International Nursing Review

Conflict management in public hospitals: the Cyprus case

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PAVLAKIS A., KAITELIDOU D., THEODOROU M., GALANIS P., SOURTZI P.& SISKOU O. (2011) Conflict management in public hospitals: the Cyprus case. *International Nursing Review* **58**, 242–248

Background: Conflict among health-care personnel has been identified as an issue within health-care settings around the world.
Aim: To investigate the existence and management of conflict among health-care personnel in public hospitals in Cyprus; to assess the factors leading to conflict among staff members; to evaluate the consequences of conflict arising; and to consider the management strategies.
Methods: A self-administered questionnaire was completed by a random sample of 1037 health-care professionals in all (seven) state-run hospitals in Cyprus in 2008.
Results: Mean age of respondents was 41 years, and 75% were female. Sixty-four per cent of respondents reported that they had never been informed about conflict management strategies, with physicians being the least informed as the relative percentage was 79.8% ($\chi^2 = 33$, $P < 0.001$). Sixty per cent of health-care professionals reported conflict at work with other health-care personnel one to five times per week, and 37% of the respondents stated that they devote 90 min (mean value) from work during their shift in conflict resolution, meaning that managing conflicts may absorb 19% of working time daily. The majority of respondents agreed that organizational problems and communication gaps were the main issues creating conflict. Avoidance and collaboration were the preferable strategies for conflict resolution, used by 36.6% and 37.5% of the respondents, respectively.
Conclusion: Better communication, fair management practices and clear job descriptions and expectations may be needed in order to facilitate change and reverse the negative atmosphere that exists. Further education in conflict management for physicians, nurses and their managers may also be needed.

Keywords: Conflict in Hospitals, Conflict Management, Conflict Management Strategies, Conflict Resolution, Cyprus, Human Resources, Workplace Conflict

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Background

Conflict among health-care personnel has been identified as an issue within health-care settings around the world (Adebamowo 2006; Almost 2006; Skjorshammer 2001). The most common sources of conflict within a health-care facility are personal differences, lack of clear job descriptions and responsibilities, role incompatibility and organizational issues such as high levels of

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stress, resource scarcity and job uncertainty (Adebamowo 2006; Danna & Griffin 1999; Jameson 2003; Lemieux-Charles 1994). Studies have shown that intrapersonal conflict among health-care personnel had a negative impact on stress levels, work satisfaction and team performance effectiveness (Cox 2003; Tabak & Koprak 2007). This kind of workplace stress often results in absenteeism and high turnover (Almost 2006; Clarke & Cooper 2004). In addition, the quality of health services provided and the implementation of quality-improving strategies seem to be affected by the cooperation of health-care professionals (Krogstad et al. 2004).

There is not one universal definition of conflict in the literature. According to Almost (2006), 'most definitions agree that conflict is a process involving two or more people, where a person perceives the opposition of the other. Antecedents stem from individual characteristics, interpersonal and organizational factors'.

According to management theory, there are five types of conflict resolution behaviour: competition, collaboration, compromise, avoidance and accommodation (Vivar 2005). The behaviour in resolving a conflict can range from cooperation to confrontation; the intentions determining the type of conflict management strategy used in a situation are assertion and cooperation, where assertion refers to an attempt to confront the other party, and cooperation refers to an attempt to find an agreeable solution.

Competition is a win-or-lose strategy where one party asserts their point of view at the potential expense of another. In this situation, personal goals usually overrule concern for relationships. Collaboration aims at working together with the other party in order to find a win-win solution that can satisfy the conflicting parties. The interests of others are as important as one's own interests in finding a mutually beneficial solution. Collaboration is usually the best method of managing conflicts, as it strives to satisfy the needs of all parties involved. Compromise refers to finding a middle ground where concern is shown for personal goals as well as relationships. In a compromise, there are gains and losses for each party. Avoidance is based on denying, delaying or ignoring the conflict. Accommodation involves surrendering one's needs or position for that of the other party in the conflict.

Aim

The present study attempted to investigate the existence and management of conflict among health-care personnel from different disciplines in public hospitals in Cyprus. The aim was to assess the factors leading to conflict between staff members, evaluate the consequences and ramifications of conflict arising between them, and consider the management strategies.

Methods

A survey was designed and implemented on a national level in Cyprus at all seven state-run hospitals in 2008. A self-administered questionnaire was used in this study to measure the existence and management of conflict among personnel of different disciplines and was administered in morning and afternoon shifts. The five-part questionnaire specific for conflicts in health-care organizations was mainly based on the questionnaire of Tenglilimoglu & Kisa (2005) after permission to use. Apart from the demographic characteristics, the main parts of the questionnaire were referring to participants' concerns on the factors causing conflict, organizational factors as well as group factors that may lead to conflict. The fifth part of the questionnaire was a section devoted to conflict resolution. The respondents were asked to select and rank in order of importance five statements from a list of 14 possible suggestions for conflict resolution.

The English version of the questionnaire was translated into Greek, and the 'translation and back translation technique' was used. It was also discussed with two medical specialists and two nurses, one in a high administrative position and one with long clinical experience, in order to increase face validity. The questionnaire was tested for reliability, and all Cronbach's α values exceeded 0.75.

The intention was to include health professionals who work across different disciplines within the realm of health-care providers in order to assess if conflict exists within and between professions and disciplines. The participants were selected by random sampling procedures.

Quantitative variables are presented as mean and standard deviation (SD), while qualitative variables are presented as absolute and relative frequencies. Differences between qualitative variables were assessed with Pearson chi-square test. All tests of statistical significance were two tailed, and P-values of less than 0.05 were considered significant. Statistical analysis was performed using the Statistical Package for Social Sciences software (SPSS 16.0 for Windows, SPSS Inc., Chicago, IL, USA).

Ethical considerations

The study protocol was approved by the ethical committees of the hospitals. The participation in the study was voluntary. An introduction letter was attached to the questionnaire to explain the study purpose. The questionnaire was anonymous, and the respondents were reassured that all information would be kept confidential. Respondents returned the questionnaire in a sealed envelope to a designated location in each institution. The envelopes containing the anonymous questionnaires were collected by a researcher and submitted for analysis. Confidentiality

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was maintained by using sequential identification numbers when entering the data.

Results

Demographics

The questionnaire was administered to 1292 health-care personnel in all seven public hospitals in Cyprus and was finally completed by 1037 (response rate 80.2%). The study population was nurses (821, 79.1%), physicians (125, 12.2%), psychologists (23, 2.2%), physiotherapists (49, 4.7%) and occupational therapists (19, 1.8%). Also, the study population represented more than 58% of the total number of the health-care personnel, which is estimated to be 2211 professionals. Nurses in the sample represent approximately 46% of the total number of nurses, and physicians, psychologists, physiotherapists and occupational therapists represent 38%, 77%, 89% and 77%, respectively.

Approximately 75% of respondents were female. The mean age of the respondents was 41 years (SD 11.6). Seventy-nine per cent of respondents were married. Demographic characteristics of the participants are shown in (Table S1). Ninety-seven per cent of all staff surveyed possessed higher education qualifications. The mean years of service in the department they were currently working in were 8.13 (SD 8), and 38.2% of the participants had a working experience ≥21 years. Almost 14% of the participants hold a managerial position. The study population for physiotherapists, occupational therapists and psychologists seems limited. However, it represents more than 75% of the total number of the respective professional categories working in public Cyprus hospitals.

Job satisfaction

The Cyprus health-care professionals seem quite satisfied in their profession as the majority of individuals surveyed (72.9%) conceded to being largely satisfied with their job (absolutely satisfied = 10.5%, to a large extent = 62.4%); a significant number expressed being somewhat satisfied (23%), leaving a very small number either a little satisfied or not at all (4.2%). Health-care professionals who had worked for more than 15 years seemed to be more satisfied than their younger colleagues (80.7% vs. 65.1%, $\chi^2 = 34$, $P < 0.001$).

Sixty-five per cent of the respondents had no intention to quit their job. Nurses supported that stronger than the other professionals (68% vs. 55.6% of the physicians and 51.7% of the rest, $\chi^2 = 15$, $P = 0.005$).

When asked about various organizational aspects of their job, more than 60% responded in a very favourable manner. Forty-four per cent of the respondents were very satisfied, and 18% were extremely satisfied with the roles and job functions assigned to them. More than 60% of physicians, nurses, physiotherapists and occupational therapists reported satisfaction with their job descriptions. Psychologists had lower scores as far as job satisfaction is concerned, but 52% still felt very satisfied by their roles and job functions. Almost 70% of health-care professionals professed that they would not be satisfied in a different occupation. Nursing staff was the exception with one-third (34.2%) expressing that they might be satisfied in a different profession (22% of physicians and 20.2% of the other professionals supported this statement) ($\chi^2 = 13$, $P = 0.014$). Approximately 40% of nurses (the highest proportion compared with other occupations) stated that they would be calmer if they worked in a different sector ($\chi^2 = 15$, $P = 0.004$). Thirty-two per cent of nurses also stated that they would be more productive in a different sector compared with 22.6% of physicians and 14.1% of the other health-care professionals ($\chi^2 = 14$, $P = 0.007$).

Regarding conflict

When health-care personnel were asked whether they had been made aware of conflict management methods or information during their professional education, 36% responded they had, and 64% had not. Physicians seemed to be the least informed, as 79.8% reported no former education on conflict management (the respective percentage for nurses was 63.1%), and psychologists were the most informed with 78.3% stating that they had been educated on these matters ($\chi^2 = 33$, $P < 0.001$). Professionals holding a managerial position were more informed about conflict resolution (42%) compared with those without administrative duties ($\chi^2 = 3$, $P = 0.09$).

With regard to the person with whom they came in conflict with at their workplace during the last 12 months, 30% of the respondents reported conflict with the administration/management as opposed to 16.2% with assistants. Physicians stated that more than the rest of the staff (35.2% vs. 29.7% of nurses and 16.5% of the rest, $\chi^2 = 9.4$, $P = 0.009$). Physicians, nurses and clinical psychologists (approximately 30% of individuals in each group) came into conflict with the administration most often, whereas the physiotherapists came into conflict with the administration least often (11%).

The majority of the respondents reported conflict with colleagues in their own wards. Physicians reported conflict with their colleagues (54.1%) more than the rest ($\chi^2 = 21$, $P < 0.001$). In terms of hierarchical levels, approximately 40% came into conflict with their superior, with nurses and physicians scoring higher than the others (41% vs. 26.4%, respectively) ($\chi^2 = 7$, $P = 0.03$). The exception seems to be the physiotherapists, who had the lowest score of conflict with a superior (15%) and the highest with colleagues at the same hierarchical level (48%).

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Nurses chose avoidance more often than the other professions as their primary conflict resolution style ($\chi^2 = 33$, $P < 0.001$) (Table S2). Moreover, physiotherapists and occupational therapists chose more often collaboration (53% and 57%, respectively), but a large percentage of them also used the avoidance style (35% and 28%, respectively). Finally, psychologists scored highest in the collaboration style of conflict resolution with 62% choosing this option, followed by 22% choosing avoidance. Physicians were the only group who scored more than 10% for the competitive style of conflict resolution (14%). The group who compromised the most were nurses (15%).

Personnel with managerial duties chose collaboration in a higher percentage than the rest of the staff (59.1% vs. 33.3%) ($\chi^2 = 35$, $P < 0.001$).

If the respondents had to choose a go-between, more than 80% of the health-care personnel expressed that they would refer either to a colleague of the same hierarchical level or to their superior in the department, to help resolve a conflict. The majority of the health-care professions chose to have a colleague assist them in resolving the conflict, and that was mostly supported by nurses (43.1%) and physicians (41.1%) compared with the rest (31.3%) ($\chi^2 = 70$, $P < 0.001$).

Respondents estimated, on average, that a conflict incident can distract them away from work for approximately 29 min, and 37% of the respondents came into conflict with others on a daily basis (one to five times per day), devoting, on average, 90 min from work during their shift in conflict resolution. Almost 60% of health-care professionals in Cyprus face conflict at work with other health-care personnel one to five times per week (Table S3).

As far as the factors that elicit conflicts are concerned, it seems that organizational problems and obscurities as well as communication gaps may lead into conflict, as these factors were ranking first among the elicitors of conflicts (Table S4). The majority of respondents agreed that organizational problems were the main issue creating conflict within the work environment (25% of respondents agreed and 20% strongly agreed with this fact). Sixty per cent of the respondents agreed that receiving direction from more than one manager affects their productivity negatively and may lead to conflicts. Nurses supported that slightly stronger (61.9% vs. 57.8% of physicians and 53.6% of the rest of the professionals) ($\chi^2 = 11$, $P = 0.02$). Two-thirds of the respondents affirmed that conflict arises with colleagues from different departments because of the nature of cooperation and interaction between the different health-care units within the hospital. Organizational obscurities (e.g. insufficient authority for the duties that a professional is responsible for, pressure or obstructions by others when someone is making professional decisions) created conflict in the workplace for all professionals, but more than 50% of physicians and physiotherapists rated this element as either 'much' or 'very much'.

Respondents stated that differences in educational levels lead to communication problems between different disciplines of health-care providers; more than 50% of respondents supported this fact to a great extent. Yet 50% of physicians, nurses and physiotherapists believed that their messages were understood by the other health-care professions; 16% of occupational therapists and 35% of psychologists supported this statement. Physiotherapists believed more than the others that remuneration is not based on job performance ($\chi^2 = 12$, $P = 0.1$). Also, psychologists believed more than the others that the remuneration is fairly distributed between different health-care specializations ($\chi^2 = 12$, $P = 0.02$). Fifty per cent of physiotherapists also felt that the hospital management is not aware of their contribution. It is important to note that even though the majority of health-care workers stated that their professional development is on track with their aspirations, 26% of physicians, 17% of nurses and 23% of the rest of the professionals 'strongly disagreed' to this statement ($\chi^2 = 52$, $P < 0.001$).

Regarding suggestions for conflict resolution, 35% of respondents chose the statement referring to the establishment of good communication and cooperation methods between personnel and between units as the most important aspect for preventing conflict. More than 50% of respondents stated that if management was fair and impartial, there would be less conflict between health-care personnel in the health sector. Nurses seemed to support that stronger than the rest of the health-care professionals (31.4% of nurses vs. 27% of physicians and 11.5% of the rest of the professionals) ($\chi^2 = 5$, $P = 0.1$).

Revealing reasons for conflict was very important (24% = first choice, 27% = second choice, 18% = third choice). More than 50% stated that specific job descriptions with specific duties assigned to each employee as well as clear responsibilities and privileges at work would lead to less conflict in the workplace (20% of physicians, 16% of nurses and 27% of the rest of the professionals, $\chi^2 = 4.3$, $P = 0.1$). Some suggestions for resolving conflict were: 'respect for personal rights and professional development' (34.7%), 'opportunities for expression of opinions during situations of conflict' (33.6%) and 'organisation of conflict resolution and conflict prevention meetings' (30.1%).

Discussion

Conflict is inherent in hospitals as in all complex organizations, and according to the findings of this study, health professionals seem to deal with internal and external conflicts on a daily basis. According to the respondents, more than one-third devoted 90 min from work in resolving conflicts daily, meaning that

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managing conflicts may absorb 19% of working time. Despite that fact, 64% of the respondents stated that they had no former information on conflict resolution strategies. These issues are confirmed by findings from other studies that have shown that nurses and physicians feel that they have insufficient background to deal with conflict (Willmot 1998) or that they are not able to handle sufficiently conflict resolution strategies (Skjorshammer 2001).

According to the findings of this study, organizational problems and obscurities as well as communication gaps are ranked between the first factors leading to conflict. This is similar to results from other studies in which poor communication has proven to be a very strong source of conflict (Adomi & Anie 2006; Tenglilimoglu & Kisa 2005). In the study of Zakari et al. (2010), the interpersonal type of conflict, which may be attributed to miscommunication, was found to be the most common type of conflict among nurses. Moreover, it has been shown that lack of clear job descriptions is one of the most important factors leading to conflict, and efforts should be made in distinguishing roles and responsibilities. These findings were also confirmed by the literature, according to which role overload and expanded duties without clear job descriptions were found to be common sources of conflict (Forte 1997; Piko 2006). According to a recently published study regarding mobbing against nurses in workplace by Efe & Ayaz (2010), almost one-fourth of the nurses who expressed that they had been exposed to mobbing reported that the executor of mobbing was the head nurse, and 10% of them supported that the reason for mobbing was 'communication problems'.

Working conditions and organizational factors were found to be among the most important workplace-related factors for eliciting conflicts. Almost 60% of the respondents agreed that receiving direction from more than one manager affects their productivity negatively, and nurses supported that fact stronger than the rest of the professionals. That may be attributed to the fact that nursing personnel hierarchy is not always kept in Cyprus hospitals, with the director of nursing personnel assigning duties to nurses going over the head nurse of the ward. These results seem to coincide with the fact that according to our findings, nurses come into conflict with their superiors more than the rest of the staff. Thirty-two per cent of the respondents strongly supported the fact that interdependence of working activities may lead to conflict, and more than one-third of nurses stated that if management was fair and impartial, there would be less conflict between health-care personnel. These are also in accordance with findings from other studies, according to which the work intensity and the conditions of assigned nursing duties may lead to conflict (Nayeri & Negarandeh 2009); as well, inter-group conflicts between groups of professionals that are supportive in work are found to be common (Zakari et al. 2010).

According to our findings, differences in educational levels lead to communication problems between different disciplines of health-care professionals. These findings coincide with other studies as well. According to Domajnko & Pahor (2010), the introduction of the higher educated nurses in Slovenia was perceived by nursing assistants (which represent the majority of nursing personnel in hospitals) as a means for nurses to exercise control over nursing assistants and as a process of distancing from direct nursing care. The mistrust of the academic nurse on the part of some nursing assistants was interpreted as a barrier to full professionalization of nursing care and also interprofessional collaboration in the health-care sector. Additionally, another factor that elicited conflicts between health-care personnel was the fact that higher educated nurses were less prone to accept a subordinate role in health care. As such, they were perceived as potentially challenging the established status quo, which made the presented 'educational' issue not so much an issue of knowledge and evidence-based practice, but rather one of (the re-distribution of) power.

Both nurses (38.1%) and physicians (34.9%) use avoidance (at almost similar percentages with collaboration), which is generally characterized as an unsuccessful technique as it denies that the problem exists. This is consistent with findings from other studies (Cavanagh 1988) where almost 30% of hospital employees reported that there were unsolved conflicts at their work unit (Skjorshammer 2001; Vivar 2005). Dominance is also in high rank regarding the choices of all professionals. Physicians seem to be the most competitive group as they report the largest percentage (14%) on attempting to acquire complete dominance, and nurses, however, are the most negotiable group as 15% choose compromise. The competitive attitude of physicians may also be supported by the fact that they keep the highest scores compared with the other health professionals in reporting conflicts with colleagues in their own wards.

It seems that head nurses and physicians with administrative duties favour more than the rest of the staff collaboration as the first strategy. This fact shows that health professionals in managerial positions are adopting a more mature behaviour regarding conflict resolution. This finding is not in accordance with other studies, according to which nurses and physicians in managerial positions were adopting more than the rest of the staff a conflict behaviour based on dominance (Rahim 1985; Vivar 2005). However, this difference may be attributed to the higher percentage of managerial personnel who reported education on conflict management strategies in comparison to the rest of the staff ($\chi^2 = 3$, $P = 0.09$). This probably shows a significant relationship between education and successful conflict management. Yet it is

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interesting to note that 22% of head nurses, physicians and the other professionals chose avoidance as the second option for handling conflicts. As stated before, although this strategy can be effective until more information is available and an analysis of the problem has been made, if it lasts long, it is dysfunctional as it prevents recognition that the problem exists.

The majority of the respondents stated that they would refer to either a colleague or their superior in their department to resolve a conflict. This finding fully coincides with Skjorshammer (2001), who supports that conflict should be handled early and as close to the premises as possible.

We found that unfair distribution of resources was a factor connected with conflict, a finding that is confirmed by other studies (Gardner 1992; Kelly 2006), indicating the importance of the 'sense of justice' within workplace.

Regarding job satisfaction, Cyprus nurses seem quite satisfied with their profession as 68% of them stated that they had no intention to quit their job, and more than 70% reported to be absolutely or to a large extent satisfied with their job and duties. These figures do not coincide with most of the studies in other countries where the respected percentages are much lower (Karanikola et al. 2007; Lee 1998; Lundh 1999; Nolan et al. 1998).

Implications for nursing practice

It is vital for an organization like a hospital that the information flows to all directions (upwards–downwards, horizontally and across) in order that the organizational objectives are clearly understood by all members. Therefore, efforts should be made to improve teamwork among hospital staff and for managers to adopt open-door policies. The objective of an open-door policy is to 'lower the threshold for raising an issue, dispute or conflict, in order to work it out early and as close as possible to the parties' own work role, work group and immediate superior' (Skjorshammer 2001), and health-care professionals should be trained for that. After all, this was ranked among the first suggestions by all groups of staff that supported the need for organizational conflict resolution and conflict prevention meetings.

Health-care personnel should possess skills and resources to manage conflicts. As shown in the results, health-care professionals do not possess the appropriate skills to handle conflicts effectively. According to Robinson (2010), nurses should, instead of simply describing conflict situations, try to understand in depth the factors leading to conflict. Given the importance of working relationships between medical and nursing personnel (Stordeur et al. 2001), and the frequency of conflict that arises in hospitals, managers should ensure that all health-care staff undergo a training on conflict resolution. Individuals will have the opportunity to analyse their own style of conflict resolution and be made aware of effective ways to deal with situations of conflict. Encouragement of collaboration, correct communication and cooperation will help them deal with conflict in constructive and effective ways. Important skills such as effective communication, organizational skills and creative problem solving can be learned and practised in a training setting so that the skills can be transferred later to a real-life situation.

Limitations

For the findings presented in this paper, some limitations should be taken into account. As mentioned in the Methods section, the questionnaire was self-reported, and therefore, the reliability of the respondents' answers is assumed. Additionally, this method carries the risk of socially desirable responses, but this limitation is minimized by the high response rate of the study population. Another limitation is that the factors associated with the high level of job satisfaction among Cyprus nurses were not explored in depth in the present study. Finally, the findings may not be generalized outside Cyprus.

Despite these limitations, the results of this study may contribute to the development of health-care reform by providing information on job satisfaction and conflicts of health-care staff in Cyprus. Our results, hopefully, may stimulate further research on successful conflict management strategies. The Cyprus health-care system is now undergoing major changes because of health-care reforms for the establishment of a national health system. Yet very few studies have investigated issues regarding working relationships between Cyprus health professionals so far. In particular, there is a shortage of research on nurses' experiences of job satisfaction and conflict resolution, and to some extent, this may explain the willingness of staff to participate in the study and therefore the high response rate of the study population.

Conclusion

The findings suggest that dealing with conflict absorbs a significant amount of time of health professionals. Yet health-care professionals are not well prepared to handle conflicts, and therefore, education on conflict resolution methods is essential to equip nurses and other health professionals with the necessary knowledge and skills to interact appropriately within health-care organizations. The health-care environment needs mechanisms to strengthen relationships between health professionals and minimize sources of conflict. Organizational problems and obscurities as well as communication gaps are ranked among the first factors leading to conflict. Better defined roles, job descriptions and communication paths may improve the working environment.

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Acknowledgement

This study has been funded by the Open University of Cyprus.

Author contributions

A.P. – study conception/design, data collection/analysis.
D.K. – study conception/design, drafting of manuscript.
M.T. – study conception/design, supervision.
P.G. – data analysis, statistical expertise.
P.S. – drafting of manuscript, critical revision of the paper.
O.S. – study conception/design, critical revisions for important intellectual content.

References

Adebamowo, C. (2006) Questionnaire survey of working relationships between nurses and doctors in university teaching hospitals in Southern Nigeria. *BMC Nursing*, **21** (5), 2.

Adomi, E. & Anie, S. (2006) Conflict management in Nigerian university libraries. *Library Management*, **27**, 520–530.

Almost, J. (2006) Conflict within nursing work environments: concept analysis. *Journal of Advanced Nursing*, **53**, 444–453.

Cavanagh, S. (1988) The conflict management style of intensive care nurses. *Journal of Critical Care*, **4**, 118–123.

Clarke, S. & Cooper, C.L. (2004) *Managing the Risk of Workplace Stress*. Routledge, London.

Cox, K.B. (2003) The effects of intrapersonal, intragroup, and intergroup conflict on team performance effectiveness and work satisfaction. *Nursing Administration Quarterly*, **27**, 153–163.

Danna, K. & Griffin, R.W. (1999) Health and well-being in the workplace: a review and synthesis of the literature. *Journal of Management*, **25**, 357–384.

Domajnko, B. & Pahor, M. (2010) Mistrust of academic knowledge among nurses in Slovenia. *International Nursing Review*, **57**, 305–311.

Efe, S. & Ayaz, S. (2010) Mobbing against nurses in the workplace in Turkey. *International Nursing Review*, **57**, 328–334.

Forte, P. (1997) The high cost of conflict. *Nursing Economics*, **15**, 119–123.

Gardner, D. (1992) Conflict and retention of new graduate nurses. *Western Journal of Nursing Research*, **14**, 76–85.

Jameson, J.K. (2003) Transcending intractable conflict in health care: an exploratory study of communication and conflict management among anesthesia providers. *Journal of Health Communication*, **8**, 563–581.

Karanikola, M., Papathanassoglou, E., Giannakopoulou, M. & Koutroubas, A. (2007) Pilot exploration of the association between self-esteem and professional satisfaction in Hellenic hospital nurses. *Journal of Nursing Management*, **15**, 78–90.

Kelly, J. (2006) An overview of conflict leadership dimension. *Dimensions of Critical Care Nursing*, **25**, 22–28.

Krogstad, U., Hofoss, D. & Hjortdahl, P. (2004) Doctor and nurse perception of inter-professional co-operation in hospitals. *International Journal for Quality in Health Care*, **16**, 491–497.

Lee, F.K. (1998) Job satisfaction and autonomy of Hong Kong registered nurses. *Journal of Advanced Nursing*, **27**, 355–363.

Lemieux-Charles, L. (1994) Physicians in health care management: managing conflict through negotiation. *Canadian Medical Association Journal*, **151**, 1129–1132.

Lundh, U. (1999) Job satisfaction among Swedish nurses and laboratory technologists. *British Journal of Nursing*, **8**, 948–952.

Nayeri, N. & Negarandeh, R. (2009) Conflict among Iranian hospital nurses: a qualitative study. *Human Resources for Health*, **20**, 25.

Nolan, M., Brown, J., Naughton, M. & Nolan, J. (1998) Developing nursing's future role. 2: nurses' job satisfaction and morale. *British Journal of Nursing*, **7**, 1044–1048.

Piko, B. (2006) Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: a questionnaire survey. *International Journal of Nursing Studies*, **43**, 311–318.

Rahim, M. (1985) Referent role and styles of handling interpersonal conflict. *Journal of Social Psychology*, **126**, 79–86.

Robinson, J. (2010) Nursing and health policy perspectives. *International Nursing Review*, **57**, 277.

Skjorshammer, M. (2001) Conflict management in a hospital: designing processing structures and intervention methods. *Journal of Management in Medicine*, **15**, 156–166.

Stordeur, S., D'hoore, W. & Vandenberghe, C. (2001) Leadership, organizational stress, and emotional exhaustion among hospital nursing staff. *Journal of Advanced Nursing*, **35**, 533–542.

Tabak, N. & Koprak, O. (2007) Relationship between how nurses resolve their conflicts with doctors, their stress and job satisfaction. *Journal of Nursing Management*, **11**, 321–331.

Tenglilimoglu, D. & Kisa, A. (2005) Conflict management in public university hospitals in Turkey: a pilot study. *Health Care Management*, **24**, 55–60.

Vivar, C. (2005) Putting conflict management into practice: a nursing case study. *Journal of Nursing Management*, **14**, 201–206.

Willmot, M. (1998) The new ward manager: an evaluation of the changing role of the charge nurse. *Journal of Advanced Nursing*, **28**, 419–427.

Zakari, N., Al Khamis, N. & Hamadi, H. (2010) Conflict and professionalism: perceptions among nurses in Saudi Arabia. *International Nursing Review*, **57**, 297–304.

Supporting information

Additional Supporting Information may be found in the online version of this article.

Table S1 Demographic characteristics of the study population ($n = 1037$)

Table S2 Conflict management strategy reported by the participants

Table S3 Time spent on conflicts (discrete episodes of conflict)

Table S4 Factors that may lead to conflicts in hospitals

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