The dataset for relationship between the nurses to patients ratio and patients satisfaction with nursing care

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**Abstract**

The nurse to patient ratio is one of the impressive nursing care features. Evaluation of patient satisfaction with nursing care according to the number of available agents can be a valuable tool for understanding the quality of service the patient receive it used to adjust appropriate strategies. This data article involved 402 patients who were ready for discharge, in East Gilan hospitals in Iran in 2013. Data were collected through questionnaires PSI. Its validity and internal consistency reliability (Cronbach's alpha) were 90%. The obtained data showed that there are differences in nurses to patients ratio in hospitals and mean satisfaction was 72.6 ± 17.8. However, no relationship was found between patient satisfaction and nurses to patients ratio. Patients' satisfaction with nursing care, regardless of the nurses to patients ratio indicates that nurses are trying to attract the patient's consent under any circumstances. In the intensive care unit was a decrease in the number of patients each nurse to provide more direct attention leads more satisfaction.

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**Specifications table**

| Subject area       | Nursing               |
|--------------------|-----------------------|
| More specific subject area | Health-care          |
| Type of data        | Tables                |
| How data were acquired | These data were acquired from hospitals patients and nurses employed in the hospitals in East Guilan. |
| Data format         | Raw and analyzed      |
| Experimental factors | Some operational limits were considered in study design. Samplings in areas such as pediatric, psychiatric wards, ICU, dialysis unit and in every wards if patients were not able to speak were removed from the unit. |
| Experimental features | The participants filled the PSI questionnaire and a checklist. Satisfaction survey sheet was completed by patients at the time of discharge. |
| Data source location | East Guilan, Guilan province, Iran. |
| Data accessibility  | Data are included in this article |
| Related research article | L.H. Aiken, D.M. Sloane, J. Ball, L. Bruyneel, A.M. Rafferty, P. Griffiths, Patient satisfaction with hospital care and nurses in England: an observational study, BMJ open. 8 (2017) e019189-e019189. [1] |

**Value of the data**

- These data can be used by other researchers to perform more detailed studies.
- These data can be used by hospital managers to adjust the nurse to patient ratio.
- These data can be useful for clinical sector managers to implement plans to select nurses with possibly higher satisfaction.

1. **Data**

   In this study, 402 patients were studied. The average age of patients participating in the study was 50.75 ± 20.8 years. 50.30% of the samples were women and 49.70% were male.

   Table 1 shows the average and standard deviation of patient satisfaction in selected hospitals. Table 2 shows the average and standard deviation of nurse to patient ratio in selected hospitals. The average ratio of nurses to patients in the hospital Kosar had the highest proportion and the proportion in the Ansari hospital was very close to it. The lowest ratio of nurses to patients was in the Roudsar hospital and then Lahijan hospital. The study of hospital in terms of nurse to patients had significant differences (Table 2). Table 3 presents the average and standard deviation of nurse to patient ratio in selected hospitals. Table 4 shows the relationship between two variable of the ratio of nurses to patients and patients satisfaction.

2. **Experimental design, materials and methods**

   This research is an applied-field research which utilized cross-correlation method and conducted in 2013. Study population consisted of hospitals patients and nurses employed in the hospitals in East Gilan. A checklist related to indicators such as the number of hospital beds, the number of nurses per shift and the number of hospitalized patients were filled.
Table 1
Average and standard deviation of patient satisfaction in selected hospitals and according to different groups.

| Total satisfaction | Mean | SD  |
|--------------------|------|-----|
| Roodsar            | 73   | 16.8|
| Lahijan            | 69.8 | 19.9|
| Langrood           | 75.6 | 16.2|
| Ansari             | 72.9 | 14.2|
| Kosar              | 71.5 | 20.7|
| Total              | 72.6 | 17.8|

| Gender            | Mean | SD  |
|-------------------|------|-----|
| Women             | 72.2 | 17.6|
| Men               | 73   | 17.9|
| Total             | 72.6 | 17.8|

| Marital situation | Mean | SD  |
|-------------------|------|-----|
| Single            | 72.6 | 17.8|
| Married           | 72.5 | 17.8|
| Total             | 72.5 | 17.8|

| Education         | Mean | SD  |
|-------------------|------|-----|
| No education      | 71.4 | 18.8|
| Elementary        | 73   | 17.3|
| Middle school     | 75.9 | 17.2|
| High school       | 73.3 | 16.2|
| University degree | 66.6 | 17.7|
| Total             | 73.3 | 17.7|

| Job               | Mean | SD  |
|-------------------|------|-----|
| Farmer or worker  | 76.3 | 17.4|
| Office employee   | 77.3 | 18.3|
| No job            | 68.2 | 15.9|
| House wife        | 71.4 | 19.3|
| Student           | 70.7 | 14.1|
| Others            | 73.2 | 17.8|
| Total             | 73.3 | 18.2|

| Place of residence| Mean | SD  |
|-------------------|------|-----|
| Urban             | 72.9 | 17.9|
| Rural             | 71.9 | 17.6|
| Total             | 72.6 | 17.8|

| Insurance        | Mean | SD  |
|------------------|------|-----|
| Yes              | 72.7 | 17.8|
| No               | 71.1 | 17   |
| Total            | 72.6 | 17.8|

Table 2
Average and standard deviation of nurse to patient ratio in selected hospitals.

|            | Average | Standard deviation |
|------------|---------|--------------------|
| Roodsar    | 0.36    | 0.36               |
| Lahijan    | 0.41    | 0.33               |
| Langrood   | 0.47    | 0.25               |
| Ansari     | 0.78    | 0.43               |
| Kosar      | 0.84    | 0.58               |
| Total      | 0.53    | 0.45               |
Two questionnaires were prepared and filled by patients and nurses separately. Demographic characteristics of participants were recorded. In case of patients, demographic characteristics included gender, age, marital situation, education, job, insurance, and place of residence. Demographic characteristics of nurses included gender, age, employment situation, and job experience. The number of satisfaction questions of patients and nurses were 31 and 41, respectively. Participants were informed about the purpose of study and content of questionnaires. They were assured that their answers will be only used for this research. Sheet satisfaction survey was completed by patients at the time of discharge. Demographic characteristics of participants are presented in Table 5.

Some operational limits were considered in study design, which using the other studies, these limitations were reduced [2–12]. Sampling in areas such as pediatric, psychiatric wards, ICU, dialysis unit and in every wards if patients were not able to speak they were removed from the unit. For the same conditions, sampling was performed at discharge. SPSS software was used to analyze the data.

### Table 3
Average and standard deviation of nurse satisfaction according to different groups.

| Nurse satisfaction | Mean | SD  |
|--------------------|------|-----|
| **Gender**         |      |     |
| Men                | 52.4 | 13.9|
| Women              | 55   | 8.2 |
| Total              | 52.5 | 13.7|
| **Employment status** | | |
| Permanent          | 53.6 | 12.5|
| Contractual 1      | 50   | 14.4|
| Contractual 2      | 52   | 14.4|
| Student duty       | 56.1 | 13  |
| Other              | 53.6 | 17.8|
| Total              | 52.5 | 13.7|
| **Age groups**     |      |     |
| 20–30              | 50.8 | 13.6|
| 31–40              | 54.4 | 15.5|
| 41–50              | 56.5 | 11.5|
| 51–60              | 48.9 | 10.4|
| Total              | 52.5 | 13.7|
| **Job experience** |      |     |
| < 5                | 53.1 | 12.8|
| 6–10               | 51.6 | 17.6|
| 11–15              | 52.3 | 9.2 |
| 16–20              | 49.3 | 10.1|
| 21–25              | 51.4 | 13.1|
| 26–30              | 60.3 | 9.1 |
| Total              | 52.5 | 13.7|

### Table 4
The relationship between two variable of the ratio of nurses to patients and patient satisfaction.

| Patient satisfaction | Correlation coefficient | P-value |
|----------------------|-------------------------|---------|
| The ratio of nurses to patients | -0.026 | 0.599   |
Table 5
Demographic characteristics of participants.

| Characteristics          | Number |
|--------------------------|--------|
| **Education**            |        |
| No education             | 87     |
| Elementary               | 81     |
| Middle School            | 99     |
| High school              | 29     |
| University degree        | 11     |
| **Job**                  |        |
| Farmer                   | 39     |
| Worker                   | 20     |
| Office employee          | 35     |
| No job                   | 8      |
| House wife               | 126    |
| Student                  | 18     |
| Others                   | 79     |
| **Insurance**            |        |
| Yes                      | 321    |
| No                       | 26     |
| **Place of residence**   |        |
| Urban                    | 271    |
| Rural                    | 93     |

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Transparency document. Supporting information

Transparency data associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.11.026.

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.11.026.

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