It takes (at least) two to tango: comparing the affordances of two learner mistreatment reporting mechanisms

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Abstract

Background: The affordances, or characteristics, of learner mistreatment reporting mechanisms can shape the information elicited from these mechanisms, which has an impact on how institutions understand the scope and nature of learner mistreatment. This study compares whether and how the affordances of two mistreatment reporting mechanisms elicit different information about learner mistreatment at a single institution.

Methods: We conducted an interpretive content analysis of reports submitted using two mechanisms, one that elicits reports through end-of-rotation evaluations and one through a voluntary web-based system, between July 2015 and December 2021. We extracted the metadata from reports and applied a coding framework informed by the Healthcare Complaints Analysis Tool (HCAT) to the narrative descriptions in reports. Data analysis included descriptive statistics and the chi-square test on SPSS v.27.

Results: We collected 90 elicited reports and 240 voluntary reports of mistreatment. Similar types of mistreatment were reported through each mechanism, but disrespectful behaviour and bias and discrimination were reported significantly more in voluntary reports. Elicited reports most frequently included incidents of learner mistreatment in clinical settings, whereas voluntary reports included incidents from a wide variety of settings and people or were issues other than mistreatment.

Discussion: Utilizing multiple learner mistreatment reporting mechanisms with different affordances can mitigate the limitations of a single mechanism, help identify a more nuanced understanding of learner mistreatment, and increase reporters' choices for how and when to report mistreatment. Increased information allows an institution to address specific incidents and develop targeted, preventive educational activities and faculty development.

Résumé

Résumé français à venir.

Introduction

Effective interventions for addressing learner mistreatment often start with methods for reporting mistreatment.[1-4] Yet there are many challenges with reporting mistreatment at medical schools such as a lack of institutional trust[5,6] and uncertainty about what experiences constitute mistreatment.[1,7,8] Additionally, some mistreatment lends itself more easily to being reported such as incident-based mistreatment, which might involve a single, blatant incident (e.g., physical abuse), compared to environment-based mistreatment, which can involve repeated incidents that are subtle and may not fall under institutional definitions of mistreatment (e.g., disregarding learners' contributions).[9] Scholars have suggested that these challenges can be mitigated by embedding reporting systems within multi-pronged approaches, providing multiple mechanisms for reporting mistreatment, and offering options for anonymous reporting.[2,10,11,] However, medical schools also require meaningful information in order to address mistreatment. Therefore, in addition to reducing barriers to reporting mistreatment, it is important to consider how the design of a reporting mechanism affects its' ability to generate meaningful information about mistreatment occurring at a medical school.

The concept of affordances provides a useful lens through which to consider the outcomes of the designs of mistreatment reporting mechanisms. First introduced in the field of cognitive psychology[12] and later adapted for use in the field of design and human-computer interaction[13], affordances are the characteristics or properties of an artifact, such as a learner mistreatment reporting mechanism, that suggest potential uses of the artifact[12,13] that enable or constrain potential outcomes.[14] Davis and Chouinard[15] suggest that affordances can include potential actions that artifacts place on users or how an artifact responds to a user's desired actions. The affordances of different reporting mechanisms, therefore, may produce different potential outcomes that can have an impact on how an institution understands the scope and nature of learner mistreatment and, ultimately, how learner mistreatment is addressed. Attending to the affordances of learner mistreatment reporting mechanisms can help medical schools design more effective mistreatment reporting systems.

The Max Rady College of Medicine (MRCoM) at the University of Manitoba employs two mechanisms for reporting mistreatment with different processes and structures, i.e., different affordances. In response to accreditation requirements requiring medical schools to have mechanisms for reporting all forms of mistreatment, we undertook a comparison of the information provided through each mechanism to better understand how each mechanism contributes to the school's overall approach to identifying learner mistreatment. The aim of our study is to gain insight into the outcomes created by the affordances of learner mistreatment reporting mechanisms. Outcomes for our study include the types of mistreatment reported and the supporting information provided through reporting mechanisms. The overarching research question that guided our study was: do different affordances of learner mistreatment reporting mechanisms produce different outcomes? To help answer this question, we developed two sub-questions:

1. What types of mistreatment and supporting information are reported using the two reporting mechanisms?

2. How does reported information differ between the two reporting mechanisms?

Methods

Study setting

The MRCoM enrolled ~440 undergraduate medical students and ~650 postgraduate physician residents per year during the study period. To address mistreatment that these learners may experience or witness, the MRCoM developed two formal reporting mechanisms. First, in 2015, MRCoM instituted a web-based reporting system called the "Speak Up" button (SUB) that learners, staff, and faculty voluntarily and actively seek out to anonymously or confidentially report learner mistreatment. Use of the SUB varied considerably during the first several years after it was established ranging from one report the first year and afterwards averaging 47.6 reports per year for the study period. Second, in 2020, a mistreatment reporting option was added to mandatory end-of-rotation evaluation (EoRE) surveys. If learners indicate that they experienced or witnessed mistreatment during the rotation, they are prompted to provide details in a separate electronic form. An average of 45.5 reports per year were submitted through the EoRE during the study period.

The incident reports for both reporting methods are structured as a survey that collects standardized information about the incident date, incident location, mistreatment recipient, and source of mistreatment, followed by an open-ended narrative description about the incident being reported. The reports are confidentially reviewed and triaged in the Office of Professionalism. For

non-anonymous reports, intake meetings are organized with complainants. For all reports, the Office of Professionalism assesses the appropriate subsequent actions.

Study design

To identify the types of mistreatment being reported and the information that is provided in reports, we conducted an interpretive content analysis of MRCoM's two reporting mechanisms. This approach allows for both deductive and inductive data analysis and is useful for systematically analyzing large amounts of narrative data, such as mistreatment reports, that may contain partial or incomplete information and might not explicitly state the form of mistreatment experienced and requires researchers' iterative interpretation.[16] We received approval to conduct the study from the University of Manitoba Health Research Ethics Board (File#: H2021:419).

Data collection

We developed a data set by collecting all the reports submitted to the SUB and EoRE from when these two reporting methods were instituted electronically – July 2015 for the SUB and August 2020 for the EoRE – until December 31, 2021. All names were removed from incident reports before data collection to protect confidentiality. One team member (AS) extracted and recorded the structured survey data from the incident reports.

Data analysis

An initial scan of the data revealed a wide range of reported incidents that are not fully reflected in existing typologies of learner mistreatment in medical schools in terms of the types and complexity of the incidents (e.g., multiple types of mistreatment per incident). To capture this complexity, we developed an initial coding framework based on the problem categories in the Healthcare Complaints Analysis Tool (HCAT), which is a validated tool for investigating complaints and facilitating improvements in the healthcare system.[17,18] While the HCAT was developed for use in healthcare contexts, it has been successfully adapted to other related contexts.[19] Two research team members (CR and JGarber) reviewed a subset of the data to adapt the tool for the medical learning environment including revising the clinical problems category to teaching and learning problems. We also added additional sections to the coding framework focused on the type of report (i.e., learner mistreatment, non-learner mistreatment, issue other than mistreatment), scope of incident (e.g., reference to repeated incidents, public or private incident), and types of information provided in report (presence of

incident description, incident setting, relevant demographic information, impact, justification or explanation for reporting).

We coded the data from the narrative descriptions of incidents in two stages. First, the whole research team met and coded a sample of incident reports together (n = 30) to standardize our interpretation of the coding framework and coding procedures. Through discussion we also further refined and finalized the coding framework (see Table 1 for final list of problem categories). We then divided the dataset up into equal sections so that each research team member coded narrative incident descriptions from approximately 52 reports. Once coding was complete, two team members (CR and JH) reviewed all the coded data to check for consistent application of the coding framework and discussed any questions or changes with the whole research team. We used SPSS v.27 to facilitate analysis of both datasets using descriptive statistics and the Chi-square statistic to compare metadata with problem categories, which met the assumptions for use of the chi-square test. The predetermined α level was set at .05.

Table 1. Problem Categories for Reported Learner Mistreatment

Categories	Description
Teaching and Learning Problems	
Quality	Issues related to teaching behaviours, role modeling of healthcare standards, and/or opportunity
Safety	Issues related to teaching and learning situations that compromise patient or learner safety
Institutional Problems	
Resources and Facilities	Issues with facilities, technology, learner supports
Institutional Processes	Issues with bureaucracy, accessing learner supports, policies, feeling unsafe reporting mistreatment
Interactional Problems	
Listening	Disregard for learner or patient questions and contributions
Communication	Absent or incorrect communication to learner or patient
Disrespect of patient and learner rights	Disregard or violation of for learners' and/or patients' rights
Disrespectful behaviour	Problems with rude or unprofessional behaviour or language
Discrimination and bias	Problems with comments and behaviour that shows discrimination or bias against certain populations
Harassment and Abuse	Problems with aggressive, violent, or unsafe behaviour and actions

Reflexivity

The study team included two PhD educational researchers (CR, JH), a resident physician (JGarber), and four members who have held leadership and staff positions in the Office of Professionalism (NP, AS, EJ, JGruber) and the Office of Equity, Diversity and Inclusion (JGruber). To mitigate the

potential bias, the educational researchers and the resident physician conducted the initial analysis and development of the coding framework and the final step of data checking. Interpretation of results was led by one of the educational researchers (CR) who is otherwise uninvolved in the Office of Professionalism but informed by the knowledge and experience of its' members.

Results

We collected a total of 330 reports, of which 240 (72.7%) were SUB reports and 90 (27.3%) were EoRE reports from a total of 10,250 end of rotation evaluation surveys (0.9%).

Results from the analysis of structured survey data

Of the EoRE reports, 32.2% (29/90) were from undergraduate clerkship rotations, 10.0% (9/90) of reports were from residents on home service, 42.2% (38/90) of reports were from residents not on home service (i.e., on rotations outside of their discipline), and 15.6% (14/90) of reports were from international medical graduate residents. Of the SUB reports, 31.3% (75/240) were reported anonymously and 68.8% (165/240) were non-anonymously reported. There were no significant differences between incidents that were reported anonymously and non-anonymously.

With respect to the structured survey data, there was a significant difference in the reported recipient of mistreatment between the reporting mechanisms (*p* = .007) (Table 2). Almost half of the EoRE reports (48.9%, 44/90) indicated that the incident "happened to me", but almost two thirds of SUB reports indicated that the incident involved another person.

The two most common sources of mistreatment were a preceptor or attending staff for both reporting mechanisms, including in 33.3% (30/90) of EoRE reports and 43.3% (104/24) of SUB reports. Additionally, 27.8% (25/90) of EoRE reports indicated nurses as sources of mistreatment, which was significantly different from 10.4% (25/240) of SUB reports (*p* = <.001), and 15.8% (38/240) of SUB reports indicated that a medical student was the source of mistreatment but none of the EoRE reports did (Table 2).

Finally, 88.9% (80/90) of EoRE reports indicated that the incident occurred at a tertiary hospital with the remaining incidents occurring at other clinical sites. In comparison, only 47.1% (113/240) of SUB reports indicated that the incident occurred in a tertiary hospital and the other reported incidents occurred in a wide range of clinical and academic settings (see Appendix A for full results).

Table 2. Recipients and sources of mistreatment reported using each mechanism.

	EoRE (*n* = 90)	SUB (*n* = 240)	p-value
Recipient			
It happened to me	44 (48.9%)	82 (34.2%)	
It happened to someone else	27 (30.0%)	65 (27.1%)	.007
It happened to me and someone else	19 (21.1%)	93 (38.8%)	
Source			
Preceptor/Attending	30 (33.3%)	104 (43.3%)	.099
Resident	15 (16.7%)	30 (12.5%)	.326
Nurse	25 (27.8%)	25 (10.4%)	**<.001**
Hospital/Clinic Staff	23 (25.6%)	57 (23.8%)	.733
Administrative Staff	4 (4.4%)	15 (6.3%)	.531
Medical Student	0	38 (15.8%)	**<.001**
Other	2 (2.2%)	17 (7.1%)	.091

Results from analysis of narrative descriptions

We first coded reports for the type of incident that was reported. There was a significant difference between the types of reports submitted to each reporting mechanism (p = <.001) (Table 3), with 82.2% (74/90) of EoRE reports about learner mistreatment and only 56.7% (136/240) of SUB reports about learner mistreatment. Over a quarter of the SUB reports (64/240, 26.7%) reported a problem or issue other than mistreatment.

Table 3. Type of incident reported using each mechanism.[a]

Type of Incident	EoRE (*n* = 90)	SUB (*n* = 240)
Learner mistreatment	74 (82.2%)	136 (56.7%)
Non-learner mistreatment (e.g., patient, faculty member)	8 (8.9%)	40 (16.7%)
Problem or issue other than mistreatment	7 (7.8%)	64 (26.7%)
Not enough information to assess	1 (1.1%)	0

[a]p = <.001 for type of report compared to type of incident

Incident reports described mistreatment that fell into three broad groups of categories: teaching and learning problems; institutional problems, and interactional problems (Table 4). Nearly all reports described an interactional problem and about half of the reports described problems related to teaching and learning. Disrespectful behaviour (e.g., rude or unprofessional language) was the most common problem category identified in the reports from each mechanism but was reported significantly more (*p* = .010) in SUB reports (70.0%, 168/240) than in EoRE reports (55.6%, 50/90) (Figure 1). Bias and discrimination (e.g., behaviours that discriminate against certain populations) were also reported significantly more (*p* = <.001) in SUB reports (26.3%, 63/240) than in EoRE reports (11.1%, 10/90) (Figure 1). It should be noted that 24.4% (41/168) of SUB reports that were coded as disrespectful behaviour were also coded as an issue other than mistreatment in comparison to only 2.0% (1/50) of EoRE reports.

Table 4. Problem categories from each reporting mechanism.

| Categories	EoRE (n=90)	SUB (n=240)	p-value
Teaching and Learning			
Quality	38 (42.2%)	88 (36.7%)	.36
Safety	21 (23.3%)	67 (27.9%)	.40
Institutional			
Resources and Facilities	6 (6.7%)	6 (2.5%)	.07
Institutional Processes	10 (11.1%)	31 (12.9%)	.66
Interactional			
Listening	20 (22.2%)	58 (24.2%)	.71
Communication	5 (5.6%)	15 (6.3%)	.81
Disrespect for Rights	9 (10.0%)	30 (12.5%)	.53
Disrespectful Behaviour	50 (55.6%)	168 (70.0%)	.01
Bias and Discrimination	10 (11.1%)	63 (26.3%)	<.001
Harassment and Abuse	21 (23.3%)	70 (29.2%)	.29
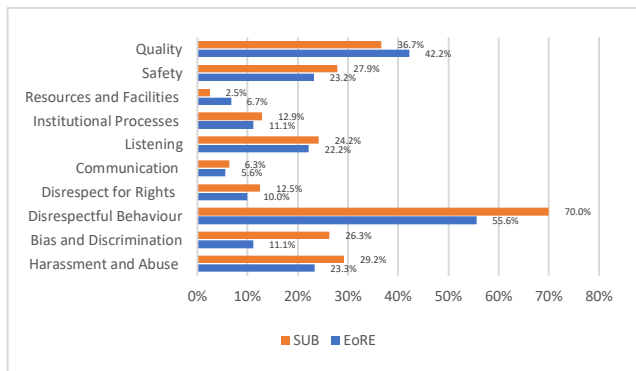
Figure 1. Comparison of problem categories reported for each reporting mechanism.

Since reports could be coded as multiple types of problems, we calculated the rate of co-occurrence for the different problem categories for each reporting mechanism. Disrespectful behaviour commonly co-occurred with several other categories, particularly in SUB reports. Of note, 68.4% (26/38) of EoRE reports and 81.8% (72/88) of SUB reports that were coded as a problem with the quality of teaching and learning were also coded as a problem with disrespectful behaviour (see Appendix for full results). For example, an instructor making rude remarks about a student's question was coded as problems with the quality of teaching and learning and disrespectful behaviour. Additionally, 87.9% (51/58) of SUB reports that were coded as a problem with listening and 74.6% (50/67) of SUB reports that were coded as a problem with safety in teaching & learning were also coded as a problem with disrespectful behaviour.

To better understand the scope of the mistreatment reported through the two mechanisms, including evidence of incident-based or environment-based mistreatment, we coded whether the narrative reports described the incident as public or private and whether the report described a specific incident and/or whether there was reference to multiple or repeated incidents. SUB reports were significantly more likely to describe a specific incident (195/240, 81.3%) than EoRE reports (51/90, 56.7%, p = <.001). In contrast, EoRE reports were significantly more likely to refer to multiple and/or repeated incidents (46/90, 51.1%) than SUB reports (87/240, 36.3%, p = .014). We also found a significant difference between the two mechanisms in whether they indicated if the incident was public or private (p = <.001). For EoRE reports, 13.3% (12/90) incidents were private, 57.8% (52/90) were public, and 28.9% (26/90) were unclear. For SUB reports, 20.4% (49/240) incidents were private, 67.1% (161/240) were public, and 12.5% (30/240) were unclear.

Finally, we coded reports for the kinds of information provided in the narrative descriptions. The SUB reports included significantly more information about the incident, the incident setting, relevant demographic details about the source and/or recipient of mistreatment, the impact of the incident, and explanation or justification for making the report compared to EoRE reports (Table 5).

Table 5. Information provided using each reporting mechanism.

Information	EoRE (n = 90)	SUB (n = 240)	p-value
Incident description	74 (82.2%)	235 (97.9%)	<.001
Incident setting	46 (51.1%)	202 (84.2%)	<.001
Relevant demographic info	13 (16.5%)	66 (83.5%)	<.001
Impact	48 (53.3%)	168 (70.0%)	.005
Explanation or Justification	36 (40.0%)	183 (76.3%)	<.001

Discussion

We found many similarities between the two reporting mechanisms in terms of the types of mistreatment that are reported to administration. A large majority of mistreatment that is reported using both mechanisms is interactional in nature and primarily related to disrespectful behaviours and language. Concerns with the quality of teaching and learning, such as modeling poor patient care, are also frequently reported and such reports often include evidence of disrespectful behaviour as well. The frequency and co-occurrence of these kinds of issues, along with the high number of incidents that occurred in public or occur repeatedly suggest that there are problems in the learning environment that are having an impact on teaching and learning beyond the reported incidents of mistreatment.[9] These findings demonstrate that using a robust framework for categorizing the nature and scope of reported incidents can help identify patterns across individually-reported incidents that signal the presence of environment-based learner mistreatment.[9]

There were also some important differences between the outcomes of the two mechanisms that highlight how the affordances of a mechanism influence the types of mistreatment incidents that get reported and the information that is provided, which affects an institutions' knowledge of and ability to address learner mistreatment. The EoRE mechanism prompts clinical learners to report mistreatment when completing their rotation evaluations and does not provide an option for anonymity of such reports. These affordances often elicited less egregious yet repeated incidents that may have otherwise gone unreported but still have a negative impact on learners. Since these reports were prompted by clinical rotations, EoRE reports were typically focused on incidents of learner mistreatment and exclusively took place in clinical settings. Given this focus, and perhaps the lack of anonymity, EoRE reports tended to include fewer details in the narrative incident descriptions. In contrast, reporters must actively seek out the SUB to submit an incident report and reporters have the option to submit an anonymous report. Additionally, there are no restrictions on who can submit a report to the SUB. These affordances elicited a wider variety of incidents that occurred outside of the traditional teaching and learning settings but still had an impact on these settings. SUB reports also tended to include more details in the narrative incident descriptions, including justifications for submitting the reports. Similar to findings from other studies,[10,11] by providing multiple reporting methods with different affordances, we have been able to identify a greater range of mistreatment and increased the accessibility of reporting for more members of the MRCoM community. Of note, Vanstone et al.[7] found that learners frequently struggle to determine whether negative personal interactions constitute mistreatment, which can make learners hesitant to report mistreatment. The high rates of reports of disrespectful behaviour in our data, along with the large number of reports of issues other than mistreatment, demonstrate that the SUB in particular provides an avenue for learners to report negative experiences, even when they are unsure if they constitute mistreatment.

Through our analysis, we also identified several limitations and challenges with the two reporting mechanisms. First, relatively few SUB reports were made anonymously, and these did not differ significantly from reports that were not anonymous. Such a finding differs from previous research that suggests people are more likely to report mistreatment when there is greater anonymity.[9,10] This finding may be an indication of institutional trust,[2,5] but the relatively small number of reports compared to the total number of learners suggests that people may choose not to report rather than report anonymously. Second, demographic information beyond roles (e.g., resident, faculty member, nurse) about the reporter and people involved in an incident is only provided voluntarily in the narrative descriptions. Less than a quarter of reporters voluntarily provided demographic information that fell into a wide range of demographic categories, which limits insight into patterns of who is and is not utilizing the reporting mechanisms and who the recipients and sources of mistreatment are. Third, while the SUB allows for a greater range of types of mistreatment incidents to be reported, it appears to have also become a more general complaints option, which can use up valuable attention and resources. While definitions of mistreatment and how to report it are widely shared with learners and faculty at orientations and through other regular communications, a potential solution is to implement additional interventions aimed at developing shared understandings of mistreatment between learners, faculty, and administration. However, while such interventions may increase learners' confidence and ability to recognize mistreatment, they do not necessarily result in a decrease in mistreatment.[8] Finally, using two mechanisms that elicit different information due to differing affordances has helped us to identify environment-based mistreatment, but the institutional processes for addressing reports of mistreatment are aimed at incident-based mistreatment and provide limited ability to address mistreatment stemming from groups outside of the university (e.g., allied health, patients) beyond sharing information with the relevant groups.

Our overarching research question considered how different affordances of learner mistreatment reporting mechanisms produce different outcomes. In sum, the affordances of each mechanism, particularly elicited versus voluntary reporting, provide unique insights into learner mistreatment occurring at MRCoM and the combination of the two provides a more fulsome picture than either can provide on its own. This information allows MRCoM to not only address specific incidents that have occurred but also to focus on preventative measures through faculty development and other educational activities targeted at more common forms of environment-based mistreatment.

Our study has several limitations that offer opportunities for future research. Our study was focused on two reporting mechanisms at one institution with different timeframes for data collection. Our data set also provided limited opportunity to compare different groups of

learners such as those from UGME, PGME, and IMG programs. A larger data set with similar timeframes may provide additional insights into the outcomes produced by the two mechanisms and will allow for more nuanced interpretations between UGME and PGME that considers duty hours and other factors. Our analysis of outcomes was limited to information that was reported. Future research should include learner and faculty perspectives and experiences with the two reporting mechanisms, particularly as they relate to how the affordances of reporting mechanisms influence how and if these groups report learner mistreatment. Finally, results from additional institutions and other types of reporting mechanisms could provide further insights into how the affordances of reporting mechanisms create different reporting outcomes.

Conclusion

Utilizing two mechanisms with different affordances for reporting learner mistreatment can help to identify a more nuanced understanding of mistreatment, including incident-based and environment-based mistreatment, and increase reporters' choices for how and when to report mistreatment. While further work needs to be done to develop a shared understanding at our institution of what constitutes mistreatment and approaches to addressing environment-based mistreatment, we anticipate that providing multiple methods for reporting learner mistreatment will increase institutions' abilities to identify incident-based and environment-based mistreatment and contribute to more effective interventions in the university and in the healthcare system.

References

1. Mazer LM, Bereknyei Merrell S, Hasty BN, Stave C, Lau JN. Assessment of programs aimed to decrease or prevent mistreatment of medical trainees. *JAMA Netw Open*. 2018;1(3):e180870. https://doi.org/10.1001/jamanetworkopen.2018.0870

2. Walvoord EC, Howenstine MS, Allen BL, et al. Engaging all stakeholders to create a trusted, data-driven, process improvement approach to addressing learner mistreatment. *Teach Learn Med*. 2024;36(1):61-71. https://doi.org/10.1080/10401334.2022.2122979

3. Fried JM, Vermillion M, Parker NH, Uijtdehaage S. Eradicating medical student mistreatment: a longitudinal study of one institution's efforts. *Acad Med*. 2012;87(9):1191-8. https://doi.org/10.1097/acm.0b013e3182625408

4. Leitman IM, Muller D, Miller S, et al. Implementation of an online reporting system to identify unprofessional behaviors and mistreatment directed at trainees at an academic medical center. *JAMA Network Open*. 2022;5(12):e2244661. https://doi.org/10.1001/jamanetworkopen.2022.44661

5. Bell A, Cavanagh A, Connelly CE, Walsh A, Vanstone M. Why do few medical students report their experiences of mistreatment to administration? *Med Educ*. 2021;55(4):462-70. https://doi.org/10.1111/medu.14395

6. Sahiti Q, Shearer C, Thomson C, Sutherland L, Bowes D. Addressing medical resident mistreatment: a resident-centred approach. *Med Teach*. 2024;46(6):769-75. https://doi.org/10.1080/0142159X.2023.2279903

7. Vanstone M, Cavanagh A, Molinaro M, et al. How medical learners and educators decide what counts as mistreatment: a qualitative study. *Med Educ*. 2023;57(10):910-20. https://doi.org/10.1111/medu.15065

8. Williams-Karnesky RL, Russell JC, Wang ML. More than aligning perception: impact of an educational intervention on medical student mistreatment reporting. *J Am Coll Surg*. 2020;231(1):112-21.e2. https://doi.org/10.1016/j.jamcollsurg.2020.03.029

9. Gan R, Snell L. When the learning environment is suboptimal: exploring medical students' perceptions of "mistreatment." *Acad Med*. 2014;89(4):608-17. https://doi.org/10.1097/ACM.0000000000000172

10. Fleit HB, Iuli RJ, Fischel JE, Lu WH, Chandran L. A model of influences on the clinical learning environment: the case for change at one US medical school. *BMC Med Educ*. 2017;17:63. https://doi.org/10.1186/s12909-017-0900-9

11. Smith-Coggins R, Prober CG, Wakefield K, Farias R. Zero tolerance: implementation and evaluation of the Stanford medical student mistreatment prevention program. *Acad Psychiatry*. 2017;41:195-9. https://doi.org/10.1007/s40596-016-0523-1

12. Gibson,JJ. *The Senses Considered as Perceptual Systems*. Boston: Houghton Mifflin; 1966.

13. Norman DA. *The Psychology of Everyday Things*. New York: Basic Books; 1988.

14. Evans SK, Pearce KE, Vitak J, Treem JW. Explicating affordances: a conceptual framework for understanding affordances in communication research. *J Comput Mediat Commun*. 2017;22(1):35-52. https://doi.org/10.1111/jcc4.12180

15. Davis JL, Chouinard JB. Theorizing affordances: from request to refuse. *Bull Sci Technol Soc*. 2016;36(4):241-8. https://doi.org/10.1177/0270467617714944

16. Drisko JW, Maschi T. Interpretive content analysis (pp. 57-80). In: *Content Analysis*. Oxford University Press, USA; 2016.

17. Gillespie A, Reader TW. The healthcare complaints analysis tool: development and reliability testing of a method for service monitoring and organisational learning. *BMJ Qual Saf*. 2016;25(12):937-46. https://doi.org/10.1136/bmjqs-2015-004596

18. London School of Economics and Political Science. *The healthcare complaints analysis tool.* v 3. Published 2015. Available from https://healthcarecomplaintsanalysis.com/. [Accessed Apr 4, 2024].

19. Crosbie C, McDougall A, Pangli H, Abu-Laban RB, Calder LA. College complaints against resident physicians in Canada: a retrospective analysis of Canadian Medical Protective Association data from 2013 to 2017. *CMAJ Open*. 2022;10(1):E35-E42. https://doi.org/10.9778/cmajo.20210026

Appendix A. Full Results

Location of incidents reported using each mechanism[a]

Location	EoRE (*n* = 90)	SUB (*n* =240)
Tertiary Hospital	80 (88.9%)	113 (47.1%)
Community Hospital/Site	7 (7.8%)	17 (7.1%)
Medical School - on site	0	52 (21.7%)
Rural Hospital/Site	2 (2.2%)	1 (0.4%)
Zoom Lecture/Meeting	0	14 (5.8%)
Social Media	0	24 (10.0%)
Telephone or Email	0	6 (2.5%)
Off-campus	0	7 (2.9%)
Not indicated	1 (1.1%)	6 (2.5%)

[a]*p* = <.0001 for type of report compared to location of incident

The tables below detail how many incident reports that were coded as the categories listed in the rows were also coded with the corresponding category listed in the columns. The n listed beside the problem categories indicates the number of incident reports coded as that category.

Co-occurrence of problem categories in EoRE

	Safety (*n* = 21)	Resources/ Facilities (*n* = 6)	Institutional Processes (*n* = 10)	Listening (*n* = 20)	Communication (*n* = 5)	Disrespect for Rights (*n* = 9)	Disrespectful Behavior (*n* = 50)	Bias/ Discrimination (*n* = 10)	Harassment/ Abuse (*n* = 21)
Quality (*n* = 38)	9	-	4	10	4	3	26	2	7
Safety (*n* =21)		1	4	3	1	4	9	4	7
Resources/ Facilities (*n* = 6)			3	2	-	2	3	-	1
Institutional Processes (*n* = 10)				3	-	4	5	-	4
Listening (*n* = 20)					-	2	11	1	5
Communication (*n* = 5)						-	1	-	-
Disrespect for Rights (*n* = 9)							3	1	2
Disrespectful Behavior (*n* = 50)								1	6
Bias/ Discrimination (*n* = 10)									1

Co-occurrence of problem categories in SUB

	Safety (*n* = 67)	Resources/ Facilities (*n* = 6)	Institutional Processes (*n* = 31)	Listening (*n* = 58)	Communication (*n* = 15)	Disrespect for Rights (*n* = 30)	Disrespectful Behavior (*n* = 168)	Bias/ Discrimination (*n* = 63)	Harassment/ Abuse (*n* = 70)
Quality (*n* = 88)	38	-	12	37	10	8	72	19	28
Safety (*n* = 67)		2	14	33	7	10	50	10	31
Resources/ Facilities (*n* = 6)			5	2	-	1	2	-	-
Institutional Processes (*n* = 31)				12	5	6	14	1	14
Listening (*n* = 58)					6	4	51	2	25
Communication (*n* = 15)						2	9	-	4
Disrespect for Rights (*n* = 30)							21	4	15
Disrespectful Behavior (*n* = 168)								35	45
Bias/ Discrimination (*n* = 63)									4