The effect of power, leadership, and psychological safety on resident event reporting

Reference:
Appelbaum NP¹, Dow A¹, Mazmanian PE¹, Jundt DK², Appelbaum EN¹. The effect of power, leadership, and psychological safety on resident event reporting. Medical Education. 2016;[ePub ahead of print]

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Tags
Clinical domain
Medical Expert
Leader

Educational domain
Learning environment
(Post)graduate
(Residency training)

Background

[This paper is the next in our series of reviews of upcoming publications in the journal Medical Education, under our special arrangement with the publisher and editors, exclusive to KeyLIME...]

Medical education as a societal enterprise exists to prepare health professionals to provide safe & effective care. However, efforts to make contemporary health care better are hampered by a number of factors, including a frequently dysfunctional medical culture and a reluctance of health professionals to report adverse events. In other industries, it is estimated that 2.5 adverse events occur for every 1 reported at work. Medicine is likely much worse. How can we continuously enhance the quality of care we provide if we cannot learn from suboptimal care? By not preparing the next cadre of physicians to do this well (CQI via adverse event reporting), we will perpetuate the status quo for another entire generation. If we are ever to ameliorate this issue in meded, we need to identify what the salient ingredients are that impact a local health care safety culture. Does the flow of power matter?

Purpose
Appelbaum et al, in exploring aspects of medical culture as it relates to patient safety competencies, set out to characterize the relationships between a number of measures of a medical microculture and the willingness of residents to report adverse events from the front lines of patient care.

**Type of paper**

Research: Observational study

**Key Points on the Methods**

This is an unusual study for the meded literature, looking at the impact of organizational dynamics on residents' willingness to report adverse events.

Residents, as physician-learners working under the supervision of more senior clinicians, often report negative experiences within a hierarchy at work. The authors recruited a convenience sample of 106 resident physicians (50% female) from 8 specialties (half surgical) affiliated with Virginia Commonwealth University School of Medicine in the USA.

The participants completed instruments that measured their perceived:

- *Psychological safety* (the belief one can express themselves without negative consequences) using the Edmondson instrument;
- *Power distance* (the extent to which an individual perceives unequal distributions in status and power within organizations) using the CPQ4;
- *Leader inclusiveness* (the behaviours that signal openness, availability, and accessibility), using the Carmeli instrument; and
- *Intention to report adverse events*.

Poor scores in these measures are associated with poor safety cultures and more adverse clinical events.

The authors analyzed the data to create a model of the relationships among the 4 psychological measures (using factor analysis and a path model). (Note: the stats did make my head hurt a bit.)

Minor quibbles with the methods include: non-representative sampling, unvalidated adapted or invented scales, inferred behaviour from self-report, and heavy extrapolation from the results.

**Key Outcomes**

Perceived power distance and leader inclusiveness measures were both significantly associated with psychological safety, which in turn predicted intention to report adverse events.

**Key Conclusions**
The authors concluded that willingness to perform the key patient safety function of reporting adverse events was directly mediated by psychological safety. Furthermore, since psychological safety was impacted by the power dynamics of the local culture, such patient safety behaviours should be regarded as a product of the local environment, and not just individual competencies.

While this may seem obvious at first glance, this is important data with implications for medical education and patient safety. It certainly supports efforts to explicitly measure residents’ learning environment.

**Spare Keys – other take home points for clinician educators**

1. Other industries continue to put medicine to shame when it comes to a healthy safety culture and CQI. We simply need to do better.
2. Teaching patient safety, or advancing the Quality agenda, is really one of the hottest topics in medical education right now...Check out the recent editorial by Eric Holmboe & Brian Wong in Academic Medicine (2016).
3. This is a very innovative take on an aspect of teaching patient safety, and one of an emerging body of literature relating to medical culture and learning environments in medical education. (See also, for example, the cool work of Paul Batalden on clinical microsystems.)
4. These are new measures of organizational psychology to me. As a CE who also works in accreditation, I wonder if they are useful for looking at other learning environments.
5. This is another paper that models the benefits of interdisciplinary collaborations, where the authors each brought perspective from their various fields and experiences to execute a unique study.
6. Paul Mazmanian is one of the coauthors of this paper. If you are new to the meded lit, check out his extensive body of work, particularly in CPD. He is a key author for a CE’s collection.

**Shout out**

Thanks to the journal Medical Education for the pre-publication draft for us to review.

Cheers to friends of KeyLIME, clinician-educators Dr. Eric Holmboe & Dr. Felix Ankel who introduced us to the great meded work being done at Virginia Commonwealth U.