

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

AUTHORS

Evmorfia Koukia

RN, Assist. Professor in Psychiatric Nursing
Faculty of Nursing, University of Athens, Greece.
ekoukia@nurs.uoa.gr

Polyxeni Mangoulia

Dr, RN
Evangelismos Hospital, 59 Orfeos 118 54, Athens,
Greece
pmangoulia@gmail.com

Dimitrios E. Papageorgiou

RN, Lecturer in Nursing
Technological Educational Institute of Athens, 12-14
Aroanion str, 11522 Athens, Greece
nos_eidik@gna-gennimatas.gr

Nikolaos Gonis

Biologist
E. Venizelou 117 str, 15231 Athens, Greece
edorasmithril@hotmail.com

Theofanis Katostaras

BA, MSc, DrN, Assistant Professor in Health Economics,
Faculty of Nursing, University of Athens, Greece
tkatos@nurs.uoa.gr

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 (Woelfle 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 $p \leq 0.10$. Second, a multiple regression analysis was performed with those variables ($p \leq 0.10$). Finally, tables present variables with $p \leq 0.05$.

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.

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 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)

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 (Kozłowska 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

REFERENCES

- Abualrub, R.F. and Al Khawalden, A.T. 2013. Workplace physical violence among hospital nurses and physicians in underserved areas in Jordan. *Journal of Clinical Nursing*, December 20 doi: 10.1111/jocn.12473.
- Ahmed, A.D. 2012. Verbal and physical abuse against Jordanian nurses in the work environment. *Eastern Mediterranean Health Journal*, 18(4):318-324.
- Alexander, C. and Fraser, J. 2004. Occupational violence in an Australian healthcare setting: implications for managers. *Journal of Health Management*, 49(6):377-392.
- Algwaiz, W.M. and Alghanim, S.A. 2012. Violence exposure among health care professionals in Saudi public hospitals. A preliminary investigation. *Saudi Medical Journal*, 33(1):76-82.
- Arnetz, J.E. and Arnetz, B.B. 2001. Violence towards health care staff and possible effects on the quality of patient care. *Social Science and Medicine*, 52(3):417-427.
- Bonner, G. and McLaughlin, S. 2007. The psychological impact of aggression on nursing staff. *British Journal of Nursing*, 16(13):810-814.
- Campbell, J.C., Messing, J.T., Kub, J., Agnew, J., Fitzgerald, S., Fowler, B., Sheridan, D., Lindauer, C., Deaton, J. and Bolyard, R. 2011. Workplace violence: prevalence and risk factors in the safe at work study. *Journal of Occupational and Environmental Medicine*, 53(1):82-89.
- Carmi-Iluz, T., Peleg, R., Freud, T. and Shvartzman, P. 2005. Verbal and physical violence towards hospital and community based physicians in the Negev: an observational study. *BMC Health Service Research* 15:5-54.
- Carroll, V. 2003. Verbal abuse in the workplace. *The American Journal of Nursing*, 103(3):132.
- Catlette, M. 2005. A descriptive study of the perceptions of workplace violence and safety strategies of nurses working in level I trauma centers. *Journal of Emergency Nursing* 31(6):519-525.
- Chapman, R. and Styles, I. 2006. An epidemic of abuse and violence: Nurse on the front line. *Accident and Emergency Nursing* 14(4):245-249.
- Daiski I. 2004. Changing nurses dis-empowering relationship patterns. *Journal of Advanced Nursing*, 48(1):43-50.
- Duncan, S.M., Hyndman, K., Estabrooks, C.A., Hasketh, K., Humphrey, C.K., Wong, J.S., Acorn, S. and Giovannetti, P. 2001. Nurses; experience of violence in Alberta and British Columbia hospitals. *Canadian Journal of Nursing Research* 32(4):57-78.
- Duxbury, J. 2002. An evaluation of staff and patient views of and strategies employed to manage inpatient aggression and violence on one mental health unit: a pluralistic design. *Journal of Psychiatric and Mental Health Nursing*, 9:325-337.
- Farrell, G.A., Bobrowski, CH. and Bobrowski, P. 2006. Scoping workplace aggression in nursing: findings from an Australian study. *Journal of Advanced Nursing*, 55(6):778-787.
- Fernandes, Ch., Bouthillette, F., Rabound, J.M., Bullock, L., Moore, C.F., Christenson, J.M., Grafstein, E., Rae, S., Ouellet, L., Gillrie, C., and Way, M. 1999. Violence in the emergency department: a survey of health care workers. *Canadian Medical Association Journal*, 161(10):124-129.
- Foster, C., Bowers, L., Nijman, H. 2007. Aggressive behaviour on acute psychiatric wards: prevalence, severity and management. *Journal of Advanced Nursing*, 58(2): 140-149.

- Gallant-Roman, M.A. 2008. Strategies and tools to reduce workplace violence. *The American Association of Occupational Health Nurses*, 56(11):449-454.
- Gates, D.M., Gillespie, G.L. and Succop, P. 2011. Violence against nurses and its impact on stress and productivity. *Nursing Economics*, 29(2):59-66.
- Gilioli, R., Campanini, P., Fichera, G.P., Punzi, S. and Cassitto, M.G. 2006. Emerging aspects of psychosocial risks: violence and harassment at work. *La Medicina del Lavoro* 97(2):160-164.
- Hahn, S., Müller, M., Needham, I., Dassen, T., Kok, G. and Halfens, R.J. 2010. Factors associated with patient and visitor violence experienced by nurses in general hospitals in Switzerland: a cross-sectional survey. *Journal of Clinical Nursing* 19(23-24):3535-3546.
- Hegney, D., Eley, R., Plank, A., Buikstra, E. and Parker, V. 2006. Workplace violence in Queensland Australia: The results of a comparative study. *International Journal of Nursing Practice*, 12(4):220-231.
- Hegney, D., Plank, A. and Parker, V. 2003. Workplace violence in nursing in Queensland, Australia: a self-reported study. *International Journal of Nursing Practice*, 9(4):261-268.
- Henderson, A.D. 2003. Nurses and workplace violence: nurses' experiences of verbal and physical abuse at work. *Canadian Journal of Nursing Leadership*, 16(4):82-98.
- Hesketh, K.L., Duncan, S.M., Estabrooks, C.A., Reimer, M.A., Giovannetti, P. and Hyndman, K. 2002. Workplace violence in Alberta and British Columbia hospitals. *Health policy*, 63:311-321.
- Hobbs, F.D. and Keane, U.M. 1996. Aggression against doctors: a review. *Journal of the Royal Society of Medicine*, 89:69-72.
- Inoue, M., Tsukano, K., Muraoka, M., Kaneko, F. and Okamura, H. 2006. Psychological impact of verbal abuse and violence by patients on nurses working in psychiatric departments. *Psychiatry and Clinical Neurosciences*, 60(1):29-36.
- International Labour Office ILO, International Council of Nurse ICN, World Health Organization WHO Public Services International PSI 2002. Joint Programme on Workplace Violence in the Health sector. Framework guidelines for addressing workplace violence in the Health Sector. Geneva.
- Kamchuchat, Ch., Chongsuvivatwong, V., Oncheunjit, S., Yip, T.W. and Sangthong, R. 2008. Workplace violence directed at nursing staff at a general hospital in Southern Thailand. *Journal of Occupational Health* 50:201-207.
- King, L.A. and McInerney, P.A. 2006. Hospital workplace experiences of registered nurses that have contributed to their resignation in the Durban metropolitan area. *Curationis*, 29(4):70-81.
- Kitaneh, M. and Hamdan, M. 2012. Workplace violence against physicians and nurses in Palestinian public hospitals: a cross-sectional study. *BMC Health Services Research* 20(12):469.
- Koukia, E., Madianos M.G. and Katostaras Th. 2009. "On the spot" Interventions by Mental Health Nurses in Inpatient Psychiatric Wards in Greece. *Issues in Mental Health Nursing*, 30:327-336.
- Kozłowska, K., Nunn, K., and Cousens, P. 1997. Adverse experiences in psychiatric training. Part 2. *Australian and New Zealand Journal of Psychiatry*, 31:641-652.
- Kwok, R.P., Law, Y.K., LiK, E., NGY, C., Cheung, M.H., Fung, V.K., Kwok, K.T., Tong, J.M., Yen, P.F. and Leung, W.C. 2006. Prevalence of workplace violence against nurses in Hong Kong. *Hong Kong Medical Journal*, 12(1):6-9.
- Magin, P.J., Adams, J., Sibbritt, D.W., Joy, E. and Ireland, M.C. 2005. Experiences of occupational violence in Australian urban general practice: a cross-sectional study of GPs. *Medical Journal of Australia*, 183(7):352-356.
- Maguire, J., Ryan, D. 2007. Aggression and violence in mental health services: categorizing the experience of Irish nurses. *Journal of Psychiatric and Mental Health Nursing*, 14(2):120-127.
- Mantzouranis, G., Fafiora, E., Bampalis, V.G. and Christopoulou, I. 2014. Assessment and analysis of workplace violence in Greek tertiary hospital. *Archives of Environmental and Occupational Health*, Jan 23 doi: 10.1080/19338244.2013.879564
- Mayhew, C. and Chappel, D. 2007. Workplace violence: An overview of patterns of risk and the emotional/stress consequences on targets. *International Journal of Law Psychiatry*, 30(4-5):327-339.
- McKenna, B., Poole, S.J., Smith, N.A., Coverdale, J.H. and Gale, Ch, K. 2003. A survey of threats and violent behaviour by patients against registered nurses in their first year of practice. *International Journal of Mental Health Nursing*, 12(1):56-63.
- McPhaul, K.M. and Lipscomb, J.A. 2004. Workplace violence in health care: recognized but not regulated. *Online Journal of Issues in Nursing*, 9(3):7. www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume92004/No3Sept04/ViolenceinHealthCare.aspx
- Mirza, N.M., Amjad, A.L., Bhatti, A.B., Mirza, F.T., Shaikh, K.S., Kiani, J., Yusuf, M.M., Khan, M.U., Nazir, M.E., Assad, Q., Humayun, A., Kiani, I.G., Amjad, S.I. and Iman, S.Z. 2011. Violence and abuse faced by junior physicians in the emergency department from patients and their caretakers: a nationwide study from Pakistan. *Journal of Emergency Medicine*, Jun 11: 727-33. doi: 10.1016/j.jemermed.2011.01.029. Epub 2011 Jun 12.
- Nazarko, L. 2001. Bullying and harassment. *Nursing Management*, 8(1):14-15.
- Nijman, H., Bowers, L., Oud, N. and Jansen, G. 2005a. Psychiatric nurses' experiences with inpatient aggression. *Aggressive Behaviour*, 31:217-227.

- Nijman, H.L., Palmstierna, T. and Wistedt, B. 2005b. Fifteen years of research with the staff observation scale: a review. *Acta Psychiatrica Scandinavica*, 111(1):12-21.
- Pai, H.C. and Lee, S. 2011. Risk factors for workplace violence in clinical registered nurses in Taiwan. *Journal of Clinical Nursing*, 20(9-10):1405-1412.
- Pranjic, N., Males-Bilic, L., Beganli, A. and Mustajbegovic, J. 2006. Mobbing, stress, and work ability among physicians in Bosnia and Herzegovina: survey study. *Croatian Medical Journal*, 47(5):750-758.
- Presley, D. and Robinson, G. 2002. Violence in the emergency department: nurses contend with prevention in the healthcare arena. *Nursing Clinics of North America*, 37(1):161-169.
- Taylor, J.L. and Rew, L. 2011. A systematic review of the literature; workplace violence in the emergency department. *Journal of Clinical Nursing*, 20(7-8):1072-1085.
- Tolhurst, H., Baker, L., Murray, G., Bell, P., Sutton, A. and Dean, S. 2003. Rural general practitioner experience of work-related violence in Australia. *Australian Journal of Rural Health*, 11(5):231-236.
- Warren, B. 2011. Workplace violence in hospitals : safe havens no more. *Journal of Healthcare Protection Management*, 27(2):9-17.
- Wells, J. and Bowers, L. 2002. How prevalent is violence towards nurses working in general hospitals in the UK? *Journal of Advanced Nursing*, 39(3):230-240.
- Whittington, R., Shuttleworth, S. and Hil, L. 1996. Violence to staff in a general hospital setting. *Journal of Advanced Nursing*, 24(2):326-333.
- WHO 2005. World Report on Violence and Health, World Health Organization, Geneva.
- Williams, M.F. 1996. Violence and sexual harassment: impact on registered nurses in the workplace. *American Association of Occupational Health Nursing*, 44: 73-77.
- Winstanley, S. and Whittington, R. 2004. Aggression towards health care staff in a UK general hospital: variation among professions and departments. *Journal of Clinical Nursing*, 13(1):3-10.
- Woelfle, Ch.Y. and McCaffrey, R. 2007. Nurse on nurse. *Nursing Forum*, 42(3):123-131.
- Yildirim, A. and Yildirim, D. 2007. Mobbing in the workplace by peers and managers: mobbing experienced by nurses working in the healthcare facilities in Turkey and its effect on nurses. *Journal of Clinical Nursing*, 16(8):1444-1453.
- Zahid, M.A., Al-Sahlawi, K.S., Shahid, A.A., Al-Ajmi, M.T. and Awadh, J.A. 1999. Violence towards doctors: prevalence and effects. *Hospital Medicine*, 60:414-418.