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Abstract

The aim of this study was to identify the facets influencing job satisfaction and intention to quit of nurses employed in Turkey. Using a non-probability sampling technique, 417 nurses from 6 large private hospitals were surveyed from March 2014 to June 2014. Nurses' demographic data, their job related satisfaction and turnover intentions were recorded through a self-administered questionnaire. In this study, descriptive and bivariate analyses were used to explore data, and multivariate analysis was performed using logistic regression. Nurses' job satisfaction was found at a moderate level with 61% of the nurses intended to quit. Nevertheless, nurses reported a high satisfaction level with work environment, supervisor support, and co-workers among the selected nine facets of job satisfaction. They also reported a low satisfaction level with contingent reward, fringe benefits, and pay. The impact of demographic characteristics on job satisfaction and intention to quit was also examined. The study revealed a negative relationship between job satisfaction and intention to quit the existing employment. Moreover, satisfaction with supervisor support was the only facet significantly explained turnover intent when controlling for gender, age, marital status, education, and experience. The implications for nurse management were also described for increasing nurses' job satisfaction and retention. This study is beneficial for hospital management to ensure proper nursing care that would lead to a better quality healthcare service.

43 1. Introduction

44 Globally the present shortage of nurses is a problematic agenda among the health care sectors.
45 Consequently, the quality of patient care services is decreased (Van Bogaert, Clarke, Roelant,
46 Meulemans, & Van de Heyning, 2010). Thus ensuring high level of job satisfaction among
47 nurses and taking proper precaution to avoid intention to quit are prime concerns
48 (Sabanciogullari & Dogan, 2014). European Commission expected that by the year 2020 there
49 will be a scarcity of 590,000 nurses in Europe (Flinkman, Isopahkala-Bouret, & Salanterä, 2013).
50 According to recent report of OECD (Organization for Economic Co-operation and
51 Development), there are 16.6 nurses for 1000 persons in Switzerland, 10.1 in Australia, 8.8 in the
52 OECD countries, 8.6 in UK, and only 1.7 in Turkey (OECD, 2013). In the contemporary studies,
53 researchers acknowledged that the quality of patient care is allied with higher staffing levels in
54 nursing. And patient satisfaction for healthcare service is related to nurses' job satisfaction
55 (Flinkman, Leino-Kilpi, & Salanterä, 2010; Hyrkas & Morton, 2013; Meeusen, Van Dam,
56 Brown-Mahoney, Van Zundert, & Knape, 2011). Moreover, nurses' higher levels of
57 dissatisfaction leads to turnover from nursing profession (Banaszak-Holl & Hines, 1996) which
58 generally creates staff shortage, increases overtime and job stress, increases burnout, longer
59 patient waiting lists, and finally, as a consequence increased displeasure among patients. The
60 turnover of nurses also increases recruitment and orientation costs (Murrells, Robinson, &
61 Griffiths, 2008).

62 Job satisfaction is the level of serenity that someone feels for work and this feeling influences the
63 performance. In case of nurses' job satisfaction, earlier research have revealed that it is
64 negatively connected with nurses' intention to quit the workplace as well as their nursing
65 profession (Applebaum, Fowler, Fiedler, Osinubi, & Robson, 2010; Cowin, Johnson, Craven, &
66 Marsh, 2008). Hence, proper understanding of factors of nurses' job satisfaction is essential for
67 proactive managers to take necessary actions. Scholars identified individual characteristics, work
68 requirements and policies, professional status, pay, working environment, coworker support, and
69 administrative style as important factors that influencing nurse' job satisfaction (Han & Jekel,
70 2011). Given the past review of literature, it is explicit that there are additional influential job
71 satisfaction factors for nursing. These are age, gender, marital status, organization itself,
72 employment type, work duration, level of responsibility, payments, financial benefits, and
73 recognition (Kacel, Miller, & Norris, 2005; Mrayyan, 2005). Moreover, Heinen et al. (2013)
74 acknowledged that characteristics of the work setting, professional identity, job satisfaction, and
75 burnout are the most persuasive factors that influence nurses' decision to remain or to quit their
76 job. Earlier research shows that turnover in nursing is a logical consequence of nurses' job
77 dissatisfaction. Initially, nurses quit the unit, then the hospital, and lastly the occupation
78 (Iliopoulou & While, 2010).

79 In the Turkish healthcare system, there is acute shortage of nurses owing to extended working
80 hours, inadequate opportunities of on the job training, dearth of chances to work autonomously,
81 and deficiency of care from their superintendents (Gök & Kocaman, 2011; Top & Gider, 2013).
82 Besides, patient load has adverse impact on work settings and the psychological or/and physical
83 health of the Turkish nurses (Arslan Yurumezoglu & Kocaman, 2015). Given these situations, in
84 order to enhance strategic managerial decision and expansion growth of hospitals, it is of
85 paramount importance that factors of nurses' job satisfaction and turnover intentions be studied
86 to improve their service quality. To the best of our knowledge, there is a dearth of such study on
87 nurses in Turkey. The main thrust of this study was to scrutinize the level of job satisfaction of

88 nurses, and to investigate the effects of socio-demographic characteristics on job satisfaction of
89 nurses' employed in Turkish private hospitals. In addition, nurses' intention to quit from existing
90 job position was also investigated in this study.

91 This research makes two contributions to the literature. Firstly, the finding that the model of
92 intention to quit built upon theories and empirical evidence also applies to the Turkey health care
93 system. Here, the logistic regression model of intention to quit can be generalized to the overall
94 system. Secondly, the findings of the present study that explore significant predictors of nurses'
95 intention to quit include the six explanatory variables (i.e., promoting, fringe benefits, contingent
96 rewards, ages and experience). These findings provide strong evidence for the importance of
97 these six significant variables in explaining intention to quit in the context of Turkey. Previous
98 literature shows a consensus that decreases in intention to quit levels will raise the quality of the
99 system. Thus, the findings on factors that contribute to nurses' job satisfaction and their intention
100 to quit will provide useful knowledge and importance to nursing management and leadership.
101 This would be crucially and considerably advantageous in health care HR planning processes in
102 Turkey. Moreover, the developed regression model provides insights to future researchers on the
103 enhancement of nurses' job satisfaction and service quality of hospitals in Turkey and other
104 emerging nations.

105

106 **2. Overview of the literature**

107 In this section, we briefly describe the factors of job satisfaction, job dissatisfaction and,
108 intention to quit of nurses from the present workplace. Some keywords are examined including
109 nurses, nursing, job dissatisfaction, job satisfaction, intention to quit, turnover intention, and
110 Turkey in different combinations. On the basis of past researches, the factors of job satisfaction
111 among nurses and their intention to quit the existing position or occupation are influenced by
112 individual attribute (e.g., gender, age, marital status, education qualification, and experience) and
113 organizational factors (e.g., pay, promotion, different types of benefits, co-worker/supervisor
114 support, and work environment).

115 **2.1 Factors related to nurses' job satisfaction**

116 Job satisfaction is defined as the emotional feelings as well as the behavioral expression for a
117 job. The feeling is influenced by some job related factors such as pay, different types of benefits,
118 recognition, working condition, relation with coworker and supervisors, and others (Cowin et al.,
119 2008; Yılmazel, 2013). Similar to other professions, it is acknowledged that nurses' job
120 satisfaction is inversely linked with their intention to quit their profession (Applebaum et al.,
121 2010). Researchers discovered that highly satisfied nurses do not quit the existing job (Flinkman,
122 Laine, Leino-Kilpi, Hasselhorn, & Salanterä, 2008). A review on nurses' job satisfaction
123 expressed that job satisfaction of nurses is positively associated with job stress, depression, and
124 organizational commitment (Lu, Barriball, Zhang, & While, 2012). In addition, they identified
125 that job satisfaction had a moderate relationship with some determinants e.g., role ambiguity,
126 recognition, supervisor support, and coworker cooperation. They found a weak association with
127 nurses' personal characteristics for example, gender, age, years of experience, education level,
128 and dealing with strategies. They also revealed an inconsistent impact on job satisfaction for
129 same determinants across nations. For instance, job satisfaction was strongly correlated with
130 individual characteristics (e.g., age) among Turkey and US nurses (Çimen & Şahin, 2000;

131 Kavanaugh, Duffy, & Lilly, 2006), but no correlation was found among nurses in China (Lu,
132 While, & Louise Barriball, 2007). Van Bogaert et al. (2010) reported that job stress was
133 positively associated with job satisfaction among nurses in Belgium though no relationship was
134 found among nurses in USA (Packard & Motowidlo, 1987).

135 Studies on nurses' job satisfaction in different countries revealed that job satisfaction is usually
136 moderate or low in nursing profession (Akgöz et al., 2005; Asegid, Belachew, & Yimam, 2014;
137 Sabanciogullari & Dogan, 2014; Yilmazel, 2013). Sizeable research is reported on nurses' job
138 satisfaction and job dissatisfaction in various settings. For example, a survey on job satisfaction
139 of 98110 nurses from nine countries conducted by Aiken et al. (2011) reported that job
140 satisfaction was peak in Germany (83%) followed by USA (78%), New Zealand and Canada
141 (67%), South Korea (64%), UK (63%), China (54%), and Japan (40%). Researchers argued that
142 levels of nurses' job satisfaction may vary across samples and countries. They also stated that
143 similar factors may not affect the level of job satisfaction in different countries (Zhu et al., 2012).
144 In Greece, a study on cardiac certified clinical nurses revealed that 38% of nurses were unhappy
145 with their supervisors and 34% with their colleagues (Iliopoulou & While, 2010). They also
146 reported that 34% of them were satisfied with their hospital management, and 81% nurses
147 expressed payment/salary as a significant job satisfaction dimension. In addition, researchers
148 explored some factors that lead to job dissatisfaction. These are low public appreciation for
149 nursing profession or poor image of the profession, low wages, inadequate social opportunities,
150 poor relationship with the management, lack of job security, inadequate involvement in decision-
151 making processes, and inflexible working hours (Aiken, Sloane, Bruyneel, Van, & Sermeus,
152 2013; El-Jardali, Dimassi, Dumit, Jamal, & Mouro, 2009). Other developing countries such as
153 public health services in Malaysia indicated that the major contributors include heavy workload,
154 repetitive work, and poor working environment. Respondents identified that inconsiderate and
155 inequitable superior/matron, lack of recognition, and conflict within and between groups were
156 common factors of satisfaction facets (Loo & Beh, 2012).

157 **2.2 Nurse turnover determinants**

158 Currently, turnover issue among the nurses is one of the prime concerns in healthcare sector.
159 Keeping this in mind, researchers explored some significant factors that prompt nurses' decision
160 retention or to quit their profession. Applebaum et al. (2010) asserted that turnover intention of
161 nurses is positively associated with nursing workload, stress for work, and burnout. Similarly,
162 Meeusen et al. (2011) stated that emotional and psychological fitness of nurses deteriorated
163 because of excessive workload and lack of coworker and supervisor support. Consequently,
164 turnover intention is increased. A survey on job satisfaction of healthcare professionals and their
165 intention to quit the job reported that length of professional experience is an important factor for
166 nurses' job satisfaction and their intention to quit from the profession (Kavanaugh et al., 2006).
167 In addition, they found that individual characteristics (e.g., gender, age educational level, and
168 race) are not liable for variances in job satisfaction. Recent studies indicate that nurse turnover or
169 their intention to quit is associated with transformational leadership style (Raup, 2008) and
170 participative governance in hospital (Gormley, 2011). Furthermore, Leiter, Price, and Spence
171 Laschinger (2010) and Delobelle et al. (2011) described that nurses are inspired for their
172 turnover intention more by managers/supervisors than by coworkers.

173 A myriad of research shows that demographic characteristics are allied with nurses' turnover
174 intention. In the recent works, researchers discovered an inverse relationship between turnover

175 intention and individual's age in nursing profession (Chan, Luk, Leong, Yeung, & Van, 2009;
176 Ma, Lee, Yang, & Chang, 2009). It is observed that nurses of Ireland reported a greater tendency
177 of premature retirement because of being female, kinship responsibilities, high workload, and
178 lack of training opportunities in the workplace (McCarthy, Tyrrell, & Lehane, 2007). Moreover,
179 Delobelle et al. (2011) found that turnover intention of nurses is inversely related with years of
180 nursing experience in South Africa while in Jordan, job satisfaction of nurses is positively
181 correlated with years of nursing experience and their age (Mrayyan, 2005). Similarly, Chan et al.
182 (2009) reported that fresh graduates are highly interested to quit the current position within their
183 first year of nursing practice. However, Beecroft, Dorey, and Wenten (2008) argued that fresh
184 graduate nurses feel committed to the organization, and turnover intention is lower given that
185 they are happier with their professions and pay. Some recent works show that turnover intention
186 of nurses is positively associated with higher levels of nursing education (Delobelle et al., 2011;
187 Stewart et al., 2011). Besides, Chan et al. (2009) revealed that educational level of nurses is
188 strongly correlated with their turnover intention or intention to stay in the organization. They
189 reported that the higher level of education, the higher level of turnover in current position. On the
190 contrary, Borkowski, Amann, Song, and Weiss (2007) stated that greater professional
191 commitment in nursing is correlated with higher education of nursing (e.g., bachelor/master
192 degree/PhD.). They also expressed that a highly educated nurse bears lower intention to quit the
193 profession.

194 In a contemporary study, Meeusen et al. (2011) reported that lack of fairness, politics, threats to
195 personal safety, and the risk of possible layoffs are causes of increased job dissatisfaction among
196 nurses. In a recent study, researchers explored that job satisfaction has a moderate relationship
197 with supervisor support, coworker support and recognition in nursing (Lu et al., 2012). Also,
198 they reported that pay, fringe benefits, and contingent rewards are associated with nurses' job
199 satisfaction, and these factors are highly related with turnover intention. Some researches show
200 that pay and financial benefits are considered as the most significant factors for job satisfaction
201 among male nurses compared to that of female nurses (Borkowski et al., 2007; Chan et al.,
202 2009). In addition, Leiter et al. (2010) stated that intention to quit the nursing profession is
203 associated with the support of nursing staff and manager's ability. In the same way, Tourangeau
204 and Cranley (2006) concluded that nurses are more likely to continue work in current position
205 who perceived their team members as cohesive and supportive.

206 **2.3 Nursing in Turkey**

207 Past studies have identified generally nurses' job satisfaction is at a moderate level in Turkey
208 (Akgöz et al., 2005; Sabanciogullari & Dogan, 2014; Yilmazel, 2013). However, these findings
209 contradict that of Cimete, Gencalp, & Keskin (2003) and Erdem et al., (2008) who found that the
210 nurses' job satisfaction to be the lowest among the health professional groups. A recent study
211 indicates that the main reasons of nurses' turnover intention is that of poor working conditions
212 and adverse perception of nursing profession in Turkish society (Gök & Kocaman, 2011).
213 Similarly, a survey on 397 Turkish nurses at health application and research center of Uludag
214 university found low level of job satisfaction (Akgöz et al., 2005). In that study, the majority of
215 nurses (68%) perceived a low job satisfaction level. Moreover, Sabanciogullari and Dogan
216 (2014) conducted a research on 2122 nurses in Turkey. They explored a strong positive
217 correlation between nursing professional identity and nurses' job satisfaction. In addition,

218 collectively 15.5% of the nurses informed that they have intention to quit their job because of
219 professional identity crisis and lower job satisfaction.

220 A recent work on 195 medical secretaries and 677 nurses conducted by Top and Gider (2013)
221 assessed job satisfaction in Turkey. They revealed that organizational commitment has a strong
222 positive correlation with nurses' job satisfaction. They also reported that demographic
223 characteristics of nurses for example gender, age, level of education, marital status, salary, years
224 of experience in the hospital, and type of hospital ownership influence the job satisfaction of
225 nurses. Similarly, Çimen and Şahin (2000) stated that the job satisfaction level of nurses
226 increased parallely with age increase. In addition, Aslan and Akbayrak (2002) reported that the
227 more is the nursing experience the more is the satisfaction in nursing profession. Paşaoğlu and
228 Tonus (2014) identified nurses' job satisfaction at low level during the first 5-years. They also
229 stated that nurses' job satisfaction usually increase along with their increased working experience
230 in hospitals. Furthermore, Yıldız, Ayhan, and Erdoğan (2009) identified a positive effect of
231 socio-demographic characteristics, level of job satisfaction, and motivation on nurses' turnover
232 intention in Turkey. They also found supervisor support as an important determinant among the
233 organizational factors of nurses' turnover intention. Besides, they revealed working hours as a
234 significant factor of nurses' intention to quit the existing job in Turkey. In this study, the job
235 satisfaction facets were scrutinized specifically for nursing profession. The impact of socio-
236 demographic characteristics on job satisfaction was also examined along with the intention to
237 quit among nurses at the healthcare sector in Turkey.

238 3. Objectives of the study

239 Evaluating nurses' job satisfaction at private hospitals of Turkey and scrutinizing their intention
240 to quit the existing employment are the prime objectives of this study. Besides, there are some
241 specific objectives:

- 242 • To identify the elements of job satisfaction among nurses;
- 243 • To measure the level of nurses' job satisfaction;
- 244 • To measure the level of intention to quit among the nurses;
- 245 • To investigate the association between nurses' job satisfaction and their intention to quit the
246 existing workplace;
- 247 • To examine the effects of socio-demographic variables (e.g., as gender, age, marital status,
248 education level, and nursing experience) on job satisfaction and intention to quit.

249 4. Methods

250 4.1 Sample and data collection procedures

252 In this study, a cross sectional survey was employed since this type of survey is suitable to
253 describe relationships between variables. Six private hospitals of Kocaeli – a province of Turkey
254 were selected to conduct the survey. It was a face-to-face survey. The questionnaire contained a
255 cover letter, a permission form, and the purpose of the research with brief description, and
256 guidelines on how to fill up the questionnaire. The sample comprised of nurses employed in the
257 pediatric ward, general ward, intensive care unit, and day ward settings. Non-probability
258 sampling – purposive sampling - technique was employed. Usable questionnaire was 417. A total
259 of 552 nurses participated in the study, representing 13.98% (417/2982) of the total population
260 from the six hospitals. The fitness criteria of the participants were ensured in all the hospitals.

261 These six hospitals were selected because of their state-of-the-art medical facilities for large
262 numbers of patients from different socio-economic levels. In this study, public hospitals were
263 excluded because of the lengthy requirements to obtain permissions granted for data collection
264 within the required study period.

265 **4.2 Instrumentation**

266 A structured questionnaire was developed from the literature of earlier studies on nurses' job
267 satisfaction. The questionnaire was divided into three segments. The first segment comprised
268 demographic characteristics such as gender, age, marital status, education level, working
269 position/title, years of nursing experience, working schedule, etc. The second segment included
270 36 items that are related to job satisfaction developed by (Spector, 1985). These items are
271 acknowledged as the Job Satisfaction Survey (JSS). In this study, nine independent variables
272 (i.e., pay promotion, contingent rewards, fringe benefits, operating procedures, work
273 environment, coworkers, supervision, and communication) were represented by the 36 items.
274 The nurses were requested to opine using a 6-point Likert scale (where, 1 = strongly disagree to
275 6 = strongly agree). Nearly one fourth of the items were described in an affirmative manner and
276 the rest of the items were in a negative manner. Hence the scores of items in negative manner
277 were inverted before analysis. The last segment contained 1 item. Nurses were asked to rate a 4-
278 point Likert scale (Where, 1= very unlikely to 4 = very likely) to express their intention to quit
279 the present workplace in the coming year.

280 **4.3 Reliability and acceptability estimates**

281 Cronbach's coefficient (α) for each selected facet of the JSS ranged from 0.73 to 0.92 (normally
282 0.6 and above is acceptable), which specifies the internal consistency of data (Spector, 1985).
283 Firstly, a pilot test was conducted to validate the questionnaire with 30 nurses who were not
284 incorporated in the sample. The instrument is acceptable as response rate was appreciable.
285 Acceptability was considered in terms of missing responses rates and refusal rates (Fitzpatrick,
286 Davey, Buxton, & Jones, 1988). Finally, the modified questionnaire was served to 650 nurses in
287 six Turkish private hospitals. 552 nurses filled up the questionnaires and response rate was
288 84.92%. The response rate of each hospital varied from 90% to 98%. After analyzing missing
289 data, we found that 87% respondents have no missing values for the entire set of 54 items.

290 **4.4 Ethical considerations**

291 Ethical approval was provided by Marmara University ethics committee (reference:
292 MUEC/06/QQ09/07/2013), and all study works were accomplished and compliant with the
293 national ethics regulations of Turkey. The questionnaire completion was deliberate and
294 anonymous. The privacy of data was assured and maintained. All participants provided their
295 written consent to participate in this study.

296 **4.5 Data analysis**

297 For data analysis, SPSS (Statistical Package for the Social Sciences; version 22; Chicago, IL,
298 USA) was used as statistical software. In this study, both descriptive and inferential statistical
299 analyses such as regression analyses, correlation analyses, ANOVA, and post-hoc tests were
300 performed to achieve objectives. For statistical significance, a level of $p < 0.05$ was used as a cut-

301 off. Spearman's rank correlation coefficient (r_s) is calculated for correlation analyses among the
302 variables. Lastly Binomial logistic regression is used with the help of back-ward stepwise
303 analysis, dichotomizing turnover intent by recoding response options ('Likely/Very Likely' = 1;
304 'Unlikely/Very Unlikely' = 0), as proposed by Hosmer Jr, Lemeshow, and Sturdivant (2013).
305 The predictor variables for job satisfaction and intention to quit were selected using the Wald test
306 (correlation $p < 0.25$) along with the theoretical relevance.

307 5. Results

308 [Insert Table 1]

309 A total 417 questionnaires were completed and returned by the respondents which represent 87% of
310 targeted nurses (total 552). Among them, male respondents were 155 and remaining 262 were
311 female nurses working at 6 private hospitals. The age range among the participated nurses was
312 21 to 60 years (mean: 31.58 and standard deviation: 6.0). The average experience of these nurses
313 were 12.7 years (standard deviation: 6.3) with a range from zero to 36 years. The descriptive
314 statistics of these nurses are shown in Table 1.

315 The JSS items along with their subscales (facets) were listed in Table 2 in an ascending order. In
316 order to focus on their magnitude to respondents' job satisfaction, mean and standard deviation
317 for each item was also presented accordingly. If the mean value for any item is more than or
318 equal to four, this means that the respondents are satisfied for that particular item. Again, if an
319 item scores less or equal to 3, it appears that the respondents were dissatisfied with that particular
320 item. A mean value in between 3 and 4 show ambivalence; thereby the calculation is the
321 percentage of mean value divided by the mean of maximum possible total (that is 6) which
322 specifies respondents' level of satisfaction for that item. Table 2 also incorporates the percentage
323 of nurses who gave responses of "moderately agree" or "strongly agree", with the purpose of
324 determining the factors that are allied with the highest level of satisfaction.

325
326 [Insert Table 2]

327 From Table 2, it is evidenced that the mean satisfaction level for the respondents was 3.46 out of
328 6 (standard deviation = 0.42), which means that the average satisfaction level is 58%. From the
329 table, it is also evident that higher scores were assigned by respondents to specific items such as
330 "I like my work environment", "my coworkers are comfortable with me", and "I enjoy the
331 administration of my supervisor". However, lower scores were assigned to the items i.e. "I feel
332 my efforts are not rewarded properly", "I feel heavy workload pressure", and "I am not satisfied
333 with my salary". According to the results from Table 2, the highest satisfactory facets were
334 "work environment", "supervisor support", and "coworkers", while "fringe benefits" and
335 "contingent rewards" were the least satisfactory facets among nurses.

336 [Insert Table 3]

337 We also tested nurses' intention to quit the existing job settings with relation to present job
338 satisfaction by asking "Considering your career aims, do you want to change your present
339 workplace in the coming year?" The results for this single statement are shown in Table 3. It is
340 shown that the mean intention to quit score was 2.81 out of 4 (standard deviation = 0.62), which
341 means that 60.9% nurses reported that they want to quit the present workplace within one year.
342 So, in Table 3, it is observed that 24.4% nurses were reported that they "very likely" to quit their
343 present workplace in the next year. Similarly, 36.5% respondents reported that they are "likely"

344 to quit their present job settings in the next year. Moreover, it is revealed that job satisfaction of
345 nurses was strongly and negatively associated with turnover decision ($r = -0.723$, $p < 0.01$).

346 Scheffé's method was run for examining the relationship between job satisfaction of nurses on
347 their promotion and work unit. It was found that Scheffé's F score 6.71 ($p = 0.03$) with the
348 correlation $r = 0.22$ ($p = 0.01$). While testing post-hoc for the possible interaction (family alpha =
349 0.05), the results revealed that general ward nurses' satisfaction level was higher than that of
350 pediatric ward, intensive care unit, and day ward. This result was significant since $p = 0.045$. The
351 correlation between nurses' fringe benefit and work unit was also found significant ($r = -0.25$,
352 $p = 0.001$) and the Scheffé's F score was 11.68 with $p = 0.03$. While testing post-hoc for the
353 possible interaction (family alpha = 0.05), the results revealed that day ward nurses' fringe
354 benefits were higher than that of pediatric ward, general ward, and intensive care unit ($r = -0.18$,
355 $p = 0.001$). Now, Scheffé's F score for contingent rewards and work unit was 10.59 ($p = 0.001$)
356 with correlation $r = -0.19$ ($p = 0.001$). The mean satisfaction for contingent rewards was found
357 higher among the general ward nurses, than that of pediatric ward, intensive care, and day ward
358 nurses ($p = 0.001$). This was tested for the post-hoc testing of the possible interactions at a family
359 alpha of 0.05.

360 The differences between the two main study variables (job satisfaction and intention to quit of
361 nurses) with relations to major demographic variables were also examined. First, independent t-
362 test was run to examine whether there is any differences based on "gender" of the nurses. The
363 results revealed that male participants ((mean = 3.44, standard deviation = 0.52), $t = 0.63$, $p =$
364 0.002) were scored slightly, but not significantly lower than the female respondents (mean =
365 3.48, standard deviation = 0.31) in terms of their present job satisfaction level. However, an
366 opposite result was found in case of nurses' intention to quit the present workplace, where
367 female participants ((mean = 2.98, standard deviation = 0.62), $t = 0.54$, $p = 0.03$) were scored
368 higher than their counterpart (mean = 2.64, standard deviation = 0.51).

369 Next, the difference in job satisfaction and intention to quit was determined with respondents'
370 marital status. The results from sample t-test revealed a significant difference in job satisfaction;
371 married participants ((mean = 3.82, standard deviation = .41), $t = -2.21$, $p = 0.000$) were scored
372 significantly higher than single participants (mean = 3.10, standard deviation = 0.32). Moreover,
373 a significant difference in intention to quit based on respondents' marital status; single
374 participants (mean = 2.90, standard deviation = 0.63), $t = 0.72$, $P = 0.003$) were scored
375 moderately higher than married participants (mean = 2.72, standard deviation = 0.52).

376 In order to test the differences in job satisfaction and intention to quit based on different
377 educational backgrounds of nurses, we used Scheffé's method. It is observed that nurses' job
378 satisfaction and educational level ($r = -0.35$, $p < 0.001$) with Scheffé's F score 11.58 ($p < 0.001$). In
379 post-hoc testing of the possible interactions at a family alpha of 0.05, the mean satisfaction of
380 nurses with diploma degree was higher than nurses with bachelor degree and master degree
381 holders ($p < 0.001$). On the other hand, it is observed that nurses' intention to quit and their
382 educational level ($r = 0.26$, $p = 0.01$) with Scheffé's F score 5.76 ($p < 0.001$). In post-hoc testing of
383 the possible interactions at a family alpha of 0.05, the mean intention to quit with master degree
384 holder was higher than nurses with diploma degree, and bachelor degree holders ($p < 0.001$).

385 [Insert Table 4]

386 Additionally, Table 4 summarizes the correlation between variables. The Spearman's rank
387 correlation coefficient (r_s) was tested to examine the relationships between job satisfaction and

388 nine organizational variables, or five demographic variables. A similar test was run with
389 intention to quit and same variables. Job satisfaction was significantly and positively correlated
390 with age and experience. Moreover, no association was found between job satisfaction and
391 gender, marital status or education level. Intention to quit was significantly and negatively
392 correlated with age and experience; the older and more experienced nurses reported less
393 intention to quit than younger nurses, and significantly positively associated with education level
394 of nurses.

395 [Insert Table 5]

396 Table 5 presents the results of stepwise backward logistic regression of intention to turnover as
397 shown by Hosmer Jr et al. (2013). Backward logistic regression of intention to quit on job
398 satisfaction, controlling for the effect of gender, age, marital status, education, and experience
399 resulted in a significant model ($\chi^2 = 25.78$, $d.f. = 3$, $P < 0.001$) with a 64.47% correct
400 classification rate of predicted values. Job satisfaction, age and education level were found to
401 predict turnover intent significantly, suggesting that younger and higher educated nurses with
402 less job satisfaction were more likely to consider turnover. Higher educated nurses were more
403 than twice as likely to consider turnover, and every one unit increase on the job satisfaction scale
404 was associated with being 61% less likely to consider turnover as shown in Model 1 of Table 5.

405 When substituting the composite measure of job satisfaction by its facets, as indicated in Model
406 2 of Table 5, supervisor support was the only facet significantly predicting turnover intent, next
407 to age and higher education. Nurses who reported more satisfaction with supervisor support were
408 nearly 39% less likely to consider a job change. Satisfaction with work environment, supervisor
409 support and coworkers was also retained, but without statistical significance. The model was
410 highly significant ($\chi^2 = 28.78$, $d.f. = 4$, $P < 0.001$) with a correct classification rate of 66.12%.

411 In summary, a statistically-significant negative relationship is revealed from the results between
412 the two main study variables job satisfaction and intention to quit among the nurses. A
413 significant positive rapport is found between nurses' job satisfaction and age. Similar results are
414 also reported for nursing experience. But a significant negative relationship with intention to quit
415 is found for age and nursing experience. Female nurses and married nurses have higher job
416 satisfaction than unmarried nurses, and male nurses. For intention to quit, male nurses and
417 unmarried nurses were found to have higher score than female nurses and married nurses. Nurses
418 with diploma were found to have the highest level of job satisfaction in comparison to others and
419 the nurses with master degree were found to be the lowest. While considering intention to quit,
420 the nurses with master degree were found to have the highest level possibilities, while the nurses
421 with bachelor degree were scored the lowest. Moreover, intention to quit was statistically
422 significantly explained by job satisfaction, age and education ($P < 0.001$), with younger and
423 higher educated nurses being more likely to show turnover intent. Satisfaction with work
424 environment was the only facet significantly explaining turnover intent when controlling for
425 gender, age, marital status, education, and experience ($P < 0.001$).

426 6. Discussion

427 This study filled a significant gap in the existing knowledge of nurses' job satisfaction and their
428 intention to quit in Turkey settings. This study found that nurses' job satisfaction score was 3.46
429 (out of 6) i.e. the average satisfaction level was 58%. So, the job satisfaction of Turkish nurses
430 was at moderate level. This result is consistent with earlier studies on Turkish nurses (Akgöz et

431 al., 2005; Sabanciogullari & Dogan, 2014; Yilmazel, 2013). However, this result contrasted with
432 the study of Erdem et al. (2008), who revealed that most Turkey nurses were dissatisfied with
433 their profession. Besides, the present study concluded that job satisfaction among nurses is
434 significantly and negatively associated with intention to quit. The finding is similar to the survey
435 of Turkey nurses (Gök & Kocaman, 2011), nurses working in American settings (Applebaum et
436 al., 2010), study of Greek nurses (Iliopoulou & While, 2010), and survey study of English nurses
437 (Frijters, Shields, & Price, 2007). In addition, 60.9% of nurses reported their strong intention to
438 quit their existing job place in the next year.

439 Among the nine facets of job satisfaction, nurses collectively expressed high level of satisfaction
440 with work environment, supervisor support, and coworkers. However, contingent rewards, fringe
441 benefits, and pay were reported with low satisfaction; that were highly related to their intention
442 to quit. This study is also congruent with Iliopoulou and While (2010) who identified supervisor
443 support as an important factor of nurses' job satisfaction. Moreover, they stated lower pay and
444 financial benefits as causes of dissatisfaction among nurses consistent with this study. In
445 addition, the recent study supported that nurses' intention to quit the existing workplace is
446 influenced more by managers or supervisors than by coworkers (Delobelle et al., 2011).
447 Likewise studies on general nurses conducted by Chan et al. (2009) and Heinen et al. (2013)
448 found high satisfaction with coworkers but dissatisfaction with their extrinsic rewards and
449 professional opportunities. Moreover, Leiter et al. (2010) stated that nurses' intentions to
450 continue the current employment was related to manager's capability and care of nursing staff.
451 The results of present study supports the finding of Tourangeau and Cranley (2006) who
452 identified that nurses felt more satisfaction and more likely to stay in hospitals when they
453 perceived their coworkers as cohesive and supportive. In the contemporary research on Turkey
454 conducted by Yıldız et al. (2009), supervisor support is noted as the third major impact on the
455 nurses' intention to quit.

456 The recent studies on nurses' job satisfaction indicate that pay, promotion, contingent rewards,
457 and fringe benefits play a significant role in job satisfaction (Han & Jekel, 2011; Top & Gider,
458 2013) that are consistent with the present findings. In the present study, nurses of general ward
459 reported a higher satisfaction level in terms of promotion and contingent rewards than nurses
460 who work in other units, and nurses of day wards reported higher satisfaction in term of fringe
461 benefits than nurses who work in other wards. Generally, most nurses were not satisfied with
462 their terms of promotion and fringe benefits. Interestingly, Seo, Ko, and Price (2004) reported
463 that Korean nurses would become very unhappy if they perceived that nurses in same position
464 elsewhere were being better rewarded. In the same way, Frijters et al. (2007) revealed that
465 Chinese nurses were displeased with pay and promotions. In contrast, Chan et al. (2009) revealed
466 an insignificant relation between pay and nurses' job satisfaction. They also stated nurses were
467 displeased more because of unfair promotion policy, lower career advancement opportunities,
468 and less chances of liberated work that highlights decision making, critical thinking, autonomy,
469 and delegation proficiency aspects of nursing.

470 It is discovered that nurses' job satisfaction and their intention to quit the present workplace are
471 significantly influenced by personal characteristics of nurses. In this study, nurses reported that
472 job satisfaction was positively associated with age. The results are congruent with the past
473 researches of Çimen and Şahin (2000) who indicates the job satisfaction level of Turkish nurses
474 increases in parallel with the increasing age, while Chinese nurses reported very weak
475 relationship between job satisfaction and age (Lu et al., 2007). Usually, one's expectations

476 become more realistic along with his/her maturity. The present study found a significant and
477 negative correlation between nurses' intention to quit and nurses' age, which is consistent with
478 recent research (Delobelle et al., 2011; Ma et al., 2009). Furthermore, female and married nurses
479 reported higher job satisfaction, while male and single nurses expressed higher intention to quit
480 the current workplace. These findings are congruent with prior research (Top & Gider, 2013;
481 Torkelson & Seed, 2011). In terms of intention to quit, it is revealed that financial benefits are
482 imperative factors of intention to quit for males nurses compared to females (Borkowski et al.,
483 2007; Kacel et al., 2005) that supports the present findings. Similarly, Lu et al. (2012) identified
484 single male nurses are more exposed to burnout than married nurses.

485 Nurses reported that professional experience is positively correlated to their job satisfaction i.e.
486 nurses with less work experience are more dissatisfied with their job compared with experienced
487 nurses, which is congruent with the earlier research of Kavanaugh et al. (2006). Past researchers
488 claimed that years of nursing experience and age are related variables for one's job satisfaction
489 that is also consistent with the present results. Usually, younger nurses who have not as much of
490 professional experience are more displeased with their workload, pay, financial benefits,
491 promotion, professional support, and the opportunity to continue their education (Torkelson &
492 Seed, 2011). It is reported that the experienced nurses (more than 15 years) conveyed less
493 intention to quit from the existing workplace compared with younger nurses. Similarly, some
494 contemporary studies stated that young nurses especially fresh graduates have higher intention to
495 quit the existing workplace within the first year of practice (Beecroft et al., 2008; Chan et al.,
496 2009; Delobelle et al., 2011). However, the present findings are not similar to earlier results of
497 Mrayyan (2005). Also, Lu et al. (2012) stated that the intention to quit of nurses is weakly
498 associated with year of age and years of job experience.

499 Chan et al. (2009) revealed that nurses' educational levels are not strongly related to job
500 satisfaction and intention to quit. The present study reveals an opposite result. Nurses with
501 master degree were the most dissatisfied nurses with their job than nurses with diploma and
502 bachelor degrees. In addition, nurses with master degree have a higher level of intention to quit
503 the current employment than others. Similarly, some prior research explored that highly educated
504 nurses are more likely to quit the existing workplace. They are conscious for their career
505 advancement, and seek alternative employment opportunities because of inadequate work
506 opportunities and benefits in their current organization (Delobelle et al., 2011; Stewart et al.,
507 2011). However, the present study rejects the finding of Borkowski et al. (2007) who stated that
508 higher education level (for example, master degree in nursing) is correlated with enhanced
509 professional commitment and possibility of intention to quit the existing employment as well as
510 the nursing profession. In the same way, Liu et al. (2012) did not find any strong relation
511 between nurses' job satisfaction and their educational qualification.

512 The job satisfaction factors of Turkish nurses were examined carefully to enhance their
513 satisfaction in organizations. Consequently, the likelihood of intention to quit among nurses will
514 be reduced. The present findings are consistent with previous researches conducted in other
515 nations. The significant difference among the nations seems to be the ranking of certain job
516 satisfaction variables over others and cultural dissimilarities which is innate in the healthcare
517 delivery systems of different nations.

518

519

520 7. Implications for the nurse managers

521 Implementation of proper motivation programs would enhance job satisfaction and decrease
522 intention to quit of Turkish nurses which ultimately may increase healthcare service quality.
523 Nursing managers can practice co-management models for nurses. Nurses can take part in
524 professional activities such as contribution in decision making and sense of confidence in
525 nursing practices to increase their sense of belonging in the organization (Aiken et al., 2013;
526 Flinkman et al., 2010). Consequently, their job satisfaction can be increased. Evidently, it is
527 important that nursing administrators and employers should inspire and allocate adequate
528 resources for professional development of nurses, thus they can avail and take part in
529 constructive programs and meetings (Aiken et al., 2013; Asegid et al., 2014).

530 Retaining the qualified nurses is a challenge in all organizations. To retain nurses, managers
531 should take initiatives to identify and assess the job satisfaction factors of nurses. Managers
532 ought to routinely screen for indications of dissatisfaction by conducting job satisfaction surveys.
533 Sometimes, nurses' intent to apply positions on different units or hospitals may be one of the
534 first signs of their job dissatisfaction. To increase job satisfaction and retention, the managers
535 ought to ensure professional opportunities such as working with skilled peers, providing
536 unceasingly support to nurses, endorsing collaborative nurse–physician relationships, securing
537 adequate staffing, advocating and helping control over nursing practice, increasing clinical
538 autonomy, and promoting nurse education (Hayes, Bonner, & Pryor, 2010).

539 Highlighting the factors of nurses' job satisfaction, the present study suggests a suitable and
540 strategic plan of professional development for Turkish nurses so that the probability of intention
541 to quit may be minimized from their existing workplace as well as nursing profession. The
542 present study provides a guideline for hospital management to identify the positive and negative
543 factors of job satisfaction among nurses. Identifying the positive factors of job satisfaction,
544 management will ensure its continuance. Addressing negative factors among healthcare policy
545 makers and hospital management are necessary and crucial measures to improve nurses' job
546 satisfaction resulting in the reduction of nurses' intention to quit.

547 8. Conclusion

548 Job satisfaction is a noteworthy issue for ensuring proper nursing care in healthcare sector.
549 Furthermore, job satisfactions of nurses will ensure better quality healthcare services and
550 enhance their professional commitment. The present study explored the important factors of job
551 satisfaction among the nurses who were employed in private hospitals in Turkey. Nurses
552 collectively expressed their job satisfaction at a moderate level. The findings of this study
553 demonstrated the significance of fair promotion opportunity, fringe benefits, and contingent
554 rewards as important factors in improving job satisfaction and retention among nurses. Amongst
555 the nine job satisfaction factors, nurses reported a higher satisfaction level with their work
556 environment, supervisors, and coworkers. It indicates that the work environment, responsive and
557 cooperation among co-workers as important factors to the nurses' job satisfaction. Job
558 satisfaction and retention among nurses varies accordingly with demographic variables. The
559 findings of this study are comparable with other studies in different nations. According to the
560 earlier research, the job satisfaction is negatively interrelated with intention to quit among nurses
561 which is congruent with the contemporary studies. Thus, low satisfaction hampers the quality of

562 healthcare services and builds the intention to quit the organizations. Consequently,
563 organizations might suffer from different direct and indirect factors of satisfaction.

564 9. Limitations and future research

565 In this study, the sample size was relatively small and limited to nurses who were employed
566 among the private hospitals in the province of Kocaeli, Turkey. Thus the findings are applicable
567 to this sample only. For future research, a larger and representative random sample of nurses
568 from both private and public hospitals can be investigated. Although the findings of this study
569 are congruent with past studies, caution is required in drawing any firm conclusions for other
570 nations. Further examination is encouraged owing to the multidimensional nature of both
571 concepts - job satisfaction and intention to quit. An ethnographic qualitative research approach
572 would be better addressed in which nurses can express their experiences and needs. This
573 approach may permit the academics to achieve a comprehensive understanding of both cultural
574 and individual nurses' point of views.

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576 References

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- 578 Aiken, L. H., Sloane, D. M., Bruyneel, L., Van, D. H. K., & Sermeus, W. (2013). Nurses' reports of
579 working conditions and hospital quality of care in 12 countries in Europe. *International Journal*
580 *of Nursing Studies*, 50, 143-153.
- 581 Aiken, L. H., Sloane, D. M., Clarke, S., Poghosyan, L., Cho, E., You, L., . . . Aunguroch, Y. (2011).
582 Importance of work environments on hospital outcomes in nine countries. *International Journal*
583 *for Quality in Health Care*, 23(4), 357-364.
- 584 Akgöz, S., Özçakir, A., İsmet, K., Tombul, Ö. B. B. K., Altinsoy, S. H. Y., & Sivriloğlu, Y. (2005). The
585 professional satisfaction of nurses employing in health, application and research center (suam) of
586 Uludağ University. *Turkiye Klinikleri Journal of Medical Ethics, Law and History*, 13(2), 86.
- 587 Applebaum, D., Fowler, S., Fiedler, N., Osinubi, O., & Robson, M. (2010). The impact of environmental
588 factors on nursing stress, job satisfaction, and turnover intention. *The Journal of Nursing*
589 *Administration*, 40, 323.
- 590 Arslan Yurumezoglu, H., & Kocaman, G. (2015). Predictors of nurses' intentions to leave the
591 organisation and the profession in Turkey. *Journal of Nursing Management*.
- 592 Asegid, A., Belachew, T., & Yimam, E. (2014). Factors influencing job satisfaction and anticipated
593 turnover among nurses in sidama zone public health facilities, south Ethiopia. *Nursing Research*
594 *and Practice*, 1-26, Article ID 909768.
- 595 Aslan, Ö., & Akbayrak, N. (2002). Hemşirelerde iş doyumunu. *Modern Hastane Yönetimi Dergisi*, 6(2), 29-
596 35.
- 597 Banaszak-Holl, J., & Hines, M. A. (1996). Factors associated with nursing home staff turnover. *The*
598 *Gerontologist*, 36(4), 512-517.
- 599 Beecroft, P. C., Dorey, F., & Wenten, M. (2008). Turnover intention in new graduate nurses: a
600 multivariate analysis. *Journal of Advanced Nursing*, 62(1), 41-52.
- 601 Borkowski, N., Amann, R., Song, S.-H., & Weiss, C. (2007). Nurses' intent to leave the profession: issues
602 related to gender, ethnicity, and educational level. *Health Care Mmanagement Rreview*, 32(2),
603 160-167.
- 604 Chan, M. F., Luk, A. L., Leong, S. M., Yeung, S. M., & Van, I. K. (2009). Factors influencing Macao
605 nurses' intention to leave current employment. *Journal of Clinical Nursing*, 18(6), 893-901. doi:
606 10.1111/j.1365-2702.2008.02463.x

- 607 Çimen, M., & Şahin, İ. (2000). Bir kurumda çalışan sağlık personelinin iş doyum düzeyinin Belirlenmesi.
608 *Hacettepe Sağlık İdaresi Dergisi*, 5(4), 53-67.
- 609 Cimete, G., Gencalp, N. S., & Keskin, G. (2003). Quality of life and job satisfaction of nurses. *Journal of*
610 *Nursing Care Quality*, 18(2), 151-158.
- 611 Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and
612 turnover for hospital-based nurses: a review of the research literature. *International Journal of*
613 *Nursing Studies*, 44(2), 297-314.
- 614 Cowin, L. S., Johnson, M., Craven, R. G., & Marsh, H. W. (2008). Causal modeling of self-concept, job
615 satisfaction, and retention of nurses. *International Journal of Nursing Studies*, 45(10), 1449-1459.
- 616 Delobelle, P., Rawlinson, J. L., Ntuli, S., Malatsi, I., Decock, R., & Depoorter, A. M. (2011). Job
617 satisfaction and turnover intent of primary healthcare nurses in rural South Africa: a questionnaire
618 survey. *Journal of Advanced Nursing*, 67(2), 371-383.
- 619 El-Jardali, F., Dimassi, H., Dumit, N., Jamal, D., & Mouro, G. (2009). A national cross-sectional study on
620 nurses' intent to leave and job satisfaction in Lebanon: implications for policy and practice. *BMC*
621 *Nursing*, 8(1), 3.
- 622 Erdem, R., Rahman, S., Avcı, L., Göktaş, B., Şenoğlu, B., & Fırat, G. (2008). Investigating Job
623 Satisfaction and Burnout Levels of the Persons Working for the Hospitals at City Center of
624 Elazığ, Turke. *Journal of Applied Science Research*, 4(2), 188-201.
- 625 Ferrera, J. M. C., Chaparro, F. P., & Jimenez, J. S. (2011). Efficiency assessment of real estate cadastral
626 offices using DEA. *International Review of Administrative Sciences*, 77(4), 802-824.
- 627 Fitzpatrick, R., Davey, C., Buxton, M. J., & Jones, D. R. (1988). Evaluating patient-based outcome
628 measures for use in clinical trials. *Health Technol. Assess*, 2(1-74).
- 629 Flinkman, M., Isopahkala-Bouret, U., & Salanterä, S. (2013). Young Registered Nurses' Intention to
630 Leave the Profession and Professional Turnover in Early Career: A Qualitative Case Study. *ISRN*
631 *nursing*, 2013.
- 632 Flinkman, M., Laine, M., Leino-Kilpi, H., Hasselhorn, H.-M., & Salanterä, S. (2008). Explaining young
633 registered Finnish nurses' intention to leave the profession: a questionnaire survey. *International*
634 *Journal of Nursing Studies*, 45(5), 727-739.
- 635 Flinkman, M., Leino-Kilpi, H., & Salanterä, S. (2010). Nurses' intention to leave the profession:
636 integrative review. *Journal of Advanced Nursing*, 66(7), 1422-1434.
- 637 Frijters, P., Shields, M. A., & Price, S. W. (2007). Investigating the quitting decision of nurses: panel data
638 evidence from the British National Health Service. *Health Economics*, 16(1), 57-73.
- 639 Gök, A. U., & Kocaman, G. (2011). Reasons for leaving nursing: A study among Turkish nurses.
640 *Contemporary Nurse*, 39(1), 65-74.
- 641 Gormley, D. K. (2011). Are we on the same page? Staff nurse and manager perceptions of work
642 environment, quality of care and anticipated nurse turnover. *Journal of Nursing Management*,
643 19(1), 33-40.
- 644 Han, G. H., & Jekel, M. (2011). The mediating role of job satisfaction between leader-member exchange
645 and turnover intentions. *Journal of Nursing Management*, 19(1), 41-49.
- 646 Hayes, B., Bonner, A., & Pryor, J. (2010). Factors contributing to nurse job satisfaction in the acute
647 hospital setting: a review of recent literature. *Journal of Nursing Management*, 18(7), 804-814.
- 648 Heinen, M. M., van Achterberg, T., Schwendimann, R., Zander, B., Matthews, A., Kózka, M., . . . Ball, J.
649 (2013). Nurses' intention to leave their profession: a cross sectional observational study in 10
650 European countries. *International Journal of Nursing Studies*, 50(2), 174-184.
- 651 Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (Vol. 398):
652 John Wiley & Sons.
- 653 Hyrkas, K., & Morton, J. L. (2013). International perspectives on retention, stress and burnout. *Journal of*
654 *Nursing Management*, 21(4), 603-604.
- 655 Iliopoulou, K. K., & While, A. E. (2010). Professional autonomy and job satisfaction: survey of critical
656 care nurses in mainland Greece. *Journal of Advanced Nursing*, 66(11), 2520-2531.

- 657 Kacel, B., Miller, M., & Norris, D. (2005). Measurement of nurse practitioner job satisfaction in a
658 Midwestern state. *Journal of the American Academy of Nurse Practitioners*, 17(1), 27-32.
- 659 Kavanaugh, J., Duffy, J. A., & Lilly, J. (2006). The relationship between job satisfaction and
660 demographic variables for healthcare professionals. *Management Research News*, 29(6), 304-325.
- 661 Leiter, M. P., Price, S. L., & Spence Laschinger, H. K. (2010). Generational differences in distress,
662 attitudes and incivility among nurses. *Journal of Nursing Management*, 18(8), 970-980.
- 663 Liu, C., Zhang, L., Ye, W., Zhu, J., Cao, J., Lu, X., & Li, F. (2012). Job satisfaction and intention to
664 leave: a questionnaire survey of hospital nurses in Shanghai of China. *Journal of Clinical
665 Nursing*, 21(1-2), 255-263.
- 666 Loo, L.H., & Beh, L.S (2012). Job stress and coping mechanism among nursing staff in public health
667 services. *International Journal of Academic Research in Business and Social Sciences*, 2(7), 131-
668 176.
- 669 Lu, H., Barriball, K. L., Zhang, X., & While, A. E. (2012). Job satisfaction among hospital nurses
670 revisited: a systematic review. *International Journal of Nursing Studies*, 49(8), 1017-1038.
- 671 Lu, H., While, A. E., & Louise Barriball, K. (2007). A model of job satisfaction of nurses: a reflection of
672 nurses' working lives in Mainland China. *Journal of Advanced Nursing*, 58(5), 468-479.
- 673 Ma, J.-C., Lee, P.-H., Yang, Y.-C., & Chang, W.-Y. (2009). Predicting factors related to nurses' intention
674 to leave, job satisfaction, and perception of quality of care in acute care hospitals. *Nursing
675 Economics*, 27(3), 178-184.
- 676 McCarthy, G., Tyrrell, M. P., & Lehane, E. (2007). Intention to 'leave' or 'stay' in nursing. *Journal of
677 Nursing Management*, 15(3), 248-255.
- 678 Meeusen, V. C., Van Dam, K., Brown-Mahoney, C., Van Zundert, A. A., & Knape, H. T. (2011).
679 Understanding nurse anesthetists' intention to leave their job: how burnout and job satisfaction
680 mediate the impact of personality and workplace characteristics. *Health Care Management
681 Review*, 36(2), 155-163.
- 682 Mrayyan, M. T. (2005). Nurse job satisfaction and retention: comparing public to private hospitals in
683 Jordan. *Journal of Nursing Management*, 13(1), 40-50.
- 684 Murrells, T., Robinson, S., & Griffiths, P. (2008). Job satisfaction trends during nurses' early career.
685 *BMC Nursing*, 7(7), 1-13.
- 686 OECD. (2013). *Health at a Glance 2013*: OECD Publishing.
- 687 Packard, J. S., & Motowidlo, S. J. (1987). Subjective stress, job satisfaction, and job performance of
688 hospital nurses. *Research in Nursing & Health*, 10(4), 253-261.
- 689 Paşaoğlu, D., & Tonus, H. Z. (2014). Strategic Importance of Human Resource Practices on Job
690 Satisfaction in Private Hospitals. *Procedia-Social and Behavioral Sciences*, 150, 394-403.
- 691 Raup, G. H. (2008). The impact of ED nurse manager leadership style on staff nurse turnover and patient
692 satisfaction in academic health center hospitals. *Journal of Emergency Nursing*, 34(5), 403-409.
- 693 Sabanciogullari, S., & Dogan, S. (2014). Relationship between job satisfaction, professional identity and
694 intention to leave the profession among nurses in Turkey. *Journal of Nursing Management*.
- 695 Seo, Y., Ko, J., & Price, J. L. (2004). The determinants of job satisfaction among hospital nurses: a model
696 estimation in Korea. *International Journal of Nursing Studies*, 41(4), 437-446.
- 697 Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job
698 Satisfaction Survey. *American Journal of Community Psychology*, 13(6), 693-713.
- 699 Stewart, N. J., D'Arcy, C., Kosteniuk, J., Andrews, M. E., Morgan, D., Forbes, D., . . . Pitblado, J. R.
700 (2011). Moving on? Predictors of intent to leave among rural and remote RNs in Canada. *The
701 Journal of Rural Health*, 27(1), 103-113.
- 702 Top, M., & Gider, O. (2013). Interaction of organizational commitment and job satisfaction of nurses and
703 medical secretaries in Turkey. *The International Journal of Human Resource Management*, 24(3),
704 667-683.
- 705 Torkelson, D. J., & Seed, M. S. (2011). Gender differences in the roles and functions of inpatient
706 psychiatric nurses. *Journal of Psychosocial Nursing*, 49(3), 34-41.

- 707 Tourangeau, A. E., & Cranley, L. A. (2006). Nurse intention to remain employed: understanding and
708 strengthening determinants. *Journal of Advanced Nursing*, 55(4), 497-509.
- 709 Van Bogaert, P., Clarke, S., Roelant, E., Meulemans, H., & Van de Heyning, P. (2010). Impacts of
710 unit-level nurse practice environment and burnout on nurse-reported outcomes: a multilevel
711 modelling approach. *Journal of Clinical Nursing*, 19(11-12), 1664-1674.
- 712 Yıldız, Z., Ayhan, S., & Erdoğan, Ş. (2009). The impact of nurses' motivation to work, job satisfaction,
713 and sociodemographic characteristics on intention to quit their current job: An empirical study in
714 Turkey. *Applied Nursing Research*, 22(2), 113-118.
- 715 Yılmazel, G. (2013). Mobbing, job satisfaction and affecting factors in the nurse. *Turkiye Clinics Journal*
716 *of Nursing Science*, 5(2), 55-63.
- 717 Zhu, X. w., You, L. m., Zheng, J., Liu, K., Fang, J. b., Hou, S. x., . . . Wang, H. h. (2012). Nurse staffing
718 levels make a difference on patient outcomes: a multisite study in Chinese hospitals. *Journal of*
719 *Nursing Scholarship*, 44(3), 266-273.
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Table 1 (on next page)

tables

Table 1. Demographic characteristics of the nurses (n = 417) Table 2. The means and standard deviations for all items of nine facets of the job satisfaction survey Table 3. Descriptive values for nurses' intention to quit the present workplace

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Table 1. Demographic characteristics of the nurses (n = 417)

Particular	Percentage (%)	Frequency
<i>Gender</i>		
Male	37	155
Female	63	262
<i>Age Group</i>		
21-25	23.5	98
26-30	30.7	128
31-35	19.6	82
36-40	14.0	58
41-45	7.6	32
≥ 46	4.6	19
<i>Marital status</i>		
Single	32.8	137
Married	55.4	231
Widowed	7.2	30
Divorced	4.6	19
<i>Education level</i>		
Diploma/ Associate degree	58	242
Graduate (Baccalaureate)	35.3	147
Master of science	6.7	28
<i>Working experience</i>		
≥ 5 year	23.5	98
6 – 15 year	32.6	136
16 – 25 year	26.9	112
26 – 35 years	10.1	42
≤ 36 years	6.9	29
<i>Unit</i>		
General Ward	25.7	107
Pediatric Ward	7.2	30
Incentive care	24.2	101
Day Ward	42.9	179
<i>Schedule</i>		
Permanent morning	24.2	101
Permanent night	18.5	77
Rotating day	57.3	239

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Table 2 (on next page)

The means and standard deviations for all items of nine facets of the job satisfaction survey

1 Table 2. The means and standard deviations for all items of nine facets of the job satisfaction survey
2

Subscale	Items	Mean	Standard deviation	Rating nurses with opinion as strongly agree or moderately agree (%)	Satisfaction ranking (descending)	Facet Mean of satisfaction	Facet standard deviation
Pay	Pay1	2.79	1.60	18.7	30	3.25	0.16
	Pay2	3.26	1.53	16.2	34		
	Pay3	3.28	1.31	23.0	23		
	Pay4	3.45	1.61	31.9	11		
Promotion	Pro1	3.01	1.35	18.7	31	3.34	0.25
	Pro2	3.30	1.30	26.3	15		
	Pro3	3.52	1.64	23.7	20		
	Pro4	3.54	1.48	28.0	13		
Supervision	Sup1	3.79	1.58	40.0	4	3.87	0.15
	Sup2	3.79	1.47	34.4	9		
	Sup3	3.81	1.52	35.0	7		
	Sup4	4.17	1.53	43.2	3		
Fringe benefits	Fri1	2.64	1.23	12.4	35	3.20	0.28
	Fri2	3.20	1.40	21.9	24		
	Fri3	3.21	1.51	19.0	28		
	Fri4	3.53	1.36	23.7	21		
Contingent rewards	Con1	3.01	1.47	18.7	33	3.14	0.12
	Con2	3.08	1.44	18.7	32		
	Con3	3.19	1.45	21.9	26		
	Con4	3.29	1.38	21.9	25		
Operating conditions	Ope1	2.69	1.24	11.2	36	3.25	0.46
	Ope2	3.34	1.46	24.0	18		
	Ope3	3.44	1.58	25.6	17		
	Ope4	3.64	1.39	24.4	19		
Coworkers	Cow1	3.28	1.44	26.3	16	3.84	0.59
	Cow2	3.39	1.33	21.2	27		
	Cow3	4.27	1.39	43.9	2		
	Cow4	4.21	1.67	52.7	1		
Work environment	Nat1	3.67	1.46	30.7	12	3.89	0.15
	Nat2	3.90	1.63	34.4	10		
	Nat3	3.95	1.43	35.7	6		
	Nat4	4.23	1.47	38.8	5		
Communication	Com1	3.13	1.65	23.7	22	3.35	0.31
	Com2	3.13	1.42	19.3	29		
	Com3	3.33	1.33	27.5	14		
	Com4	3.79	1.59	35.0	8		

3

Table 3 (on next page)

Descriptive values for nurses' intent to quit the present workplace

1
2
3
4
5

Table 3. Descriptive values for nurses' intent to quit the present workplace

Level	Frequency	Percentage (%)
Very unlikely	93	22.3
Unlikely	70	16.8
Likely	152	36.5
Very likely	102	24.4

6

Table 4 (on next page)

Spearman's rank correlation

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2
3
4

Table 4. Spearman's rank correlation

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Gender	1.00															
2	Age	0.19	1.00														
3	Marital status	0.25	0.32	1.00													
4	Education level	0.21	0.27	-0.35	1.00												
5	Experience	0.16	0.28*	0.31	0.27	1.00											
6	Pay	0.31	0.27	0.23	0.37	0.28	1.00										
7	Promotion	0.23	-0.37	0.24	-0.17**	0.27	0.17	1.00									
8	supervisory support	0.24	-0.17	0.14	0.18	-0.37	-0.16	0.31	1.00								
9	Fringe benefits	0.14	0.18**	-0.17	0.15	-0.17*	0.24	0.28	-0.15	1.00							
1	Contingent rewards	-	0.15	0.14	0.23	0.14	0.31	0.27*	-0.14*	0.17	1.00						
1	Operating	-	0.27	0.28	0.24	-0.17	0.23	0.24	-0.17	0.23*	0.31	1.00					
1	Coworkers	-	-0.18	0.27	0.14	-0.15	0.24	0.14**	-0.15	0.24	0.23*	0.18	1.00				
1	Work environment	-	-0.17	-0.37	-0.17	-0.24	0.28	-0.17	-0.24	0.28	0.24	0.15	0.12	1.00			
1	Communication	0.18	0.25	-0.17	-0.15	-0.18	0.27	0.14	0.23	0.24	-0.17	0.23	0.31	0.15	1.00		
1	Job Satisfaction	0.60	0.31**	0.28	0.25	0.66**	0.87**	0.67**	0.64*	0.84**	0.55**	0.74**	0.53**	-	0.59*	1.00	
1	Intention to quit	0.18	-	0.17	0.57**	-	-0.17	-0.26	0.14	-0.17	-0.24	0.28	0.24	-0.21	0.19	-	1.0

5 *P < 0.05 level (two-tailed); **P < 0.01 level (two-tailed); ***P < 0.001 level (two-tailed).

Table 5 (on next page)

Stepwise backward logistic regression of intention to quit

Table 5. Stepwise backward logistic regression of intention to turnover

	B	SE	Wald (d.f.=1)	P	OR (95%CI)
Model 1 ^a					
Age	-0.07	0.01	11.01	0.001	0.92 (0.74-0.85)
Education level	0.95	0.47	4.62	0.029	2.47(1.12-5.78)
Job Satisfaction	-0.91	0.37	5.91	0.001	0.33 (1.24-0.65)
Constant	5.07	1.41	8.82	0.002	
-2 log likelihood	142.08				
Correct classification rate (%)	64.47				
Model 2 ^b					
Age	-0.07	0.01	11.24	0.001	0.92 (0.74-0.85)
Education level	0.87	0.34	5.24	0.011	2.34 (1.05-0.95)
supervisory support	-0.56	0.17	4.89	0.001	0.71(0.54-0.87)
Work environment	-0.54	0.25	6.34	0.034	0.82 (0.42-0.97)
Coworkers	-0.72	0.36	4.42	0.042	0.43 (0.14-2.65)
Constant	6.95	2.07	8.99	0.008	
-2 log likelihood	135.85				
Correct classification rate (%)	66.12				

a= Variables entered: gender, age, marital status, education level, experience (step 1); job satisfaction (step 2).

b=Variables entered: gender, age, marital status, education level, experience (step 1); satisfaction, pay, promotion, supervisory support, fringe benefits, contingent rewards, operating conditions, coworkers, work environment, communication (step 2).