**Abstract**

**Aim:** Nurses have an important role in caring for terminally ill patients. They are often confronted with euthanasia but little is known about their attitudes towards it. The present study aimed to examine Iranian Muslim nurses’ attitudes towards euthanasia.

**Methods:** In this exploratory cross-sectional study, all qualified registered nurses working in two teaching hospitals (Kashani and Hajar hospitals) in Iran were invited to participate. The Euthanasia Attitude Scale (EAS) was used to assess the nurses’ attitude towards euthanasia. Of 266 nurses who fit the criteria, 190 participated in the study (response rate 72.9%); 91.1% (n=173) were female and 8.9% (n=17) were male.

**Results:** In total, 57.4%, 3.2% and 39.5% of nurses reported a negative, neutral, and positive attitude to euthanasia respectively. Nurses reported most negative attitude to domain ‘practical consideration’ with mean of 2.36±0.9 and most positive attitude to the domain ‘treasuring life’ with a mean EAS score of 2.85±0.4.

**Conclusion:** The majority of Muslim nurses were found to have negative attitudes to euthanasia. We recommend that future studies should be conducted to examine Muslim nurses’ attitudes to euthanasia in different cultures to determine the role of culture and religious beliefs in attitude to euthanasia.

**Key words:** Euthanasia ● Nurses ● Muslim ● Religion ● End-of-life care

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With the expertise and medical technology available in today’s world, most diseases can be treated, extending human lifespan and creating a number of moral and ethical problems (Zarghami et al, 2009; Tang et al, 2010; Kamath et al, 2011; Aghababaei, 2014). One of the most important topics related to these problems is that of euthanasia, a subject that has received attention from experts from varied disciplines (Zarghami et al, 2009; Mousavi et al, 2011; Aghababaei, 2014). Euthanasia has been classified as either ‘active’ or ‘passive’ (Parpa et al, 2010; Aghababaei, 2014). In the active type, the patient is the decision-maker and would ask the physician to end his/her life, which is done by an ‘act’ such as injection of a lethal medicine. For example, the physician injects a quick-acting sedative intravenously followed by a paralytic agent to halt respiration (Aghababaei, 2014). Active euthanasia may be voluntary (when the patient has requested to end their life), involuntary (when the patient has expressed a wish to the contrary), or non-voluntary (when the patient who is being killed has made no request to end their life) (Rastegari et al, 2010). In the passive type, the patient would refuse his treatment to hasten death without any specific activity to end life (Aghababaei, 2014).

As part of the health-care team, nurses have an important role caring for terminally ill patients. They are often confronted with euthanasia but little is known about their attitudes towards it (De Bal et al, 2006; Inghelbrecht et al, 2009; Moghadas et al, 2012). In this regard, Ryynänen et al (2002) conducted a study in Finland, examining physicians, nurses and the general public’s attitude towards physician-assisted suicide, active voluntary euthanasia and passive euthanasia in five imaginary patient scenarios (incurable cancer, severe dementia, mental retardation, depression and paralysis). In Finland, assisted suicide is not considered a crime under the Penal Code (Ministry of Social Affairs and Health, 2012). The results showed that passive euthanasia was largely accepted among Finnish medical professionals and the general public. Their study also showed that all forms of euthanasia were more often accepted among nurses with a higher level of religious beliefs compared to other nurses (Ryynänen et al, 2002).

Similar to Netherlands and Luxembourg, euthanasia has been legislated in Belgium (Gastmans et al, 2004; Inghelbrecht et al, 2010). In Belgium, legislation allows physicians only to perform the euthanasia (Inghelbrecht et al, 2010). In one study in Belgium (Inghelbrecht et al, 2010), researchers investigated the role of nurses in the decision-making, preparation and administration of life-ending medications with a patient’s explicit request (euthanasia) or without an explicit request. The results of the study
showed that in 12% of the cases of euthanasia and in 45% of the cases of assisted death without an explicit request the life-ending medications, were administered by the nurses. Belgian nurses acted according to the physicians’ orders, but mostly without the physicians’ presence. In another study, van Bruchem-van de Scheur et al (2008) examined nurses’ attitudes towards euthanasia and physician-assisted suicide from 1509 hospitals, home-care organisations and nursing homes in The Netherlands. More than half of the nurses who participated in this study mentioned that preparing euthanatics and inserting an infusion needle to administer the euthanatics should not be accepted as nursing tasks (van Bruchem-van de Scheur et al, 2008). A survey by Mickiewicz et al (2012) studied nurses (with and without experience on hospice wards), nursing students and family members of patients’ attitudes towards euthanasia. They reported that the majority of their respondents were not interested in participating in the process of euthanasia. They also reported that legalisation of euthanasia was rarely favoured by the hospice workers (Mickiewicz et al, 2012).

Iran is a middle eastern country with approximately 77 million residents. Most religions are represented in Iran but the major faith tradition in the country is Islam (Iranmanesh et al, 2010) and death is one of the crucial subjects in Islam (Razban et al, 2013). According to Islamic views, the patient does not have the right to die voluntarily (Zahedi et al, 2007). The use of devices or medications aimed at ending human life are also not allowed in Islam. Muslims believe that life on earth and death is only a transition between two different lives (Sarhill et al, 2001; Razban et al, 2013). To have a better situation in life after death is the goal of every Muslim. There is very little available information about attitudes towards euthanasia in Islamic countries, especially in Iran (Mousavi et al, 2011; Aghababi et al, 2011). Moghadas et al (2012) examined Iranian critical care nurses’ attitudes towards euthanasia. The study showed that the majority of critical care nurses (83.5%) had a negative attitude towards euthanasia. The authors also reported that nursing work experience and age were negatively associated with attitude to euthanasia (Moghadas et al, 2012). Interestingly, in another study, Kachoie et al (2011) examined medical students’ attitudes towards euthanasia and 50% of the participants reported a positive attitude towards euthanasia.

Studies about Iranian nurse’s attitudes about euthanasia are scarce. The aim of the present study was to examine Iranian Muslim nurses’ attitudes towards euthanasia.

Methods

Participants
This study employed a descriptive design and was conducted in two teaching hospitals, Kashani and Hajar, in Shahrekord, west Iran. Using convenience sampling, all qualified registered nurses (n=266) working in 15 different wards at the two teaching hospitals were invited to participate in the study.

In Iran, the government regulates nursing education. Students can study nursing across all education levels from bachelor to doctoral; however, unlike some western countries, Iran does not differentiate by rank within licensed nursing personnel. Registered nurse (RN) is the only professionally recognised rank. On successful completion of nursing educational programs, graduated nurses are automatically granted the status of RN, which is the minimum legal and educational requirement for professional nursing practice. RNs must complete a 4-year bachelor’s degree at a nursing college (Iranmanesh et al, 2013).

Data collection
Data were collected from March to May 2013. Questionnaire packages containing a covering letter describing the aims of the study, a demographic variables questionnaire, and the Euthanasia Attitude Scale (EAS) that includes a definition of euthanasia, were distributed to participants. Euthanasia was defined as:

‘a medical term which refers to easy and intentional termination of a person’s life who suffers from an incurable disease with no hope of recovery. It can be divided into two major types: active and passive euthanasia. In active euthanasia, the patient asks the doctor to end his/her life, which is done by performing an action such as lethal injection, while in passive euthanasia, the patient refuses medications thereby accelerating his/her death without any specific action being carried out.’ -ref?

Participants answered the questionnaire and EAS individually during hours of work and returned the test to their head nurse. At the end of the shift work, the researcher collected the questionnaires.

The Euthanasia Attitude Scale (EAS)
The EAS was originally developed by Tordella and Neutens to examine the attitude to euthanasia among college students (Tordella and Neutens, 1979). Rogers et al (1996) modified
and edited the EAS items for assessing social values and ethical judgment of euthanasia. In 2005, Chong and Fok categorised the 21 items of EAS in four domains: ethical consideration, practical consideration, treasuring life and naturalistic beliefs (Chong and Fok, 2005). The scoring method used in this study was the same as the original design, meaning items ranged from 1 to 5, with 5 indicating strong support for euthanasia, 3 indicating neutral, and 1 indicating strong opposition to euthanasia (Aghababaei, 2012).

### Ethical consideration
Consent was implicit by respondent's decision to return the completed questionnaire. Participants were assured that all data would remain anonymous, kept confidential and be stored safely. Ethical approval was obtained from both Shahrekord University of Medical Sciences and the heads of the two hospitals affiliated to the university prior to the collection of any data.

### Data analysis
Descriptive statistics, Pearson correlation coefficient and independent sample T-test were used for data analysis. All statistical analyses were performed using SPSS software (v17.0; PASW Statistics) and a variable was considered to be statistically significant if P< 0.05.
Results

Out of 266 nurses, 194 participated in the study. There were four returned questionnaires which were incomplete and thus excluded from the study, therefore analysis was performed on 190 questionnaires (response rate 72.9%). Of the 190 nurses, 91.1% (n=173) were female and 8.9% (n=17) were male. The mean age of participants was 33.3±6.3 years and mean years of experience was 9.2±0.9 years. Some 75% of nurses were married and the rest were single. All nurses who participated in the study were Muslim; 75.3% considered themselves as very religious and the rest reported to have a moderate level of religious beliefs.

In total, 57.4%, 3.2% and 39.5% of nurses reported a negative, neutral and positive attitude to euthanasia respectively. Nurses reported the most negative attitude to the EAS domain ‘practical consideration’ with a mean score of 2.36±0.9 and the most positive attitude to the domain ‘treasuring life’ with mean of 2.85±0.4. Tables 1 and 2 show nurses’ responses to the 4 domains and the 21 items of EAS in detail.

The Pearson correlation test showed no significant correlation between mean score of nurses’ attitude toward euthanasia and nurses’ age (p=0.94). Results of this test also showed no significant correlation between mean score of nurses’ attitude toward euthanasia and nurses’ years of experience (p=0.05). According to the results of the independent T-test, male nurses showed most positive attitudes compared to female nurses (2.96±0.74 vs 2.69±0.75) but the difference was not statistically significant (p=0.171) (Table 3). The results of this test also showed no significant difference in attitude to euthanasia between married and single nurses; although the mean score of attitudes of single nurses were higher (2.77±0.76 vs 2.70±0.75) (p=0.614) (Table 3). Independent T-test also revealed no significant difference between nurses with high and moderate level of religious beliefs; although the mean score of attitudes were higher in nurses with a moderate level of religious beliefs (2.83±0.81 vs 2.62±0.72) (p=0.24).

Discussion

In Iran, end-of-life care is still a new topic (Razban et al, 2013) and information about attitudes to euthanasia in Iran is scarce. The present study examines Iranian Muslim nurse’s attitudes towards euthanasia. According to the findings, most Iranian nurses (60.2%) did not have a positive attitude to euthanasia. Previous studies in Iran showed similar findings to the results of the present study. Rastegari et al (2010) examined the attitudes of nurses towards euthanasia who had experience of caring for dying patients in different wards such as oncology, intensive care unit, neurology and hemodialysis. Similar to our findings, Rastegari et al, reported that most Iranian nurses have a negative attitude toward euthanasia. In their study, 67.7%, 73.5%, 40% and 80% of nurses reported a negative attitude to active voluntary euthanasia, active non-voluntary euthanasia, passive voluntary euthanasia and passive non-voluntary euthanasia respectively (Rastegari, et al, 2010). In another study using the EAS, Moghadas et al (2012), examined Iranian critical care nurses’ attitudes to euthanasia and reported that most Iranian nurses have negative attitude to euthanasia. Similar to euthanasia, ‘do not resuscitate’ (DNR) order is another ethical issue related to end-of-life decision-making that health-care providers face.
team members in Islamic country face. Mogadasian et al (2014) examined the attitude of 306 Iranian Muslim nurses towards DNR order, and concluded that most Iranian nurses have negative attitudes towards this (Mogadasian et al, 2014).

Studies from other countries with large Muslim populations have reported similar results with regards to attitudes to euthanasia. A study in Sudan (Ahmed et al, 2001) examined Sudanese physicians’ attitudes towards euthanasia and assisted suicide. Some 98% of 248 physicians participating in the study were Muslim. Similar to findings of the present study, most participants (85%), reported disagreement over euthanasia and assisted suicide. A study in Pakistan (Afzal et al, 2010) investigated attitudes of Muslim junior and senior Pakistani physicians towards euthanasia and assisted suicide. The results showed that the majority of Pakistani physicians strongly disagree with the practice and legalisation of euthanasia and assisted suicide.

Previous studies conducted among European countries about nurses’ attitudes towards euthanasia have shown different results. In one study, Inghelbrecht et al (2009), examined Belgian nurses’ attitudes towards end-of-life decisions in medical practice. In contrast to the findings presented here, the majority of nurses participating in Inghelbrecht et al’s study agreed with the practice of euthanasia (92%), practice of withholding/withdrawing potentially life-prolonging treatments and decisions to alleviate symptoms with possible life-shortening side-effects (96%) (Inghelbrecht et al, 2009). In another study, Bendiane et al (2007), examined French district nurses’ opinions towards euthanasia and affecting factors. They reported that 63% of French nurses favoured legalisation of euthanasia. The authors also reported that nurses who discuss end-of-life issues with end-stage patients (considered as competent patients and should always be aware of their prognosis) and who appreciate the role of skilled directors and surrogates in the end-of-life decision-making for incompetent patients, were more in favour of legalising euthanasia (Bendiane et al, 2007). A study in Finland (Ryynänen et al, 2002) examined physicians, nurses and the general public attitude about physician-assisted suicide, active voluntary euthanasia, and passive euthanasia. This study reported that 46% of 582 nurses who participated in the study agreed that euthanasia would be acceptable in some situations. The results of the study also showed that non-religious nurses and nurses under the age of 50 years accepted euthanasia more often than religious or elderly nurses (Ryynänen et al, 2002). The differences between the results of the present study and studies in European countries could be related to the differences in religious beliefs between these populations. Also, the differences might also be related to different types of instruments used in various studies.

**Limitations**
The respondents were predominantly female, which limits the generalisability of the results. As this study was based on a convenient sample and the participation was voluntary, there might have been a selection bias which might affect the possibility to generalise the results to all nurses.

**Conclusion**
Iran is a country governed by Islamic rules, and according to these rules, euthanasia is strongly abhorred and outlawed. Among health-care team members, nurses have an important role in end-of-life care, and this study aimed to examine Muslim nurses’ attitudes towards euthanasia. The study found that the majority of Muslim nurses have a negative attitude to euthanasia. We recommend that future studies should be conducted to examine Muslim nurses with similar religious beliefs but different cultural attitudes to euthanasia, to determine the role of culture and religious beliefs in attitudes to euthanasia among Muslim nurses.

**Acknowledgment**
The authors would like to thank the nurses for their cooperation and thoughtful responses. We also thank the research center of Shabrekord University of Medical Science for their financial support to perform this study (research code: 1376).

**Declaration of interests**
The authors have no conflicts of interest to declare.


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International Journal of Palliative Nursing 2015, Vol 21, No 1