

Measuring patient safety culture in Austrian hospitals: Open communication as a key factor in improving handovers, teamwork, and adverse event reporting.

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Introduction

One in a hundred hospital admissions results in a **medical error**, **one in a thousand results in death** (Schrappe & Lessing, 2007; Schrappe, 2007).

There were **2 561 346** hospitalized patients in Austria in 2019 and **2 083 663** in 2022:

- Unexpected event (5 - 10%) (128 067 – 256 134)
- Avoidable event (2 - 4%) (51 226 – 102 453)
- Unexpected event caused by negligence (1%) (25 613)
- Death (0.1%) (2 561)

New research has shown that in high-income countries, an average of **one in ten people** treated in hospital is affected by an **unexpected event** (Slawomirski et al., 2021).

Inaccurate or incorrect communication is one of the most common reasons why patients are harmed (Fuchshuber & Greif, 2022).

The study aims to investigate the relationship between health professionals' communication and teamwork, adverse event reporting and patient safety. Additionally, the study examines the work areas concerning communication to identify potential differences.

Objectives

Examine the relationship between **'communication openness'** and

- **'teamwork within units'**,
 - **'hospital handoffs and teamwork across hospital units'**,
 - **'frequency of event reporting'** and
 - **'patient safety rating'**.
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- Assess whether there are any differences between the main departments (surgical departments, other medical departments, institutes, internal medicine, other facilities administrative facilities, and technical area) and jobs in terms of **'openness to communication'**.

Methods

Survey instrument used:

Patient Safety Climate Inventory Austria (PaSKI AUT)

Data collection and sample:

- Paper-pencil questionnaire (June - September 2023)
- 1086 questionnaires were handed out in two Austrian hospitals.
- 554 questionnaires were returned (51% response rate).
- 526 questionnaires were used for further data analysis

85 items:

- The items of the scales have been validated.
- In addition to the scales, these also included the patient safety rating, questions on employment, occupational group and field of work, etc.
- **Response format:** 5-point Likert scale, open answers and nominal choices

Methods

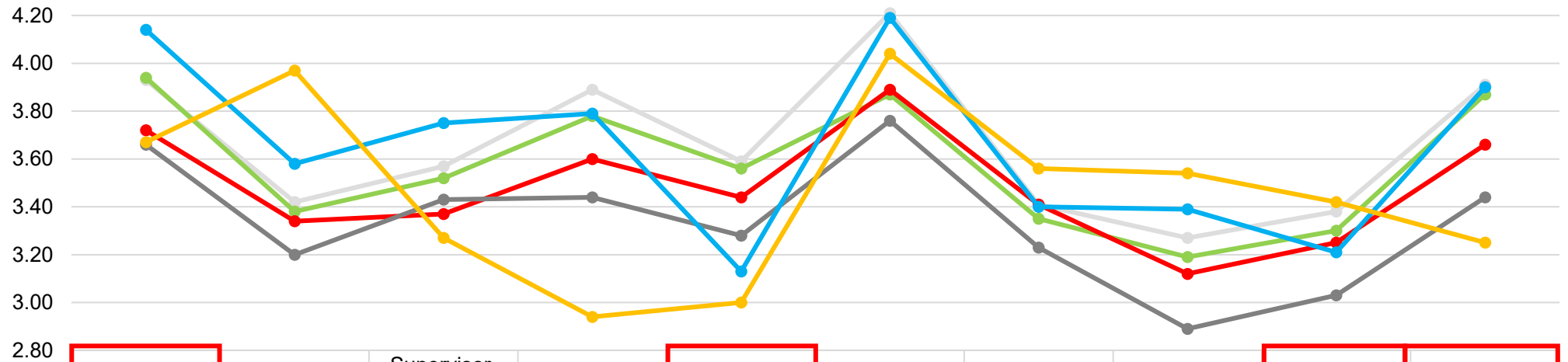
Key dimensions for the study:

- Communication openness,
- Teamwork within units,
- Hospital handoffs and teamwork across hospital units and
- Frequency of event reporting.

Descriptive statistics and tests

- Collection and evaluation of statistical parameters.
- Implementation of the Spearman correlations, Kruskal-Wallis tests and Mann-Whitney U-tests.

Central scales of the study



| | Teamwork within units | Nonpunitive response to error | Supervisor, manager expectations and actions promoting safety | Feedback and communication about error | Frequency of event reporting | Unit management support for patient safety | Unit handoffs and transitions | Hospital management support for patient safety | Hospital handoffs and teamwork across hospital units | Openness in communication |
|---|-----------------------|-------------------------------|---|--|------------------------------|--|-------------------------------|--|--|---------------------------|
| — Surgical departments | 3.93 | 3.42 | 3.57 | 3.89 | 3.59 | 4.21 | 3.41 | 3.27 | 3.38 | 3.91 |
| — Other medical departments | 3.94 | 3.38 | 3.52 | 3.78 | 3.56 | 3.87 | 3.35 | 3.19 | 3.30 | 3.87 |
| — Institutes | 3.72 | 3.34 | 3.37 | 3.60 | 3.44 | 3.89 | 3.41 | 3.12 | 3.25 | 3.66 |
| — Internal Medicine | 3.66 | 3.20 | 3.43 | 3.44 | 3.28 | 3.76 | 3.23 | 2.89 | 3.03 | 3.44 |
| — Other facilities | 4.14 | 3.58 | 3.75 | 3.79 | 3.13 | 4.19 | 3.40 | 3.39 | 3.21 | 3.90 |
| — Administrative and technical facilities | 3.67 | 3.97 | 3.27 | 2.94 | 3.00 | 4.04 | 3.56 | 3.54 | 3.42 | 3.25 |

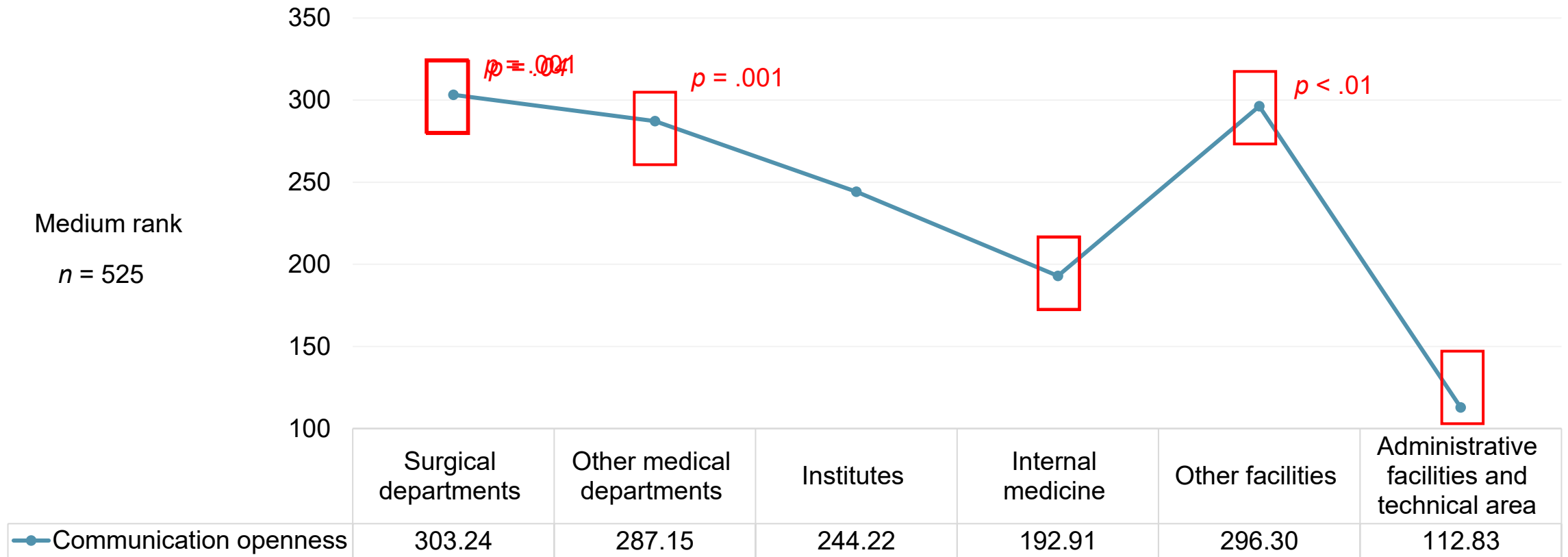
Measures of location/ dispersion and Spearman correlations with Fieller confidence intervals

| Variable | <i>M (SD)</i> | <i>Md (IQA)</i> | Communication openness | Teamwork within the clinic/department | Frequency of reporting events | Safe handovers, and teamwork between clinics/departments |
|--|---------------|-----------------|------------------------|---------------------------------------|-------------------------------|--|
| Communication openness | 3.75 (.61) | 3.75 (.75) | | | | |
| Teamwork within the clinic/department | 3.84 (.75) | 3.75 (1.25) | .32** [.24, .40] | | | |
| Frequency of reporting events | 3.44 (.99) | 3.67 (1.33) | .32** [.24, .39] | .20** [.11, .28] | | |
| Safe handovers, and teamwork between clinics/departments | 3.26 (.72) | 3.50 (.50) | .34** [.26, .42] | .24** [.16, .32] | .20** [.12, .29] | |
| Patient safety rating | 3.78 (.74) | 4.00 (1.00) | .34** [.26, .42] | .36** [.28, .43] | .30** [.22, .38] | .25** [.17, .33] |

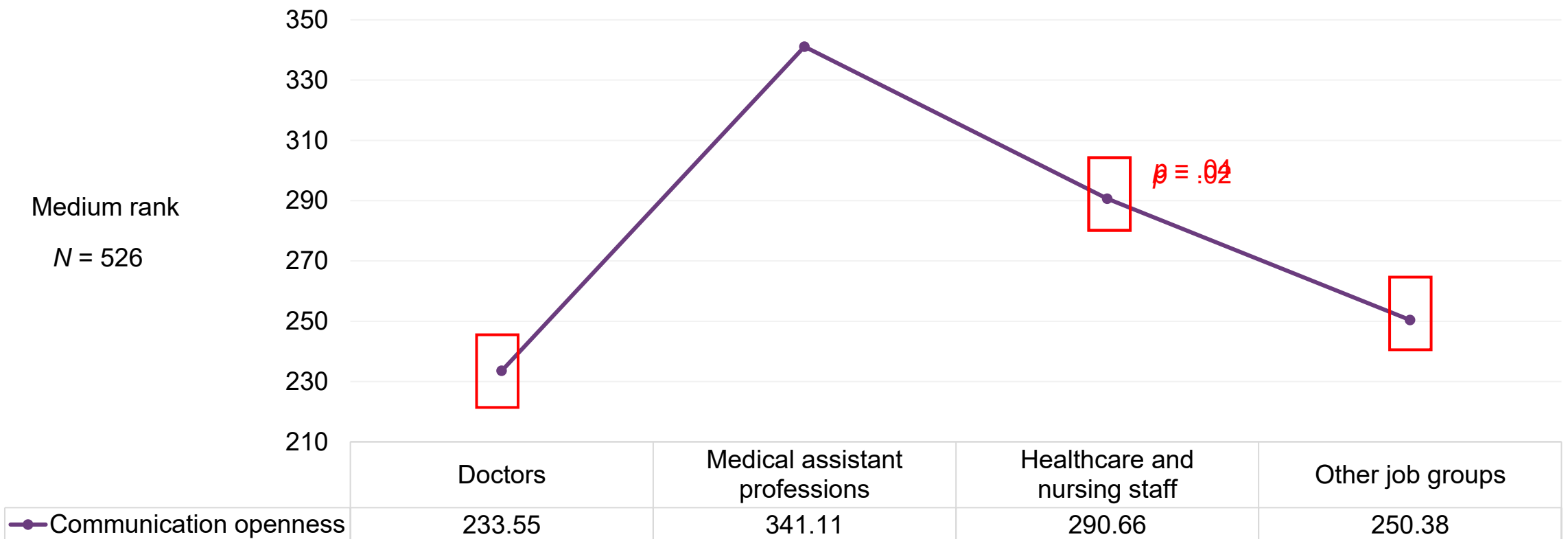
Note. Explanation of the abbreviations for the statistical key figures: *M* = mean, *SD* = standard deviation, *Md* = median and *IQA* = interquartile range.

The confidence intervals are given in square brackets. The asterisks (**) indicate that the correlations are significant ($p < .01$).

Comparison of different main areas of work in terms of openness in communication



Group comparison between the jobs in terms of openness in communication



Conclusion and outlook

- The study has proven that communication is a key factor in improving patient safety culture and is positively related to successful teamwork.
- In addition, communication also promotes the frequency of reporting an adverse event, making it easier to prevent, identify, and correct a potential treatment error.
- One notable limitation is that this study was only conducted in two hospitals. Attempts should be made to repeat these studies in other hospitals.
- A follow-up study in the form of a qualitative interview could be carried out to find out why there were differences between the main departments and certain jobs in terms of communication.
- In addition, attempts should be made to establish various programs that promote communication in the hospital setting to improve patient safety.

Thank you for your attention!

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