Factors influencing job satisfaction among registered nurses:
a questionnaire survey in Mashhad, Iran

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Background Job satisfaction is a critical factor in health care. Strong empirical evidence supports a causal relationship between job satisfaction, patient safety and quality of care.

Objective To determine the level of nurses’ job satisfaction and its associated factors.

Method A stratified random sample of 421 registered nurses working at a large hospital in Mashhad, Iran was surveyed.

Result The results showed that autonomy, task requirement and work interaction had scores higher than their respective median on the subscales. There were significant differences between demographic characteristics and the autonomy, task requirement, work interaction, salary, work condition, professional development, supportive nursing management, decision making, professional status subscales and mean total job satisfaction. In univariate analysis, young age, being female and being married were significantly associated with a higher level of job satisfaction. The adjusted $R^2$ for this model was 0.14, indicating that the model explained 14% of the variability. The regression model was highly significant, $F(4298) = 13.194, P < 0.001$.

Conclusions and implications for nursing management The authors emphasise that the human resources policies and incentives need to be re-visited. Efforts undertaken to improve working conditions, supportive nursing management, improved professional status, professional development and increased salaries are some of the ways for nurse managers to improve job satisfaction.

Keywords: Iran, job satisfaction, registered nurse, salary

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Introduction
Due to current nursing shortages, hospitals are facing serious challenges in providing high-quality care worldwide (Khowaja et al. 2005). Previous studies have shown that low job satisfaction is a major cause of turnover among health care providers (Camerino et al. 2006, Abualrub 2007). In Iran, a shortage of nursing staff, as a multidimensional phenomenon, is a significant challenge (Farsi et al. 2010). The shortage
of staff could be a symptom of low job satisfaction, poor leadership and lack of managerial support and poor job opportunities for new graduates (Nikhbakhht-Nasrabadi & Emami 2006, Farsi et al. 2010). Nursing graduates may not choose nursing as a career and some may migrate to other countries (Zarea et al. 2009). Although Iran needs 220 000 nurses in order to deliver optimal nursing care (Zarea et al. 2009), it is estimated that the workforce consists of only 98 020 registered nurses (RN) in Iran (WHO 2011).

Background

Job satisfaction is a multidimensional concept. It consists of individual abilities, attitudes, beliefs and value systems (Ravari et al. 2012). By identifying factors that contribute to job satisfaction, effective strategies can be implemented to improve nurses’ job satisfaction and the quality of patient services (Hirschfeld 2009, Zarea et al. 2009). Earlier studies have suggested that low satisfaction levels are significantly related to jobs involving repetitive tasks or jobs in which employees have little choice (Sengin 2003). Mills and Blaesing (2000) found that the higher the percentage of time a nurse spent on shift work, the more likely he or she was to leave nursing.

A number of studies have found that collaborative relationships between nurses, co-workers and supervisors, collaboration with physicians in decision making about patient care and teamwork, and scheduling flexibility are important correlates of nurses’ job satisfaction (Gardulf et al. 2008, Wyatt & Harrison 2010). Finn (2001) found that professional autonomy was the most important factor in registered nurses’ job satisfaction. A similar finding in the USA has also been reported by Zurmehly (2008).

In addition, studies have reported that the level of responsibility given to nurses and professional opportunities to enhance nurses’ capabilities and competencies have an impact on job satisfaction and staff retention (Adams & Bond 2000, Mogharab et al. 2006, Al-Enezi et al. 2009). Lack of educational opportunities and opportunities for advancement, poor salary and heavy workload were reported to be major factors associated with job dissatisfaction for nurses in a study comparing job satisfaction among nurses in Europe (Aiken et al. 2012).

Overview of the literature

The literature search and review has focused on both the international literature and studies conducted in Iran. Based on findings derived from qualitative and quantitative studies, it has been reported that Iranian nurses are not satisfied with the policies and management in nursing (Mirzabeigi et al. 2009), the poor public image of nurses (Farsi et al. 2010, Varaei et al. 2012) and low levels of respect from patients and relatives (Mirzabeigi et al. 2009, Farsi et al. 2010). Moreover, Iranian nurses suffer from poor working conditions, including limited clinical autonomy, and from conflicts with physicians that are associated with burnout and high rates of turnover (Adib Hajbaghery & Salsali 2005, Mogharab et al. 2006). According to Zarea et al. (2009) the most important factors related to the nurses’ job dissatisfaction in Iran were low salary and poor job security, which are similar to the results of studies conducted in other countries such as China (Hu & Liu 2004), Jordan (Mrayyan 2005), Pakistan (Khawaja et al. 2005), Ireland (Curtis 2007), South Africa (Pillay 2009) and Malaysia (SiewPien et al. 2011).

Nursing in Iran today

The standard workweek for nurses in public hospitals in Iran is 44 hours (Joolae et al. 2006). However, some hospitals potentially add up to 150 hours of overtime each month (Joolae et al. 2006). In recent years the Iranian Nursing Organization (INO) has tried to provide higher salaries and improved autonomy, to increase the number of nurses employed in hospitals in order to reduce nurses’ workloads, and to provide better work conditions for nurses employed in public hospitals (Zarea et al. 2009). This reconfiguration has resulted in a gradual shift of nurses from private to public hospitals, and it is also expected to raise levels of job satisfaction among nurses in Iran.

Major new policies in nursing have been introduced by the Ministry of Health in Iran and implemented in all hospitals since August 2011. The main goal has been to reduce nurses’ standard working time. Nurses are not allowed to work more than 12 hours a day and, depending on an employee’s work experience (years) and specialty, nurses’ working hours can be reduced from 44 hours to 36 hours a week. However, nurses are allowed to work an additional 80 hours of overtime per month according to the hospital’s needs. Moreover, hours worked as part of the night shift and at the weekend are calculated, according to the new policy, by multiplying the hours by 1.5 (Iranian Nurse Organization 2011). To the best of our knowledge, no study has been conducted on nurses’ job satisfaction.

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in Iran since the implementation of the new policy; hence, it is of significant importance to assess and identify the important features of nurses’ job satisfaction under the new policy.

**Methods**

**Aim and objectives**

This study aimed to assess and identify the important factors related to nurses’ job satisfaction. The objectives were as follows:

- To assess the current level of job satisfaction.
- To investigate the differences between demographic characteristics such as gender, age, marital status, years of working experience, level of education and work unit with nurses’ overall job satisfaction.
- To determine the predictors of job satisfaction in Iranian nurses.

**Study design**

A cross-sectional study was conducted between mid-November 2011 and the end of December 2011. A stratified random sample of nurses based in medical, surgical and critical care units from the largest hospital in Mashhad, Iran was employed. With a population of 98020 registered nurses in Iran (WHO 2011), the required sample size was calculated as 383, based on an error margin of 5% and 95% CI. We factored in an additional non-response rate of 10% to account for missing values, providing an eventual total of 421.

**Instruments**

The modified index of work satisfaction (MIOWS) questionnaire was derived from the index of work satisfaction (IWS) questionnaire developed by Stamps (1997). The IWS questionnaire is a two-part instrument designed to determine nurses’ level of satisfaction with their work by measuring six subscales of satisfaction (i.e. task requirement, autonomy, salary, organisational policies, professional status and interaction). In this study, the MIOWS questionnaire was used, which is a combination of Part A of the original IWS (44 items) and another 23 items adapted from the modified index of work satisfaction (Ramoo 2006). To avoid the problems inherent in translation, two bilingual experts translated the instruments from English to Farsi, after which they were again blindly back-translated by two other bilingual experts. The MIOWS comprises nine subscales: task requirement, work interaction, decision making, autonomy, professional development, professional status, supportive nursing management, work conditions and salary. Scores for subscales vary according to the number of items, with higher scores denoting greater satisfaction. Each item on the MIOWS is measured on a five-point Likert scale (1, strongly disagree to 5, strongly agree). Four negatively worded items were reversed and re-coded during the data analysis process, with strongly agree receiving a score of 1 and strongly disagree receiving a score of 5. There are a total of 67 items (questions) in all the subscales. Total scores are calculated by adding all the scores of the nine subscales, giving a total score that ranges from 67 to 335. Exploratory factor analysis and reliability coefficient calculations were performed on all 67 items. The factor loadings of all items were positive and ranged from 0.50 to 0.92. This analysis suggested that the 67-item instrument measured one construct, the job satisfaction of nurses. Ten experts in the field of nursing assessed the face validity. All the MIOWS subscales yielded an acceptable reliability coefficient above 0.70 (Table 1). The Cronbach’s alpha reliability coefficient scores for each item were as follows: task requirement 0.73, work interaction 0.72, decision making 0.75, autonomy 0.82, professional development 0.73, professional status 0.71, supportive nursing management 0.89, work condition 0.73 and salary 0.81. The overall Cronbach’s alpha coefficient for the modified MIOWS questionnaire used in this study was 0.90, which is within the acceptable range reported for the IWS questionnaire (Stamps 1997, Cowin 2002).

**Data collection and analysis**

A total of 421 questionnaires together with consent forms and information sheets were put in envelopes and distributed by a research assistant to the nurses in the sample. The respondents were requested to drop the completed questionnaire into locked boxes kept in each ward. After two reminders, 303 completed questionnaires were returned, yielding a response rate of 72%. The data collected from the surveys were coded and entered into the Statistical Package for the Social Sciences Version 16.00 (SPSS; Chicago, IL, USA) for analysis. The normality of distributions of the data was tested with the Kolmogorov–Smirnov test. Comparisons of the mean total job satisfaction score between demographic variables were performed by using the one-sample t-test and one-way between-groups analysis.
of variance. The Pearson correlation coefficients were calculated to evaluate the relationship between a dependent variable (total job satisfaction) and nine subscales of job satisfaction. All effects were reported as correlation coefficients ($r$). Univariate linear regression analysis was conducted to identify the factors associated with total job satisfaction.

Results

Sample characteristics

Details of the demographic characteristics of the entire sample are summarised in Table 2. There were more females than males in this study. The ages of the nurses ranged from 25 to 53 years, with a mean age of 34.2 years (SD ± 5.0). The majority of the nurses were married (79.5%, $n = 241$). Most of the nurses were educated to Bachelor’s degree level (93.7%, $n = 284$). Nearly three-quarters (74.9%, $n = 227$) of the nurses had work experience of 6 years or more. Less than half of the nurses worked at critical care units (40.3%, $n = 122$).

Job satisfaction and nurses’ background variables

The median score of the job satisfaction subscales for each subscale was used as a basis for determination of job satisfaction. The mean scores for autonomy (mean 19.01, median 18), task requirement (mean 21.01, median 21) and work interaction (mean 36.01, median 36) subscales were slightly higher than their median scores as shown in Table 1. The mean scores for six subscales were lower than their respective median scores (i.e. salary: mean 10.87, median 18; work condition: mean 20.69, median 24; professional development: mean 16.81, median 18; professional status: mean 23.00, median 24; decision making: mean 17.39, median 21; and supportive nursing management: mean 18.74, median 21).

The demographic differences in the nine subscales of job satisfaction are shown in Table 2. Female nurses had significantly higher scores on the professional status (mean 23.71, SD 5.96), work condition (mean 21.21, SD 6.47), task requirement (mean 20.55, SD 5.04), salary (mean 11.14, SD 4.46), supportive nursing management (mean 19.45, SD 7.34) and work interaction (mean 35.18, SD 7.07) subscales than their male colleagues ($P < 0.05$). Compared with unmarried nurses, the married nurses had significantly higher scores on the task requirement (mean 20.65, SD 4.91), autonomy (mean 19.24, SD 4.61), decision making (mean 17.82, SD 6.96), work interaction (mean 35.28, SD 7.28), professional development (mean 17.07, SD 5.32), supportive nursing management (mean 19.66, SD 7.65), work condition (mean 21.46, SD 6.74) and salary (mean 11.12, SD 5.08) subscales. Nurses with < 6 years of experience had significantly higher scores than those with 6 or more years of experience on the autonomy (mean 19.39, SD 3.68), professional development (mean 17.82, SD 6.96) and work condition (mean 20.65, SD 6.96) subscales. Nurses with > 6 years of experience had significantly higher scores than those with 6 or more years of experience on the autonomy (mean 19.39, SD 3.68), professional development (mean 17.82, SD 6.96) and work condition (mean 20.65, SD 6.96) subscales.

There were statistically significant differences in scores on the work interaction, task requirement, autonomy and salary subscales between nurses working in critical care, surgical and medical wards. A post hoc comparison using Tukey’s test showed that medical ward nurses had significantly higher scores on the task requirement, autonomy and work interaction subscales ($P < 0.05$) than nurses in surgical and critical care units. Both medical and surgical ward nurses had higher scores on the salary subscale than critical care unit nurses ($P < 0.05$). Nurses in the 25–29 age range had significantly higher scores on the autonomy subscale than those aged 30–34 years ($P < 0.05$).

Table 2

<table>
<thead>
<tr>
<th>Subscale</th>
<th>No. of item</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach’s $\alpha$</th>
<th>Min score</th>
<th>Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task requirement</td>
<td>7</td>
<td>21</td>
<td>21.01</td>
<td>5.01</td>
<td>0.73</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Work interaction</td>
<td>12</td>
<td>36</td>
<td>36.01</td>
<td>7.96</td>
<td>0.72</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Decision making</td>
<td>7</td>
<td>21</td>
<td>17.39</td>
<td>6.68</td>
<td>0.75</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Autonomy</td>
<td>6</td>
<td>18</td>
<td>19.01</td>
<td>4.65</td>
<td>0.82</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Professional development</td>
<td>6</td>
<td>18</td>
<td>16.81</td>
<td>5.02</td>
<td>0.73</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Professional status</td>
<td>8</td>
<td>24</td>
<td>23.00</td>
<td>3.71</td>
<td>0.71</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Supportive nursing</td>
<td>7</td>
<td>21</td>
<td>18.74</td>
<td>4.23</td>
<td>0.89</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Work condition</td>
<td>8</td>
<td>24</td>
<td>20.69</td>
<td>6.77</td>
<td>0.73</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Salary</td>
<td>6</td>
<td>18</td>
<td>10.87</td>
<td>4.81</td>
<td>0.81</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Total job satisfaction</td>
<td>67</td>
<td>201</td>
<td>183.53</td>
<td>42.87</td>
<td>0.90</td>
<td>67</td>
<td>335</td>
</tr>
</tbody>
</table>

The mean score of each subscale higher than the median score provided the highest level of satisfaction. The lowest possible overall score is 67, and the highest possible overall score is 335.
### Table 2
Socio-demographic difference in mean job satisfaction and subscales scores and multiple linear regression analysis of socio-demographic variables predicting job satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Task requirement</th>
<th>Work interaction</th>
<th>Decision making</th>
<th>Autonomy</th>
<th>Professional development</th>
<th>Professional status</th>
<th>Supportive nursing</th>
<th>Work condition</th>
<th>Salary</th>
<th>Total job</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socio-demographic variable</strong></td>
<td><strong>No.</strong></td>
<td><strong>Mean ± SD</strong></td>
<td><strong>F(4,298) = 13.194, P &lt; 0.001, Adjusted R² = 0.14 (SE)</strong></td>
<td></td>
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<tr>
<td><strong>Gender</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>57</td>
<td>18.68 ± 4.61*</td>
<td>30.56 ± 9.11*</td>
<td>17.49 ± 5.95</td>
<td>18.01 ± 3.17</td>
<td>16.77 ± 3.54</td>
<td>19.26 ± 8.11*</td>
<td>15.68 ± 7.81*</td>
<td>18.47 ± 7.63*</td>
<td>9.68 ± 5.36*</td>
</tr>
<tr>
<td>Female</td>
<td>246</td>
<td>20.55 ± 5.04</td>
<td>35.18 ± 7.07</td>
<td>17.36 ± 6.84</td>
<td>16.77 ± 5.42</td>
<td>23.71 ± 5.96</td>
<td>19.45 ± 7.34</td>
<td>21.21 ± 6.47</td>
<td>11.14 ± 4.46</td>
<td>184.11 ± 41.25</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
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<td></td>
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<tr>
<td>25–29</td>
<td>53</td>
<td>21.11 ± 4.08*</td>
<td>36.50 ± 4.56</td>
<td>18.28 ± 4.84*</td>
<td>20.77 ± 4.34*</td>
<td>19.01 ± 4.86*</td>
<td>24.41 ± 5.98</td>
<td>19.77 ± 5.25*</td>
<td>22.83 ± 5.08*</td>
<td>13.37 ± 4.39*</td>
</tr>
<tr>
<td>30–34</td>
<td>99</td>
<td>19.15 ± 4.85</td>
<td>33.10 ± 9.71</td>
<td>19.14 ± 7.97</td>
<td>18.60 ± 5.08</td>
<td>18.01 ± 5.01</td>
<td>22.93 ± 7.48</td>
<td>19.98 ± 8.79</td>
<td>21.31 ± 8.25</td>
<td>11.07 ± 5.07</td>
</tr>
<tr>
<td>40 and above</td>
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<tr>
<td><strong>Marital status</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Single</td>
<td>62</td>
<td>18.43 ± 5.02*</td>
<td>30.53 ± 8.16*</td>
<td>15.70 ± 5.17*</td>
<td>15.81 ± 3.73*</td>
<td>15.72 ± 4.08*</td>
<td>23.45 ± 6.88</td>
<td>15.17 ± 6.04*</td>
<td>17.69 ± 6.08*</td>
<td>9.87 ± 3.42*</td>
</tr>
<tr>
<td>Married</td>
<td>241</td>
<td>20.65 ± 4.91</td>
<td>35.28 ± 7.28</td>
<td>17.82 ± 6.96</td>
<td>19.24 ± 4.61</td>
<td>17.07 ± 5.32</td>
<td>22.73 ± 6.58</td>
<td>19.66 ± 7.65</td>
<td>21.46 ± 6.74</td>
<td>11.12 ± 5.08</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
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</tr>
<tr>
<td>Diploma</td>
<td>19</td>
<td>20.05 ± 5.46</td>
<td>28.78 ± 13.09</td>
<td>18.10 ± 8.81</td>
<td>18.31 ± 3.83</td>
<td>17.05 ± 3.76</td>
<td>17.84 ± 11.12</td>
<td>16.26 ± 10.85</td>
<td>19.05 ± 10.71</td>
<td>11.31 ± 6.03</td>
</tr>
<tr>
<td>Bachelors</td>
<td>284</td>
<td>20.28 ± 4.97</td>
<td>35.84 ± 7.81</td>
<td>17.34 ± 6.53</td>
<td>18.55 ± 4.70</td>
<td>16.77 ± 5.21</td>
<td>23.21 ± 6.11</td>
<td>18.91 ± 7.28</td>
<td>20.81 ± 6.44</td>
<td>10.84 ± 4.27</td>
</tr>
<tr>
<td><strong>Years of working experience</strong></td>
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<tr>
<td>≤ 6 years</td>
<td>76</td>
<td>20.02 ± 4.85</td>
<td>35.52 ± 8.39</td>
<td>18.94 ± 7.04</td>
<td>19.39 ± 3.68*</td>
<td>18.01 ± 4.64*</td>
<td>25.06 ± 6.73*</td>
<td>18.90 ± 6.46</td>
<td>19.80 ± 5.41</td>
<td>10.69 ± 5.41</td>
</tr>
<tr>
<td><strong>Work unit</strong></td>
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<td></td>
</tr>
<tr>
<td>Medical ward</td>
<td>103</td>
<td>21.48 ± 5.16*</td>
<td>36.44 ± 8.99*</td>
<td>17.54 ± 6.24</td>
<td>19.61 ± 4.11*</td>
<td>17.11 ± 5.61</td>
<td>22.11 ± 5.89</td>
<td>18.97 ± 7.51</td>
<td>21.23 ± 7.22</td>
<td>12.45 ± 5.43*</td>
</tr>
<tr>
<td>Critical care unit</td>
<td>122</td>
<td>19.72 ± 4.46</td>
<td>33.91 ± 5.91</td>
<td>16.86 ± 7.74</td>
<td>18.68 ± 4.86</td>
<td>17.01 ± 5.39</td>
<td>23.53 ± 6.93</td>
<td>19.37 ± 7.57</td>
<td>20.69 ± 6.45</td>
<td>9.40 ± 3.64</td>
</tr>
<tr>
<td>Surgical unit</td>
<td>78</td>
<td>19.26 ± 5.32</td>
<td>34.31 ± 7.68</td>
<td>18.02 ± 5.31</td>
<td>16.91 ± 4.59</td>
<td>16.05 ± 3.82</td>
<td>22.87 ± 7.07</td>
<td>17.47 ± 7.55</td>
<td>19.98 ± 6.68</td>
<td>11.07 ± 4.86</td>
</tr>
</tbody>
</table>

*P < 0.05.

**P < 0.01.
group had significantly ($P < 0.05$) higher scores in the decision making, work condition, autonomy, salary and professional development subscales than the other age groups.

Analysis of the univariate Pearson correlation showed statistically significant positive correlation between each pair of the subscales of job satisfaction, as shown in Table 3. According to Choudhury (2009), an $r$ value of $-0.1$ to $0.1$ is considered to show no or very weak correlation, $0.1$–$0.29$ a weak correlation, $0.3$–$0.49$ a moderate correlation and $0.5$–$1.0$ a strong correlation. There were strong correlations between task requirement and work interaction ($r = 0.601$), autonomy ($r = 0.533$) and professional status ($r = 0.547$). Significant strong correlations were found between work interaction and supportive nursing management ($r = 0.601$), decision making ($r = 0.559$), autonomy ($r = 0.519$), professional status ($r = 0.693$) and work condition ($r = 0.658$). There were significant moderate correlations between professional development and task requirement ($r = 0.350$), work interaction ($r = 0.366$) and decision making ($r = 0.366$). There were also significant moderate correlations between salary and work interaction ($r = 0.398$), autonomy ($r = 0.411$), professional status ($r = 0.378$), decision making ($r = 0.441$), supportive nursing management ($r = 0.444$) and task requirement ($r = 0.368$). Significant weak correlations were found between task requirement and decision making ($r = 0.285$) and between salary and professional development ($r = 0.270$).

### Nurses’ total job satisfaction

Only a total of 87 nurses (28.7%) had a mean total job satisfaction score above the median score of 201. The majority of the nurses with scores above the median were female, married and working in medical wards, with $<6$ years of work experience.

There were no statistically significant differences in mean total job satisfaction scores between educational levels and work units (Table 2). The mean total job satisfaction score of females (mean 184.11, SD 41.25) was significantly higher than that of males (mean 164.61, SD 46.40, $P < 0.05$). Married nurses had significantly higher mean total job satisfaction scores (mean 185.08, SD 42.99) than single nurses (mean 162.41, SD 37.56, $P < 0.05$). Nurses with $<6$ years of work experience were found to have significantly higher mean total job satisfaction scores (mean 191.75, SD 17.22) than the more experienced nurses (mean 176.66, SD 42.24, $P < 0.05$). Nurses in the 25–29 age group (mean

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Overall job</th>
<th>Task requirement</th>
<th>Work interaction</th>
<th>Decision making</th>
<th>Autonomy</th>
<th>Professional development</th>
<th>Professional status</th>
<th>Supportive nursing management</th>
<th>Work condition</th>
<th>Salary</th>
<th>Overall job</th>
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<tr>
<td><strong>Correlation coefficient</strong></td>
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<td>Task requirement</td>
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<td>0.601**</td>
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<tr>
<td>Work interaction</td>
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<td></td>
<td>0.693**</td>
<td>0.658**</td>
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<tr>
<td>Decision making</td>
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<td>0.559**</td>
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<td>0.534**</td>
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<td>0.615**</td>
<td>0.554**</td>
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<td>0.541**</td>
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<td>0.552**</td>
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<td>0.624**</td>
<td>0.621**</td>
<td>0.621**</td>
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<td>Supportive nursing management</td>
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<td>0.401**</td>
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<td>Work condition</td>
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<td>Salary</td>
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<td>0.398**</td>
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<td>0.366**</td>
<td>0.441**</td>
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<td>0.444**</td>
<td>0.444**</td>
<td>0.634**</td>
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$**P < 0.001$. © 2013 John Wiley & Sons Ltd Journal of Nursing Management
and greater work interaction among medical nurses compared with critical care unit and surgical nurses.

Both medical and surgical ward nurses had higher scores in the salary subscale compared with critical care unit nurses. This may be due to the critical care unit nurses having expectations of better salaries and benefits than general surgical and medical ward nurses. Nurse managers should provide nurses with more challenges and greater autonomy at work, and supervisors should encourage support and collaborative teamwork among their staff; by providing immediate praise for good nursing conduct they can express recognition of their nurses (Khowaja et al. 2005, Smith et al. 2005, Duffield et al. 2009).

With regard to the factors associated with job satisfaction, this study found that younger nurses had higher mean total job satisfaction scores and higher scores on most of the subscales of job satisfaction. This concurs with the findings of Mogharab et al. (2006) who suggested that, in Iran, younger nurses were more satisfied with their jobs than older nurses because younger nurses are energetic and have more positive attitudes, which can lead to satisfaction. However, their findings contradict those of Curtis (2007), who reported that total job satisfaction in the Republic of Ireland was lowest among nurses in the 18–25 and 26–35 age groups and highest among nurses in the 36–45 and 46–55 age groups. Norman et al. (2005) also found that in the USA, older nurses were more satisfied than younger nurses. The authors reasoned that it is difficult to draw any firm conclusions about the relationship between age and job satisfaction, due to the mixed findings reported. The reason why young nurses exhibited higher degrees of job satisfaction in this study is not known, thus an in-depth examination, particularly one that uses qualitative research techniques, should be conducted to provide useful insights into the reasons why young nurses in Iran are more satisfied in their jobs.

In contrast with Pillay’s (2009) study, this study has found that nurses with <6 years of work experience had significantly higher scores than those with 6 or more years of work experience in the autonomy, professional development, professional status and work condition subscales. One possible explanation for this may be that nurses with more years of work experience expect more autonomy, respect and opportunities; thus, when these factors do not exist, experienced nurses may become dissatisfied. Likewise, Ma et al. (2003) also reported that experienced nurses had lower levels of job satisfaction than those who were inexperienced. Therefore, it is recommended that

Limitations of the study

Since the findings of this study are based in a single centre, they may not generalise to other hospitals in Iran. The use of a cross-sectional research design might provide only a snapshot of RNs satisfaction. In addition, the generalisation of the findings is limited by self-report bias. However, our data support findings from studies conducted in other countries.

Discussion and implications for nursing management

The significantly higher scores on the work interaction, autonomy and task requirement subscales among the medical ward nurses, compared with surgical and critical care unit nurses, contradict findings by Davis et al. (2007), who found no significant difference in total job satisfaction scores between medical–surgical nurses and critical care unit nurses. The reason why medical nurses in this study have a higher level of job satisfaction may be due to the perceived increased autonomy and greater work interaction among medical nurses compared with critical care unit and surgical nurses.

Both medical and surgical ward nurses had higher scores in the salary subscale compared with critical care unit nurses. This may be due to the critical care unit nurses having expectations of better salaries and benefits than general surgical and medical ward nurses. Nurse managers should provide nurses with more challenges and greater autonomy at work, and supervisors should encourage support and collaborative teamwork among their staff; by providing immediate praise for good nursing conduct they can express recognition of their nurses (Khowaja et al. 2005, Smith et al. 2005, Duffield et al. 2009).

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nurse managers conduct regular job satisfaction surveys in order to understand the needs of different nurse groups (Choi et al. 2011) which also give nurses the chance to voice opinions about their training, advancement opportunities and other issues related to their job satisfaction.

Findings on marital status and job satisfaction were mixed. Berg et al. (2004) reported no association between marital status and job satisfaction among nurses. In contrast, some studies have also reported that married nurses exhibited higher levels of job satisfaction (Monjamed et al. 2004, Al-Enezi et al. 2009). The findings of this study concur with those of Monjamed et al. (2004) and Al-Enezi et al. (2009), where married nurses obtained higher scores than unmarried nurses for mean total job satisfaction and in all of the subscales except for professional status. Al-Enezi et al. (2009) reasoned that the married nurses had been living with their families, which contributed significantly to job satisfaction. The support given by families may help to improve nurses’ job satisfaction. In Iran single nurses are often assigned greater responsibility for more duties than married nurses as they are perceived to have more leisure time since they do not need to care for their spouse and children. Nurse managers should consider the need for new strategies, such as recruiting new employees and designing new work schedules in order to increase nurses’ job satisfaction. Nurses who received at least a day or more per month of scheduled professional development reported significantly higher scores for job satisfaction (Bjørk et al. 2007, Pillay 2009).

Consistent with the findings of Dunn et al. (2005), there was no statistically significant difference between nurses with diplomas and those with Bachelor’s degrees in mean total job satisfaction scores. However, some studies have found a positive association between nurses’ educational level and job satisfaction (Ingersoll et al. 2002, Monjamed et al. 2004, Rambur et al. 2005, Mogharab et al. 2006, Al-Hussami 2008) and others have reported a negative association (Battu et al. 2000, Robinson et al. 2006). A possible explanation for this study’s findings may be that there is not much difference between the salary structures of the two groups of nurses in some hospitals in Iran. It is suggested that nurses’ salaries in hospitals should be based on their education level to ensure better job satisfaction. In Iran, the average nursing salary for newly hired nurses is approximately rials 100 000 000 (US $1 = 25 000 rials) per year.

In this study, female nurses scored higher than male nurses on most of the subscales, except autonomy, decision making and professional development. The generally higher scores may be explained by the fact that, throughout history in Iran, nursing has been viewed as a profession for women and it is traditionally more acceptable for women than for men. Similar findings were also reported by Shields and Ward (2001) and Kalist and Okoye (2011). The higher scores in autonomy, decision making and professional development among male nurses may be due to the fact that male nurses mostly work in highly technological wards, such as emergency and intensive care, where opportunities to learn new skills and be autonomous are increased due to advances in technology and the nature of the work in these wards. As an on-the-job incentive for nurses, Bjørk et al. (2007) suggested clinical ladder programmes. These programmes consider a nurse’s continuing education, committee participation, work experience, certifications, academic degrees, community service and performance appraisal scores as criteria for advancement (Bjørk et al. 2007). Clinical ladder programmes have been introduced successfully in some countries such as the UK and USA (Lu et al. 2008). It is recommended that nurse managers establish this programme in Iran and explore its applicability to health care organisations.

In this study, the majority of nurses obtained higher scores in autonomy, task requirement and peer relationship, which is similar to findings reported previously in the literature (Finn 2001, Price 2002, Apostolidis & Polifroni 2006, Castle 2006, Wilson 2006, Bjørk et al. 2007, Curtis 2007, Zurmehly 2008). Thus, nurse managers should offer shared governance opportunities and improve the work environment (Mrayyan 2005, Bjørk et al. 2007, Lu et al. 2008) by offering activities such as a journal club and opportunities to join different committees and workshops, and give nurses opportunities to attend these activities.

The nurses in this study also reported lower scores for professional status, support given for their own professional development and decision making. For example, more than half of the nurses (65%) believed that opportunities for promotion were unfair and career development was not related to good performance. Likewise, Rout’s (2000) study indicated a lack of opportunity for career development, and low levels of job satisfaction among the nurses. Similar findings were also reported by Gardulf et al. (2008). Al-Enezi et al. (2009) concluded that dissatisfaction with professional opportunities reflects some of the key issues in the nursing service in Kuwait. For example, the absence of opportunities for nurses to enhance their capabilities and competencies or to extend their scientific potential,
were reported as some of the key issues. Therefore, it is recommended that nurse managers should create a good working environment using job enrichment techniques. According to Hu and Liu (2004), job enrichment involves upgraded responsibility, and usually includes increased recognition and greater chances for promotion, development, learning and achievement. It is suggested that nurse managers establish staff annual performance review in order to promote and improve employee effectiveness.

In this study, approximately 78% of the nurses believed that staff in other departments did not appreciate nursing and they would not choose nursing as their career if given the choice again. This finding is supported by Zarea et al. (2009), who stated that, in comparison with physicians, Iranian nurses receive less respect from the community. Public awareness of the role of nurses in health care organisations needs to be improved. One way to improve the social position of nurses in the community is to report the nursing profession accurately in the media and newspapers.

Supportive nursing management was found to have significant effects on job satisfaction (Bartram et al. 2004, Zangaro & Johantgen 2009). About 78% of nurses in this study believed that their hospital administration often does not respond to employees’ concerns. Mirzabeigi et al. (2009) also reported that Iranian nurses suffered from managerial problems. They indicated that some of the nursing management are not supportive and that not all managers have good communication skills. Therefore, it is recommended that nurse managers should develop the required knowledge to deal with situations that influence nurses’ job satisfaction; that they should promote their nurses’ satisfaction through managerial intervention such as by involving nursing staff in policy making, especially in policies that affect nursing staff directly; and that nurses and supervisors should be encouraged to open communications as a way of providing a better working environment.

In this study, more than half of the nurses (76%) reported that nursing staff do not have sufficient control over scheduling their own work shifts at their hospital. Additionally, about 75% of nurses believed that the workload in their ward is unreasonable. Workload has negative and significant effects on job satisfaction, according to Khowaja et al. (2005) and Kalist and Okoye (2011). Therefore, self-scheduling and flexible scheduling to decrease workload are essential for improving satisfaction (Khowaja et al. 2005, Kovner et al. 2006).

It is evident from the literature that salary is an important factor in nurses’ job satisfaction. Many studies from other countries have shown that nurses express dissatisfaction, particularly about their salary, promotion opportunities and benefits (Cowin 2002, Tzeng 2002, Khani & Jaafarpour 2008). Our findings concur with Mirzabeigi et al. (2009), who found that Iranian staff nurses were dissatisfied with their salary and benefits. It is reasoned that because nurses’ income in Iran is generally lower than that of other health-related professionals, nurses felt that they were underpaid compared with other medical professions, even though their responsibility and workload seems similar (Emami & Nasrabadi 2007). Therefore, the promotion and salary structure should be reviewed by policy makers and changed proportionately where necessary. Nurses’ salaries and benefits should be increased based on their performance and expertise.

The findings of the multivariate linear regression analysis suggest that to improve job satisfaction, nurse leaders and the administration should focus on nurses who are unmarried, male nurses and nurses who are older. Nurse managers should be encouraged to establish formal recognition programmes, promote awards and provide economic incentives and retirement benefits, especially for older nurses (Norman et al. 2005, Tourangeau & Cranley 2006). Such an approach would acknowledge the skills, knowledge and experience of older nurses. In a society like Iran, men are typically the breadwinner for their household, so male nurses may require improved pay, benefits and rewards from their organisations to increase their level of satisfaction.

**Conclusion**

The findings of this study make several contributions to the current literature. First, the result of lower than median scores for the six subscales of job satisfaction, namely salary, decision making, professional development, professional status, supportive nursing management and work condition, provides an insight into targeted interventions that could be implemented to improve job satisfaction.

Overall job satisfaction correlated positively with the nine subscales of job satisfaction. It would appear that higher correlations with respect to any one of these subscales are likely to translate into higher levels of job satisfaction. Efforts undertaken to improve working conditions, supportive nursing management, improved professional status, professional development and increased salaries are some of the ways for nurse managers to improve job satisfaction. Nurse
managers should provide more autonomy and involve nurses in decision making so that nurses can experience greater job satisfaction.

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Ethical approval
Ethical approval was obtained from the Ethics Research Committee of Mashhad University of Medical Science (Ref. No. 90295976). Informed written consent was obtained from the participants who were informed about the purpose and design of the study and assured that participation was voluntary and confidential.

References