chi}$ ±SD***
Effecting factor of sleep		
Yes	9.05±4.35	9.48±4.54
No	6.40±3.49	5.24±3.01
	MU = 259.000, p = 0.026	MU = 160.500, p = 0.001
Sleep problem		
Yes	10.62±4.08	11.15±3.94
No	6.06±3.19	5.30±3.036
	MU = 143.000, p = 0.000	MU = 83.500, p = 0.000
Perception of the sleep adequacy		
Adequate	6.52±3.46	5.51±3.06
Not adequate	9.78±4.62	12.20±3.52
	MU = 195.000, p = 0.026	MU = 51.500, p = 0.000
Feeling rested after waking up		
Yes	6.92±3.73	6.14±3.32
No	7.90±4.37	10.11±5.19
	MU = 370.500, p = 0.465	MU = 162.000, p = 0.008
Physical disease status		
Yes	7.70±3.92	7.75±4.50
No	5.20±3.70	6.75±4.21
	MU = 153.500, p = 0.055	MU = 252.500, p = 0.480
Perception of health		
Good	5.78±3.27	5.66±3.96
Moderate	8.57±4.08	8.18±4.65
Poor	8.63±4.38	10.00±3.56
	KW = 6.775, p = 0.034	KW = 9.171, p = 0.010
Pain status		
Yes	8.32±4.07	8.06±4.53
No	5.60±3.22	6.52±4.13
	MU = 265.500, p = 0.015	MU = 254.500, p = 0.184

Abbreviations: KW: Kruskall Wallis; MU: Mann Whitney U.

DISCUSSION

In general, sleep is important for every age group. Elders need quality sleep to maintain an optimal quality of life as well as to protect both their body and mental functions (Hoffman 2003). Sleep takes up approximately one-third of human life and is an important factor in the promotion and maintenance of health.

This study aimed to analyse sleep quality and factors affecting it in the elderly living at home or in a nursing home; it showed that more than half of the individuals living at home had poor quality sleep and a high PSQI score. Results from other studies support this finding. Studies examining the sleep quality of elders living at home have reported that more than half of the subjects had sleep disturbances (Karagül et al 2011; Malakouti et al 2009; Foley et al 1995). In this study, the elderly living in the nursing home had poor quality sleep and high PSQI scores. Previous studies from Turkey on the elderly living in nursing homes have reported similar results; different studies have reported poor sleep quality in 77% (Fadıloğlu et al 2006), 60.9% (Eser et al 2007), and 50.5% (Bilgili et al 2012) of the subjects included. Also, a study by Fetveit and Bjorvatn (2002) found that two out of three respondents had some sleep difficulties; another study (Babacan et al 2009) reported that more than half of elders living at a nursing home had sleep problems such as 'falling asleep', 'maintaining sleep', and 'taking a nap'.

In this study there was no statistically significant difference between general sleep score average and the sleep qualities of both groups. Sleep-related problems are common in the general population. With an ageing society, medical and physiological problems increase and one of these is poor sleep quality (Martin et al 2006). Consistent with these findings, Bilgili et al (2012) reported there was no statistically significant difference between elders living at home or in nursing homes.

In the present study, the sleep quality of the individuals in both groups was not significantly influenced by personal variables such as age, gender, education, income, having children, and having a physical illness. In several studies gender has been considered a predictor, with women having better quality sleep than men (Babacan et al 2009; Malakouti et al 2009; Fadiloglu et al 2006; Goktas and Ozkan 2006). Other studies in Turkey have shown the mean scores for the sleep quality of elders were not significantly influenced by marital status, education, income (Babacan et al 2009; Fadiloglu et al 2006), or gender (Bilgili et al 2012).

In this study, individuals in both groups who reported their sleep to be inadequate had a sleep problem, and those who reported their sleep was affected for various reasons and who perceived their health to be poor, had physical illnesses, were in pain, reported not feeling rested after waking up, and who were living either at home or in the nursing home reported significantly poor sleep quality. Advancing age, increasing physical illness, more medications, acute and chronic diseases, and drugs have negative effects on sleep. Common symptoms in elderly people such as pain, dyspnoea, coughs, and frequent urination can continue during the night causing sleep disturbances (Goktas and Ozkan 2006). Lack of sleep, sleep problems and the perception of poor health negatively affects the quality of sleep in an old person. As a result of the advancement of age, problems related to sleep increase and adversely affect an individual's perception of poor health and sleep (Ulusoy Kaymak et al 2010). In the literature, poor health status and physical illness have been reported to be correlated with an increase in sleep complaints (Bilgili et al 2012; Babacan et al 2009; Eser et al 2007; Beck-Little and Weinrich 1998).

LIMITATIONS OF THE STUDY

Several limitations must be considered when interpreting data from this study. This is a cross-sectional study and causality cannot be assumed. The sleep pattern in this study was evaluated using self-reports, and there was no validation by more objective measures such as polysomnography. The healthy independent sample of the study, self-reported sleep quality may not be truly representative and limits to the generalisation of results to other groups.

CONCLUSION

According to the study's findings, the sleep qualities of the elderly either living at home or in a nursing home are at similar levels, and more than half of the individuals in both groups have poor sleep quality. In Turkey, the number of elderly individuals in the population is gradually increasing and, as a result, the problems of elderly people are growing. Elderly people need to have good quality sleep in order to maintain their quality of life. Sleep problems are common among elders. Recently, increased attention to the sleep problems of the elderly has been observed in Turkey. As in other health-care settings, health-care professionals working in nursing homes and family care centres should conduct research to improve the quality of care for elderly people. They should be mindful of the issue of sleep in any environment, and address this issue together with the elderly in order to develop interventions for their sleep problems. In order to improve their quality of life and health status, health-care providers should recognise and take the necessary actions to alleviate these problems.

In conclusion, because nurses encounter elderly people in every setting, it is important to evaluate sleep problems, educate them about sleep hygiene, and provide consultancy to elderly people.

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Introduction of a novel, mobile, nurse-led prostate cancer education and testing service

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KEY WORDS

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ABSTRACT

Testing for prostate cancer (PCa) remains a controversial issue with conflicting professional recommendations resulting in wide variation in general practitioner's opinions, and advice to patients. As a result some men may not receive information about their risk of developing PCa, and are therefore unable to make a decision about undergoing testing. A nurse-led program was established for delivery of information about PCa, and providing convenient testing opportunities in the workplace. The program was evaluated and found to be an efficient and well-received model for delivery of this health related initiative.

Objective

The aim of this paper is to describe the development and evaluation of a mobile, nurse-led PCa education and testing service.

Setting

PCa information and testing in work-place environment.

Primary Argument

Controversy exists regarding the risks and benefits of PCa testing. Guidelines are conflicting, with one consistent premise being that men should be provided with enough information to make an informed decision. General practitioner's uncertainty about appropriate advice, and men's reluctance to engage in health seeking behaviours, make provision of information to men regarding the risks and benefits of PCa testing a challenge. This novel nurse-led work-place service helps overcome some of the identified difficulties in men accessing information to enable them to make an informed decision regarding PCa testing and to undergo this testing.

Conclusion

The provision of work-place group education sessions and follow-up individual nurse-led consultation and testing sessions was well received and provided an opportunity for men to access information regarding PCa, and to undergo testing if appropriate, in a convenient, non-threatening environment.

INTRODUCTION

PCa remains a controversial health issue for men, with ongoing debate about the risks and benefits of PCa testing and treatment (Chapman and Barratt 2010; Myers et al 2005; Weinrich et al 2003) and guidelines offering conflicting advice. It is the most common cancer affecting Western males (Ferlay et al 2010), accounting for almost a third of male cancer diagnoses in Australia in 2007, with 3,000 being the second leading cause of male cancer deaths (AIHW 2012).

Conflicting advice about undergoing testing for PCa means that general practitioners (GPs) may be uncertain about what to recommend, and men may not receive information to allow them to make an informed decision about whether or not to be tested.

This nurse-led service offers a novel means of providing men with information about the risks and benefits of PCa testing and treatment, both in a group setting and through individual consultation, thereby allowing men to make an informed choice about whether or not to undergo testing, and then providing an opportunity for testing.

BACKGROUND

Risks and benefits of PCa testing

A limitation of PCa testing is that the blood test, prostate specific antigen (PSA), does not provide a cancer-specific diagnosis. PSA may be raised as a result of any abnormal prostate condition such as benign prostatic hyperplasia, inflammation or infection. However, an abnormal PSA result will often require further investigation if a benign cause is not apparent. A further limitation of PSA testing is that PCa may be present with a normal PSA reading (NHS Cancer Screening Programmes 2012; Baade et al 2005).

Suggested benefits of testing for PCa include the detection of any PCa before symptoms develop, at an early stage of disease, thereby permitting cure or treatment that could extend life. Risks of testing include the morbidity associated with prostate biopsy including sepsis requiring hospitalisation (0.6 – 1.4%) (Pinkhasov et al 2012; Nam et al 2010) and significant bleeding (Loeb et al 2011). Not all PCa diagnosed is clinically significant, so testing may lead to overtreatment, with the diagnosis and treatment of a cancer that would never cause any health-related problems for that individual. In addition the treatment of PCa has associated morbidity, in particular urinary incontinence and sexual dysfunction.

PCa Testing Guidelines

Most international PCa guidelines do not recommend population screening. Rather, it is recommended that men should be able to access testing if they have been fully informed of the potential harms and benefits of testing, the limitations of the test, and the implications of abnormal results (Baade et al 2005; Radosevich et al 2004). The Urological Society of Australia and New Zealand (USANZ) PSA Testing Policy (2009) does not recommend mass population-based PCa screening as public health policy, but recommends that “men interested in their prostate health in these younger age groups (<55 years) could have a single Prostate Specific Antigen (PSA) test and digital rectal examination (DRE) at, or beyond age 40, to provide an estimate of their PCa risk over the next 10 – 20 years, based on age–specific median PSA levels with the intensity of subsequent monitoring being individualised accordingly”. The guidelines state that “overall there is growing evidence that PSA based testing can reduce PCa mortality and should be offered to appropriately selected patients” (Urological Society of Australasia and New Zealand 2009. The American Urological Association (AUA) Prostate-Specific Antigen Best Practice Statement 2009 Update lowered the recommended age for offering a baseline PSA test to 40 years, suggesting that because of the uncertainty that PSA testing may offer more benefit than harm patients must be well-informed before undergoing testing (American Urological

Association 2009). This recommendation for testing men at 40 years was reversed by the Early Detection of Prostate Cancer: AUA Guideline (2013) which stated that " the greatest benefit of screening appears to be in men ages 55 to 69 years". In May 2012 the United States Preventive Services Task Force recommended against screening for PCa due to the potential risk of over-diagnosis and over-treatment, concluding that the small potential benefit of testing does not outweigh the significant potential harms (U.S. Preventive Services Task Force 2012. The Royal Australian College of General Practitioners (RACGP) also recommend against screening in their Guidelines for Preventive Activities in General Practice. They advise general practitioners (GPs) not to raise the issue with every eligible man, but to wait for the patient to ask (Royal Australian College of General Practitioners 2012). The recently released Melbourne Consensus Statement on Prostate Cancer Testing (Murphy et al 2014) further supported baseline testing for men in their 40s as a predictor of those at risk of developing PCa in the future (2013). It is not surprising that confusion exists amongst GPs in view of these conflicting recommendations.

Factors influencing decisions about PCa testing

With these conflicting recommendations surrounding PCa testing and treatment there exists confusion within the general population also around whether or not to undergo testing for PCa. Uncertainty about whether or not to offer PCa testing is also common amongst GPs, with wide variability in practice patterns and advice offered to patients (Crowe et al 2013) . GPs report they refer to a range of the available clinical guidelines with the RACGP "Red Book" being the most frequently used source, but USANZ guidelines, the Cancer Council guidelines, the Royal Australian College of Pathologists guidelines also being utilised. Some GPs do not refer to any guidelines (Crowe et al 2013). Patients have concerns that some GPs are not well informed about PCa, and that they do not have enough time to discuss the issues surrounding being tested appropriately in a routine consultation. Forty-four per cent of patients in New Zealand who had undergone PCa testing were unable to recall having a discussion with their GP about the benefits and potential harms of testing (Arroll et al 2003). Similarly, half of the men attending a urology clinic in the United Kingdom (UK) for investigation of an abnormal PSA level were unaware of having this test (Hevey et al 2009). A study of veterans in the United States of America (USA) found of those patients who knew that they had had a PSA test only 47% recalled any prior discussion about the risks and benefits of testing (Federman et al 1999). The authors suggested that centres specialising in dissemination of quality information about PCa and support may address these problems. One study proposed that providing education supporting decisions regarding PCa testing, and testing opportunities within the same environment, may impact the number of men who chose to be tested (Myers et al 2005; Bretton 1994).

Involving patients in shared decision making is recommended by many authorities (Woolf and Krist 2005; Radosevich et al 2004). For patients to participate in this decision making process specific information must be made available to them, with the opportunity to have a discussion with an informed health care professional (Radosevich et al 2004). A 2008 survey conducted of men attending Australian GP practices reported a deficit in knowledge about PCa amongst men in the at-risk age group (Arnold-Reed et al 2008). A study of Irish men found a similar lack of knowledge with few men being able to list PCa risk factors (Casey et al 2012). An Australian GP survey reported that men were reluctant to ask for information, but were receptive to receiving information if it was made available to them (Arnold-Reed et al 2008). There have been few studies examining the reasons why men do not seek information about PCa and do not participate in screening (Cormier et al 2003), but Ferrante et al's (2011) study reported that men gained most of their health education from the media, or from friends or family.

Physician support and having knowledge about PCa have been identified as factors encouraging men with a family history of PCa to undergo testing (Cormier et al 2003). Patients have reported many reasons for not undergoing screening, including a lack of time and inconvenient doctor's hours (Weinrich et al 2003) lack of ease with making appointments (McDougall et al 2004), a lack of knowledge about personal risks and procrastinating (Ferrante et al 2011). Embarrassment about the DRE was also identified as a major reason for some men to avoid being tested, whilst some men felt that the absence of any urinary symptoms meant that they were at low risk of PCa (Ferrante et al 2011). A further study also found that the fear and shame experienced by the DRE was a definite barrier to screening, but that having undergone a DRE, the majority of men reported that it was less awkward than they had expected, and they would be more likely to undergo repeat testing in the future (Naccarato et al 2011).

It is reported that men, in particular younger men, do not routinely participate in health prevention measures, including regular health checks with their GPs (Smith et al 2006). A recent study in Ireland found that men lack the knowledge to pursue health initiatives (Casey et al 2012). Similarly in the UK it was reported that men are 20% less likely to visit their GP than women (Baker 2012). From the physician's perspective, a lack of time, competing health demands, fears regarding malpractice, and patient interest have been identified as factors that influenced shared decision making about PCa testing (Davis et al 2011; Guerra et al 2007). Patient comorbidity, patients' limited education and health literacy and physician forgetfulness were potential additional barriers for doctors to discuss PCa risks and testing (Guerra et al 2007).

There is evidence of the effectiveness of using non-traditional venues for delivering men's health services including sports stadia, workplaces, pubs, clubs and men's DIY stores (Baker 2012), and many groups now use these routinely for provision of health information. The researchers believe this program is novel in that it offers workplace PCa testing as well.

Aims of the Project

The project was designed to develop and evaluate a service offering a convenient opportunity for men to be provided with information about PCa, thereby enabling them to make informed decisions about their prostate health. This pilot study was conducted to evaluate the usefulness and feasibility of this nurse-led Mobile Advice and Testing Service (MATS).

METHODS

Ethics approval for the piloting and evaluation of the MATS was obtained from Epworth Healthcare Human Research Ethics Committee. The MATS was designed to provide appropriate, unbiased, relevant information about PCa including known risk factors, and the risks and benefits of undergoing testing and treatment. After receiving this information in a group setting, and then having the opportunity for individual discussion with a specialist urology nurse, men in the appropriate age group who wished to undergo testing would be offered both PSA and DRE tests. Existing international and national guidelines for PCa testing were reviewed and from these a PCa testing protocol was developed for the MATS in conjunction with urologists attending our facility. To ensure consistency of information an education program was created including information about the prostate gland, PCa, PCa testing and treatments, and associated risks and benefits of testing and treatment. The specialist urology nurses involved in the MATS underwent supervised training in performing DRE. Each nurse completed 50 documented prostate examinations under urologist supervision.

Initially the MATS was situated in a central office location, based in a research centre located in close proximity to the CBD in Melbourne, Victoria.

The MATS was advertised in local newspapers, and at nearby workplaces. It was recognised that the service needed to be easily accessible to men to encourage attendance. To this end flexible appointment times were available, both during and after normal working hours. Men were able to self-refer to the clinic. Despite this there were few enquiries and attendances, fewer than 20 over a three month period. It is possible that for the same reasons men do not attend a GP they were reluctant to attend the clinic-based MATS.

The researchers were invited to deliver a PCa education session to railway employees in outer Melbourne as part of their routine health education service. It is a predominantly male workplace with the main work force being labourers and tradesmen as well as some administration and clerical staff. A nurse-led PCa consultation and testing session was provided for those men who attended the education session. The nurse-led consultation sessions were scheduled approximately one week after the education session allowing the men time to have discussions with each other, family and friends, and GP, and to make a decision about whether or not to attend, and to undergo testing.

It has been the researchers experience that education sessions about men's health issues directed to men may be better received if given by a male. A male urologist was present to give the group education session. One of the employees at the workplace had undergone treatment for PCa and was willing to talk about his experiences. A meeting room was used to conduct the education session which was scheduled prior to the commencement of the workday. The information presentations from the urologist and the employee were of approximately 30 minutes duration, followed by time for questions and answers. The specialist urology nurses were in attendance and were introduced to the audience. Instructions about how to book for the follow-up consultations with the nurses were provided. These were scheduled for approximately one week later in rooms adapted for use at the workplace.

All attending the education sessions, both males and females, were asked to identify the reasons for men's reluctance to seek information about PCa and/or undergo testing. Those men who attended the individual consulting sessions provided informed consent. Demographic and previous health-related behaviour data were collected from these individuals. During these consultations there was a general discussion about PCa and the opportunity to ask for any further information or clarification. Questions about other health related issues were also received and answered as appropriate. Men in the appropriate age group were then given the option of undergoing testing, both PSA and DRE. The optional nature of this testing was made clear. A service Quality Assurance questionnaire was completed anonymously at the completion of these sessions.

Test results for those who underwent testing were reviewed with a urologist, and recommendations for future appropriate testing were made based on these. The results and recommendations were sent to the men, copied to their GP within two weeks of attending the session. Those men who did not have a GP were given a copy of the results to take to their next medical appointment. Any results that were of particular concern were notified by telephone as well as posted.

The format for the first session was repeated at additional workplaces, including a factory, a major trucking organisation depot, a public transport depot and weekend in-service and retreats for ambulance Victoria volunteers. Logistically detailed information about those attending group sessions was not able to be collected. The majority attending were males, with some females also present. The service was directed towards males, but females often influence the health behaviours of male family members and friends. This was seen as an opportunity for dissemination of information about PCa to them.

RESULTS

Between October 2009 and July 2012, 336 individuals (207 males, 115 females, 14 non-respondents) attended a MATS education session. Attendances at the sessions varied from small groups of 10-20 to larger groups in excess of 100. Following the education session, 151 of the 207 men (72.9%) returned for individual consulting sessions with a urology nurse.

Table 1: Age distribution of men attending individual MATS consultations

AGE	n = (151)	%
< 40 years	15	9.9%
40 – 49 years	62	41.9%
50 – 59 years	61	40.5%
60 – 69 years	12	7.9%
>70 years	1	0.6%

The majority of men who attended the individual consultation sessions were aged between 40 and 70 years, the recommended age group to receive information about PCa (table 1). Those younger than 40 years were not offered testing, but were provided with information about PCa and testing for them to consider when they reached the appropriate age.

The educational background of men attending varied, with the majority having some academic preparation (table 2). Of the 151 men who attended the individual sessions 60 (39.8%) reported they do not regularly attend a GP, 83 (54.9%) do have regular health checks with their GP, eight (5.4%) did not respond. Of those 83 men who do see their GP regularly, approximately half (49%) had not had a discussion with their GP regarding the risks and benefits of PCa testing. Sixty-nine (51.1%) of the 135 men in the eligible age group indicated they had previously been tested for PCa, with 26 (37.7%) having had both a PSA and DRE. Thirty-three (47.8%) had a PSA, but no DRE, and 9 (13%) reported a DRE but no PSA, one (1.4%) provided no response.

Table 2: Educational qualification levels of men attending individual MATS consultations

QUALIFICATION	n = (151)	%
Did not complete high school	16	10.6%
Completed high school	27	17.9%
TAFE qualification	39	25.8%
Bachelor degree	43	28.5%
Masters degree	12	7.9%
PhD	3	1.9%
No response	11	7.3%

Of those men who attended the individual counselling sessions, 16 were not in the appropriate age group for testing (< 40 years, or > 70 years). Of the remaining 135 men, all but one elected to undergo PCa testing, with both PSA and DRE offered. Four declined to have a DRE, and all had a PSA test. The vast majority (114 men, 85.1%) of those tested had PSA test results within the age-specific normal range and a normal DRE. They were advised that no further PCa testing was required for five years. Thirteen men (9.7%) had abnormal PSA test results and were recommended to attend their GP and have their tests repeated at a specified time ranging from 3 – 12 months. Seven men (5.2%) had both an abnormal DRE and PSA and were advised to attend a urologist for review.

To determine appropriate places to provide health related information for men, those attending the education sessions were asked where they have previously sought information regarding PCa.

Table 3: Sources of prostate cancer information previously utilised by men attending individual MATS consultations

SOURCE	n 151)	%
Family and/or friends	17	11.2%
Internet	13	8.6%
Cancer Council Australia	5	3.3%
Other media sources (TV/ newspapers)	15	9.9%
Never look	71	47.1%
More than one source	16	10.6%
No response	14	9.3%

There were no significant differences found between men from different age groups and educational levels and sources of PCa information utilised.

Those who attended the education session, both males and females, were asked to indicate potential reasons why men do not seek information about PCa and/or undergo testing. More than one reason could be selected.

Table 4: Possible reasons for not seeking prostate cancer information identified by those attending MATS education sessions

Reason	Total responses n = 320		Male responses n = 207		Female responses n = 113	
		Ranking		Ranking		Ranking
Afraid and/or embarrassed	231	1	139	1	92	1
Don't want to have a DRE	177	2	108	2	69	2
Don't want to know about it	114	3	64	=5	50	3
Scared to know the result	111	4	67	4	44	4
Don't like going to the doctor	91	5	74	3	17	7
Don't know they may have to	84	6	62	7	22	5
Can't be bothered	82	7	64	=5	18	6

Other reasons recorded included “there is a lack of information about PCa”, “belief that the tests are not reliable and the cure is worse than the disease”, “don't have time” and “a fear of the treatment for PCa”. Those who attended both the education and the individual counselling sessions were asked to indicate their satisfaction with the MATS. Reponses indicated satisfaction with the service (table 5).

Table 5: Satisfaction with MATS education sessions and consultations

n = 151	Highly Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied
Education Session	113 (74.8%)	30 (19.9%)	2 (1.3%)	0
Individual Consultations	105 (69.5%)	38 (25.2%)	0	0
No Response	7 (5.3%)	{Nagler, 2005 #152}		

DISCUSSION

Provision of information about PCa to enable men to make an informed choice about whether or not to undergo testing is universally recommended. However, meeting this requirement may not always be easily met in a busy GP practice. In addition, the guidelines available for GPs regarding recommendations for PCa testing and treatment are conflicting. As a result, it is not surprising that men attending GPs may undergo testing without any prior discussion, or are never made aware that they may be at an appropriate age for testing if they do not specifically ask for information. In addition it is recognised that many men do not regularly attend a GP to undergo health checks so are not in a position to receive information and advice about the pros and cons of PCa testing.

Providing PCa information in the workplace is not novel. Many workplaces provide regular health-related information sessions. The scheduled individual nurse-led consulting and testing sessions included in the MATS do offer a novel workplace experience. The testing is offered to men after they have received information about PCa and the risks and benefits of testing and treatment. This obviates the need for men to attend their GP for this service, provides the opportunity for men who do not attend a GP or have not had a discussion with their GP to receive the necessary information.

The educational qualifications of those attending (table 2) highlight the diversity of educational standards in the workplace settings attended. This emphasises the need to ensure that any educational material is pitched at a level able to be understood by those attending.

It is of interest that that approx. 50% of the men attending the MATS had never previously sought any information about PCa despite it being the most common cancer affecting Western males (Ferlay et al 2010). Family and friends proved to be the most commonly used source of health related information identified by the men attending the MATS. It was of interest that there were no differences identified between age groups and educational levels and information sources utilised. This may be as a result of the small numbers in this pilot study, but it does suggest that the commonly used existing means of providing information to men may not be effective for raising awareness of health related issues. Nurses need to be aware of this, and of the lack of health-seeking behaviour amongst men, and use all available opportunities and venues to provide them with relevant health-related information.

Fear and embarrassment, and not wanting to have a DRE were the most common reasons identified by both males and females for men being reluctant to seek information about PCa and/or undergoing testing. This supports Nagler's (2005) finding of the DRE being a barrier to men undergoing testing. Not liking to go to the doctor was also rated highly by the males responding as being a reason for not seeking information, whereas the females identified this as the least likely reason. Offering this information in a non-clinical setting goes some way to overcoming this barrier.

Almost three quarters (72.9%) of those attending the education sessions returned for an individual consultation, indicating the acceptance of this staggered process. This offered the researchers some control over the consulting workload in terms of scheduling appointments at appropriate time intervals, and having sufficient nursing attendance. It also allowed the individuals time to seek more information and advice if they felt the need, and to make a considered decision about whether or not they wanted to undergo testing. The convenience of having these sessions in the workplace also proved popular. Provision of this information and testing opportunity in a group setting in the workplace may also overcome some of the identified reasons for why men do not undergo PCa testing.

Typical comments offered about the MATS were "Friendly, competent staff", "Professional and efficient", "Very helpful and understanding", "Great communication and knowledge", "Very informative, easy access, relaxed atmosphere", "Staff very friendly and comforting". These comments were reflective of the overall, and further demonstrate the acceptability of providing a health-related service such as MATS in a non-clinical environment. Only one respondent recorded that he would have liked more information than was provided.

CONCLUSION

The pilot study of the MATS program found that the workplace setting provides a convenient and well-received environment for men to receive health-related information. The initial group education session about PCa, known risk factors, and the risks and benefits of testing, was an efficient means of providing information to a large number of men, with the delayed scheduled individual consultations allowed individuals to make an informed decision about whether or not to undergo testing. They had privacy and time to make this decision, thus meeting the requirements of international guidelines. We believe the MATS offers a model of nurse-led health-related information delivery and testing for men that overcomes some of the traditional barriers which may be suitable for nurses offering other educational health programs for men.

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The effects of workplace bullying on physicians and nurses

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ABSTRACT

Objective
This cross-sectional and descriptive study assessed workplace bullying and its effects on work performance and depression status of physicians and nurses in a university hospital, Turkey.

Methods
The study sample consisted of 201 physicians and 309 nurses. The variables are demographical characteristics of the participants, their perception of bullying, workload, the impact of bullying on work performance and their depression status.

Results
A large percentage of physicians (74%) and nurses (82%) reported having experienced bullying in the workplace. No significant differences were found between the physicians and nurses in terms of experienced workplace bullying. However, there was an association between performance, depression and experienced violent behaviours.

Conclusion
In order to solve the problem caused by workplace bullying, the rate of awareness amongst healthcare professionals needs to be raised. The researchers believe that unless organisations realise bullying's harmful effects on the employees and work performance, it is not easy to overcome the problem. Therefore, workplace bullying should be dealt with not only at an individual level, but also at organisational levels.

INTRODUCTION

In the last decade, research conducted in many different cultures has shown that bullying is a widespread and serious problem. Recently a number of countries, including Turkey, have increasingly been focusing on raising awareness and preventing this particular problem (Johnston et al 2010; Mistry and Latoo 2009) in order to prevent its negative implications on the victim's health and work performance as well as on the organisation itself (Einarsen et al 2009; Johnson 2009).

In general, bullying consists of the behaviour targeted at a person to humiliate and stigmatise socially. It also aims at sabotaging the victim's reputation by attacking the victim's character and professional competence. A person can experience bullying at work from managers, supervisors, co-workers or subordinates (Yıldırım and Yıldırım 2007). The major difference between 'experienced' bullying and 'intentional' bullying is the frequency and longevity of the negative behaviours. In order for the bullying label to be applied to a particular activity, interaction or process, it has to occur repeatedly and regularly (eg. weekly) and over a period of time (eg. about 12 months). The effects of deliberate and systematically repetitive psychological oppression becomes evident as a collection of injuries gradually develop in the individual (Dilek and Aytolan 2008). These individuals experience a variety of physiological, psychological and social problems that are related to the intense stress and anxiety of bullying (Johnston et al 2010; Einarsen et al 2009). In the literature, people exposed to long term and persistent bullying at work have been reported to have low self-esteem and self-confidence (Cleary et al 2010; Einarsen et al 2009; Hoosen and Callaghan 2004) and to suffer from social isolation, stigmatisation and ill-adjustment (Johnson 2009; Hutchinson et al 2008;) as well as demonstrating anxiety, aggression, depression or depression-related symptoms. Many bullying victims have been known to demonstrate symptoms of Post-Traumatic Stress Disorder (MacIntosh et al 2010; Yıldırım 2009) and some have reportedly attempted suicide (Yıldırım 2009; Yıldırım and Yıldırım 2007). On the other hand, individuals experiencing bullying at work have poor job satisfaction, work performance, motivation and efficiency, while their social relations suffer both at work and home (Johnston et al 2010; MacIntosh et al 2010; Yıldırım 2009; Hutchinson et al 2008).

The number of attacks and acts of violence workers direct at each other in the workplace is alarmingly high and cannot be ignored. It is clear from various statistical studies and analyses that this situation is alarming for the workers and damaging for the facility (Johnston et al 2010; MacIntosh et al 2010; Yıldırım and Yıldırım 2010; Yıldırım 2009; Hutchinson et al 2008). The obvious detrimental effects bullying has on health professionals make it essential that early intervention takes place and that staff recognise what is happening and prevent further bullying (Schoonbeek and Henderson 2011). Apart from a few countries like Sweden and Norway, workplace bullying is generally not covered by specific legislations in many countries. In the United Kingdom (UK), The British Medical Association (BMA) has called for zero tolerance on bullying (BMA 2006). On the other hand, Turkey has just published a report on workplace bullying and published anti-mobbing policies (Turkish Prime Ministry's Mobbing Report 2011). Although anti bullying policies are adopted by governments in many countries, the implementation of these policies are still regarded as ineffective. Therefore these policies are criticised as just being show business (Mistry and Latoo 2009).

The BMA has stated that bullying rates are higher in healthcare organisations and stated that one in seven National Health Services staff reported being bullied by other staff (BMA 2006). Despite the growth of literature in this area, no study has compared physicians and nurses exposed to workplace bulling. In the literature, 18-38% of the physicians and 27-51% of the nurses reported bullying at their workplace (Johnston et al 2010; Yıldırım and Yıldırım 2010; Hutchinson et al 2008; Hoosen and Callaghan 2004). Also 60-84% experienced at least one or more bullying behaviours in their workplaces, and 69% reported having witnessed their co-workers experiencing such behaviour (Yıldırım and Yıldırım 2007; Paice et al 2004; Stebbing et al 2004; Quine 2002). Higher rates have been reported by non-European physicians practicing in westernised countries where bullying is less likely to be addressed by the country (Mistry and Latoo 2009; Hoosen and Callaghan 2004).

THE STUDY

Study Aims and Design

The effects of deliberate and systematically repetitive psychological oppression become evident as a collection of injuries that develop gradually in the individual. They experience a variety of work performance and psychological problems that are related to the intense stress and depression of bullying. This cross-sectional and descriptive study examined workplace bullying behaviour experienced by physicians and nurses in Turkey and also investigated the effects of bullying on work performance and depression status. The research questions were as follows:

1. What sort of bullying behaviours are physicians and nurses subjected to by their supervisors/co-workers at work?
2. Are there any differences between physicians and nurses in terms of exposed bullying behaviours?
3. Is the experienced bullying behaviour correlated with age, education, the number of years in service, and the number of years at current workplace, post or workload?
4. Are there any effects of bullying on depression symptoms and work performance?

Study sample

The study was conducted in a hospital with 722 beds (mean bed occupation rate 81%) and 16 operating theatres (average 136 operations per day) after written permission were obtained from the institution. The data was collected by the researchers after the purpose of the study was explained to the participants and their verbal consent was given. The total number of physicians employed at the hospital at the time of the research was 443. Only 388 surveys were handed out to the physicians who voluntarily agreed to participate in the study. However, only 201 responded to the survey (52% response rate). Similarly, the total number of nurses employed at the hospital at the time of the research was 590 nurses; of those, 472 nurses were given the survey who voluntarily agreed to participate in the study. Only 309 nurses responded to the questionnaires (65% response rate).

Sample Characteristics

The mean age of the physicians enrolled in the study was 29.88±6.64 years, the mean values for the cumulative service years and the service years at that particular healthcare institution for the physicians was 5.37±7.66 years and 3.28±5.64 years respectively. The physicians participating in the survey were residents, lecturers and academic staff. The gender distribution of the physicians in our study was 54 women and 147 men and all nurse participants were women. The mean age of the nurses enrolled in the study was 28.66±5.10 years. The mean values for the cumulative service years and the service years at that particular healthcare institution for the nurses were 7.83±7.31 years and 6.82±5.46 years respectively. The nurses participating in the survey had baccalaureate degrees, associate degrees and masters' degrees. The participating nurses worked as bedside nurses in the wards, in special care areas (such as the intensive care unit or operating rooms). The remaining were ward head nurses.

Data Collection

A questionnaire consisting of five sections was distributed: demographical characteristics of the participants (gender, age, educational status, position at work, experience), the perception of bullying, workload, the impact of the perceived bullying on work performance and the depression status of the participants.

Bullying behaviour at work

How physicians and nurses perceived workplace bullying was evaluated using a 33-item scale developed by Dilek and Aytolan (2008). The items used a six-point Likert scale (0=never experienced and 5=always experience). The total points obtained from the scale were divided by the number of questions asked. A final score of ≥ 1 indicated that the person was exposed to intentional bullying at work.

Workload

Time demand of the work and its flexibility were evaluated by using an 11-item scale developed by Duxbury and Higgins (1994), and adapted to the Turkish language by Aycan et al (2005). The items used a five-point Likert scale (1 = strongly disagree and 5 = strongly agree). Higher scores indicated more demanding and less flexible jobs.

The impact on work performance

The questions in the fourth section of the questionnaire were prepared by referring to the information in the literature concerning the effects of workplace bullying on work performance (Johnston et al 2010; Hutchinson et al 2008). The participants were asked how bullying affected their work performance. The participants responded with 0 (no impact) or 4 (very negative impact).

Depression

Beck Depression Inventory (BDI) was used to evaluate the depression status of the participants. BDI was developed by Beck et al (1961) and the validity and reliability of the Turkish version was confirmed by Tegin (1980).

Data Analysis

Statistical analyses of the data were performed by using SPSS software. Initially, descriptive statistics (frequency, percentage, mean and standard deviation) were used in the analysis of the data. Levene's test was carried out to test for equality of variances to determine the differences between physicians and nurses; variances were observed to be equal ($p>0.05$). The difference between the groups was then analysed using independent t test. ANOVA test was used to analyse the differences between title, position and educational background. Test of homogeneity of variances revealed the data was distributed equally ($p>0.05$). Pearson correlation and regression analyses were performed to determine the factors associated with bullying.

RESULTS

Bullying behaviour experienced by physicians and nurses at work

The majority of the physicians (74%) and nurses (82%) enrolled in the study declared experiencing workplace bullying at least once in the last year. According to the results (mean score of >1), 11% of the physicians and 12% of the nurses had experienced deliberate bullying at their workplaces during the last 12 months. The most common types of bullying experienced by physicians and nurses were aggression towards their professional status and personality. As outlined in table 1, analysis of bullying behaviours experienced by physicians and nurses in terms of content revealed nurses were more frequently exposed to aggression towards their personality than the physicians. The difference between the results of physicians and nurses was found to be statistically significant ($t= 6.02$; $p<0.05$).

The most common behaviours under the category of 'aggression towards personality' is addressed in a humiliating and degrading way in front of others. We found 58% of the physicians and 56% of the nurses faced

Table 1: Differences between physicians and nurses in terms of mobbing experienced

	Physicians Mean±SD	Nurses Mean±SD	t
Isolation at work	3.81±6.23	4.85±7.69	-2.27
Aggression towards professional status	7.92±6.91	8.38±9.80	-2.41
Aggression towards personality	4.24±6.50	6.09±7.21	-4.62*
Directly hostile behaviours	0.34±1.39	0.53±1.66	-1.25

*p<0.05

humiliation and degradation in our study. "*You are checked behind your back regarding your work*" and "*you are blamed for issues you are not responsible for*". These two types of common psychological behaviours are categorised under the category of 'aggression towards professional status'. In terms of aggression towards professional status, 56% of the physicians and 55% of the nurses complained about "*being checked behind their back regarding their work*". In terms of the second type of behaviours of being wrongly blamed, 44% of the physicians and 48% of the nurses complained about experiencing such accusations. When we evaluated the behaviours in terms of bullies, we found that physicians were bullied only by physicians, whereas nurses were bullied not only by nurses but also physicians. Both groups stated that they were subjected to such behaviours mostly by their supervisors rather than by their co-workers. Sometimes their subordinates could also be the bullies.

The difference between physicians and nurses

The difference between the physicians (17.23±19.42) and nurses (20.08±19.76) in terms of exposure to workplace bullying was not found to be significant ($t=2.65$; $p>0.05$). The difference between the mean ages of physicians (29.88±6.64 years) and nurses (28.66±5.10 years) was not significant either ($t=2.65$; $p>0.05$). The workload of the nurses (35.77±8.07) were found to be heavier than the physicians (31.02±11.73) ($t=5.32$; $p<0.05$). In physicians, there was no statistically significant gender difference in terms of workload (t:-1.499, $p>0.05$) and workplace bullying behaviours (t:-1.099, $p>0.05$). There was no significant differences between position, educational level of the individual and the workplace violence behaviours for both physicians and nurses ($p>0.05$).

Factors associated with bullying

No statistically significant correlation was found with the victim's position, educational background and the experienced bullying both for nurses and physicians ($p>0.05$). There was no significant correlation with the title or educational background and experienced bullying in physicians ($p>0.05$). However, bullying experienced at work by physicians was found to be negatively correlated with age (r:-0.18; $p<0.05$), the number of years in service (r:-0.16; $p<0.05$) and positively correlated with workload (r:0.39; $p<0.01$).

Hierarchical regression analysis was carried out to evaluate the predictive value of factors associated with experienced bullying by physicians (table 2). In the first step of the analysis, demographical variables (age, educational background, position, serving years at the current organisation, serving years) were analysed as a block. Demographical variables had 9% power ($R2$:0.09; F:1.66; $p>0.05$) to predict the exposed psychological violence (table 2). In the second stage, workload was analysed.

Keeping demographic factors aside, the workload prediction level of exposed bullying was calculated as 31% ($\Delta R2$:0.31; F:8.32; $p<0.001$). According to table 2, demographical variables and workload had direct and significant effects on workplace bullying and the total variance explained was 40% in the study ($\Delta R2$:0.40; F:43.21; $p<0.01$).

Table 2: Factors affecting mobbing in physicians and nurses

	Physicians (n:201)			Nurses (n:309)		
Variables	***B***	***SE B***	***β***	***B***	***SE B***	***β***
1st Stage: Control variables						
Age	-0.18	0.25	-0.22*	-0.21	0.11	- 0.27*
No. of years in the current organisation	-0.08	0.07	-0.03	-0.05	0.09	- 0.09
No. of years in service	0.15	0.36	0.20*	0.14	0.07	0.14*
Educational background	0.06	0.04	0.05	0.11	0.06	0.17*
Position/Title	-0.00	0.02	-0.10	-0.01	0.07	-0.04
R^2	0.09*			0.11*		
2nd Stage						
Age	-0.14	0.13	-0.09	-0.09	0.08	- 0.01
No. of years in the current organisation	-0.07	0.12	-0.09	0.00	0.03	- 0.04
No. of years in service	-0.04	0.25	-0.12	0.05	0.10	0.11
Educational background	-0.06	0.43	-0.03	0.18	0.10	0.02
Position/Title	-0.02	0.02	-0.10	0.21	0.11	0.09
Workload	0.43	0.08	0.35**	0.38	0.04	0.40**
ΔR^2	0.31**			0.38**		
Total ΔR^2	0.40**			0.49**		
Overall F	6.28**			8.57**		

*p<0.05; **p<0.01

Similarly, bullying behaviour experienced by nurses at work was not found to be significantly correlated with their titles, position and educational background (p>0.05). However, experienced bullying by nurses was negatively associated with age (r:-0.22; p<0.01), service years (r:-0.16; p<0.05) and positively associated with workload (r: 0.44; p<0.01). Hierarchical regression analysis also was carried out for nurses to evaluate the predictive values of factors associated with bullying experienced at work (table 2). In the first step of the analysis, demographical variables (age, educational background, position, the number of years in the current organisation, the number of years in service) were analysed as a block and demographic variables were calculated to have 11% power (R2:0.11; F:2.98; p<0.05) in predicting being exposed to bullying at work. In the second and final stage of the analysis, workload was analysed and found to have 38% power (ΔR2:0.38; F:11.04; p<0.001) in predicting psychological violence at work. The power of the analysis for demographical variables and workload to predict the nurses likelihood of encountering bullying was 49% (Total ΔR2:0.49; F:52.83; p<0.01).

The impact of bullying on the work performance of physicians and nurses

Bullying has negative effects on the work performance of nurses and physicians (table 3). Both nurses and physicians agree on the negative impact of bullying on their motivation (p<0.01), energy level (p<0.01), collaboration with co-workers (p<0.05) and supervisors (p<0.05), whereas only nurses stressed its negative effect on the commitment to the organisation and their relationship with patients (p<0.01).

Depression symptoms of physicians and nurses

The depression status of the nurses (14.04±10.61) was noted to be more intense than the physicians (10.31±10.38) (t=4.32; p<0.05). The physicians enrolled in the study 28% (n:56) had mild or severe depression symptoms (figure 2). The analyses revealed the depression symptoms of the physicians was positively correlated with workplace bullying (r:0.33; p<0.01) and workload (r:0.30; p<0.01). Multiple regression analysis was carried out to establish the factors with predictive value on the depression symptoms of physicians. Regression analysis demonstrated that exposed bullying and workload was significantly predictive of depression symptoms for physicians (β:0.43; F:19.37; p<0.00). Experiencing bullying at work had 27% (p<0.01) and workload had 26% (p<0.01) impact on the physicians' depression status. Likewise, 40% of the nurses (n: 124) enrolled reported mild or severe depression symptoms. The analyses revealed depression symptoms (table 3) of the nurses were positively correlated with experienced bullying and workload. Regression analysis demonstrated that bullying (r:0.38; p<0.01) and workload (r:0.34;p<0.01) were significant factors in terms of predicting the depression symptoms of the nurses (β: 0.55; F:48.14; p<0.01). Workplace bullying had 33% (p<0.001) and workload had 30% (p<0.01) impact on the nurses' depression symptoms.

Table 3: Correlations between mobbing and other variables

Impact on work performance	Physicians Pearson's r	Nurses Pearson's r
1. Motivation at work	0.30**	0.37**
2. Energy level	0.26**	0.41**
3. Commitment to organisation	0.09	0.39**
4. Concentration on work	0.08	0.05
5. Efficiency at work	0.10	0.09
6. Relations with co-workers	0.17*	0.32**
7. Relations with supervisors	0.20**	0.34**
8. Desire to make a career	0.04	0.01
9. Team work	0.02	0.01
10. Time spent at work	0.03	0.02
11. Time management	0.05	0.07
12. Relations with patients	0.09	0.29**
13. Work planning	0.07	0.09
14. Meeting deadlines	0.04	0.10

*p<0.05; **p<0.01

DISCUSSION

Bullying behaviours experienced by physicians and nurses

In this study, 11% of the physicians and 12% of the nurses were found to have been bullied. In addition a large percentage of the physicians (74%) and nurses (82%) enrolled in the study were found to have experienced workplace psychological violence at least once in the last 12 months. There was no significant differences (p>0.05) between the physicians and nurses in terms of exposed bullying behaviour. In a survey of workplace bullying of junior physicians in the UK, 37% of respondents reported being bullied and 84% had experienced at least one bullying behaviour within the last year (Quine, 2002). The results of this present study were consistent with the results of previous studies in the literature which report a large percentage of physicians and nurses being exposed to bullying behaviour often originating from their own supervisors or co-workers at work (Hader 2009; Mistry and Latoo 2009). Consistent with our results (figure1), bullying experienced at healthcare institutions by physicians and nurses was reported to be in the form of 'belittling', 'yelling or scolding', 'speaking in a humiliating and degrading way in front of others', and 'mocking'. Such behaviours, like yelling, scolding or belittling, often take place in front of patients and/or co-workers, making the targeted persons feel inadequate in defending themselves (Mistry and Latoo 2009).

Factors associated with bullying experienced by physicians and nurses

The results of this current study demonstrated that younger and less experienced physicians and nurses were found to be more likely to experience bullying behaviour than others (p<0.05). Similarly, previous studies, consistent with our results, reported that younger employees with less experience and competence were subjected to hostile and negative behaviours by their more experienced seniors (Einarsen and Skogstad 1996). On the other hand, workload has been implicated as the most significant organisational factor in the manifestation of workplace psychological violence (Randle 2003; Hoel and Cooper 2000). Excessive workload and time pressure on health workers creates a bullying suitable environment. This causes especially violent behaviours directed at the junior staff by their superiors.

Figure 1: Content of workplace mobbing experienced by physicians and nurses

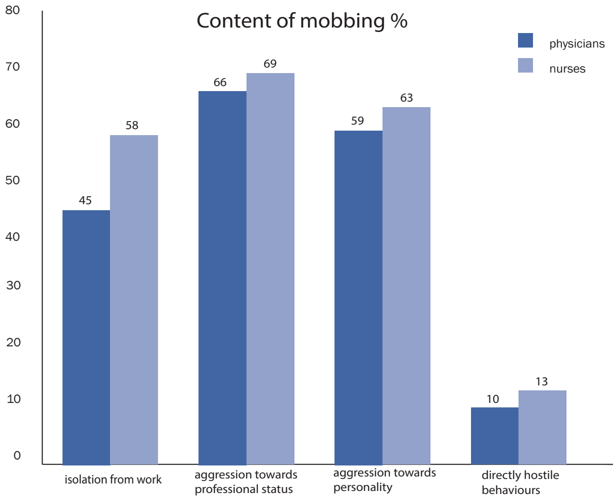
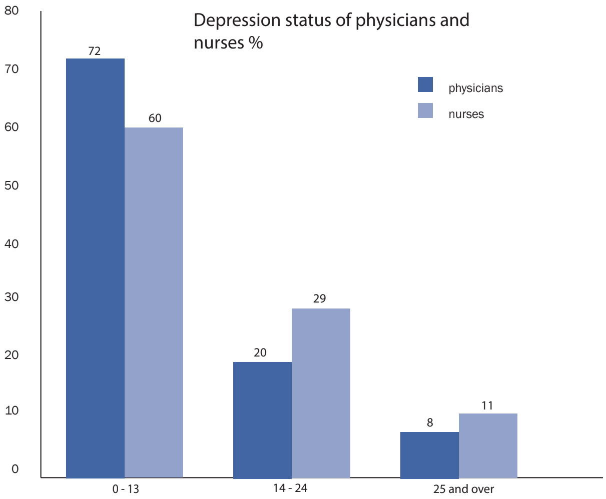


Figure 2: Depression status of physicians and nurses



The effects of bullying behaviour on work performance

This present study demonstrated that bullying could also reduce the performance of the health care professionals by reducing the collaboration and communication among co-workers and superiors (Hutchinson et al 2008). Moreover, the results in the literature emphasise that people experiencing bullying directly demonstrate negative professional behaviours because of their poor job satisfaction, performance and efficiency. These negative professional behaviours in the working environment lead the professionals to lose their motivation and commitment to the organisation and their jobs. As a result, mistakes at work could be unpreventable (Davenport et al 1999).

The effects of bullying behaviours on depression symptoms

It was found that 28% of the physicians and 40% of the nurses enrolled in this present study had symptoms of depression (figure 2). Regression analysis revealed that psychological violence at work had a significant effect on the depression status of physicians (27%) and nurses (33%) ($p<0.01$). The related literature demonstrated that the psychology of victims is significantly affected. The victims, who are suffering from the effects of bullying, usually experience severe psychiatric, psychosomatic and psychosocial problems (Yıldırım and Yıldırım 2007). On the other hand, talking about bullying behaviours at work is accepted as social taboo in our culture which makes it difficult to identify and solve the bullying problem and thus address its psychological effects. Therefore, bullying victim's attitude of not seeking help or even talking about the matter, strengthens the perpetuator's hand and even makes the problem more difficult to solve.

CONCLUSION

This study has the potential to contribute to the literature of bullying by comparing the results of physicians and nurses working at the same hospital as bullying victims. Although bullying negatively affects the physicians' and nurses' work performance by strongly influencing working atmosphere and psychology of the workers, it is still not discussed. The bullies in healthcare organisations may not often realise what they are doing. There are many conflicting views for the solution to bullying in many countries. There are no widely accepted policies and preventive guidance in relation to workplace bullying established in countries. Individuals still do not know what steps to take if they find themselves as a victim of a bully at work (Mistry and Latoo 2009). Therefore, identification of bullying behaviours and increasing the awareness of bullying in the community should be the first step of the solution. Appropriate policies and procedures need to be developed and shared with all employees to prevent the development of these behaviours.

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Tailoring Dementia Care Mapping and Reflective Practice to empower Assistants in Nursing to provide quality care for residents with dementia

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KEYWORDS

dementia, dementia care mapping, Assistants in Nursing, residents, residential aged care facilities, reflective practice.

ABSTRACT

Objective
The study addressed one central aim. This was to explore the experience of Assistants in Nursing being exposed to Dementia Care Mapping coupled with reflection to improve older residents care in a residential aged care facility.

Design and Setting
A qualitative exploratory design was employed to gain an in-depth understanding of Assistants in Nursing experience of creating new care for older residents using Dementia Care Mapping and feedback. The study was conducted in a dementia specific nursing home, located in urban Sydney, New South Wales, Australia.

Subjects
The study participants were ten Assistants in Nursing and five older residents diagnosed with mild to moderate dementia by a Physician.

Results
For the first time, the study illuminated the Assistants in Nursing innovative care following Dementia Care Mapping feedback and reflection. Their experience was highlighted in three major themes: (i) Reflecting on Care (ii) Creating a Caring Connection and (iii) Empathetic Communication.

Conclusion
These Assistants in Nursing valued and used findings from Dementia Care Mapping feedback coupled with reflection to improve contemporary practice. In addition, they felt empowered to create new nursing strategies for quality care. The study highlighted the usefulness of providing Assistants in Nursing with these types of educational strategies to encourage the development of creative caring for residents with dementia living in a residential aged care facility.

INTRODUCTION

In Australia, the number of people diagnosed with dementia is projected to increase, with cases escalating from 245,000 in 2009, to 1.13 million by 2050 (Alzheimers Australia, 2009). For older people aged 65 and over, the likelihood of living with dementia doubles every five years. Dementia is a syndrome encompassing a progressive effect on cognition, personality, and activities of daily living (Nicholls et al 2014). Older persons with dementia were more likely than those without dementia to require high care (87% vs. 63%) (Australian Institute of Health and Welfare, 2013; Australian Institute of Health and Welfare, 2012). The Australian government identified dementia as a National Health Priority (NSW Department of Health, 2006). Critical questions in contemporary nursing practice continue to arise concerning enhanced quality care for older residents living with dementia in Residential Aged Care Facilities (RACFs). For example, what type of educational strategies can be implemented with Assistants in Nursing (AINs) to improve resident outcomes? In Australia, AINs are also known as Nursing Assistants (NAs), Personal Carers, Care Aides or Care Workers as they comprise the majority of workers in residential aged care facilities (Nancarrow, 2012). They interact with residents every day to provide basic hygiene needs including showering, toileting, assisting residents with eating, transferring and positioning residents with the central aim being to achieve holistic care (Coleman and Medvene, 2013). Their practise is under the supervision of a registered nurse to whom they communicate any associated changes in the resident’s care (Nancarrow, 2012).

Dementia Care Mapping

Dementia Care Mapping (DCM) is a systematic observational tool developed by Kitwood and Bredin in the United Kingdom (1992). The tool is used by nurses to assess and improve the care of people living with dementia (Sloane et al 2007). By using observational skills whilst implementing the tool, nurses use the findings to support each individual living with dementia to improve their care. The underlying principle of DCM concerns recognition that dementia fundamentally affects a person’s psychosocial skills as well as their cognitive and physical abilities (Surr et al 2006; Younger and Martin 2000). Therefore, it is driven by the person-centred care approach (Kitwood 1995), which is individualised from the perspective of the person living with dementia and it also identifies new nursing opportunities for improvement in resident’s care (Smy 2005). Findings from the literature suggests that DCM can prove useful in implementing quality nursing care to improve outcomes for residents with dementia.

Only a few studies have addressed the efficacy of DCM, and implementation of the tool. In Chenoweth and Jeon’s study (2007) they found that the outcomes from DCM prompted and improved staffs’ attention to monitoring and attending to resident’s well-being. In another study, a randomised controlled trial (RCT) (n=236) which emphasised DCM, and used a control group of usual care, it found reduced agitation in people with dementia in RACFs (Chenoweth et al 2009). Hence, DCM can be employed to assist nurses to identify resident’s facial and body expressions indicating either well-being or ill-being (Bruce 2000). The term ‘well-being’ in this paper refers to the resident’s pleasant, psychological and emotional affect, with ‘ill-being’ the opposite of ‘well-being’ (Bradford Dementia Group 1997). Thus little attentions have been given to using DCM as a tool to empower AINs to build knowledge, understanding and meaning given to their care.

Reflection

The concept of reflective practice has become ‘commonplace’ in nursing and nursing education. As a result, it is well documented in the literature (Booth 2010; Carroll 2009; Clark 2009; Glen et al 1995). However it remains unclear whether reflection on practice, is genuinely implemented by health care professionals, academics, undergraduate or postgraduate nursing students, to the level of satisfaction required for excellence in practice (Ranheim et al 2010; Skovdahl et al 2004). Other studies concerning the usefulness of reflection have highlighted that reflection was the building block of knowledge (Sumner 2010) and professionalism (Wainwright et al 2010) in nursing practice. Further, reflection enabled students to move from being passive recipients of information to being more questioning and critical of their practices (Mann et al 2009; Smith 1998). In an earlier study by the current authors, it was found by incorporating reflective practice with DCM, was a catalyst for enhancing interaction between AINs, the residents and the RACF (Mansah et al 2008).

The role of AINs in providing effective dementia care, following DCM coupled with reflection to improve resident care, has not been previously explored in detail and there remains a paucity of literature addressing their contemporary role in aged care. This study now attempts to address this imbalance. Therefore, the aim of this study was to explore the experience of AINs in relation to Dementia Care Mapping and reflection to improve older residents' care in a residential aged care facility.

STUDY DESIGN

Method

A qualitative exploratory design (Polit and Beck 2010) was employed to gain an in-depth understanding of AINs experience of creating new care for older residents using Dementia Care Mapping feedback. Additionally, observations of each resident were undertaken using Dementia Care Mapping (Bradford Dementia Group 1997).

Ethical consideration

Ethics approval was granted by the Australian Catholic University National Human Research Ethics Committee and the Residential Aged Care Facility's Ethics Committee Board. Assistants in Nursing were given an information letter and consent form to participate in the study. Each resident's Person Responsible, who was usually their next of kin, was provided with the information letter and the consent form to join the study. All participants were informed that their participation was voluntary and they could withdraw from the study at any time without any consequences for their work or care. Pseudonyms were used for each participant (Schneider and Whitehead 2013).

Study setting

A dementia specific RACF located in Sydney New South Wales was selected for this study. It was chosen because DCM had never previously been implemented in this RACF. None of the AINs had prior knowledge or experience with DCM, nor had reflective practice been planned, implemented or encouraged.

DCM inter-rater reliability

Prior to the study commencing, DCM training was undertaken by three of the study authors, so that each was qualified as a DCM evaluator (Bradford Dementia Group 1997). Two of the authors proceeded to become Mappers for the project (the first author was referred to as the Chief Mapper in this paper). A concordance score above 0.7 was regarded as a sufficient score for inter-reliability testing between the Mappers, prior to study commencement (Surr and Neilsen 2003). The inter-reliability score of the Mappers was assessed and based on the Kappa coefficient and was found to be 0.95.

Study Inclusion Criteria for Residents

Following ethics clearance, the Chief Mapper proceeded to meet with each resident and their respective families. The purpose of each meeting was to describe and discuss the study details with them and create opportunities for any study questions to arise and be answered. Five residents with mild to moderate dementia consented to participate in the study. In order for each resident to participate, they needed to have been diagnosed by a physician as having mild to moderate dementia. Mild dementia is defined as diminished ability to perform complex tasks, decreased knowledge of current and recent events and withdrawal from challenging situations. In moderate dementia there is clear evidence of cognitive deficits and associated behaviour changes which often require some level of supervision or assistance with tasks of daily living (Miller and Hunter 2012). DCM has been well tested for effectiveness with this group of residents (Bradford Dementia Group 1997). Informed consent to participate in the study was sought and obtained from each resident's person responsible, who was usually their next of kin. As a sign of respect consent to participate was also sought from each individual resident. No participants chose to withdrawn from the study.

Study Inclusion Criteria for the Assistants in Nursing

Ten AINs volunteered to participate in the study during a convened meeting (see table 1, Phase I). Each AINs qualification was a Level Three Certificate in Aged Care. This was typically required by the Nursing Director of the Aged Care Facility where each nurse needed to provide individualised care plans for residents on a day-to-day basis. Their respective daily care of the residents was usually supervised by one Registered Nurse who had a three year Nursing Degree qualification. The AINs work experience ranged from one to twenty three years with a median of eight years in the study RACF. They were either employed as full-time, or rostered as permanent part-time nursing employees. All nursing participants remained in the study throughout it is entire duration.

DATA COLLECTION

Data was collected from the residents in terms of observation using the DCM tool. Additionally, data was collected from the AINs relating to education and feedback as reported from the DCM observations of residents.

Dementia Care Mapping Tool Observations of Residents

During Phase III of the study (see table 1), the two Mappers used the DCM tool to record observations concerning the resident's interaction with the environment including social, verbal and nonverbal communication. In this process, two Mappers both tracked each resident over a representative time period of eight hours (Bradford Dementia Group 1997). For example, the resident's verbal skills and non-verbal actions were observed and recorded for every five minute period. Each code, described the resident's behaviour at the time they were mapped. Scores, based on a scale of plus five to minus five addressed each resident's state of well-being or ill-being. It also identified the resident's level of interaction with the RACF environment (Bradford Dementia Group 1997). In addition, during Phase III of the study (see table I), the Chief Mapper used an educational process to provide DCM feedback to the AINs, based on the observations of residents. This detailed process was supported by the Bradford University Training Manual (Bradford Dementia Group 1997). It is contended that this type of educational feedback can be an integral driver that leads to the development of person-centred care practice. During Phase IV of the study (see table I), the AINs developed a collaborative care plan for each resident, which they then implemented, monitored and evaluated. These new care strategies were documented by the Registered Nurse in each resident's nursing care plan.

The Chief Mapper's Education Session with AINs

During Phase II of the study, the Chief Mapper conducted an educational session with the AINs (N=10) including an educational overview concerning the nature of DCM and a description of the process of reflection and how it could be applied to the delivery of resident care. The Chief Mapper explained to the AINs that they were required to keep a nursing journal in which they would record, describe their nursing observations, ideas and new care strategies, actions and interactions with each resident during the study period and to also ensure that confidentiality was maintained. This was subsequently followed by their evaluation of care plans and implementation strategies with supervision from the Registered Nurse on duty (see Table 1, Phase IV). The benefits of journaling often allow chaotic experience to be clearly documented. According to Greenwood (2001), opportunities may also arise to establish hidden connections and meanings concerning attitudes, culture, values and clinical situations. Greenwood later confirmed (2001 p.14), that through writing "we create and recreate (reconstruct, reinvent) ourselves and nursing…practice…" In this study, the AINs provided their clinical reflections in their journal and throughout the DCM feedback sessions (see table 1, Phases II-V).

The Focus Group with Assistants in Nursing

In Phase V of the Study (see table I), the Chief Mapper conducted a focus group interview with the AINs. The purpose was to identify and discuss with the AINs their experience of using feedback from DCM coupled with their reflections in order to create new care strategies for each resident. In addition, they were asked to determine whether they felt empowered by using DCM feedback, coupled with reflection as a learning process, which assisted them to plan creative care for residents living with dementia. The focus group process was audio-taped and lasted for one hour.

Two months later, the Chief Mapper returned again to the RACF for the final time to discuss with the same AIN's the study findings and to obtain the AIN's recommendations for improving practice with older residents. The study findings including the emergence and naming of the three major study themes were discussed. For each finding, the following questions were asked: "Does it ring true?" and "Do you wish to correct/develop/delete any part of these findings?" This process helped to ensure authenticity and led to confirmation of the study findings (Byrne 2001).

Table 1: The Study Method: Overview of the Five Phases

Phase 1	Phase II	Phase III	Phase IV	Phase V
Informed Consent obtained	***Educational Session***	***Residents Observations and DCM feedback***	***DCM Feedback Implementation and follow up***	***Focus Group and follow up***
Study initiated Ethics clearance obtained Chief Mapper provided study details to the AINs. The AINs volunteered and provided written consent. The Chief Mapper met with each resident and also their person responsible (next of kin), who provided written consent for their relative to participate in the study.	The Chief Mapper conducted an educational session with the AINs (N=10) including: (i) DCM details (ii) Reflective practice and how to keep a journal. (iii) The Chief Mapper answered any questions about the study method.	Two Mappers conducted DCM observations of each resident (N=5). (n=5). Informal feedback given by the Chief Mapper to the AINs. Formal, planned feedback were provided based on DCM observations and analysis of the data provided to the AINs. The ten AINs in-depth discussion and review (with approval from the resident's families and Director of Nursing) led to the development of new care strategies for each resident.	Each AIN implemented the new care strategies for each resident and repeated these for 2 weeks. The Chief Mapper and AINs met and discussed outcomes from their implementation of the new care strategies. In addition, they identified ongoing opportunities to review, monitor, evaluate and create further strategies for the improvement of resident's ongoing care.	In the focus group interview, the AINs discussed with the Chief Mapper their experience of using feedback from DCM coupled with their reflections to create new care strategies for each resident (findings presented in this paper). Two months later, the Chief Mapper again returned to the RACF to present and discuss with the AINs the study findings, outcomes and also to obtain from the AINs their recommendations for improving practice with older residents.

DATA ANALYSIS

Data transcripts were analysed using content analysis. This included the use of open, line-by-line coding and reading and rereading, browsing and validating codes (Strauss and Corbin 1998). Hence the data analysis involved an in-depth examination and interpretation of the collected data (Polit and Beck 2010).

FINDINGS

From the study findings, a feedback report was given to the AINs concerning the DCM observations undertaken by the two mappers (a summary of the report has been provided below). Information gained from the focus group interview (Phase V) resulted in the identification and development of three major themes. These themes were named as: (i) Reflecting on Care (ii) Creating a Caring Connection and (iii) Empathetic Communication.

A summary of the Dementia Care Mapping observations for each resident was provided to the AINs. This now follows below.

> *Joseph*
>
> Analysis of Joseph's behaviours indicated that his time was divided between sleeping, being in the lounge room, interacting with others, being socially uninvolved, walking, and at times was the recipient of physical care by the AINs. There were few interactions between Joseph and the AINs and other residents. His attempts at communication were few, short-lived and rarely initiated by him. Joseph spent much of the early observational time sleeping or dozing. However, he appeared to be content most of the time and never complained about any aspect of his care or well-being.
>
> *Mary*
>
> From observations conducted by the two Mappers, Mary's time was divided between sleeping, sitting in the lounge room, interacting with others, being socially uninvolved or walking. She needed minimal physical care from the AINs. There were few interactions between Mary and the AINs or other residents and she was asleep for a period of thirty minutes of the observation, including before the meal, and after the meal she dozed on and off at the meal table for a further fifteen minutes. It was suggested that Mary's well-being had the potential for improvement because she showed obvious signs of engaging in some interaction and activities if encouraged by the AINS.
>
> *Rachel*
>
> Rachel had several small interactions with other residents whilst eating. She seemed to tolerate her diet with obvious signs of satisfaction. There was a game of cards being played by one of the other family members around a table. Rachel showed signs of wanting to participate, but did not physically join in, nor was she encouraged to take part. Rachel was socially involved by staying present. There were small numbers of interactions with other residents around the table. On several occasions she was observed to be socially uninvolved with other residents, but she still seemed to remain reasonably alert to her environment by actively looking around. Rachel initiated only a few interactions between herself and the AINs. These findings suggested that Rachel's well-being can be further enhanced or improved by providing more stimuli within her environment. For example, initiates her interests in gardening and listening to music from the 1940s, 1950s, and 1960s may heighten her engagement and participation.
>
> *Nicolas*
>
> Nicolas seemed reasonably alert to his surroundings but mostly was not actively engaged with other residents in the lounge room, only minimally in the day room, and hardly at all whilst walking. The

feedback identified there were few interactions between Nicolas and the AINs. He enjoyed moving and rearranging chairs and tables. He seemed interested in the religious ceremony which was taking place and participated in it. This suggested that Nicolas was sometimes motivated to initiate interaction with other residents and AINs. More importantly, there was a potential for further interaction and the development of new care strategies to enhance his quality of life.

Jackie

Jackie was observed to be interacting with other residents. She would frequently go and hold one of the other resident's hands, engage in eye-contact and walk up and down the corridor next to the lounge room. Jackie was observed to spend a significant period of time walking. It was felt that there was a need to help her reduce the level of walking. The feedback identified that there were only a few interactions between Jackie and the AINs. This finding suggested that Jackie's well-being has the potential to improve or be enhanced by exploring a range of strategies to engage Jackie in doing activities that she previously enjoyed such as knitting, making bread and listening to music.

MAJOR THEMES

Reflecting on Care

Essentially, this first theme identified and described the AINs reflections on their care and opportunities for creating new directions in care for these older residents. This finding addressed their professional caring work with each resident, by describing ways in which they benefited from engaging in reflective practice aimed at improving each resident's outcomes and the teamwork involved. They also reported that by reflecting on their care, it provided opportunities for gaining clearer insights and a deeper understanding of each resident's unique behaviour and need for unique care.

For instance, Candice, AIN with seven years' experience explained it like this:

> *Since our meetings, I have started to reflect all the time on my work, to improve my weak points and see new ways in caring for these residents…I think it has really improved our teamwork …*

And Michelle, AIN with five years experience supported Candice's story:

> *I now think of each interaction I have with the residents. I mean, before I just carried out my activities and rushed through them. I understand the process of engaging, becoming involved in their care not only routinely, but emphasising the uniqueness of each individual. Reflecting on care has been something I lacked in the past, not anymore. DCM has highlighted the key needs of each resident…I think it is really important to think about your work, re-evaluate your decisions and see how things can be done better.*

From the meetings with the AINs, they pointed out that by reflecting on care, and combining it with the DCM feedback from the Mapper, it assisted a deeper understanding of individual resident's unique care needs. In addition, it provided new opportunities for creative planning and implementing innovative care and evaluation of their care decisions. In this way, these nurses were able to create new care strategies to improve their residents' day to day outcomes.

Creating a Caring Connection

Most AINs described this second major theme as establishing a clinical framework in which heartfelt care could be provided for these residents. This involved maintaining open, clear effective communication with each resident and other health team members. For the nurses it meant building rapport, showing the resident respect and creating a warm interpersonal environment. They maintained that therapeutic communication skills were important to improve interpersonal relationships and to create an environment in which meaningful dialogue and exchange could occur. Furthermore, they identified that stronger caring bonds were formed between the residents and team members, when the AINs reflected on practice, prior to and following nursing care. Overall, this meant improving their daily interaction with each resident, their families and other AINs. This also involved maintaining open, clear effective communication with each resident and the health care team on a daily basis.

Sarah with seven years experience explained it like this:

> *Jackie and I became close…she connected well with me…DCM was good at helping me to identify this. Reflecting on care proved useful to my care…I now feel connected with the residents and the family members as well. Like yesterday, I walked past a family member who I haven't seen visiting for a while, I asked him how he was doing and he started telling me he had been ill and was hospitalised for treatment. You know, in the past, I would have just walked past him… not that I didn't care, I assumed I had too much work to do….and taking time to communicate with the family members was time consuming…*

Naomi AIN with ten years experience said:

> *When you approach them [residents] with a warm voice and good manners, they can feel it. They respond to you well. Nicolas came in here very aggressive and sometimes withdrawn…I [now] try to approach him with a very calm voice and use the DCM techniques we discussed. He responded to it….*

Later, Naomi further explained:

> *He [Nicolas] started talking to me about his wife. We made a connection with each other…I also told him personal stuff about me, like about my children and husband. It made it easier to care for him. In a way, he cared for me too.*

Here, these AINs reflected on the multiple benefits of expressing mutual feelings, such as warmth, kindness, and tenderness. This involved feelings of closeness and connection. They believed that this was important for establishing a sense of mutual togetherness. In ways such as these, the AINs created a caring connection with their residents.

Empathetic Communication

Evident throughout the third theme was the AINs perception that effective interaction was deemed appropriate and necessary to improve care. They highlighted that this assisted them to manage situations where a resident may become aggressive, agitated or anxious. They believed the goal of person-centred care was highly useful and important in order to encourage residents to become more involved in their daily care.

As Samantha an AIN with five years' nursing experience, reflected:

> *We have no excuse here…nurses have to deliver care that is identified for every resident. The thing is when we engaged in this DCM process and reflection…It just makes sense. I realised that care delivery is when residents can be themselves, and comfortable with themselves. This can only be done by talking to them warmly and sharing in their experiences…*

As Mary an AIN with only one year's experience, explained:

> *One of the residents is very social. She said she liked to be dressed up, have makeup on and her pearls on. After, I showered her, talked with her and asked her to choose her clothes. In the end, she was dressed up like she was going out to the Opera. It did make her happy and that's what she wanted. Before, I always put her in trackies, which I thought would make her comfortable. However, after our discussion, I changed, by communicating with her, learning about her…and understanding her.*

And later Mary continued:

> *Communicating is so important! This works well, when the residents can see in your eyes that you understand them. When you show it by putting understanding in your conversation…It certainly helps to manage [their] distress and agitation….*

In a nutshell, the third major theme highlighted the importance of AINs using empathetic communication. These nurses saw it as a springboard to improve aspects of quality care, which they believed enhanced the residents and the AINs interactions. They considered that it opened new ways to care and facilitated effective ways of supporting each resident's well-being and their need to express individuality during their activities of daily living in the residential aged care facility.

DISCUSSION

Our study found that these AINs appreciated the usefulness of DCM coupled with opportunities for reflection on their care. This acted as a catalyst for innovate nursing practice, which importantly assisted with improving outcomes for older residents. In contrast, one recent study found that AINs employed in dementia specific RACFs were more likely to be confronted with physical violence (Tak e al 2010). Consequently, it could be argued that there is a real need to use DCM feedback and reflection to prepare AINs to better navigate specialised care for this group of older residents. In addition, this may also reduce the risk of disruptive, violent behaviour experienced by some residents with dementia. As acknowledged earlier in this study, these AINs reported that they felt empowered, had increased knowledge and enhanced confidence to connect with each resident. They also recognised that their teamwork had improved and that they had new positive directions for future care of these residents.

In a report by the Royal College of Nursing Australia (May 2011), they identified two critical challenges in caring for older residents. These included: (i) that AINs typically have a minimal qualification, yet represent the majority of staff employed in RACFs, and (ii) ongoing education for AINs is not mandatory in this occupation. Thus, there remains an urgent need to ensure that AINs are provided with ongoing research based educational opportunities to fulfil and advance their caring role as respected health professionals. Previous studies identified that AINs felt empowered and equipped when provided with educational programs (Clark et al 2006). These findings suggest that RACF administrators, nurses and allied stakeholders, can create ongoing learning opportunities for AINs to improve practice when working with older residents in residential aged care facilities.

The importance of effective empathetic communication in the role of AINs in nursing has been identified in this study in their reflections on practice, and in their described stories of empathetic communication. Employing DCM and reflection strategies needs to be activated, implemented and evaluated by all concerned. Further, these empowered AINs, felt creative and discussed with the wider nursing team, a range of new strategies to improve clinical outcomes for residents.

Essentially, this study innovatively explored Assistants in Nursing experience concerning the usefulness of DCM coupled with reflection to improve older residents care in RACF. It also highlighted the professional role of AINs in building interactive relationships with both residents and staff, based on qualities of rapport, respect, and warmth. Moreover, the DCM feedback provided by the Mapper coupled with their ongoing reflection on care, created new opportunities for caring connections and empathetic communication between the AINs and the residents. These AINs believed by employing such creative strategies it empowered them to reduce resident's aggression, agitation and anxiety in the residential aged care environment. Thereby a win-win situation was created for all concerned.

Limitations

The relatively short time spent with the AINs during the focus group interview may have been insufficient to ensure total ongoing commitment and use of the combined DCM and reflection as tools to improve the resident's care. Consequently, strategies such as DCM education should be provided at repeated intervals, for example, during nursing education programs and clinical assessment, and evaluated to determine if any improvements occurred in the residents' care. The Hawthorne effect could also be considered in light of these findings. However, the researchers remained as unobtrusive as possible and both the Mappers were Registered Nurses with a gerontology nursing background. These factors combined should potentially help to reduce the Hawthorne effect (Casey 2006).

Implications for practice

Most AINs indicated they felt confident applying DCM feedback, and welcomed and accepted the benefits of reflecting on their individualised care, in order to enhance older residents' well-being. They also reported feeling more empowered as their body of knowledge continued to grow. They maintained that DCM feedback incorporated with reflection was beneficial and heightened their senses in providing quality care for each resident. Therefore, residential aged care facilities commitment to employ the DCM tool may prove useful for resident's care delivery and quality outcomes.

Recommendations

Residential aged care facilities need to create: (i) innovative dementia nursing policy; (ii) develop specific DCM educational processes and monitor related outcomes; (iii) nurses need to be at the frontier of creating a national DCM strategy. This could be combined with enhanced opportunities for reflection on clinical care. This means residents living with dementia, including their families, will benefit from enhanced caring connections and empathetic communication by AINs, empowered to provide innovative practice. Further, extensive research also needs to be undertaken concerning future DCM education, feedback and reflection which must be incorporated into best nursing practice.

CONCLUSION

It is evident that for RACFs organisations, Directors of Nursing, Supervisors, and Assistants in Nursing, the challenges that remain are profound. Vigilance must inform caring gerontology practice in new innovative ways. Quality nursing care can be instigated and delivered when templates supporting and structuring new opportunities such as DCM with reflection on care are provided. In this study, AINs considered DCM feedback and reflection on their practice valuable. They recognised that inevitably, without such innovative care their residents' health would continue to decline. Essentially, these study participants sought to improve their resident's well-being which was a fundamental and central goal supported by caring strategies.

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Violence against health care staff by peers and managers in a general hospital in Greece: a questionnaire-based study

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KEY WORDS

workplace violence, physicians, nurses, manager, general hospital

ABSTRACT

Background

Many studies have investigated violence against nurses or physicians from patients and visitors especially in psychiatric settings. Few however, have focused on violence between co-workers in general hospitals and various departments.

Objectives

This study examined the types of violence experienced by physicians, nurses and nurse assistants in various departments instigated by doctors, nurses and supervisors as well as the possible causes, the effects on job performance, the handling of the incidents and the possible preventive measures.

Design

A questionnaire based study was conducted among nurses and physicians concerning violence between co-workers.

Setting

The study was carried out in two general hospitals in Athens, Greece.

Subjects

A total of 250 health care staff - doctors, nurses, and nurses' assistants took part in the study.

Methods

A questionnaire based study with multiple choice questions was held with doctors, nurses, and nurses' assistants. Quantitative data was analysed by SPSS. A logistic regression analysis was used in order to determine significant risk factors of violence.

Results

A majority of respondents had experienced some form of violence (verbal, psychological, physical or sexual). Doctors and nurses were the main perpetrators followed by managers. The most frequently reported incident was psychological violence, followed by verbal violence. Associations were found between workplace violence and age, gender and wards. Violence was significantly more likely to be targeted towards less experienced, younger staff and those working in ICU, but was significantly less likely among those working in the emergency department and orthopaedics.

Conclusion

Health care staff are at great risk of workplace violence by both co-workers and managers. The reporting of these violent events needs to increase in order to develop safety policies and strategies. Future research must focus on factors influencing high levels of violence and preventive measures.

INTRODUCTION

Violence within the health care environment is a significant problem. According to the World Health Organization workplace violence is defined as “*incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health*” (ILO, ICN, WHO, PSI 2002).

The World Health Organization (WHO) initiated a global campaign for violence prevention (WHO 2005). It has been estimated that health care staff are the professionals at highest risk of violence in their workplace (Warren 2011; Chapman et al 2006; McKenna et al 2003).

In recent years researchers have focused on workplace violence directed especially against nurses (Campbell et al 2011; Farrell et al 2006;Wells and Bowers 2002). Most studies have examined violence against nurses especially in psychiatric settings and emergency department (Taylor and Rew 2011; Foster et al 2007; Maguire and Ryan 2007). Very few studies have systematically explored violence against doctors (Mirza et al 2011; Carmi-Iluz et al 2005; Tolhurst et al 2003; Zahid et al 1999; Hobbs and Keane 1996).

A review of the literature illustrates that aggressive and violent behaviour is caused mainly by patients and visitors (Hahn et al 2010; Kamchuchat et al 2008; Inoue et al 2006; Duncan et al 2001; Fernandes et al 1999). However, increasing amount of data from further research indicates co-workers and managers to be as likely the offenders of the violent acts (Farrell et al 2006, Hegney et al 2006). Few studies consider general hospitals, various departments and especially doctors and nurses as perpetrators of violence. (Farrell et al 2006). Furthermore, the phenomenon of violence between staff known as ‘horizontal violence’ has been investigated in nursing profession (Woelfle and McCaffrey 2007; Nazarko 2001).

Previous evidence has shown that incidents of violence, aggression and abuse experienced by nurses, influence their job performance, and lead to increased sick leave, decreased productivity and deterioration of the patient care quality (Nijman et al 2005a, 2005b, Carroll 2003, Arnetz and Arnetz 2001). Violence, especially against nursing staff, has a major psychological impact (Gates et al 2011; Bonner and McLaughlin 2007). Additionally, experiencing workplace violence is proved to be a main cause for staff resignations (King and McInerney 2006).

Staff begin to feel threatened and emotionally disturbed, a fact that may have a damaging impact on patient care (Gates et al 2011; Duxbury 2002). Moreover, violence between staff seems to have both physical and psychological consequences. Higher rates of burnout, low self-esteem and self-destructive aggression are among the usual symptoms (Woefle and McCaffrey 2007; Nazarko 2001). A previous study in Greek hospitals concerning workplace violence has shown that the vast majority of staff had experienced work-related violence (Mantzouranis et al 2014).

Therefore, this study tries to determine the prevalence of various types of violence by doctors, nurses and managers towards health care staff in the general hospital.

AIM

The aims of the study were to:

a) examine the types of violence experienced by physicians and nurses in various departments, which were instigated by doctors, nurses and supervisors;

b) identify the possible causes; and

c) determine the effects on job performance, the handling of the incident and the potential recommendations for the prevention of violence.

METHOD

Design

The study was conducted in two general hospitals in Athens greater area, Greece. The survey was conducted to investigate the experiences of violence from peers and supervisors and data was collected using a self-administered questionnaire between September 2010 and December 2010.

Sample and Data Collection Procedure

The two general hospitals each have an average of 418 beds, 600 nurses and nurses' assistants and 160 doctors. The researcher informed the head nurse and the head doctor of each ward of the purpose of the study who then informed the nursing staff. Due to a large workload the head nurse permitted the distribution of the questionnaire only during the evening shift and as a result the eligible sample consisted of 320 health care staff, medical specialists, resident doctors, registered nurses, and assistant nurses. The only inclusion criterion was to work full-time, which meant 37.5 hours per week on three rotating shifts in seven types of wards in two general hospitals. All health care staff were in regular contact with patients.

The final sample after the exclusion of the partially completed questionnaires was 250 health care staff. Approval was given by the hospital Ethics Committee. Verbal consent was obtained from nurses and doctors on the wards. Staff were informed of the purposes of the study and of the fact that each of them was free to withdraw at any time. Assurances were given to nurses and physicians on duty concerning confidentiality.

All questionnaires were coded according to hospital name. Participants were asked to put the sealed questionnaire in a box in the head nurse's office. One of the researchers personally collected the questionnaires.

Data collection instrument

An anonymous self-administered questionnaire was constructed by the Demographic Laboratory in The Faculty of Nursing, University of Athens based on feedback of nurses working in hospitals. A pilot study of the questionnaire with 30 health care staff currently working in a children's general hospital demonstrated no problems in understanding the questions concerning violence and thus minor changes were made to wording and format to make it suitable for staff caring for adults. The results of the pilot study asserted the content validity of the items.

Two experts, one associate professor on Health Economics and one assistant professor in psychiatric nursing, examined content validity. Content validity index was 0.91. Cronbach's alpha coefficient was 0.78.

The first part of the questionnaire included the participants' demographic characteristics and information was provided about the definition of violence including verbal, psychological, physical and sexual.

Verbal violence: screaming, calling names, threats, insults, swearing, and accusations.

Psychological violence: mainly verbal abuse, bullying, and mobbing.

Physical violence: slapping, kicking, biting, beating, stabbing, punching, pushing, pinching, arm-twisting, and hair-pulling.

Sexual violence: unwanted, unwelcomed and offensive behaviour of sexual nature e.g. forced intercourse, sexual harassment verbally or by making physical contact.

The second section of the questionnaire comprised six parts including:

1. Types of violence - psychological, verbal, physical, sexual.

The respondents were requested to answer whether he or she had experienced violence ('yes' or 'no') during their career in the same department by a physician, a nurse, or a supervisor. The supervisor is the head medical doctor and the head nurse of the ward. Each respondent might have given multiple responses to these questions.

The questionnaire also distinguished incidents of violence between different shifts (morning-evening-night shift).

2. Perceived causes of violence
3. Actions taken to anticipate violence
4. Consequences on job performance
5. Possible prevention strategies
6. An empty frame at the end of the questionnaire in order for the health care staff to provide any additional comments

In questions 2, 3 and 4 respondents could choose more than one answer.

Data Analysis Procedure

A descriptive analysis was used to identify violence characteristics.

A logistic regression analysis was used in order to identify factors that may predict a certain type of violence. The following independent variables (victims' characteristics) were chosen: gender, age, height and weight, marital status, years of work and hospital department. First, a separate logistic regression was performed for each independent variable and those variables were p≤0.10. Second, a multiple regression analysis was performed with those variables (p≤0.10). Finally, tables present variables with p≤0.05.

Data were analysed using Statistical Package for Social Sciences (SPSS, version 13).

FINDINGS

Respondents' characteristics

Questionnaires were distributed to 320 health care staff, 250 of who responded. This represents a 78% response rate. The mean age of the respondents was 36.3 (SD = 5.2). 36 (14.4%) were medical specialists, 54 (21.6%) were resident doctors, 132 (52.8%) were registered as nurses and 28 (11.2%) were nurse assistants. The demographic characteristics of the sample are presented in table 1.

Table 1: Demographic characteristics (N=250)

Characteristics	N (%)
Sex	
Males	66 (26.4)
Females	184 (73,6)
Age	X=36.3(5.2)
Years of work	X=11.7(5.2)
Position	
Medical specialist	36 (14.4)
Resident doctor	54 (21.6)
Registered nurse	132 (52.8)
Nurse assistant	28 (11.2)
Type of ward	
Internal medicine	62 (24.8)
Surgical	44 (17.6)
Anaesthesiology	12 (4.8)
Cardiology	28 (11.2)
Emergency	30 (12.0)
ICU	54 (21.6)
Orthopaedics	20 (8.0)

Prevalence of violence

All participants stated that at a given time they have faced some type of violence. Psychological violence was the most common, 80.0% (200) by doctor, 75.2% (188) by nurse, 76.0% (190) by manager in health care staff work history, followed by verbal violence and sexual violence.

Medical doctors and nurses were the main perpetrators during all shifts given the fact that during the evening and night shift supervisors have no regular contact with staff. The questionnaire distinguished violent events according to different shifts. The results showed that the most violent events were not time-dependent (table 2).

Table 2: Prevalence of violence (N=250)

Perpetrator	Medical Doctor	Nurse	Supervisor
	N (%)	N (%)	N (%)
Violence type			
Psychological	200 (80.0)	188 (75.2)	190 (76.0)
Verbal	196 (78.4)	188 (75.2)	140 (56.0)
Physical	44 (17.6)	32 (12.8)	6 (2.4)
Sexual	84 (33.6)	68 (27.2)	12 (4.8)

Perceived causes of violence

The most frequent causes of violent acts by the doctors were: unprofessional manner (60, 84.0%), delays in nursing care provision (170, 67.9%), and psychological problems of the perpetrator (148, 59.2%). The most frequent causes of violent acts by the nurse were: unprofessional manner (194, 77.6%), disagreements/ miscommunication (58.0%), and psychological problems (140, 56.0%). Finally by supervisor: disagreement/ miscommunication (112, 44.8%) and smoking prohibition (96, 38.4%), (table 3).

Table 3: Perceived causes of violence (N=250)

Perpetrator	Medical doctor	Nurse	Supervisor
	N (%)	N (%)	N (%)
Perceived causes of violence			
Delays in medical care provision	148 (40.8)	-	-
Delays in nursing care provision	170 (67.9)	46 (18.4)	-
Unprofessional manner	60 (84.0)	194 (77.6)	70 (28.0)
Psychological problems (anger, anxiety)	148 (59.2)	140 (56.0)	32 (12.8)
Disagreements/ miscommunication	134 (55.6)	145 (58.0)	112 (44.8)
Alcohol/drug abuse	35 (15.0)	16 (6.4)	15 (6.0)
Violation of visiting hours	144 (57.6)	44 (17.6)	26 (10.4)
Smoking prohibition	124 (49.6)	106 (42.4)	96 (38.4)
No perceivable reason	14 (5.6)	8 (3.2)	8 (3.2)

Handling of the incident

Concerning the handling of various incidents in various times 242 (96.8%) of the victims preferred to have faced incidents by themselves. A great proportion (204, 81.6%) contacts the nurse/doctor on call to deal with the incident. The 65.6% (164) confront the incident by a colleague followed by 28.0%(70) who took no action. 10.0% (25) reported the incident to hospital security, and 4.8% (12) reported the incident to the police.

Consequences on job performance

The majority of staff (232, 94.4%) continued working after the incident; a great proportion (220, 88.0%) chose to leave the job for a short period. 142 (56.8%) considered a job outside health care system, 76 (30.4%) tried to change departments and 52 (20.8%) took the day off work.

Prevention management

Health care staff suggested a number of measures, like better hospital organisation (236, 94.4%), a 24hr security surveillance officer (224, 89.6%), working harder (222, 88.8%) and a workshop on violence prevention management (162, 64.8%) in order to prevent violent episodes.

Logistic regression analysis (tables 4, 5 and 6)

Logistic regression analysis showed that in cases where the doctor was the perpetrator, younger people had increased odds of experiencing verbal ($p<0.006$) and physical violence ($p<0.007$). Women had increased odds of experiencing sexual violence ($p<0.012$). Victims with lower height and weight had increased odds of experiencing psychological ($p<0.001$), verbal ($p<0.013$) and sexual violence ($p<0.030$) respectively. Working in ICU increased the risk of psychological and physical violence while emergency department increased the risk of psychological and sexual violence and orthopaedics of psychological violence (table 4).

Table 4: Multiple Logistic Regression Analysis results: Doctor as the perpetrator

Independent Variable (Victims' characteristics)	B	OR	95% C.I for OR		p-value	Dependent Variable
			Lower	Upper		
Height	-0.069	0.933	0.895	0.974	0.001	Psychological violence
ICU	-0.776	0.460	0.222	0.955	0.037	Psychological violence
Emergency	-0.909	0.403	0.164	0.993	0.048	Psychological violence
Orthopaedics	-2.416	0.089	0.030	0.268	0.000	Psychological violence
Age	-0.092	0.912	0.854	0.974	0.006	Verbal violence
Height	-0.052	0.949	0.911	0.989	0.013	Verbal violence
Age	-0.094	0.911	0.851	0.975	0.007	Physical violence
ICU	-2.766	0.063	0.008	0.471	0.007	Physical violence
Sex	-0.944	0.389	0.186	0.811	0.012	Sexual violence
Weight	-0.024	0.976	0.955	0.998	0.030	Sexual violence
Emergency	-1.758	0.172	0.050	0.594	0.005	Sexual violence

In cases where the nurse was the perpetrator, younger people had increased odds of experiencing psychological, physical and verbal violence ($p<0.001$, $p<0.010$, $p<0.003$ respectively). Women seemed to have higher risk of experiencing physical violence ($p<0.014$). Years of work were found to predict verbal violence. Those with fewer years of work had a greater risk of experiencing verbal violence ($p<0.040$). Working in orthopaedics increased the odds of experiencing psychological violence ($p<0.029$) and working in emergency unit increased the odds of sexual violence ($p<0.013$) (table 5).

Table 5: Multiple Logistic Regression Analysis results: Nurse as the perpetrator

Independent Variable (Victims' characteristics)	B	OR	95% C.I for OR		p-value	Dependent Variable
			Lower	Upper		
Age	-0.126	0.881	0.817	0.951	0.001	Psychological violence
Height	-0.075	0.927	0.886	0.971	0.001	Psychological violence
Orthopaedics	-1.257	0.284	0.092	0.881	0.029	Psychological violence
ICU	1.183	3.265	1.204	8.857	0.020	Psychological violence
Age	-0.093	0.911	0.857	0.968	0.003	Verbal violence
Height	-0.046	0.955	0.920	0.991	0.014	Verbal violence
Years of work	-0.064	0.938	0.883	0.997	0.040	Verbal violence
ICU	0.928	2.530	1.079	5.935	0.033	Verbal violence
Sex	-1.830	0.160	0.037	0.691	0.014	Physical violence
Age	-0.113	0.893	0.820	0.973	0.010	Physical violence
Emergency	-2.078	0.125	0.024	0.640	0.013	Sexual violence

In cases where the supervisor was the perpetrator, men ($p<0.007$), younger people ($p<0.000$) and lower height (0.000) all related to a higher risk of psychological violence. Additionally those of a younger age ($p<0.003$) and lower height ($p<0.043$) had a risk of experiencing verbal violence (table 6).

Table 6: Multiple Logistic Regression Analysis results: Supervisor as the perpetrator

Independent Variable (Victims' characteristics)	B	OR	95% C.I for OR		p-value	Dependent Variable
			Lower	Upper		
Sex	1.712	5.542	1.586	19.365	0.007	Psychological violence
Age	-0.116	0.890	0.834	0.950	0.000	Psychological violence
Height	-0.163	0.850	0.783	0.922	0.000	Psychological violence
Age	-0.099	0.906	0.848	0.967	0.003	Verbal violence
Height	-0.048	0.953	0.909	0.998	0.043	Verbal violence
ICU	1.378	3.965	1.930	8.148	0.000	Verbal violence

DISCUSSION

This study tried to separate the types of violence (verbal, psychological, physical, sexual) related to a different perpetrator (physician, nurse, manager). This is one of the first studies in Greek hospitals, investigating worker-to-worker violence, types of violence as well as different perpetrators.

The study was conducted in two large public hospitals in the capital Athens, with an average of 418 beds. In order to interpret the results the researchers have taken into consideration certain cultural factors related to Greek hospitals. In Greek hospitals the care is medically oriented. In the Greek health care system nurses have limited autonomy. The law is not clear concerning the nurses' intervention framework. This fact adds extremely high stress and tiredness to the already existing heavy workload and personnel shortage and leads to open confrontation with doctors in many cases. Additionally, limited team meetings or meetings where nurses are excluded, place additional difficulty on nurses work and worsens the tension in co-workers interaction (Koukia et al 2009).

The most significant finding is the high rate of workplace violence between health care staff and the fact that health professionals - doctors, nurses and supervisors - perform violent acts. Violence against health care staff seems to be a serious problem in Greek hospitals. There are some possible explanations, for example the inadequate working conditions, the mal-payment and the work overload combined with lack of health care staff (Abualrub and Al Khawaldeh 2013).

The response rate was 78%, which is a favourable one, given the fact that this research represents the first attempt to investigate incidents of violence between health care staff.

The overwhelming majority of nurses and doctors participating in this research reported facing all types of violent behaviour in their workplace. These results indicate that the study population was highly motivated to participate in a research, on an issue of fundamental significance to them. The results also show that doctors and nurses are at serious risk in the general health care environment, a finding in contrast to most previous research results where nurses appeared to have a higher risk of violence (Wells and Bowers 2002). The possible explanation is that researches focus mainly on violence by patient and visitors (Hahn et al 2010; Winstanley and Whittington 2004). On the contrary, Alexander and Fraser (2004) found no statistically significant differences among different allied health professional disciplines.

Even though mental health services are at highest risk of violence, in our study we found that different departments of general hospitals are at extremely high risk also, and that the respondents reported high proportions of workplace violence from co-workers as well as managers. A possible explanation could be that safety measures and security rules in Greece are still inadequate. A previous study has combined poor workplace safety with higher incidents of violence (Hegney et al 2006). It is also noted that Greek hospitals have no workplace policy for violent behaviour of other staff. Another reason may be that in Greece the shortage of health care staff is combined with a large workload. Future research could focus on reasons culminating to this violent behaviour.

Psychological violence, which included mobbing, and bullying, was extremely high in all groups (80% by doctor, 75.2% by nurse and 76% by manager) a finding compatible with those reported from other investigators (Yildirim and Yildirim 2007; Pranjic' et al 2006). The result also showed high rates of violence from managers to staff. This finding authorises previous nurses' reports concerning lack of support shown by managers (Daiski 2004). Given the fact that previous research has shown that psychological violence can be as severe as physical violence, our findings raise a major concern (Pai and Lee 2011; Mayhew and Chappell 2007).

The findings that verbal violence was an extremely frequent type of violence is in accordance to many previous studies (Winstanley and Whittington 2004, Wells and Bowers 2002).

A significant proportion of health care staff reported incidents of *sexual violence* a finding also evident in other studies (Pai and Lee 2011; Hesketh et al 2002; Williams 1996). Sexual harassment from co-workers was reported elsewhere, mainly in Emergency Departments (Fernandes et al 1999). In this study, 33% of respondents were sexually harassed involving touching by a doctor, 27.2% by a nurse, and 4.8% by a manager. The level of sexual harassment in our study seems to be very high; surprisingly it occurs irrespective of gender and profession. Prevention against sexual violence must be prioritised.

The most common causes for violent acts were delays in medical and nursing care provision, psychological problems, smoking prohibition, violation of visiting hours and disagreements/miscommunication between staff. In Greek hospitals the main care provision is based on nurses. If the nurse delays care provision the doctor blames him/her for this delay and even performs a violent act.

In this study, victims were unlikely to report the incidents and they tended to keep the problem to themselves, a similar finding with previous studies (Taylor and Rew 2011; Duncan et al 2001; Fernandes et al 1999).

The low reporting of violence seems to be a wider problem that concerns all types of violent behaviour in the workplace (Kitaneh and Hamdan 2012; McKenna et al 2003). Staff reported that "nothing will change as a result of reporting" and some of them noted: "report the incident to whom? There is no security for staff in the hospital". This finding is supported by previous research (Kozlowska et al 1997). In addition, most of the respondents - especially nurses - noted that nursing or medical administration would never come to their aid even if they had reported the incident (Carmi-Lluz et al 2005).

Many of them share their experience with a colleague, even though they recognise that this type of support is inadequate (Kwok et al 2006; Henderson 2003). It is of note, that Greek health care staff have no training in violence de-escalation strategies and seeking support from colleagues seems to be their only possible solution. Health care staff noted that they feel powerless to do anything about this situation.

The serious impact of psychological and physical violence at work is becoming a topical subject in various health care systems (Gates et al 2011). In developed countries hospital-based clinics were set up in order to deal with diseases related to working environment. Most victims in our study continue working after the incident or they leave the job for a short period of time, which is similar to findings in a previous study by Gilioli et al (2006). A great number of victims consider finding a job outside the health care system. These findings are consistent with those of previous studies and need to be taken into serious consideration, given the staff shortages especially in the nursing profession (Algwaiz and Alghanim 2012; King and McInerney 2006; McKenna et al 2003).

It is of note, that working harder after a violent episode was a type of prevention management for 88.8% of the victims. A similar finding was found in previous studies concerning mainly psychological abuse (Yildirim and Yildirim 2007). It is generally accepted that studies must focus on prevention programs and safety measures in order for health care staff to feel less vulnerable in the health care sector (Gallant-Roman 2008; Catlette 2005).

This study found a number of personal risk factors of workplace violence and some very interesting results in cases of different perpetrators. Younger staff had increased probability of experiencing verbal, psychological and physical violence (Algwaiz and Alghanim 2012; Whittington et al 1996). Doctors, nurses and supervisors seem to show greater respect to their older colleagues. These results are extremely alarming and consistent with previous studies (Magin et al 2005; Wells and Bowers 2002). Even though in research, bullying has been reported as the most common violent action between health care staff, this study found staff to be at a high risk for all forms of violence (Yildirim and Yildirim 2007).

These results suggest that there is an apparent need for junior staff protection and training in dealing with violence. In Greek nursing schools, nurses have no training in protecting themselves against violent acts or managing violence in the workplace.

This study did not find gender to be a significant predictive factor, a similar hypothesis by Kamchuchat et al (2008), except in cases of supervisors as perpetrators, where females are possibly experiencing more psychological violence and in cases of nurses as perpetrators, again females may experience physical violence. Given the fact that in this study the number of female respondents was three times more than male respondents, these results may not be representative of the whole health care staff. Additionally, it is noted that in Greece there is a predominance of females in the nursing profession.

Personal characteristics like height and weight seemed to predict the risk of experiencing violence. Those with lower height and weight had increased odds of experiencing psychological, verbal and sexual violence. Combined with the fact that in most cases women have lower somatic characteristics, these may put them in a 'more at risk for violence' situation.

The results show that working in the emergency department, orthopaedics and ICU, increased the risk of experiencing violence, a similar finding in previous studies (Taylor and Rew 2011; Hegney et al 2003; Presley and Robinson 2002). ICU should also be considered as a high-risk ward, in contrast to other studies (Kamchuchat et al 2008). This may have been influenced by the fact that in Greece, the lack of nursing and medical staff along with the difficult shifts may increase the tension when working in ICU (Ahmed 2012).

Study limitations

This study has a number of limitations.

First, conclusions may not be generalised to other health care systems since Greece has a lack of workplace authorities and support systems in the hospitals. At the same time, health care staff does not have the opportunity to report incidents in an official capacity.

Second, there might be a recall bias among respondents so that the number of incidents of violence may have been over-reported.

Third, given the fact that the study represents the first attempt to investigate violence between staff, we lack information like emotional responses and physical consequences of the event.

CONCLUSION

Violence against health care staff is an underestimated phenomenon in Greek hospitals. Lack of policies and assertive legislation on workplace violence has placed health care staff at frequent risk of violence. This study helps to highlight the problem and encourage the reporting of incidents in an attempt to reduce them. From the aspect of prevention, workplace violence has to be considered as the most serious professional hazard (Gallant-Roman 2008; McPhaul and Lipscomb 2004).

However, the most important finding was the great number of violent incidents that health care staff, nurses and physicians, confront by themselves in their daily work.

RECOMMENDATION

Future research has to investigate in depth the phenomenon of non-reporting of violent incidents and possible recommendations for health care staff to develop safety measures and strategies. Information about the circumstances that initiated violent events and possible stressors could highlight the results. Additionally, it is essential to understand the possible predictors and indicators of health care staff violent behaviour against doctors and nurse

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