Factors Influencing Intentions to Leave of Nurse Anesthetists in a Public University Hospital

Abstract: Factors influencing intentions to leave of nurse anesthetists in a public university hospital
Parichad Apidechakul B.Ns.*, Phongthara Vichitvejpaisal M.D., Ph.D*, Phetcharee Chainchop B.Sc.*, Thanaporn Napachoti B.Sc.*, Ladda Permpholprasert B.Sc.*
*Member of Anesthesiology Department, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.

Background: Intentions to leave affected functions of the organization Objectives: To verify factors influencing intentions to leave of nurse anesthetists who worked in a public University hospital Method: A cross-sectional, descriptive study included 56 certified, volunteered nurse anesthetists working more than 6 months. The questionnaire was developed with the internal reliability of Motivation-Hygiene factors, external factors and personal factors were 0.9, 0.8 and 0.9 respectively. Results: Nurse anesthetists ‘leaved certainly’ 13.2%, ‘probably leaved’ 60% and ‘not to leave’ 20.8%. The younger had intentions to leave than the older. Those with low income had intentions to leave more income. Nurse anesthetists having experience less than 5 years intended to leave than others. Hygiene factors (company policies) were associated with intentions to leave. Hygiene

Corresponding author: Phongthara Vichitvejpaisal
E-mail: phongthara@gmail.com
factors (the salary) and (fringe benefits) influenced their intentions to leave of nurse anesthetists. The salary and fringe also predicted their intentions to leave. **Conclusions:** Ageing, experience, income, fringe benefit and company policy had influence on intentions to leave. Salary and fringe benefits became the determining factors of the risk.

**Keywords:** nurse anesthetists, public hospital, intentions to leave

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**Introduction**

The nursing shortage and high turnover have become a critic issue.¹ In recent years, this problem, especially in anesthesia has affected the delivery of healthcare all over the world.² Resignation seems to be the troublesome in all government hospitals. During 2007 - 2012, the Department of Anesthesiology, Faculty of Medicine Siriraj Hospital had lost 15 nurse anesthetists with 0 - 5 years of work experience. This was an opportunity waste in economical and managerial process in training program.

**Background**

The Royal College of Anesthesiologists of Thailand (RCAT) has determined that nurse anesthetists have to be registered and graduate in 1 - year training program from the well-certified institutes. At present, the RCAT can produce 198 nurse anesthetists annually with the total number of 2478 nationwide. They can work as anesthesiologist assistant in the operating room or perform general anesthesia under the supervision of surgeons or general practitioners.

According to the government policy, a university hospital can liberate itself in financial management. This becomes a downsizing organization that recruits workers as government, university or faculty employees.³

Siriraj hospital is a tertiary health unit. The Anesthesiology department provides services to 55 operating rooms, a pain clinic and 2 intensive care units. Most anesthesiologist and nurse anesthetists as well as trainees have to work in rotation both in healthcare service and education program. As a result, all anesthesia personnel seem not to have free time in their daily rounds.

Mowday claimed that employees expressed 3 behaviors when they had ideas of intentions to resign. There were absenteeism, inertia and drug abusing.⁴ Job satisfaction affected turnover and turnover intention in organization.⁵ Thus satisfaction and turnover in job amongst nurses had a strong relationship.⁶ Herzberg’s (1966) presented his Motivation-Hygiene theory regarding factors effecting satisfaction at work that associated with working environment. Hygiene factors, a work satisfaction had negative associated with intentions to resign. However, motivation factors had positive effect. Hygiene factors were related with job content and led to job satisfaction while motivation...
factors were related with job context and led to job dissatisfaction. Hygiene factors were achievement, recognition, working details, responsibility, personal and advancement career path. Motivation factors were company policies, relationship with supervisor and peers, status, security, working conditions, supervision, salary and fringe benefits.

All medical institutions approached in both internal and external environments. Internal environmental factors were managerial resources (material, financial and human variables), core capability (business information management and product development research), organization structure and culture (leadership and shared values). The external environmental factors were market and community factors.

We would like to verify factors affecting intentions to leave such as Hygiene and Motivation, external and internal factors as well as personal factors.

**Objectives**

To verify factors influencing intentions to leave in nurse anesthetists who work in a public University hospital

**Methods**

This was a cross-sectional, descriptive study. Ethical permission was obtained from IRB committee, Faculty of Medicine, Siriraj Hospital Reference No.801/2011(EC2)

The 56 certified nurse anesthetists, working more than 6 months volunteered to join the study. Participation or not participation in the project had no impact on their assignments.

Criteria for grouping intentions to leave:

Group 1 Expected not to leave
Group 2 Probably leaved
Group 3 Leaved certainly

The questionnaire was developed and assessed for content validity and reliability using alpha Cronbach (α-coefficient). The internal reliability of Motivation-Hygiene factors (90 items), External factors (20 items) and Personal factors (15 items) was 0.9, 0.8 and 0.9 respectively.

Data were expressed as mean ± SD. and percentage. Chi-square test was used to analyze intentions to leave and all associated matters. Factors influencing the intentions to leave were analyzed by stepwise regression. P<0.05 was considered as statistically significant difference.

**Results**

The 53 participants that was 94.64% of nurse anesthetist responded to the questionnaires: 96.2 % was women, 49% aged> 46 years, 30.2 % aged 26-35 years and 20.8 % aged 36-45 years. They worked as government employees 14.3%, university employees 62.5% and faculty employees 23.1 %. They got married 54.7 %. 83.0%, graduated with a Bachelor's degree in Nursing Care. The income was 15,000-30,000 Baht/month (32.1%) and 60,000 Baht/month (30.2 %). Some said this amount of money was enough 32.1 % enough and left for savings 49.2 %. Some had to patronize their parents 34.1 %, son 24.2%. Most of them
lived in their homes 68.9% and having cars 43.9%. Operation extra work 67.9%. Experience was less than 5 years 22.6%, 5-10 years 22.6% and 16-20 years 20.8%. Reasons to become nurse anesthetist were switching to another field of nursing 32.5%, didn’t want to work after office hours 25.2%, for further study 25.2%. Nurse anesthetists ‘Expected not to leave’ with a total of 11 persons (20.8%), and ‘Probably leaved’ 66% and ‘Leaved certainly’ 13.2%. In ‘Expected not to leave’ 72.72% was university employees, 18.18% was government employees. In ‘Probably leaved’ 40% was university employees, 28.57% was government employees, 14.28% was faculty employees. And in ‘Leaved certainly’ 42.85% was university employees with 42.85% was faculty employees.

Hygiene factors (the salary) and Hygiene factors (fringe benefits) influence their intentions to leave of nurse anesthetist. Both can predict the intentions to leave of the nurse anesthetists in about 24% significantly.

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \]

The independent variable \( Y \) represents intentions to leave. The dependent variable \( X_1 \) represents Hygiene factors (the salary), \( X_2 \) represents Hygiene factors (fringe benefits).

**Discussion**

The study revealed that nurse anesthetists leaved certainly 13.2%, probably leaved 60% and not to leave 20.8%. Ageing was associated with intentions to leave: the older was fewer than the younger. In addition, those with low income had intentions to leave higher than those with more income. Nurse anesthetists having experience less than 5 years intended to leave than others. Thus hygiene factors (company policies) were associated with intentions to leave of nurse anesthetists. Hygiene factors (the salary and fringe benefits) influence their intentions to leave of nurse anesthetist. However, the salary and fringe benefits not only influenced but also predicted their intentions to leave.

The certain to leave seemed to agree with Shimizutani et al. (2008) who found that only 20% of the nurses had intentions to leave. This is not beyond our expectation since work in anesthesia has a high level of stress and workload both in and out of office hours. They might have some difficulties to organize their time in several aspects. Firstly, they had to be a teacher or teacher assistant to the trainees during daily rounds. Secondly, they had to adapt themselves to cope with other colleagues in between rotating schedule. Thirdly, they had language barrier to communicate with some foreign trainees. This was confirmed by Corser who insisted that the collaboration and meaningful dialogue with mutual respect could help essentials for collaborative interaction. Finally, they lacked knowledge and experience in research as project assistant or principle investigator as project assistant.

The reasons that the younger nurse anesthetists had intentions to leave were 1) Easy to lose their stability in mind to settle down 2) Having multiple desires to change to the new things and 3) Having labile attitudes to the environment. These agreed
with several studies. McCarthy et al. claimed that the age profile of the nurses between 21 and 35 years broadly correlated with that of the leavers in Ireland with the figure rose to 70%. Shimizutani et al. confirmed that factors associating with personal burnout were ageing (29.3 ± 8.4 yr). Zeytinoglu et al. explained by nurse’s need for job security and resistance to change, though the levels of turnover intention were not evaluated.

Wherever the more they got paid, the more attractive it would be. Since they got low salary, they had to earn an extra work to raise their families. As a result, salary played an important role in determining turnover among nursing personnel. Salary became the most prominent reason for younger generation to end up their career.

Cassandra revealed that years of anesthesia experience were associated with positive attitudes in the collaboration with anesthesiologists. The current study showed that single nurses with experience less than 5 years had possibility to change or migrate easily as compared to the others. This disagreed to Strachota et al. who found that nurses with less than 15 years of experience had more eager to leave.

Nurses who dissatisfied with the company policy and management highly intended to leave. This agree with Sourdif who claimed that satisfaction with administration were the best predictor of intentions to stay.

The salary and fringe benefit seemed to play the major roles in decision-making of nurse anesthetists. Amongst the hectic schedule, all workers need money and free time to improve their quality of life. This agreed with Gardulf about half of the responding nurses intended to quit their jobs. The main reason for this was dissatisfaction with the salary.

Limitations of the study and suggestions for a future study

We should study all Thai nurse anesthetists who worked in all public university hospitals. In addition, the exit interview regarding one who left the organization might yield accurate outcomes.

Conclusion

Resignation is still a problem in many public sectors. Ageing, experience, income, fringe benefit and company policy had influence on intentions to leave. Salary and fringe benefits became the determining factors of the risk. For further study, we should access all kinds of factors affecting the causes of resignation.
### Table 1  Chi-square test between age and intentions to leave

<table>
<thead>
<tr>
<th>Age (yrs.)</th>
<th>Intentions to leave</th>
<th>Expected Not to leave (%)</th>
<th>Probably leaved (%)</th>
<th>Leaved certainly (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-35</td>
<td></td>
<td>2 (3.77)</td>
<td>9 (16.98)</td>
<td>5 (9.43)</td>
<td>16 (30.19)</td>
</tr>
<tr>
<td>36-45</td>
<td></td>
<td>5 (9.43)</td>
<td>5 (9.43)</td>
<td>1 (1.89)</td>
<td>11 (20.75)</td>
</tr>
<tr>
<td>&gt;46</td>
<td></td>
<td>4 (7.55)</td>
<td>21 (39.62)</td>
<td>1 (1.89)</td>
<td>26 (49.06)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11 (20.75)</td>
<td>35 (66.04)</td>
<td>7 (13.21)</td>
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</tr>
</tbody>
</table>

### Table 2  Chi-square test between income and intentions to leave

<table>
<thead>
<tr>
<th>Personal income (baht)</th>
<th>Intentions to leave</th>
<th>Expected Not to leave (%)</th>
<th>Probably leaved (%)</th>
<th>Leaved certainly (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,001-30,000</td>
<td></td>
<td>4 (7.55)</td>
<td>7 (13.21)</td>
<td>6 (11.32)</td>
<td>17 (32.08)</td>
</tr>
<tr>
<td>30,001-45,000</td>
<td></td>
<td>3 (5.66)</td>
<td>9 (16.98)</td>
<td>0 (00)</td>
<td>12 (22.64)</td>
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<tr>
<td>45,001-60,000</td>
<td></td>
<td>0 (00)</td>
<td>8 (15.09)</td>
<td>0 (00)</td>
<td>8 (15.09)</td>
</tr>
<tr>
<td>&gt; 60,000</td>
<td></td>
<td>4 (7.55)</td>
<td>11 (20.75)</td>
<td>1 (1.89)</td>
<td>16 (30.19)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11 (20.75)</td>
<td>35 (66.04)</td>
<td>7 (13.21)</td>
<td>53 (100)</td>
</tr>
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</table>

### Table 3  Chi-square test between years of experience and intentions to leave

<table>
<thead>
<tr>
<th>Years of experience (yrs)</th>
<th>Intentions to leave</th>
<th>Expected Not to leave (%)</th>
<th>Probably leaved (%)</th>
<th>Leaved certainly (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5</td>
<td></td>
<td>1 (1.89)</td>
<td>5 (9.43)</td>
<td>6 (11.32)</td>
<td>12 (22.64)</td>
</tr>
<tr>
<td>5-10</td>
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<td>6 (11.32)</td>
<td>6 (11.32)</td>
<td>0 (00)</td>
<td>12 (22.64)</td>
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<tr>
<td>11-15</td>
<td></td>
<td>0 (00)</td>
<td>0 (00)</td>
<td>0 (00)</td>
<td>0 (00)</td>
</tr>
<tr>
<td>16-20</td>
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<td>1 (1.89)</td>
<td>10 (18.87)</td>
<td>0 (00)</td>
<td>11 (20.75)</td>
</tr>
<tr>
<td>21-25</td>
<td></td>
<td>1 (1.89)</td>
<td>6 (11.32)</td>
<td>1 (1.89)</td>
<td>8 (15.09)</td>
</tr>
<tr>
<td>&gt; 25</td>
<td></td>
<td>2 (3.77)</td>
<td>8 (15.09)</td>
<td>0 (00)</td>
<td>10 (18.87)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11 (20.75)</td>
<td>35 (66.04)</td>
<td>7 (13.21)</td>
<td>53(100)</td>
</tr>
</tbody>
</table>

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### Table 4  Chi-square test between Hygiene factors (Company policies) and intentions to leave

<table>
<thead>
<tr>
<th>Company Policies</th>
<th>Intentions to leave</th>
<th>Expected Not to leave (%)</th>
<th>Probably leaved (%)</th>
<th>Leaved certainly (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td></td>
<td>0 (00)</td>
<td>3 (5.66)</td>
<td>4 (7.55)</td>
<td>7 (13.21)</td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td>8 (15.09)</td>
<td>20 (37.74)</td>
<td>2 (3.77)</td>
<td>30 (56.60)</td>
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<tr>
<td>Satisfied</td>
<td></td>
<td>3 (5.66)</td>
<td>11 (20.75)</td>
<td>1 (1.89)</td>
<td>15 (28.30)</td>
</tr>
<tr>
<td>Very satisfied</td>
<td></td>
<td>0 (00)</td>
<td>1 (1.89)</td>
<td>0 (00)</td>
<td>1 (1.89)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>11 (20.75)</td>
<td>35 (66.04)</td>
<td>7 (13.21)</td>
<td>53 (100)</td>
</tr>
</tbody>
</table>

### Table 5  Chi-square test between group and intentions to leave

<table>
<thead>
<tr>
<th>Group</th>
<th>Intentions to leave</th>
<th>Expected Not to leave (%)</th>
<th>Probably leaved (%)</th>
<th>Leaved certainly (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government employees</td>
<td></td>
<td>2 (16.67)</td>
<td>10 (83.33)</td>
<td>0 (00)</td>
<td>12 (100)</td>
</tr>
<tr>
<td>University employees</td>
<td></td>
<td>8 (32.00)</td>
<td>14 (56.00)</td>
<td>3 (12.00)</td>
<td>25 (100)</td>
</tr>
<tr>
<td>Faculty employees</td>
<td></td>
<td>0 (00)</td>
<td>5 (62.50)</td>
<td>3 (37.50)</td>
<td>8 (100)</td>
</tr>
<tr>
<td>etc.</td>
<td></td>
<td>1 (12.50)</td>
<td>6 (75.00)</td>
<td>1 (12.50)</td>
<td>8 (100)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>11 (20.75)</td>
<td>35 (66.04)</td>
<td>7 (13.21)</td>
<td>53 (100)</td>
</tr>
</tbody>
</table>

### References


ปัจจัยที่มีอิทธิพลต่อความตั้งใจลาออกของวิสัญญีพยาบาลสังกัดโรงพยาบาลมหาวิทยาลัยในกำกับของรัฐ

บทคัดย่อ

บทความ: ความตั้งใจลาออกมีผลกระทบต่อระบบงานขององค์กร วัตถุประสงค์: เพื่อค้นหาปัจจัยที่มีผลต่อความตั้งใจลาออกของวิสัญญีพยาบาลสังกัดโรงพยาบาลมหาวิทยาลัยในกำกับของรัฐ วิธีการศึกษา: การศึกษาเชิงพรรณนาในวิสัญญีพยาบาลผู้สมัครจ้างจำนวน 56 คนที่ทำงานมากกว่า 6 เดือน แบบสอบถามได้ถูกพัฒนาและมีค่าความเชื่อมั่นในด้านปัจจัยจุนและปัจจัยจูงใจ ปัจจัยจุนประกอบ ปัจจัยส่วนบุคคล มีค่าเท่ากับ 0.9, 0.8 และ 0.9 ตามลำดับ ผลการศึกษา: พบว่ามีวิสัญญีพยาบาลที่ตั้งใจลาออกแน่นอนร้อยละ 13.2 อาจลาออกคิดเป็นร้อยละ 60 ไม่ลาออกคิดเป็นร้อยละ 20.8 วิสัญญีพยาบาลที่อายุน้อยและมีรายได้น้อยมีความตั้งใจลาออกมากกว่าผู้มีอายุมาก วิสัญญีพยาบาลที่มีประสบการณ์การทำงานน้อยกว่า 5 ปีมีความตั้งใจลาออกมากกว่ากลุ่มอื่นๆ ปัจจัยจุนด้านนโยบายและการบริหารมีความสัมพันธ์กับความตั้งใจลาออก รวมปัจจัยจุนด้านนโยบายและสวัสดิการมีผลต่อความตั้งใจลาออกของวิสัญญีพยาบาล โดยปัจจัยจุนด้านเงินเดือนและสวัสดิการมีอิทธิพลต่อความตั้งใจลาออก

ค่าสัมพันธ์: วิสัญญีพยาบาล โรงพยาบาลของรัฐ ความตั้งใจลาออก