NURSES’ PATIENT SAFETY CULTURE PERCEPTIONS AND THE TRANSFORMATIONAL LEADERSHIP PRACTICES IN TURKEY

Aysegul YILMAZ*, Assoc. Prof. Sergul DUYGULU¹*
¹Hacettepe University Institute of Health Sciences, **¹Hacettepe University Faculty of Nursing, Ankara, Turkey
Patient safety is a primary concern of health care institutions and organizations, and it has become a precondition for high quality health care services.

World Health Organization (WHO) emphasized that 10 million people around the world are estimated to become mutilated or die every year due to preventable medical errors and called on everyone to do more research about patient safety (WHO 2007).
BACKGROUND

• To provide safe and high quality patient care, patient safety culture must be improved in the health sector (Weaver et al. 2013).

• For patient safety culture to be created, maintained and achieved in an institution, there is a need for effective leadership practices (Sammer & James 2011).
Patient Safety Culture:

- Ensuring patient safety is closely related to the development of safety culture in health institutions.

- According to the International Council of Nurses (ICN) (2012), patient safety is the basis for high quality nursing care.
Patient Safety Culture:

- The Joint Commission (TJI), categorized international accreditation standards for hospitals under 13 headings, one of which is patient safety.
- TJI also improved the standards for patient safety, and gave nurses managerial and functional responsibilities in the identification and resolution of problems about patient safety within the health care system.
- The provision of safe and quality health care service can be achieved by improving patient safety culture.
Patient Safety Culture Definition:

Patient safety culture is commonly defined as: "the product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to and the style and proficiency of an organization's health and safety program" (Halligan & Zecevic 2011, p. 338).
Institutions' failure to create patient safety culture causes serious damage to patients, nurses and the institutions themselves.

When patients are harmed during health care service, it can cause serious injuries, extend hospital stays, increase medical errors and even cause death (Cloete 2015).

Such harm occurs when the safety measures for patients are insufficient.

It causes psychological traumas, diminishes patients' functionality, reduces patients' trust in the health care system and its workers and leads to socio-economic losses (Institute of Medicine 2004, Cloete 2015).
In hospitals where a patient safety culture has been established:
• There are positive changes in patient care outputs (DiCuccio 2015), and
• Hospital workers have fewer injuries related to needles and sharp objects (Smith et al. 2010).
• There are also fewer medical errors (Vaismoradi et al. 2016), shorter hospital stays, fewer falling accidents and lower death rates among patients (Agnew et al. 2013, Leone & Adams 2016).
• It has been shown that such environments ensure workers' motivation and psychological wellness (Brunetto et al. 2016) and improve their knowledge, skills and motivation (Pumar-Mendez et al. 2013).
Transformational Leadership

- Nurse managers in health institutions have a crucial role in improvement and the facilitation of safe care practices (Vaismoradi et al. 2016).

- The transformational leadership approach is to be necessary to achieve patient safety (McFadden et al. 2015, Vaismoradi et al. 2016).
Transformational Leadership:

Burns (1978) (cited by Bass in 1999) state that transformational leaders inspire motivation, high spirits and performance in their followers.

Kouzes and Posner (2003) described the behaviors of transformational leaders as guiding others, inspiring a shared vision, challenging processes and encouraging followers by congratulating them on their achievements and improvements.
There are numerous studies showing transformational leadership behaviors’ effect:

- High job satisfaction and a positive patient safety culture (Brewer et al. 2016).
- Strong and more productive employee (Tremblay et al. 2015).
- Increases worker and patient satisfaction, effects teamwork positively (Berry et al. 2016).
- Increases psychological wellness and reduces resignation rates among nurses, reducing the financial losses of health care institutions (Cloete 2015, Fischer 2016).
Relationship Between Transformational Leadership and Patient Safety Culture

- A positive relationship between the level of transformational leadership and the improvement of patient safety have been shown in previous studies (Derin & Demirel 2011, Livens & Vlerick 2013), and
- Transformational leadership has a positive effect on the creation of a safety climate (Merrill 2015).
- Researchers have also emphasized that nurse managers' leadership plays a very important role to develop and maintain patient safety culture (Feng et al. 2012).
BACKGROUND

Relationship Between Transformational Leadership and Patient Safety Culture

It is to be expected that there is a desirable patient safety culture in environments that include UCNs who are capable of uniting their nurse colleagues around patient care goals, innovating, creating a shared vision and stimulating and motivating them.

However, the number of studies investigating both patient safety culture and transformational leadership in hospitals is limited although the importance of these subjects in health care environments is often emphasized.
This study aimed to determine nurses' patient safety culture perceptions and the transformational leadership practices of unit charge nurses in Turkey.
1- What are the UCNs and staff nurses’ (observers) evaluations of the UCNs' transformational leadership practices?
2- What are the UCNs and observers' evaluations of patient safety culture?
3- Is there a correlation between patient safety culture and leadership practices?
METHODOLOGY

Study design:
A descriptive correlational design..

Sample:
- The sample of observers included 375 nurses who had been working with the UCNs for at least six months (with at least three nurses working with each UCN).
- In total, 70 UCNs and 357 nurse observers filled out the data collection tools.
- The participation rate was 94.8%.
between March and June 2014.

- Demographic data form,
- The Leadership Practices Inventory (Self and Observer Form) and
- Patient Safety Culture Hospital Survey.
The Leadership Practices Inventory (LPI):

The inventory examines five basic leadership practices:

- challenge the process,
- inspire a shared vision,
- model the way,
- encourage the others to act and
- encourage the heart (Kouzes & Posner 2003).

The statements in the inventory were assessed using a 5-point scale (from almost never-1 to almost always-5).

The possible minimum score on the entire inventory is 30, and the possible maximum score is 150.
Hospital Survey on Patient Safety Culture:

- Agency for Health care Research and Quality (AHRQ) developed Hospital Survey on Patient Safety Culture.
- It consists of 42 items and 12 dimensions, 10 of which were about patient safety culture, and 2 of which were about the hospitals outputs regarding patient safety culture.
- In this study, 10 dimensions were used.
Before conducting the study, the researchers obtained permission from the Association of Public Hospitals General Secretariat and the Non-invasive Clinical Research Ethical Board of Hacettepe University.

The researchers also obtained written consent from the UCNs and observers who participated in the study indicating that they did so on a voluntary basis.

Sorra, who developed patient Safety Culture Hospital Survey, Bodur and Filiz, who translated the survey into Turkish, and Kouzes and Posner, who developed the LPI, also gave their permissions.
DATA ANALYSIS

• IBM SPSS Statistics 22 was used for data analysis. The demographic data were analyzed using descriptive statistics.

• The chi-square test, the independent sample t test, means, percentages and Spearman's non-parametric correlation were used for data analysis.

• The percentage of positive results for each question was calculated.

• The study findings were accepted as significant at a 95% confidence interval and a p<0.05 significance level.
RESULTS

- The average age of the UCNs was 38.29 years (SD=4.90).
- Their average working year in nursing profession was 17.25 (SD=6.99),
- Their average working year in hospital was 8.97 (SD=6.76),
- and their average working experience as unit charge nurse was 3.10 years (SD=2.73).
- The average age of the observer nurses was 32.11 years (SD=6.50).
- Their average working experience in nursing profession was 10.86 years (SD=7.06),
- their average working period at the hospital was 4.85 years (SD=4.60), and
  the average working time with the UCNs was 1.78 years (SD=1.66).
Table 1. The UCNs and Observers' evaluations of the UCNs Leadership Practices

<table>
<thead>
<tr>
<th>Leadership practices</th>
<th>UCNs n=70</th>
<th>Observers n=357</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{X}$± SD</td>
<td>$\bar{X}$± SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model the way</td>
<td>24.61 ± 2.48</td>
<td>24.03 ± 4.70</td>
<td>1.507</td>
<td>.134</td>
</tr>
<tr>
<td>Inspire a shared vision</td>
<td>23.03 ± 2.95</td>
<td>22.95 ± 5.04</td>
<td>.179</td>
<td>.859</td>
</tr>
<tr>
<td>Challenge the process</td>
<td>24.01 ± 2.81</td>
<td>22.88 ± 4.97</td>
<td>2.653</td>
<td>.009**</td>
</tr>
<tr>
<td>Enable others to act</td>
<td>25.39 ± 2.61</td>
<td>24.16 ± 4.70</td>
<td>3.072</td>
<td>.002**</td>
</tr>
<tr>
<td>Encourage the heart</td>
<td>25.24 ± 2.99</td>
<td>23.63 ± 4.98</td>
<td>3.637</td>
<td>.000*</td>
</tr>
<tr>
<td>Total</td>
<td>122.29 ± 12.10</td>
<td>117.65 ± 23.10</td>
<td>2.447</td>
<td>.015***</td>
</tr>
</tbody>
</table>

*p<.001, **p<.01, ***p<.05
What are the UCNs and observers' evaluations of patient safety culture?"

- The positive responses rate to the items about patient safety culture was 48.16%.
- The lowest rate of positive answers was in the dimension of non-punitive response to errors (UCNs: 35.7%, nurse observers: 31.0%).
- The highest average rate of positive answers was in the dimension of unit teamwork (UCNs: 87.1%, observers: 73.4%).
- The average percentage of positive answers was lower than 50% in the sub dimensions of frequency of errors reported and non-punitive response to errors for both UCNs and observers.
What are the UCNs and observers' evaluations of patient safety culture?” (Cont.)

- The UCNs' average percentage of positive responses to the items in the sub dimensions of unit teamwork (p=0.001), teamwork between units and management support (p<0.001), organizational learning (p<0.001), overall patient safety perceptions (p=0.011), feedback and open communication about errors (p=0.028), frequency of events reported (p<0.001) and non-punitive response to errors (p=0.001) was significantly higher than that of the observers.

- The UCNs' average rate of positive responses to the items about patient safety culture (59.21) was significantly higher than that of the observers (46.66) (p<0.001).
Is there a correlation between patient safety culture and leadership practices?

- There was a moderately positive and significant correlation between nurse observers' assessments of total patient safety culture and the UCNs' leadership practices [model the way (r=.40, p=.000), inspire a shared vision (r=.39, p=.000), challenge the process (r=.41, p=.000), enable others to act (r=.41, p=.000), encourage the heart (r=.38, p=.000) and total leadership practices (r=.42, p=.000)].
Is there a correlation between patient safety culture and leadership practices? (Cont.)

• There was a moderately positive and significant correlation between UCNs' assessments of total patient safety culture and leadership practices [model the way (r=.43, p=.000), inspire a shared vision (r=.27 p=.022), challenge the process (r=.29, p=.016), enable others to act (r=.43, p=.000), encourage the heart (r=.28, p=.018) and total leadership practices (r=.38, p=.001)].

• The average rate of positive responses to the items about total patient safety culture increased in direct proportion to the scores for leadership practices.
DISCUSSION

• In the self-assessments of the UCNs, their mean scores on the subdimensions of challenge the process, enable others to act, encourage the heart and total LPI scores were higher than the scores given by the nurse observers.

• This result may be explained by the inclination to social desirability. Accordingly, the UCNs may be inclined to express behaviors that they are expected to display rather than their actual behaviors.
DISCUSSION

• The scores on the entire inventory and its sub dimensions indicated that the UCNs' leadership practices self-assessments and the observers' assessments were desirably close to each other.
• These finding simply that the UCNs working in the hospitals inspire a shared vision, give their followers opportunities to take risks to benefit their organizations, encourage them to improve and congratulate them on their achievements.
• The recent managerial changes in the hospitals where the study was conducted and the regulations for hospitals made by the Turkish Republic Ministry of Health have had a positive effect on the nurse managers.
DISCUSSION

- The unit teamwork sub dimension had the highest percentage of positive responses, while the teamwork between units sub dimension had a low score.
- This result is important since it shows that each unit has an independent culture. However, teamwork between units is as necessary as teamwork in units for the creation of patient safety culture in hospitals as Singer et al. (2003) stated.
DISCUSSION

• The sub dimension of non-punitive response to errors on the Hospital Survey on Patient Safety Culture had the lowest average percentage of positive responses by both the UCNs and the nurse observers.

• This result may imply that the importance and necessity of patient safety culture has not been understood completely in the health institutions in Turkey, and nurses are blamed and punished by the senior management when they make errors.
DISCUSSION

• The percentage of positive responses in the staffing sub dimension was lower than 50% for both the UCNs and the nurse observers, which implies that the number of nurses in health institutions is low.
• This may be one of the main causes of the medical errors that pose a threat to patients' lives.
• Chang and Mark (2009) conducted a study to determine the causes of nurses' errors, and the nurses said that they were long work hours, lack of nursing staff and fatigue.
DISCUSSION

• The percentage of nurses’ positive responses to the Hospital Survey on Patient Safety Culture was 48.2%.
• This percentage of positive responses is lower that the percentage found by study conducted by AHRQ in the US (Nieva and Sorra 2003), which indicates that the patient safety culture in the health institutions where this study was conducted is still not at the desired level.
• In Turkey, there are works related to patient safety in the hospitals directed by the Ministry of Health, which requires quality regulations. However, this study's results show that there are some problems regarding the attainment of the desired results, and there were difficulties with the regulations for establishing a patient safety culture.
Another significant finding of this study is that the rate of positive responses to the items about patient safety culture was low, although the transformational leadership scores of the nurses were high. Considering the capability of transformational leadership to change and improve practices, these results imply that the UCNs have difficulties creating these changes.
Additionally, this study results showed that there was a correlation between transformational leadership and culture of patient safety.

The UCNs' transformational leadership practice scores increased in direct proportion to the percentage of their positive responses to the items about patient safety culture.

This shows the importance of transformational leadership in the creation of patient safety culture.
The study found that the leadership scores of UCNs and nurse observers were high, but that their positive responses to the items about patient safety culture was low. At the same time, this study demonstrated the presence of a moderately positive correlation between transformational leadership and patient safety culture, and the importance of transformational leadership in the improvement of patient safety culture. The results of this and other studies (Bodur & Fliz 2010, Bahcecik & Gündoğdu 2012) show that patient safety culture is not at the desired level in Turkey.
CONCLUSION

• The researcher suggests that the necessary regulations be made at once to improve patient safety and patient care quality in the Turkish hospitals where the study was conducted.
• It is important that an effective error reporting system be established, and that managers play constructive and supportive roles in error reporting.
• A sufficient number of suitably qualified nurses should be employed for patient safety, and teamwork should be encouraged and maintained.
• Nurse managers' transformational leadership qualities should be improved, and necessary regulations should be made to get this improvement to enhance patient safety practices.
THANK YOU

sduygulu@hacettepe.edu.tr